MAGNETICAL OBSERVATIONS

MADE AT

THE HONORABLE EAST INDIA COMPANY'S

OBSERVATORY

AT

MADRAS,

UNDER THE SUPERINTENDENCE OF

W. S. JACOB, Esq., F.R.A.S.,

ASTRONOMER TO THE HONORABLE COMPANY,

IN THE YEARS 1851—1855.

LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

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INTRODUCTION.

Hourly Magnetical and Meteorological Observations were first ordered at Madras by the Honorable East India Company upon the recommendation of the Royal Society, and were commenced in March 1841, under the direction of the late Major General (then Captain) S. O. E. Ludlow.

The original Magnetical Observatory was located in the grounds of the Old College, about a quarter of a mile eastward of the Astronomical Observatory and the instruments were recorded there until 1847 October 27th, when they were removed to the latter establishment and handed over to the future management of the Astronomer, Mr. T. G. Taylor. All the Magnetical registers and their partial reductions for the first five years, 1841 to 1845, were taken by Captain Ludlow to England, with a view to their being completed and published by him. This however was never accomplished. The papers were lost sight of for many years, but were ultimately returned to the care of the head native assistant, R. Ramanajooloo Naidoo, who had made by far the largest share of the observations and probably all the calculations of the partial results. Ramanajooloo completed the reductions for the early years privately, and before retiring on pension at the end of 1871, handed them over to the Government Astronomer, to whom they should have been sent when returned, instead of to one of his assistants. The papers appear to have been prepared with all the accuracy and neatness which distinguished Ramanajooloo's work in general, but will of course require careful revision before they can be considered ready for publication. Ramanajooloo was a rare instance of a native who delighted in his scientific occupation more for its own sake, than for the moderate pay it procured him, and who, at a time when higher education was not so easily attainable as it now is, managed to acquire a fair knowledge of mathematics, so far as spherical trigonometry, and an intelligent comprehension of all the processes, alike of observation and calculation, required in the discharge of his somewhat difficult duties. He died in 1880.

The Magnetical Observations for the next five years, 1846 to 1850, were made under the successive superintendence of Mr. T. G. Taylor; Captain W. K. Worster, Madras Artillery, and Captain W. S. Jacob, Bombay Engineers, all now deceased. The calculations and press revision were the work of R. Ramanajooloo, and the results were published by Captain Jacob in 1854.

The printing of the third five years series, from 1851 to 1855, contained in the present volume, was commenced in July 1860, when no astronomical work was in hand; the old instruments being dismounted and the new Transit Circle not yet ready for use. The results for 1851 were completed by Ramanajooloo before my arrival in India, which will account for the somewhat remarkable foot notes to be found in the earlier pages. The erection of the new Transit Circle and other instruments; the far more important astronomical arrangements then inaugurated and the frequent discoveries made during the next five years, caused the less interesting arrears of Magnetic researches to be comparatively shelved; and above all, the discouraging regulations in regard to the distribution of volumes, peculiar to Madras though unknown elsewhere, all combined to delay the completion of the volumes. The very kind and liberal consideration of the present Government of Madras, in removing the painful restrictions hitherto in force, will insure the earliest possible publication of all past results on hand, and will give renewed energy to the future exertions of the oldest established English colonial observatory.

The forms adopted in the previous volume, for 1846 to 1850, have been strictly adhered to in the following pages, though in many respects not in accordance with my own views upon the subject. The English practice of leaving Nature's works unrecorded on Sundays and the adoption of Gottingen Mean Time for the commencement of the day, together, caused only six hours observations to be made on each Saturday, and after a break of twenty-four hours, thirteen more on Sunday (Madras Monday, A.M.). By the application of proper hourly corrections, the deduced means for each day might easily have been shewn; instead of which the Saturday mean results are omitted, and those given as for each Sunday are

made up of observations, partly on Saturday but chiefly on Monday. With a questionable view to lighten the labors of the observers in some years, five of the hourly observations were omitted during the night; but here again, instead of using the means of the nineteen readings actually made, with the proper hourly corrections duly applied, the missing hourly records were filled up by dubious interpolations. Days of imperfect or broken records, usually attributable to sudden illness or ceremonies incumbent upon the native observers, as for instance in the first week of 1851, were entirely omitted from the daily and monthly means. The results of the Force Observations should have been reduced to British, or better still to continental units, instead of being given as mere ratios; and lastly, there is too frequently a very needless display of decimals, far in excess of what the observations warranted; a weakness common to many similar scientific labors, elsewhere as well as at Madras.

THE DECLINATION MAGNETOMER.

The steel bar magnet employed was fifteen inches long, seven-eighths broad and a quarter of an inch thick. Its weight was 6713 grains, or when equipped with its scale, stirrup and lens, 8838 grains. It was suspended between two copper dampers, by twenty-four silk fibres; the distance between the bar and its point of suspension being about thirty-six inches. The Torsion Circle was four and a half inches in diameter. Reading telescopes and collimators were supplied with the magnetometers, but by some oversight the latter were used instead of the former, which unfortunately gave rise to the possibility of the vertical reading wire being changed, by the collimator being turned round one or more quadrants, which of course never could have occurred had the proper reading telescopes been employed. A thirty inch Transit Instrument, by Dollond, was used for finding the astronomical north, and an excellent eight inch Everest's theodolite, by T. Jones of London, placed midway between the Transit instrument and the Declinometer, gave the azimuth of the vertical wire of the reading telescope and hence the magnetic declination at any time desired. Four substantial brick piers, each about eight feet apart, supported these appliances nearly in a meridian line; the Transit instrument being most northward and the reading telescope of the Declinometer the southernmost of the four. All the Magnetometers bear the maker's name "Grubb, Dublin."

The observations of the Declination Magnetometer are printed, as read off, in tenths of the scale divisions; the daily means only being shewn in arc. A correction of + 7′ 6″ has been applied throughout, for the influence of the brick walls of the building. The details of this determination were given in Tables VI to XI of the previous volume. The adopted value of one division of the scale was determined on 26th April, 1847, *viz.*, 40″·30; that furnished by the Royal Society in the "*Report of the Committee of Physics*," page 23, being 40″·48. The adopted Zero of the Declinometer Scale throughout the five years was 1497, the mean of two determinations in March and December 1854.

INDUCTION INCLINOMETER.

No trace of this instrument remaining in the Observatory or in the recollection of any one now on the establishment, all that can be said concerning it is, that its readings have only been retained on Term Days and on the occasions of Disturbance Observations. The following brief description of it was given by Captain W. S. Jacob in the "*Introduction*" to the former volume.

"The instrument used is a small portable unifilar Magnetometer, with a cylindrical needle, a "quarter of an inch thick and three and a quarter inches in length, and two soft iron bars of three-"quarter inch thickness and nine inches length. The instrument appears inapplicable to these latitudes; "its changes appear to follow those of the Declinometer very closely, so that no certain deduction can be "derived from them."

HORIZONTAL FORCE MAGNETOMETER.

The instrument by which the hourly changes of the horizontal component of the earth's magnetic force was measured, was a bifilar magnetometer, with a steel bar, suspended by two silver wires, or more correctly, by a single wire a little over seventy-two inches in length, passing round a pulley 0·645 inch in diameter. By means of a four and a half inch torsion circle above, the magnetic bar was turned to point

nearly East and West, in which position its equilibrium would be maintained by two opposing forces; that of the earth's directive power, tending to bring it to the magnetic meridian; and that of gravity, which would compel it to rest in the direction of the two supporting points of the wire by which it hangs. The latter force is variable only by the slight alteration in the length of the wire, arising from a change of temperature which can be duly allowed for, while the former is altered by every change in the earth's directive magnetic force. At right angles to the magnetic bar, a small collimator is attached, the axis of which will therefore be the magnetic meridian, and every change in its direction indicated by the varied readings of its divided scale, as seen in a small fixed telescope, is readily convertible into corresponding changes of the earth's horizontal magnetic force, by means of well known formulæ, given in the Royal Society's "*Report of the Committee of Physics*," which have been strictly followed throughout and therefore need no repetition in this brief description of the instrument.

The records printed are, the hourly readings in tenths of the scale division on the upper half of each page, and the corresponding temperatures on the lower half. Temperature corrections are shewn for the mean daily readings and for the mean hourly readings for each month, and only these corrected means are reduced into the relative magnetic force changes represented by the expression $1 + \frac{\Delta X}{X}$

The value of one division of the scale furnished by the Royal Society was 64″74, or expresed in parts of radius, 0·0003139. Owing to the scale having been inverted throughout, increase of force is shewn by diminished readings of the instrument. The Fahrenheit's thermometer used read 0·°5 too high, and the adopted temperature correction was 3·3963 divisions for each degree. The value of the angle v, used during the five years, was 75° 15′ as found on June 30th, 1851; and the Zero of the scale, reduced to the standard temperature of 80°, was 1215.

Throughout the year 1846, and also in 1847 until October 19th, when the instruments were removed to the Astronomical Observatory, the angle v was always erroneously given 90° two great, at the top of each page in the former volume, but the correct value was fortunately used in the calculation of k.

VERTICAL FORCE MAGNETOMETER.

The Vertical Force Needle was of the ordinary construction and 13·5 inches in length. The Vertical Force results were never entitled to any confidence, especially before March 1st, 1853, when, for the first time, the needle was placed *nearly perpendicular to the magnetic meridian*, agreeably to the directions so clearly given in the Royal Society's "*Report*," page 32. Previously to that date it had been curiously misplaced, 45′ West of the magnetical meridian, instead of at right angles thereto.

The elements of reduction being given in full at the top of each page of the observations, it is needless to repeat them in a tabular form here. As stated at the foot of page 20, increasing readings shew a diminution of force. They are given in tenths of the micrometer divisions, and the temperatures of the thermometer inside also to tenths of a degree Fahrenheit, the daily mean temperatures being most needlessly extended to hundredths of a degree. Only monthly results of $\frac{\Delta Y}{Y}$ are shewn, for the purpose of giving the hourly variations from the monthly means.

DISTURBANCES OF THE MAGNETIC OBSERVATIONS.

Whenever any decided departure from the usual hourly variations of the instruments was noticed, readings of all four magnetometers were recorded at brief intervals of five minutes or less. These observations are separately given on pages 221 to 231.

MAGNETIC INCLINATION OR DIP.

The Dip Circle, ten inches in diameter, by Robinson, of London, was the same used by Captain Ludlow in the old Magnetic Observatory; a smaller circle, by the same maker, having been employed from 1846 to 1850. The observations were made on Tuesdays and Fridays, at $6\frac{1}{2}$ and $11\frac{1}{2}$ A.M., near the times of presumed maximum and minimum inclination at Madras. They were carefully taken and are entitled to consideration, though certainly not reliable to seconds of arc, as given in the printed results.

ABSOLUTE HORIZONTAL FORCE.

Determinations of the Absolute Horizontal Intensity were usually made near the end of each month, with an independent Declinometer, similar to the one before described, but placed in a detached building expressly for that purpose. The absurd detail of these observations and their reductions in the former volume was beyond endurance, and the printed results in this volume have been considerably abridged, though still carried out to a most unwarrantable extent of mere arithmetical display.

The magnet was of the same dimensions as that used in the other Declinometer. Its weight was stated to be 6727 grains up to 1854, July 27th; and g at Madras, 32·0984 feet. Hence log. k was 1·43745. The magnet was cleaned before the next observation in 1854, September 1st, and was then found to weigh only 6695 grains, which changed log. k to 1·43538.

The value of one division of the scale was 40″30.

The Torsion Factors $1+\frac{H}{F}$ employed were not shown in the calculations, but were mixed up with the scale value. Separating them therefrom, the following are the factors really used:—

1851 January 28	1·00023	1851 October 26	1·00041
1851 November 27	1·00030	1854 December 3	1·00053
1854 September 25	1·00035	1855 December 24	1·00037

With the aid of these constants, the observations and partial results printed on pages 234 to 238, can readily be converted into absolute determinations of X; which, however, simply expresses the ratio which that force bears to the *unit of force*. In the former volume this was only given as a ratio, and required to be multiplied by $\sqrt{g}$ to express it in British Units.

In the present volume, British Units (foot, grain, second) are used, though I have been strongly urged to adopt the continental units (centimetre, gramme, second) by two eminent magnetists to whose opinion I shall probably defer in the two remaining volumes. One of these, the still unpublished first, will contain the observations from 1841 to 1845; the fourth and last of the twenty year hourly series carried out at Madras, will be for the years 1856 to 1860.

The remaining tables, after page 239, require no remarks beyond my dissent from their needless detail. With rare exceptions, all the records and determinations were made by the native assistants, whose names and adopted initials, in this and the former volume, were as follows:—

C. Veerasawmy Pillay V	P. Bashiacarloo Naidoo .....B
C. Sashoo Iyengar .....S	T. Mootoosawmy Pillay .....M
R. Ramanajooloo Naidoo. .....R R	G. Veerasawmy Naidoo .....G V
C. Ragoonatha Chary .....R	C. Varadaya Naidoo .....C V
M. Christnama Chary.....M C	

Of the successive Directors of the Magnetical Observations, *viz.*, Colonel S. O. E. Ludlow, Mad. Eng.; T. G. Taylor, Esq., H. C. Astronomer; J. J. Franklin, Esq., Superintendent of Marine; Captain W. S. Jacob, Bom. Eng.; Major General W. K. Worster, Mad. Art., and Major General J. F. Tennant, R. E., who was in charge in 1860, only the last survives. The six first native assistants in the list are all dead, and the last three, though still living, are incapacitated and oblivious of the past. The difficulty of publishing arrears of scientific observations, when not one concerned in them can be consulted, is very serious, and must be accepted as an apology for all shortcomings in the present volume.

N. R. POGSON,

Government Astronomer.

MADRAS, 1851.

MAGNETICAL OBSERVATIONS.

LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

$\alpha.\left(1+\frac{H}{F}\right)=4'.03\times1.000385=4'.03155$. $\alpha+7'.06=\rho=0°.42'.37''.2+0°.7'.06''=0°.49'.43''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JANUARY 1851. Declination Magnetometer.

Gottingen Mean Time.	Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 6.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 15.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41		
	s.d.t.	s.d.t.	s.d.t.	s.d.t. 1.6 *	s.d.t.	s.d.t. -0.4 *	s.d.t.	s.d.t. 0.4 *	s.d.t.	s.d.t. 0.4 *	s.d.t.	s.d.t. 0.6 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	Arc. ° ′ ″
† 1	1628	1620	1634		1632		1627		1642				1630	1620	1610	1610	1620		1620		1607		1622			
† 2	629		627		626		630		630				620		620		637		634		622		630			
† 3	631		622		622		626		630				620		613		630		647		620		621			
† 4	639		626		623		625		627	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
† 5	—	—	—	—	—	—	—	—	—				625		627		632		640		632		642			
† 6	643		628		631		627		630				623		623		640		648		629		635			
7	643	636	632	632	628	625	623	624	624	625	626	624	620	617	618	617	620	630	632	620	616	605	610	622	624	0 58 15
8	629	624	623	628	630	625	621	623	624	622	620	620	618	617	620	630	640	640	640	614	608	606	612	628	623	58 11
9	637	628	624	629	630	632	634	632	630	630	630	628	624	624	625	610	620	635	635	630	610	604	613	619	626	58 23
10	630	627	626	630	631	630	630	631	631	631	630	629	627	624	628	624	630	640	620	610	606	589	600	618	624	58 15
11	630	628	628	631	630	629	629	627	625	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	623	620	621	620	616	615	620	640	632	623	611	602	590	600	612	621	58 03
13	623	630	632	636	637	635	634	634	634	635	635	633	630	623	623	630	655	662	660	642	637	639	626	630	636	59 04
14	634	630	630	633	633	637	642	644	645	642	638	633	626	630	630	630	648	666	652	631	618	624	620	623	635	58 59
15	622	626	634	637	637	637	638	636	634	637	639	640	640	630	630	626	640	652	655	645	640	639	630	640	637	59 08
16	642	635	640	642	640	640	640	653	666	666	666	665	662	659	640	640	637	639	629	630	628	634	639	643	645	59 40
17	642	638	639	643	644	644	644	642	640	639	638	635	631	628	627	625	635	645	646	638	640	648	638	639	639	59 16
18	650	644	644	645	642	639	636	636	636	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	628	620	626	630	610	606	614	655	670	665	612	604	619	619	640	633	58 51
20	650	652	644	655	662	656	651	647	643	644	645	643	640	636	639	642	648	652	640	615	619	628	624	626	642	59 28
21	625	628	637	637	633	635	638	642	645	647	649	642	633	630	640	650	680	673	660	650	640	630	640	645	643	59 32
22	641	630	635	638	638	637	636	638	639	641	642	643	643	642	641	640	650	644	623	610	614	602	610	630	634	58 55
23	640	631	636	635	631	634	637	639	640	636	632	627	620	620	628	638	655	666	657	642	632	626	620	637	636	59 04
24	639	630	631	635	636	635	635	635	635	633	630	627	623	628	632	650	675	670	642	618	610	615	619	630	634	58 55
25	634	623	626	629	629	628	627	628	628	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	628	628	627	625	625	630	628	645	645	620	602	601	610	610	607	624	58 15
27	612	622	629	633	633	630	628	626	624	624	623	620	616	610	607	620	645	650	630	628	628	634	635	625	626	58 23
28	622	620	621	622	620	618	617	617	617	618	618	615	610	610	612	614	640	648	630	612	611	616	613	620	619	57 55
29	623	622	622	628	630	625	620	621	621	619	616	614	610	613	613	625	646	650	644	631	617	612	616	624	623	58 11
30	631	630	628	627	623	622	622	627	632	628	624	620	615	612	613	625	642	640	618	608	593	608	612	612	621	58 03
31	615	612	613	618	620	618	617	611	605	609	613	612	610	610	611	620	646	669	656	629	612	620	634	642	622	58 07
Means	1632	629	631	634	633	631	631	632	633	631	631	629	626	623	624	627	645	651	637	624	618	618	620	628	1630	
Declination	58′ 47″	58 35	58 43	58 55	58 51	58 43	58 43	58 47	58 51	58 43	58 43	58 35	58 23	58 11	58 15	58 27	59 40	60 04	59 08	58 15	57 51	57 51	57 59	58 31		
Mean Hourly Variations from General Monthly Mean.	8″	−4	04	16	12	4	4	8	12	4	04	−4	−16	−28	−24	−12	61	85	29	−24	−48	−48	−40	−8		0 58 39

FEBRUARY 1851. Declination Magnetometer.

				−0.2 *		−0.7 *		0.5 *		0.0 *		0.1 *														° ′ ″
1	1638	1630	1626	1626	1627	1626	1627	1630	1631	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	—	—	—	—	—	—	—	—	—	1625	1620	1616	1612	1610	1602	1600	1620	1635	1618	1629	1631	1612	1630	1639	1623	0 58 11
3	640	620	619	623	627	624	623	622	620	620	620	617	614	608	602	606	622	618	620	632	635	640	650	650	624	58 15
4	635	620	620	622	624	622	622	623	623	621	620	620	620	613	610	608	620	627	619	619	613	622	640	655	622	58 07
5	650	633	623	624	625	623	623	622	620	619	618	615	613	607	603	622	628	630	620	613	604	591	608	620	619	57 55
6	630	620	619	625	632	630	629	629	627	624	622	621	620	612	612	622	620	628	621	604	608	619	630	640	623	58 11
7	640	623	620	622	624	622	622	623	622	621	620	620	620	621	610	600	612	619	620	609	606	600	610	623	618	57 51
8	632	630	622	623	625	623	622	623	623	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	631	640	641	643	637	630	620	610	610	610	592	589	600	610	618	621	58 03
10	623	613	618	617	616	617	619	622	623	626	630	635	640	633	625	632	637	626	625	622	624	622	622	622	625	58 19
11	622	620	619	620	621	620	620	627	632	633	634	627	621	618	630	628	625	628	630	625	628	636	640	640	627	58 27
12	638	630	628	626	624	624	626	629	630	630	630	628	627	623	629	637	633	628	631	624	628	636	650	640	630	58 39
13	630	623	624	624	625	627	630	631	630	630	630	628	627	628	620	622	628	626	617	614	613	622	635	647	626	58 23
14	636	620	620	622	624	624	626	628	628	629	630	629	628	621	628	620	619	617	619	624	628	646	653	657	628	58 31
15	640	622	620	620	621	622	624	628	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	630	630	627	625	622	622	619	620	622	632	639	648	653	655	655	630	58 39
17	650	630	627	625	623	622	622	625	627	626	625	626	627	622	620	618	619	621	631	640	651	656	657	658	631	58 43
18	650	632	625	625	625	626	629	631	631	633	635	632	630	627	629	618	620	640	639	648	655	657	650	647	635	58 59
19	650	653	647	642	638	639	641	641	640	645	650	648	647	641	642	640	639	630	630	631	629	633	638	641	641	59 24
20	636	630	634	628	623	626	631	634	635	637	640	636	633	629	639	640	639	640	640	640	647	642	640	643	636	59 04
21	639	625	626	627	628	627	628	630	630	629	629	626	623	620	623	628	622	623	629	623	629	636	645	654	629	58 35
22	649	630	628	627	627	627	629	631	632	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	631	630	629	629	631	631	630	628	625	628	627	628	629	635	650	631	58 43
24	642	630	629	633	638	638	639	637	633	631	630	630	630	632	629	632	642	640	641	637	639	640	641	648	636	59 04
25	640	635	630	629	629	631	635	633	630	632	634	630	626	628	630	635	642	648	641	639	645	642	640	643	635	58 59
26	640	625	623	625	628	628	630	631	630	629	629	625	622	621	628	631	640	633	628	631	639	645	646	638	631	58 43
27	632	632	627	628	630	628	628	630	630	627	625	623	622	623	628	629	635	633	629	632	640	640	640	636	630	58 39
28	629	620	622	624	627	628	630	631	630	626	622	621	620	620	625	631	650	648	656	657	649	651	656	645	634	58 55
29																										
30																										
31																										
Means	1638	627	625	625	626	626	627	629	629	629	629	627	626	623	623	624	628	629	628	627	630	632	638	642	1629	
Declination	59′ 12″	58 27	58 19	58 19	58 23	58 23	58 27	58 35	58 35	58 35	58 35	58 27	58 23	58 11	58 11	58 15	58 31	58 35	58 31	58 27	58 39	58 47	59 12	59 28		
Mean Hourly Variations from General Monthly Mean.	38	−7	−15	−15	−11	−11	−7	1	1	1	1	−7	−11	−23	−23	−19	−3	1	−3	−7	5	13	38	54		0 58 34

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily means and those numbers on the heads of them are the corrections of interpolations

† The observations from 1st to 6th are rejected from the hourly and daily Means.

$a\left(1+\frac{H}{T}\right)=4'03\times 1{\cdot}000385=4'03155$ $\quad a+7'06''=\rho=0°\,42'\,37''{\cdot}2+0°\,7'\,06''=0°\,49'\,43''{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MARCH 1851. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 6.41	h.m. 7.41	h.m. 8.41.	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m 2.41	h.m 341		
	s.d.t.	s.d.t.	s.d.t.	s.d.t. -1.3 *	s.d.t.	s.d.t. -0.5 *	s.d.t.	s.d.t. 0.1 *	s.d.t.	s.d.t. 0.6 *	s.d.t.	s.d.t. 0.0 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s. d. l.	Arc. ° ′ ″
1	1640	1634	1630	1627	1628	1628	1630	1635	1640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1634	0 58 55
2	—	—	—	—	—	—	—	—	—	1641	1640	1640	1640	1644	1649	1640	1637	1633	1619	1621	1622	1619	1630	1640	631	58 43
3	635	634	623	621	623	625	629	1630	630	631	631	628	626	627	618	616	628	638	632	630	639	650	655	654	629	58 35
4	648	628	622	621	623	625	629	630	630	631	630	627	625	626	633	631	640	645	635	618	609	619	630	640	631	58 43
5	640	630	623	623	627	627	628	629	630	631	630	627	625	624	636	538	638	639	632	623	628	627	640	650	629	58 35
6	649	635	628	624	623	622	622	624	625	624	622	623	624	626	630	630	640	643	632	627	627	624	632	638	628	58 31
7	639	628	623	624	628	625	622	625	628	628	627	626	626	631	630	637	640	640	640	632	618	615	620	630	632	58 47
8	629	629	622	624	629	629	630	630	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	640	59 20
9	—	—	—	—	—	—	—	—	—	636	640	639	639	638	632	634	631	630	630	622	628	630	640	645	642	59 28
10	640	635	638	636	638	638	638	644	650	647	642	641	640	638	645	650	640	640	640	628	624	630	642	648	632	58 47
11	653	649	638	636	637	639	642	645	648	650	650	647	645	652	660	650	640	630	630	630	626	621	637	650	631	58 43
12	642	633	631	635	643	642	642	642	642	642	640	639	639	641	650	655	650	650	640	635	623	630	638	637	627	58 31
13	630	627	632	634	639	639	640	640	640	641	640	639	638	636	640	644	645	650	647	634	634	629	632	638	634	58 27
14	634	628	628	631	637	638	640	640	640	645	648	645	642	639	640	640	622	620	620	612	610	620	632	639	633	58 51
15	651	648	639	639	642	640	639	640	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	641	59 24
16	—	—	—	—	—	—	—	—	—	636	630	632	634	631	646	657	668	665	652	637	621	623	633	643	632	58 47
17	646	635	632	628	630	630	630	632	634	634	633	632	632	636	640	650	657	650	640	612	600	600	615	633	631	58 43
18	632	629	623	623	627	628	630	630	630	631	630	629	629	631	635	635	640	640	635	632	628	622	640	643	627	58 27
19	637	630	628	626	628	626	624	627	630	631	630	630	630	629	630	634	640	638	627	611	602	612	620	628	634	58 55
20	630	625	620	623	630	630	630	639	647	647	646	643	641	642	645	650	650	652	641	622	613	610	615	632	630	58 39
21	633	627	622	620	622	622	623	627	630	631	630	630	630	627	635	640	650	660	645	630	618	612	623	630	628	58 47
22	628	633	628	628	632	631	630	630	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	632	58 47
23	—	—	—	—	—	—	—	—	—	336	640	635	630	629	630	634	645	650	650	637	620	613	620	630	633	58 51
24	630	632	629	630	635	635	635	638	641	639	636	635	635	633	635	642	653	645	635	620	614	614	623	635	640	59 20
25	638	632	629	629	633	632	631	632	633	632	630	632	634	630	640	654	670	680	677	659	640	630	632	635	633	58 51
26	634	630	632	630	632	632	632	631	630	632	632	632	632	630	645	650	650	652	645	630	612	611	620	630	631	58 43
27	630	628	622	622	625	623	622	626	630	632	632	630	629	630	641	649	655	653	651	637	617	613	615	628	633	58 51
28	630	633	629	624	623	626	630	634	638	637	635	635	636	633	645	653	648	647	635	612	607	624	638	636	641	59 24
29	640	629	632	631	634	634	635	635	635	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	642	59 28
30	—	—	—	—	—	—	—	—	—	642	647	646	645	643	646	650	654	655	650	633	630	633	650	657		
31	650	640	638	638	642	645	648	649	649	647	644	644	644	637	640	642	650	660	656	632	618	620	937	646		
Means.....	1638	632	628	628	631	631	632	634	636	637	636	635	634	634	639	642	645	646	640	628	620	621	631	639	1634	
Declination	′ ″ 58 13	′ ″ 58 47	′ ″ 58 31	′ ″ 58 31	′ ″ 58 43	′ ″ 58 43	′ ″ 58 47	′ ″ 58 55	′ ″ 59 04	′ ″ 59 08	′ ″ 59 04	′ ″ 58 59	′ ″ 58 55	′ ″ 58 55	′ ″ 59 16	′ ″ 59 28	′ ″ 59 40	′ ″ 59 44	′ ″ 59 20	′ ″ 58 31	′ ″ 57 59	′ ″ 58 03	′ ″ 58 43	′ ″ 59 16		
Mean Hourly Variations from General Monthly Mean.	″ 16	″ -9	″ -25	″ -25	″ -13	″ -13	″ -9	″ -1	″ 8	″ 12	″ 8	″ 3	″ -1	″ -1	″ 20	″ 32	″ 44	″ 48	″ 24	″ -25	″ -57	″ -53	″ -13	″ 20		0 58 56

APRIL 1851. Declination Magnetometer.

				—1.1 *		—0.7 *	—0.6 *		—1.1 *	—0.1 *																
1	1648	1638	1636	1635	1636	1636	1637	1639	1642	1645	1645	1642	1640	1648	1652	1654	1649	1638	1622	1600	1598	1600	1623	1634	1635	° ′ ″ 0 58 59
2	634	630	627	628	632	633	636	637	640	641	640	639	638	638	645	641	639	631	618	611	610	618	630	640	632	58 47
3	638	630	628	626	626	630	635	637	640	641	640	639	638	642	648	650	642	630	614	592	590	603	605	617	628	58 31
4	618	615	617	617	620	623	628	628	630	632	632	628	624	626	640	642	638	640	630	610	611	603	607	616	624	58 15
5	628	628	622	622	625	635	647	648	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	646	640	638	636	638	659	668	672	672	658	638	620	618	630	630	640	59 20
7	627	626	628	627	628	633	640	637	636	638	637	634	632	622	631	639	643	657	641	628	618	622	623	620	632	58 47
8	618	617	622	621	622	625	630	629	630	631	630	626	623	627	632	639	631	630	610	589	578	580	596	606	618	57 51
9	612	618	621	620	622	624	628	628	630	631	630	630	630	623	640	650	650	650	638	611	609	615	628	637	628	58 31
10	639	637	632	631	633	636	640	639	640	641	640	638	636	636	646	655	650	643	620	598	580	584	600	620	630	58 39
11	632	630	628	622	618	621	625	627	630	631	630	627	624	621	650	655	654	655	632	620	620	621	626	628	630	58 39
12	630	630	628	624	622	625	630	629	629	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	635	639	637	636	641	660	673	671	661	633	610	602	603	608	620	632	58 47
14	635	639	630	628	628	630	634	635	637	638	637	634	632	632	652	660	653	645	632	615	600	599	616	638	632	58 47
15	650	650	639	632	628	632	637	638	640	640	637	633	630	630	648	653	659	660	632	602	593	595	608	620	633	58 51
16	630	629	620	622	626	632	640	641	643	643	640	638	636	623	642	650	663	663	650	612	593	600	605	623	632	58 47
17	638	640	633	633	636	642	650	649	650	644	636	627	619	620	646	653	658	639	617	600	600	605	612	624	632	58 47
18	640	642	640	634	630	634	640	640	642	642	640	636	632	632	641	648	648	647	633	616	601	603	613	620	633	58 51
19	633	637	642	637	634	636	640	641	643	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	648	650	649	648	640	650	661	662	653	642	630	621	620	628	632	641	59 24
21	647	648	645	649	655	650	647	643	640	640	638	639	640	648	657	650	639	638	640	628	620	622	632	640	641	59 24
22	637	642	647	640	635	636	638	635	633	634	633	633	633	638	648	656	652	640	638	628	608	603	610	620	634	58 55
23	630	643	647	637	630	634	640	642	645	649	650	648	647	645	663	662	656	648	630	632	630	636	641	640	643	59 32
24	646	648	648	642	638	638	640	639	640	642	642	645	649	651	660	662	654	650	639	628	628	626	630	633	642	59 28
25	638	636	640	641	645	642	640	645	652	654	654	650	646	652	668	668	650	640	634	620	610	611	628	631	641	59 24
26	634	636	635	635	638	638	640	641	644	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	656	666	658	650	653	650	642	648	632	620	612	605	614	625	631	638	59 12
28	636	634	636	635	636	638	642	650	660	658	653	651	650	659	672	677	678	670	650	630	625	622	623	634	647	59 48
29	634	640	633	634	637	638	640	639	640	645	648	645	643	643	661	672	685	690	672	638	630	638	640	643	647	59 48
30	643	648	642	637	635	637	640	643	647	645	640	641	642	646	662	662	670	655	637	620	616	629	642	646	643	59 32
31																										
Means.....	1634	635	633	631	631	634	638	638	640	642	641	639	637	637	651	655	654	649	634	616	608	611	620	629	1635	
Declination	′ ″ 58 55	′ ″ 58 59	′ ″ 58 51	′ ″ 58 43	′ ″ 58 43	′ ″ 58 55	′ ″ 59 12	′ ″ 59 12	′ ″ 59 20	′ ″ 59 28	′ ″ 59 21	′ ″ 59 16	′ ″ 59 08	′ ″ 59 08	′ ″ 59 04	′ ″ 59 20	′ ″ 59 16	′ ″ 59 22	′ ″ 58 55	′ ″ 57 43	′ ″ 57 11	′ ″ 57 23	′ ″ 57 59	′ ″ 58 35		
Mean Hourly Variations from General Monthly Mean.	″ -4	″ 0	″ -8	″ -16	″ -16	″ -4	″ 13	″ 13	″ 21	″ 29	″ 25	″ 17	″ 9	″ 9	″ 65	″ 81	″ 77	″ 57	″ -4	″ -76	″ -108	″ -96	″ -60	″ -24		0 58 59

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily means, and those numbers on the heads of them are the corrections of interpolations.

$a\left(1+\frac{H}{T}\right) = 4''\cdot03 + 1\cdot000385 = 4''\cdot03155$. $a + 7''\cdot06 = \rho = 0°\,42'\,37''\cdot2 + 0°\,7'\,06'' = 0°\,49'\,43''\cdot2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MAY 1851. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41.	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41		
	s.d.t.	s.d.t.	s.d.t.	s.d.t. −1.6 *	s.d.t.	s.d.t. 0.6 *	s.d.t.	s.d.t. −0.4 *	s.d.t.	s.d.t. 0.5 *	s.d.t.	s.d.t. −0.4 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	Arc.
1	1640	1640	1630	1627	1627	1629	1629	1635	1642	1642	1641	1641	1641	1650	1670	1670	1660	1650	1650	1650	1638	1635	1631	1635	1642	0° 59′ 28″
2	640	648	661	647	636	639	640	645	650	650	649	656	664	662	668	680	678	658	640	628	622	625	630	648	648	59 52
3	660	660	643	640	640	645	648	649	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	654	657	653	650	645	668	682	691	672	660	648	634	632	642	648	653	60 12
5	648	651	650	646	646	654	660	661	662	671	678	666	655	655	678	680	668	660	650	640	632	632	632	633	654	60 16
6	644	650	650	647	647	646	643	647	652	653	652	655	658	656	676	680	666	647	628	618	610	620	630	641	646	59 44
7	650	653	651	649	650	651	651	650	650	651	651	649	648	661	670	662	658	639	620	610	614	631	650	660	647	59 48
8	670	673	665	661	660	658	655	653	651	652	651	651	652	661	668	667	650	630	610	615	622	640	648	640	650	60 00
9	648	648	647	642	640	640	639	647	656	659	661	654	648	649	666	680	673	660	645	630	620	630	642	642	649	59 56
10	650	652	650	645	643	647	649	650	651	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	653	653	651	650	649	670	680	667	650	630	610	609	600	601	610	642	59 28
12	621	633	636	634	635	640	643	647	652	652	650	646	643	645	668	680	670	640	620	600	604	606	603	612	637	59 08
13	626	636	636	635	637	640	642	646	650	651	650	648	646	655	678	673	670	647	624	622	628	630	630	632	643	59 32
14	630	632	632	631	633	638	641	642	644	647	649	646	644	652	681	690	680	649	620	610	600	607	617	628	639	59 16
15	644	648	637	636	638	640	640	640	640	641	641	641	642	651	670	673	670	650	634	612	602	609	618	621	639	59 16
16	618	630	620	622	627	630	632	637	642	643	642	639	638	635	654	670	660	640	630	618	614	612	637	640	635	58 59
17	649	652	652	648	647	646	644	643	642	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	647	651	653	655	653	668	666	651	642	637	627	620	622	636	644	646	59 44
19	650	648	640	639	642	644	645	646	648	650	650	645	641	637	649	655	659	650	637	620	625	630	638	640	643	59 32
20	654	652	650	646	645	644	642	642	643	645	645	645	645	653	667	677	674	657	640	640	646	644	640	650	649	59 56
21	652	650	642	638	637	639	640	643	647	646	643	644	646	640	651	650	645	632	624	628	630	630	634	648	641	59 24
22	656	659	650	645	643	644	643	645	648	650	651	651	652	660	667	660	660	647	630	618	612	622	642	653	646	59 44
23	655	650	650	644	642	645	647	648	650	651	650	650	650	655	662	665	662	658	651	642	626	621	638	635	648	59 52
24	642	640	635	631	630	634	637	639	641	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	651	659	654	649	655	677	670	660	648	630	626	624	621	633	640	643	59 32
†26	640	630	635	632	633	636	637	641	645	644	642	642	642	650	670	673	662	—	—	—	—	—	—	—	?	
†27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	596	603	617	628	?	
28	632	638	629	623	620	621	620	621	622	626	629	630	632	641	655	663	650	620	600	580	580	590	592	602	621	58 03
29	617	628	622	618	618	621	622	623	625	628	630	629	628	638	660	660	652	630	603	590	587	601	619	638	624	58 15
30	640	630	624	619	618	620	621	624	628	634	639	634	630	629	644	653	659	652	630	610	601	608	619	630	629	58 35
31																										
Means	1643	646	642	638	638	640	641	643	645	648	649	647	646	649	666	670	664	647	631	620	617	621	629	637	1642	
Declination	59 32	59 44	59 28	59 12	59 12	59 20	59 24	59 32	59 40	59 52	59 56	59 48	59 44	59 56	61 04	61 21	60 56	59 48	58 43	57 59	57 47	58 03	58 35	59 08		
Mean Hourly Variations from General Monthly Mean	3	15	-1	-17	-17	-9	-5	3	11	23	27	19	15	27	95	112	87	19	-46	-90	-102	-86	-54	-21		0 59 29

JUNE 1851. Declination Magnetometer.

				−2.4 *		0.1 *		0.2 *		0.4 *		0.9 *														
May 31	1630	1627	1624	1620	1620	1623	1625	1627	1629	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1629	1628	1623	1620	1635	1654	1670	1658	1640	1612	1588	1582	1588	1593	1602	1623	0° 58′ 11″
2	618	620	617	611	620	620	620	619	618	623	628	624	622	630	648	640	639	633	619	588	578	590	583	589	617	57 47
3	600	607	610	605	605	608	611	616	620	623	625	625	626	632	642	658	651	640	620	602	610	595	586	600	617	57 47
4	607	613	618	612	610	611	612	615	618	621	623	621	620	625	638	640	648	640	625	610	584	576	580	589	615	57 39
5	598	611	608	607	610	611	611	624	636	640	644	636	630	640	660	668	662	633	610	590	588	595	600	610	622	58 07
6	615	620	618	611	608	611	613	618	623	625	627	623	620	622	642	650	648	632	616	610	600	596	604	621	620	57 59
7	630	625	617	612	612	615	618	620	621	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	620	618	614	612	630	650	660	640	610	594	600	588	590	610	612	617	57 47
9	618	615	620	615	615	612	608	616	623	626	629	629	630	634	652	670	659	628	605	590	584	592	604	616	620	57 59
10	620	617	612	609	610	607	604	608	611	612	613	615	618	622	648	650	645	632	610	588	586	592	600	615	614	57 35
11	620	620	616	606	600	605	609	608	607	610	613	611	610	622	650	650	630	598	582	580	562	572	590	605	607	57 07
12	620	627	622	616	615	613	611	612	612	612	612	610	610	620	635	642	642	634	620	616	610	611	625	625	620	57 59
13	620	620	617	611	610	610	610	610	610	610	609	609	610	610	637	640	630	630	610	600	590	593	612	637	614	57 35
14	643	634	621	618	620	617	614	616	617	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	619	621	620	620	630	640	640	630	620	610	600	580	578	592	610	617	57 47
16	621	626	622	621	625	629	633	637	640	635	630	629	630	637	657	655	647	621	590	585	580	573	575	581	620	57 59
17	600	610	624	621	622	622	622	621	620	622	624	621	620	630	651	658	651	640	629	619	602	609	607	618	623	58 11
18	627	623	620	616	617	618	619	621	623	626	628	625	623	630	650	658	649	634	612	598	589	580	581	594	619	57 55
19	612	622	635	626	622	621	620	622	624	626	627	627	628	633	647	640	629	618	600	580	574	586	590	600	617	57 47
20	618	620	623	619	620	621	621	621	620	623	626	627	630	637	650	655	640	620	601	591	583	602	612	610	620	57 59
21	610	608	609	604	604	607	610	616	622	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	623	624	621	620	623	643	647	638	637	618	614	604	600	611	617	618	57 51
23	635	636	627	619	615	619	622	626	630	630	630	629	629	640	660	668	643	620	600	590	590	605	611	630	625	58 19
24	629	622	618	617	621	625	628	633	637	635	632	631	631	638	659	658	650	640	622	622	622	620	620	628	631	58 43
25	640	637	627	622	621	623	624	625	625	629	632	630	630	649	669	671	665	650	640	620	610	618	620	626	633	58 51
26	625	627	613	613	617	619	620	626	631	635	639	643	648	657	671	668	650	629	612	600	600	610	612	622	629	58 35
27	632	626	617	620	627	625	623	629	635	638	640	642	646	658	680	680	670	647	620	602	589	597	615	628	633	58 51
28	630	630	622	620	622	627	632	633	633	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	633	632	635	640	644	669	677	650	646	590	570	565	580	598	613	625	58 19
30	620	622	617	617	622	625	628	632	635	634	632	634	638	650	670	676	650	625	592	578	569	581	599	610	623	58 11
31																										
Means	1621	622	619	615	616	617	618	621	624	625	626	625	625	634	653	657	647	631	610	597	589	593	601	612	1621	
Declination	58 03	58 07	57 55	57 39	57 43	57 47	57 51	58 03	58 15	58 19	58 23	58 19	58 19	58 55	60 12	60 28	59 48	58 43	57 19	56 26	55 54	56 10	56 42	57 27		
Mean Hourly Variations from General Monthly Mean	1	5	-7	-23	-19	-15	-11	1	13	17	21	17	17	53	130	146	106	41	-43	-96	-128	-112	-80	-35		0 58 02

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations

† The observations of 26th and 27th are rejected from the hourly and daily means,

$a\left(1+\frac{H}{F}\right) = 4'.03 + 1000385 = 4.03155$ $\quad a + 7'.6 = \rho = 0°.42'.37''.2 + 0°.7'.6 = 0°.49'.43''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JULY 1851. Declination Magnetometer.

Gottingen. Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 5.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41		
	s.d.t.	s.d.t.	s.d.t.	s.d.t. −1.4 *	s.d.t.	s.d.t. 0·0 *	s.d.t.	s.d.t. −0·2 *	s.d.t.	s.d.t. 0·9 *	s.d.t.	s.d.t. −0·8 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.		*Arc.*
1	1617	1628	1622	1621	1622	1625	1629	1631	1634	1638	1640	1639	1640	1650	1684	1699	1689	1655	1625	1592	1580	1580	1598	1608	1631	° ′ ″ 0 58 43
2	618	619	618	614	612	615	619	619	620	631	640	639	640	647	665	667	664	647	630	612	612	625	611	612	629	58 35
3	618	620	617	617	620	621	622	631	640	646	650	652	655	650	680	692	680	650	624	594	590	601	602	612	633	58 51
4	619	630	626	622	621	623	626	629	632	637	640	639	640	633	660	672	680	662	640	595	589	590	604	621	630	58 39
5	625	630	634	630	628	628	628	628	628	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	637	645	642	640	635	655	667	657	644	620	590	562	590	608	622	629	58 35
7	628	631	629	623	620	621	622	623	625	633	640	639	640	640	662	660	657	635	615	588	589	592	608	614	626	58 23
8	625	628	624	620	619	620	621	622	623	627	630	630	632	640	663	670	660	640	620	610	590	592	602	618	626	58 23
9	630	632	623	621	622	626	631	631	632	634	635	635	637	640	650	647	646	640	622	602	602	622	620	628	630	58 39
10	632	639	628	622	619	621	623	623	623	630	635	637	640	645	669	654	637	620	602	583	572	592	617	632	625	58 19
11	637	632	621	619	620	625	630	628	627	630	632	630	630	640	660	660	648	635	622	602	598	610	620	640	629	58 35
12	650	655	633	626	622	624	627	628	629	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	635	640	642	645	647	670	670	659	650	643	628	620	612	612	630	637	59 08
14	638	638	640	636	635	635	636	637	639	645	650	652	656	662	690	683	660	653	638	630	625	620	630	646	645	59 40
15	650	648	651	647	645	647	650	650	650	656	860	657	655	665	689	690	666	646	630	630	633	622	617	618	649	59 56
16	630	638	641	639	639	642	645	647	649	652	653	656	660	660	680	705	698	680	650	633	620	600	607	625	648	59 52
17	630	639	638	634	632	637	642	646	650	651	650	648	647	650	677	688	690	680	660	642	628	603	602	610	645	59 40
18	630	643	650	644	640	640	640	641	642	649	655	652	650	655	661	669	660	660	660	635	622	603	610	617	643	59 32
19	632	638	642	641	642	641	640	644	648	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	650	650	649	650	650	663	673	660	640	622	620	622	617	630	637	642	59 28
21	643	650	652	645	641	639	638	637	637	644	650	649	650	655	676	688	688	680	660	643	630	633	636	645	650	1 00 00
22	642	643	650	646	644	646	649	649	650	651	650	649	650	657	670	668	660	660	662	648	635	632	634	647	650	00 00
23	655	655	659	653	649	648	648	645	643	647	650	649	650	659	680	678	670	654	636	630	620	629	640	643	650	00 00
24	646	643	640	638	638	640	642	647	653	653	652	655	660	670	690	690	670	650	632	630	630	633	629	645	649	0 59 56
25	655	653	640	636	635	638	642	648	655	653	650	649	650	668	688	678	658	640	628	607	603	610	618	630	643	59 32
26	640	647	648	644	642	642	642	645	649	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	650	650	652	655	668	690	688	679	660	624	600	604	618	628	632	646	59 44
28	636	639	636	633	632	633	635	637	640	642	643	643	645	655	679	685	674	650	640	605	592	588	610	618	637	59 08
29	640	635	630	633	639	640	642	646	650	654	657	658	660	660	678	680	677	668	640	614	593	593	604	617	642	59 28
30	627	633	640	638	638	639	640	644	648	652	655	652	650	660	678	680	670	650	640	614	613	608	619	630	642	59 28
31	645	649	643	637	634	636	638	640	642	647	650	649	650	655	677	680	670	660	641	621	630	609	610	610	643	59 32
Means.....	1635	638	636	633	631	633	635	637	639	643	646	646	647	652	673	677	668	652	634	615	608	608	616	626	1639	
Declination.....	58 59	59 12	59 04	58 51	58 43	58 51	58 59	59 08	59 16	59 32	59 44	59 44	59 48	60 08	61 33	61 49	61 12	60 08	58 65	67 39	67 11	57 11	67 43	58 23		
Mean Hourly Variations from General Month-ly Mean.....	-15	-2	-10	-23	-31	-23	-15	-6	2	18	30	30	34	54	139	155	118	54	-19	-95	-123	-123	-91	-51		° ′ ″ 0 59 14

AUGUST 1851. Declination Magnetometer.

				−1·1 *		−9·9 *		−0·6 *		0·2 *		−0·2 *														
1	1613	1618	1634	1632	1632	1623	1633	1636	1640	1642	1643	1642	1642	1650	1670	1674	1667	1657	1640	1629	1620	1618	1619	1628	1638	° ′ ″ 0 59 12
2	632	634	632	629	629	621	632	633	636	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
3	—	—	—	—	—	—	—	—	—	638	640	640	640	645	663	672	666	650	630	616	626	620	623	642	637	59 08
4	650	640	643	638	635	627	638	638	640	645	650	650	650	653	661	665	662	650	626	621	610	613	618	623	639	59 16
5	538	642	644	641	641	631	641	641	642	646	650	650	650	650	662	662	657	645	630	620	617	630	630	640	642	59 28
6	637	631	645	644	645	633	641	644	648	649	650	649	648	650	660	671	658	637	628	617	619	623	628	638	641	59 24
7	647	650	636	638	642	636	650	648	648	652	655	660	665	668	684	682	672	650	640	630	637	637	649	655	651	1 00 04
8	658	657	663	655	650	640	650	652	656	659	662	660	658	664	679	680	664	646	634	620	627	640	657	660	654	00 16
9	667	662	655	652	651	641	650	653	657	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	659	660	659	658	670	684	682	675	643	630	630	617	630	643	657	654	00 16
11	660	665	665	654	646	639	651	655	661	662	663	665	667	682	706	707	690	666	650	643	650	663	670	667	664	00 56
12	663	658	650	651	655	648	660	663	668	669	670	670	670	677	694	692	672	658	647	640	650	658	660	663	663	00 52
13	664	660	665	665	668	658	667	669	672	674	675	679	683	687	698	686	680	656	636	616	607	620	638	658	662	00 48
14	660	667	668	663	660	651	662	665	670	672	673	674	675	680	701	708	680	650	630	625	622	633	650	651	662	00 48
15	658	656	664	661	660	651	661	663	667	669	670	670	670	670	688	703	704	688	660	649	643	642	644	652	665	01 00
16	659	660	656	656	659	651	662	661	661	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
17	—	—	—	—	—	—	—	—	—	666	670	671	673	680	695	700	699	687	665	648	646	632	646	668	665	01 00
18	676	670	662	665	670	657	664	666	670	670	670	670	670	676	688	693	677	660	640	623	623	621	630	644	661	00 44
19	655	668	672	670	670	660	669	674	680	680	680	678	677	680	702	710	711	687	684	665	658	645	645	643	673	01 33
20																										
21																										
22																										
23																										
24										Thread broken.																
25																										
26																										
27																										
28																										
29	635	634	633	631	632	622	631	634	638	636	633	640	647	645	680	696	680	664	639	620	610	599	609	632	638	0 59 12
30	644	650	645	644	645	638	650	645	642	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
31	—	—	—	—	—	—	—	—	—	644	645	650	655	673	700	705	672	650	630	622	620	630	640	648	649	59 56
Means.....	1650	651	651	649	649	640	650	652	655	657	658	659	660	666	684	688	677	658	641	629	627	630	638	648	653	
Declination.....	60 00	60 04	60 04	59 58	59 56	59 20	60 00	60 08	60 20	60 28	60 32	60 36	60 40	61 04	62 17	62 33	61 49	60 32	59 24	58 35	59 27	58 39	59 12	59 52		
Mean Hourly Variations from General Month-ly Mean.....	-11	-7	-7	-15	-15	-51	-11	-3	9	17	21	25	29	53	126	142	98	21	-47	-96	-104	-92	-59	-19		° ′ ″ 1 00 11

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right)=4'03\times1{\cdot}000238=4'03096.$ $\quad a+7'6''=\rho=0°42'37''2+0°7'6''=0°49'43''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

SEPTEMBER 1851. Declination Magnetometer.

Gottingen Mean Time.	Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 6.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41			
	s.d.t.	s.d.t.	s.d.t.	s.d.t. 0·1 *	s.d.t.	s.d.t. −0·7 *	s..dt.	s.d.t. −0·2 *	s.d.t.	s.d.t. 0·4 *	s.d.t.	s.d.t. 0·0 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	
1	1657	1660	1658	1654	1649	1645	1642	1644	1647	1646	1645	1648	1652	1670	1700	1710										
2																										
3																										
4																										
5																										
6	Substitude the brass bar.																									
7																										
8																										
9																										
10																										
11																			591	599	590	602	619	641		
12	649	640	621	621	620	620	622	625	628	632	636	634	633	630	650	657	648	634	600	582	579	592	607	624		
13	637	632	626	624	621	624	629	630	633	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	637	640	640	640	642	660	664	658	643	634	603	586	593	610	623		
15	633	631	633	630	626	630	630	635	650	650	650	650	650	655	680	680	662	645	617	582	601	618	632	644		
16	645	634	633	635	636	640	642	643	644	645	646	650	654	654	670	680	677	663	650	630	620	622	640	650		
17	657	643	639	642	645	647	646	642	635	638	640	640	640	648	673	674	668	652	623	601	600	616	626	638		
18	648	641	639	641	643	643	644	643	644	644	644	644	644	648	665	674	665	642	626	603	598	606	630	650		
19	650	633	637	639	641	639	638	641	644	646	647	646	646	646	665	682	680	662	639	628						
20																										
21	Substitude the brass bar.																									
22																										
23																686	683	654	617	595	598	613	642	652		
24	648	631	631	633	635	634	634	635	637	639	640	640	641	650	668	676	654	624	599	575	582	593	612	630		
25	634	636	635	637	638	639	642	644	647	649	650	647	645	650	670	674	660	640	625	612	622	628	640	657		
26	669	652	656	655	653	654	656	654	652	648	643	646	650	652	660	660	642	617	588	589	608	615	629	647		
27	646	650	653	653	652	650	650	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	658	665	662	660	660	680	—	685	668	658	640	632	649	662	680		
29	678					Substitude the brass bar.										690	—	—	—	—	665	668	677	695		
30	690	670	666	667	667	667	668	667	667	665	662	661	660	659	676			Substitude the brass bar.								

OCTOBER 1851. Declination Magnetometer.

				1-3 *		−0·4 *		0·99 *		0·1 *		−0·2 *														
1																										
2																										
3	Substitude the brass bar.																									
4																										
5																							*			
6																				1530	1528	1542	1555	1566		
7	1570	1571	1572	1575	1576	1590	1604	1620	1616	1613	1609	1611	1614	1600	1612	1603	1600	1583	1560	550	550	565	578	590	1589	° ′ ″ 0 55 54
8	600	609	619	617	612	619	626	643	640	661	682	673	665	647	645	657	636	642	610	598	595	607	615	630	631	58 43
9	630	630	631	639	645	647	650	664	658	669	680	661	642	655	688	664	665	648	625	625	628	631	633	634	648	59 52
10	642	650	660	670	677	685	694	706	699	691	682	676	670	670	681	713	721	705	686	669	651	663	688	690	681	1 02 05
11	686	688	692	698	702	709	717	729	722	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	737	752	749	747	740	720	739	740	726	706	686	688	704	709	712	717	04 30
13	713	719	720	727	732	741	750	754	739	742	745	742	740	745	766	778	765	740	720	707	695	687	696	702	732	05 30
14	702	708	707	712	714	717	720	731	722	724	725	729	733	730	748	760	714	715	700	670	659	654	656	660	709	03 58
15	682	703	712	714	713	722	731	751	751	751	750	746	742	740	736	701	702	690	680	660	645	644	657	670	708	03 54
16	673	682	691	686	679	682	685	698	691	690	688	687	687	697	699	711	697	690	671	655	654	660	667	682	683	02 13
17	690	698	698	700	700	705	710	724	719	720	720	719	718	724	724	720	731	745	728	712	710	707	708	712	714	04 18
18	710	710	722	725	725	725	725	737	730	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	756	782	778	774	746	761	774	752	727	716	719	709	720	740	751	738	05 55
20	750	750	761	757	750	757	764	777	771	763	755	762	770	760	783	741	737	729	726	737	746	742	745	752	754	06 59
21	750	756	763	769	773	779	785	798	792	796	800	795	790	788	779	770	759	769	740	725	725	—	—	—		
22	625	627	632	634	634	632	630	640	630	630	629	624	620	612	620	630	631	627	613	610	620	625	642	650	628	0 58 31
23	632	618	618	619	618	623	628	638	628	624	620	618	617	617	630	622	617	612	609	615	622	622	625	638	622	58 07
24	635	628	628	630	629	626	624	633	622	622	622	619	617	617	623	627	638	628	608	601	608	610	630	641	624	58 15
25	629	630	625	626	624	626	628	637	626	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	624	621	620	619	615	612	619	613	623	620	612	612	620	636	633	623	58 11
27	628	620	622	624	623	625	628	639	630	629	628	626	625	622	615	620	624	629	627	630	639	649	652	660	630	58 39
28	652	646	649	649	646	647	648	659	650	649	647	646	645	647	650	650	638	657	660	710	710	710	698	680	660	1 00 40
29	680	681	675	675	672	670	668	669	650	654	657	655	654	655	654	667	668	660	650	650	646	659	670	671	663	00 52
30	670	669	667	662	654	656	659	669	660	659	657	654	651	650	668	681	684	673	660	650	650	660	666	670	662	00 48
31	660	646	652	653	651	651	652	662	652	651	650	648	647	642	642	651	665	655	650	651	662	667	667	670	654	00 16
Means	1664	665	669	671	670	674	679	690	681	684	686	684	682	678	684	686	682	676	662	656	656	657	666	671	1674	
Declination	60 56	61 00	61 17	61 25	61 21	61 37	61 57	62 41	62 05	62 17	62 25	62 17	62 09	61 53	62 17	62 25	62 09	61 45	60 48	60 24	60 24	60 28	61 04	61 25		
Mean Hourly Varistions from General Monthly Mean	-40	-36	-19	-11	-15	1	21	65	29	41	49	41	33	17	41	49	33	9	-48	-72	-72	-68	-32	11		° ′ ″ 1 01 36

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right)=4'03\times 1{\cdot}000238=4'03096.$ $\quad a+7'6''=\rho=0^{\circ}\,42'\,37''{\cdot}2+0^{\circ}\,7'\,6''=0^{\circ}\,49'\,43''{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

NOVEMBER 1851. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 6.41	h.m. 7.41	h.m. 8.41.	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41		
	s.d.t.	s.d.t.	s.d.t.	s.d.t. 0.2 *	s.d.t.	s.d.t. −0·9 *	s.d.t.	s.d.t. 0·9 *	s.d.t.	s.d.t. 0·4 *	s.d.t.	s.d.t. −0·4 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s. d. t.	Arc.
1	1664	1649	1653	1653	1653	1655	1658	1660	1660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	—	—	—	—	—	—	—	—	—	1659	1657	1655	1653	1650	1650	1660	1662	1652	1650	1657	1669	1664	1670	1670	1658	° ′ ″ 1 00 32
3	660	653	657	657	657	656	657	659	660	660	660	656	652	650	648	650	655	654	650	650	658	664	670	667	657	00 28
4	655	656	659	657	655	655	657	658	657	658	658	653	648	650	658	664	670	671	660	655	669	682	676	670	660	00 40
5	668	659	662	661	660	659	660	661	660	659	658	655	652	655	657	663	661	655	640	637	652	660	660	667	658	00 32
6	658	658	660	658	656	656	658	658	657	658	658	656	655	659	660	670	677	671	658	657	653	658	650	657	659	00 36
7	655	651	656	656	656	657	660	661	660	660	660	659	659	660	643	657	660	663	660	666	662	668	665	660	659	00 36
8	657	651	657	655	652	653	655	658	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	659	658	655	653	650	648	658	662	670	651	642	663	680	673	668	658	00 32
10	655	652	660	660	659	656	655	660	663	663	662	657	652	647	642	642	640	629	637	650	660	663	670	670	654	00 16
11	658	650	650	653	656	662	670	666	660	664	667	663	660	658	652	652	655	648	640	642	650	653	660	659	656	00 24
12	650	651	653	656	658	658	660	664	666	666	666	659	653	652	650	658	664	655	647	650	660	667	670	668	658	00 32
13	668	662	664	662	660	660	662	667	670	669	667	663	660	652	655	650	650	649	642	643	647	655	661	666	658	00 32
14	670	663	664	663	662	664	668	670	670	670	670	666	663	664	670	681	680	654	648	650	660	672	678	666	666	01 04
15	670	662	667	666	664	662	662	664	664	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	664	664	659	655	655	659	661	670	660	650	648	654	658	660	660	661	00 44
17	655	663	665	666	666	663	662	666	668	666	664	661	658	656	654	656	670	669	664	669	677	678	674	670	665	01 00
18	665	663	664	664	663	662	662	667	670	667	664	662	661	660	661	665	663	653	660	662	673	682	680	671	665	01 00
19	666	664	664	665	665	663	662	664	665	664	663	662	662	660	666	670	677	672	670	672	685	690	690	680	669	01 17
20	667	660	661	661	660	658	658	661	663	663	662	661	660	660	652	650	650	647	640	640	657	664	672	672	658	00 32
21	671	674	678	675	671	672	675	672	668	666	663	658	653	652	650	650	658	644	647	647	668	690	700	695	667	01 08
22	680	682	678	682	686	682	680	681	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	675	670	665	660	658	665	660	662	662	660	662	680	687	695	689	674	01 37
24	677	669	673	674	674	675	678	676	672	672	671	669	668	660	658	657	654	650	644	630	636	650	663	677	664	00 56
25	672	663	669	668	666	663	662	665	666	668	670	666	662	660	668	672	675	665	660	662	650	659	668	675	666	01 04
26	670	659	667	666	665	664	664	668	670	670	670	666	662	660	665	673	678	679	655	645	647	650	660	671	664	00 56
27	670	661	664	665	666	665	666	667	666	667	668	669	670	662	660	666	672	669	654	650	653	660	668	667	664	00 56
28	667	660	669	667	665	664	664	666	667	666	664	662	660	660	665	670	675	667	662	650	647	653	654	660	663	00 52
29	660	654	660	660	660	659	659	641	621	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	640	658	658	658	650	650	660	672	678	656	655	667	664	662	667	657	00 28
31																										
Means.....	1664	660	663	663	662	662	663	664	663	664	664	661	658	656	656	661	664	659	652	652	660	667	670	670	1662	
Declination	′ ″ 60 56	′ ″ 60 40	′ ″ 60 52	′ ″ 60 52	′ ″ 60 48	′ ″ 60 48	′ ″ 60 52	′ ″ 60 56	′ ″ 60 52	′ ″ 60 56	′ ″ 60 56	′ ″ 60 44	′ ″ 60 32	′ ″ 60 24	′ ″ 60 24	′ ″ 60 44	′ ″ 60 56	′ ″ 60 36	′ ″ 60 08	′ ″ 60 08	′ ″ 60 40	′ ″ 61 08	′ ″ 61 21	′ ″ 61 21		
Mean Hourly Variations from General Monthly Mean.....	″ 10	″ -6	″ 6	″ 6	″ 2	″ 2	″ 6	″ 10	″ 6	″ 10	″ 10	″ -2	″ -14	″ -22	″ -22	″ -2	″ 10	″ -10	″ -38	″ -38	″ -6	″ 22	″ 35	″ 35		° ′ ″ 1 00 46

DECEMBER 1851. Declination Magnetometer.

				0·6 *		−0·6 *		0·4 *		0·2 *		0·4 *														
1	1662	1658	1661	1662	1661	1659	1659	1660	1660	1658	1656	1657	1658	1655	1650	1660	1681	1677	1662	1667	1677	1675	1672	1677	1664	° ′ ″ 1 00 56
2	673	668	669	667	663	661	660	660	660	660	660	660	658	652	655	664	665	668	670	670	661	660	668		663	00 52
3	671	663	666	664	661	659	658	658	658	657	655	653	650	652	654	660	670	678	671	672	678	681	678	670	664	00 56
4	667	661	664	663	661	659	659	659	658	657	655	655	655	654	646	650	657	660	666	670	677	670	664	663	660	00 40
5	662	662	663	662	660	659	659	660	660	659	657	656	655	650	642	648	655	659	660	671	680	688	675	664	661	00 44
6	660	657	661	662	661	660	660	662	663	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	—	—	667	670	666	662	650	650	637	640	640	633	642	650	670	679	680	658	00 32
8	669	678	681	676	669	665	663	667	670	665	660	660	660	660	655	661	670	670	668	660	659	669	676	680	667	01 08
9	678	663	661	662	661	662	664	663	662	666	670	665	660	651	643	635	642	638	640	642	657	677	674	674	659	00 36
10	672	666	663	662	659	658	659	658	657	659	660	660	660	654	652	653	650	645	639	647	655	670	673		658	00 32
11	670	661	671	666	659	659	660	658	656	654	652	655	657	654	650	654	658	655	644	640	644	650	662	679	657	00 28
12	670	655	660	657	653	651	650	652	654	657	660	656	652	550	643	642	637	640	637	648	656	660	672	672	654	00 16
13	677	667	662	660	656	657	659	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	660	660	660	660	654	652	658	663	657	650	658	664	662	660	668	660	00 40
15	667	658	660	661	660	659	659	659	659	657	655	654	653	650	650	657	670	671	648	647	638	640	652	670	656	00 24
16	668	661	664	668	671	669	669	667	664	662	660	658	656	655	650	650	647	652	655	645	652	652	658	662	659	00 36
17	659	657	661	663	663	663	665	664	662	661	660	657	653	655	651	658	655	657	660	657	657	660	662	669	660	00 40
18	664	661	667	669	669	665	662	660	658	658	658	654	650	647	648	647	652	660	653	668	672	678	670	667	661	00 44
19	670	669	670	670	669	665	663	661	659	655	650	650	649	646	647	650	650	646	638	640	648	657	657	654	656	00 24
20	652	658	668	668	667	662	658	659	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	—	—	—	655	650	650	650	652	659	659	663	648	647	646	639	646	648	650	655	00 20
22	646	646	653	661	667	664	662	665	668	666	663	667	670	668	658	647	651	654	640	632	647	656	662	668	658	00 32
23	658	657	662	662	661	660	661	661	660	659	658	658	657	650	648	640	650	643	637	640	648	660	660	664	655	00 20
24	670	660	664	665	665	662	661	659	656	653	650	647	643	644	653	657	670	650	629	640	661	661	660	670	656	00 24
25	672	665	670	667	663	657	653	652	651	650	649	647	645	648	655	657	660	653	636	639	638	643	644	658	653	00 12
26	668	646	654	657	659	657	657	655	652	651	650	650	650	648	654	660	666	659	650	640	642	653	663	666	654	00 16
27	668	659	657	660	661	663	667	667	667	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	663	658	656	654	659	644	640	645	655	669	675	676	681	678	677	662	00 48
29	681	682	684	683	680	670	662	666	670	668	666	654	642	642	660	650	660	652	652	658	669	680	687	684	667	01 08
30	680	671	670	669	666	661	658	657	655	653	650	650	650	640	632	643	650	658	655	651	645	642	653	658	655	00 20
31	660	657	661	661	660	658	658	654	650	650	650	650	649	647	646	644	650	652	644	651	645	642	633	640	650	00 00
Means.....	1667	662	665	665	663	661	660	660	660	659	657	656	654	652	650	651	657	656	650	652	657	662	664	668	659	
Declination	′ ″ 61 08	′ ″ 60 48	′ ″ 61 00	′ ″ 61 00	′ ″ 60 52	′ ″ 60 44	′ ″ 60 40	′ ″ 60 40	′ ″ 60 40	′ ″ 60 36	′ ″ 60 28	′ ″ 60 24	′ ″ 60 16	′ ″ 60 08	′ ″ 60 00	′ ″ 60 04	′ ″ 60 28	′ ″ 60 24	′ ″ 60 00	′ ″ 60 08	′ ″ 60 28	′ ″ 60 48	′ ″ 60 56	′ ″ 61 12		
Mean Hourly Variations from General Monthly Mean.....	″ 32	″ 12	″ 24	″ 24	″ 16	″ 8	″ 4	″ 4	″ 4	″ 00	″ -8	″ -12	″ -20	″ -28	″ -36	″ -32	″ -8	″ -12	″ -36	″ -28	″ -8	″ 12	″ 20	″ 36		° ′ ″ 1 00 36

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations.

$k = a.\ \text{Cot.}v = 0{\cdot}0003139 \times \text{Cot. } 75°14' = 0{\cdot}00008274$ s.d. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1431 at Ther. 8°.03 or Corrected Zero 1438.

Zero for Thermometer 80°.5 or Standard 80°.0.

HORIZONTAL FORCE MAGNETOMETER.

JANUARY 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
	s.d.t.	s.d.t.	s.d.t.	s.d.t. 1·8 *	s.d.t.	s.d.t. 0·6 *	s.d.t.	s.d.t. -0·9 *	s.d.t.	s.d.t. -0·2 *	s.d.t.	s.d.t. -0·2 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s d.t.	s.d.t.	s.d.t.	s.d.t.	s d.t.	s.d.t.			
†1	1175	1160	1177	1203	1225	1222	1217	1231	1247	1230	1213	1197	1182	1164	1130	1085	1010		930		996		1137					
†2	1161		1183	1185	1183	1177	1170	1155	1142				1120		1107		1008		990		932		1069					
†3	1116		1132	1130	1125	1124	1122	1121	1122				1113		1102		1010		902		960		1130					
†4	1164		1143	1141	1135	1138	1140	1136	1134	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†5	—	—	—	—	—	—	—	—	—				1130		1130		1064		910		860		1072					
†6	1128		1128	1131	1130	1133	1135	1128	1122				1110		1100		1080	1050	998	923	937	1000	1042	1069				
7	1096	1103	1108	1101	1090	1093	1095	1093	1092	1092	1093	1091	1090	1088	1087	1083	1048	993	950	926	931	1002	1022	1040	1059	76	1135	1.002507
8	1060	1081	1112	1117	1118	1120	1120	1118	1117	1112	1108	1104	1100	1100	1105	1098	1070	995	932	925	932	1000	1048	1080	1070	75	1145	2425
9	1106	1114	1112	1113	1110	1123	1134	1141	1150	1145	1140	1140	1140	1130	1112	1120	1082	1043	962	935	975	1060	1097	1121	1096	81	1177	2160
10	1135	1150	1142	1141	1136	1134	1130	1126	1123	1125	1127	1128	1130	1120	1120	1110	1094	1045	1028	1005	960	1001	1060	1094	1099	71	1170	2217
11	1132	1130	1130	1134	1135	1139	1142	1141	1141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1143	1145	1142	1140	1120	1115	1093	1090	1036	994	947	943	1010	1070	1110	1097	55	1152	2366
13	1124	1144	1147	1154	1158	1167	1175	1164	1154	1153	1153	1151	1150	1150	1160	1135	1095	1063	1000	1022	1050	1122	1120	1150	1128	36	1164	2267
14	1166	1170	1168	1176	1181	1197	1212	1211	1212	1213	1215	1201	1188	1180	1170	1150	1123	1102	1081	1062	1081	1110	1150	1151	1161	18	1179	2143
15	1169	1175	1179	1185	1187	1188	1188	1189	1192	1200	1208	1209	1210	1200	1172	1150	1110	1119	1117	1120	1141	1158	1180	1221	1174	16	1190	2052
16	1220	1202	1063	1147	1227	1264	1300	1406	1513	1456	1400	1416	1433	1435	1462	1450	1439	1398	1288	1331	1338	1342	1379	1382	1345	7	1352	0711
17	1372	1355	1361	1359	1353	1351	1348	1347	1348	1339	1330	1325	1320	1290	1290	1255	1260	1210	1167	1140	1150	1238	1270	1329	1296	14	1310	1059
18	1360	1370	1398	1386	1370	1340	1309	1294	1280	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	1246	1213	1219	1225	1220	1220	1170	1155	1145	1080	1034	1109	1311	1283	1516	1261	26	1287	1200
20	1580	1721	1672	1669	1663	1568	1471	1471	1472	1476	1480	1456	1433	1423	1402	1380	1341	1294	1242	1227	1267	1304	1367	1401	1449	26	1475	0.999694
21	1414	1401	1391	1398	1402	1421	1438	1440	1443	1420	1397	1371	1345	1365	1360	1314	1285	1233	1234	1267	1325	1391	1430	1437	1372	37	1409	1.000228
22	1445	1400	1382	1392	1398	1422	1444	1435	1428	1379	1330	1335	1340	1347	1310	1285	1222	1155	1062	1042	1092	1182	1244	1289	1307	38	1345	0769
23	1290	1318	1380	1352	1320	1329	1337	1346	1357	1338	1320	1300	1280	1253	1276	1237	1190	1123	1079	1068	1112	1199	1242	1270	1263	27	1290	1225
24	1269	1261	1267	1274	1277	1272	1266	1255	1245	1235	1225	1222	1220	1212	1205	1180	1135	1068	980	975	1051	1160	1230	1262	1198	50	1248	1573
25	1260	1278	1259	1248	1233	1227	1220	1209	1199	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	1209	1220	1215	1210	1210	1210	1192	1159	1110	1060	1039	1058	1098	1148	1180	1185	68	1253	1531
27	1210	1210	1217	1210	1200	1202	1202	1201	1201	1194	1187	1171	1155	1140	1130	1120	1050	1035	1040	1036	1080	1110	1159	1172	1151	79	1230	1721
28	1160	1162	1168	1176	1180	1193	1205	1190	1176	1183	1190	1180	1170	1160	1140	1093	1053	1011	965	974	1048	1129	1190	1210	1138	84	1222	1787
29	1207	1191	1186	1198	1206	1204	1200	1214	1230	1208	1187	1186	1185	1180	1160	1130	1094	1060	1012	1009	1068	1110	1180	1201	1159	80	1239	1646
30	1182	1180	1187	1191	1192	1189	1184	1181	1180	1177	1175	1167	1160	1152	1147	1120	1079	1030	984	999	1060	1149	1200	1217	1145	73	1218	1821
31	1188	1177	1183	1186	1186	1194	1200	1197	1195	1192	1190	1187	1185	1180	1149	1090	1029	969	952	969	1029	1112	1167	1186	1137	50	1187	2077
Means.....	1234	1241	1237	1241	1242	1243	1242	1243	1248	1238	1229	1223	1219	1212	1205	1180	1146	1102	1055	1048	1082	1150	1193	1228	1195			
Temp. Corrections	24	27	37	40	42	46	49	52	54	55	54	57	58	64	74	79	77	70	59	51	39	29	25	22	.....	49		
Corrected Means..	1258	1268	1274	1281	1284	1289	1291	1295	1302	1293	1283	1280	1277	1276	1279	1259	1223	1172	1114	1099	1121	1179	1218	1250	.....	.....	1244	
Mean Hourly Variations from General Monthly Mean. =.00	-14 -0116	-24 -0196	-30 -0248	-37 -0306	-40 -0331	-45 -0372	-47 -0389	-51 -0422	-58 -0479	-49 -0405	-39 -0323	-36 -0298	-33 -0273	-32 -0265	-35 -0289	-15 -0124	21 0173	72 0596	130 1074	145 1199	123 1018	65 0537	26 0215	-6 -0050	.....	$1+\frac{\Delta X}{X}=$	.....	1.00160

JANUARY 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
†1	790	790	788	786	785	783	781	780	780	779	779	776	773	771	770	769	769		775		781		786					
†2	787		783	782	781	778	775	772	770				766		763		765		770		777		780					
†3	782		778	777	777	774	772	771	771				770		768		768		772		780		786					
†4	787		782	781	781	780	780	777	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
†5	—	—	—	—	—	—	—	—	—				780		775		771		779		783		788					
†6	789		785	784	783	782	781	780	780				777		772		772	774	779	780	782	787	789	789				
7	789	788	786	784	783	781	780	780	780	780	780	780	780	780	777	776	776	777	779	782	788	791	792	793	7826			
8	792	791	788	786	785	784	784	782	780	780	780	780	780	780	777	775	775	778	780	781	786	788	790	791	7830			
9	791	789	787	785	784	782	780	778	777	778	779	778	778	776	774	770	773	773	778	780	785	788	790	793	7811			
10	793	790	789	787	786	785	785	783	781	781	781	780	780	777	775	772	775	778	780	785	790	794	796	796	7841			
11	796	794	784	784	784	783	782	783	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
12	—	—	—	—	—	—	—	—	—	787	790	790	790	788	785	783	785	788	790	790	794	798	800	800	7889			
13	802	800	797	797	797	796	795	793	792	791	791	790	790	790	788	787	788	789	792	795	798	802	802	803	7944			
14	804	803	802	801	800	800	800	799	798	798	798	798	798	797	793	791	793	797	800	800	803	807	807	808	7998			
15	808	807	803	802	802	801	800	800	800	799	799	799	799	797	794	793	794	794	799	800	802	806	807	808	8005			
16	807	807	803	803	803	803	803	803	803	803	803	801	800	800	799	798	797	799	800	803	807	809	809	810	8030			
17	809	808	804	803	803	802	801	800	799	799	799	798	798	796	795	794	795	797	799	800	803	807	807	806	8009			
18	806	805	802	801	800	799	798	798	798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
19	—	—	—	—	—	—	—	—	—	798	798	796	795	793	790	788	789	790	795	796	799	801	801	801	7974			
20	802	802	802	802	803	802	802	800	799	798	798	797	796	792	789	788	787	789	791	795	798	799	800	801	7972			
21	800	800	798	797	796	795	795	794	794	793	792	791	790	790	788	786	786	789	791	793	797	800	800	801	7940			
22	801	800	798	797	797	795	794	793	793	792	791	791	791	790	790	786	784	788	790	794	797	799	801	802	7939			
23	802	800	800	800	800	800	800	800	800	800	800	797	795	792	790	788	789	790	791	795	799	800	800	801	7970			
24	802	801	798	797	797	794	791	790	790	789	789	788	787	784	780	779	778	781	785	789	790	793	795	797	7902			
25	796	796	792	791	790	789	788	784	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
26	—	—	—	—	—	—	—	—	—	782	784	782	780	780	778	775	776	778	780	782	786	790	790	791	7850			
27	791	790	788	787	787	786	785	783	782	781	781	780	779	775	770	770	771	772	778	780	784	785	788	789	7817			
28	789	790	787	784	782	781	780	779	778	778	778	777	777	775	771	770	771	772	779	780	782	787	788	789	7802			
29	789	789	787	785	783	782	782	781	780	780	780	780	780	777	772	770	772	776	779	780	782	787	788	790	7813			
30	790	789	787	786	785	783	781	780	780	780	780	780	780	779	775	775	774	778	780	788	790	792	795	797	7835			
31	796	794	791	790	790	790	790	790	790	790	790	789	788	786	782	781	782	787	789	790	795	797	799	799	7902			
Means.....	7979	7969	7942	7931	7926	7915	7907	7897	7891	7889	7891	7883	7878	7861	7833	7816	7823	7845	7875	7899	7934	7964	7975	7985	7905			

N. B.—Decreasing numbers denote an increase in the Horizontal Force. In the upper table the number are tenths of scale divisions In the lower table tenths of Fahrenheit degrees, and in the Means, hundredths of degrees.

* The numbers in these columns are not observed ; but interpolated for the sake of obtaining the daily Means and those numbers on the heads of them are the corrections of Interpolations.

† The observation from 1st to 6th are rejected from the hourly and daily Means.

$k = a.\ \text{Cot.}\, v = 0{\cdot}0003139 \times \text{Cot.}\ 75^{\circ}\ 14' = 0{\cdot}00008274$. s.d. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1431 at Ther. 80°·3 or Corrected Zero 1438.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

FEBRUARY 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P. M.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.				
		4·41	5·41	6·41	7·41	8·41	9·41	10·41	11·41	12·41	13·41	14·41	15·41	16·41	17·41	18·41	19·41	20·41	21·41	22·41	23·41	0·41	1·41	2·41	3·41				
		s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.			
					5·9 *		0·9 *		4·7 *		1·7 *		−1·9 *																
1	1174	1160	1192	1217	1231	1251	1270	1284	1289																			
2	—	—	—	—	—	—	—	—	—	1251	1209	1194	1182	1174	1130	1070	987	936	909	960	1049	1140	1215	1260	1156	41	1197	1001994
3	1256	1260	1262	1273	1272	1265	1257	1246	1225	1223	1217	1206	1198	1182	1131	1038	927	839	827	907	1040	1134	1210	1235	1151	46	1197	1994
4	1210	1170	1172	1186	1188	1188	1186	1193	1190	1194	1194	1179	1167	1152	1113	1044	970	893	843	878	948	1028	1100	1150	1106	62	1168	2234
5	1160	1140	1149	1160	1160	1162	1163	1137	1102	1099	1092	1140	1192	1172	1154	1073	980	886	827	883	1057	1187	1245	1290	1109	81	1190	2052
6	1290	1270	1240	1251	1250	1241	1230	1235	1230	1224	1215	1207	1203	1199	1171	1152	1029	979	915	927	983	1085	1130	1180	1160	85	1245	1597
7	1193	1170	1163	1185	1195	1207	1217	1212	1198	1189	1176	1168	1163	1162	1129	1053	983	901	834	843	901	1004	1140	1170	1106	80	1186	2085
8	1160	1147	1153	1167	1170	1173	1175	1176	1167	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	1199	1227	1224	1224	1190	1201	1168	1110	1072	1021	1031	1041	1100	1160	1200	1152	70	1222	1787
10	1240	1220	1209	1227	1233	1252	1270	1248	1217	1200	1179	1183	1190	1218	1200	1211	1192	1144	1078	1088	1113	1180	1210	1222	1197	57	1254	1523
11	1240	1250	1243	1256	1257	1259	1260	1265	1260	1252	1240	1230	1223	1222	1200	1168	1110	1071	1047	1056	1100	1130	1150	1170	1194	58	1252	1539
12	1210	1240	1242	1252	1250	1257	1263	1255	1237	1241	1241	1238	1238	1242	1209	1178	1129	1117	1123	1134	1169	1206	1220	1215	1213	31	1244	1605
13	1208	1210	1223	1237	1240	1245	1249	1249	1240	1237	1230	1223	1219	1218	1200	1162	1101	1040	1036	1071	1127	1160	1170	1190	1187	26	1213	1861
14	1190	1203	1212	1227	1230	1234	1237	1233	1220	1217	1210	1199	1191	1189	1153	1090	1003	980	1020	1100	1180	1248	1270	1257	1179	23	1202	1952
15	1230	1222	1240	1260	1268	1268	1267	1274	1271	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	1255	1236	1203	1173	1204	1172	1102	1030	968	982	1041	1122	1215	1260	1270	1189	−6	1183	2110
17	1268	1245	1290	1297	1292	1289	1285	1278	1261	1251	1238	1233	1232	1221	1179	1103	1022	950	942	997	1081	1157	1220	1247	1191	−8	1183	2110
18	1220	1210	1205	1188	1159	1214	1267	1282	1287	1285	1280	1270	1264	1234	1212	1211	1258	1307	1349	1550	1491	1525	1518	1485	1303	−8	1295	1183
19	1505	1520	1507	1510	1502	1487	1470	1459	1439	1452	1462	1431	1403	1378	1371	1340	1292	1213	1194	1214	1248	1305	1370	1397	1395	-14	1381	0472
20	1385	1380	1410	1396	1370	1379	1386	1379	1362	1363	1360	1345	1334	1328	1298	1239	1173	1115	1079	1092	1141	1200	1268	1307	1295	−9	1286	1258
21	1312	1290	1293	1305	1305	1308	1309	1308	1297	1279	1258	1249	1243	1226	1200	1160	1086	1007	962	961	1007	1155	1205	1285	1209	−5	1204	1936
22	1295	1285	1272	1288	1293	1296	1297	1293	1280	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1260	1236	1237	1242	1218	1192	1139	1064	968	1017	1047	1109	1175	1188	1275	1207	8	1215	1845
24	1270	1250	1293	1289	1274	1280	1285	1277	1260	1251	1238	1232	1230	1232	1220	1199	1160	1116	1057	1068	1130	1160	1207	1225	1217	20	1237	1663
25	1250	1265	1310	1307	1292	1302	1310	1310	1300	1295	1287	1265	1247	1238	1208	1167	1110	1061	1060	1087	1131	1180	1215	1230	1226	26	1252	1539
26	1240	1255	1245	1254	1252	1252	1250	1250	1240	1239	1235	1227	1222	1214	1179	1122	1037	962	975	1023	1082	1160	1220	1225	1182	28	1210	1886
27	1217	1220	1239	1244	1237	1234	1230	1237	1235	1224	1210	1199	1192	1190	1171	1109	1047	990	972	1027	1109	1210	1270	1275	1179	24	1203	1944
28	1268	1230	1230	1239	1237	1225	1211	1210	1200	1197	1190	1188	1190	1210	1162	1119	1112	1068	1162	1130	1150	1204	1258	1265	1194	8	1202	1952
Means.....	1250	1242	1250	1259	1257	1261	1264	1262	1250	1245	1236	1228	1223	1217	1190	1142	1080	1024	1010	1046	1105	1177	1226	1251	1196			
Temp. Corrections	−3	1	10	16	20	22	23	27	29	34	36	43	48	59	71	75	69	57	43	27	18	9	0	−5	.....	31		
Corrected Means.	1247	1243	1260	1275	1277	1283	1287	1289	1279	1279	1272	1271	1271	1276	1261	1217	1149	1081	1053	1073	1123	1186	1226	1246	.....	.....	1227	
Mean Hourly Variations from General Monthly Mean. =·00	-20 -0165	-16 -0133	-33 -0273	-48 -0397	-50 -0414	-56 -0464	-60 -0496	-62 -0513	-52 -0431	-52 -0431	-45 -0372	-44 -0364	-44 -0364	-49 -0406	-34 -0281	10 0083	78 0645	146 1208	174 1440	154 1274	104 0860	41 0339	1 0008	-19 -0157	.....	$1+\frac{\Delta X}{X}=$	.....	1.001746

FEBRUARY 1851. Temperature of Horizontal Force Magnetometer.

				•		*		*		*		*																
1	799	799	798	796	795	794	794	792	791	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	790	790	789	789	—	787	783	782	784	789	791	795	798	800	802	802	7929			
3	802	801	800	798	797	796	795	794	794	793	793	790	787	783	780	779	780	782	786	789	790	793	795	794	7913			
4	791	794	793	791	790	790	790	789	789	788	787	785	783	781	778	774	778	780	782	785	787	790	791	791	7867			
5	791	791	790	788	787	787	787	784	781	780	780	776	773	773	770	770	770	772	778	780	782	784	787	788	7812			
6	789	787	785	783	782	782	782	781	780	780	780	778	777	772	770	768	769	772	776	780	784	785	788	791	7800			
7	791	790	789	787	785	783	782	781	780	780	780	778	777	772	770	768	770	772	779	783	786	788	790	793	7814			
8	793	792	790	789	788	787	787	787	787	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	784	782	780	778	776	770	770	771	777	780	787	790	793	795	796	7845			
10	797	796	794	792	791	790	790	789	789	788	788	786	784	780	778	775	778	780	784	789	792	794	797	799	7883			
11	800	798	795	793	791	790	790	788	787	786	785	782	779	777	772	771	773	779	782	789	793	800	802	804	7878			
12	805	803	800	797	795	795	795	795	795	795	795	793	792	789	789	788	789	790	794	797	800	803	805	806	7960			
13	806	805	800	799	799	798	798	797	797	797	797	794	792	790	789	789	789	791	794	799	800	803	806	808	7974			
14	808	806	802	801	800	799	799	799	799	796	794	792	790	788	784	784	788	790	795	802	808	810	811	813	7983			
15	813	812	810	808	806	806	807	806	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	805	806	804	803	801	799	799	799	801	807	809	811	815	815	815	8067			
17	814	813	812	810	809	809	809	809	809	808	807	804	801	800	798	797	799	800	804	808	810	812	813	816	8071			
18	815	813	810	809	809	809	809	809	809	807	806	805	804	799	797	794	797	799	802	810	812	814	816	818	8072			
19	818	816	813	811	810	810	810	810	810	809	809	807	806	802	799	799	799	801	807	810	813	815	816	817	8090			
20	818	817	814	812	810	810	810	809	809	808	807	805	803	799	794	793	798	800	803	808	810	812	815	815	8075			
21	815	814	811	810	810	810	810	809	808	805	803	802	801	799	794	793	794	799	802	809	811	813	816	816	8064			
22	816	814	811	810	809	808	808	807	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	804	801	800	799	793	790	788	789	791	797	800	802	806	808	810	8028			
24	810	810	807	806	805	804	803	800	798	797	797	794	792	789	786	784	787	790	795	799	801	805	807	809	7990			
25	809	808	804	803	803	801	800	799	799	797	796	794	792	788	782	780	782	789	793	798	800	803	808	809	7974			
26	809	808	806	803	801	800	799	797	796	794	793	791	790	786	780	780	781	788	790	798	801	806	810	812	7966			
27	813	812	806	803	800	799	799	797	795	793	792	790	789	784	780	779	780	789	793	801	808	811	815	818	7978			
28	819	817	813	810	808	805	803	801	800	799	798	797	797	793	790	788	790	794	802	805	805	807	811	816	8028			
Means.....	8060	8048	8022	8004	7992	7984	7982	7970	7964	7951	7944	7923	7908	7875	7842	7830	7848	7881	7923	7971	7998	8026	8050	8065	7960			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\ \text{Cot.}v = 0{\cdot}0003139 \times \text{Cot. } 75°14' = 0{\cdot}00008274.$ s.d. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1431 at Ther. 80°3 or Corrected Zero 1438.

Zero for Thermometer 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

MARCH 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
	s.d.t.	s.d.t.	s.d.t.	s.d.t. 4·8 *	s.d.t.	s.d.t. —0·4 *	s.d.t.	s.d.t. —0·7 *	s.d.t.	s.d.t. 0·2 *	s.d.t.	s.d.t. —1·7 *	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.			
1	1270	1280	1278	1292	1297	1289	1281	1280	1280	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	1280	1280	1254	1232	1276	1261	1215	1147	1085	1040	1078	1098	1159	1250	1299	1229	10	1239	1·001646
3	1312	1345	1277	1284	1282	1291	1300	1276	1254	1247	1240	1225	1213	1200	1180	1120	1045	1110	1040	1041	1104	1180	1230	1240	1210	21	1231	1713
4	1221	1211	1232	1247	1252	1257	1262	1261	1261	1260	1260	1251	1246	1237	1210	1155	1080	1110	970	988	1056	1147	1207	1232	1192	-4	1188	2069
5	1234	1225	1236	1248	1250	1257	1264	1260	1258	1245	1232	1226	1223	1217	1200	1140	1100	1000	960	971	1041	1140	1207	1220	1181	-9	1172	2200
6	1210	1210	1222	1232	1232	1237	1242	1238	1235	1229	1222	1215	1211	1194	1177	1110	1030	930	865	903	988	1089	1170	1202	1150	-20	1130	2548
7	1227	1208	1237	1243	1240	1249	1258	1254	1251	1253	1255	1246	1240	1262	1230	1190	1080	1023	1000	1090	1127	1202	1257	1310	1206	-50	1156	2333
8	1328	1320	1306	1308	1301	1298	1295	1302	1310	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	1290	1270	1265	1263	1267	1217	1190	1140	1110	1110	1103	1114	1170	1213	1230	1238	-53	1185	2093
10	1250	1260	1272	1306	1330	1344	1358	1361	1366	1363	1360	1348	1340	1317	1288	1220	1140	1085	1070	1082	1120	1199	1276	1331	1266	-52	1214	1853
11	1387	1404	1389	1383	1367	1372	1378	1385	1393	1384	1375	1347	1323	1339	1338	1325	1258	1160	1150	1182	1225	1300	1390	1382	1331	-78	1253	1531
12	1368	1380	1391	1411	1422	1415	1408	1388	1370	1345	1320	1314	1312	1307	1280	1240	1200	1160	1160	1188	1210	1270	1314	1365	1314	-87	1227	1746
13	1332	1330	1339	1353	1357	1364	1371	1360	1350	1341	1332	1316	1303	1295	1281	1240	1178	1120	1100	1100	1170	1250	1281	1300	1282	-83	1199	1977
14	1297	1284	1308	1334	1351	1361	1372	1341	1312	1317	1322	1297	1275	1267	1250	1180	1175	1150	1090	1110	1178	1230	1297	1305	1267	-64	1203	1944
15	1373	1357	1362	1372	1372	1366	1360	1350	1342	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	1318	1295	1282	1272	1263	1230	1165	1070	1000	1010	1060	1138	1238	1283	1300	1257	-68	1189	2060
17	1290	1281	1292	1305	1309	1314	1319	1315	1312	1300	1288	1278	1272	1265	1240	1183	1100	1023	978	1010	1077	1180	1227	1280	1227	-66	1161	2292
18	1287	1272	1273	1288	1294	1297	1300	1292	1285	1282	1279	1272	1269	1258	1240	1185	1090	1010	970	980	1040	1120	1200	1253	1210	-70	1140	2466
19	1275	1270	1262	1278	1284	1288	1293	1285	1279	1276	1273	1270	1270	1272	1260	1178	1082	993	958	954	1004	1094	1160	1220	1199	-92	1107	2739
20	1209	1242	1267	1333	1390	1433	1476	1446	1418	1399	1380	1364	1351	1330	1310	1270	1200	1140	1105	1130	1180	1247	1320	1370	1305	-122	1183	2110
21	1380	1351	1280	1310	1330	1325	1320	1307	1296	1293	1290	1287	1288	1283	1315	1277	1198	1100	1050	1080	1155	1230	1282	1309	1264	-153	1111	2706
22	1340	1333	1358	1389	1411	1397	1383	1397	1413	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1389	1365	1357	1352	1339	1310	1265	1182	1110	1064	1082	1167	1210	1272	1304	1300	-163	1137	2491
24	1340	1350	1348	1355	1352	1360	1369	1371	1374	1358	1342	1342	1346	1340	1305	1275	1187	1090	1060	1140	1182	1240	1310	1349	1295	-149	1146	2416
25	1348	1340	1332	1357	1372	1378	1385	1367	1350	1346	1342	1330	1322	1318	1310	1270	1198	1110	1062	1080	1142	1208	1270	1300	1285	-135	1150	2383
26	1325	1314	1319	1332	1336	1332	1329	1319	1310	1305	1300	1311	1325	1270	1260	1250	1180	1072	1005	1036	1098	1201	1257	1290	1253	-114	1139	2474
27	1298	1281	1281	1290	1289	1280	1272	1269	1268	1264	1260	1245	1234	1224	1187	1124	1063	1002	1020	1045	1092	1157	1260	1372	1212	-120	1092	2862
28	1380	1370	1401	1385	1360	1366	1372	1366	1362	1371	1380	1364	1352	1331	1322	1275	1220	1175	1170	1185	1219	1280	1372	1440	1326	-151	1175	2176
29	1480	1400	1403	1416	1420	1421	1422	1415	1410	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	1420	1430	1425	1424	1410	1395	1330	1250	1200	1150	1187	1238	1300	1373	1420	1364	-179	1185	2093
31	1422	1405	1430	1446	1452	1453	1455	1438	1423	1422	1420	1413	1409	1410	1380	1340	1270	1195	1190	1210	1258	1320	1400	1422	1374	-189	1185	2093
Means.....	1315	1309	1311	1327	1333	1336	1340	1332	1326	1319	1312	1302	1295	1288	1268	1220	1149	1087	1052	1078	1132	1206	1272	1309	1259	.....		
Temp. Corrections	-117	-113	-102	-99	-97	-92	-89	-84	-80	-75	-73	-66	-60	-54	-51	-51	-57	-68	-82	-94	-105	-113	-120	-123	.....	-86		
Corrected Means.	1198	1196	1209	1228	1236	1244	1251	1248	1246	1244	1239	1236	1235	1234	1217	1169	1092	1019	970	984	1027	1093	1152	1186	.....	.....	1173	
Mean Hourly Variations from General Monthly Mean. =·00	-25 -0206	-23 -0190	-36 -0298	-55 -0455	-63 -0521	-71 -0587	-78 -0645	-75 -0620	-73 -0604	-71 -0587	-66 -0546	-63 -0521	-62 -0513	-61 -0504	-44 -0364	4 0033	81 0670	154 1274	203 1680	189 1564	146 1208	80 0662	21 0173	-13 -0108	.....	$1+\frac{\Delta X}{X}=$	.....	1·002192

MARCH 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	815	813	811	810	810	807	804	802	801	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	800	800	797	795	790	790	790	792	796	799	801	804	806	808	808	8020			
3	809	808	804	803	803	801	800	799	799	796	794	792	790	788	788	787	789	791	798	801	804	808	809	810	7988			
4	810	810	808	807	807	807	807	806	806	804	803	801	800	799	798	797	799	801	806	809	811	815	817	819	8061			
5	819	817	814	812	811	810	810	808	806	804	802	801	800	799	798	796	798	801	805	809	810	814	817	817	8074			
6	818	817	812	812	812	811	810	810	810	809	809	806	804	801	801	800	802	806	810	814	819	820	824	824	8109			
7	824	821	820	820	820	819	818	817	817	817	817	816	816	815	814	813	814	817	820	822	827	828	830	831	8197			
8	831	830	328	825	823	822	822	821	821	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	819	818	816	814	810	810	810	811	815	819	822	824	825	828	828	8205			
10	829	828	825	825	825	823	821	820	819	818	817	814	812	810	810	810	812	815	818	822	826	828	830	830	8203			
11	830	830	828	828	828	827	827	826	825	824	824	823	823	820	820	820	822	826	830	836	838	839	840	841	8281			
12	841	840	839	837	836	834	833	831	830	829	828	824	820	820	820	821	822	825	829	830	834	836	837	840	8307			
13	841	840	838	837	836	834	832	831	830	828	827	825	823	820	818	819	820	825	826	828	830	830	833	835	8294			
14	835	833	832	831	830	829	828	824	821	820	820	817	815	813	811	811	815	818	820	825	828	830	834	834	8239			
15	835	834	832	831	830	829	829	827	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	823	822	818	815	813	811	812	812	817	822	827	830	831	836	837	8249			
17	837	835	832	831	830	828	827	823	820	820	820	817	815	814	814	814	816	819	823	827	829	830	831	832	8243			
18	834	833	830	830	830	829	828	825	822	821	820	819	819	817	815	816	818	820	825	830	831	833	836	837	8257			
19	838	838	834	833	832	831	830	829	828	827	826	826	827	827	822	822	823	826	831	837	840	844	846	850	8320			
20	849	847	843	842	841	840	840	838	836	835	835	832	830	829	829	829	830	833	839	846	855	860	862	862	8409			
21	861	859	853	851	850	849	848	845	842	841	840	840	840	839	839	839	840	845	850	859	865	868	869	868	8500			
22	868	864	861	859	858	856	854	853	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	851	850	847	844	842	840	841	844	847	850	852	857	859	860	860	8529			
24	860	859	856	854	853	851	850	849	849	846	844	842	840	838	838	838	840	842	848	850	852	856	858	858	8488			
25	858	856	851	850	850	850	850	847	844	842	841	839	838	836	835	834	836	839	840	842	847	849	850	850	8448			
26	850	849	847	845	844	842	840	839	839	837	836	833	830	828	828	827	830	831	835	838	840	843	845	848	8385			
27	849	846	843	842	842	840	839	838	838	836	834	832	830	829	829	830	831	836	841	848	850	852	855	857	8403			
28	857	856	851	850	850	849	849	848	848	846	844	843	842	840	840	840	841	846	850	855	859	860	861	863	8495			
29	862	861	859	858	857	855	854	853	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	854	857	855	853	851	850	851	853	856	860	862	865	867	869	869	8576			
31	870	869	864	864	864	863	862	861	860	859	859	856	854	854	851	852	854	857	859	861	864	866	867	867	8607			
Means.....	8396	8382	8352	8341	8335	8322	8312	8296	8285	8272	8264	8243	8227	8208	8200	8200	8217	8250	8290	8328	8361	8385	8405	8413	8303			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\ \text{Cot.}v. = 0{\cdot}0003139 \times \text{Cot. } 75^\circ 14' = 0{\cdot}00008274.$ s.d. 3.3963 = Correction for 1° Faht. Zero for Magnetometer 1431 at Ther. 80°3 or Corrected Zero 1438. Zero for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

APRIL 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·42	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.			
				5·9 *		0·7 *		1·9 *		0·4 *		−0·7 *																
1	1418	1400	1404	1418	1421	1426	1430	1424	1415	1408	1400	1388	1378	1372	1350	1292	1203	1116	1082	1119	1219	1322	1400	1420	1343	-175	1168	1·002234
2	1398	1383	1387	1403	1407	1415	1422	1418	1410	1390	1370	1365	1362	1350	1331	1282	1205	1134	1113	1180	1232	1300	1347	1392	1333	-171	1162	2283
3	1400	1389	1367	1380	1382	1382	1380	1372	1360	1355	1350	1333	1317	1309	1290	1268	1202	1139	1128	1197	1264	1360	1402	1392	1322	-176	1146	2416
4	1400	1412	1438	1453	1457	1457	1455	1429	1400	1395	1390	1367	1346	1332	1310	1262	1189	1112	1078	1080	1140	1249	1347	1390	1329	-194	1135	2507
5	1452	1440	1423	1443	1452	1477	1500	1477	1450	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	-	—	—	—	—	—	—	1446	1442	1428	1416	1398	1379	1342	1318	1234	1186	1182	1231	1280	1330	1371	1379	-200	1179	2143
7	1397	1400	1391	1398	1394	1413	1430	1417	1400	1388	1375	1356	1338	1348	1334	1310	1230	1154	1117	1170	1206	1270	1321	1360	1330	-162	1168	2234
8	1379	1380	1372	1387	1390	1376	1360	1369	1375	1363	1350	1329	1310	1308	1292	1250	1173	1110	1056	1055	1100	1192	1280	1334	1287	-144	1143	2441
9	1348	1352	1358	1363	1357	1364	1370	1367	1360	1348	1335	1338	1342	1334	1331	1292	1249	1172	1150	1141	1210	1260	1338	1362	1310	-166	1144	2433
10	1360	1380	1411	1429	1435	1439	1442	1428	1410	1391	1372	1362	1353	1359	1325	1270	1198	1142	1130	1163	1240	1292	1341	1360	1335	-183	1152	2366
11	1364	1361	1363	1372	1370	1372	1373	1371	1366	1378	1390	1377	1366	1348	1330	1290	1228	1145	1220	1260	1300	1323	1400	1467	1339	-202	1137	2491
12	1457	1442	1432	1433	1423	1417	1410	1407	1400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	1400	1399	1394	1390	1388	1378	1321	1239	1152	1113	1159	1220	1312	1377	1408	1353	-223	1130	2548
14	1400	1395	1390	1411	1420	1419	1417	1410	1400	1400	1400	1390	1382	1373	1362	1318	1250	1179	1152	1210	1268	1351	1401	1420	1355	-222	1133	2523
15	1429	1448	1460	1452	1432	1422	1410	1402	1390	1391	1392	1386	1381	1383	1352	1281	1180	1094	1089	1145	1224	1317	1390	1420	1345	-224	1121	2623
16	1410	1391	1372	1382	1380	1382	1383	1383	1380	1385	1390	1401	1413	1386	1408	1361	1302	1213	1132	1120	1223	1311	1374	1398	1345	-228	1117	2656
17	1420	1427	1400	1426	1441	1451	1460	1454	1445	1438	1430	1417	1405	1412	1402	1388	1279	1189	1150	1192	1244	1330	1392	1430	1376	-223	1153	2358
18	1450	1442	1437	1444	1440	1436	1430	1417	1400	1410	1420	1411	1403	1388	1379	1320	1227	1128	1092	1162	1221	1274	1350	1397	1353	-222	1131	2540
19	1391	1400	1413	1423	1421	1421	1420	1418	1413	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	1404	1395	1387	1381	1380	1361	1315	1242	1164	1161	1192	1287	1390	1431	1480	1362	-212	1150	2383
21	1478	1510	1476	1504	1521	1516	1510	1497	1480	1464	1448	1435	1423	1418	1390	1348	1289	1240	1220	1252	1298	1358	1410	1473	1415	-219	1196	2002
22	1490	1470	1480	1486	1480	1480	1478	1476	1470	1456	1442	1414	1387	1392	1343	1372	1320	1260	1243	1260	1330	1405	1450	1481	1411	-240	1171	2209
23	1510	1504	1490	1491	1480	1478	1475	1459	1440	1437	1433	1451	1470	1475	1440	1385	1332	1302	1250	1340	1365	1460	1450	1460	1432	-256	1176	2168
24	1460	1473	1490	4511	1520	1524	1526	1515	1500	1490	1480	1473	1468	1462	1448	1395	1361	1330	1338	1380	1422	1455	1460	1462	1456	-278	1178	2152
25	1470	1480	1475	1498	1510	1508	1505	1494	1480	1477	1473	1462	1452	1458	1445	1412	1344	1291	1273	1300	1361	1422	1472	1501	1440	-276	1164	2267
26	1488	1479	1492	1505	1507	1503	1497	1495	1490	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	1462	1434	1438	1444	1438	1430	1409	1358	1334	1392	1381	1408	1450	1440	1427	1446	-263	1183	2110
28	1430	1440	1450	1463	1465	1460	1453	1467	1478	1487	1495	1477	1460	1442	1400	1350	1310	1260	1260	1310	1364	1415	1480	1497	1421	-263	1158	2317
29	1470	1474	1462	1472	1470	1468	1465	1467	1465	1458	1450	1452	1456	1449	1440	1419	1355	1299	1251	1260	1300	1338	1390	1420	1415	-260	1155	2341
30	1440	1460	1447	1459	1460	1471	1480	1472	1460	1455	1449	1435	1422	1419	1395	1345	1290	1210	1212	1240	1295	1320	1350	1379	1390	-255	1135	2507
Means.....	1427	1428	1426	1439	1440	1441	1442	1435	1425	1418	1412	1403	1395	1389	1371	1331	1264	1196	1176	1210	1268	1337	1389	1419	1370			
Temp. Corrections.	−252	−247	−233	−228	−224	−221	−218	−214	−210	−204	−199	−194	−190	−183	−178	−179	−188	−200	−214	−228	−240	−250	−254	−257	.....	-217		
Corrected Means.	1175	1181	1193	1211	1216	1220	1224	1221	1215	1214	1213	1209	1205	1206	1193	1152	1076	996	962	982	1028	1087	1135	1162	.....	.....	1153	
Mean Hourly Variations from General Monthly Mean. =·00	-22 -0182	-28 -0231	-40 -0331	-58 -0480	-63 -0521	-67 -0554	-71 -0587	-68 -0562	-62 -0513	-61 -0504	-60 -0496	-56 -0464	-52 -0431	-53 -0439	-40 -0331	1 0008	77 0637	157 1299	191 1580	171 1415	125 1034	66 0546	18 0149	-9 -0074	.....	$1+\frac{\Delta X}{X}=$	.....	1·002358

APRIL 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	868	868	865	864	863	861	860	859	859	857	855	851	848	844	841	842	848	850	852	856	859	860	862	863	8565			
2	863	863	859	859	859	858	858	856	855	853	851	850	849	847	842	843	849	850	852	859	860	864	866	867	8555			
3	867	866	862	861	860	859	859	857	855	853	851	848	846	842	840	840	845	849	852	860	867	871	876	877	8568			
4	877	874	870	868	868	864	861	860	860	858	856	853	850	848	846	846	849	851	859	866	872	877	878	880	8621			
5	881	879	873	871	870	868	867	866	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	861	857	857	857	857	855	854	855	857	859	860	862	867	868	869	8640			
7	869	865	861	860	860	859	859	856	853	851	850	847	845	841	839	840	842	847	849	850	852	856	856	857	8527			
8	858	858	854	852	850	850	850	848	847	845	844	841	839	837	832	832	837	840	847	850	852	857	859	860	8475			
9	860	860	858	857	856	854	853	852	851	850	850	848	847	843	843	842	848	850	855	858	860	863	866	868	8538			
10	868	866	860	860	860	859	858	857	857	854	851	850	849	848	848	849	851	853	860	864	869	871	874	874	8588			
11	874	871	867	865	863	862	861	860	860	859	859	857	856	854	853	854	857	860	867	870	876	879	880	882	8644			
12	881	879	872	871	870	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	869	869	867	865	862	860	860	862	866	870	872	879	880	882	882	8707			
14	881	880	873	872	871	870	870	869	869	868	867	864	861	860	860	860	861	868	870	874	879	880	882	883	8705			
15	881	878	873	871	870	870	870	869	868	866	865	864	864	862	860	860	863	869	872	879	880	883	883	885	8710			
16	885	881	876	874	873	871	870	869	868	867	867	866	866	863	860	860	862	869	871	878	880	884	885	885	8721			
17	883	880	878	876	874	872	870	869	868	866	865	862	860	860	860	860	863	868	870	872	878	880	882	883	8708			
18	881	880	877	875	874	872	870	868	867	866	865	864	863	862	860	861	864	868	870	872	875	877	879	879	8704			
19	878	877	872	871	870	870	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	865	861	860	860	859	855	856	859	860	865	870	872	876	877	878	8675			
21	879	877	872	871	870	869	869	868	867	865	863	862	862	858	858	859	860	864	870	876	879	881	884	886	8695			
22	885	883	880	877	875	875	875	873	871	869	868	867	867	863	862	863	867	870	877	883	889	892	892	894	8757			
23	892	890	886	884	882	881	880	876	873	871	870	870	870	870	871	871	873	877	883	889	892	894	894	893	8805			
24	892	890	890	890	890	889	889	888	887	885	883	881	879	873	873	875	879	880	888	891	897	899	900	900	8870			
25	900	897	893	891	890	888	886	883	880	879	878	877	877	874	875	877	879	881	889	890	893	897	897	897	8862			
26	897	895	891	890	889	887	885	883	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	877	872	872	872	872	870	870	872	877	880	884	889	890	890	890	8823			
28	888	887	883	882	881	880	880	880	880	880	880	880	880	878	877	878	879	880	883	887	889	889	890	890	8825			
29	888	887	884	883	882	882	882	881	880	880	880	880	880	878	877	876	877	879	880	880	880	885	886	887	8814			
30	886	884	881	880	880	880	880	879	878	876	875	876	877	873	872	873	873	877	880	884	887	888	890	890	8800			
Means.....	8793	8775	8735	8721	8711	8700	8693	8679	8669	8650	8635	8621	8611	8588	8573	8577	8605	8638	8681	8721	8757	8785	8799	8807	8689			

* The numbers in these columns are not observed; but Interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations.

$k = a.\ \text{Cot.}\ v. = 00003139 \times \text{Cot.}\ 75°14' = 0{\cdot}0008274.$ s.d. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1431 at Ther. 80°3 or Corrected Zero 1438.

Zero for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

MAY 1851. Horizontal Force Manetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{1+X}$
Madras Mean Time.	P. M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d t.	s.d.t.	s.d.t.	s.d.t.	s.d.t	s.d.t.	s.d.t.	s.d.t.	s.u.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.	s.d.t.			
				6·7 *		0·9 *		2·1 *		−0·9 *		1.1 *																
1	1399	1417	1411	1432	1440	1436	1430	1427	1420	1446	1472	1481	1488	1470	1440	1400	1340	1330	1370	1440	1400	1438	1400	1459	1424	-239	1185	1·002093
2	448	489	512	497	468	472	475	470	460	454	449	429	406	402	390	330	210	130	210	170	260	280	300	295	1375	-144	1231	1713
3	290	300	320	337	340	341	340	340	340	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	327	315	313	308	302	288	241	168	060	028	060	090	140	180	220	1250	-58	1192	2035
5	230	250	266	277	275	303	330	321	308	313	318	300	279	276	233	200	098	020	020	080	122	200	239	248	1229	-57	1172	2200
6	248	269	305	329	340	323	305	304	298	290	283	284	283	280	250	200	145	080	050	054	120	208	266	308	1243	-74	1169	2225
7	320	332	331	350	355	346	335	331	322	320	318	310	300	320	288	212	136	160	102	130	210	307	389	448	1291	-104	1187	2077
8	499	490	531	551	558	545	530	497	460	419	378	374	368	365	300	262	230	190	190	183	225	279	322	378	1380	-135	1245	1597
9	402	439	444	439	420	414	407	406	400	396	392	392	390	410	380	310	285	220	192	185	205	287	359	427	1358	-179	1179	2143
10	472	458	480	482	470	471	471	469	462	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	450	438	430	420	414	410	377	310	263	210	200	214	274	339	387	1390	-218	1172	2200
12	401	410	431	442	439	450	459	445	426	419	412	417	420	398	380	333	280	260	250	214	300	337	377	414	1380	-215	1165	2258
13	453	456	459	462	451	447	442	445	444	421	399	403	405	409	360	318	250	235	225	220	290	320	380	410	1379	-215	1164	2267
14	429	432	434	439	431	435	437	428	414	416	418	417	414	380	340	293	235	180	176	190	280	340	409	432	1367	-221	1146	2416
15	441	452	450	470	477	464	450	438	421	410	400	395	388	370	350	320	250	193	170	200	260	323	377	322	1366	-228	1138	2483
16	310	342	366	406	432	427	420	407	390	390	391	381	369	392	427	380	332	250	154	190	360	408	467	518	1371	-220	1151	2375
17	557	532	580	566	538	523	507	498	485	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	446	408	400	389	376	350	320	247	225	209	222	270	310	350	380	1404	-216	1188	2069
19	410	418	422	423	410	401	391	393	390	389	389	386	380	374	370	350	300	242	185	180	212	272	340	400	1351	-210	1141	2458
20	428	422	420	422	410	412	413	408	398	389	381	385	387	378	375	347	290	200	173	190	216	268	322	370	1350	-210	1140	2466
21	400	413	401	404	393	389	383	384	380	380	380	382	381	382	390	368	303	250	208	186	195	219	267	310	1340	-213	1127	2573
22	349	359	350	354	345	347	348	346	339	333	327	320	310	300	293	270	230	165	120	090	190	250	311	363	1292	-223	1069	3053
23	400	400	391	405	405	399	392	393	390	384	378	378	376	370	368	355	330	298	268	260	202	235	300	321	1350	-237	1113	2689
24	346	358	350	362	360	365	369	364	355	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	343	331	332	330	321	290	245	194	106	106	140	172	227	259	280	1288	-172	1116	2664
26	281	294	310	317	310	314	317	318	314	318	322	319	313	312	310	298	260.	245	230	230	265	302	322	333	1298	-154	1144	2433
27	330	330	331	340	335	332	328	331	330	326	322	322	320	313	290	255	200	164	160	175	210	260	309	340	1290	-163	1127	2573
28	360	362	352	358	350	349	347	346	341	340	339	356	370	330	290	235	192	162	130	180	225	294	332	350	1304	-201	1103	2772
29	353	350	350	355	347	349	350	349	343	342	342	341	338	332	330	312	282	230	210	220	270	325	356	372	1323	-223	1100	2797
30	376	370	370	375	367	365	361	362	359	356	354	349	342	342	332	330	260	239	198	200	210	280	320	356	1324	-248	1076	2995
Means.....	1382	1390	1399	1407	1403	1401	1398	1393	1384	1378	1371	1369	1364	1358	1339	1302	1245	1196	1175	1184	1230	1284	1330	1363	1335			
Temp. Corrections	-214	-210	-202	-197	-194	-190	-187	-185	-183	-176	-169	-163	-159	-155	-157	-158	-161	-167	-176	-186	-195	-202	-210	-212	.....	-184		
Corrected Means..	1168	1180	1197	1210	1209	1211	1211	1208	1201	1202	1202	1206	1205	1203	1182	1144	1084	1029	999	998	1035	1082	1120	1151	.....	.....	1151	
Mean Hourly Variations from General Monthly Mean. =.00	-17 -0141	-29 -0240	-46 -0381	-59 -0488	-58 -0480	-60 -0496	-60 -0496	-57 -0472	-50 -0414	-51 -0422	-51 -0422	-55 -0455	-54 -0447	-52 -0431	-31 -0256	7 -0058	67 0554	122 1010	152 1258	153 1266	116 0960	69 0571	31 0256	0 0000	.....	$1+\frac{\Delta X}{X}=$	.....	1.002375

MAY 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	889	888	887	885	883	882	881	880	880	878	877	873	870	871	872	872	872	873	873	873	870	862	860	858	8754			
2	857	852	850	850	850	851	852	853	855	853	852	850	849	847	848	846	844	843	842	842	840	838	838	837	8475			
3	836	835	834	832	830	830	830	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	825	820	820	820	820	818	816	813	810	810	810	812	816	817	817	8221			
5	820	820	820	821	822	822	822	821	821	819	818	817	816	814	815	816	818	820	822	828	830	832	835	834	8218			
6	831	830	829	828	827	826	826	825	824	823	822	821	820	819	820	820	820	823	826	830	835	837	839	839	8267			
7	839	839	838	837	836	835	835	834	834	833	832	831	830	829	830	832	833	834	834	836	837	840	847	849	8356			
8	850	850	848	846	845	843	842	842	842	841	840	839	838	836	837	838	840	840	843	348	850	854	859	862	8447			
9	867	865	861	860	859	858	857	856	856	853	851	850	849	847	848	849	850	851	855	859	863	870	874	874	8576			
10	878	878	874	872	870	870	870	869	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	868	868	864	861	860	860	860	860	862	867	870	874	877	879	880	8691			
12	880	880	879	877	875	873	872	871	870	867	864	862	860	858	859	860	860	861	862	863	867	870	872	874	8682			
13	874	874	872	871	870	869	868	867	867	865	863	862	861	860	860	860	861	863	865	869	875	878	882	883	8683			
14	882	880	880	878	877	874	872	871	870	868	866	865	865	859	858	858	859	860	862	868	871	877	879	882	8700			
15	884	883	880	879	879	877	876	874	873	870	868	864	861	860	860	860	861	864	869	873	878	880	880	880	8722			
16	880	880	877	876	875	874	873	871	870	867	864	862	860	860	860	860	862	864	868	870	873	874	878	878	8698			
17	878	877	872	871	871	870	870	869	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	865	862	861	860	859	860	860	861	865	869	872	875	877	878	876	8686			
19	876	872	870	869	868	867	866	866	866	864	862	860	859	859	860	860	860	864	870	872	873	874	874	874	8669			
20	874	872	870	868	867	866	866	864	863	863	863	861	859	859	860	860	862	863	868	872	873	875	877	878	8668			
21	877	874	870	869	868	867	866	865	864	862	860	860	860	860	860	861	865	870	873	875	878	879	880		8676			
22	880	879	877	874	872	870	868	867	866	864	863	861	860	859	860	860	861	866	870	873	880	888	890	890	8708			
23	890	889	886	883	880	879	879	878	878	876	874	872	871	871	870	870	870	870	870	868	868	868	867	867	8748			
24	868	867	866	866	866	865	864	863	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	855	849	844	840	845	845	846	848	850	851	854	854	853	856	857	8556			
26	858	858	852	851	850	849	848	848	848	847	846	846	846	842	843	845	848	350	850	852	855	858	859	860	8504			
27	860	860	858	856	855	853	851	851	851	849	847	845	843	843	843	843	845	850	852	856	860	863	868	870	8530			
28	872	871	870	868	867	865	863	862	861	860	859	857	855	855	855	856	858	862	866	870	872	872	872	875	8643			
29	875	875	871	870	870	869	869	869	869	867	866	863	861	860	861	864	867	868	870	875	880	881	888	890	8707			
30	890	889	887	884	882	881	880	878	876	873	870	870	870	869	870	869	869	871	873	879	880	883	890	890	8780			
Means.....	8679	8668	8645	8631	8621	8610	8602	8594	8589	8567	8548	8531	8517	8508	8512	8515	8524	8543	8568	8598	8623	8644	8668	8675	8591			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\ \text{Cot.}v = 0{\cdot}0003139 \times \text{Cot. } 75°\,14' = 0{\cdot}00008274.$ 3″·3963 = Correction for 1 Faht. Zero for Magnetometer 1431 at Ther. 80°·3 or Corrected Zero 1438.

Zero for Thermometer 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

JUNE 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41					
				1·7 *		0·9 *		−1·6 *		0·8 *		−0·9 *																
May 31	1370	1360	1360	1366	1368	1370	1370	1368	1370	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	1360	1348	1346	1345	1344	1340	1332	1288	1230	1186	1178	1194	1240	1292	1340	1319	-273	1046	1·003243
2	350	362	364	365	363	365	366	363	363	372	380	367	356	352	350	330	290	170	153	150	188	230	292	340	1316	-311	1005	3582
3	350	355	358	361	360	362	363	365	370	370	368	364	361	360	350	342	331	310	280	250	240	290	330	357	1339	-299	1040	3293
4	387	400	405	400	392	393	392	389	390	387	383	381	380	380	382	378	361	308	285	265	295	330	350	380	1366	-301	1065	3086
5	391	388	390	395	397	386	374	379	388	390	390	384	380	380	375	370	405	390	360	370	372	397	415	430	1387	-277	1110	2714
6	450	457	459	450	437	432	426	423	423	424	423	416	410	412	412	411	392	370	300	292	330	370	385	407	1404	-292	1112	2697
7	429	420	432	436	436	435	432	429	429	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	422	413	411	410	400	400	392	380	370	358	370	380	393	400	410	1408	-319	1089	2887
9	415	420	431	432	430	430	429	433	441	438	433	435	439	432	430	420	413	401	400	400	393	405	420	428	1423	-307	1116	2664
10	430	447	490	499	512	527	540	530	523	511	497	492	488	464	456	440	390	315	270	280	340	380	451	513	1449	-305	1144	2433
11	521	528	539	527	512	511	508	495	485	484	482	475	470	460	438	410	363	310	300	323	330	377	430	481	1448	-328	1120	2631
12	517	525	517	507	493	486	478	474	473	474	474	457	442	435	430	404	428	322	288	290	302	348	404	453	1434	-316	1118	2648
13	480	499	510	504	495	483	470	458	450	443	435	424	415	420	427	408	382	400	412	382	440	503	530	537	1454	-312	1142	2449
14	552	539	518	521	521	516	510	504	502	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	477	450	440	432	408	388	348	272	268	228	248	290	322	368	398	1418	-283	1135	2507
16	431	440	441	437	429	435	440	423	410	415	418	408	400	390	360	340	287	213	200	170	190	248	319	381	1359	-251	1108	2731
17	439	441	457	446	432	428	422	415	411	409	405	402	400	390	361	322	267	184	140	160	191	254	352	415	1356	-236	1120	2631
18	430	440	440	444	445	439	431	420	413	407	400	407	416	410	388	352	300	244	199	188	218	270	319	391	1367	-261	1106	2747
19	448	461	463	468	470	466	460	456	455	455	453	441	430	420	410	382	327	266	230	211	238	280	346	402	1393	-290	1103	2772
20	435	440	437	434	428	426	423	418	416	410	402	400	400	380	350	336	295	260	279	291	309	341	370	410	1379	-276	1103	2772
21	431	450	472	461	447	442	436	416	399	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	365	329	349	370	356	350	296	213	155	142	158	202	238	307	370	1340	-234	1106	2747
23	404	410	400	393	383	376	368	358	352	352	350	343	338	329	298	257	210	160	130	140	190	260	312	350	1311	-206	1105	2755
24	355	352	347	349	347	345	342	339	340	340	338	336	335	324	308	272	243	200	172	170	200	250	317	375	1304	-210	1094	2846
25	400	410	398	391	380	380	378	369	363	379	394	365	338	318	298	281	250	210	120	100	135	188	267	329	1310	-232	1078	2979
26	360	341	360	364	365	369	371	375	383	377	370	344	319	310	289	248	220	249	240	260	260	270	310	330	1320	-246	1074	3012
27	364	371	395	417	435	434	432	419	410	412	413	412	412	398	351	338	317	307	300	290	288	310	350	400	1374	-248	1126	2581
†28	430	437	440	437	430	430	428	423	422	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†29	—	—	—	—	—	—	—	—	—	403	382	375	370	360	328	289	318	200			re-adjusted.							
†30	456	435	421	420	415	404	391	396	405	399	392	389	387	388	340	297	250	221	230	250	296	347	398	423				
Means.....	1422	1427	1433	1432	1428	1427	1423	1417	1415	1411	1405	1400	1395	1387	1373	1350	1318	1276	1249	1247	1271	1312	1360	1401	1374			
Temp. Corrections	−315	−311	−303	−297	−293	−287	−282	−274	−269	−262	−256	−253	−251	−246	−242	−242	−246	−252	−263	−275	−285	−294	−306	−312	.....	-276		
Corrected Means.	1107	1116	1130	1135	1135	1140	1141	1143	1146	1149	1150	1147	1144	1141	1131	1108	1072	1024	986	972	986	1018	1054	1089	.....	.....	1098	
Mean Hourly Variations from General Monthly Mean. =·00	-9 -0074	-18 -0149	-32 -0265	-37 -0306	-37 -0306	-42 -0348	-43 -0356	-45 -0372	-48 -0397	-51 -0422	-52 -0431	-49 -0106	-46 -0381	-43 -0356	-33 -0273	-10 -0083	26 0215	74 0612	112 0927	126 1043	112 0927	80 0662	44 0364	9 0074	.....	$1+\frac{\Delta X}{X}=$	.....	1·002814

JUNE 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
May 31	890	890	890	890	890	890	890	889	889	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	884	880	879	878	876	875	876	876	878	880	882	887	890	898	905	8855			
2	908	908	905	902	900	900	900	896	893	891	890	889	889	887	886	886	888	891	895	899	902	905	905	905	8967			
3	903	903	901	899	898	898	898	894	890	889	889	888	888	887	884	883	885	888	890	890	894	895	900	900	8931			
4	901	901	900	898	897	895	893	891	890	888	887	886	885	882	881	882	887	889	892	898	901	905	909	910	8937			
5	910	902	898	895	893	891	889	884	880	880	880	879	879	878	876	876	876	879	882	886	889	890	893	895	8867			
6	899	903	901	900	899	897	896	893	891	888	885	883	881	880	878	879	880	881	883	888	892	899	903	908	8911			
7	909	910	909	908	907	905	903	901	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	896	892	891	890	889	887	888	889	890	894	897	900	904	908	908	8990			
9	908	907	905	903	901	899	898	896	894	892	891	890	889	888	885	885	885	889	890	894	896	900	903	903	8955			
10	903	902	902	901	900	897	895	894	894	892	891	890	889	887	887	884	883	886	890	895	899	901	906	909	8949			
11	910	910	910	907	905	903	902	900	899	898	898	896	895	892	891	892	893	897	900	903	906	910	911	913	9017			
12	914	914	910	907	904	901	898	896	895	895	895	892	890	888	885	886	889	891	893	897	899	901	907	909	8982			
13	910	911	909	907	905	902	899	897	895	893	892	891	890	887	884	886	889	890	892	897	899	900	902	901	8970			
14	900	899	894	893	892	891	891	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	885	880	880	880	881	879	880	882	884	887	892	893	893	894	894	8885			
16	895	893	890	889	889	884	880	876	873	872	872	871	870	868	868	868	869	870	875	878	881	885	889	890	8790			
17	890	889	887	885	883	878	873	871	870	867	864	863	863	863	863	863	868	869	870	874	879	880	886	889	8745			
18	890	890	887	884	882	881	880	879	878	878	878	877	877	875	873	872	873	876	880	881	888	890	894	898	8817			
19	899	898	897	897	897	896	895	893	892	891	890	887	884	880	880	880	880	880	884	888	890	893	897	898	8903			
20	899	897	892	890	889	887	886	884	882	881	880	880	880	880	879	878	879	881	886	889	890	891	895	897	8863			
21	897	892	890	889	888	886	885	882	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	871	862	863	864	865	864	861	860	860	862	867	868	870	872	874	8738			
23	877	872	871	870	870	868	866	864	863	861	860	860	860	860	859	859	860	861	864	865	870	870	872	875	8657			
24	875	874	872	870	868	868	868	865	862	861	860	860	860	860	860	860	860	860	867	868	872	875	879	882	8669			
25	883	880	878	876	874	874	874	872	870	869	868	867	866	865	863	863	867	870	872	875	879	882	887	888	8734			
26	887	884	881	880	880	878	877	875	874	873	872	871	870	869	869	869	870	871	876	880	883	888	890	890	8774			
27	890	888	885	883	881	880	880	878	876	875	874	872	871	870	870	870	870	870	875	879	882	882	883	885	8779			
†28	885	882	880	880	880	878	877	876	875	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†29	—	—	—	—	—	—	—	—	—	872	870	870	870	870	869	869	870	872			re-adjusted.							
†30	888	887	883	882	881	879	878	874	871	870	870	870	870	870	870	874	874	877	879	880	880	882	882	884				
Means.....	8978	8965	8943	8926	8913	8895	8882	8858	8842	8821	8804	8794	8787	8774	8761	8761	8774	8792	8825	8859	8891	8916	8951	8969	8862			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.
† The Observations of 28, 29, and 30, are rejected from the hourly Means.

$k = a.\ \text{Cot.}\ v. = 0{\cdot}0003139 \times \text{Cot.}\ 75^\circ 15' = 0{\cdot}00008264.$ s.d. 3·3963 = Correction for 1° Fahr. Zero for Magnetometer 1497 at Ther. 88°·8 or Corrected Zero 1215.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

JULY 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				3·1 *		1·1 *		−1·3 *		2·1 *		−0·2 *																
1	1436	1431	1422	1420	1411	1400	1386	1389	1395	1395	1390	1387	1385	1373	1345	1297	1245	1190	1158	1137	1190	1240	1300	1342	1336	-241	1095	1·000991
2	380	402	385	381	371	356	338	345	355	350	340	337	335	330	315	296	284	210	240	200	253	259	295	352	1321	-246	1075	1157
3	413	451	517	540	557	524	488	458	430	417	400	397	395	390	390	373	337	288	270	364	340	354	420	470	1416	-255	1161	0447
4	500	463	458	443	423	426	427	414	403	396	385	382	380	373	370	396	336	300	190	161	178	235	293	345	1362	-211	1151	0529
5	386	385	378	374	363	363	360	353	348	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	341	330	322	315	305	290	257	234	174	155	160	168	227	265	290	1298	-159	1139	0628
7	314	329	328	317	299	299	297	292	290	285	275	272	270	270	250	212	190	150	136	143	181	220	273	322	1259	-140	1119	0793
8	327	296	282	278	268	261	252	247	245	245	240	238	237	232	230	217	182	140	185	177	137	183	260	310	1236	-160	1076	1149
9	322	317	300	309	312	324	333	335	340	327	310	302	295	280	260	227	194	178	132	117	168	214	244	268	1267	-170	1097	0975
10	298	310	318	314	304	305	303	303	305	305	300	295	290	276	230	210	160	125	180	182	201	249	293	315	1265	-168	1097	0975
11	326	325	320	325	324	324	322	315	310	302	290	290	290	285	260	250	215	178	135	118	176	193	250	316	1268	-169	1099	0958
12	372	340	311	313	308	304	297	286	277	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	279	277	268	260	248	230	220	196	190	165	130	140	160	200	238	1250	-145	1105	0909
14	250	286	294	296	292	318	341	359	380	381	378	369	360	360	318	270	230	198	280	320	330	362	393	408	1324	-138	1186	0240
15	410	400	390	389	382	387	390	384	380	382	380	374	368	350	328	300	290	252	210	300	335	330	333	340	1349	-136	1213	0016
16	349	340	338	341	338	338	335	331	330	330	327	323	320	305	248	205	164	098	025	065	135	145	192	242	1257	-142	1115	0826
17	240	293	304	306	301	325	347	324	304	304	300	294	288	265	291	308	300	249	153	107	114	155	216	300	1266	-143	1123	0760
18	497	459	362	372	375	349	320	314	310	309	303	301	300	300	305	261	250	175	125	085	159	220	263	310	1293	-134	1159	0463
19	363	380	377	380	377	373	367	362	360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	352	340	337	335	330	330	295	247	168	118	127	150	190	240	292	1300	-152	1148	0554
21	322	330	320	322	318	317	314	313	315	315	310	305	300	294	290	272	220	160	116	087	110	163	210	238	1261	-140	1121	0777
22	288	291	288	286	278	279	278	299	322	313	300	289	278	265	252	243	215	185	120	142	179	203	252	295	1256	-146	1110	0868
23	307	310	292	301	304	297	288	283	280	277	270	272	275	279	242	219	221	148	122	120	156	178	240	266	1247	-138	1109	0876
24	295	307	305	309	306	310	312	301	292	288	280	269	258	245	230	188	155	120	130	140	180	229	256	297	1250	-160	1090	1033
25	303	300	289	293	290	291	289	281	275	270	260	260	260	245	240	185	140	098	072	138	200	249	268	281	1241	-176	1065	1239
26	290	310	342	360	372	356	337	330	326	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	310	290	292	295	290	273	240	197	155	130	142	203	252	290	310	1279	-181	1098	0967
28	326	322	320	317	308	300	290	288	288	286	280	277	274	270	252	236	220	160	115	096	124	190	253	277	1253	-196	1057	1306
29	360	342	364	384	398	349	298	310	324	324	320	346	372	360	353	328	273	230	197	163	228	268	350	380	1318	-204	1114	0835
30	410	392	375	375	368	361	352	337	325	326	322	316	310	310	295	290	260	205	132	117	131	187	240	300	1293	-180	1113	0843
31	342	370	361	353	338	328	316	316	318	318	313	311	310	305	293	257	215	174	115	095	120	171	216	261	1272	-166	1106	0901
Means.....	1349	1351	1346	1348	1344	1339	1332	1328	1327	1323	1315	1312	1309	1301	1286	1261	1229	1181	1152	1153	1185	1223	1271	1310	1286			
Temp. Corrections	−197	−194	−188	−184	−182	−176	−171	−167	−165	−161	−159	−156	−154	−151	−149	−147	−149	−154	−163	−170	−178	−185	−190	−194	.....	-170		
Corrected Means..	1152	1157	1158	1164	1162	1163	1161	1161	1162	1162	1156	1156	1155	1150	1137	1114	1080	1027	989	983	1007	1038	1081	1116	.....	.....	1116	
Mean Hourly Variations from General Monthly Mean. = ·00	−36 −0298	−41 -0339	−42 -0348	−48 -0397	−46 -0381	−47 -0389	−45 -0372	−45 -0372	−46 -0381	−46 -0381	−40 -0331	−40 -0331	−39 -0323	−34 -0281	−21 -0173	2 -0017	36 -0298	89 -0736	127 -1050	133 -1099	109 -0901	78 -0644	35 -0289	0 -0000	.....	$1+\frac{\Delta X}{X}=$	.....	1·000818

JULY 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	885	885	882	880	878	875	873	873	873	872	872	871	871	870	870	870	871	873	878	878	880	880	883	882	8760			
2	884	883	883	881	880	878	876	874	873	872	872	872	872	870	870	870	874	875	880	880	881	883	885	888	8773			
3	888	888	884	884	884	881	879	878	878	877	877	875	874	872	872	873	874	877	880	880	884	889	889	889	8802			
4	882	875	875	875	875	873	872	869	866	864	863	861	860	860	860	858	858	860	863	862	868	869	870	870	8670			
5	870	868	864	861	858	856	855	855	855	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	852	850	848	846	846	844	843	843	844	844	846	849	849	849	850	8519			
7	850	850	850	848	847	845	844	843	842	841	841	840	840	840	840	840	840	844	848	849	853	857	858	858	8462			
8	857	852	852	851	851	850	850	850	850	850	850	850	850	848	847	846	848	850	854	855	858	860	860	861	8521			
9	861	861	861	860	860	859	858	857	856	855	854	852	851	850	850	849	850	850	852	852	855	858	858	857	8552			
10	858	858	857	855	854	853	853	852	851	851	851	850	850	850	849	848	850	851	856	858	860	864	864	867	8546			
11	863	861	860	860	860	859	859	858	857	854	852	851	850	850	850	849	848	848	849	850	850	856	859	860	8547			
12	859	858	856	853	851	850	850	849	849	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	847	845	844	843	842	841	840	840	840	842	845	847	848	850	853	8476			
14	852	852	852	850	848	846	845	843	841	840	840	840	840	840	840	840	840	843	848	848	850	852	854	854	8457			
15	854	855	852	850	849	847	845	843	841	841	841	840	840	840	840	840	840	840	842	846	848	849	850	850	8451			
16	850	850	850	850	850	849	848	847	847	846	845	843	842	841	841	841	842	842	845	847	849	850	852	853	8467			
17	854	853	852	851	850	849	849	848	848	847	846	845	844	843	842	841	842	843	843	844	847	849	849	850	8470			
18	850	850	844	845	847	844	842	841	841	840	840	840	840	840	839	839	840	840	842	848	851	853	855	857	8445			
19	857	857	852	851	851	851	851	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	851	852	850	849	848	846	846	845	846	848	848	849	850	850	850	8499			
21	850	850	847	847	847	845	843	843	843	843	843	842	842	841	840	840	842	845	847	850	851	854	857	858	8462			
22	858	859	857	855	853	851	850	850	850	849	848	846	844	841	840	840	840	840	843	845	848	848	849	850	8481			
23	850	850	849	848	848	848	848	845	842	841	840	840	840	840	840	839	840	842	846	847	851	852	856	858	8458			
24	858	857	857	857	857	856	856	853	850	850	850	848	847	845	843	843	845	847	848	850	854	857	860	864	8522			
25	867	865	861	860	859	858	858	855	852	851	850	850	850	850	850	850	850	853	856	858	861	864	865	867	8567			
26	868	868	864	863	863	861	860	860	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	855	851	851	851	850	850	850	850	853	856	859	860	863	865	868	8583			
28	869	869	868	867	866	863	861	860	860	860	860	859	858	856	854	853	855	857	860	866	867	869	873	875	8627			
29	876	876	870	870	870	867	864	863	862	862	862	861	860	860	859	858	858	860	861	865	867	868	870	870	8650			
30	870	870	870	866	863	861	859	858	858	857	856	855	854	853	851	850	850	850	852	855	857	859	860	860	8581			
31	860	860	860	860	860	855	850	850	850	850	850	850	850	850	850	849	849	850	850	853	857	859	860	861	8539			
Means.....	8630	8622	8603	8592	8585	8567	8555	8543	8535	8525	8519	8509	8503	8495	8488	8483	8490	8505	8531	8550	8575	8596	8611	8622	8551			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the corrections of interpolations.

$k = a.\ \text{Cot.}\, v. = 0{\cdot}0003139 \times \text{Cot.}\ 75^\circ 15' = 0{\cdot}00008264.$ s.d. 3.3963 = Correction for 1° Faht. Zero for Magnetometer 1497 at Ther. $88^\circ 8$ or Corrected Zero 1215.

Zero for Ther. $80^\circ 5$ or Standard $80^\circ 0$.

HORIZONTAL FORCE MAGNETOMETER.

AUGUST 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·42	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·4 *		0·7 *		−0·9 *		−1·3 *		−0·9 *																
1	1319	1368	1349	1352	1347	1342	1336	1332	1330	1324	1320	1317	1315	1300	1295	1260	1215	1168	1105	1054	1061	1140	1216	1274	1268	-174	1094	1·001000
2	319	357	352	352	344	343	340	337	336	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	342	350	349	350	340	352	320	270	240	220	195	250	303	378	389	1322	-197	1125	0743
4	430	404	380	388	388	378	366	364	364	356	350	344	340	335	330	315	290	253	210	186	209	260	280	324	1327	-203	1124	0752
5	353	360	355	358	353	357	359	353	348	335	325	330	337	330	325	320	310	282	290	295	310	360	395	421	1340	-209	1131	0694
6	430	425	423	428	424	414	402	390	380	374	370	372	375	350	330	348	330	330	342	367	413	457	492	485	1394	-234	1160	0455
7	500	510	476	469	453	451	448	431	415	416	420	415	412	410	380	330	308	275	260	282	292	310	339	345	1389	-212	1177	0314
8	350	367	393	394	387	387	386	384	384	381	380	368	357	350	345	320	304	274	242	270	255	270	290	321	1340	-187	1153	0512
9	350	377	389	400	402	402	401	394	388	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	359	332	325	320	315	300	282	240	195	174	168	180	217	255	299	1311	-178	1133	0677
11	305	317	370	375	371	376	379	369	360	342	327	310	295	275	265	270	230	244	240	190	227	251	275	310	1303	-162	1141	0612
12	320	335	327	338	340	341	340	330	322	318	317	305	295	290	280	238	169	120	082	072	094	160	227	289	1260	-152	1108	0885
13	322	337	295	308	312	313	313	311	310	307	306	302	300	300	290	268	220	175	134	159	156	190	215	260	1267	-161	1106	0901
14	317	350	362	353	335	323	310	299	290	284	280	265	252	255	253	250	192	162	150	162	149	140	170	218	1255	-153	1102	0933
15	281	320	316	321	317	314	309	303	298	289	283	278	275	265	260	256	230	198	170	150	158	187	230	268	1262	-172	1090	1033
16	300	306	305	309	305	301	302	299	298	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	293	290	282	275	260	248	227	192	145	150	162	182	214	231	240	1255	-157	1098	0967
18	272	290	288	284	272	266	259	250	242	225	210	207	205	200	213	200	150	110	102	120	118	150	212	262	1213	-142	1071	1190
19	279	281	288	294	292	288	282	280	280	274	270	257	245	240	234	211	184	153	142	161	170	200	220	232	1240	-127	1113	0843
20	235	241	243	243	235	238	239	233	228	225	225	222	220	205	185	170	146	120	160	179	222	280	275	281	1219	-124	1095	0991
21	270	300	361	341	318	303	286	285	285	272	262	260	260	255	248	232	220	195	207	200	210	200	225	240	1260	-122	1138	0637
22	250	272	289	301	305	296	286	276	268	263	260	254	250	245	231	220	206	190	182	167	180	200	233	250	1245	-123	1122	0768
23	260	262	276	294	303	292	279	278	279	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	358	440	439	440	420	380	343	340	330	340	352	350	330	341	343	1336	-130	1206	0074
25	355	380	383	379	366	364	361	363	366	354	345	339	335	340	308	270	210	150	168	172	203	257	300	346	1309	-134	1175	0330
26	360	353	349	349	340	340	338	333	330	324	320	311	304	308	323	282	210	165	124	148	150	209	260	337	1286	-131	1155	0496
27	372	363	355	364	365	354	342	341	341	330	322	320	320	320	305	278	233	195	150	149	169	190	240	287	1292	-144	1148	0554
28	329	339	328	334	332	331	329	324	321	322	325	321	318	305	285	268	218	170	140	161	190	210	222	237	1277	-150	1127	0727
29	258	270	263	288	305	303	300	308	318	310	305	317	330	310	312	303	254	212	133	125	104	150	260	319	1265	-148	1117	0810
30	320	320	327	359	379	388	395	384	374	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	383	395	387	380	380	360	313	301	260	251	225	247	253	330	357	1336	-164	1172	0355
Means	1325	1339	1340	1345	1342	1339	1334	1329	1325	1322	1320	1315	1312	1304	1294	1273	1237	1204	1187	1187	1202	1234	1274	1305	1291			
Temp. Corrections	-189	-186	-178	-174	-171	-168	-165	-162	-159	-154	-151	-148	-147	-144	-138	-134	-137	-142	-149	-158	-167	-176	-183	-188	.....	-161		
Corrected Means	1136	1153	1162	1171	1171	1171	1169	1167	1166	1168	1169	1167	1165	1160	1156	1139	1100	1062	1038	1029	1035	1058	1091	1117	.....	.....	1130	
Mean Hourly Variations from General Monthly Mean. =·00	-6 -0050	-23 -0190	-32 -0265	-41 -0339	-41 -0339	-41 -0339	-39 -0323	-37 -0306	-36 -0298	-38 -0314	-39 -0323	-37 -0306	-35 -0289	-30 -0248	-26 -0215	-9 -0074	30 0248	68 0562	92 0761	101 0834	95 0785	72 0595	39 0323	13 0108	.....	$1+\frac{\Delta X}{X}=$	.....	1·000702

AUGUST 1851. Temperature of Horizontal Force Magnetometer.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Means.
			•		*		•		*		*														
1	862	862	860	860	860	860	860	859	858	856	855	853	852	852	850	849	848	850	852	853	857	860	861	863	8563
2	869	869	866	866	866	864	862	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	—	—	—	—	—	—	—	—	—	860	860	859	858	857	854	853	857	860	860	863	870	872	872	873	8630
4	874	873	870	870	870	866	863	863	863	861	860	860	860	860	859	858	859	860	860	863	868	870	872	872	8648
5	875	874	870	869	869	868	867	864	862	861	860	860	860	860	859	858	860	862	865	869	870	875	879	880	8665
6	880	880	879	878	877	876	875	873	871	870	870	869	869	867	865	865	867	869	870	873	878	880	886	888	8740
7	886	883	879	877	875	873	872	871	870	869	869	867	865	861	860	858	857	856	858	859	860	862	865	866	8674
8	867	867	865	863	861	860	860	860	860	859	858	856	855	851	850	851	852	857	860	861	864	867	868	868	8600
9	869	869	866	864	863	862	861	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	855	850	850	850	850	848	848	849	850	853	854	857	859	862	865	8573
11	865	865	861	860	860	860	860	859	858	855	852	851	850	850	846	841	840	840	840	845	848	850	854	857	8528
12	858	858	855	855	855	855	855	853	852	851	850	850	850	848	842	840	839	840	841	845	848	850	851	855	8498
13	857	857	855	852	850	850	850	850	850	850	850	850	850	850	848	846	848	849	852	854	857	860	862	863	8525
14	863	861	860	857	855	853	851	850	849	848	848	845	843	841	840	840	840	842	846	848	851	854	857	859	8500
15	860	860	859	859	859	858	858	857	856	854	853	851	850	849	848	847	847	849	851	857	860	863	864	866	8556
16	865	864	861	860	860	860	860	859	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	—	—	—	—	—	—	—	—	—	849	840	840	840	840	840	840	840	843	847	850	851	854	856	857	8514
18	857	855	850	849	849	849	849	843	838	840	843	842	841	840	840	840	840	844	846	849	850	854	858	859	8469
19	852	850	850	848	846	843	841	840	840	840	840	840	840	839	838	838	838	839	840	840	841	843	846	848	8425
20	848	848	847	845	844	842	840	840	840	839	838	837	837	837	835	833	834	837	840	842	846	849	850	850	8416
21	849	848	843	842	842	841	840	840	840	840	840	839	839	838	833	833	835	837	839	841	844	847	848	848	8411
22	848	848	845	842	840	840	840	840	840	840	840	839	838	838	837	836	837	837	838	840	844	847	848	848	8413
23	848	848	845	843	842	842	842	841	841	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
24	—	—	—	—	—	—	—	—	—	840	840	840	840	840	839	838	839	840	844	847	849	850	852	852	8434
25	853	850	850	849	849	845	842	841	840	840	840	840	840	840	838	837	839	840	842	847	848	850	852	854	8444
26	853	852	850	847	844	843	842	841	841	840	840	840	840	840	837	837	838	839	841	841	845	850	851	855	8436
27	857	857	855	853	851	850	849	848	847	845	843	842	841	840	840	840	840	843	848	850	853	854	855	855	8475
28	856	855	851	850	850	850	850	850	850	850	850	849	849	848	845	843	843	844	847	848	850	850	850	852	8492
29	852	852	851	850	850	850	850	849	848	841	845	845	846	847	848	843	843	845	848	849	850	852	854	855	8487
30	854	852	852	853	855	854	854	855	856	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
31	—	—	—	—	—	—	—	—	—	853	850	850	850	850	848	848	848	849	850	854	857	859	861	866	8533
Means	8607	8599	8575	8562	8555	8544	8536	8526	8518	8504	8494	8486	8482	8474	8457	8446	8453	8468	8490	8515	8543	8569	8590	8605	8525

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\ \text{Cot.}v = 0{\cdot}0003139 \times \text{Cot. } 75^\circ\ 15' = 0{\cdot}00008264$. s.d. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1497 at Ther. 88°·8 or Corrected Zero 1215.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

SEPTEMBER 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P. M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				3·9 *		1·4 *		2·6 *		1·3 *		−1·7 *																
1	1398	1400	1374	1390	1399	1390	1379	1382	1380	1371	1360	1357	1357	1345	1330	1305	1268	1220	1198	1172	1220	1300	1371	1403	1336	-182	1154	1·000504
2	437	410	453	465	469	453	434	434	428	400	370	363	360	360	342	317	280	253	231	226	218	248	292	370	1359	-197	1162	0438
3	360	358	399	434	461	452	440	431	417	410	400	391	385	352	317	305	310	412	325	662	942	2122	2093	2034	1509	-198	1311	0·999207
4	922	998	922	924	919	938	955	811	662	705	745	705	668	660	630	568	520	478	472	477	460	1489	1556	1550	1697	-220	1477	7835
5	539	540	548	558	560	551	540	535	525	524	520	523	530	510	508	462	402	350	311	279	302	358	427	501	1475	-208	1267	9580
6	528	499	490	509	521	512	500	493	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	599	715	716	720	735	720	740	667	708	719	688	729	786	769	746	1637	-210	1427	8248
8	740	698	696	678	653	656	656	658	655	643	628	612	600	593	540	533	503	465	518	510	528	552	590	618	1605	-220	1385	8595
9	610	594	590	592	586	587	585	575	560	561	560	558	540	534	532	502	439	378	319	308	552	414	489	532	1512	-217	1295	9339
10	540	521	527	512	490	499	505	520	530	526	520	513	510	510	510	487	438	385	342	318	329	339	397	458	1468	-222	1246	9744
11	466	462	446	477	500	506	510	509	502	492	480	473	470	470	465	420	361	166	128	172	308	397	488	569	1427	-224	1203	1·000099
12	588	561	523	518	505	500	492	489	480	490	498	487	480	460	468	447	378	300	257	269	310	359	400	438	1446	-222	1224	0·999926
13	448	429	436	445	446	457	465	460	450	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	451	450	441	435	420	413	387	320	278	220	229	247	319	342	388	1391	-221	1170	1·000372
15	425	439	437	442	440	461	480	501	517	501	483	480	480	475	464	400	339	290	308	332	366	410	432	448	1431	-217	1214	0008
16	427	414	431	442	445	441	435	440	440	439	435	441	450	400	400	426	361	323	267	260	300	362	428	440	1402	-198	1204	0091
17	448	449	439	446	446	439	430	417	390	404	415	406	400	400	403	400	322	275	216	188	210	262	328	388	1372	-198	1174	0339
18	394	387	384	395	398	405	410	399	382	382	380	376	375	370	365	320	257	210	188	196	221	260	316	364	1339	-192	1147	0562
19	370	376	410	424	430	416	399	402	400	404	405	396	390	390	393	360	310	284	248	260	271	300	317	348	1363	-189	1174	0339
20	378	396	411	408	398	396	392	391	385	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	389	390	387	387	388	360	327	268	198	156	186	222	290	340	351	1341	-189	1152	0520
22	367	358	357	369	373	388	400	390	375	369	360	358	360	355	360	350	270	167	133	197	230	296	345	360	1329	-199	1130	0702
23	368	376	389	409	422	417	410	416	417	410	400	398	400	398	404	367	288	190	198	242	297	350	408	435	1367	-219	1148	0554
24	421	406	393	395	390	402	411	398	380	380	377	380	387	384	403	347	261	179	140	170	237	290	330	341	1342	-212	1130	0702
25	349	347	362	374	379	384	387	387	382	372	360	338	320	330	302	240	139	088	112	148	212	288	347	402	1306	-191	1115	0826
26	422	409	420	436	445	449	450	459	462	426	387	359	335	325	325	279	213	216	179	197	218	227	259	308	1342	-143	1199	0132
27	364	414	449	425	393	415	435	418	395	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	401	405	368	335	330	375	360	300	208	188	187	238	299	357	422	1353	-148	1205	0082
29	458	409	411	431	443	429	412	402	387	395	400	505	613	722	217	780	899	2011	680	682	743	770	730	773	1571	-157	1414	0·998356
30	742	712	659	700	693	678	660	646	627	615	600	588	580	575	570	535	488	1418	355	320	350	412	479	517	1565	-181	1384	8603
Means.....	1481	1475	1477	1485	1485	1485	1484	1475	1462	1464	1463	1458	1456	1453	1428	1422	1369	1325	1285	1303	1348	1404	1447	1481	1434			
Temp. Corrections	−219	−216	−213	−209	−205	−202	−201	−198	−197	−195	−194	−190	−189	−184	−180	−179	−183	−187	−191	−196	−203	−209	−214	−219	.....	-199		
Corrected Means..	1262	1259	1264	1276	1280	1283	1283	1277	1265	1269	1269	1268	1267	1269	1248	1243	1186	1138	1094	1107	1145	1195	1233	1262	.....	.....	1235	
Mean Hourly Variations from General Monthly Mean. =·00	-27 -0223	-24 -0198	-29 -0240	-41 -0339	-45 -0372	-48 -0397	-48 -0397	-42 -0348	-30 -0248	-34 -0281	-34 -0281	-33 -0273	-32 -0265	-34 -0281	-13 -0108	-8 -0066	49 0405	97 0802	141 1165	128 1058	90 0744	40 0331	2 0017	-27 -0223	.....	$1+\frac{\Delta X}{X}=$	.....	0.999834

SEPTEMBER 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	867	865	863	862	861	860	860	859	859	858	857	855	853	850	850	850	853	854	856	858	859	862	865	867	8585			
2	869	869	868	867	866	864	862	861	860	859	859	859	860	860	858	857	858	859	860	864	868	868	869	869	8630			
3	869	868	868	867	867	865	864	863	862	861	860	860	860	858	858	855	858	858	860	861	865	869	870	873	8633			
4	873	872	872	871	870	870	870	870	870	870	870	870	870	870	867	867	866	867	867	869	870	871	872	872	8698			
5	871	871	870	869	869	868	867	866	865	864	863	862	862	862	862	862	862	863	864	867	868	869	870	872	8662			
6	872	872	871	871	871	869	868	867	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	866	866	865	864	863	861	861	861	861	862	864	867	869	870	872	8667			
8	874	874	874	873	872	872	872	871	870	870	870	868	867	865	863	862	864	865	867	868	870	871	874	877	8697			
9	879	878	877	875	873	871	870	870	870	869	869	867	866	863	861	861	862	864	863	866	868	870	871	872	8690			
10	875	875	874	872	870	870	870	870	870	870	870	869	869	868	866	866	867	867	868	869	870	871	874	877	8703			
11	877	876	874	872	870	870	871	870	870	870	870	869	869	867	865	866	868	869	870	870	871	874	878	879	8710			
12	879	878	877	873	870	870	870	869	869	867	866	865	864	863	865	865	867	869	870	871	872	873	877	878	8703			
13	877	872	871	870	870	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	869	870	868	867	866	865	865	867	868	869	870	872	874	877	878	8701			
15	876	874	872	871	870	870	870	869	869	867	866	865	865	864	863	861	863	864	868	869	870	872	877	876	8688			
16	874	873	872	870	868	867	867	864	862	861	860	858	857	855	853	855	857	858	860	860	863	867	869	870	8633			
17	871	870	869	867	866	864	862	861	860	860	860	860	860	859	856	857	858	860	860	864	868	869	870	871	8634			
18	870	867	868	866	865	864	863	862	861	860	860	859	859	857	856	856	856	856	858	859	860	861	863	867	8614			
19	867	867	866	863	860	860	860	860	860	860	860	860	860	859	857	857	858	860	860	860	860	860	860	862	8607			
20	860	860	860	859	858	857	857	857	857	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	858	860	860	860	860	859	859	860	862	861	862	864	867	869	869	8606			
22	870	869	868	866	864	863	863	862	862	861	861	860	860	860	859	857	858	860	861	862	868	870	870	872	8636			
23	872	872	870	870	870	870	870	870	870	870	870	870	870	869	868	867	866	866	866	868	870	870	870	872	8694			
24	872	871	870	869	869	868	867	867	867	866	865	865	865	865	865	863	863	866	867	869	869	868	869	870	8673			
25	870	870	870	870	870	869	869	868	868	866	864	863	862	860	860	858	854	851	850	850	850	851	852	853	8612			
26	853	852	850	849	849	848	848	847	847	844	842	841	840	840	840	840	845	847	849	850	850	852	852	852	8470			
27	851	850	850	849	848	847	846	846	846	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	846	846	844	843	842	841	842	845	847	849	852	855	859	860	860	8485			
29	860	859	857	856	855	854	853	851	850	850	850	848	847	844	842	841	842	846	850	850	854	858	858	859	8514			
30	860	860	860	860	860	860	860	860	860	860	860	859	858	853	850	850	850	853	855	858	860	861	864	867	8583			
Means.....	8695	8686	8677	8664	8654	8646	8642	8634	8631	8624	8621	8611	8607	8593	8581	8577	8588	8600	8612	8627	8647	8664	8681	8695	8636			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\ \text{Cot.}\ v. = 0{\cdot}0003139 \times \text{Cot.}\ 75^\circ 15' = 0{\cdot}00008264.$ 3″·3963 = Correction for 1° Faht. Zero for Magnetometer 1497 at Ther. 88°·8 or Corrected Zero 1215.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

OCTOBER 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h. m. 4 41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				1·7 *		1·7 *		4·3 *		−1·4 *		−0·9 *																
1	1529	1530	1541	1543	1541	1556	1568	1558	1540	1514	1490	1483	1477	1465	1473	1423	1372	1302	1272	1275	1325	1405	1430	1510	1463	−191	1272	0·999528
2	1585	1593	1538	572	602	629	652	630	600	614	631	637	645	648	570	424	380	1392	1470	1383	500	503	539	533	1553	−203	1350	8884
3	535	536	550	559	565	564	560	559	550	551	555	547	540	538	524	478	414	1348	1314	1360	364	406	460	507	1495	−202	1293	9355
4	449	471	476	484	489	481	470	481	483	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5	—	—	—	—	—	—	—	—	—	465	449	446	445	440	422	370	293	1231	1212	1225	266	330	375	398	1402	−203	1199	1·000132
6	390	368	378	387	393	403	410	403	388	374	362	355	350	350	323	258	172	1100	1080	1100	180	275	336	345	1312	−164	1148	0554
7	307	310	311	313	312	318	320	324	320	309	300	285	272	280	289	233	168	1100	1080	1110	170	243	280	300	1261	−131	1130	0702
8	313	313	338	343	345	338	327	324	312	300	290	282	275	270	252	210	144	1075	1040	1115	140	200	254	275	1253	−103	1150	0537
9	280	300	289	291	290	306	318	314	302	300	300	295	291	290	281	242	169	1122	1110	1168	218	287	320	400	1270	−101	1169	0380
*10	*a*														*a*	242	194	1140	1095	1100	205	290	375	450	?			
11	450	428	425	425	422	408	390	380	362	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	335	310	305	302	291	277	190	112	1035	1016	1080	155	235	300	335	1290	−130	1160	0455
13	355	339	341	346	347	352	353	351	340	334	330	325	321	340	317	318	272	1199	1120	1145	160	240	310	345	1300	−155	1145	0578
14	382	370	411	388	361	382	400	387	366	357	350	347	345	350	368	340	280	1217	1190	1180	220	260	295	320	1328	−168	1160	0455
15	330	328	330	336	339	343	344	351	350	333	318	303	290	288	286	249	200	1170	1125	1100	122	154	215	225	1268	−156	1112	0851
16	245	260	291	293	292	299	303	311	310	299	290	288	287	298	307	277	250	1200	0	1135	180	210	248	275	1262	−152	1110	0868
17	280	297	300	300	297	306	311	315	311	304	300	293	287	292	299	267	198	1173	1125	1110	162	250	278	290	1264	−149	1115	0826
18	303	319	326	355	380	386	388	391	386	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	349	315	317	320	350	337	284	258	1290	1270	1280	307	310	320	333	1328	−144	1184	0256
20	353	294	359	336	310	309	304	329	346	332	320	328	337	350	386	325	342	1323	1360	1358	380	385	385	397	1344	−130	1214	0008
21	400	402	398	396	390	388	383	389	387	372	360	344	330	298	269	228	170	1122	1095	1090	065	166	257	280	1291	−123	1168	0389
22	300	329	348	347	342	348	350	345	332	310	290	290	292	320	327	252	179	1122	1080	1055	115	178	250	327	1268	−119	1149	0545
23	320	326	243	312	377	381	381	377	364	340	318	309	302	307	307	274	201	1260	1192	1250	315	370	420	450	1321	−133	1188	0224
24	410	470	425	375	322	353	380	366	343	334	327	332	339	330	294	250	209	1154	1090	1147	225	247	327	314	1307	−120	1187	0232
25	307	304	298	305	308	310	309	316	315	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	285	257	258	260	265	258	200	152	1101	1090	1110	160	210	280	315	1249	−96	1153	0512
27	310	329	332	321	306	314	318	307	288	282	279	277	277	266	241	192	127	1065	0998	1000	055	120	172	200	1224	−85	1139	0628
28	208	220	225	214	200	198	192	208	216	212	210	262	315	330	318	282	201	1228	1270	1705	812	760	665	630	1337	−76	1261	0·999620
29	624	644	569	552	531	511	488	498	500	484	470	460	451	435	430	405	340	1285	1210	1198	230	295	352	395	1432	−87	1345	8925
30	440	463	430	421	409	400	388	378	360	354	351	333	317	310	301	257	199	1127	1085	1070	115	160	195	228	1295	−60	1235	9834
31	245	257	269	277	282	291	297	296	286	277	271	262	255	230	214	146	103	996	982	936	015	090	133	186	1192	−57	1135	1·000661
Means.....	1371	1377	1375	1377	1375	1380	1381	1380	1371	1358	1348	1345	1343	1343	1333	1284	1227	1182	1155	1180	1229	1280	1323	1350	1319			
Temp. Corrections	-152	-146	-142	-140	-140	-138	-137	-132	-130	-128	-127	-125	-123	-119	-116	-115	-116	-120	-126	-131	-135	-142	-146	-148	.....	-132		
Corrected Means..	1219	1231	1233	1237	1235	1242	1244	1248	1241	1230	1221	1220	1220	1224	1217	1169	1111	1062	1029	1049	1094	1138	1177	1202	....	.....	1187	
Mean Hourly Variations from General Monthly Mean. = ·00	-32	-44	-46	-50	-48	-55	-57	-61	-54	-43	-34	-33	-33	-37	-30	18	76	125	158	138	93	49	10	-15				
	-0265	-0364	-0381	-0413	-0397	-0454	-0471	-0504	-0446	-0356	-0281	-0273	-0273	-0306	-0248	0149	0628	1033	1306	1140	0769	0405	0083	-0124	.....	$1+\frac{\Delta X}{X}=$	.....	1·000232

OCTOBER 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	868	867	863	863	863	863	863	862	861	861	861	860	859	855	852	852	854	857	860	860	863	866	867	868	8612			
2	870	869	868	867	866	867	868	867	867	866	866	864	862	858	858	858	859	860	861	862	864	868	869	869	8647			
3	869	865	865	864	863	863	863	862	862	862	862	861	861	860	861	862	863	864	866	868	868	870	872	872	8645			
4	872	871	870	869	869	868	868	866	864	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	865	867	866	865	863	860	859	858	859	860	860	861	863	865	866	8648			
6	865	861	860	860	860	859	859	856	854	852	850	850	850	848	847	846	846	848	848	850	850	851	858	853	8532			
7	852	850	850	849	849	848	847	845	843	841	840	840	840	840	839	838	838	839	840	843	843	844	845	646	8437			
8	846	842	840	840	840	840	840	838	837	834	832	831	830	829	828	828	829	830	832	835	836	837	838	840	8355			
9	839	837	835	835	835	835	835	835	835	833	832	831	830	830	830	831	832	834	835	836	838	839	840	840	8347			
*10																834	836	837	838	840	841	842	845	845	?			
11	844	842	841	841	841	841	841	840	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	841	842	841	841	841	840	840	840	844	845	847	849	850	853	855	8433			
13	855	853	851	851	851	851	851	850	850	849	849	848	848	848	847	847	848	848	850	850	851	855	857	859	8507			
14	858	857	856	856	856	855	854	854	854	853	852	852	852	852	850	850	850	851	853	855	857	860	861	861	8545			
15	862	860	859	859	859	855	852	851	851	850	849	847	845	843	842	842	844	847	848	850	851	852	853	853	8510			
16	853	850	850	849	849	849	849	848	848	848	848	848	848	848	848	848	848	848	850	850	852	854	855	855	8497			
17	855	851	850	850	850	849	849	848	848	848	848	847	847	847	847	847	848	848	849	850	850	850	850	850	8490			
18	850	850	849	848	848	848	848	847	847	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	847	847	846	845	842	842	842	842	844	847	849	850	854	854	852	8474			
20	850	849	849	848	847	846	846	844	842	842	842	841	841	840	840	839	839	840	840	840	841	845	845	845	8434			
21	845	845	845	845	845	844	843	842	842	342	842	842	842	841	840	840	840	839	838	837	837	838	839	840	8414			
22	840	840	839	839	839	838	838	837	837	837	837	838	839	840	840	837	838	838	840	842	843	847	848	849	8400			
23	847	845	846	846	846	846	846	845	844	844	844	842	841	841	840	840	840	840	843	844	844	846	848	850	8441			
24	848	847	844	843	843	842	841	840	840	840	840	839	839	837	835	836	837	838	840	840	840	840	840	841	8404			
25	841	840	839	836	834	832	831	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	830	830	830	830	829	828	827	828	829	830	836	838	839	839	840	8332			
27	838	837	832	832	832	832	832	831	830	829	829	829	829	828	827	826	824	822	826	828	830	830	833	834	8300			
28	833	831	830	830	830	829	828	827	826	825	825	824	823	821	820	820	820	824	826	829	831	835	836	836	8275			
29	835	832	832	834	836	836	836	833	830	830	830	829	829	827	823	823	824	825	827	830	832	833	835	835	8307			
30	835	832	830	830	830	829	828	825	822	821	821	820	818	817	813	813	813	815	817	820	822	825	825	826	8228			
31	825	825	824	823	822	821	821	820	820	820	820	820	820	820	820	818	819	820	820	822	825	826	826	825	8218			
Means.....	8498	8480	8468	8464	8463	8456	8453	8440	8432	8427	8425	8418	8413	8402	8391	8388	8393	8404	8420	8436	8448	8468	8479	8485	8440			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means and those numbers on the heads of them are the Corrections of interpolations.
* The Observations of 16th are rejected from the Hourly Means.
a The Observations rejected from the register being doubtful found a Cobweb on the Instrument.

$k = a.\ \text{Cot.}v = 0{\cdot}0003139 \times \text{Cot. } 75^\circ\,15' = 0{\cdot}00008264$. 3·3963 = Correction for 1° Faht. Zero for Magnetometer 1497 at Ther. 88°·8 or Corrected Zero 1215.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

NOVEMBER 1851. Horizontal Force Manetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P. M. h. m. 4·41	h. m. 5·41	h. m. 6·41	h. m. 7·41	h. m. 8·41	h. m. 9·41	h. m. 10·41	h. m. 11·41	h. m. 12·41	h. m. 13·41	h. m. 14·41	h. m. 15·41	h. m. 16·41	h. m. 17·41	h. m. 18·41	h. m. 19·41	h. m. 20·41	h. m. 21·41	h. m. 22·41	h. m. 23·41	h. m. 0·41	h. m. 1·41	h. m. 2·41	h. m. 3·41				
				2·4 *		—5·1 *		4·1 *		1·1 *		—1·6 *																
1	1195	1203	1213	1226	1235	1233	1242	1245	1240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	1227	1211	1198	1188	1162	1150	1127	1160	1103	1042	980	1000	1042	1030	1050	1154	-20	1134	1·000669
3	071	119	160	192	220	190	170	186	193	178	160	152	147	150	144	140	1088	1049	1018	1020	1063	085	093	090	1128	34	1162	0438
4	100	127	161	149	133	131	140	143	137	139	139	132	128	140	130	098	1040	994	960	952	1010	068	102	120	1099	46	1145	0578
5	130	135	160	169	174	162	160	162	155	157	157	154	154	158	142	114	1062	1033	1000	1010	1033	072	090	098	1118	38	1156	0483
6	100	103	116	125	129	119	120	112	095	093	088	087	090	090	073	040	997	941	927	940	1000	053	072	087	1067	71	1138	0637
7	092	093	097	106	111	115	130	127	115	114	110	107	108	106	090	048	1006	994	1008	1020	1040	080	132	170	1088	43	1131	0694
8	182	174	164	164	159	150	151	149	138	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	133	125	121	120	124	130	087	1041	997	1000	1017	1081	160	222	240	1126	-16	1110	0868
10	282	298	300	282	259	229	210	203	187	181	172	161	153	140	139	087	985	924	910	950	970	025	068	088	1133	-39	1094	1000
11	129	190	231	219	202	211	230	213	188	183	176	172	172	189	172	128	1080	1032	1018	1048	1079	148	191	216	1159	-46	1113	0843
12	210	196	196	202	203	201	210	224	230	215	197	188	182	188	162	126	1058	1015	970	991	1040	092	140	166	1150	-45	1105	0909
13	171	157	163	175	183	187	202	205	200	190	177	172	170	170	166	100	1040	988	938	940	1002	055	100	129	1124	-36	1088	1050
14	158	159	179	175	166	180	205	216	218	209	198	188	181	180	162	155	1115	1068	1078	1072	1109	139	141	128	1157	-22	1135	0661
15	138	123	124	139	149	139	140	131	114	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	129	142	138	138	130	123	080	1040	965	940	940	990	019	055	103	1089	1	1090	1033
17	146	153	168	186	200	181	172	160	140	141	140	137	137	122	123	106	1080	1080	1069	1063	1076	100	132	135	1131	-16	1115	0826
18	139	149	161	173	180	166	162	184	197	191	182	179	180	178	170	160	1130	1077	1038	1032	1048	083	118	127	1142	-30	1112	0851
19	133	142	151	159	163	160	168	166	155	148	138	133	132	130	118	076	1042	1000	1020	1025	1039	081	113	125	1113	-24	1089	1041
20	135	140	151	160	164	161	168	167	157	159	159	153	150	157	146	117	1060	1032	1005	1000	1040	090	118	130	1122	-34	1088	1050
21	171	180	212	229	242	250	269	236	195	189	180	169	162	147	120	093	1060	1040	1050	1090	1160	319	408	435	1192	-45	1147	0562
22	337	353	450	448	442	409	386	377	360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	309	255	257	262	250	239	180	1138	1100	1108	1130	1202	257	310	340	1287	-66	1221	0·999951
24	350	362	357	359	356	353	360	307	245	254	260	268	280	258	248	205	1150	1094	1025	1050	1090	147	190	225	1241	-79	1162	1·000438
25	199	191	210	214	214	216	229	221	205	211	215	215	218	212	202	164	1095	1058	1010	1040	1087	129	167	199	1172	-75	1097	0975
26	200	200	201	206	207	198	200	199	190	191	190	187	188	180	169	132	1060	1000	962	970	1010	082	140	190	1144	-62	1082	1099
27	182	174	169	171	168	158	159	155	143	150	155	148	144	130	172	147	1109	1047	1010	1016	1033	090	131	150	1130	-32	1098	0967
28	171	184	171	169	162	148	145	151	148	138	125	131	140	142	120	082	1041	1001	980	984	1003	034	070	092	1106	10	1116	0818
29	084	078	080	103	121	114	117	118	110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	107	102	099	100	083	101	089	1044	1018	990	1020	1042	110	114	125	1086	17	1103	0925
Means.....	1168	1175	1190	1196	1198	1190	1194	1190	1178	1173	1166	1162	1161	1157	1148	1115	1069	1026	1003	1012	1050	1102	1138	1158	1138			
Temp. Corrections	-29	-26	-24	-21	-19	-17	-17	-16	-15	-13	-12	-10	-10	-8	-6	-6	-10	-13	-17	-20	-23	-26	-28	-28	.....	-17		
Corrected Means..	1139	1149	1166	1175	1179	1173	1177	1174	1163	1160	1154	1152	1151	1149	1142	1109	1059	1013	986	992	1027	1076	1110	1130	.....	.....	1121	
Mean Hourly Variations from General Monthly Mean.	-18	-28	-45	-54	-58	-52	-56	-53	-42	-39	-33	-31	-30	-28	-21	12	62	108	135	129	94	45	11	-9				
=·00	-0149	-0231	-0372	-0446	-0479	-0430	-0463	-0438	-0348	-0323	-0273	-0256	-0248	-0231	-0173	0100	0513	0892	1115	1066	0777	0372	0091	-0074	.....	$1+\frac{\Delta X}{X}=$	.....	1·000777

NOVEMBER 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	824	823	822	821	820	820	820	820	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
2	—	—	—	—	—	—	—	—	—	815	810	809	809	808	807	805	805	802	802	800	800	799	799	798	8108			
3	798	798	798	798	798	798	798	798	798	797	797	796	795	795	794	792	792	791	791	791	790	792	793	793	7950			
4	793	793	792	791	790	790	790	790	791	791	791	790	790	790	790	791	792	792	793	793	793	793	794	794	7915			
5	795	793	793	792	792	792	792	792	793	793	793	792	792	792	793	794	794	795	796	797	797	797	797	795	7938			
6	793	791	791	789	787	784	782	781	780	780	780	780	780	780	780	780	780	780	781	784	786	788	789	789	7840			
7	790	790	790	788	787	788	790	790	790	789	789	789	789	789	790	790	792	793	796	797	798	800	802	806	7922			
8	807	807	806	805	804	803	803	803	803	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
9	—	—	—	—	—	—	—	—	—	806	810	810	810	810	810	810	810	811	813	815	817	818	818	818	8095			
10	818	819	818	818	818	817	817	816	815	815	815	814	813	812	812	812	813	815	818	820	820	821	820	820	8165			
11	820	820	819	818	817	817	818	817	817	816	816	815	815	815	816	817	819	820	821	823	824	825	825	825	8185			
12	823	821	820	819	819	819	819	818	818	818	818	818	818	816	815	815	817	818	818	820	820	820	820	820	8184			
13	820	819	818	818	818	817	816	815	815	815	815	814	814	813	812	812	813	813	815	816	816	817	817	815	8155			
14	815	814	814	813	812	812	812	812	812	811	811	810	810	810	810	810	810	813	813	811	810	810	810	808	8114			
15	807	806	806	804	803	802	802	802	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
16	—	—	—	—	—	—	—	—	—	803	804	803	802	802	801	803	804	803	806	808	810	811	811	811	8048			
17	811	810	810	809	809	808	808	808	808	807	807	806	806	806	805	806	807	809	810	813	815	817	817	817	8095			
18	816	816	815	814	814	814	814	813	813	812	812	812	812	811	811	812	815	815	815	815	815	815	816	816	8139			
19	816	815	814	812	811	810	810	810	810	810	810	810	810	810	809	809	810	811	812	815	816	817	818	818	8122			
20	818	818	816	815	814	814	814	813	813	812	812	811	811	811	811	812	814	814	817	818	820	820	820	820	8149			
21	820	820	820	819	818	818	818	817	816	815	815	814	814	814	814	814	816	818	820	820	821	825	826	826	8183			
22	826	824	824	823	823	823	824	824	824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
23	—	—	—	—	—	—	—	—	—	823	822	821	821	820	820	820	821	822	826	828	829	831	832	833	8243			
24	834	832	831	830	829	828	828	828	828	828	828	827	827	825	822	823	825	827	828	829	830	830	831	831	8283			
25	831	830	830	829	828	827	827	826	826	826	826	825	825	824	823	823	825	827	827	828	828	829	829	829	8270			
26	829	827	827	825	824	824	824	823	823	821	820	820	820	820	818	819	820	820	823	824	827	827	827	826	8233			
27	825	822	821	819	817	816	816	816	816	815	814	813	812	810	810	810	810	810	811	812	812	812	813	813	8144			
28	812	811	810	808	806	805	805	804	803	801	800	801	802	802	800	797	797	797	797	797	797	799	800	800	8021			
29	799	798	799	800	801	801	802	801	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
30	—	—	—	—	—	—	—	—	—	799	798	796	795	795	795	796	797	800	801	802	805	806	807	808	8000			
Means.....	8136	8127	8122	8111	8104	8099	8100	8095	8094	8087	8085	8078	8077	8072	8067	8068	8078	8086	8100	8109	8119	8127	8132	8132	8100			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k=a$. Cot.v. = 0·0003139 × Cot. 75° 15′ = 0·00008264. 3.3963 s.d. = Correction for 1 Faht. Zero for Magnetometer 1497 at Ther. 88°·8 or Corrected Zero 1215.

Zero for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

DECEMBER 1851. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				0·8 *		4·1 *		0·1 *		−1·6 *		0·2 *																
1	1131	1114	1120	1129	1137	1152	1159	1161	1162	1138	1118	1124	1130	1132	1142	1127	1102	1040	1030	1008	1052	1114	1158	1167	1119	-15	1104	1·000917
2	180	190	178	176	173	180	178	177	175	168	165	163	160	160	165	1149	1123	1080	1040	1017	1010	1058	1110	137	1138	-35	1103	0925
3	141	153	150	160	168	172	168	164	159	153	150	150	150	152	160	1147	1141	1112	1087	1062	1070	1091	1120	156	1139	-45	1094	1000
4	163	165	168	164	158	163	159	165	170	152	138	144	150	145	140	1123	1099	1052	1027	1025	1057	1097	1120	130	1128	-38	1090	1033
5	132	132	140	141	140	144	140	135	130	117	108	104	100	085	030	1008	990	953	940	966	1040	1061	1129	140	1084	-16	1068	1215
6	132	137	145	128	109	147	176	158	139	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	168	200	224	248	240	235	1200	1167	1162	1140	1169	1158	1174	1220	249	1176	8	1184	0256
8	266	300	285	264	242	236	222	206	190	175	163	169	175	173	157	1150	1103	1055	1020	1022	1038	1080	1112	156	1165	28	1193	0182
9	168	170	201	209	216	223	221	209	197	182	170	157	143	138	117	1083	1067	1030	1010	1037	1084	1093	1090	104	1138	37	1175	0330
10	110	123	152	144	134	142	141	125	109	120	135	132	128	117	103	1070	1027	1010	1019	1027	1063	1097	1102	118	1102	42	1144	0587
11	130	130	136	128	119	139	150	153	155	131	110	104	097	092	073	1040	1002	967	970	990	1015	1032	1039	045	1081	58	1139	0628
12	052	079	083	086	088	102	107	094	080	083	090	090	090	075	060	1040	1001	967	948	972	1002	1058	1107	104	1061	67	1128	0719
13	107	118	108	122	135	151	158	150	142	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	124	110	118	125	113	090	1070	1046	1018	988	986	1020	1060	1079	088	1093	46	1139	0628
15	093	106	113	117	119	122	117	118	118	112	110	110	110	100	088	1073	1052	1010	970	982	1018	1051	1070	112	1083	18	1101	0942
16	104	110	132	169	204	170	128	139	150	142	138	133	127	120	100	1082	1042	1020	1004	998	1022	1058	1080	096	1103	10	1113	0843
17	113	128	140	136	130	143	148	134	120	119	122	117	111	107	092	1065	1042	1000	980	964	1020	1017	1078	120	1089	-1	1088	1050
18	153	153	158	193	227	198	160	154	147	137	130	130	130	122	096	1070	994	997	935	1020	1060	1066	1092	128	1110	11	1121	0777
19	184	149	170	177	182	173	155	151	147	137	130	124	118	112	079	1054	1022	1011	990	980	1000	1030	1040	048	1098	42	1140	0620
20	058	073	082	100	117	115	104	107	109	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	081	056	051	046	047	038	981	960	914	900	940	950	1002	1060	130	1043	54	1097	0975
22	093	104	132	174	214	218	214	205	195	210	228	209	190	152	130	1087	1039	990	1010	1080	1102	1150	1168	160	1144	61	1205	0082
23	160	136	149	172	193	196	191	188	184	165	150	146	142	126	074	1103	1059	1008	910	887	914	984	1040	080	1098	75	1173	0347
24	110	154	113	112	110	114	109	091	072	066	063	072	080	098	102	1059	1019	978	918	908	947	1032	1100	154	1066	86	1152	0520
25	160	142	142	141	138	132	118	119	120	108	100	091	082	068	060	1040	985	936	889	896	949	1019	1053	055	1064	79	1143	0595
26	053	059	044	079	112	106	092	076	060	048	040	055	070	070	060	1040	995	954	900	903	920	953	990	008	1029	96	1125	0743
27	034	100	121	147	171	175	170	185	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	213	230	228	225	240	190	1122	1009	1025	1071	1070	1073	1084	1100	120	1138	81	1219	0·999967
29	147	159	157	190	222	255	280	320	360	309	262	246	230	184	230	1202	1169	1128	1117	1122	1149	1259	1284	250	1218	67	1285	9421
30	217	192	167	167	166	149	124	122	120	128	140	141	142	108	063	1052	990	967	920	910	949	977	998	017	1080	62	1142	1·000603
31	040	072	110	108	104	111	110	100	090	083	080	080	079	060	058	1042	1018	966	921	908	920	950	992	020	1043	74	1117	0810
Means.....	1127	1135	1141	1149	1157	1160	1156	1152	1148	1140	1135	1134	1133	1124	1109	1084	1047	1013	987	994	1022	1061	1094	1115	1105			
Temp. Corrections	21	24	25	27	28	31	33	34	35	37	38	40	41	44	49	52	50	47	42	37	33	28	25	24	.....	35		
Corrected Means.	1148	1159	1166	1176	1185	1191	1189	1186	1183	1177	1173	1174	1174	1168	1168	1136	1097	1060	1029	1031	1055	1089	1119	1139	.....	.....	1140	
Mean Hourly Variations from General Monthly Mean. = ·00	-8 -0066	-19 -0157	-26 -0215	-36 -0298	-45 -0372	-51 -0421	-49 -0405	46 -0381	-43 -0361	-37 -0306	-33 -0281	-34 -0281	-34 -0281	-28 -0231	-18 -0149	4 0033	43 0356	80 0661	111 0917	109 0901	85 0620	51 0421	21 0173	1 0008	.....	$1+\frac{\Delta X}{X}=$	.....	1·000620

DECEMBER 1851. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	808	808	808	808	808	807	807	807	807	806	806	806	806	806	806	806	808	810	814	814	815	816	818	819	8093			
2	819	818	817	816	815	814	814	814	814	813	813	813	813	812	812	812	813	814	816	818	820	820	820	820	8154			
3	820	820	820	819	818	818	818	817	817	817	817	817	817	815	814	815	816	817	818	820	820	822	822	822	8182			
4	822	820	820	819	819	818	818	817	816	815	814	813	812	812	811	811	811	814	817	818	818	818	819	819	8163			
5	818	817	817	816	815	813	811	810	810	809	808	807	807	805	802	802	804	806	808	808	809	810	810	810	8097			
6	810	810	810	809	809	808	807	806	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	803	800	800	800	800	797	796	797	798	799	800	800	800	801	801	8028			
8	801	801	801	800	800	799	798	798	798	796	795	794	794	792	791	791	793	793	794	796	798	799	799	800	7967			
9	800	799	798	797	797	795	793	793	793	792	792	792	792	790	790	790	790	792	792	793	794	796	798	798	7940			
10	798	798	797	797	797	795	793	791	790	790	790	790	790	790	789	788	789	790	790	791	792	794	795	796	7925			
11	795	793	792	791	790	790	790	790	790	790	790	789	788	786	783	780	780	781	783	785	787	789	790	790	7880			
12	790	790	789	788	788	787	787	786	786	785	784	783	782	782	780	780	780	780	781	785	788	789	790	790	7854			
13	790	789	788	788	788	787	787	786	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	788	791	791	791	791	791	791	791	792	794	796	798	800	800	800	7914			
15	801	800	800	800	800	799	799	799	799	799	799	799	799	798	798	798	799	799	800	800	802	802	804	804	7999			
16	804	803	803	803	803	802	802	801	801	800	800	800	800	800	799	800	800	800	801	802	803	807	809	809	8022			
17	809	808	808	807	807	807	807	806	805	803	802	802	802	801	801	802	802	805	806	807	808	808	808	808	8054			
18	808	807	807	807	807	805	803	803	803	801	800	800	800	800	798	798	798	799	799	800	800	800	800	800	8018			
19	799	799	798	798	797	796	795	793	792	791	790	790	790	790	788	784	786	789	790	791	792	793	794	794	7925			
20	794	793	793	792	791	790	790	789	788	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	788	788	788	788	788	785	783	782	783	787	789	790	792	793	794	7891			
22	794	790	790	789	789	788	788	788	788	788	788	787	787	784	781	780	780	781	784	787	789	790	790	790	7871			
23	790	790	790	788	787	785	783	782	781	781	781	780	780	779	778	777	778	779	780	781	783	784	785	786	7828			
24	786	784	783	782	781	780	780	780	780	780	780	780	780	779	779	773	773	774	777	778	780	782	782	782	7798			
25	781	781	784	786	788	788	788	788	789	789	789	785	781	778	775	772	774	774	775	777	778	780	780	780	7817			
26	781	780	780	780	780	779	779	778	778	778	778	777	777	775	772	771	770	771	772	773	775	777	779	779	7766			
27	780	780	779	779	779	779	780	780	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	781	782	782	782	782	780	780	780	780	780	780	782	786	787	788	7812			
29	788	787	786	786	786	786	786	786	786	786	786	786	786	783	781	780	780	780	783	787	787	786	788	789	7852			
30	790	789	788	786	785	786	787	787	787	787	787	786	786	786	784	783	783	784	785	787	789	789	789	789	7866			
31	790	789	788	787	787	786	786	786	786	784	783	782	781	780	780	778	778	777	778	779	780	781	784	785	7831			
Means....., ...	7987	7979	7976	7970	7967	7958	7954	7949	7946	7941	7938	7933	7930	7920	7906	7897	7902	7912	7927	7941	7954	7967	7976	7979	7946			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot } \theta . \left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7^\circ\ 37'\ 15'' \times \left(\frac{6{\cdot}896}{11{\cdot}236}\right)^2 = {\cdot}00008192 \quad \frac{q}{k}\frac{.000360}{.000082} = 4{\cdot}394 = 1^\circ \text{ Faht.} \quad \text{Zero } 80{\cdot}0 \text{ Ther.}$

VERTICAL FORCE MAGNETOMETER—*(Uncorrected.)*

JANUARY 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				−4·3 *		−7·7 *		−9·9 *		−2·4 *		12·0 *																
†1	1519	1490	1524		1544		1579		1613		1540		1421	1358	1384	1455	1774		2188		2211		1884					
†2	1586		1566		1522		1521		1521				1447		1361		1521		1557		1607		1590					
†3	1540		1478		1450		1442		1939				1374		1364		1360		1796		2387		1744					
†4	1518		1478		1450		1450		1444				—		—	—	—	—	—	—	—	—	—	—				
†5	—	—	—	—	—	—	—	—	—	—	—	—	1363		1249		1550		2070		2691		2285					
†6	1528		1500		1490		1429		1429				1402		1347		1585	1711	1763	2136	2450	2368	2096	1865				
7	1754	1573	1475	1473	1479	1459	1455	1445	1455	1465	1479	1465	1427	1380	1384	1403	1477	1725	1857	1880	1957	2200	2223	1973	1619	76	1695	
8	1693	1616	1584	1557	1539	1504	1484	1481	1497	1469	1445	1445	1422	1378	1385	1284	1416	1385	1422	1551	1718	1710	1545	1532	1503	69	1572	
9	1599	1592	1510	1492	1482	1438	1410	1400	1410	1415	1425	1396	1343	1348	1251	1134	1166	1355	1604	2154	2623	2295	2079	1734	1569	79	1648	
10	1633	1551	1477	1472	1475	1440	1420	1410	1420	1428	1440	1430	1396	1376	1380	1427	1492	1535	1425	1460	1887	2065	1904	1645	1525	71	1596	
11	1578	1501	1485	1471	1465	1442	1435	1421	1426	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1399	1377	1376	1352	1321	1322	1367	1516	1559	1649	1978	2309	2430	2178	1790	1589	38	1627	
13	1581	1550	1457	1438	1427	1425	1439	1429	1439	1394	1353	1361	1346	1346	1205	1141	1312	1412	1473	1576	1721	1631	1499	1492	1435	24	1459	
14	1492	1428	1315	1353	1400	1399	1414	1397	1400	1327	1259	1294	1305	1291	1291	1284	1411	1540	1717	1717	1760	1775	1573	1573	1446	−6	1440	
15	1478	1420	1400	1394	1397	1378	1375	1355	1355	1346	1341	1354	1344	1334	1215	1180	1210	1340	1251	1321	1487	1547	1507	1390	1363	−7	1356	
16	1347	1365	947	1140	1341	1370	1414	1740	2085	1676	1272	1335	1374	1480	1286	1071	857	1182	1369	1084	1335	1475	1249	1216	1334	-11	1323	
17	1167	1231	1249	1260	1279	1271	1279	1275	1290	1267	1248	1242	1213	1121	1224	1224	1448	1644	1623	1561	1660	1747	1521	1568	1359	-6	1353	
18	1458	1424	1470	1376	1290	1284	1294	1223	1171	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	1241	1316	1323	1307	1334	1319	1415	1835	2469	2887	1936	1950	1710	1660	2520	1592	13	1605	
20	1794	2099	1581	1445	1318	1277	1252	1254	1276	1324	1376	1368	1337	1326	1326	1382	1509	1713	1890	2011	1980	1841	1755	1693	1547	15	1562	
21	1425	1393	1418	1421	1432	1434	1452	1432	1432	1358	1289	1325	1337	1333	1307	1304	1724	2015	2175	2105	1773	1277	1287	1427	1495	25	1520	
22	1548	1373	1382	1390	1406	1394	1397	1366	1355	1280	1210	1270	1306	1307	1181	1244	1320	1360	1657	1894	1885	1754	1471	1308	1419	25	1444	
23	1265	1319	1520	1395	1279	1302	1341	1339	1356	1310	1269	1272	1251	1273	1268	1191	1561	1956	2182	2232	2263	2076	1701	1573	1521	15	1536	
24	1493	1433	1450	1436	1431	1410	1405	1368	1350	1358	1370	1378	1362	1324	1242	1369	1762	2431	2895	2904	2599	2150	1717	1404	1668	45	1713	
25	1461	1560	1506	1467	1436	1428	1436	1420	1424	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	1441	1463	1475	1463	1448	1394	1166	1225	1294	1430	1734	1934	2058	2049	1843	1523	61	1584	
27	1594	1452	1502	1467	1440	1427	1429	1455	1501	1473	1450	1444	1415	1404	1389	1364	1208	1827	1907	1773	1761	1900	1900	1766	1552	77	1629	
28	1553	1514	1506	1516	1534	1516	1514	1504	1514	1498	1486	1470	1431	1443	1434	1485	1604	1842	1934	1934	2041	2027	1726	1536	1607	83	1690	
29	1536	1458	1462	1476	1499	1425	1366	1356	1366	1393	1424	1470	1492	1469	1418	1424	1582	1924	2170	2339	2362	2101	1834	1607	1623	77	1700	
30	1420	1512	1466	1470	1483	1440	1412	1392	1392	1389	1390	1402	1390	1357	1376	1529	1819	2221	2440	2542	2542	2047	1665	1487	1649	66	1715	
31	1460	1540	1495	1478	1470	1462	1470	1443	1435	1421	1411	1411	1387	1363	1402	1537	1836	2397	2651	2857	2325	1641	1219	1120	1635	40	1675	
Means.....	1515	1496	1439	1427	1423	1406	1404	1405	1425	1394	1368	1378	1364	1353	1318	1315	1468	1733	1891	1934	1994	1884	1694	1600	1526			
Temp. Corrections	7	12	23	28	31	35	37	42	45	47	47	51	55	67	79	83	73	59	46	35	24	13	6	4	.....	40		
Corrected Means..	1522	1508	1462	1455	1454	1441	1441	1447	1470	1441	1415	1429	1419	1420	1397	1398	1541	1792	1937	1969	2018	1897	1700	1604	.....	.....	1566	
Mean Hourly Variations from General Monthly Mean. =.00	44 0360	58 0475	104 0285	111 0909	112 0917	125 1024	125 1024	119 0975	96 0786	125 1024	151 1237	137 1122	147 1204	146 1196	169 1384	168 1376	25 0205	-226 -1851	-371 -3039	-403 -3301	-452 -3703	-331 -2712	-134 -1098	-38 -0311	.....	$\frac{\Delta X}{X}$ =	.....	·003703

JANUARY 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
†1	790	789	786		784		783		782		777		772	771	768	766	770		776		784		786					
†2	787		784		783		775		775				765		760		765		773		778		782					
†3	783		778		775		773		773				772		767		769		775		784		786					
†4	788		784		783		780		776				—		—		—		—		—		—					
†5	—	—	—	—	—	—	—	—	—	—	—	—	779		775		775		780		785		790					
†6	790		786		784		784		784				776		773		774	777	780	782	785	788	788	789				
7	790	788	786	784	782	782	782	781	781	780	780	780	780	778	775	775	775	778	780	784	789	792	793	793	7828			
8	793	791	787	787	787	786	786	784	782	782	782	781	780	779	775	775	777	780	782	785	787	788	791	793	7842			
9	792	790	786	786	786	783	781	781	781	780	780	778	776	775	773	770	775	777	779	782	787	788	791	791	7820			
10	791	789	786	786	786	785	785	782	780	780	781	780	780	776	774	772	775	779	783	787	790	794	796	796	7839			
11	797	796	796	793	790	788	787	786	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	787	790	790	790	788	785	785	787	790	792	794	797	798	800	802	7914			
13	800	799	797	796	796	795	794	793	793	792	792	791	790	788	786	785	789	793	795	797	800	802	803	804	7946			
14	805	805	803	802	801	800	800	800	800	800	801	800	800	798	794	793	796	799	801	804	805	808	808	809	8013			
15	808	808	804	804	804	804	804	802	800	800	800	799	798	795	795	795	796	796	799	802	805	806	808	806	8016			
16	806	806	803	803	803	803	803	802	802	801	801	799	798	796	796	795	797	800	804	805	806	809	810	810	8024			
17	810	807	804	803	803	802	801	800	800	800	800	798	797	795	794	793	795	799	800	802	804	807	808	808	8013			
18	808	806	804	801	798	798	799	797	796	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	795	795	795	795	790	786	785	790	792	796	797	800	802	802	803	7971			
20	803	802	802	802	802	801	801	799	798	797	796	795	794	790	786	786	786	790	794	796	797	799	800	800	7965			
21	800	798	797	796	796	795	795	795	796	794	793	791	790	787	785	785	786	790	793	795	797	802	803	803	7943			
22	803	801	797	796	796	795	795	794	794	793	792	792	792	788	786	785	784	787	794	795	797	800	802	802	7942			
23	803	801	801	799	797	796	795	796	797	797	797	796	795	791	788	785	790	792	795	796	800	802	803	803	7965			
24	802	802	797	796	796	794	793	790	788	787	787	786	785	781	777	775	778	785	787	790	790	793	796	797	7897			
25	797	796	793	792	792	789	787	784	782	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	783	785	783	782	780	776	775	778	780	784	785	787	790	793	793	7861			
27	793	793	787	787	787	786	786	784	782	782	782	779	777	774	772	769	771	775	780	782	785	786	790	790	7825			
28	790	788	786	784	783	782	782	782	782	781	780	778	776	775	770	768	772	775	780	783	785	788	790	790	7813			
29	787	787	787	785	784	784	784	783	782	782	782	782	782	775	773	770	774	779	780	784	786	788	788	790	7824			
30	790	789	787	786	786	786	786	784	783	783	783	782	782	778	775	775	776	780	784	788	790	793	795	797	7849			
31	797	796	793	792	791	790	790	790	790	789	788	788	788	786	785	783	785	788	790	792	795	798	800	799	7910			
Means.....	7984	7972	7947	7936	7930	7920	7916	7904	7897	7893	7894	7883	7876	7847	7821	7809	7833	7865	7896	7920	7945	7970	7986	7990	7910			

N. B.—Decreasing numbers denote an increase in the Vertical Force; in the upper table the numbers are tenths of scale divisions; in the lower table tenths of Fahrenheit degrees, and in the Means hundredths of degrees,

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

† The Observations from 1st to 6th are rejected from the hourly and daily Means

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$k = a \text{ Cot. } \theta \left(\frac{T}{T'}\right)^2 = \cdot 0000291 \times \text{Cot. } 7°35'35'' \times \left(\frac{6\cdot892}{11\cdot055}\right)^2 = \cdot 00008484$ $\quad \frac{q}{k} = \frac{\cdot 360}{\cdot 085} = 4\cdot 243 = 1°$ Faht. Zero 80·0 Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·5 *		—1·5 *		5·1 *		14·9 *		7·7 *																
1	1373	1514	1522	1526	1522	1520	1521	1476	1420																			
2	—	—	—	—	—	—	—	—	—	1407	1365	1353	1325	1310	1370	1410	1677	2174	2531	2297	2141	1369	0984	1009	1547	30	1577	
3	334	553	481	485	481	423	368	375	372	387	372	355	323	313	386	575	2074	2610	2865	2831	2324	1617	1157	1098	1632	39	1671	
4	269	405	431	445	451	444	440	433	415	445	446	415	368	341	405	615	1941	2193	2472	2590	2214	1779	1368	1225	1606	52	1658	
5	326	440	487	493	491	500	513	438	353	325	267	384	486	438	472	672	2007	2414	2780	2647	2098	1352	1311	1422	1630	77	1707	
6	542	560	483	508	524	475	432	437	432	467	473	467	446	415	390	523	1691	2249	2799	2861	2622	2138	1646	1449	1710	84	1794	
7	557	610	528	540	543	553	565	556	537	531	496	456	401	403	388	388	1589	1836	2118	2463	2327	2030	1495	1205	1630	78	1708	
8	447	493	462	466	462	472	485	468	441	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	488	505	506	492	442	415	344	1573	1818	2025	2054	1939	1841	1631	1517	1574	63	1637	
10	551	447	433	437	433	424	418	393	357	365	343	435	511	514	381	398	1398	1437	1659	1728	1796	1641	1493	1510	1479	50	1529	
11	612	556	506	506	497	502	510	498	476	460	415	425	420	395	350	350	1371	1417	1545	1648	1597	1692	1470	1435	1486	51	1537	
12	590	572	492	465	429	420	413	332	241	288	306	357	392	360	339	432	1502	1549	1669	1466	1345	1402	1376	1404	1423	16	1439	
13	503	482	407	415	415	420	427	408	379	383	357	370	367	343	357	357	1289	1337	1298	1201	977	932	1029	1232	1320	9	1329	
14	432	443	363	367	363	367	374	372	359	390	392	376	345	333	452	688	1957	2151	1969	1597	1190	778	712	894	1403	9	1412	
15	260	389	323	339	347	339	334	347	350	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	362	344	326	293	265	344	612	2032	2301	2330	1897	1604	1399	1169	1252	1482	-26	1456	
17	548	503	478	482	478	410	345	360	364	339	284	295	291	205	196	196	1479	1810	1994	1782	1507	1199	968	1076	1400	-30	1370	
18	230	417	384	352	311	383	457	462	457	347	208	239	254	299	300	673	2260	2443	2027	1349	1713	1449	1313	1219	1481	-27	1454	
19	292	362	322	358	385	344	306	328	340	361	352	337	306	268	333	445	1626	1859	1995	1785	1411	1136	981	1007	1385	-38	1347	
20	315	402	444	469	485	333	183	222	250	305	330	318	291	251	378	602	1980	2296	2445	2497	2347	2094	1855	1648	1614	-31	1583	
21	570	438	399	400	392	385	380	368	345	343	311	313	300	251	251	399	1609	1901	2131	2170	2018	1662	1294	1242	1495	-30	1465	
22	366	386	340	344	340	329	320	319	308	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	349	371	373	359	337	329	475	1702	2132	2199	1849	1460	1236	1201	1611	1460	-8	1452	
24	547	484	484	427	361	340	321	389	447	413	350	383	401	398	371	524	1705	1851	1990	2025	1653	1641	1599	1698	1533	8	1541	
25	640	587	580	502	415	440	468	473	468	486	475	444	397	396	396	576	1811	2106	2106	1956	1778	1707	1626	1577	1600	11	1611	
26	665	562	451	455	451	443	437	442	437	443	420	409	383	355	424	546	1809	2143	2231	1936	1824	1678	1445	1402	1575	15	1590	
27	572	611	546	522	489	476	465	478	481	453	396	430	449	430	482	667	2069	2438	2654	2434	1989	1618	1399	1526	1670	10	1680	
28	561	511	456	460	456	409	364	334	294	323	323	399	460	440	272	394	1890	2205	2206	2263	1861	1750	1726	1731	1587	-11	1576	

FEBRUARY 1851. Vertical Force Magnetometer.

Means.....	1463	1489	1450	1448	1438	1423	1410	1405	1388	1394	1371	1382	1378	1354	1366	1494	1752	2028	2168	2055	1822	1548	1344	1350	1530			
Temp.Corrections	-29	-23	-8	-3	1	6	8	14	17	22	26	36	45	58	78	78	62	44	26	10	-1	-16	-24	-30	.....	26		
Corrected Means..	1434	1466	1442	1445	1439	1429	1418	1419	1405	1416	1397	1418	1423	1412	1444	1572	1814	2072	2194	2065	1821	1532	1320	1320	.....	.....	1556	
Mean Hourly Variations from General Monthly Mean =·00	122	90	114	111	117	127	138	137	151	140	159	138	133	144	112	-16	-258	-516	-638	-509	-265	24	236	236	.....	$\frac{\Delta Y}{Y}$ =	.....	·005413
	1035	0764	0967	0942	0993	1078	1171	1162	1281	1188	1349	1171	1128	1222	0950	-0136	-2189	-4378	-5413	-4319	-2249	0204	2002	2002				

				*		*		*		*		*																
1	798	796	795	795	795	794	793	792	791																			
2	—	—	—	—	—	—	—	—	—	790	790	789	788	787	785	783	785	790	793	796	798	801	802	803	7929			
3	803	802	798	797	796	794	793	793	793	793	793	789	785	783	777	775	780	785	786	790	792	794	795	795	7909			
4	796	795	794	793	792	791	791	790	790	789	788	786	784	778	775	774	778	780	785	788	790	793	794	793	7878			
5	793	793	791	789	787	787	787	785	783	781	780	776	773	773	769	770	770	774	778	780	783	786	788	788	7818			
6	789	787	784	783	783	783	783	781	780	780	780	777	775	773	765	765	770	775	776	782	785	789	791	793	7804			
7	793	791	788	787	786	784	783	782	781	780	779	776	774	773	766	765	770	774	779	784	786	790	793	795	7816			
8	795	794	791	789	788	787	786	786	786	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	785	784	780	776	775	771	770	775	779	784	786	790	795	795	796	7851			
10	797	796	795	792	790	790	790	789	789	788	787	786	785	777	775	775	779	780	785	790	792	795	798	800	7883			
11	800	800	796	794	792	791	790	788	787	785	784	780	777	774	770	770	775	779	785	790	794	800	804	805	7879			
12	805	803	800	798	797	797	797	796	795	794	793	792	792	789	787	785	790	793	795	796	800	804	805	806	7962			
13	806	805	802	801	801	800	800	798	797	796	795	794	793	789	789	788	790	793	796	798	801	804	806	807	7979			
14	807	805	801	800	800	799	799	798	798	796	794	790	787	787	782	785	787	793	796	802	805	810	812	815	7978			
15	815	813	808	807	806	806	806	804	803	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	804	805	804	803	800	795	795	799	804	806	809	811	815	815	815	8062			
17	814	814	812	812	812	811	810	809	809	807	806	802	798	797	795	795	800	802	805	808	810	814	815	815	8072			
18	815	814	809	808	807	807	807	806	806	805	805	802	800	796	794	793	797	800	805	810	814	816	817	820	8064			
19	819	816	813	812	811	809	808	808	808	808	808	807	806	803	796	796	799	804	808	811	814	815	817	818	8089			
20	819	817	814	813	812	811	810	809	808	806	805	805	805	797	791	793	797	800	805	808	810	813	815	815	8074			
21	815	815	812	811	811	810	810	809	808	806	805	804	804	800	790	792	795	800	805	808	813	815	815	815	8070			
22	815	815	810	809	809	808	807	806	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	804	802	798	795	793	786	785	789	793	796	800	802	805	806	810	8020			
24	810	810	805	805	805	804	803	800	797	795	794	792	790	786	782	782	786	790	795	799	801	805	806	809	7980			
25	808	807	805	804	804	801	799	798	798	796	794	793	793	785	780	780	785	790	795	797	800	805	808	809	7973			
26	809	808	805	803	801	799	798	797	796	794	793	790	788	784	777	779	784	787	794	799	802	806	810	813	7965			
27	814	813	806	803	801	799	798	795	793	793	793	789	786	783	775	777	783	789	795	803	806	812	816	820	7976			
28	820	817	813	810	807	805	803	801	800	798	797	794	792	789	785	785	792	797	805	808	807	809	814	816	8027			

FEBRUARY 1851. Temperature of Vertical Force Magnetometer.

Means.....	8065	8053	8020	8006	7997	7986	7980	7967	7959	7947	7939	7915	7895	7863	7815	7815	7856	7896	7938	7976	8003	8038	8057	8071	7961			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \cot.\theta \left(\frac{T}{\tau}\right)^2 = 0{\cdot}0000291 \times \cot. 7'35''{\cdot}27 \times \left(\frac{8.6^{\circ}889}{11^{\circ}191}\right)^2 = {\cdot}00008275$ $\quad \frac{q}{k} = \frac{360}{083} = 4{\cdot}351 = 1$ Faht. Zero. $80^{\circ}0$ Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

MARCH 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				6·4 *		0·3 *		1·7 *		13·2 *		24·2 *																
1	1730	1643	1504	1500	1483	1475	1466	1461	1452	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1733	−8	1725	
2	—	—	—	—	—	—	—	—	—	1513	1547	1559	1522	1430	1468	1602	1897	2311	2498	2632	2369	2012	2068	1453	1575	10	1585	
3	1623	1684	1448	1476	1492	1485	1477	1479	1477	1498	1492	1474	1407	1407	1394	1356	1589	1947	2102	2169	1925	1610	1446	1354	1493	−24	1469	
4	1458	1519	1491	1499	1494	1467	1440	1440	1436	1427	1391	1399	1358	1331	1382	1431	1671	1947	2019	1820	1572	1375	1213	1241	1492	−31	1461	
5	1443	1509	1467	1473	1467	1454	1440	1442	1440	1431	1396	1420	1396	1354	1387	1471	1686	1871	1865	1710	1574	1486	1281	1338	1549	−45	1504	
6	1454	1535	1471	1468	1452	1459	1466	1440	1410	1423	1410	1422	1386	1310	1313	1400	1598	1986	2178	2126	2000	1550	1421	1500	1543	−86	1457	
7	1455	1495	1567	1525	1471	1448	1424	1426	1424	1423	1396	1404	1363	1363	1255	1277	1483	1923	2170	1863	1933	1802	1629	1520				
8	1444	1444	1375	1381	1375	1352	1329	1331	1329	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1425	−84	1341	
9	—	—	—	—	—	—	—	—	—	1303	1251	1318	1337	1337	1188	1239	1350	1536	1536	1564	1708	1642	1694	1840	1479	−85	1394	
10	1677	1525	1440	1450	1448	1439	1430	1432	1430	1403	1350	1363	1327	1215	1258	1405	1615	1839	1943	1699	1502	1205	1478	1612	1553	−123	1430	
11	1612	1511	1276	1289	1290	1311	1331	1323	1312	1325	1312	1302	1244	1220	1262	1288	1453	1604	1738	1522	1416	2912	2882	2535	2365	−134	2231	
12	2531	2521	2430	2454	2465	2424	2382	2353	2321	2315	2282	2306	2282	2282	1896	2212	2441	2777	2734	2505	2326	2120	2152	2245	2024	−127	1897	
13	2115	2073	2035	1998	1949	1934	1918	1889	1856	1879	1875	1870	1817	1744	1744	1861	2163	2479	2638	2555	2364	1959	1899	1953	2100	−101	1999	
14	1992	2033	2475	2254	2020	1969	1917	1830	1740	1815	1864	1825	1737	1737	1874	1995	2119	2181	2482	2454	2534	2640	2452	2471				
15	2130	2027	1938	1924	1898	1898	1898	1846	1791	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1660	−107	1800	
16	—	—	—	—	—	—	—	—	—	1807	1797	1753	1660	1595	1651	1800	2025	2397	2602	2383	2028	1690	1575	1660	1907	−102	1879	
17	1902	1874	1880	1846	1800	1789	1778	1766	1751	1764	1751	1734	1668	1668	1643	1828	2085	2304	2621	2809	2631	2510	2152	1982	1981	−113	1675	
18	1824	1838	1788	1803	1805	1751	1696	1690	1681	1694	1681	1675	1620	1507	1398	1335	1449	1747	2063	2204	2364	2290	2120	1887	1788	−136	1591	
19	1753	1776	1688	1698	1695	1671	1647	1620	1589	1602	1589	1590	1543	1513	1454	1396	1557	1717	1989	2260	2290	2121	1895	1798	1727	−172	1585	
20	1514	1596	1669	1778	1874	1781	1688	1612	1532	1523	1487	1520	1504	1353	1341	1474	1768	2161	2245	2313	2433	2178	1970	1858	1757	−219	1332	
21	1719	1566	1377	1453	1516	1479	1442	1420	1395	1408	1395	1427	1411	1353	1248	1149	1276	1570	1833	1965	2008	1969	1931	1906	1551			
22	1509	1509	1565	1542	1507	1507	1507	1523	1535	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1562	−226	1336	
23	—	—	—	—	—	—	—	—	—	1486	1410	1390	1321	1205	1152	1195	1382	1594	1860	1923	2000	2046	1985	1846	1563	−209	1354	
24	1758	1607	1515	1461	1395	1363	1331	1350	1365	1343	1295	1345	1346	1249	1226	1338	1505	1952	2203	2203	2031	1939	1826	1577	1543	−191	1352	
25	1410	1400	1341	1365	1376	1374	1371	1322	1269	1272	1249	1263	1229	1134	1223	1286	1485	1817	2137	2363	2363	2192	2012	1774	1567	−166	1401	
26	1651	1490	1460	1441	1409	1369	1328	1330	1328	1367	1379	1329	1231	1188	1255	1472	1623	1959	2315	2277	2150	1922	1738	1605	1418	−172	1246	
27	1467	1441	1400	1375	1338	1292	1246	1248	1246	1259	1246	1248	1202	1202	1140	1142	1256	1490	1796	1805	2133	1788	1738	1530	1326	−214	1112	
28	1376	1324	1385	1311	1224	1216	1208	1210	1208	1239	1244	1224	1156	1156	1094	1200	1202	1425	1328	1351	1415	1650	1867	1818	1250	−255	995	
29	1343	1147	1225	1231	1225	1183	1141	1143	1141	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1205	−262	943	
30	—	—	—	—	—	—	—	—	—	1152	1137	1167	1149	1026	929	962	1056	1326	1646	1722	1603	1608	1456	1286				
31	1286	1186	1190	1180	1158	1116	1073	1062	1048	1061	1048	1042	988	988	826	809	1028	1464	1808	1779	1648	1503	1380	1241				
Means.....	1661	1626	1592	1584	1563	1539	1514	1500	1481	1490	1472	1476	1431	1380	1346	1420	1606	1897	2090	2076	2012	1912	1818	1724	1634			
Temp. Corrections	-172	-166	-151	-147	-145	-138	-132	-124	-117	-112	-109	-100	-93	-83	-79	-85	-98	-113	-128	-144	-158	-170	-177	-181	.....	-130		
Corrected Means..	1489	1460	1441	1437	1418	1401	1382	1376	1364	1378	1363	1376	1338	1297	1267	1335	1508	1784	1962	1932	1854	1742	1641	1543	.....	.....	1504	
Mean Hourly Variations from General Monthly Mean. = ·00	15	44	63	67	86	103	122	128	140	126	141	128	166	207	237	169	-4	-280	-458	-428	-350	-238	-137	-39		$\frac{\Delta Y}{Y} =$	.....	003790
	0124	0364	0521	0551	0712	0852	1009	1059	1158	1043	1167	1059	1374	1713	1961	1398	-0033	-2317	-3790	-3542	-2896	-1969	-1131	-0323	.....			

MARCH 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	815	815	811	809	808	805	802	801	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8018			
2	—	—	—	—	—	—	—	—	—	800	801	797	794	790	790	791	795	796	799	802	804	806	806	806	7976			
3	807	807	804	804	804	803	802	796	790	790	790	789	788	785	785	785	790	795	800	801	804	806	808	809	8056			
4	809	809	806	806	806	805	805	803	802	802	802	802	802	799	797	797	800	805	806	809	812	815	818	818	8071			
5	818	816	814	813	812	810	808	806	804	803	803	801	800	797	795	795	799	803	804	809	810	815	818	818	8104			
6	818	816	813	812	812	809	807	807	807	806	806	805	805	802	801	800	803	807	810	815	819	820	825	825	8198			
7	824	822	819	819	819	819	819	819	819	817	816	816	816	814	814	814	815	819	821	824	825	827	829	830	8193			
8	831	830	826	825	824	823	822	821	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8195			
9	—	—	—	—	—	—	—	—	—	817	815	813	811	807	807	807	810	815	816	820	823	825	827	827	8283			
10	827	827	823	823	823	822	821	819	817	816	815	813	812	810	810	810	813	815	820	822	825	827	829	830	8308			
11	830	830	827	826	826	825	825	825	825	825	825	823	821	821	821	821	824	827	832	835	836	844	842	842	8291			
12	842	842	838	837	836	834	832	831	830	827	825	822	820	818	819	821	825	825	830	832	834	838	839	841	8231			
13	843	842	837	837	837	835	834	831	828	826	825	822	820	816	814	819	821	825	826	828	830	832	835	835	8247			
14	836	834	832	830	828	827	826	823	820	819	818	816	815	812	807	810	815	818	820	823	827	830	834	835	8234			
15	836	834	832	831	831	830	830	827	824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8259			
16	—	—	—	—	—	—	—	—	—	822	820	816	812	810	808	810	814	818	822	828	830	832	837	838	8313			
17	838	835	832	830	828	826	824	821	818	817	817	814	812	812	810	813	815	820	825	828	829	831	833	833	8395			
18	835	834	831	830	829	827	826	824	823	822	821	818	816	815	815	815	819	823	825	830	833	835	837	838	8503			
19	838	838	834	833	833	831	830	828	826	825	824	824	824	822	820	820	823	825	832	838	842	845	847	850	8520			
20	849	847	843	843	843	839	835	832	830	830	830	828	826	825	826	827	830	834	840	847	857	861	863	864	8481			
21	863	861	854	852	850	848	846	843	841	840	840	839	839	836	837	839	842	846	852	862	867	871	871	869	8438			
22	868	865	861	859	857	854	852	851	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8382			
23	—	—	—	—	—	—	—	—	—	849	848	845	842	840	840	841	845	847	848	851	857	859	860	860	8396			
24	860	859	854	853	853	851	850	847	845	845	845	841	838	836	835	837	840	845	847	850	853	857	857	857	8431			
25	856	855	851	850	850	849	849	846	843	841	840	837	835	834	832	833	834	836	840	844	847	850	850	850	8438			
26	850	847	845	845	845	843	841	840	839	838	837	833	830	825	822	825	829	833	835	838	841	843	845	847	8382			
27	846	846	843	843	843	840	838	836	835	834	833	831	829	826	825	830	832	836	843	843	851	853	854	856	8396			
28	856	855	852	850	848	847	847	846	845	844	844	843	843	840	840	841	845	846	852	854	858	860	860	863	8491			
29	863	860	858	858	858	857	857	856	856	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8385			
30	—	—	—	—	—	—	—	—	—	855	855	853	852	850	850	854	855	857	860	863	866	868	871	871	8601			
31	871	868	865	864	864	862	860	859	859	857	855	854	854	851	850	854	855	857	860	862	863	865	867	867				
Means.....	8396	8382	8348	8339	8333	8316	8303	8284	8268	8257	8250	8229	8214	8190	8181	8196	8226	8259	8294	8332	8363	8390	8408	8415	8299			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$$k = a \text{ Cot. } \theta\left(\frac{T}{\vec{T}}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7°37'19'' \times \left(\frac{6{\cdot}890}{11{\cdot}764}\right)^2 = {\cdot}00007459 \qquad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}075} = 4{\cdot}826 = \overset{\circ}{1} \text{ Faht.} \qquad \text{Zero } 80{\cdot}0 \text{ Ther.}$$

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

APRIL 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−6·1		−5·5		−11·8		7·7		3·9																
				*		*		*		*		*																
1	1241	1145	1098	1098	1111	1083	1066	1048	1054	1062	1054	1063	1065	1016	995	1113	1428	1804	2114	2172	1923	1576	1182	1129	1277	-267	1010	
2	1176	1166	1166	1146	1138	1113	1099	1062	1048	1056	1049	1048	1040	958	904	946	1090	1444	1705	1705	1661	1546	1369	1369	1209	-266	943	
3	1217	1122	1122	1110	1111	1069	1037	1006	999	1037	1059	1048	1030	1015	946	1032	1292	1513	1795	1698	1603	1356	1219	1271	1196	-270	926	
4	1256	1186	1275	1177	1092	1055	1028	970	936	944	936	951	958	908	872	979	1167	1387	1555	1730	1780	1776	1501	1299	1197	-299	898	
5	1388	1118	1118	1112	1118	1082	1057	1020	1006	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	974	927	945	955	823	971	1130	1282	1644	1899	2067	2067	1882	1870	1641	1296	-307	989	
7	1368	1239	1224	1115	1019	1031	1053	1021	1012	1022	1017	1004	984	947	616	586	831	1295	1758	1758	1570	1479	1362	1272	1149	-245	904	
8	1091	1044	1074	1051	1041	967	903	926	972	992	997	975	946	922	999	1109	1296	1445	1716	1907	1877	1704	1509	1297	1198	-226	972	
9	1170	1099	1099	1086	1085	1042	1010	998	1010	988	950	989	1020	958	868	951	1103	1301	1431	1431	1204	1223	1167	1049	1093	-2?8	835	
10	1083	1083	1059	1038	1029	993	967	942	940	935	915	913	904	890	916	1096	1424	1623	1740	1704	1597	1365	1225	1198	1140	-280	869	
11	1073	990	990	984	990	938	897	885	897	935	958	930	894	784	938	1051	1393	1687	1569	1494	1414	1541	1482	1249	1123	-316	807	
12	1171	963	963	924	897	861	835	823	835	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	—	—	—	—	852	854	834	807	791	850	1041	1431	1800	2017	2096	2076	1786	1454	1118	1170	-342	828	
14	1032	1008	1008	992	988	940	902	871	864	845	811	814	809	734	827	968	1158	1431	1719	1779	1691	1470	1328	1017	1084	-335	749	
15	925	1002	1009	928	860	826	803	785	790	798	790	754	711	614	634	788	1076	1586	2023	2010	1790	1384	940	762	1025	-343	682	
16	818	906	906	849	805	800	805	764	746	792	823	819	808	553	761	799	1289	1590	1841	1841	1693	1559	1127	872	1024	-349	675	
17	872	965	965	939	926	899	883	842	824	774	709	713	709	781	779	936	1402	1774	1851	1793	1627	1316	966	923	1049	-342	707	
18	1003	973	956	891	838	807	787	775	787	809	816	755	686	639	706	849	1032	1298	1511	1476	1263	1121	975	896	944	-339	605	
19	844	844	844	838	844	797	760	748	760	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	747	719	704	681	623	463	517	708	781	890	1120	897	875	666	666	764	-321	443	
21	861	920	758	780	815	757	709	631	577	593	594	596	590	556	670	802	953	1132	1244	1322	1348	1129	1024	909	845	-334	511	
22	909	886	821	783	757	726	706	669	655	663	655	630	597	544	573	913	1150	1277	1365	1573	1540	1429	1243	1055	922	-365	557	
23	992	882	813	763	726	703	690	659	652	718	768	755	735	671	707	804	980	1115	1274	966	1005	765	754	870	824	-385	439	
24	852	802	759	713	680	665	660	623	609	597	570	578	579	571	595	658	898	987	987	961	813	720	720	773	724	-412	312	
25	863	840	717	692	680	634	599	562	549	600	636	583	523	588	610	692	730	827	920	1007	952	874	767	805	719	-412	307	
26	710	684	689	662	648	609	580	547	538	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	542	530	560	583	540	480	496	704	812	980	931	818	734	683	683	656	-390	266	
28	781	712	680	632	597	554	521	509	521	543	550	522	486	424	508	780	1172	1475	1772	1644	1412	1220	1406	824	844	-391	453	
29	644	644	666	621	588	560	542	530	542	540	522	530	530	402	371	394	581	958	1274	1544	1151	1115	960	656	703	-389	314	
30	584	620	620	606	605	600	605	554	526	533	525	514	495	450	442	498	668	902	1157	1213	1067	990	828	701	679	-382	297	
Means.....	0997	956	938	905	884	859	827	799	794	804	797	790	774	719	731	843	1086	1342	1543	1575	1455	1305	1143	1012	995			
Temp. Corrections	-383	-374	-356	-347	-341	-334	-328	-320	-313	-303	-295	-290	-286	-273	-270	-279	-294	-309	-332	-353	-367	-380	-388	-391	.....	-329		
Corrected Means..	614	582	582	558	543	516	499	479	481	501	502	500	488	446	461	564	792	1033	1211	1222	1088	925	755	621	.....	.....	665	
Mean Hourly Variations from General Monthly Mean. =.00	51	83	83	107	122	149	166	186	184	164	163	165	177	219	204	101	-127	-368	-546	-557	-423	-260	-93	44	.....	$\frac{\Delta Y}{Y}$ = ...		·004157
	0380	0619	0619	0798	0910	1111	1238	1387	1372	1223	1218	1231	1320	1633	1522	0753	-0917	-2745	-4073	-4155	-3155	-1939	-0671	0328	.....			

APRIL 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	867	867	862	862	862	861	860	858	857	854	851	848	845	843	840	844	847	850	853	855	859	860	862	862	8554			
2	862	862	860	859	858	856	855	855	855	852	850	848	847	843	842	844	849	851	855	860	862	863	867	867	8551			
3	867	864	861	860	860	858	856	853	850	850	850	846	843	840	837	840	845	849	855	861	869	874	877	879	8560			
4	879	876	871	869	867	865	863	860	858	855	853	850	847	844	844	845	849	854	860	865	870	877	882	883	8619			
5	883	880	875	873	871	868	865	864	863	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	860	857	857	857	853	853	853	854	855	860	862	864	864	868	868	8637			
7	867	865	862	859	857	856	855	851	848	846	845	845	843	837	835	840	843	846	849	852	852	853	853	855	8507			
8	855	855	854	853	852	851	850	847	845	844	843	841	840	834	830	834	837	841	846	850	852	855	857	858	8468			
9	858	858	856	855	854	853	853	852	851	849	848	846	845	843	843	845	849	852	855	859	860	864	866	868	8534			
10	867	867	861	860	860	857	855	854	853	852	851	849	847	845	845	845	851	855	860	866	870	872	875	877	8581			
11	876	873	868	866	865	863	861	860	859	857	856	855	855	853	853	855	859	865	870	874	880	881	883	885	8655			
12	884	880	875	872	870	870	870	869	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
13	—	—	—	—	—	—	—	—	—	866	865	863	862	861	860	862	865	865	869	874	880	883	884	883	8708			
14	882	881	876	872	869	868	868	866	865	864	863	861	860	856	857	859	863	865	870	875	880	881	882	883	8694			
15	882	879	874	872	870	868	867	866	865	864	863	863	863	860	859	860	865	870	874	880	882	885	886	887	8710			
16	887	883	876	875	874	872	870	869	868	866	865	864	863	860	860	861	865	869	874	879	880	885	886	885	8723			
17	883	882	880	877	875	872	869	867	866	864	862	860	858	856	860	862	864	868	872	875	880	883	883	884	8709			
18	883	880	880	878	877	873	870	868	866	864	862	862	862	859	860	862	865	865	869	873	875	877	878	878	8703			
19	877	875	871	870	870	870	870	868	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
20	—	—	—	—	—	—	—	—	—	862	858	857	856	855	853	855	859	862	865	871	872	877	879	879	8665			
21	878	876	872	871	871	870	869	866	864	862	860	860	860	856	856	859	861	865	870	878	880	883	886	888	8692			
22	887	885	881	878	876	875	875	872	869	867	865	864	864	861	861	863	865	871	878	884	890	894	895	895	8756			
23	893	890	886	883	880	877	875	873	872	871	870	870	870	869	870	870	873	877	880	888	891	895	895	895	8797			
24	895	890	887	886	886	885	884	883	883	881	880	877	875	872	871	875	879	880	889	895	895	898	900	900	8853			
25	898	897	894	890	887	886	885	882	880	877	875	875	875	874	874	875	878	882	889	892	895	895	897	896	8853			
26	895	895	890	888	886	884	883	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
27	—	—	—	—	—	—	—	—	—	875	870	870	870	868	866	870	872	875	882	885	887	892	890	888	8809			
28	888	885	881	880	880	880	880	880	880	878	876	876	876	876	876	876	877	879	882	886	886	888	890	890	8811			
29	888	887	883	881	880	880	880	880	880	880	880	880	880	877	876	875	876	877	880	880	882	884	885	885	8807			
30	884	883	880	880	880	880	880	878	876	873	870	873	876	874	874	875	875	876	880	885	886	886	887	888	8791			
Means.....	8794	8775	8737	8719	8707	8692	8680	8662	8649	8628	8611	8600	8593	8566	8560	8578	8610	8640	8687	8732	8761	8788	8805	8810	8683			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot. } \theta \left(\frac{T}{T}\right)^2 = \cdot 0000291 \times \text{Cot. } 7^\circ 38' 21'' \times \left(\frac{\text{S. } 6{\cdot}891}{11{\cdot}155}\right)^2 = \cdot 00008279$ $\quad \frac{q}{k} = \frac{\cdot 360}{\cdot 083} = 4{\cdot}348 = 1^\circ$ Faht. Zero $80^\circ 0$ Ther.

VERTICAL FORCE MAGNETOMETER—(*Uncorrected.*)

MAY 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				-13·1 *		-17·1 *		6·2 *		-0·9 *		10·6 *																
1	636	636	620	557	520	503	520	547	561	575	590	573	534	534	567	487	561	919	1262	799	1055	1129	918	754	682	-322	360	
2	602	688	691	577	490	453	450	453	444	461	480	446	390	375	231	413	734	953	953	1004	797	429	220	220	540	-193	347	
3	343	509	562	521	507	464	456	450	431	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	456	483	487	470	274	64	128	340	615	954	1132	1132	1165	843	599	558	-82	476	
5	505	505	580	483	412	429	481	438	382	414	448	415	360	212	187	322	546	740	771	648	729	640	494	396	481	-88	393	
6	490	627	627	513	425	364	338	351	351	347	345	356	345	240	240	329	517	749	896	1021	981	806	625	423	513	-113	400	
7	354	502	504	456	435	381	361	366	359	356	355	350	324	260	133	133	311	311	280	280	394	309	446	446	350	-153	197	
8	419	329	458	402	373	268	198	203	195	171	149	160	149	183	56	-152	-176	-29	11	79	153	262	280	280	184	-195	011	
9	328	328	328	286	270	253	270	281	279	281	284	288	270	132	37	107	136	312	396	139	-17	146	146	70	223	-250	027	
10	238	315	315	269	250	221	227	209	178	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	237	298	279	238	200	225	306	465	545	803	1174	1111	876	628	440	419	-297	122	
12	359	424	477	410	370	355	374	358	329	309	290	301	290	237	238	472	719	1011	1086	1203	1076	795	663	554	529	-287	242	
13	538	467	472	428	410	353	330	342	341	321	302	318	312	219	170	181	380	772	772	870	697	579	454	253	428	-290	138	
14	253	395	395	361	354	319	319	327	323	346	370	381	370	159	102	171	428	821	1028	1028	866	764	669	484	460	-297	163	
15	429	501	500	464	455	389	357	360	351	354	359	370	359	296	321	390	619	958	1321	1260	971	839	600	360	549	-310	239	
16	232	436	436	418	427	335	277	293	296	298	302	302	281	222	165	244	436	711	854	1313	783	583	442	154	427	-292	135	
17	65	360	484	385	313	249	219	216	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	234	270	247	203	127	146	112	262	482	649	816	727	443	294	294	325	-287	38	
19	415	415	349	291	259	204	184	191	185	199	214	161	86	40	-61	-201	109	313	453	572	687	514	401	217	258	-278	-20	
20	217	217	217	183	175	149	157	151	133	128	125	114	82	82	-152	-261	-179	35	303	638	863	989	858	711	247	-283	-36	
21	520	309	254	201	175	136	132	140	135	143	153	132	90	-47	-146	-315	-247	-164	-92	80	192	232	335	294	110	-283	-173	
22	294	167	148	99	77	43	44	51	45	34	25	-15	-51	-71	-136	-267	-167	65	303	613	930	930	766	461	183	-297	-114	
23	260	106	175	152	155	67	13	21	17	3	-9	19	26	-77	-91	-40	152	528	574	385	145	76	195	195	127	-323	-196	
24	278	176	107	78	75	40	40	2	-44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	-25	-5	36	56	24	-37	-27	74	87	76	213	94	78	122	285	75	-230	-155	
26	523	401	265	220	201	159	151	159	154	141	130	141	130	110	172	278	669	1016	817	744	638	477	289	164	340	-209	131	
27	298	335	269	213	184	150	151	157	150	149	150	146	121	37	93	259	452	1054	1302	1808	1034	722	488	159	370	-223	147	
28	99	230	289	218	172	117	97	122	135	129	125	136	125	2	-56	71	572	915	985	1064	979	796	565	318	300	-271	29	
29	216	216	251	186	148	131	148	146	132	135	140	151	140	77	156	349	578	791	790	960	1253	794	676	401	369	-301	68	
30	354	304	304	238	198	149	135	156	164	195	228	217	185	90	40	-105	-9	330	614	660	655	641	536	357	276	-336	-60	
31																												
Means.....	356	381	388	331	301	257	247	250	239	246	254	250	226	151	102	130	319	571	660	789	689	616	494	357	359			
Temp. Corrections	-286	-279	-270	-267	-262	-259	-254	-250	-247	-238	-231	-223	-219	-211	-214	-217	-221	-233	-244	-256	-267	-274	-283	-287	.....	-249		
Corrected Means.	70	102	118	64	39	-2	7	000	-8	8	23	27	7	-60	-112	-87	98	338	416	533	422	342	211	70	.....	.....	110	
Mean Hourly Variations from General Monthly Mean. = ·00	40	8	-8	46	71	112	117	110	118	102	87	83	103	170	222	197	12	-228	-306	-423	-312	-232	-101	40				
	0331	0066	-0066	0381	0588	0927	0968	0911	0977	0844	0720	0687	0853	1407	1838	1631	0099	-1888	-2534	-3502	-2583	-1921	-0836	0331	.....	$\frac{\Delta Y}{Y} =$	.....	.003502

MAY 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	885	885	884	884	883	882	881	879	877	876	875	872	870	871	870	872	873	875	875	872	867	858	854	855	8740			
2	851	847	846	846	846	847	848	851	854	853	852	849	846	846	845	843	840	840	840	838	837	834	835	833	8445			
3	831	831	831	831	830	829	828	827	827	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	822	818	818	818	816	814	811	806	804	806	805	808	810	815	815	8188			
5	816	816	816	818	819	820	820	819	818	817	817	815	814	814	815	815	817	820	823	826	830	833	834	834	8202			
6	831	829	828	828	827	825	823	823	823	823	823	821	820	816	818	820	820	823	826	830	834	835	837	839	8259			
7	838	838	836	836	835	835	835	834	834	833	833	831	829	829	831	832	832	833	833	835	836	840	847	850	8352			
8	851	850	847	846	844	844	843	843	843	841	839	838	838	836	835	838	840	842	845	847	851	855	859	861	8448			
9	865	865	862	861	860	859	858	856	855	853	851	848	846	846	847	848	850	851	855	860	865	870	874	875	8575			
10	879	876	874	872	870	870	869	868	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	865	864	863	862	860	860	860	861	865	865	870	872	875	876	877	8683			
12	878	876	875	874	872	871	869	867	866	864	863	861	860	855	856	856	858	860	861	863	866	868	870	873	8659			
13	873	872	871	870	868	867	865	865	865	863	861	860	860	858	859	860	860	863	865	869	874	876	880	880	8668			
14	878	878	876	875	874	874	873	870	867	865	864	863	863	854	855	855	856	859	863	867	872	876	880	884	8684			
15	884	882	880	879	878	876	874	872	870	868	866	863	861	857	860	860	860	865	868	872	877	880	880	880	8713			
16	879	877	875	874	873	872	871	869	868	865	862	859	856	855	856	856	857	862	865	868	871	874	875	875	8672			
17	875	874	872	871	870	869	868	867	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	862	858	856	855	854	855	856	858	862	865	870	874	875	875	875	8660			
19	872	870	867	866	864	863	861	860	860	859	859	857	856	856	857	858	860	862	869	872	873	873	872	870	8640			
20	870	868	865	865	864	864	863	862	861	861	861	859	857	856	858	860	860	865	869	872	874	875	875	875	8650			
21	875	871	867	866	865	864	863	861	860	858	856	855	855	856	857	858	860	865	870	874	875	875	876	878	8650			
22	878	875	872	870	867	865	863	863	863	861	860	860	860	854	855	858	860	865	870	874	880	887	889	889	8682			
23	890	886	882	881	880	879	878	878	878	877	876	874	872	869	870	870	870	870	870	867	867	866	865	865	8742			
24	865	865	862	862	862	861	860	859	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	852	847	844	841	841	842	843	846	847	848	850	852	852	854	855	8528			
26	855	854	850	849	848	848	847	846	846	844	843	842	841	840	843	844	845	846	848	852	855	856	859	860	8484			
27	860	856	854	853	851	851	850	850	850	846	843	843	843	841	840	842	844	848	851	855	860	864	866	870	8513			
28	870	870	865	864	863	862	861	860	860	858	856	855	854	853	855	856	857	860	865	870	870	870	870	873	8624			
29	873	873	870	870	869	868	867	866	866	864	863	861	860	860	861	862	865	868	870	875	879	880	885	888	8693			
30	887	885	884	883	882	881	880	878	876	873	870	870	870	869	869	867	868	870	874	877	880	883	887	890	8772			
31																												
Means.....	8657	8642	8620	8613	8602	8595	8584	8574	8569	8547	8531	8514	8503	8485	8493	8500	8509	8535	8561	8588	8615	8631	8650	8661	8574			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot. } \theta \left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7°38'28'' \times \left(\frac{6{\cdot}892}{11{\cdot}09_4}\right)^2 = {\cdot}00008371$ $\quad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}084} = 4{\cdot}300 = 1°$ Faht. $\quad$ Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41	
				−2·3		4·1		-11.7		13·7		8·4													
				*		*		*		*		*													
May 31	307	268	321	310	304	278	244	208	195																
1	—	—	—	—	—	—	—	—	—	215	207	215	207	132	167	268	424	566	754	886	947	1086	917	677	
2	547	437	416	376	340	340	332	305	302	316	302	302	286	255	198	82	215	215	336	627	571	389	373	409	
3	438	438	425	375	330	336	333	324	338	352	338	329	304	205	150	150	221	545	688	578	603	599	504	392	
4	342	342	399	303	211	237	254	242	254	268	254	262	254	211	84	-162	-245	-34	74	207	262	295	318	241	
5	170	282	311	299	292	263	225	301	399	414	402	410	402	247	306	528	667	667	867	1001	1060	791	594	577	
6	488	386	386	333	285	284	275	263	275	328	354	331	292	263	191	191	296	375	525	710	621	529	475	475	
7	399	236	351	349	351	342	325	313	325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	334	315	304	277	282	322	461	647	628	593	638	471	506	506	545	
9	521	497	458	400	347	318	280	288	319	334	321	348	359	175	290	437	496	496	501	576	504	420	420	405	
10	436	450	381	364	351	336	313	310	331	347	336	344	336	335	379	396	500	607	808	852	775	688	538	538	
11	421	403	440	389	343	351	351	339	351	365	351	347	327	327	375	429	642	870	884	884	709	426	255	255	
12	271	312	454	418	387	389	383	371	383	397	383	396	392	346	314	367	577	702	795	661	516	415	446	529	
13	484	406	458	408	362	356	342	318	317	331	317	310	286	286	367	618	797	797	1026	1026	790	502	396	446	
14	446	520	431	432	437	390	334	322	334	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	340	319	344	352	284	280	155	193	292	504	670	562	435	475	489	
16	435	435	435	411	391	384	368	356	368	382	368	360	336	238	202	202	328	500	556	696	891	928	788	609	
17	423	359	444	404	369	369	360	329	322	316	282	290	282	201	88	44	72	151	353	622	803	884	835	378	
18	348	341	341	309	282	281	272	239	230	264	271	281	274	193	221	200	267	314	537	664	976	1121	1029	817	
19				One of the Micrometers wire broken.																					
20																									
21																									
22						re-adjusted.																			
23	4710	4783	4927	4931	4939	4915	4882	4851	4844	4911	4950	4923	4879	4794	4899	5111	5531	5975	6294	6283	5950	5661	5400	5400	
24	5391	5372	5295	5242	5194	5142	5081	5069	5081	5095	5081	5069	5040	4904	4871	4871	4999	5299	5389	5360	5440	5570	5529	5249	
25	5021	4967	5022	4997	4977	4988	4990	5014	5062	5015	4940	4942	4927	4863	4798	4739	4781	4776	4842	4696	4447	4447	4366	4441	
26	4704	4912	4886	4860	4839	4823	4798	4796	4818	4813	4780	4788	4780	4807	4896	5102	5259	5301	5208	5208	5012	4847	4931	4931	
27	4988	4902	4989	4990	4995	4923	4843	4831	4843	4857	4843	4858	4856	4792	4792	4874	5091	5145	4977	5169	5369	5569	5402	5348	
28	5014	5014	4990	4968	4950	4937	4915	4924	4957	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	4922	4860	4833	4789	4775	4749	4808	4939	4999	5157	5236	4991	5017	4924	4946	
30	4946	5004	4982	4961	4944	4927	4901	4885	4893	4907	4893	4865	4820	4820	4856	5036	5223	5260	5172	5320	5320	5059	4855	4816	

JUNE 1851. Vertical Force Magnetometer.

				*		*		*		*		*													
May 31	890	888	887	886	885	885	885	884	883																
1	—	—	—	—	—	—	—	—	—	880	878	877	875	875	875	875	876	878	880	880	885	890	896	901	
2	903	902	900	899	897	897	897	895	892	891	891	889	886	885	885	885	887	890	895	898	900	905	904	903	
3	902	902	898	898	897	895	894	891	888	887	887	886	885	885	884	883	884	885	888	890	892	896	900	900	
4	902	902	899	897	895	893	892	890	887	886	886	885	884	882	882	883	885	887	890	895	900	905	908	909	
5	908	901	897	895	892	889	886	883	880	880	880	880	880	876	875	874	875	877	880	882	887	890	893	894	
6	898	899	898	897	896	895	895	893	890	887	884	843	882	877	875	876	878	882	885	886	891	897	900	904	
7	908	909	908	907	906	905	904	902	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	-	—	—	897	894	893	892	888	888	889	889	890	894	897	900	905	907	907	
9	907	906	903	902	900	898	896	894	892	891	890	889	887	885	884	884	885	886	889	892	898	900	902	902	
10	902	901	901	900	898	896	895	894	892	890	888	887	886	885	884	880	883	886	890	895	898	901	905	906	
11	908	909	907	906	904	904	904	902	900	898	896	896	895	892	891	893	895	895	900	903	905	910	910	912	
12	914	914	912	907	902	897	895	894	892	891	891	889	886	884	885	886	888	889	890	894	897	901	905	907	
13	909	908	907	905	902	899	897	896	894	892	890	889	887	885	883	885	886	888	890	894	897	899	901	900	
14	898	896	892	891	890	890	890	890	889	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	889	889	883	876	876	876	877	880	882	882	890	890	894	895	894	
16	894	891	887	886	885	881	877	874	870	870	870	869	867	863	863	864	865	868	874	876	880	884	886	888	
17	887	886	884	882	879	875	871	868	865	864	864	864	863	860	861	862	865	866	869	873	876	880	885	888	
18	888	887	884	883	882	880	879	876	872	873	874	874	874	872	870	869	873	876	880	882	885	890	895	896	
19																									
20																									
21																									
22																									
23	877	875	872	871	870	867	864	863	861	860	860	859	857	855	856	856	859	861	864	865	868	870	873	874	
24	873	873	869	867	864	864	864	862	860	860	860	860	860	857	858	860	860	861	864	866	870	875	879	881	
25	882	879	874	873	872	871	870	869	867	865	864	863	862	860	860	862	865	869	872	875	877	882	884	886	
26	884	883	880	880	880	877	874	874	873	871	870	868	866	865	865	867	870	870	875	879	882	885	887	888	
27	888	887	884	882	880	878	876	875	874	873	873	872	870	870	870	867	868	870	874	878	880	880	882	883	
28	882	880	879	879	878	876	874	873	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	871	870	869	867	865	865	866	868	873	875	880	880	883	883	884	
30	883	883	880	879	877	875	874	872	870	870	870	870	870	868	870	873	874	877	878	879	880	884	884	883	

JUNE 1851. Temperature of Vertical Force Magnetometer.

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot. } \theta \left(\frac{T}{\tau}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7°38'36'' \times \left(\frac{8.\ 6{\cdot}893}{14{\cdot}827}\right)^2 = {\cdot}00004687$ $\quad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}047} = 7{\cdot}682 = 1°$ Faht. Zero. 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

JULY 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				2·9 *		-2·04 *		-8·1 *		7·2 *		17·5 *																
1	4816	4860	4879	4891	4897	4893	4893	4885	4893	4913	4919	4905	4856	4789	4806	4889	5039	5378	5424	5104	5645	5407	5290	5200	5020	-572	4452	
2	5083	5011	5036	5021	5001	4958	4919	4939	4976	4977	4963	4944	4889	4889	4896	4939	5026	5169	5169	5232	5232	5149	5149	5177	5031	-588	4443	
3	5028	4875	4981	4993	5000	4930	4864	4856	4864	4849	4820	4862	4869	4831	4727	4727	4955	5081	5194	5194	5300	5371	5371	5289	4993	-589	4404	
4	5228	5013	4993	4918	4838	4845	4857	4868	4895	4902	4895	4900	4869	4762	4607	4282	4248	4132	4280	4459	4718	4800	4991	4991	4762	-492	4270	
5	4865	4717	4747	4752	4752	4740	4732	4687	4659	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	4663	4653	4658	4627	4584	4521	4434	4505	4648	4808	4808	4808	4870	4818	4660	4696	-384	4312	
7	4660	4660	4695	4678	4655	4641	4631	4627	4640	4646	4638	4667	4661	4611	4604	4604	4823	5087	5190	5114	5114	5010	4913	4913	4770	-346	4424	
8	4830	4757	4795	4740	4680	4676	4677	4688	4715	4729	4729	4726	4687	4687	4600	4646	4782	4871	4845	4845	4866	4787	4787	4846	4750	-390	4360	
9	4804	4753	4691	4709	4721	4709	4701	4703	4721	4719	4702	4704	4671	4671	4584	4418	4504	4398	4238	4416	4282	4095	4187	4445	4564	-412	4152	
10	4481	4481	4620	4618	4610	4625	4644	4636	4644	4665	4672	4683	4658	4577	4603	4603	4633	4775	5009	4848	4778	4668	4526	4572	4651	-409	4242	
11	4626	4741	4702	4702	4696	4680	4668	4660	4668	4668	4654	4666	4643	4680	4577	4551	4577	4597	4689	4899	4801	4801	4841	4841	4693	-408	4285	
12	4754	4617	4715	4702	4683	4649	4620	4603	4602	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	4711	4805	4770	4699	4701	4701	4682	4742	4489	4496	4624	4813	5009	4943	4943	4711	-358	4353	
14	4943	4913	4906	4861	4810	4798	4791	4765	4756	4816	4862	4851	4805	4755	4651	4601	4997	5294	5329	5484	5343	5135	4972	4949	4933	-344	4589	
15	4740	4717	4796	4774	4746	4744	4746	4740	4750	4738	4711	4719	4692	4644	4739	4868	4959	4982	4982	4926	4960	5173	5173	4936	4831	-346	4485	
16	4789	4759	4781	4784	4781	4779	4781	4772	4779	4786	4779	4757	4700	4642	4657	4757	4865	5133	5031	5031	4874	4813	4564	4630	4793	-363	4430	
17	4630	4834	4895	4844	4788	4799	4814	4761	4724	4765	4792	4776	4724	4607	4667	4795	5048	5201	5335	5799	6143	7375	7197	6752	5211	-359	4852	
18	5878	5018	5003	4997	4985	4920	4860	4852	4860	4874	4873	4879	4850	4826	4588	4666	4617	5096	5360	5558	6316	5630	5630	5523	5111	-336	4775	
19	5334	5181	5145	5083	5015	5012	5014	4977	4956	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	4926	4881	4895	4873	4850	4726	4856	4912	5211	5748	6150	6576	6410	6215	5915	5286	-376	4910	
21	5571	5262	5264	5183	5096	5062	5033	5025	5033	4994	4940	4932	4889	4852	4873	5046	5354	5729	6009	6464	6337	6379	6155	5872	5390	-339	5051	
22	5572	5274	5214	5126	5033	5013	4997	4995	5010	5011	4997	5012	4991	4928	4926	4926	4971	5253	5937	6196	6230	6170	5830	5503	5296	-363	4933	
23	5323	5090	5165	5110	5050	4968	4891	4883	4892	4922	4937	4961	4950	4879	4894	5019	5319	5570	5700	5632	5310	5284	5332	5349	5143	-343	4800	
24	5337	5305	5135	5071	5002	4969	4940	4913	4902	4918	4920	4912	4869	4852	4950	5184	5364	5618	5555	5330	5141	5141	4780	4417	5064	-388	4676	
25	4561	4731	4842	4845	4842	4849	4861	4837	4830	4837	4830	4866	4866	4731	4936	5111	5450	5917	6286	6748	6233	5746	5290	4985	5168	-438	4730	
26	4985	5200	5370	5325	5274	5065	4861	4847	4850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	4862	4859	4921	4948	4937	5161	5296	5711	6229	6330	6135	5715	5186	4884	4861	5242	-453	4789	
28	5123	5215	5186	5146	5100	5071	5046	5038	5046	5053	5046	5025	4968	4912	4984	5381	5708	6001	6119	6556	6596	6181	5630	5590	5405	-479	4926	
29	4769	4797	4826	4929	5026	4879	4736	4750	4780	4824	4854	4902	4915	4781	4781	4885	5133	5441	5611	5648	5566	5333	5373	5373	5038	-490	4548	
30	5328	5067	5107	5079	5045	5051	5062	4996	4947	4961	4960	4965	4935	4935	4878	5041	5239	5323	5607	5770	5720	5801	5690	5301	5200	-440	4760	
31	5116	5158	5091	5078	5060	5025	4994	4986	4994	4971	4934	4952	4934	4869	4953	5071	5413	5669	6057	6560	6603	6454	6161	6027	5380	-409	4971	
Temp. Corrections	5006	4926	4947	4924	4896	4865	4838	4826	4829	4841	4838	4845	4816	4770	4763	4825	4996	5196	5346	5464	5482	5414	5285	5180	5005			
Means.....	-473	-467	-452	-446	-436	-427	-420	-413	-403	-393	-387	-383	-377	-371	-369	-366	-376	-386	-402	-417	-432	-446	-459	-466	.....	-416		
Corrected Means..	4533	4459	4495	4478	4460	4438	4418	4413	4426	4448	4451	4462	4439	4399	4394	4459	4620	4810	4944	5047	5050	4968	4826	4714	.....	.....	4589	
Mean Hourly Variations from General Monthly Mean. =·00	56 0262	130 0609	94 0441	111 0522	129 0605	151 0708	171 0801	176 0825	163 0764	141 0661	138 0647	127 0595	150 0703	190 0891	195 0914	130 0609	-31 -0145	-221 -1036	-355 -1664	-458 -2147	-461 -2161	-379 -1776	-237 -1111	-125 -0586	.....	$\frac{\Delta Y}{Y} =$	.....	·002161

JULY 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	882	880	879	876	873	872	871	871	871	870	870	870	870	870	869	869	871	873	876	877	880	881	882	882	8744			
2	882	881	881	880	879	877	875	874	873	872	871	871	870	870	870	873	874	875	878	879	881	883	884	885	8766			
3	885	883	877	877	876	875	874	874	873	872	871	871	870	870	872	872	875	876	878	880	882	885	885	887	8767			
4	880	873	873	873	873	871	869	866	862	861	860	858	856	855	855	855	855	856	860	862	865	865	867	869	8641			
5	870	865	852	858	854	853	853	853	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	850	848	847	845	845	843	843	843	844	844	844	845	845	846	848	8500			
7	850	850	847	846	845	844	843	842	841	840	840	840	839	838	840	840	841	844	846	848	851	855	855	855	8450			
8	854	852	852	852	852	851	850	850	850	849	848	847	846	845	845	845	846	849	852	853	855	857	859	860	8508			
9	860	860	859	859	858	856	855	854	853	852	851	851	851	849	850	848	849	850	850	852	854	855	855	855	8536			
10	854	854	854	854	854	853	852	851	850	850	850	850	850	848	846	848	850	852	854	856	858	863	864	864	8533			
11	863	861	859	859	859	858	857	857	856	853	850	850	850	847	844	845	846	818	848	849	851	854	855	855	8531			
12	854	852	852	851	850	850	850	850	849	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	847	845	844	843	841	840	840	840	841	843	844	845	847	849	851	8466			
14	850	850	850	849	847	845	844	843	841	840	839	839	838	838	840	840	842	844	847	847	848	850	852	853	8448			
15	852	852	852	849	846	845	845	845	845	842	840	840	840	840	839	840	840	842	844	847	848	848	849	850	8450			
16	852	852	850	850	850	850	850	849	847	846	845	844	842	841	842	843	844	844	845	847	848	850	852	853	8473			
17	855	855	852	851	849	848	847	846	845	845	845	845	845	845	844	842	842	842	843	845	847	848	848	848	8467			
18	848	849	845	845	844	843	842	842	841	840	840	840	840	840	838	837	839	841	844	846	848	851	853	854	8437			
19	856	855	853	853	853	852	851	851	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	850	850	849	847	846	845	844	845	845	844	846	847	847	847	849	8490			
21	849	850	840	840	840	841	842	841	840	840	840	840	840	840	840	840	844	845	846	848	850	852	855	855	8441			
22	855	856	856	855	853	851	850	850	850	848	847	845	843	840	840	837	840	840	842	845	847	847	848	849	8472			
23	849	849	848	848	848	847	847	844	841	840	840	840	840	839	839	836	840	841	844	845	848	850	853	855	8446			
24	856	855	855	855	855	854	853	850	846	845	845	845	845	844	845	845	845	845	848	850	853	856	859	863	8505			
25	865	865	861	859	857	857	857	855	852	851	850	850	850	850	851	851	851	855	859	860	863	865	867	868	8570			
26	868	868	864	864	864	862	861	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	856	852	852	852	850	848	849	850	854	856	860	863	866	867	868	8590			
28	868	869	867	867	866	865	864	862	859	858	858	857	856	855	855	853	855	856	859	864	865	868	874	875	8623			
29	877	878	875	870	865	864	864	863	862	861	861	860	858	857	858	856	856	858	859	864	865	865	867	868	8638			
30	869	869	867	866	864	862	860	858	856	855	854	853	851	850	848	850	850	851	853	855	856	858	860	860	8573			
31	860	859	859	859	859	855	851	851	850	850	850	850	850	850	850	847	847	848	850	853	855	856	859	861	8533			
Means.....	8616	8608	8589	8580	8568	8556	8547	8538	8524	8512	8504	8499	8491	8483	8480	8477	8489	8503	8523	8543	8562	8580	8597	8607	8541			

* The numbers in these Columns are not observed; but Interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot. } \theta \left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7°38'18'' \times \left(\frac{6{\cdot}895}{15{\cdot}180}\right)^2 = {\cdot}00004477$ $\qquad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}045} = 8{\cdot}042 = 1°$ Faht. $\qquad$ Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

AUGUST 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				-14·2 *		5·3 *		-24·7 *		-0·1 *		2·5 *																
1	5778	5606	5457	5362	5296	5286	5265	5240	5265	5239	5214	5180	5141	5068	4928	4556	4315	4637	4876	5186	5476	5501	5320	5311	5188	-446	4742	
2	5151	5100	5100	5068	5065	5070	5065	5032	5049	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	5099	5149	5152	5149	5097	5128	5322	5559	5493	5606	5603	5398	5398	5135	5093	5212	-493	4719	
4	5338	5191	5137	5104	5099	5083	5056	5031	5056	5031	5007	4976	4939	4955	4955	4969	5038	5217	5199	5467	5405	5405	5389	5352	5142	-510	4632	
5	5251	5008	5008	4987	4994	5027	5050	5043	5086	5062	5039	5042	5039	5004	5156	5401	5545	5777	5777	5840	5769	5769	5741	5701	5296	-528	4768	
6	5592	5275	5245	5160	5096	5085	5064	4995	4976	4976	4976	4996	5009	4854	5061	5451	5613	5781	5814	5814	5954	5753	5389	5414	5306	-593	4713	
7	5261	5300	4956	4906	4885	4914	4932	4850	4818	4911	5004	5034	5059	4937	5078	5384	5847	5911	6271	6128	5683	5565	5464	5350	5269	-527	4742	
8	5350	5277	5277	5202	5155	5141	5116	5069	5071	5054	5037	4975	4907	4920	5142	5268	5310	5310	5288	5288	5593	5448	5263	5285	5198	-462	4736	
9	5331	5204	5125	5111	5125	5063	4991	4941	4941	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	4982	5024	5003	4977	4977	4993	4986	4986	5244	5404	5404	5215	4968	4968	4723	5070	-452	4618	
11	4743	4862	4862	4838	4843	4876	4898	4831	4814	4805	4796	4827	4852	4852	5046	5344	5722	5861	5122	5647	5905	5813	5655	5338	5132	-416	4716	
12	5081	5050	5055	5041	5055	5023	4980	4974	5019	5019	5019	5004	4984	4936	4582	4703	5103	5292	5616	5808	5839	5839	5784	5470	5178	-383	4795	
13	5183	5120	5120	5098	5104	5088	5061	5013	5014	5005	4997	5000	4997	4918	4972	4972	5138	5313	5167	4985	4985	5056	5233	5383	5080	-406	4674	
14	5359	5190	4969	4895	4850	4856	4852	4829	4856	4856	4856	4827	4792	4776	4720	4803	4718	4495	4219	4273	4422	4928	5576	5675	4858	-386	4472	
15	5437	5034	5012	4998	5012	4961	4900	4854	4858	4850	4843	4853	4857	4857	4781	4665	4886	4660	4479	4512	4752	5047	5114	5114	4889	-436	4453	
16	5019	4995	4919	4905	4919	4924	4919	4879	4889	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	4929	4969	4910	4846	4857	4792	4814	4879	4875	4855	4855	4876	4783	4800	4882	4887	-408	4479	
18	4882	4825	4825	4791	4785	4801	4806	4781	4806	4806	4806	4773	4734	4712	4989	5198	5230	5384	5524	5568	5708	5870	5596	5375	5066	-377	4689	
19	5144	5117	5190	5102	5043	5026	4999	4974	4999	4934	4869	4872	4869	4846	4890	4890	5028	4601	5242	5079	5032	5045	4898	4873	4982	-335	4647	
20	4958	5030	4969	4955	4969	4955	4930	4899	4918	4932	4947	4923	4893	4893	5004	5351	5373	5748	5888	5627	5590	5389	5369	5429	5164	-319	4845	
21	5360	5360	5284	5083	4910	4915	4910	4873	4886	4911	4937	4923	4903	4886	5134	5379	5657	5856	5775	5622	5365	5483	5510	5338	5219	-325	4894	
22	5256	5153	5085	5071	5085	5037	4979	4907	4884	4874	4865	4832	4793	4877	4978	4935	5051	5182	4713	4501	4613	4938	5238	5261	4963	-328	4635	
23	5116	5009	5047	5044	5069	4966	4853	4828	4853	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	4892	4932	4926	4915	4840	5008	5110	5237	5121	5206	5033	4937	4745	4616	4705	4959	-354	4605	
25	4825	4913	4849	4793	4765	4805	4835	4810	4835	4813	4792	4780	4762	4762	4963	5369	5822	6048	5814	5869	5745	5483	5412	5362	5134	-353	4781	
26	5329	5100	5100	5061	5051	5010	4959	4915	4920	4920	4920	4919	4912	4921	4921	4923	4974	5240	5053	5233	5233	5201	5137	5046	5042	-348	4694	
27	4951	4834	4834	4845	4884	4883	4872	4864	4905	4885	4866	4894	4916	4818	4957	5140	5368	5484	5585	5686	5964	6149	6003	5702	5179	-376	4803	
28	5403	5148	5169	5112	5084	5070	5046	4987	4977	4966	4955	4958	4955	4860	4956	5166	5348	5155	5391	5056	5015	5068	5186	5311	5098	-399	4699	
29	5311	5255	5071	5246	5450	5141	4822	4844	4916	4884	4852	4893	4928	4565	4897	5087	5311	5720	6153	6309	6256	6324	6161	5804	5342	-388	4954	
30	5168	5165	5189	5186	5211	5147	5072	5024	5026	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	4926	4827	4799	4766	4808	5045	5512	5673	6024	6293	6335	6250	6353	6590	5888	5428	-417	5011	
Means.....	5214	5120	5071	5037	5031	5006	4970	4934	4948	4945	4942	4933	4919	4877	4964	5104	5259	5363	5397	5413	5422	5435	5406	5315	5126			
Temp. Corrections	-474	-472	-458	-452	-444	-433	-427	-421	-411	-399	-389	-382	-372	-363	-353	-350	-357	-371	-388	-409	-428	-446	-464	-473	.....	-414		
Corrected Means..	4740	4648	4613	4585	4587	4573	4543	4513	4537	4546	4553	4551	4547	4514	4611	4754	4902	4992	5009	5004	4994	4989	4942	4842	.....	.....	4712	
Mean Hourly Variations from General Monthly Mean.	-28	64	99	127	125	139	169	199	175	166	159	161	165	198	101	-42	-190	-289	-297	-292	-282	-277	-230	-130				
=.00	-0125	0287	0443	0569	0560	0622	0757	0891	0783	0743	0712	0721	0739	0886	0452	-0188	-0851	-1254	-1330	-1307	-1263	-1240	-1030	-0582	.....	$\frac{\Delta Y}{Y}$ =	.....	·001330

AUGUST 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	861	861	861	861	860	860	860	859	857	855	853	852	850	850	850	847	846	848	851	854	856	858	860	862	8555			
2	865	866	865	865	865	863	861	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	857	855	855	854	854	852	855	856	859	860	860	868	870	872	873	8613			
4	873	873	871	870	869	866	863	863	862	860	858	856	854	854	853	855	857	860	860	863	867	870	872	872	8634			
5	873	873	870	869	868	867	866	864	862	861	860	859	858	856	856	857	860	863	865	867	868	874	878	880	8656			
6	880	880	879	878	876	875	875	874	872	871	870	868	866	865	865	865	866	869	872	873	877	880	885	887	8737			
7	886	883	879	877	875	873	871	869	867	866	865	864	862	860	856	855	855	855	856	856	857	859	862	863	8655			
8	863	863	862	862	861	859	857	857	856	855	855	854	852	850	850	851	852	855	857	859	862	863	863	863	8575			
9	865	865	865	865	864	862	861	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	855	850	849	847	845	845	846	846	849	851	854	857	860	863	863	8562			
11	864	864	864	863	861	860	860	859	857	855	853	850	847	845	841	836	839	839	841	844	847	848	851	853	8517			
12	853	854	855	855	855	854	853	852	851	850	850	848	846	845	841	838	835	836	837	841	845	847	849	853	8476			
13	854	854	852	851	850	850	850	849	848	848	848	847	846	845	845	845	846	848	850	853	855	858	860	860	8505			
14	861	860	855	854	853	852	852	849	846	845	844	842	840	840	838	840	840	842	843	846	848	850	855	857	8480			
15	858	858	857	857	856	856	856	855	854	853	853	852	850	848	846	846	846	847	853	857	858	860	862	863	8542			
16	863	863	860	860	860	860	860	859	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	849	840	840	840	840	838	838	840	844	847	849	851	852	853	853	8507			
18	854	853	851	851	850	849	848	847	846	844	842	841	840	840	837	840	841	843	846	847	849	852	857	857	8469			
19	850	848	848	847	845	843	842	841	840	840	840	840	839	837	836	836	836	838	838	840	843	843	845	845	8417			
20	846	846	845	845	844	841	838	837	836	835	835	835	835	833	834	831	832	836	839	842	844	847	848	848	8397			
21	848	848	845	844	843	841	840	839	838	838	838	838	837	835	835	833	835	835	837	842	844	845	845	846	8404			
22	846	846	845	843	840	840	840	840	840	840	840	839	838	837	836	835	835	837	838	842	844	846	846	846	8408			
23	846	846	846	846	845	845	845	844	843	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	841	840	840	840	840	840	840	842	843	846	847	848	851	853	8440				
25	853	853	847	846	845	843	841	841	840	840	840	840	840	839	837	836	839	840	845	847	847	850	852	853	8439			
26	853	851	849	847	845	843	842	842	842	841	840	840	840	838	835	835	838	840	840	842	846	848	850	853	8433			
27	855	857	854	852	850	848	847	847	846	845	845	844	842	840	840	837	838	840	842	846	848	852	853	854	8467			
28	856	855	852	852	852	852	852	852	851	850	850	849	848	846	845	844	844	845	846	847	848	850	852	853	8496			
29	854	854	850	850	850	849	849	848	846	845	845	845	845	845	845	844	844	845	847	849	850	852	854	854	8483			
30	853	852	852	852	852	851	851	851	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	850	850	849	848	845	845	847	848	850	852	854	857	859	861	866	8519			
Means.....	8590	8587	8569	8562	8552	8539	8531	8523	8511	8496	8484	8475	8463	8451	8439	8435	8444	8462	8483	8508	8532	8554	8577	8588	8515			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a \text{ Cot. } \theta \left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{Cot. } 7°38'33'' \times \left(\frac{8.}{\frac{6{\cdot}896}{17{\cdot}788}}\right)^2 = {\cdot}00003259$ $\quad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}033} 11{\cdot}045 = 1°$ Faht. Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER—(*Uncorrected.*)

SEPTEMBER 1851. Vertical Force Manetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				0·7 *		−0·1 *		−13·2 *		11·9 *		3·8 *																
1	5552	5203	4959	4960	4959	4897	4836	4836	4862	4874	4862	4878	4887	4797	5077	5570	5791	6046	6316	6458	6532	6159	6032	5764	5379	-640	4739	
2	5664	5241	5318	5155	4990	4938	4886	4860	4860	4873	4862	4879	4889	4889	5201	5429	5669	5864	6174	6222	6182	6105	5810	5810	5365	-686	4679	
3	5294	5133	5358	5348	5336	5235	5134	4990	5072	5025	4954	4843	4724	4716	4979	5156	6196	6583	8010	8664	8046	4475	3724	4560	5481	-683	4798	
4	4790	5510	4515	4492	4468	4706	4944	4526	4135	4404	4649	4669	4681	4616	4692	4863	4993	4905	4972	4910	4910	4440	4642	4573	4709	-747	3962	
5	4757	4966	4908	4898	4887	4899	4911	4849	4813	4802	4767	4785	4796	4608	4928	5422	5697	5656	5700	5429	5712	5782	5605	5451	5126	-733	4393	
6	5216	5090	5040	5055	5069	4925	4782	4769	4782	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	4427	4049	4153	4250	4499	4919	4982	4791	4798	5018	5206	5246	5316	4886	4703	4832	-742	4090	
8	4788	4698	4737	4643	4547	4587	4628	4692	4783	4789	4771	4734	4689	4680	4946	5742	6576	6893	7418	6989	5809	5297	5033	4972	5227	-772	4455	
9	5251	5356	5197	5177	5156	5156	5156	5051	4972	5006	5017	5011	4998	4886	5046	5335	5719	6250	6756	6549	6280	5432	4773	4683	5342	-771	4571	
10	5152	5364	5335	5306	5275	5250	5226	5189	5178	5190	5178	5163	5141	5074	5234	5524	5926	6470	6596	6577	6443	5928	5715	5470	5538	-779	4759	
11	5410	5540	5361	5362	5361	5371	5382	5292	5228	5218	5185	5189	5185	5132	5150	5222	5465	6081	7002	7437	6793	5980	5077	4852	5553	-790	4763	
12	4870	5198	5235	5213	5189	5136	5084	5106	5154	5192	5207	5261	5308	5012	5041	5170	5551	6310	6737	6737	6584	6147	5687	5415	5481	-779	4702	
13	5354	5308	5329	5289	5248	5273	5298	5285	5298	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	5287	5253	5239	5217	5180	5243	5457	5700	6016	6451	6570	6156	6027	5796	5544	5534	-779	4755	
15	5557	5530	5462	5422	5380	5476	5572	5517	5488	5281	5051	5132	5206	5082	5406	5717	6000	6430	7253	6625	6067	5695	5376	5401	5630	-754	4876	
16	5365	5364	5353	5339	5323	5361	5399	5309	5246	5258	5246	5500	5346	4988	5138	5595	6083	6387	6744	6688	6296	6119	5827	5477	5606	-705	4901	
17	5456	5506	5441	5394	5345	5289	5234	5174	5140	5217	5270	5257	5237	5219	5429	5743	6240	6911	7224	7242	7152	6912	6336	5949	5805	-706	5099	
18	5704	5682	5647	5588	5527	5514	5501	5427	5380	5418	5432	5423	5406	5358	5341	5532	5720	5832	5672	5303	5100	4995	5145	5475	5463	-675	4788	
19	5557	5544	5550	5507	5463	5375	5288	5275	5288	5353	5395	5345	5287	5221	5179	5406	5715	6276	6190	5824	5606	5560	5560	5702	5519	-666	4853	
20	5804	5739	5562	5563	5562	5506	5450	5437	5450	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	5429	5384	5392	5393	5266	5266	5309	5412	5633	5698	5756	5889	5698	5814	6013	5559	-679	4880	
22	5924	5655	5584	5551	5517	5480	5443	5404	5392	5382	5349	5365	5374	5329	5477	5908	6433	7879	8365	7930	7061	6609	6019	6117	6023	-710	5313	
23	6386	6140	5910	5911	5910	5795	5680	5669	5685	5674	5640	5675	5702	5467	5761	6541	7599	8612	8846	8377	7677	6699	6610	6298	6428	-779	5649	
24	6101	6140	6059	6075	6089	6048	6008	5787	5593	5633	5650	5618	5578	5592	5683	6351	7558	8523	8673	8387	7889	7016	6233	6025	6430	-748	5682	
25	6068	6138	6081	6013	5943	5868	5793	5719	5671	5646	5597	5597	5589	5557	5637	6181	6825	7622	7750	7318	6721	6181	5919	6000	6143	-663	5480	
26	6155	6062	6080	5966	5850	5806	5762	5659	5582	5564	5522	5596	5662	5633	5812	6127	6455	6665	6454	5930	6250	6332	6532	6696	6066	-514	5492	
27	5865	6191	6075	6010	5943	5962	5981	5900	5846	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	5798	5726	5490	5246	5523	5911	6447	6662	6917	7133	7161	7038	6838	6890	6862	6226	-539	5687	
29	6459	5809	5888	5758	5626	5626	5626	5667	5735	5766	5774	6671	7561	7127	6984	7490	6156	6455	6740	7052	6635	6147	5749	5947	6269	-574	5695	
30	5290	5137	5163	5227	5289	5288	5287	5230	5200	5205	5187	5226	5257	5106	5133	5624	6519	7348	7441	7319	7153	6836	6327	6099	5787	-643	5144	
Means.....	5530	5509	5429	5393	5356	5337	5319	5255	5224	5220	5191	5227	5254	5175	5331	5686	6056	6514	6821	6718	6432	5951	5658	5610	5633			
Temp.Corrections	-771	-762	-749	-735	-725	-715	-709	-698	-693	-683	-679	-667	-659	-643	-634	-638	-654	-668	-679	-699	-718	-740	-760	-773	.....	-702		
Corrected Means.	4759	4747	4680	4658	4631	4622	4610	4557	4531	4537	4512	4560	4595	4532	4697	5048	5402	5846	6142	6019	5714	5211	4898	4837	.....	.....	4931	
Mean Hourly Variations from General Monthly Mean. = ·00	172 0561	184 0600	251 0818	271 0883	300 0978	309 1007	321 1046	374 1219	400 1304	394 1284	419 1366	371 1209	336 1095	399 1300	234 0763	−117 −0381	−471 −1536	−915 −2982	−1211 −3947	−1088 −3546	−783 −2562	−280 −0913	33 0108	94 0306	.....	$\frac{\Delta Y}{Y}$ =	.....	.003947

SEPTEMBER 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	867	866	864	863	862	861	860	858	856	855	854	852	850	850	849	850	852	855	857	857	858	862	865	867	8579			
2	868	868	866	865	865	864	863	861	860	859	859	858	858	856	856	856	857	859	860	864	867	867	867	867	8621			
3	867	866	866	866	866	863	861	859	858	858	858	857	856	855	853	855	857	859	860	864	865	867	873	875	8618			
4	874	874	872	869	867	866	866	866	866	865	865	865	865	863	863	863	864	865	865	867	869	873	875	875	8676			
5	872	872	871	870	869	868	867	866	865	863	862	862	862	862	861	862	862	864	865	866	867	869	872	874	8664			
6	874	873	873	872	871	870	869	868	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	866	865	864	864	862	861	860	861	864	864	865	866	868	871	874	8672			
8	876	876	875	874	873	871	870	870	870	869	868	867	866	865	865	864	865	865	866	867	870	873	875	877	8699			
9	878	878	876	875	875	874	874	873	872	871	870	868	866	863	863	862	863	863	865	865	866	869	872	875	8698			
10	875	874	874	872	871	871	871	871	871	870	870	869	868	865	865	867	868	869	869	869	870	862	875	876	8705			
11	876	876	874	872	871	871	871	871	871	870	870	870	870	867	865	866	868	869	870	873	875	876	876	877	8715			
12	877	876	875	873	872	872	872	870	869	867	866	865	864	863	863	865	867	870	870	873	875	875	876	878	8705			
13	876	873	873	872	871	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	868	868	867	866	865	865	865	867	869	869	872	875	876	879	879	8705			
15	876	875	874	872	870	870	870	868	867	866	865	863	862	862	861	860	863	865	866	867	870	874	876	876	8683			
16	875	874	872	870	869	868	867	864	862	861	860	858	856	854	853	854	857	858	860	862	865	868	870	874	8638			
17	873	872	869	867	866	865	864	863	862	861	860	859	858	855	855	857	858	860	862	865	867	869	872	874	8639			
18	871	868	868	866	864	863	863	862	861	860	859	857	856	855	855	856	856	856	857	859	860	864	865	866	8611			
19	866	866	865	863	862	861	861	860	860	860	860	859	858	856	856	857	857	859	860	860	860	860	861	861	8603			
20	860	860	860	860	860	859	859	858	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	860	863	862	862	861	859	860	861	861	862	865	865	866	867	868	8615			
22	870	869	867	866	865	864	863	863	863	863	863	862	861	860	858	857	859	862	864	865	866	869	871	874	8643			
23	875	874	873	872	872	871	871	871	871	871	871	871	871	870	868	867	866	866	866	867	870	872	873	873	8705			
24	873	873	871	870	869	868	867	867	867	866	865	865	865	865	865	864	865	867	867	870	870	867	869	870	8677			
25	870	869	868	868	868	867	866	865	864	863	863	861	860	860	859	857	856	852	850	850	850	850	852	852	8600			
26	853	851	850	848	847	847	847	846	846	844	842	841	840	840	840	841	844	845	847	849	851	852	852	852	8465			
27	852	851	849	848	848	847	847	846	846	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	845	845	843	842	841	841	845	846	850	850	854	856	859	860	860	8488			
29	860	858	857	854	852	851	850	850	850	850	850	850	850	845	842	844	846	847	851	854	856	860	860	860	8520			
30	860	861	861	861	861	860	859	858	858	857	857	856	856	852	852	850	854	855	856	858	860	864	865	866	8582			
Means.....	8698	8690	8678	8665	8656	8647	8642	8632	8627	8618	8615	8604	8597	8582	8574	8578	8592	8605	8615	8633	8650	8670	8688	8700	8636			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a\mathrm{Cot.}\theta\left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \mathrm{Cot.}\ 7'38''{\cdot}25 \times \left(\frac{6{\cdot}897}{15{\cdot}052}\right)^2 = {\cdot}00004537$ $\quad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}045} = 7{\cdot}936 = 1^\circ$ Faht. Zero $80^\circ{\cdot}0$ Ther.

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

OCTOBER 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				-11·3 *		0·8 *		18·5 *		−3·6 *		7·2 *																
1	5698	5698	5698	5632	5589	5562	5534	5478	5385	5243	5109	5264	5404	5297	5455	5709	6008	6323	6566	6483	6348	6265	6131	6637	5772	-497	5275	
2	6074	5797	5254	5481	5731	5690	5647	5474	5264	5197	5138	5382	5611	5403	5257	5692	6139	6329	6271	5688	5530	5647	5649	5679	5626	-509	5117	
3	5545	5538	5537	5459	5404	5359	5313	5319	5288	5283	5286	5256	5211	5061	5018	5305	5638	5877	6324	6438	6427	6197	6090	5865	5585	-527	5058	
4	5460	5592	5453	5410	5390	5288	5184	5202	5184	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	5231	5286	5293	5286	5164	5504	5968	6350	6806	7155	7271	7079	6607	5942	5692	5783	-517	5266	
6	5742	5680	5589	5542	5517	5464	5409	5400	5355	5334	5320	5288	5241	5138	5224	5748	6442	6895	7239	7320	6808	6204	5822	5608	5805	-416	5389	
7	5601	5601	5601	5536	5494	5498	5501	5480	5422	5403	5392	5395	5383	5383	5457	5781	6156	6555	6746	6513	6214	6303	6022	5873	5763	-341	5422	
8	5941	5750	5750	5644	5561	5496	5430	5409	5352	5348	5352	5346	5326	5202	5312	5695	5936	6488	6812	6381	6219	5935	5757	5634	5712	-269	5443	
9	5741	5743	5555	5506	5480	5481	5480	5416	5315	5311	5315	5340	5351	5191	5393	5723	6241	6660	6760	6651	6256	6004	5450	5533	5704	-278	5426	
10	5533	5461	5461	5458	5478	5433	5387	5340	5257	5279	5308	5240	5158	5086	5144	5201	5735	6309	6819	7099	6794	6794	6369	5926	5711	-298	5413	
11	5523	5523	5431	5343	5278	5143	5006	5060	5078	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	5056	5041	5048	5041	4906	4988	5211	5911	6993	7717	7054	6387	5988	5910	5444	5587	-348	5239	
13	5642	5301	5301	5264	5249	5225	5199	5200	5165	5127	5096	5103	5096	4946	5079	5533	6169	6738	7500	7161	6984	6381	5887	5446	5658	-412	5246	
14	5543	5463	5500	5292	5106	5158	5209	5171	5096	5092	5096	5082	5053	4925	5024	5351	5621	5991	6299	6202	6197	6084	5692	5654	5454	-439	5015	
15	5526	5379	5245	5212	5202	5209	5215	5233	5215	5158	5108	5115	5108	4978	4990	5247	5739	6074	6104	5778	5766	5739	5710	5571	5401	-408	4993	
16	5426	5351	5351	5284	5240	5212	5182	5162	5105	5075	5053	5114	5160	5048	5103	5103	5174	5645	6112	6162	6136	6019	5872	5634	5405	-397	5008	
17	5270	5270	5203	5169	5158	5185	5210	5196	5146	5097	5055	5062	5055	5022	5101	5223	5485	5854	6219	6194	6194	6007	5585	5375	5389	-395	4994	
18	5499	5356	5194	5219	5266	5190	5112	5080	5011	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	5003	5002	5009	5002	5051	5290	5520	5896	5905	5656	5489	5489	5478	5561	5693	5332	-378	4954	
20	5729	5269	5218	5087	4979	4869	4758	4929	5064	5005	4954	5008	5047	5294	4825	4900	5209	5462	4946	4946	5321	5343	5207	5224	5108	-352	4756	
21	5049	4881	4881	4829	4799	4783	4765	4769	4737	4723	4716	4671	4612	4455	4670	4850	4971	5182	5256	4981	4518	4643	5054	5264	4836	-329	4507	
22	5323	5181	5181	5038	4918	4804	4688	4684	4642	4632	4629	4605	4567	4465	4776	4960	5330	5865	6095	6177	6056	5954	5821	5812	5175	-302	4873	
23	5315	5098	4967	4996	5047	4956	4863	4745	4591	4489	4395	4426	4443	4374	4813	5069	5599	6086	6539	6396	6000	5944	5725	5636	5188	-344	4844	
24	5245	5224	4713	4490	4289	4491	4691	4891	5054	5087	5127	4991	4840	4405	4593	4994	5447	5893	6511	6134	5425	5282	5477	5270	5107	-325	4782	
25	5098	5098	4860	4894	4950	4871	4790	4815	4804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	4788	4779	4813	4833	4767	4549	4525	4699	4792	4792	4682	4648	5029	5176	5149	4842	-267	4575	
27	4998	4930	4835	4832	4852	4838	4823	4827	4795	4791	4795	4766	4723	4567	4423	4503	4808	5083	5415	5201	5284	5341	5096	5168	4904	-248	4656	
28	5118	5004	5004	4897	4813	4820	4825	4822	4782	4778	4782	4982	5168	5077	4733	4798	4798	5018	6470	5657	4882	4841	5121	5271	5019	-217	4802	
29	5012	4760	4674	4684	4717	4703	4687	4786	4849	4763	4685	4729	4758	4817	4721	4866	5027	5333	5435	5621	5552	5572	5459	5269	4978	-244	4734	
30	5321	5098	4808	4820	4855	4850	4843	4830	4781	4777	4781	4723	4650	4650	4676	4870	5402	5911	5663	5784	5784	5722	5608	5407	5109	-177	4932	
31	5323	5154	5047	5036	5047	5038	5027	4967	4871	4867	4871	4831	4776	4652	4619	4523	4708	4822	5102	5341	5445	5412	5232	5302	5001	-172	4829	
Means.....	5455	5341	5234	5187	5163	5134	5103	5099	5060	5035	5017	5033	5033	4938	4990	5217	5579	5959	6242	6104	5916	5805	5645	5557	5369			
Temp. Corrections	-400	-375	-368	-364	-363	-356	-351	-344	-341	-336	-334	-326	-324	-313	-304	-303	-310	-321	-340	-356	-369	-381	-389	-392	.....	-348		
Corrected Means.	5055	4966	4866	4823	4800	4778	4752	4755	4719	4699	4683	4707	4709	4625	4686	4914	5269	5638	5902	5748	5547	5424	5256	5165	.....	.....	5021	
Mean Hourly Variations from general Monthly Mean = ·00	-34 -0154	55 0250	155 0703	198 0898	221 1003	243 1103	269 1220	266 1207	302 1370	322 1461	338 1534	314 1425	312 1416	396 1797	335 1520	107 0485	-248 -1125	-617 -2799	-881 -3997	-727 -3298	-526 -2386	-403 -1828	-235 -1066	-144 -0653	.....	$\frac{\Delta Y}{Y}$ =	.....	·003997

OCTOBER 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	867	866	865	865	865	864	864	864	864	864	864	863	863	858	855	853	854	857	860	862	865	866	866	868	8626			
2	870	867	864	864	865	865	865	864	864	863	862	861	860	858	857	859	861	862	864	865	866	870	872	872	8642			
3	872	867	866	865	865	865	865	865	865	865	865	864	864	862	862	863	864	865	866	868	868	874	875	874	8664			
4	874	874	872	871	870	869	868	867	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	866	867	865	864	862	859	857	857	858	860	860	862	864	865	865	8651			
6	865	860	860	860	860	858	856	854	853	851	849	848	848	845	845	845	845	846	847	850	851	853	855	854	8524			
7	854	850	850	849	848	846	844	843	842	841	840	839	839	837	835	835	837	838	840	844	845	845	845	845	8430			
8	845	843	840	840	840	838	836	834	833	831	830	829	829	826	825	825	826	828	830	835	835	837	838	840	8339			
9	840	836	835	835	835	835	835	835	835	833	832	831	831	830	830	832	833	834	837	838	839	840	840	840	8350			
10	840	840	840	838	837	836	836	835	835	834	833	832	832	832	833	834	835	837	840	842	845	845	845	845	8375			
11	845	844	841	841	841	840	840	840	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	840	840	840	840	841	841	843	845	846	849	850	853	855	856	856	8438			
13	856	852	851	852	853	853	853	851	850	850	850	849	849	848	848	848	849	850	853	853	854	856	858	860	8519			
14	860	856	855	855	855	855	855	855	855	854	854	853	852	851	850	850	852	853	855	856	859	861	862	865	8553			
15	865	861	861	860	859	854	850	850	850	848	847	845	843	842	842	843	845	847	850	853	855	855	855	854	8514			
16	854	850	850	850	850	849	849	848	848	848	848	847	846	846	847	847	848	848	851	852	855	856	856	856	8500			
17	856	851	851	851	851	850	849	848	848	848	848	847	847	846	846	847	848	848	850	853	854	854	853	852	8498			
18	852	847	846	846	846	846	846	846	846	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	846	847	846	845	843	843	843	844	845	850	850	853	856	856	855	8476			
20	852	847	847	846	846	846	846	845	845	845	845	844	844	843	840	839	839	840	842	842	843	845	846	846	8443			
21	845	845	845	845	845	844	844	843	842	842	842	842	842	842	842	840	840	839	837	836	835	836	840	840	8414			
22	840	835	835	835	835	834	834	834	834	834	834	834	834	835	835	836	837	839	842	845	846	848	850	850	8381			
23	848	844	842	842	842	842	842	842	842	842	842	842	842	842	840	840	840	841	845	845	846	848	849	849	8433			
24	848	845	845	844	843	842	841	840	840	840	840	839	839	838	836	836	838	839	841	842	842	842	842	843	8410			
25	842	840	839	837	835	834	834	833	833	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	831	830	830	830	828	826	825	827	829	832	835	837	840	840	842	8337			
27	840	835	834	833	833	833	833	833	833	832	832	831	831	830	828	825	823	823	825	830	830	831	835	835	8312			
28	835	830	830	829	828	827	826	825	825	824	824	823	823	820	818	819	820	823	826	830	835	836	838	840	8273			
29	835	834	834	834	834	834	834	832	830	830	830	829	828	825	822	822	823	825	829	832	835	835	836	836	8308			
30	835	833	830	829	828	827	826	824	822	821	821	819	818	816	811	810	811	813	818	821	825	826	825	826	8223			
31	826	824	824	824	824	823	822	821	820	820	820	819	819	819	819	818	818	819	820	822	825	825	825	825	8217			
Means.....	8504	8473	8464	8459	8457	8448	8442	8434	8430	8423	8421	8411	8408	8394	8383	8382	8391	8404	8428	8448	8465	8480	8490	8494	8439			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a\,\mathrm{Cot.}\theta\left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \mathrm{Cot.}\ 7^\circ 37' 36'' \times \left(\frac{\overset{s.}{6{\cdot}898}}{8{\cdot}852}\right)^2 = {\cdot}00013197$ $\quad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}132}$ $\quad 2{\cdot}728 = 1^\circ$ Faht. Zero $80^\circ{\cdot}0$ Ther.

VERTICAL FORCE MAGNETOMETER—*(Uncorrected.)*

NOVEMBER 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				−6·2		−9·8		−10·2		−7·8		19·1																
1	5179	5014	4946	4940	4946	4936	4946	4906	4886	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	4771	4672	4669	4627	4504	4525	4675	4578	4479	4436	4861	5216	5198	5139	5017	4836	−23	4813	
3	4884	4962	4937	4852	4780	4660	4559	4572	4605	4578	4566	4472	4340	4288	4288	4301	4477	4450	4566	4795	4895	4720	4552	4746	4619	25	4644	
4	4783	4686	4686	4499	4324	4305	4305	4285	4286	4278	4286	4269	4213	4189	4280	4416	4866	5285	5285	5308	5540	5495	5110	5026	4667	27	4694	
5	4811	4592	4559	4472	4389	4235	4101	4098	4116	4120	4139	4140	4102	4050	3865	3857	4073	4432	4458	4458	4588	4808	4767	4610	4327	18	4345	
6	4383	4307	4277	4271	4277	4149	4040	4004	3988	3971	3969	3955	3902	3849	3849	4021	4328	4373	4339	4366	4393	4393	4197	4242	4160	50	4210	
7	4168	4155	4080	4064	4061	4036	4030	3950	3891	3883	3891	3910	3891	3827	3877	4052	4313	4463	4124	4036	4117	4293	4230	4132	4061	25	4086	
8	4028	3934	3929	3912	3907	3862	3836	3824	3833	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	3813	3808	3757	3667	3586	3451	3432	3560	3890	4105	4121	4086	3964	3905	3905	3838	−26	3812	
10	4173	4074	4018	3886	3767	3716	3685	3570	3475	3454	3448	3382	3278	3253	3293	2995	3231	3396	3712	4229	4333	4015	3733	3652	3657	−46	3611	
11	3813	3864	3818	3631	3456	3517	3598	3445	3312	3324	3351	3447	3505	3512	3427	3440	3680	3925	4143	3919	4005	3779	3521	3606	3627	−50	3577	
12	3624	3583	3587	3564	3553	3502	3470	3503	3556	3500	3459	3437	3377	3358	3138	3214	3472	3716	3674	3745	3641	3615	3505	3439	3510	−49	3461	
13	3577	3589	3569	3563	3569	3530	3510	3489	3489	3429	3385	3386	3349	3246	3122	3002	3326	3608	3791	4026	3975	3933	3752	3533	3531	−41	3490	
14	3619	3580	3529	3455	3393	3482	3491	3442	3414	3386	3374	3368	3323	2936	2824	2824	3432	3457	3138	2986	2775	2687	2719	2874	3227	−29	3198	
15	3113	3050	3015	3009	3015	2976	2957	2947	2957	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	2960	2979	2989	2961	2925	2945	2849	2904	2978	2916	2964	2980	3156	3114	3218	2995	−9	2986	
17	3276	3160	3074	3090	3119	3016	2932	2860	2808	2813	2834	2853	2834	2751	2847	2804	2935	3151	3151	3179	3161	3161	3326	3430	3024	−24	3000	
18	3243	3002	2937	2931	2937	2886	2855	2841	2847	2826	2820	2782	2705	2574	2610	2717	2900	2790	2844	2661	2528	2681	2893	2960	2824	−37	2787	
19	2960	2825	2808	2790	2785	2743	2721	2691	2681	2643	2621	2603	2546	2378	2252	2410	2737	2737	2849	2735	2660	2976	2999	2974	2714	−33	2681	
20	2974	2951	2951	2923	2907	2897	2907	2881	2875	2852	2845	2864	2845	2858	2858	2874	2878	2878	2901	2874	3048	3076	3095	3116	2922	−43	2879	
21	3093	3093	3112	3104	3109	3099	3109	3113	3137	3129	3187	3158	3141	3141	3145	3154	3154	3154	3154	3882	1563	1102	0911	1864	2865	−53	2812	
22	1707	1820	2000	1938	1888	1855	1841	1803	1785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1879	1988	1978	1930	1930	1967	1951	2050	2254	2368	2407	2358	2277	2361	2305	2027	−71	1956	
24	2263	2263	2235	2238	2253	2243	2253	2176	2120	2138	2172	2191	2172	2101	2101	2027	2090	2120	2348	2432	2386	2295	2241	2186	2210	−82	2128	
25	2186	2255	2290	2257	2237	2257	2296	2267	2259	2272	2301	2302	2264	2212	2212	2317	2599	2857	2414	2442	2298	2231	2194	2194	2309	−77	2232	
26	2213	2184	2161	2147	2145	2143	2161	2144	2147	2145	2159	2178	2159	2126	2105	2105	2284	2380	2620	2656	2590	2596	2650	2601	2283	−66	2217	
27	2522	2468	2474	2483	2505	2485	2484	2471	2478	2470	2478	2505	2494	2494	2494	2510	2546	2576	2740	2867	2814	2814	2741	2710	2568	−40	2528	
28	2710	2697	2707	2691	2687	2678	2689	2680	2691	2685	2695	2704	2674	2680	2697	2752	2658	2696	2735	2729	2716	2677	2653	2626	2692	1	2693	
29	2626	2592	2602	2594	2598	2585	2591	2574	2577	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	2568	2575	2594	2575	2580	2556	2556	2556	2611	2653	2679	2663	2663	2832	2809	2617	5	2622	
Means	3437	3388	3372	3332	3304	3270	3255	3221	3209	3195	3198	3196	3155	3094	3069	3090	3265	3386	3419	3494	3413	3384	3326	3351	3284			
Temp. Corrections	−37	−33	−30	−27	−26	−24	−25	−23	−23	−22	−22	−20	−19	−16	−16	−19	−21	−24	−27	−29	−32	−35	−37	−37	.....	−26		
Corrected Means	3400	3355	3342	3305	3278	3246	3230	3198	3186	3173	3176	3176	3136	3078	3053	3071	3244	3362	3392	3465	3381	3349	3289	3314	.....	.....	3258	
Mean Hourly Variations from General Monthly Mean. =.00	−142	−97	−84	−47	−20	12	28	60	72	85	82	82	122	180	205	187	14	−104	−134	−207	−123	−91	−31	−56				
	−1874	−1280	−1109	−0620	−0264	0158	0369	0792	0950	1122	1082	1082	1610	2375	2705	2468	0185	−1372	−1768	−2732	−1623	−1201	−0409	−0739	.....	$\frac{\Delta Y}{Y} =$	.....	·002734

NOVEMBER 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	824	822	821	820	820	820	820	818	817	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	812	807	806	806	804	803	801	800	800	800	799	797	795	795	795	8084			
3	794	793	792	792	793	792	792	792	792	791	791	791	791	791	792	790	790	789	788	788	787	790	792	792	7910			
4	790	790	788	788	788	788	788	789	790	790	790	789	789	789	789	790	791	792	792	792	793	793	793	793	7902			
5	793	793	793	792	792	792	793	793	794	794	795	794	793	793	793	794	794	795	795	795	794	793	793	793	7935			
6	790	788	787	785	784	782	780	779	778	777	777	776	776	776	776	778	779	779	781	783	785	787	787	787	7815			
7	787	786	786	785	786	786	787	787	787	786	786	786	786	786	787	790	793	794	797	797	799	801	803	807	7907			
8	808	807	806	805	804	803	803	802	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	806	810	809	808	807	807	810	810	812	815	817	818	818	819	819	8094			
10	818	818	817	816	816	816	817	816	816	815	815	814	814	813	812	812	815	816	819	822	823	823	823	823	8170			
11	822	820	819	818	817	816	816	815	815	815	815	815	815	814	814	816	816	819	821	823	825	826	827	826	8185			
12	823	821	820	819	819	819	819	818	818	817	816	816	816	815	814	815	815	816	818	818	820	820	821	821	8181			
13	820	818	817	816	816	815	815	815	815	815	815	814	814	812	812	813	814	814	814	814	815	816	816	815	8150			
14	815	813	812	812	812	812	812	812	812	811	811	810	810	810	809	810	810	812	812	810	809	808	807	806	8107			
15	806	804	803	801	800	800	800	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	802	804	803	803	801	800	801	802	802	804	805	807	810	811	811	8033			
17	811	810	807	806	806	806	806	806	807	807	807	806	805	804	803	806	808	809	810	813	815	817	817	817	8087			
18	816	815	814	813	812	812	812	812	812	812	812	812	812	812	811	814	815	815	815	814	815	815	816	816	8135			
19	816	814	813	812	811	810	810	810	810	810	810	810	810	808	807	808	810	812	814	815	816	817	818	818	8120			
20	818	816	816	815	815	814	814	814	814	814	814	814	814	812	812	815	815	815	817	818	820	821	822	822	8159			
21	822	820	820	819	818	817	817	816	816	815	815	815	815	815	814	816	819	820	822	822	827	828	828	828	8193			
22	828	827	826	825	824	824	825	825	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	823	822	822	822	820	821	823	824	825	827	829	832	834	836	837	8261			
24	837	836	834	832	830	830	830	830	830	828	827	826	825	824	824	825	827	828	830	832	833	834	834	834	8300			
25	833	832	830	829	828	828	828	828	828	827	826	825	825	825	826	826	827	828	829	831	831	831	831	830	8284			
26	830	828	826	825	825	824	824	824	824	824	824	823	822	820	818	820	822	824	825	825	825	827	827	827	8243			
27	826	823	822	819	817	816	815	815	815	814	813	812	812	810	810	810	810	811	812	812	813	813	814	814	8145			
28	814	812	809	807	806	804	803	802	801	800	800	799	798	797	795	792	792	792	792	792	794	797	798	799	7998			
29	798	796	796	796	797	797	798	798	798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	797	796	795	795	793	794	796	796	798	800	801	804	806	807	808	7983			
Means	8136	8121	8110	8099	8094	8089	8090	8086	8086	8081	8079	8073	8070	8060	8057	8068	8078	8087	8100	8107	8119	8128	8134	8135	8095			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$$k = a\,\mathrm{Cot.}\,\theta\left(\frac{T}{\overline{T}}\right)^2 = 0{\cdot}0000291 \times \mathrm{Cot.}\ 7°38'11'' \times \left(\frac{6{\cdot}899}{10{\cdot}744}\right)^2 = {\cdot}00008949 \qquad \frac{q}{k} = \frac{{\cdot}360}{{\cdot}089} = 4{\cdot}023 = 4°\ \text{Faht.} \qquad \text{Zero } 80{\cdot}0 \text{ Ther.}$$

VERTICAL FORCE MAGNETOMETER.—(*Uncorrected.*)

DECEMBER 1851. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta F}{F}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·4 *		8·5 *		-16·1 *		-2·2 *		7·6 *																
†1	2633	2614	2614	2616	2609	2608	2591	2575	2591	2581	2576	2584	2576	2573	2589	2564	2564	2578	2576	2612	2680	2680	2633	2633				
†2	2633	2617	2617	2580	2534	2532	2514	2472	2462	2447	2436	2454	2456	2445	2439	2166	2177	2177	2245	2323	2403	2403	2376	2376				
†3	2310	2262	2247	2255	2255	2563	2255	2241	2260	2247	2239	2247	2239	2232	2223	2226	2220	2261	2261	2261	2284	2284	2284	2260				
†4	2260	2260	2260	2277	2285	2293	2285	2260	2268	2257	2250	2264	2262	2264	2264	2235	2253	2279	2279	2324	2365	2365	2365	2342				
†5	2342	2342	2342	2339	2328	2337	2330	2314	2330	2319	2313	2321	2313	2298	2308	2322	2279	2292	2347	2347	2347	2364	2364	2313				
†6	2271	2250	2271	2270	2260	2279	2281	2265	2281	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†7	—	—	—	—	—	—	—	—	—	2279	2281	2284	2271	2271	2277	2267	2283	2306	2306	2279	2256	2256	2296	2296				
†8	2296	2296	2296	2296	2288	2289	2274	2258	2274	2258	2247	2255	2247	2247	2273‡	4247	4351	4434	4607	4629	4640	4676	4410	4364				
9	4364	4353	4418	4422	4418	4416	4397	4334	4304	4352	4405	4395	4370	4334	4279	4276	4334	4412	4439	4475	4426	4426	4442	4529	4388	17	4405	
10	4490	4476	4476	4447	4410	4439	4451	4426	4433	4477	4525	4517	4494	4464	4428	4534	4703	4831	4851	4851	4832	4832	4685	4685	4573	27	4600	
11	4685	4676	4698	4673	4639	4647	4639	4624	4642	4617	4596	4618	4624	4603	4587	4626	4738	4775	4741	4639	4445	4445	4520	4592	4629	50	4679	
12	4633	4633	4636	4603	4561	4584	4591	4569	4580	4617	4659	4658	4641	4565	4523	4635	4740	4872	4988	4958	4874	4708	4309	3919	4627	62	4689	
13	3978	3909	3909	3913	3909	3952	3978	3962	3978	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	3693	3412	3414	3401	3312	3301	3333	3440	3554	3514	3514	3500	3573	3573	3491	3646	39	3685	
15	3491	3491	3440	3438	3427	3435	3427	3400	3405	3399	3397	3405	3397	3356	3334	3363	3411	3523	3523	3686	3752	3674	3674	3711	3482	2	3484	
16	3560	3437	3437	3496	3547	3439	3315	3344	3405	3403	3405	3392	3364	3352	3389	3427	3501	3646	3678	3697	3697	3709	3735	3651	3501	-14	3487	
17	3601	3537	3537	3490	3435	3443	3435	3400	3398	3405	3416	3406	3381	3381	3385	3455	3524	3524	3512	3586	3445	3559	3624	3677	3482	-22	3460	
18	3636	3544	3544	3548	3544	3498	3436	3420	3437	3447	3461	3469	3461	3435	3492	3574	3698	3719	4009	3811	3855	3873	3754	3838	3604	-12	3592	
19	3886	3660	3714	3697	3672	3680	3672	3639	3638	3619	3605	3613	3605	3576	3658	4010	4243	4328	4292	4292	4265	4102	4157	4250	3870	27	3897	
20	4196	4129	4113	4117	4113	4084	4039	4062	4058	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	4039	4024	4032	4024	4046	4199	4145	4453	4453	4431	4431	4511	4332	4352	4367	4197	41	4238	
22	4294	4294	4434	4375	4308	4264	4203	4177	4183	4197	4215	4223	4215	4153	4153	4208	4448	4673	4504	4178	4099	4064	3999	4089	4248	49	4297	
23	4230	4216	4279	4263	4239	4247	4239	4172	4157	4176	4200	4208	4200	4124	4124	4092	4401	4584	4677	4777	4777	4777	4483	4412	4336	68	4404	
28	4503	4413	4321	4325	4321	4304	4271	4246	4253	4266	4284	4275	4250	4225	4225	4097	4235	4473	4688	4761	4915	4905	4702	4580	4410	80	4490	
25	4475	4406	4402	4386	4361	4349	4320	4317	4346	4315	4288	4305	4307	4307	4409	4409	4585	4709	4946	5005	4912	4680	4560	4507	4484	82	4566	
26	4520	4425	4407	4474	4533	4473	4397	4356	4347	4327	4311	4356	4385	4359	4227	4346	4512	4733	4911	4775	4687	4718	4579	4465	4484	93	4577	
27	4407	4483	4433	4413	4384	4370	4340	4317	4326	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	4497	4673	4444	4199	4174	4240	4142	4009	4007	4051	4122	4153	4312	4367	4367	4301	77	4378	
29	4394	4372	4277	4296	4306	4314	4306	4332	4391	4242	4097	4105	4097	4097	4225	4180	4160	4285	4308	4284	4520	4474	4533	4054	4277	59	4336	
30	4054	4135	4171	4178	4177	4130	4066	4070	4107	4136	4170	4176	4166	4063	4102	4221	4293	4477	4477	4578	4650	4627	4597	4484	4263	58	4321	
31	4347	4301	4358	4341	4316	4319	4305	4289	4305	4274	4248	4256	4248	4199	4199	4251	4343	4510	4684	4761	4901	4806	4687	4431	4403	71	4474	
Temp. Corrections	4187	4144	4150	4145	4131	4120	4091	4071	4085	4075	4070	4063	4041	4006	4024	4066	4189	4301	4361	4359	4361	4330	4267	4205	4160			
Means.....	23	31	33	37	38	41	42	45	46	47	47	50	52	57	62	64	61	55	45	39	34	29	26	25	.....	43		
Corrected Means..	4210	4175	4183	4182	4169	4161	4133	4116	4131	4122	4117	4113	4093	4063	4086	4130	4250	4359	4406	4398	4395	4359	4293	4230	.....	.....	4203	
Mean Hourly Variations from General Monthly Mean. = ·00	-7	28	20	21	34	42	70	87	72	81	86	90	110	140	117	73	-47	-156	-203	-195	-192	-156	-90	-27	.....	$\frac{\Delta F}{F}$ =	.....	·001817
	-0063	0251	0179	0188	0304	0376	0626	0779	0644	0725	0770	0805	0984	1253	1047	0653	-0421	-1396	-1817	-1745	-1718	-1396	-0805	-0242				

DECEMBER 1851. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	808	805	804	804	804	803	803	803	803	803	803	802	802	802	805	806	808	812	813	814	816	818	819	820				
2	820	816	815	815	815	814	814	814	814	814	814	814	814	814	814	815	815	816	816	819	820	821	822	822				
3	822	820	820	819	818	817	817	816	816	816	816	815	815	815	815	816	817	817	819	821	822	824	824	825				
4	825	820	820	819	818	817	817	816	815	815	815	815	815	813	810	811	812	815	816	818	819	820	820	820				
5	818	816	815	814	814	813	812	811	811	809	808	807	806	805	803	803	805	808	809	810	811	812	814	814				
6	813	811	810	809	808	807	806	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	803	801	800	800	798	795	795	797	799	800	801	802	804	805	805				
8	805	802	801	800	800	798	797	797	797	796	795	795	795	793	791	796	797	799	799	799	800	802	804	804				
9	804	799	799	798	798	797	796	795	794	794	794	793	793	791	790	790	791	794	794	797	798	799	800	800	7958			
10	799	797	797	796	796	795	794	793	792	791	790	790	790	790	789	788	789	790	794	795	796	796	796	796	7933			
11	796	794	794	792	791	790	790	789	788	788	788	787	786	785	780	778	779	781	784	786	788	789	790	790	7876			
12	790	789	786	786	786	785	785	785	785	783	782	782	782	781	780	779	779	780	783	785	786	789	790	790	7845			
13	790	787	787	786	786	785	785	784	783	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	786	790	790	790	790	790	790	790	792	795	796	797	798	800	800	7903			
15	802	800	800	799	799	798	798	797	797	797	797	796	796	795	795	796	797	799	802	804	805	805	806	806	7994			
16	805	803	803	803	803	802	802	802	802	802	802	801	801	801	800	800	801	804	805	806	807	808	809	809	8034			
17	808	806	806	805	805	804	804	803	802	802	803	803	803	803	803	803	804	805	808	808	809	811	811	811	8054			
18	809	806	805	804	804	804	804	803	803	803	803	802	802	799	798	798	800	801	802	802	803	805	805	804	8029			
19	803	799	799	798	797	796	796	794	793	792	792	791	790	788	786	785	788	790	792	794	794	795	795	795	7934			
20	794	794	794	792	791	790	790	789	789	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	787	786	785	785	785	785	785	786	788	790	790	792	794	795	798	7898			
22	797	793	790	789	789	788	787	787	787	786	785	785	785	784	782	782	783	785	786	788	790	792	792	792	7877			
23	792	790	790	788	786	785	784	783	782	782	782	781	780	777	775	775	777	780	782	784	785	785	786	786	7832			
24	786	785	784	783	783	782	782	781	780	780	780	777	775	772	772	772	774	776	779	781	783	785	785	785	7801			
25	784	784	784	783	783	783	783	782	782	781	780	778	776	774	773	770	773	775	777	777	780	782	783	784	7796			
26	784	782	782	781	780	779	779	778	778	777	777	776	775	773	772	770	770	771	773	775	777	778	779	779	7769			
27	778	778	777	777	777	777	778	778	778	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	780	783	782	782	782	781	779	776	778	784	785	787	788	788	788	7809			
29	788	787	786	786	786	785	785	785	786	786	786	786	786	785	782	780	779	780	784	788	788	787	788	788	7853			
30	789	788	787	786	786	785	785	784	784	784	784	784	784	784	785	785	785	785	785	787	786	788	788	789	7857			
31	790	788	787	786	785	785	785	785	785	784	784	782	781	780	776	776	775	775	776	778	780	782	785	785	7823			
Means.....	7944	7924	7918	7909	7905	7897	7896	7888	7885	7882	7884	7875	7871	7859	7847	7840	7848	7864	7887	7903	7915	7928	7935	7937	7893			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

† The Observations from 1 to 8th are rejected from the hourly and daily Means.

‡ The Axle of the needle cleaned.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 22D JANUARY 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 22d January, 1851.														Thursday, 23rd January, 1851.										
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9	
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	
0 0	1642	1643	1643	1642	1641	1640	1650	1644	1623	1610	1614	1602	1610	1630	1640	1631	1636	1631	1631	1632	1637	1640	1640	1638	
5 0	42	43	43	42	43	42	50	42	20	10	15	02	11	30	40	30	37	31	31	32	37	40	40	38	
10 0	41	43	43	42	44	43	50	42	19	10	16	02	12	33	40	30	39	31	32	32	38	40	40	38	
15 0	40	43	44	42	45	42	50	40	18	10	15	02	12	37	40	30	39	32	32	32	38	40	40	39	
20 0	40	43	44	42	43	44	50	39	14	11	12	04	14	38	41	29	38	32	32	32	38	40	40	38	
25 0	40	43	44	41	41	45	50	39	13	10	11	04	15	39	39	29	37	32	31	32	39	40	39	37	
30 0	40	42	43	41	41	46	50	36	12	10	11	06	18	40	38	28	36	31	31	32	39	40	39	35	
35 0	40	42	43	41	41	48	50	34	11	10	10	07	20	40	36	28	35	31	31	33	38	40	38	33	
40 0	40	42	43	41	41	49	49	32	10	11	10	09	20	41	34	30	33	31	31	34	41	40	38	32	
45 0	40	42	43	41	40	49	49	29	10	11	04	09	20	41	33	30	32	31	31	34	42	40	38	32	
50 0	42	42	43	40	39	49	48	28	10	14	04	09	22	40	32	31	32	31	31	35	42	40	38	32	
55 0	42	42	43	40	38	49	46	25	10	14	02	09	22	40	31	32	32	31	32	36	42	40	38	32	

HORIZONTAL FORCE.

2 0	1330	1322	1340	1347	1310	1285	1222	1155	1062	1042	1092	1182	1244	1289	1290	1318	1380	1332	1320	1346	1337	1353	1357	1350	
7 0	30	24	40	47	12	81	15	40	52	49	1100	86	48	90	97	19	83	30	28	48	38	51	57	50	
12 0	26	24	40	45	14	79	14	38	42	50	08	89	52	85	1300	24	85	30	34	49	39	49	57	50	
17 0	20	28	42	45	13	72	17	20	47	51	12	92	58	81	01	30	82	30	37	51	40	43	58	50	
22 0	14	33	44	40	12	65	12	20	44	54	22	1205	60	82	1296	30	79	30	38	46	34	47	58	41	
27 0	12	36	44	32	02	62	05	12	40	58	35	12	62	82	1300	32	75	26	40	38	32	50	57	30	
32 0	10	36	47	27	1297	54	1196	13	34	59	43	17	68	85	02	38	72	22	41	34	37	50	57	27	
37 0	10	38	50	16	93	50	90	1098	32	63	48	24	72	88	08	38	70	20	41	32	40	50	50	23	
42 0	07	40	50	08	90	43	79	90	36	70	50	37	76	90	12	60	67	20	42	30	47	52	52	18	
47 0	06	40	50	06	88	40	71	77	34	72	62	39	78	98	12	66	61	24	43	30	50	53	52	20	
52 0	10	40	50	08	85	30	68	65	35	80	64	40	82	97	14	70	50	28	44	31	52	57	51	20	
57 0	15	40	48	08	85	26	62	67	35	84	68	43	84	92	16	76	40	26	45	34	57	58	50	20	
Faht....																									
Attached Thermometer...	79·1	79·1	79·1	79·0	79·0	78·6	78·4	78·8	79·0	79·4	79·7	79·9	89·1	80·2	80·2	80·0	80·0	80·0	80·0	80·0	80·0	79·9	80·0	80·0	

VERTICAL FORCE.

m. s.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	
3 0	1210	1307	1306	1307	1181	1244	1320	1360	1652	1894	1885	1750	1471	1308	1265	1319	1520	1278	1279	1369	1341	1428	1356	1375	
8 0	10	07	06	07	81	72	31	79	88	94	85	50	50	08	46	19	20	78	79	69	41	28	56	75	
13 0	10	07	06	07	81	72	37	79	1718	94	85	28	50	1260	46	47	20	78	79	69	41	28	56	75	
18 0	10	07	06	07	81	72	37	1425	48	81	79	13	50	32	78	67	1474	78	79	69	41	28	56	75	
23 0	10	37	06	07	95	65	61	25	88	81	79	1612	1399	16	54	67	74	78	1341	41	41	28	56	21	
28 0	10	37	06	07	1219	25	61	65	1818	72	79	1599	99	16	65	95	74	78	41	41	41	29	56	21	
33 0	52	37	06	1201	04	30	67	87	49	72	88	64	69	19	65	95	74	78	41	41	41	28	37	1283	
38 0	52	37	52	01	19	30	65	1605	66	72	88	64	69	19	96	95	08	78	41	41	41	28	37	83	
43 0	52	37	52	01	27	35	72	1530	66	86	88	16	43	30	96	1467	08	78	41	41	41	28	37	30	
48 0	52	37	52	1147	27	55	72	47	66	86	34	16	43	30	1302	67	08	78	41	41	41	28	37	30	
53 0	52	37	52	47	37	68	95	76	66	92	34	06	29	51	02	67	1333	78	41	41	74	28	37	30	
58 0	52	37	52	47	1337	90	95	1603	96	92	34	06	29	51	1257	67	33	78	69	41	74	28	37	30	
Faht....																									
Attached Thermometer....	79·2	79·2	79·2	78·8	78·6	78·5	78·4	78·7	79·4	79·5	79·7	80·0	80·2	80·2	80·3	80·1	80·1	79·6	79·7	79·6	79·5	79·5	79·7	79·7	

INDUCTION INCLINOMETER.

m. s.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	
0 20	1645	1647	1650	1646	1642	1641	1649	1646	1629	1618	1622	1614	1621	1637	1643	1635	1639	1635	1636	1633	1638	1641	1640	1638	
5 20	45	49	50	46	43	42	49	45	29	19	23	14	21	37	43	34	39	34	36	33	38	41	40	38	
10 20	45	50	50	45	43	43	49	45	23	19	23	15	23	39	42	33	41	34	36	34	39	41	40	38	
15 20	44	50	50	45	43	42	50	44	23	19	22	15	23	41	42	32	40	34	36	34	39	41	40	38	
20 20	43	50	50	45	42	45	50	43	22	20	20	17	24	42	42	31	39	34	34	34	40	41	40	36	
25 20	43	50	50	43	39	45	50	42	22	19	20	17	25	42	41	31	39	33	33	34	40	41	40	35	
30 20	44	50	48	43	40	44	50	40	21	19	20	19	27	42	40	30	39	33	33	34	40	41	40	34	
35 20	44	50	48	43	40	47	50	39	20	19	19	19	29	42	39	30	38	33	33	34	39	41	38	32	
40 20	44	50	48	43	40	48	49	38	20	20	19	21	29	43	38	33	38	33	33	34	40	41	38	32	
45 20	44	50	48	43	40	48	49	34	19	20	15	20	29	43	37	33	37	34	32	35	40	41	38	32	
50 20	46	50	48	41	40	49	49	33	19	22	15	20	31	43	36	34	36	36	32	35	40	40	38	32	
55 20	47	50	47	41	40	49	47	30	19	22	14	20	31	43	36	35	36	36	33	36	40	40	38	32	
Faht...																									
Attached Thermometer..	78·1	78·1	78·0	77·3	77·0	76·7	77·2	78·1	79·0	79·5	79·8	80·2	80·4	80·3	80·0	79·5	79·2	78·9	78·8	78·7	78·7	79·0	78·9	78·8	

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..	In. 1·136	In. 1·126	In. 1·130	In. 1·142	In. 1·158	In. 1·181	In. 1·201	In. 1·217	In. 1·218	In. 1·204	In. 1·172	In. 1·148	In. 1·132	In. 1·130	In. 1·136	In. 1·152	In. 1·154	In. 1·178	In. 1·212	In. 1·216	In. 1·214	In. 1·204	In. 1·187	In. 1·164	
Attached Thermometer.....	76·0	76·0	76·0	74·0	72·0	71·5	73·0	76·0	78,0	78·5	79·0	79·5	80·0	79·5	79·5	78·5	77·5	77·0	77·0	76·5	76·5	76·5	76·5	76·0	
Dry Thermometer (Standard).....	72·3	71·6	71·0	70·7	70·5	71·4	74.5	78·8	80.7	81·9	82·2	82·7	82·6	82·6	80·8	79·2	77·8	77·2	77·0	76·8	76·7	76·7	76·2	75·8	
Wet Do.....	68·0	68·0	67·8	68·0	67·5	68·0	69.0	71·0	72.0	72·2	72·0	71·9	71·6	71·6	71·2	71·5	71·0	71·0	70·8	71·0	70·7	70·2	70·7	70·8	
Cloudy sky in 8ths.....	3	2	1	3	2	2	2	3	3	3	3	2	2	2	3	2	3	2	1	1	3	0	1	3	
Wind. Force..lbs.....	0·00	·00	·00	·00	·00	·00	·02	·22	·55	·60	·70	·75	·80	·60	·25	·12	·07	·00	·02	·00	·00	·00	·00	·00	
Wind. Directions.....	56	56	349	349	349	00	11	67	56	56	56	56	45	45	45	45	45	45	45	56	56	67	67	67	
REMARKS. ON THE WEATHER	sc-cu, dew.	do. do.	do. do.	cu, hz, dew.	do. do.	fl-cu.....	sc-cu, cu-str, hz.	do. do.	do. do.	fl-cu, hz.	cu, hz.....	cu, cir-str-hz.....	cu, cir-str.	cu, cir, str-hz.....	cu, cir-cir-lhz.....	cu, cir, cir-cu, cir-hz.	cu, cir-str.	cu, cir-lhz.	cu, hz.	do.	cu., cir-hz. Nim E....	Nearly clear.	cu-hor.....	cu, haze.	

N. B.—The numbers in the Magnetometer Tables are tenths of scale divisions.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 28TH FEBRUARY 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 28th February, 1851.														Saturday, 1st March, 1851.									
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1622	1617	1620	1620	1625	1631	1650	1648	1656	1657	1649	1651	1656	1645	1640	1634	1630	1629	1628	1628	1630	1637	1640	1639
5 0	21	18	20	20	25	32	52	50	55	59	49	50	56	45	38	34	30	29	28	28	30	37	40	39
10 0	21	18	20	20	25	32	51	50	55	60	50	50	56	43	38	34	30	30	28	28	30	38	40	39
15 0	21	19	20	20	25	34	52	50	53	60	49	50	55	43	36	34	30	30	28	28	30	38	40	39
20 0	20	19	20	20	26	36	52	50	52	60	49	52	55	45	35	33	30	30	28	28	30	39	40	39
25 0	20	20	20	20	26	40	50	52	51	60	48	52	55	45	34	33	30	30	28	28	30	39	40	39
30 0	20	20	20	20	27	43	49	53	50	59	48	52	53	45	34	34	30	30	29	28	31	39	39	40
35 0	20	20	20	20	29	46	48	54	50	58	47	53	53	45	33	34	30	29	29	29	31	40	39	40
40 0	18	20	20	20	29	48	44	52	50	58	47	53	50	46	33	34	30	29	29	30	32	40	39	40
45 0	17	20	20	22	30	49	43	55	52	53	49	55	48	43	34	33	30	30	27	30	33	40	39	41
50 0	15	19	20	24	30	50	42	54	54	51	50	56	48	41	34	32	30	29	27	30	35	40	39	41
55 0	14	19	19	24	30	50	43	55	56	51	50	56	45	40	35	32	30	29	28	30	36	40	39	41

HORIZONTAL FORCE.

2 0	1190	1165	1190	1210	1162	1119	1112	1068	1162	1130	1150	1204	1258	1265	1270	1280	1278	1283	1297	1283	1281	1299	1280	1280
7 0	90	68	94	04	60	24	18	72	70	4[illegible]	61	14	59	70	70	80	78	83	98	82	81	1300	80	80
12 0	89	70	97	02	54	25	22	77	88	48	58	10	56	73	73	80	75	86	95	81	84	00	80	80
17 0	82	72	95	00	50	20	48	67	88	60	58	14	53	78	76	80	75	87	92	81	87	02	80	80
22 0	76	75	98	1194	44	14	62	73	65	1200	72	10	56	*	79	78	75	89	91	81	87	09	80	80
27 0	60	87	1200	90	38	12	57	73	62	10	98	18	56	80	82	77	73	91	91	84	87	13	79	80
32 0	58	92	03	84	35	12	31	83	60	1175	1202	28	59	85	85	80	72	91	87	87	88	15	74	80
37 0	55	97	05	80	32	13	41	1120	76	60	00	28	65	83	90	80	76	92	84	89	90	20	74	80
42 0	53	99	04	74	27	12	12	1095	72	40	04	30	68	80	90	80	79	92	83	90	91	1295	77	80
47 0	52	99	04	69	21	06	1092	95	50	28	08	35	66	75	88	75	80	94	81	90	92	87	77	81
52 0	54	1200	07	67	16	01	82	1120	34	35	1196	40	66	72	88	76	81	97	81	90	92	85	79	81
57 0	59	1196	09	64	19	06	59	40	27	20	90	46	66	66	85	78	81	98	81	83	97	82	80	81
Faht.....																								
Attached Thermometer...	79°8	79°8	79°7	79°3	79°0	78°8	79°0	79°4	80°2	80°5	80°5	80°7	81°1	81°6	81°5	81°3	81°1	81°1	81°0	80°7	80°4	80°2	80°1	80°0

VERTICAL FORCE.

m. s.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3 0	1323	1371	1460	1440	1272	1394	1890	2205	2206	2263	1861	1780	1726	1731	1730	1643	1504	1483	1483	1444	1466	1535	1452	1471
8 0	23	71	60	40	72	94	1927	05	06	35	1901	56	26	31	30	43	04	83	83	44	66	35	52	71
13 0	23	71	60	40	72	94	27	2186	2154	04	1887	56	26	31	30	43	04	83	83	44	66	35	52	71
18 0	23	1416	60	40	72	1477	60	86	30	04	87	24	26	89	30	43	04	87	83	44	66	35	52	71
23 0	1277	16	1399	40	72	77	56	2225	30	06	60	24	1692	*	30	07	1475	87	83	44	63	35	52	71
28 0	77	16	99	40	72	1561	57	65	79	06	22	04	92	89	30	07	75	87	79	44	63	44	71	71
33 0	77	80	99	40	72	1641	2004	64	79	2115	22	04	92	1843	30	07	85	87	79	67	78	44	71	72
38 0	77	80	99	1353	72	81	04	74	37	2070	1783	1687	92	43	30	07	85	85	79	67	1505	44	71	72
43 0	77	80	99	53	1352	1727	39	2320	61	70	83	87	92	43	30	07	85	85	79	67	05	1430	71	72
48 0	77	80	99	53	52	70	80	37	61	1984	83	87	92	43	30	1526	85	85	79	67	05	22	71	72
53 0	1316	80	1440	1272	52	1828	2102	37	2219	30	78	93	92	1756	30	26	85	85	42	67	05	22	71	72
58 0	16	80	40	72	52	51	82	2256	28	30	78	93	92	56	30	26	85	85	42	67	05	35	71	72
Faht.....																								
Attached Thermometer...	79°7	79°5	79°2	78°9	78°5	78°5	79°2	79°7	80°5	80°8	80°7	80°9	81°4	81°6	81°5	81°5	81°1	81°1	80°8	80°6	80°2	80°0	80°0	79°9

INDUCTION INCLINOMETER.

m. s.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 20	1623	1618	1620	1619	1622	1630	1647	1642	1652	1651	1642	1652	1658	1650	1644	1640	1635	1630	1629	1629	1630	1637	1640	1640
5 20	22	19	20	19	21	31	48	43	52	51	42	52	58	50	43	40	34	30	29	29	30	37	40	40
10 20	22	19	20	19	20	31	44	46	51	51	42	52	58	50	43	40	32	30	29	29	30	37	40	40
15 20	22	19	20	19	20	32	47	46	51	50	42	53	57	50	42	40	33	30	29	29	30	37	40	40
20 20	21	19	20	20	20	33	48	47	50	50	42	54	57	*	40	39	32	30	29	29	30	38	40	40
25 20	21	20	20	20	22	36	43	48	50	50	42	54	57	49	40	39	33	30	29	29	30	38	40	40
30 20	20	20	20	20	22	38	42	48	49	50	42	54	55	47	40	40	32	30	30	29	31	38	40	40
35 20	20	20	20	20	22	40	41	50	49	49	42	56	55	48	40	38	32	29	30	29	31	39	40	40
40 20	19	20	20	20	23	42	39	48	48	49	42	56	53	48	38	38	32	29	30	29	32	40	40	40
45 20	18	20	20	22	25	42	39	52	49	46	46	58	52	47	39	36	32	30	29	30	33	40	40	40
50 20	16	20	20	22	27	42	38	52	50	44	49	58	52	46	39	35	32	30	29	30	35	40	40	40
55 20	15	20	20	22	28	42	40	50	51	43	49	58	50	46	40	35	32	30	29	30	36	40	40	40
Faht.....																								
Attached Thermometer...	78°3	78°0	77°7	77°0	76°2	77°0	78°7	79°9	81°0	81°2	81°4	81°9	82°3	82°5	82°1	81°2	80°8	80°3	79°8	79°0	78°7	78°5	78°5	78°4

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected = 29·0 +..	In. 0·992	In. 0·980	In. 0·978	In. 0·984	In. 1·012	In. 1·048	In. 1·078	In. 1·100	In. 1·098	In. 1·084	In. 1·062	In. 1·034	In. 1·014	In. 1·000	In. 1.006	In. 1·014	In. 1·016	In. 1·025	In. 1·039	In. 1·054	In. 1·064	In. 1·064	In. 1·060	In. 1·041
Attached Thermometer.....	74°0	73°0	72°0	71°0	70°0	71°5	75°0	79°0	80°0	81°0	81°5	82°5	82°5	82°5	82°0	81°0	80°0	78°0	76°5	75°5	74°5	74°5	74°0	73°0
Dry Thermometer (standard).....	71·0	70·8	70·3	69·7	69·4	72·8	77·8	81·7	83·5	85·3	86·2	86·9	86·4	85·7	85·1	82·7	80·4	77·9	76·1	74·6	73·2	72·2	70·7	70·0
Wet do.....	68·0	67·0	67·0	66·6	66·2	70·0	73·7	72·8	72·4	72·0	72·0	73·0	72·2	71·7	72·3	72·2	72·0	71·0	70·3	69·7	68·5	67·5	67·5	66·5
Cloudy sky in 8ths.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind. Force.....lb..	·00	·00	·00	·00	·00	·00	·07	·12	·15	·17	·20	·15	·17	·15	·15	·10	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °.....	259	259	259	259	259	236	180	135	135	135	135	135	135	135	146	135	135	135	135	135	135	135	135	135
REMARKS ON THE WEATHER.	clear, dew.....	clear, dew.....	clear, dew.....	clear, dew.....	clear, dew.....	nearly-clear.	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear	clear.....	clear.....	clear.....	clear.....	clear	clear.....	clear, dew.....	clear, dew.....	clear, dew.....

* The observer went to shift the Anemometer Board.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 19TH MARCH 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 19th March 1851.														Thursday, 20th March, 1851.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1630	1630	1630	1629	1630	1634	1640	1638	1627	1611	1602	1612	1620	1628	1630	1625	1620	1628	1630	1631	1630	1641	1647	1648
5	0	30	30	30	29	31	34	40	38	25	10	07	12	20	28	30	25	20	28	30	30	30	40	47	48
10	0	30	30	30	29	32	35	41	37	23	09	07	14	21	27	30	24	20	28	31	30	34	40	47	48
15	0	30	30	30	30	34	35	41	38	22	09	09	15	22	27	30	24	22	28	30	30	34	41	48	46
20	0	29	30	30	30	36	35	41	38	20	08	10	17	22	26	30	23	23	29	31	30	34	41	48	45
25	0	30	30	30	30	36	36	41	37	19	06	10	17	22	26	30	22	23	30	30	31	34	41	48	45
30	0	30	30	30	30	36	36	42	31	18	02	11	17	23	27	29	20	23	32	31	31	36	41	48	45
35	0	30	30	30	28	35	36	42	30	18	01	11	17	23	27	28	20	24	33	31	30	39	42	48	44
40	0	30	30	30	28	35	36	41	31	18	01	11	19	25	27	29	20	25	34	30	30	39	42	49	44
45	0	30	30	30	28	35	37	41	29	13	01	11	19	25	28	29	21	27	34	31	29	39	43	48	44
50	0	30	30	29	28	35	39	40	29	11	00	12	20	25	28	28	22	27	32	31	28	39	44	48	44
55	0	30	30	29	29	34	39	39	28	10	00	12	20	26	30	26	22	27	32	30	30	40	47	48	46

HORIZONTAL FORCE.

2	0	1273	1270	1270	1272	1260	1178	1082	993	958	954	1004	1094	1160	1220	1209	1242	1267	1310	1390	1472	1476	1470	1418	1394
7	0	72	70	70	72	54	74	79	992	54	56	20	65	65	20	11	47	69	10	1420	77	70	74	14	92
12	0	72	70	70	72	50	72	73	991	49	56	20	80	86	22	17	49	70	12	10	79	60	70	10	91
17	0	71	70	70	70	49	70	67	993	51	60	24	96	98	24	15	49	75	07	24	78	65	66	10	91
22	0	70	70	70	70	48	58	61	1000	40	70	38	92	1200	27	12	50	81	10	40	73	50	59	06	91
27	0	70	72	70	70	47	47	58	997	37	80	44	1110	00	30	20	47	86	22	54	70	48	52	00	90
32	0	71	72	70	70	45	39	54	978	41	89	54	20	00	31	27	46	88	42	62	50	45	50	00	90
37	0	70	72	70	65	29	23	51	973	44	90	64	24	00	28	35	47	90	46	75	40	43	58	00	90
42	0	70	72	70	60	1198	09	39	968	48	88	68	40	00	27	45	47	90	58	80	38	40	54	00	90
47	0	70	72	70	60	95	00	30	962	52	91	70	44	10	18	50	52	90	62	80	40	46	50	00	90
52	0	70	72	72	60	87	1089	00	961	50	94	80	70	10	07	50	60	90	72	80	42	51	40	00	84
57	0	70	70	72	60	78	84	996	959	52	96	82	75	12	12	49	62	92	80	76	40	60	29	1395	81
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer....		82·6	82·8	82·7	82·7	82.2	82·2	82·3	82·6	83·1	83·7	84·0	84·4	84 6	85·0	8·49	84·7	84·3	84·2	84·1	84·2	84·0	83·8	83·6	83·6

VERTICAL FORCE.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	1589	1550	1543	1513	1454	1396	1557	1717	1989	2260	2290	2121	1895	1798	1514	1596	1669	1705	1874	1824	1688	1673	1532	1516
8	0	89	50	43	13	54	96	57	17	2001	60	90	2099	95	98	14	96	69	05	74	24	88	73	32	16
13	0	89	50	43	13	54	1420	1605	53	22	90	2303	99	72	22	14	96	69	05	89	24	1712	73	32	16
18	0	80	50	43	13	60	45	05	70	36	90	03	69	72	22	14	96	69	1680	89	1737	12	73	32	16
23	0	80	50	43	13	60	47	05	70	55	2317	2246	47	72	22	14	96	69	80	1932	37	12	88	32	16
28	0	80	50	43	13	60	69	05	1841	70	17	21	15	72	22	1555	1666	69	1703	32	37	1618	88	16	16
33	0	80	50	43	13	60	61	28	41	92	17	2183	1996	44	22	55	66	69	55	32	37	18	88	16	16
38	0	80	50	43	13	1381	61	47	41	98	06	60	96	44	1638	1600	66	80	55	32	37	1543	88	16	16
43	0	80	50	43	1445	81	61	47	1901	2140	06	60	96	1798	38	00	66	80	1809	32	1577	43	88	16	16
48	0	62	50	43	45	86	1502	66	19	40	06	60	96	98	1566	16	1717	80	09	1898	77	43	1594	16	16
53	0	62	50	43	45	91	27	66	34	93	06	80	43	98	66	16	17	80	09	98	77	76	94	16	16
58	0	62	50	43	45	91	27	66	65	2231	06	80	43	98	66	16	17	80	09	98	77	76	94	16	1487
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		82·4	82·5	82·4	82·2	82·0	82·0	82·3	82·5	83·2	83·8	84·2	84·5	84·7	85·0	84·9	84·7	84·3	84·3	84·3	84·0	83·5	83·4	83·0	83·0

INDUCTION INCLINOMETER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1625	1625	1620	1620	1616	1620	1627	1627	1620	1609	1601	1610	1616	1624	1622	1615	1611	1616	1620	1620	1620	1623	1626	1624
5	20	24	25	20	20	16	20	27	27	20	09	04	10	16	24	20	15	11	16	20	20	21	23	26	23
10	20	24	25	20	20	16	21	28	27	19	06	04	10	17	23	20	13	11	15	20	20	22	23	26	23
15	20	24	25	20	20	18	21	28	28	19	04	04	11	19	23	20	13	12	15	19	20	22	24	25	23
20	20	24	25	20	20	20	21	28	28	16	03	06	11	20	23	20	12	13	17	19	21	22	24	25	23
25	20	25	23	20	20	20	22	28	27	14	02	07	12	20	23	20	11	13	18	19	21	22	24	25	23
30	20	25	23	20	20	20	22	29	24	13	00	08	12	20	24	20	10	13	20	20	21	23	24	25	23
35	20	25	23	20	17	19	22	29	23	12	00	08	12	20	24	20	10	13	20	20	20	24	24	25	23
40	20	25	23	20	16	19	22	29	22	11	00	09	14	21	24	20	10	13	21	19	20	23	25	26	23
45	20	25	22	20	16	19	23	29	21	09	00	10	14	22	25	19	11	14	21	20	19	22	25	26	25
50	20	25	22	20	16	20	26	28	21	09	00	10	15	22	25	18	11	14	20	20	18	22	25	26	27
55	20	25	20	20	16	20	26	27	20	09	00	10	15	23	22	16	11	14	20	20	20	23	26	25	25
Faht.....		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer.		81·5	81·5	81·2	81·0	80·1	81·0	82·3	83·0	84·0	84·9	85·2	85·8	85·9	85·8	85·4	84·7	83·7	83·6	83·2	82·8	82·3	82·3	82·0	82·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..		In. 0·990	In. 0·978	In. 0·984	In. 0·990	In. 1·020	In. 1·048	In. 1·070	In. 1·079	In. 1·066	In. 1·034	In. 1·004	In. 0 976	In. 0·946	In. 0·926	In. 0 918	In. 0·909	In. 0.926	In. 0·944	In. 0·972	In. 0·974	In. 0·964	In. 0·962	In. 0·935	In. 0·930
Attached Thermometer.....		78·0	77·5	76·5	76·0	76·0	77·0	79·5	81·5	83·0	84·0	85·0	86·0	86·0	85·5	85·0	83·0	82·5	82·5	82·0	81·0	80·0	79·0	78·5	78·5
Dry Thermometer (standard).....		77·0	76·3	75·3	75·4	75·5	78·6	82·9	86·0	88·3	89·3	90·2	90·7	90·4	89·6	88·3	85·5	83·2	82·1	81·5	80·6	79·4	78·5	77·6	77·4
Wet do.....		74·0	73·0	73·2	72·4	73·0	75·0	75·0	75·1	77·0	77·2	78·0	77·8	77·0	75·2	77·0	76·2	77·0	76·5	76·1	75·2	75·2	75·0	74·4	74·2
Cloudy sky in 8ths.....		3	4	4	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind. Force....lbs.....		0·00	·00	·00	·00	·00	·00	·05	·10	·12	·20	·27	·30	·32	·30	·20	·22	·10	·02	·02	·00	·00	·00	·02	·00
Wind. Direction °		270	270	270	270	180	225	225	169	146	135	135	135	135	135	146	146	146	146	157	157	180	180	191	180
REMARKS ON THE WEATHER.		cu, cir-hz.....	do.....	do.....	do.....	ny-clear.....	clear.....	sc-cu, cir.....	cir-hz.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....	clear.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 23RD APRIL 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time		Wednesday, 23rd April 1851.													Thursday, 24th April 1851.									
		p.m. 10	11	12	13	14	15	16	17	18	10	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1650	1650	1647	1645	1663	1662	1656	1648	1630	1632	1630	1636	1641	1640	1646	1648	1648	1642	1638	1640	1640	1641	1640	1645
5	0	50	50	45	47	63	62	56	48	31	32	31	36	41	40	46	49	46	42	38	40	40	41	41	45
10	0	50	50	45	48	65	60	58	47	30	32	31	36	40	40	47	50	43	42	37	40	40	40	43	45
15	0	60	50	45	50	65	60	55	44	30	30	32	36	40	40	48	50	41	41	37	40	41	40	45	46
20	0	50	50	43	50	63	61	55	44	32	30	35	36	40	40	48	50	40	†	37	40	42	40	46	46
25	0	50	50	43	52	63	60	54	40	32	30	33	36	40	*	48	50	39	40	37	40	43	40	47	47
30	0	50	50	43	55	64	58	53	40	30	30	38	37	40	40	47	50	39	40	37	40	42	40	47	47
35	0	50	50	43	57	62	58	52	39	32	28	38	37	40	42	47	50	39	40	38	40	42	40	49	46
40	0	50	50	45	59	62	58	50	38	33	28	38	40	40	42	47	50	39	40	38	40	41	39	48	46
45	0	50	50	45	60	62	57	48	36	34	28	36	40	40	44	46	50	39	39	39	40	40	39	48	44
50	0	50	47	47	60	62	56	48	33	34	29	36	40	40	40	46	52	40	38	38	40	40	38	46	43
55	0	50	47	47	62	62	55	48	31	32	29	36	40	40	48	47	50	40	38	39	40	40	38	45	43

HORIZONTAL FORCE.

2	0	1433	1445	1470	1475	1440	1392	1332	1302	1250	1340	1365	1460	1450	1460	1460	1473	1490	1520	1520	1529	1526	1503	1500	1491
7	0	32	45	72	73	36	85	42	1298	70	50	90	65	60	64	60	77	90	21	20	29	26	03	1499	90
12	0	30	47	72	73	30	75	48	97	92	70	1404	50	50	69	59	80	92	24	20	29	27	00	97	90
17	0	30	50	75	70	25	68	32	89	1320	70	20	56	48	71	57	82	92	31	21	29	21	00	97	90
22	0	30	55	75	70	23	62	28	92	42	80	48	50	50	73	58	85	93	†	21	29	17	00	97	90
27	0	30	57	77	70	20	35	18	89	50	70	52	60	50	*	59	88	97	27	22	29	09	00	97	90
32	0	30	60	75	68	16	10	27	62	40	80	62	40	50	70	60	87	97	21	26	27	10	1497	95	91
37	0	30	60	75	65	12	03	17	80	50	75	70	40	49	68	60	85	98	20	27	27	10	1505	96	91
42	0	33	66	75	63	15	02	15	87	50	70	70	50	48	65	64	83	1500	20	28	26	09	05	96	91
47	0	38	70	77	60	12	12	1293	70	40	70	62	50	53	66	67	83	02	20	29	27	06	07	95	87
52	0	40	70	77	56	05	17	89	70	30	52	75	50	60	64	70	83	03	21	31	27	05	08	90	85
57	0	42	70	75	50	1398	20	1300	50	30	50	70	50	60	62	71	86	10	20	30	27	05	09	88	84
Faht...																									
Attached Thermometer...		87°0	87°0	87°0	87°0	87°1	87°1	87°3	87°7	88°3	88°9	89°2	89°4	89°4	89°3	89°2	89°0	89°0	89°0	89°0	89°0	88°9	88°7	88°7	88°5

VERTICAL FORCE.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	768	760	735	671	707	804	980	1115	1274	966	1005	765	754	870	852	802	759	758	680	694	660	577	609	616
8	0	768	760	735	671	707	804	980	02	74	966	1005	765	754	870	852	802	759	758	680	694	660	577	609	616
13	0	768	760	735	671	707	820	1004	02	1187	941	952	772	754	870	852	802	759	758	680	694	660	577	609	616
18	0	738	760	735	671	707	850	41	02	87	941	952	772	754	870	852	802	759	767	680	704	591	577	609	616
23	0	738	760	735	671	707	874	65	1092	1057	891	952	772	754	870	852	802	759	†	678	704	591	577	609	644
28	0	738	760	735	671	707	912	60	92	1248	891	913	772	784	*	852	802	726	724	678	704	586	577	609	644
33	0	738	760	735	671	728	918	71	1129	1246	891	913	661	784	870	852	802	726	697	678	686	586	577	609	644
38	0	738	760	735	671	748	957	71	29	1246	860	839	661	784	826	814	802	726	683	703	686	586	577	609	644
43	0	738	760	716	671	748	970	84	09	1246	860	819	661	814	826	814	789	726	681	703	686	586	573	609	644
48	0	738	760	716	671	751	970	1100	37	946	860	819	661	814	826	814	789	726	681	703	686	582	573	609	644
53	0	738	760	716	671	763	959	13	29	946	956	765	702	814	826	814	789	745	681	703	686	582	573	609	644
58	0	738	760	716	694	759	986	24	1240	946	956	765	702	870	852	814	759	745	681	703	686	582	573	609	644
Faht....																									
Attached Thermometer...		87°0	87°0	87°0	86°9	87°0	87°0	87°3	87°7	88°0	88°8	89°1	89°5	89°5	89°5	89°5	89°0	88°7	88°7	88°6	88°5	88°4	88°3	88°3	88°1

INDUCTION INCLINOMETER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	sed.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1638	1640	1638	1638	1650	1650	1646	1642	1630	1630	1629	1633	1638	1632	1638	1635	1632	1633	1628	1629	1630	1630	1629	1632
5	20	38	40	36	39	50	50	46	41	30	30	30	33	38	32	38	37	32	33	28	29	30	30	30	32
10	20	38	40	36	40	50	48	48	40	30	30	30	33	38	32	38	38	31	33	27	29	30	30	31	31
15	20	38	40	35	42	50	48	46	38	30	29	30	33	35	32	39	38	30	32	27	29	30	30	32	31
20	20	38	40	32	44	50	49	47	39	31	28	32	32	35	32	39	38	30	†	27	29	31	30	32	31
25	20	39	40	32	44	50	49	46	36	30	28	32	32	35	*	38	38	29	31	27	29	32	30	33	32
30	20	39	40	32	46	50	48	44	37	30	28	34	33	35	33	37	38	29	31	27	30	31	30	33	32
35	20	40	40	32	47	50	48	43	38	31	26	34	33	34	34	37	37	29	31	28	30	31	30	35	32
40	20	40	40	35	49	50	47	43	38	31	26	32	33	33	34	36	36	29	30	28	30	30	28	34	32
45	20	40	40	35	50	50	46	42	34	32	26	32	34	33	35	34	35	29	30	28	30	30	28	34	31
50	20	40	38	37	50	49	45	41	32	32	28	32	36	33	37	33	34	30	29	27	30	30	28	32	30
55	20	40	38	38	50	49	46	42	30	30	28	32	36	33	38	34	34	30	29	28	30	30	28	32	30
Faht...																									
Attached Thermometer...		86°0	86°0	86°0	86°0	86°0	86°7	87°6	88°3	89°3	90°2	90°5	90°6	90°2	90°0	89°3	88°6	88°0	88°2	88°1	87°9	87°4	87°4	87°4	87°1

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ...		In. 0·838	In. 0·842	In. 0·858	In. 0·870	In. 0·890	In. 0·930	In. 0·934	In. 0·933	In. 0·916	In. 0·890	In. 0·862	In. 0·832	In. 0·810	In. 0·796	In. 0·788	In. 0·802	In. 0·812	In. 0·840	In. 0·854	In. 0·872	In. 0·879	In. 0·870	In. 0·862	In. 0·842
Attached Thermometer.....		83°0	83°0	82°5	83°0	83°0	84°0	85°5	87°0	88°5	88°5	89°0	89°0	89°0	89°0	88°0	87°0	86°0	86°5	86°0	85°5	85°5	85°0	85°0	84°0
Dry Thermometer (standard).....		83·0	83·0	83·0	83·0	84·1	87·5	90·5	94·0	96·2	95·8	96·2	95·4	94·3	93·5	92·4	90·0	87·8	86·9	86·3	86 0	85·8	85·3	84·9	84·2
Wet Do.		79·5	79·6	79·8	79·8	80·3	80·2	80·2	81·2	83·0	82·8	82·8	82·2	81·4	81·2	81·0	80·1	79·0	80·1	80·8	80·6	80·7	81·0	81·3	79·8
Cloudy sky in 8ths.....		6	4	2	3	3	3	4	3	3	2	2	1	1	2	3	3	3	2	3	3	3	4	2	2
Wind: Force...lbs.....		0·02	·05	·07	·07	·25	·70	·85	·50	·75	·80	·75	1·20	1·05	0·55	·65	·60	·27	·20	·17	·20	·20	·15	·12	·05
Wind: Directions.....°		202	202	191	202	191	191	202	225	146	146	146	146	146	146	146	146	146	157	169	169	169	191	191	191
REMARKS ON THE WEATHER.		fl-cu, cir-haze.....	cir, cir-haze.....	do.	cu, cir-cum.....	do.	cum, haze.....	cu, cir-hz.....	do.	do.	cu. hz.....	cir, cir-hz.....	do.	do.	cir-str, cir-hz.....	do.	do.	sc-cu, cir-str.....	lt-cu, cir-hz.	cir-haze, lg. E.	lt-cu, cir-hz.....	lt-cu, cir-hz, sh-lg. N	cu, cir-hz.....	do.	cu-hor.....

* The observer went to shift the Anemometer Board.
† do to observe the Flash of the Evening Gun.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 30TH MAY 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.			Friday, 30th May, 1851.													Saturday, 31st May, 1851.									
			p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	*m.*	*s*																								
	0	0	scd. 1639	scd. 1631	scd. 1630	scd. 1629	scd. 1644	scd. 1653	scd. 1659	scd. 1652	scd. 1630	scd. 1610	scd. 1601	scd. 1608	scd. 1619	sc d. 1630	scd. 1630	scd. 1627	scd. 1624	scd. 1612	scd. 1620	scd. 1622	scd. 1625	scd. 1628	scd. 1629	scd. 1630
	5	0	39	32	31	29	48	55	59	52	29	10	02	08	20	31	30	28	26	12	20	22	25	28	29	30
	10	0	39	31	31	30	48	57	59	51	28	10	02	10	20	30	30	28	26	11	20	22	25	28	29	30
	15	0	38	31	30	30	49	58	59	49	25	10	02	10	20	30	31	28	20	11	20	22	25	28	30	30
	20	0	38	31	30	32	49	58	58	48	21	10	02	12	20	30	30	29	20	12	21	22	27	28	30	30
	25	0	37	33	29	34	49	59	57	48	21	09	02	12	22	30	30	28	20	12	21	23	28	28	30	30
	30	0	37	31	30	96	50	59	58	48	20	08	03	12	22	30	29	29	19	13	22	23	28	28	30	30
	35	0	33	31	29	38	51	59	58	43	18	05	03	15	22	31	30	28	18	15	22	23	28	28	30	30
	40	0	33	30	30	39	51	59	57	40	15	02	05	16	23	30	29	29	16	16	22	24	28	28	30	30
	45	0	32	29	31	40	51	60	56	40	13	02	06	17	26	30	28	29	15	18	22	24	28	28	39	30
	50	0	31	30	28	41	52	59	55	32	10	01	07	18	27	30	27	26	14	18	22	24	28	28	30	30
	55	0	31	30	28	40	53	59	54	31	10	01	08	19	28	30	28	24	12	19	22	25	28	28	30	30
HORIZONTAL FORCE.																										
	2	0	1354	1348	1342	1342	1332	1330	1260	1239	1198	1200	1210	1280	1320	1356	1370	1360	1360	1363	1368	1370	1370	1372	1370	1370
	7	0	53	46	40	44	30	26	50	36	83	00	13	83	30	50	72	60	60	64	69	70	70	72	70	70
	12	0	54	48	42	48	30	20	48	25	98	00	20	85	30	58	68	64	64	65	69	70	70	72	70	70
	17	0	53	44	42	48	40	15	46	20	94	00	30	85	38	60	68	60	60	65	69	70	70	72	70	70
	22	0	61	46	44	40	41	11	43	18	93	05	33	97	45	60	66	64	60	65	68	70	70	72	70	69
	27	0	61	44	46	40	43	00	40	20	90	05	40	1300	50	60	69	70	62	65	69	70	71	72	70	69
	32	0	52	44	42	40	46	1295	39	18	91	10	47	13	50	64	66	60	60	65	69	70	71	72	70	69
	37	0	52	44	44	38	47	90	38	08	97	10	50	12	52	68	68	60	60	65	70	70	71	72	70	69
	42	0	50	46	48	39	48	82	37	00	95	10	60	17	52	68	64	62	60	65	70	70	71	70	70	69
	47	0	48	42	42	36	47	70	35	00	95	10	66	26	53	66	60	60	60	65	70	70	72	70	70	69
	52	0	48	46	42	34	40	67	36	1198	95	10	70	20	53	70	62	60	60	65	70	70	72	70	70	69
	57	0	48	42	42	32	36	62	37	98	1200	10	75	20	53	72	70	64	61	67	70	70	72	70	70	69
	Faht....																									
	Attached Thermometer...		87·0	87·0	87·0	86·9	87·0	86·9	86·9	87·1	87·3	87·9	88·0	88·3	89·0	89·0	89·0	89 0	89·0	89·0	89·0	89·0	89·0	88·9	88·9	88·9
VERTICAL FORCE.	*m.*	*s.*																								
	3	0	scd 228	scd. 207	scd. 185	scd. 90	scd. 40	scd. 105	scd. −9	scd. 330	scd. 614	scd. 660	scd. 655	scd. 641	scd. 536	scd. 357	scd. 307	scd. 268	scd. 321	scd. 276	scd. 304	scd. 270	scd. 244	scd. 258	scd. 195	scd. 202
	8	0	15	07	85	90	40	−5	43	63	24	60	55	41	36	57	07	68	21	76	04	70	44	58	95	02
	13	0	15	07	41	90	40	−20	74	433	35	24	55	41	36	57	07	68	21	76	04	70	44	58	95	02
	18	0	15	169	41	90	21	−20	83	72	51	24	55	41	485	43	07	68	21	76	04	70	44	58	95	02
	23	0	194	69	41	68	06	−16	102	89	51	24	20	30	85	43	07	68	21	76	04	70	45	17	95	02
	28	0	80	69	41	68	09	−11	23	89	55	24	20	30	85	43	280	68	21	76	04	70	45	17	95	02
	33	0	99	69	41	68	−47	−82	23	89	65	50	20	30	85	43	80	68	21	76	270	70	65	17	95	02
	38	0	76	93	31	60	−70	−51	54	516	69	50	20	10	12	43	80	68	21	76	70	70	58	17	71	02
	43	0	76	93	31	60	−95	−43	83	16	69	50	30	10	12	43	80	68	21	76	70	44	58	17	71	02
	48	0	76	93	31	60	−110	−17	212	84	69	50	30	567	12	43	80	68	276	76	70	44	58	17	71	02
	53	0	92	46	31	40	−105	−9	50	71	67	59	30	67	398	43	80	68	76	76	70	44	58	17	71	02
	58	0	92	46	90	40	−105	−9	85	614	67	59	30	67	98	43	80	68	76	304	70	44	58	17	71	02
	Faht....																									
	Attached Thermometer....		87·0	87·0	87·0	86·8	86·9	86·7	86·8	87·0	87·4	87.7	88·0	88·3	88 7	89·0	89·0	88·8	88·7	88·7	88·5	88·5	88·5	88·3	88·3	88·2
INDUCTION INCLINO-METER.	*m.*	*s.*																								
	0	20	scd. 1638	scd. 1633	scd. 1630	scd. 1628	scd. 1643	scd. 1652	scd. 1658	scd. 1650	scd. 1632	scd. 1618	scd. 1612	scd. 1618	scd. 1630	scd. 1637	scd. 1636	scd. 1630	scd. 1630	scd. 1620	scd. 1624	scd. 1626	scd. 1628	scd. 1630	scd. 1630	scd. 1630
	5	20	38	33	30	29	46	54	58	50	32	17	12	18	30	38	36	30	30	20	24	26	28	30	30	30
	10	20	38	32	30	29	46	55	58	50	31	16	12	19	30	38	35	32	30	20	24	26	28	30	30	30
	15	20	38	31	30	29	47	56	57	49	31	15	12	20	30	37	35	32	23	20	24	26	28	30	30	30
	20	20	38	32	30	33	47	57	57	47	30	15	12	24	30	37	35	33	22	20	24	26	29	30	30	30
	25	20	37	32	30	35	48	57	56	47	29	15	12	25	30	38	36	32	23	21	25	27	29	30	30	30
	30	20	36	31	30	36	49	58	57	47	26	15	13	25	30	38	35	32	20	21	25	27	30	30	30	30
	35	20	34	30	30	37	50	58	57	43	23	13	13	27	30	39	36	30	20	21	25	27	30	30	30	30
	40	20	34	31	30	39	50	57	56	40	23	12	15	28	33	38	37	30	20	22	25	28	30	30	30	30
	45	20	33	30	30	40	50	58	54	39	22	12	16	29	35	38	35	30	20	22	25	28	30	30	30	30
	50	20	32	30	29	40	51	58	53	38	20	12	17	30	35	37	35	30	20	22	25	28	30	30	30	30
	55	20	32	30	29	40	52	58	52	35	18	12	18	30	36	37	36	30	20	23	25	28	30	30	30	30
	Faht...																									
	Attached Thermometer..		86·1	86·1	86·1	85·8	85·9	86·0	86·6	87·2	88·0	88·5	89·0	89·3	90·5	90·7	90·2	89·6	89·0	88·8	88·4	88·1	88·0	88·0	87·7	87·5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..			In. 0·780	In. 0·778	In. 0·780	In. 0·802	In. 0·820	In. 0·840	In. 0·853	In. 0·860	In. 0·848	In. 0·824	In. 0·800	In. 0·772	In. 0·748	In. 0·732	In. 0·734	In. 0·746	In. 0·756	In. 0·772	In. 0·794	In. 0·810	In. 0·824	In. 0·812	In. 0·784	In. 0·764
Attached Thermometer.....			° 84·0	° 84·0	° 83·0	° 83·0	° 83·5	° 84·0	° 85·0	° 85·5	° 87.0	° 89·0	° 90·0	° 91·5	° 92·0	° 92·0	° 91·0	° 89·5	° 88·5	° 87·0	° 86·5	° 86·0	° 85·5	° 85·5	° 85·0	° 84·5
Dry Thermometer (standard).....			83·6	83·5	83·2	83·0	83·7	86·0	89·2	92·2	94.3	95·4	96·9	98·5	100 0	98·7	97·8	96·8	92·0	89·5	88·4	87·6	86·9	86·3	85·6	85·0
Wet Do.....			74·4	75·2	75·2	75·2	76·0	79·9	80·5	79·0	78·0	77·5	77·5	78·0	79·0	80·4	79·4	79·8	81·6	81·0	80·3	80·0	80·0	80·2	80·7	81·0
Cloudy sky in 8ths.....			2	0	3	3	2	6	4	5	4	3	3	3	2	3	4	2	1	1	1	0	0	2	1	0
WIND. Force..lbs.....			0·12	·05	·10	·15	·20	·45	·40	·50	·37	·30	·25	·20	·15	·05	·07	·05	·02	·02	·10	·15	·12	·25	·20	·02
WIND. Directions...			135	146	135	135	146	169	169	180	191	191	202	202	202	22	56	67	79	90	124	135	135	135	146	146
REMARKS ON THE WEATHER			cu, cu-str, hz.....	nearly-clear...	cu, cu-str, cir-hz.....	do.	cu, cu-str, hz.....	cu, cir-cu, cir,cir-str..	do.	do.	do.	cir, cir-hz.....	do.	do.	cu, cir-hz.....	do.	cu, cu-str. cir-hz.. ...	cu-str, cir, cir-hz.	cu-str, hz.....	cu, cir-hz.	cu, cir, sh-lg-S W ...	lt-hz, fqt-sh-lg-S W	ny-clear sh-lg-S W	fl-cu, hz.....	cu, hz.....	nearly clear.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 18TH JUNE 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 18th June 1851.														Thursday, 19th June 1851.									
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1628	1623	1623	1630	1650	1658	1649	1634	1612	1598	1589	1580	1581	1594	1612	1622	1635	1622	1622	1622	1620	1620	1624	1628
5 0	28	23	23	30	50	59	45	32	10	96	89	80	81	94	13	22	35	21	22	22	20	20	25	29
10 0	29	23	24	30	48	59	42	30	10	95	87	80	83	95	14	22	34	20	22	22	20	20	25	30
15 0	28	23	24	33	50	58	43	28	09	94	85	80	85	96	16	22	34	20	22	21	20	20	25	30
20 0	28	23	25	35	52	58	47	29	08	93	84	80	88	96	19	23	34	19	23	20	20	20	27	29
25 0	29	23	25	37	55	57	49	29	06	91	83	80	88	*	20	23	34	21	24	20	21	20	27	27
30 0	30	24	25	37	55	55	47	26	04	90	82	80	89	1600	21	24	33	21	25	20	21	20	27	27
35 0	29	24	25	39	56	53	45	23	01	90	81	80	89	04	21	24	32	22	24	21	20	22	27	27
40 0	28	24	27	40	57	53	43	22	01	90	80	81	91	07	20	25	29	22	24	22	20	22	28	27
45 0	26	24	27	43	56	53	41	21	00	90	80	81	92	08	19	25	26	22	23	22	20	24	28	27
50 0	25	23	27	47	57	52	38	18	00	90	80	81	93	09	19	25	24	21	23	20	20	24	28	27
55 0	25	23	28	49	57	50	38	17	1599	90	80	81	94	11	19	25	23	20	22	20	20	24	28	27

HORIZONTAL FORCE.

2 0	1400	1410	1416	1410	1388	1352	1300	1244	1199	1188	1218	1270	1319	1391	1448	1461	1463	1462	1470	1462	1460	1453	1455	1450
7 0	04	10	16	07	86	45	1293	40	86	86	19	72	19	94	49	61	62	62	72	62	60	53	55	50
12 0	08	12	16	06	81	44	85	37	88	87	22	74	22	96	49	62	62	66	75	60	60	53	54	50
17 0	02	12	16	02	79	40	82	40	88	89	27	77	30	98	50	62	62	67	77	58	60	53	54	50
22 0	08	12	16	00	79	38	80	31	88	90	30	81	40	1403	52	62	61	70	73	54	60	50	54	50
27 0	00	12	15	1397	74	34	78	20	80	93	36	88	47	*	55	63	61	77	70	52	60	50	53	50
32 0	1398	13	15	96	69	30	76	17	80	95	43	97	51	20	58	64	60	79	68	52	60	52	53	50
37 0	1400	13	15	92	69	29	75	14	80	99	49	1310	62	28	59	64	60	80	64	57	60	52	53	53
42 0	08	14	14	90	69	26	74	17	80	1202	55	10	69	32	59	64	60	78	60	60	60	52	53	53
47 0	10	14	12	85	68	20	72	16	82	07	57	12	78	41	59	64	63	76	60	60	57	55	52	53
52 0	10	16	12	90	65	14	69	08	84	10	60	16	89	42	60	65	63	71	58	60	55	55	52	53
57 0	08	16	12	90	59	10	57	01	88	14	64	19	90	46	61	65	62	70	56	60	55	55	52	53
Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer....	87·8	87·7	87·7	87·5	87·3	87·2	87·3	87·6	88·0	88·1	88·8	89·0	89·4	89·8	89·9	89·8	89·7	89·7	89·7	89·6	89·5	89·3	89·2	89·0

VERTICAL FORCE.

m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	
3 0	0271	0271	0274	0193	0221	0200	0267	0314	0537	0664	0976	1121	1029	
8 0	271	271	274	193	221	200	267	314	537	664	976	21	29	
13 0	271	271	274	193	221	200	267	314	567	664	976	21	29	
18 0	271	271	274	190	229	213	267	330	567	790	1021	21	0971	
23 0	296	271	274	145	229	213	267	363	585	790	21	21	971	
28 0	296	271	260	145	221	213	267	385	585	790	21	21	930	
33 0	296	271	260	146	221	213	280	385	585	790	21	21	930	
38 0	296	271	260	146	221	247	280	415	585	903	21	21	891	
43 0	271	271	260	167	216	247	280	473	585	903	21	1051	891	
48 0	271	271	234	167	216	247	280	491	664	941	21	51	863	
53 0	271	271	234	167	200	247	290	528	664	941	77	51	863	
58 0	271	271	234	167	200	247	290	528	664	941	77	51	834	
Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	
Attached Thermometer...	87·4	87·4	87·4	87·2	87·0	86·9	87·3	87·6	88·0	88·2	88·5	89·0	89·5	

One of the Micrometers wire broken.

INDUCTION INCLINOMETER.

m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 20	1632	1630	1630	1638	1650	1658	1649	1640	1624	1611	1604	1600	1601	1614	1626	1630	1633	1626	1627	1628	1627	1630	1630	1633
5 20	32	30	30	38	50	59	45	39	23	11	03	00	01	14	26	30	33	25	27	28	27	30	31	33
10 20	32	30	30	39	50	59	43	38	22	11	02	00	04	14	27	30	32	25	27	28	27	30	31	33
15 20	32	30	30	41	52	58	44	37	22	10	01	00	05	15	28	30	32	25	28	27	27	30	33	33
20 20	32	30	31	43	53	57	46	36	20	10	01	01	08	15	29	31	32	25	29	27	27	30	33	33
25 20	34	30	31	43	56	56	47	36	18	09	01	01	08	*	30	31	32	27	29	27	27	30	33	30
30 20	34	30	31	43	57	55	45	35	18	09	01	01	08	18	31	32	31	27	30	27	27	30	33	30
35 20	33	30	32	45	58	54	44	33	15	09	00	01	09	21	31	32	30	27	30	27	27	30	33	30
40 20	31	30	34	47	58	54	43	32	15	09	00	01	10	22	30	33	28	27	30	28	27	30	33	30
45 20	30	30	34	48	58	53	43	32	13	08	00	01	12	22	29	33	28	26	29	28	28	30	33	30
50 20	30	30	34	50	58	51	42	29	13	08	00	01	13	23	29	33	27	26	29	27	28	30	33	30
55 20	30	30	35	50	58	49	43	26	12	06	00	01	13	25	29	33	26	25	28	27	29	30	33	30
Faht.....	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer.	86·6	86·6	86·6	86·2	87·2	86·9	87·3	88·0	88·6	89·1	90·0	90·8	91·0	91·4	91·0	89·7	89·2	88·8	88·8	88·7	88·3	88·0	88·0	88·0

METEOROLOGICAL OBSERVATIONS.

Baromcter (uncorrected) = 29·0 + ..	In. 0·888	In. 0·890	In. 0·899	In. 0·914	In. 0·934	In. 0·954	In. 0·968	In. 0·969	In. 0·970	In. 0·962	In. 0·934	In. 0·906	In. 0·886	In. 0·871	In. 0·860	In. 0·865	In. 0.872	In. 0·892	In. 0·904	In. 0·921	In. 0·931	In. 0·924	In. 0·908	In. 0·880
Attached Thermometer.....	° 84·5	° 84·0	° 84·0	° 83·5	° 84·0	° 84·5	° 85·0	° 86·0	° 87·0	° 88·5	° 89·0	° 90·0	° 90·0	° 92·0	° 91·0	° 89·5	° 87·5	° 87·0	° 86·0	° 85·5	° 85·5	° 85·5	° 85·5	° 85·5
Dry Thermometer (standard).....	84·5	84·0	83·8	83·3	84·9	88·7	91·0	93·0	94·4	95·5	97·4	99·0	1006	1011	97·9	92·7	90·2	89·5	87·7	87·3	86·9	86·8	86·8	86·0
Wet do.....	75·8	74·2	74·2	74·0	74·6	75·7	76·3	76·2	77·0	77·0	77·8	78·4	79·0	78·6	80·0	80·6	80·0	80·5	80·7	80·7	81·5	80·5	80·3	79·8
Cloudy sky in 8ths.....	4	4	3	2	2	2	1	1	2	3	3	3	4	4	4	3	3	5	2	5	7	7	8	6
Wind. Force....lbs.....	·05	·05	·10	·07	·07	·10	·25	·20	·35	·37	·20	·15	·17	·07	·10	·12	·05	·05	·05	·07	·07	·10	·02	·00
Wind. Direction °	247	247	247	270	247	270	247	259	270	270	259	259	259	304	135	135	146	157	169	169	191	191	191	202
REMARKS ON THE WEATHER.	cu, cu-str,hz,hl, around the ☽	cu, cu-str, cir-hz, do.	cu, cu-str, cir-hz.....	cir, cu-hz, cir-str.....	cu, cir-hz.....	cu, cir, cir-str, hz.....	cir, cir-str, hz.....	do.....	do.....	cir, cir-str, cir-hz.....	cu, cir, cir-str, hz.....	sc-cu, cu-str, cir-hz..	cu, cu-str, cir-haze...	sc-cu, cu-str,cir-str...	cu, cu-str, cir-str.....	cu, cir, cir-str.....	cu, cir-str.....	cu, cir-haze.....	cu-hor, passing shower	cu, cir-hz, Nim.....	do.....	cu, cir-haze.....	overcast.....	cu, cir-haze.....

* Went to Anemometer.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 23D JULY 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 23d July, 1851.														Thursday, 24th July, 1851.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1650	1650	1650	1659	1680	1678	1670	1654	1636	1630	1620	1629	1640	1643	1646	1643	1640	1639	1638	1642	1643	1648	1653	1659
5	0	50	50	52	60	80	77	69	54	36	29	21	30	40	43	44	45	40	39	38	42	43	48	53	59
10	0	50	50	52	60	80	76	68	53	32	24	20	30	40	45	43	45	40	39	38	42	43	48	54	59
15	0	50	50	53	62	78	76	65	52	31	22	21	30	41	46	41	45	40	39	39	42	44	48	55	59
20	0	50	50	53	65	77	76	62	49	32	21	20	32	41	47	40	45	39	40	38	42	44	49	55	58
25	0	50	50	53	67	77	77	61	49	32	21	21	32	42	47	40	44	37	40	38	42	44	50	56	56
30	0	50	50	53	68	76	76	60	48	31	20	21	33	42	47	41	44	37	39	38	42	45	50	58	56
35	0	50	50	54	68	76	75	60	46	30	23	21	33	41	47	42	44	37	39	38	42	46	50	58	55
40	0	50	50	54	70	76	72	59	42	29	24	22	34	42	48	42	44	37	39	39	42	47	51	58	54
45	0	50	50	55	73	75	70	58	40	30	22	21	36	43	48	43	43	37	39	40	42	48	51	58	53
50	0	50	50	57	75	76	70	58	40	31	22	21	38	42	48	43	42	38	39	41	43	48	52	59	53
55	0	50	50	57	77	77	69	57	38	28	20	24	38	42	48	43	41	38	38	41	43	48	53	59	52

HORIZONTAL FORCE.

2	0	1270	1280	1275	1270	1242	1219	1221	1148	1122	1120	1156	1178	1240	1266	1295	1307	1305	1318	1306	1310	1312	1298	1292	1280
7	0	70	80	75	70	44	17	10	44	26	24	58	79	42	67	92	10	04	18	06	10	11	98	91	80
12	0	73	80	75	70	44	12	09	40	18	32	60	86	50	69	90	12	07	18	05	10	10	97	90	80
17	0	73	80	75	65	42	09	1192	35	12	34	60	92	52	70	87	10	10	18	04	10	07	96	90	80
22	0	75	80	73	62	42	06	79	32	08	32	62	1200	54	75	82	10	10	16	06	10	04	95	88	80
27	0	75	80	73	62	40	03	70	31	00	38	64	04	58	78	85	10	10	15	07	07	01	94	86	80
32	0	75	77	73	58	39	02	60	29	1098	40	66	08	60	89	88	10	10	13	07	07	02	93	85	80
37	0	75	77	70	58	37	00	52	28	1110	42	67	14	56	80	90	10	10	12	09	06	01	93	82	80
42	0	75	77	70	53	35	00	59	26	14	46	58	20	52	84	90	10	12	11	10	09	00	93	82	80
47	0	77	77	70	50	32	00	60	24	10	48	60	24	54	89	96	07	12	10	10	09	00	92	82	80
52	0	77	75	70	46	29	19	55	20	16	50	69	29	58	91	1300	05	17	10	10	10	00	92	82	80
57	0	80	75	70	43	20	19	49	24	18	52	74	30	60	95	06	02	18	09	10	10	1299	92	81	80
Faht.....																									
Attached Thermometer...		84·0	84·0	84·0	84·0	84·0	83·9	84·0	84·2	84·6	84·7	85·1	85·2	85·6	85·8	85·8	85·7	85·7	85·7	85·7	85·7	85·6	85·1	85·0	85·0

VERTICAL FORCE.

m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	4937	4999	4950	4879	4894	5019	5319	5570	5700	5632	5310	5284	5332	5349	5337	5305	5135	5198	5002	5026	4940	4897	4902	4920
8	0	37	99	50	79	94	61	19	70	00	32	10	84	32	49	37	05	35	98	02	26	40	97	02	20
13	0	37	99	50	79	94	93	40	70	5679	32	10	84	32	49	5276	05	35	98	02	26	40	97	02	20
18	0	37	99	25	79	94	3113	40	86	83	32	5293	84	82	49	76	05	35	67	02	26	45	97	02	20
23	0	87	77	25	79	94	18	69	5600	83	5485	93	51	82	49	5195	05	66	67	02	07	45	97	02	20
28	0	87	77	25	79	94	44	80	00	96	85	93	51	82	49	95	5261	66	67	06	07	27	97	02	20
33	0	87	77	25	60	4914	44	5426	00	96	85	56	51	82	49	95	61	21	5080	06	07	27	97	02	20
38	0	87	77	16	60	14	53	77	00	96	35	56	51	03	49	5255	61	21	80	06	07	27	98	02	20
43	0	87	77	16	60	58	53	77	00	96	35	56	79	03	92	55	61	51	80	15	4964	27	98	02	20
48	0	87	77	16	60	78	44	5541	5700	92	5365	5300	79	03	92	55	5171	51	80	15	64	27	98	02	20
53	0	87	77	16	60	78	93	36	00	92	65	00	79	03	92	90	71	51	18	15	44	4897	98	02	20
58	0	87	77	16	60	93	5255	40	00	92	65	00	79	03	92	90	71	51	18	15	44	97	4902	20	20
Faht.....																									
Attached Thermometer...		84·0	84·0	84·0	84·0	83·9	83·6	84·0	84·1	84·4	84·5	84·8	85·0	85·3	85·5	85·6	85·5	85·5	85·5	85·5	85·4	85·3	84·8	84·6	84·5

INDUCTION INCLINO-METER.

m.	s.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1630	1635	1635	1640	1653	1652	1647	1634	1620	1614	1610	1618	1628	1630	1632	1630	1626	1624	1622	1629	1630	1632	1645	1640
5	20	32	35	36	40	53	51	46	34	21	14	10	19	29	30	30	31	26	24	22	29	30	32	43	40
10	20	32	35	36	40	53	50	44	33	20	12	11	19	30	31	30	32	26	24	22	29	30	32	43	40
15	20	33	35	38	40	51	50	42	32	20	11	11	20	30	32	30	32	26	25	23	29	31	32	42	40
20	20	33	35	38	43	50	50	40	30	20	11	11	22	30	33	29	32	23	26	22	29	31	33	40	40
25	20	34	35	38	43	49	50	39	30	20	11	11	22	31	33	29	31	21	26	22	29	31	33	40	40
30	20	34	35	40	45	49	50	39	30	19	12	11	22	32	33	30	30	21	24	22	29	31	33	40	40
35	20	34	35	40	47	49	49	39	27	18	14	10	24	32	33	30	30	21	24	23	29	31	36	40	39
40	20	34	35	40	49	49	47	39	24	18	14	12	25	31	33	30	30	21	24	24	29	32	39	40	39
45	20	34	35	40	50	48	45	38	22	18	13	12	26	32	33	30	29	21	24	26	29	32	44	40	39
50	20	35	35	40	53	49	46	37	22	19	10	11	27	31	33	30	28	22	24	27	30	32	46	40	38
55	20	35	35	40	53	50	46	37	20	16	10	16	26	31	33	30	27	22	23	27	30	32	47	40	38
Faht.....																									
Attached Thermometer....		83·0	83·0	83·0	83·0	83·0	82·9	83·0	84·0	84·6	85·0	85·6	85·9	86·4	86·7	86·2	85·8	85·4	85·3	85·0	84·8	84·6	84·0	83·9	83·8

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 +...		In. 0·840	In. 0·836	In. 0·846	In. 0·864	In. 0·884	In. 0·899	In. 0·920	In. 0·925	In. 0·914	In. 0·890	In. 0·876	In. 0·856	In. 0·840	In. 0·828	In. 0·832	In. 0·847	In. 0·861	In. 0·880	In. 0·893	In. 0·903	In. 0·909	In. 0·886	In. 0·862	In. 0·846
Attached Thermometer.....		80·5	80·0	80·0	80·0	80·0	80·0	81·0	82·0	82·5	83·5	85·0	86·0	87·0	87·0	87·0	86·5	84·5	83·5	83·0	83·0	82·5	81·5	81·0	80·5
Dry Thermometer (standard).....		80·0	79·6	79·5	79·3	79·8	81·1	85·5	87·5	89·5	91·6	91·8	92·5	94·0	93·6	91·7	89·5	85·7	85·3	84·6	83·4	82·3	81·0	80·4	80·3
Wet do.....		74·0	74·0	73·5	73·0	73·2	74·6	76·0	76·2	76·8	78·8	76·4	77·4	78·2	79·0	78·3	79·7	80·3	78·9	78·9	78·0	76·9	76·4	76·0	76·0
Cloudy sky in 8ths.....		7	7	7	5	7	5	4	7	7	6	6	6	7	8	7	7	6	4	5	6	7	6	4	4
Wind. Force.....lb..		·10	·02	·02	·07	·05	·05	·05	·07	·05	·10	·60	·35	·15	·07	·02	·00	·00	·00	·02	·00	·00	·00	·02	·02
Wind. Direction °		270	247	247	247	247	247	259	259	270	236	270	270	270	270	315	67	146	157	157	191	202	191	225	225
REMARKS ON THE WEATHER.		nearly-clear.....	nearly-clear.....	nearly-clear.....	cu, cir, cir-haze.....	cir, cu, cir-haze.....	cu, cu-str, cir-haze.....	do.....	nearly-overcast..	do.....	cu, cu-str, cir-haze.....	cu, cu-str, cir, cir-hz. .	do do.....	sc-cu, cu-stra, do.....	cu, cir-haze	do...	cir, cir-haze, cir-cum...	cir, cir-haze, cum..	cum, dense-haze, lg-SW	do lg-S W.....	do do do	do do do.....	cu, cu-str, d-haze	cu, cir, cir-str, haze.....	cu, cu-str, haze... .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 29TH AUGUST 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 29th August, 1851.													Saturday, 30th August, 1851.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1633	1640	1647	1645	1680	1696	1680	1664	1639	1620	1610	1599	1609	1632	1644	1650	1645	1640	1645	1642	1650	1638	1642	1647
5	0	34	41	49	47	86	95	81	61	39	19	11	99	09	33	45	50	44	40	45	42	49	40	42	46
10	0	36	42	49	49	90	95	78	62	33	16	11	99	09	34	43	50	45	40	45	42	48	40	43	50
15	0	38	43	49	51	88	94	73	60	33	13	11	1600	11	35	42	48	45	40	45	44	47	41	45	51
20	0	40	43	49	54	87	93	71	59	30	12	10	00	15	38	44	47	42	*	46	44	40	40	46	51
25	0	38	45	50	57	88	92	69	57	29	13	07	00	19	38	45	47	41	41	47	46	38	38	44	51
30	0	36	47	50	60	89	91	72	52	28	12	05	00	21	38	47	47	39	42	47	45	34	41	43	51
35	0	35	48	50	65	90	90	70	51	28	12	04	02	25	39	49	47	38	43	45	45	32	42	46	50
40	0	38	48	50	68	94	89	68	50	28	11	02	02	28	40	50	47	38	44	44	46	31	41	47	50
45	0	39	48	48	73	94	87	68	46	25	11	02	02	29	41	51	48	38	44	43	47	34	42	46	51
50	0	40	48	47	77	94	86	67	45	21	10	01	05	30	42	52	48	39	44	42	48	36	41	45	52
55	0	40	48	45	78	94	84	67	44	19	10	00	07	30	42	50	47	40	44	42	49	38	43	44	52

HORIZONTAL FORCE.

2	0	1305	1285	1330	1310	1312	1303	1254	1212	1133	1125	1104	1150	1260	1319	1320	1330	1327	1340	1379	1381	1395	1356	1374	1392
7	0	05	80	30	08	17	08	50	02	47	30	09	57	69	22	19	20	21	41	81	81	96	50	77	94
12	0	05	80	30	04	20	02	54	1187	39	30	14	62	77	25	20	20	28	43	81	80	91	60	79	1400
17	0	05	88	30	00	25	02	45	71	40	27	17	70	88	17	20	13	30	47	83	91	87	64	73	02
22	0	05	93	30	00	30	00	31	1208	49	22	24	76	94	19	20	08	37	*	86	91	92	60	70	10
27	0	03	1300	25	05	30	00	18	1180	45	20	20	83	1306	20	20	05	39	58	84	92	84	54	67	16
32	0	00	15	20	10	22	03	18	58	35	20	19	96	10	26	20	10	39	60	83	97	82	60	64	12
37	0	00	23	10	15	28	12	18	53	39	21	20	1207	14	30	20	18	30	61	82	1400	80	67	72	15
42	0	1293	28	07	17	31	06	10	59	41	19	22	21	14	28	22	20	30	64	81	1398	60	69	78	18
47	0	90	28	07	14	18	01	1191	39	42	17	27	30	16	30	25	21	31	67	80	1401	40	70	79	10
52	0	87	30	10	10	09	00	1230	37	38	13	30	42	19	32	27	21	34	67	78	05	46	72	77	10
57	0	85	30	10	10	07	1282	13	42	33	10	41	50	22	26	21	22	37	71	78	02	40	74	75	15
Faht....		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		84·5	84·5	84·6	84·7	84·8	84·3	84·3	84·5	84·8	84·9	85·0	85·2	85·4	85·5	85·4	85·2	85·2	85·4	85·5	85·4	85·4	85·4	85·6	85·6

VERTICAL FORCE.

m.	*s.*	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	4852	4747	4928	4565	4897	5087	5311	5720	6153	6309	6256	6324	6161	5804	5168	5165	5189	5140	5211	5095	5072	5017	5026	5043
8	0	52	47	28	65	4982	98	5438	40	53	6275	56	24	61	5740	68	65	89	40	50	95	51	30	26	43
13	0	52	47	28	65	5034	84	5342	5813	83	75	56	24	27	5679	68	65	89	40	07	95	34	63	26	43
18	0	52	47	28	65	34	74	42	5930	83	28	05	24	27	5549	68	17	89	57	5175	5130	4949	87	11	43
23	0	92	4913	4882	4717	4922	86	42	5845	80	28	05	24	27	18	68	17	5210	*	80	30	43	83	11	5187
28	0	92	13	82	17	97	92	5414	5935	80	64	6306	24	6085	5422	68	17	5161	57	71	64	4850	83	4984	87
33	0	92	13	82	17	5076	85	5534	67	80	34	06	24	85	5384	68	5207	61	57	77	66	01	83	84	65
38	0	4768	13	82	4827	5100	70	5448	6000	6206	34	06	47	5998	84	5207	18	72	61	77	50	4773	60	91	65
43	0	68	57	4650	27	5095	61	64	00	06	6185	64	6187	35	84	07	18	72	61	48	28	20	60	91	47
48	0	68	57	50	27	95	5104	5600	94	06	85	64	61	35	28	07	24	52	61	5088	36	79	35	91	47
53	0	68	57	50	27	5183	39	28	94	06	6222	64	61	03	28	07	24	34	36	88	98	4852	35	37	65
58	0	68	57	50	27	37	5244	95	94	06	22	24	61	03	5238	07	24	34	36	99	98	4906	35	37	65
Faht....		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer....		84·5	84·5	84·5	84·5	84·5	84·4	84·4	84·5	84·7	84·9	85·0	85·2	85·4	85·4	85·3	85·2	85·2	85·2	85·2	85·1	85·1	85·3	85·3	85·4

INDUCTION INCLINO-METER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1620	1630	1630	1630	1658	1668	1657	1642	1622	1608	1600	1592	1602	1617	1626	1632	1628	1624	1629	1627	1632	1622	1625	1630
5	20	20	30	32	32	60	68	57	42	21	07	01	92	02	17	26	32	27	24	29	27	31	24	26	30
10	20	23	30	33	35	62	68	54	41	16	03	01	92	02	18	27	32	27	24	29	27	30	25	26	31
15	20	24	30	33	36	61	68	50	41	17	01	01	92	05	20	28	30	27	25	29	28	29	25	28	31
20	20	25	30	33	36	60	68	50	38	15	01	00	92	07	20	28	30	25	*	30	28	22	24	28	32
25	20	25	32	33	38	62	67	48	36	14	02	1597	94	09	20	29	30	23	26	30	29	20	25	27	32
30	20	24	32	33	42	65	67	50	32	14	02	95	94	10	21	29	30	22	27	31	29	18	26	27	31
35	20	23	32	33	46	68	65	49	32	13	02	96	98	12	22	30	30	22	27	29	29	15	26	29	31
40	20	25	33	33	48	68	62	48	30	13	02	95	98	12	23	30	30	22	27	28	30	16	26	29	30
45	20	27	33	32	51	68	61	43	27	11	02	95	98	13	24	32	30	23	28	27	30	20	26	29	30
50	20	28	33	31	52	68	61	46	26	09	00	94	1600	14	26	33	30	24	28	26	31	22	26	28	31
55	20	28	32	30	54	69	60	43	26	07	00	93	01	15	26	33	29	24	28	26	32	22	27	28	32
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer..		83·6	83·6	83·6	83·5	83·3	83·2	83·7	84·2	84·8	85·0	85·2	85·8	86·0	85·0	85·0	84·8	84·7	84·7	84·6	84·6	84·6	84·5	84·3	84·3

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..		In. 0·748	In. 0·760	In. 0·774	In. 0·790	In. 0·798	In. 0·824	In. 0·842	In. 0·848	In. 0·848	In. 0·845	In. 0·822	In. 0·796	In. 0·778	In. 0·775	In. 0·768	In. 0·780	In. 0·804	In. 0·814	In. 0·822	In. 0·854	In. 0·858	In. 0·838	In. 0·824	In. 0·816
Attsched Thermometer.....		° 81·5	° 81·5	° 81·0	° 81·0	° 81·0	° 81·0	° 81·0	° 82·0	° 83·0	° 83·0	° 84·0	° 84·5	° 85·0	° 84·5	° 84·0	° 83·5	° 83·0	° 83·0	° 83·0	° 82·5	° 82·5	° 82·5	° 82·5	° 82·5
Dry Thermometer (standard).....		80·5	80·2	80·4	80·0	79·9	81·1	82·8	85·2	88·0	89·0	90·0	90·7	91·8	86·0	86·0	84·7	83·3	82·8	82·1	82·0	81·1	81·0	79·5	79·2
Wet Do.....		75·8	76·0	76·5	76·0	75·8	75·8	77·2	77·4	79·0	79·0	79·5	79·1	79·0	78·8	79·0	77·7	79·0	77·3	76·1	76·3	76·5	76·2	76·0	76·0
Cloudy sky in 8ths.....		8	8	8	8	8	8	8	8	8	8	7	7	7	8	7	7	7	7	6	8	8	4	7	2
Wind. Force..lbs.....		0·00	·00	·00	·02	·05	·05	·07	·10	·22	·27	·25	·17	·07	·12	·12	·07	·10	·07	·05	·20	·25	·00	·00	·00
Wind. Directions... °		270	202	202	225	236	236	225	225	225	225	247	259	247	236	236	225	225	225	191	225	225	191	191	191
REMARKS ON THE WEATHER		overcast Nim... ...	do.	v-lt-R.....	do.	do.	do.	do.	do.	do.	do.	Nim...	ny-overcast.....	cu, cir-cu, cir-str,cu-str	cu, cu-str,Nim.....	cu,cir-haze, Nim, Rain..	do ...	do ...	do ...	ny-overcast.....	cu, Nim, dense, haze.	overcast.....	overcast, Rain.....	cu, haze.....	ny-overcast...	cu, cir-haze.....

* Went to observe the Gun.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 24TH SEPTEMBER 1851, GOTTINGEN MEAN TIME.

Gottingen Mean Time.			Wednesday, 24th September, 1851.														Thursday, 25th September, 1851.									
			p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
MAGNETICAL OBSERVATIONS.	DECLINATION.	m. s.																								
		0 0	scd. 1640	scd. 1643	scd. 1641	scd. 1650	scd. 1668	scd. 1676	scd. 1654	scd. 1624	scd. 1599	scd. 1578	scd. 1582	scd. 1593	scd. 1612	scd. 1630	scd. 1634	scd. 1636	scd. 1635	scd. 1637	scd. 1638	scd. 1639	scd. 1642	scd. 1643	scd. 1647	scd. 1649
		5 0	40	43	42	52	68	77	50	21	97	73	83	96	12	30	35	36	35	37	39	39	42	44	47	50
		10 0	40	43	42	54	70	74	50	20	96	72	87	98	13	30	35	36	35	37	39	39	42	44	48	49
		15 0	40	43	43	54	70	74	48	19	94	72	88	99	16	30	36	35	35	38	39	39	42	44	49	48
		20 0	40	43	43	57	70	72	41	16	92	72	90	1600	17	31	36	35	35	38	39	40	42	42	49	47
		25 0	40	42	44	58	72	73	40	12	89	72	90	01	18	*	36	35	35	38	39	40	41	41	48	48
		30 0	42	42	44	58	72	71	38	10	88	72	90	02	20	34	36	34	35	38	39	40	41	41	48	49
		35 0	42	42	44	59	73	69	38	09	85	72	91	05	23	34	36	34	37	37	39	40	40	40	49	50
		40 0	42	42	44	61	73	63	32	08	82	75	92	08	24	36	36	34	37	37	39	41	41	42	49	49
		45 0	42	42	46	61	77	61	31	04	82	77	92	09	26	36	36	35	37	37	40	42	42	43	50	49
		50 0	42	41	48	64	78	60	30	02	80	79	92	10	27	34	35	35	37	38	39	42	42	44	49	50
		55 0	42	41	48	66	77	59	28	00	78	80	92	10	28	33	35	35	37	38	38	42	42	45	49	50
	HORIZONTAL FORCE.																									
		2 0	1377	1388	1387	1384	1403	1347	1261	1179	1140	1170	1237	1290	1330	1341	1349	1347	1362	1372	1379	1374	1387	1372	1382	1384
		7 0	77	88	80	87	02	40	48	70	42	78	40	92	32	41	49	47	62	72	79	76	87	72	86	78
		12 0	80	88	76	88	00	30	41	68	42	87	49	94	32	41	48	49	67	74	79	78	87	74	88	70
		17 0	80	88	72	92	00	22	40	61	47	91	51	1300	32	40	48	50	69	76	78	79	88	76	90	74
		22 0	80	90	70	95	1393	10	22	57	48	98	53	02	35	40	48	50	70	77	77	80	90	72	88	79
		27 0	82	90	70	98	89	01	09	50	50	99	60	07	39	*	49	50	70	78	77	89	89	70	82	76
		32 0	82	90	70	1400	82	1298	08	52	53	1200	64	10	40	50	49	47	71	77	77	90	85	75	80	78
		37 0	82	90	73	00	78	90	08	58	56	10	69	11	40	51	49	41	73	77	78	89	86	70	84	70
		42 0	82	92	73	06	71	82	08	48	58	13	72	13	42	50	49	48	71	77	79	87	84	80	87	70
		47 0	85	92	76	10	68	81	1198	49	60	18	77	17	42	50	47	49	70	77	79	85	80	83	88	68
		52 0	85	90	79	08	60	78	90	48	65	22	81	21	44	50	46	53	72	77	74	85	73	90	89	67
		57 0	87	87	82	05	51	68	81	45	69	28	87	24	47	50	42	60	72	79	72	86	71	92	93	62
		Faht....	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
		Attached Thermometer.	86·5	86·6	86·5	86·5	86·5	86·3	86·3	86·6	86·7	86·9	86·9	86·8	86·9	87·0	87·0	87·0	87·0	87·0	87·0	87·0	86·9	86·9	86·8	86·7
	VERTICAL FORCE.	m. s.																								
		3 0	scd. 5650	scd. 5692	scd. 5578	scd. 5592	scd. 5683	scd. 6351	scd. 7558	scd. 8523	scd. 8673	scd. 8387	scd. 7889	scd. 7016	scd. 6233	scd. 6025	scd. 5568	scd. 6138	scd. 6081	scd. 5992	scd. 5943	scd. 5872	scd. 5793	scd. 5641	scd. 5671	scd. 5642
		8 0	50	92	78	92	83	6495	7712	8706	43	31	10	16	33	25	68	38	82	92	43	72	5817	41	71	42
		13 0	50	92	78	92	83	6618	65	44	43	8292	7752	6880	6196	25	68	38	82	89	40	72	01	41	71	42
		18 0	50	92	78	92	5729	6720	7825	98	04	92	7688	6761	96	25	68	38	82	87	40	96	5792	41	71	42
		23 0	77	92	49	92	88	6829	7944	8808	8583	14	26	6675	09	25	6046	38	82	84	40	96	93	19	71	42
		28 0	77	92	49	5656	5868	7061	8050	8788	83	8181	26	28	6062	*	46	38	63	84	18	5913	93	19	07	42
		33 0	5702	92	49	56	5908	7142	8117	50	07	81	7550	6552	62	50	46	38	63	79	18	13	74	19	07	42
		38 0	02	92	49	56	65	7209	70	15	07	09	50	52	62	50	80	21	53	72	18	13	13	19	07	66
		43 0	02	07	15	56	6027	47	8234	8696	8474	8071	7369	6466	62	50	80	21	53	72	5885	13	13	41	73	66
		48 0	02	07	15	56	6123	7314	8311	73	74	24	7285	66	5986	50	80	21	53	74	55	13	13	41	73	66
		53 0	02	07	15	56	6203	7440	78	73	34	7975	7183	6294	86	50	80	21	53	74	69	5872	5641	71	73	66
		58 0	02	07	15	56	54	75	8463	73	34	50	7087	94	86	50	80	21	26	74	69	33	41	71	73	66
		Faht..	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
		Attached Thermometer.....	86·5	86·5	86·5	86·5	86·5	86·4	86·5	86·7	86·7	87·0	87·0	86·7	86·9	87·0	87·0	86·9	86·8	86·8	86·8	86·7	86·6	86·5	86·4	86·3
	INDUCTION INCLINO-METOR.	m. s.																								
		0 20	scd. 1630	scd. 1630	scd, 1630	scd. 1635	scd. 1650	scd. 1652	scd. 1636	scd. 1610	scd. 1589	scd. 1572	scd. 1578	scd. 1589	scd. 1602	scd. 1618	scd. 1621	scd. 1620	scd. 1620	scd. 1622	scd. 1623	scd. 1623	scd. 1627	scd. 1628	scd. 1630	scd. 1630
		5 20	30	30	30	37	50	52	32	09	88	72	79	89	02	18	21	20	20	22	23	23	27	30	30	31
		10 20	30	30	30	38	50	52	30	08	85	72	82	90	03	18	21	20	20	22	23	23	27	29	31	30
		15 20	30	30	30	40	60	52	29	03	84	71	82	92	05	18	21	20	20	23	23	23	27	28	32	29
		20 20	30	30	30	40	50	51	24	02	82	71	82	93	08	19	21	20	20	23	23	24	27	26	32	29
		25 20	30	30	30	41	52	51	21	00	80	70	82	96	09	*	21	20	20	23	23	24	27	26	30	29
		30 20	30	30	30	41	52	49	21	1599	80	70	83	98	10	20	21	20	20	23	23	24	27	26	30	30
		35 20	30	30	30	41	52	48	19	98	80	71	84	99	12	20	21	20	22	22	23	24	26	25	30	30
		40 20	30	30	30	43	52	42	18	96	79	72	85	1600	13	21	21	20	22	22	23	25	26	27	30	30
		45 20	30	30	33	45	53	41	15	93	78	72	86	00	13	22	21	20	22	22	23	26	26	27	30	30
		50 20	30	30	33	47	53	39	13	90	77	73	87	00	14	21	21	20	22	22	25	26	26	29	29	31
		55 20	30	30	33	49	52	38	11	89	75	75	88	00	15	20	21	20	22	22	22	26	27	30	30	30
		Faht..	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
		Attached Thermometer....	85·7	85·7	85·7	85·7	85·6	85·4	86·1	86·6	86·9	87·1	86·4	86·8	87·0	87·1	87·1	86·7	86·5	86·4	86·1	86·0	85·9	85·8	85·7	85·5
METEOROLOGICAL OBSERVATIONS.	Barometer (uncorrected) = 29·0 +...		In. 0·876	In. 0·868	In. 0·880	In. 0·896	In. 0·932	In. 0·956	In 0·972	In 0·970	In. 0·960	In. 0·934	In. 0·906	In. 0·880	In. 0·867	In. 0·864	In. 0·876	In. 0·892	In. 0·917	In. 0·948	In. 0·957	In. 0·970	In. 0·979	In. 0·964	In. 0·936	In. 0·920
	Attached Thermometer.....		° 82·0	° 81·5	° 81·5	° 81·5	° 81·5	° 82·0	° 83·0	° 84·0	° 85·0	° 86·0	° 84·5	° 84·0	° 85·0	° 86·0	° 86·0	° 85·0	° 84·5	° 84·5	° 83·5	° 83·5	° 82·5	° 82·0	° 81·5	° 81·0
	Dry Thermometer (standard).....		81·9	81·7	81·7	81·5	80·9	82·6	86·0	88·2	89·6	91·7	84·6	87·7	90·5	89·6	89·4	86·6	85·3	84·6	83·6	83·0	82·6	82·0	81·6	81·2
	Wet Do.		78·0	77·6	77·7	78·0	76·2	78·2	79·0	79·1	80·0	80·2	78·0	79·1	80·0	79·8	79·7	79·0	78·5	78·4	78·4	78·0	78·0	78·4	78·8	77·8
	Cloudy sky in 8ths.....		3	2	2	6	7	5	3	5	6	7	7	7	7	6	6	6	3	2	2	1	2	1	0	0
	WIND. Force...lbs.....		0·00	·00	·00	·00	·12	·15	·15	·20	·10	·05	·10	·02	·02	·05	·02	·02	·00	·00	·00	·00	·00	·00	·00	·00
	WIND. Directions.....°		67	67	67	67	202	214	236	236	225	225	270	00	34	56	45	45	56	56	56	56	56	56	45	45
	REMARKS ON THE WEATHER.		cu. cir, cir-hz.	do.	do.	cr-cu, cir, cir-hz.	fi-cu, Nim.	fi-cu, hz.	cu, cu-str, cir-str.	cu, cu-str, cir-str,cir-hz.	cu, cir-str, cir-hz.	cu, cu-str, cir-hz, Nim.	do. Th-W...	do. Nim.....	cu, cir-hz, cir.	cu, cir-hz. cir, cir-str...	do.	do.	cu, hz-hor sh-lg-SW...	cu, hz, sh-lg-W.....	do.	do.	do.	cu, cir, hz.	clear.	clear.

* Went to Anemometer.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 22D OCTOBER 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 22d October, 1851.														Thursday, 23d October, 1851.									
		p. m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1629	1628	1620	1612	1620	1630	1631	1627	1613	1610	1620	1625	1642	1650	1632	1618	1618	1623	1618	1622	1628	1631	1628	1626
5	0	29	28	20	12	23	30	31	25	11	10	20	26	43	50	30	18	18	22	18	22	28	30	28	25
10	0	28	26	20	13	24	30	30	24	11	10	20	28	43	51	28	18	18	20	19	22	29	30	27	24
15	0	29	25	20	15	24	30	30	22	10	12	20	30	43	51	25	20	18	20	19	22	29	30	28	24
20	0	29	23	19	17	27	31	30	20	10	12	22	30	43	51	23	22	18	18	20	23	30	30	28	22
25	0	29	22	19	17	28	31	30	20	10	13	22	33	46	47	21	22	17	17	21	23	30	30	29	24
30	0	28	21	19	18	29	31	29	19	10	15	24	33	50	44	18	22	17	17	21	22	28	30	28	24
35	0	28	20	19	19	29	31	29	19	10	15	24	32	50	42	17	20	14	16	20	24	27	30	28	25
40	0	28	20	17	20	30	31	27	18	10	16	25	34	52	40	16	19	13	16	21	24	29	29	28	24
45	0	28	20	16	20	30	31	26	19	10	18	25	37	51	38	17	19	13	17	21	29	30	29	27	22
50	0	28	20	15	20	30	31	26	17	10	20	25	39	50	37	17	19	12	18	22	28	30	30	25	21
55	0	28	20	14	20	30	31	26	15	10	20	25	40	50	33	17	19	14	17	22	28	30	30	25	21

HORIZONTAL FORCE.

2	0	1290	1281	1292	1320	1327	1252	1179	1122	1080	1055	1115	1178	1250	1327	1320	1326	1243	1419	1377	1359	1381	1400	1364	1374
7	0	90	80	97	20	24	43	69	27	74	58	25	76	50	35	26	28	49	09	76	59	82	02	60	76
12	0	88	77	1300	22	20	39	69	17	67	60	30	74	50	39	34	28	52	00	68	58	86	06	60	78
17	0	90	74	07	27	20	32	60	09	62	67	38	80	56	42	44	00	80	1388	63	57	87	1396	64	74
22	0	90	72	12	30	1300	30	52	1099	55	70	45	86	63	47	39	1282	94	78	60	77	89	88	70	70
27	0	90	70	12	36	1299	22	42	92	55	80	50	97	80	40	27	82	1300	78	59	76	99	78	70	70
32	0	89	73	10	22	91	19	39	90	57	88	58	1206	95	31	24	80	1290	78	59	79	1400	72	70	74
37	0	88	75	11	25	89	18	21	89	57	82	60	08	1302	28	20	65	79	76	48	83	04	70	72	70
42	0	85	78	16	30	83	09	27	91	55	94	63	17	10	21	26	50	60	79	48	83	08	70	74	72
47	0	83	81	18	30	78	03	18	93	55	1102	65	26	13	26	24	50	63	80	47	83	06	70	74	60
52	0	83	85	19	30	68	1193	12	90	58	02	72	38	15	30	29	48	61	81	49	84	04	70	72	52
57	0	82	87	20	28	59	83	20	90	56	1110	75	42	27	21	30	44	59	80	47	79	02	70	70	44
Faht.....																									
Attached Thermometer.....		83°7	83°7	83°9	84°0	84°0	83°7	83°8	83.8	84°0	84°2	84°3	84°7	84°8	84°9	84°7	84°5	84°6	84°6	84°6	84°6	84°6	84°5	84°4	84°6

VERTICAL FORCE.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	20	4629	4621	4567	4465	4776	4960	5330	5865	6095	6177	6056	5954	5821	5812	5315	5098	4967	5347	5047	4783	4863	4899	4591	4686
8	20	29	21	67	65	50	84	86	5939	95	77	56	54	21	12	15	98	67	5790	47	88	63	99	91	86
13	20	29	21	67	4520	4827	84	86	39	6125	18	71	28	5794	5686	74	98	67	5655	47	88	63	99	91	25
18	20	29	4537	67	20	27	5028	95	82	13	18	71	28	94	03	74	4912	4826	5391	4973	4894	24	4719	4611	69
23	20	29	37	4615	69	66	52	5443	6021	13	6088	33	28	5810	03	74	4736	4708	5246	00	94	24	19	11	84
28	20	29	4456	15	69	4900	52	95	47	34	44	59	5878	10	03	5283	36	08	5120	4858	94	84	4642	11	55
33	20	26	56	45	4666	00	84	5528	98	34	44	76	78	48	5419	83	36	44	5095	58	94	84	42	43	42
38	20	26	56	45	66	07	84	5650	6113	23	6114	26	78	48	19	83	4624	4693	94	26	94	84	42	43	42
43	20	26	56	45	4749	07	5131	19	28	07	37	26	51	48	19	5171	4494	4573	71	26	72	4784	4598	43	42
48	20	26	64	4576	49	07	82	34	28	07	6099	5981	51	48	19	71	94	73	53	26	72	84	98	4597	4557
53	20	26	64	16	49	35	5228	5782	28	07	6106	81	15	48	19	71	94	73	53	4715	47	84	91	97	45
58	20	21	64	16	49	53	85	82	6087	07	06	70	15	48	19	71	94	4804	32	15	36	84	91	97	15
Faht.....																									
Attached Thermometer....		83°4	83°4	83°4	83°5	83°5	83°6	83°7	83°9	84°2	84°5	84°6	84°8	85°0	85°0	84°8	84°4	84°2	84°2	84°2	84°2	84°2	84°2	84°2	84°2

INDUCTION INCLINOMETER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1623	1621	1615	1610	1618	1625	1626	1620	1607	1606	1612	1620	1638	1640	1625	1612	1613	1619	1617	1621	1625	1629	1627	1625
5	20	22	21	15	10	20	23	25	20	05	06	14	20	38	40	23	12	13	19	17	21	25	30	26	25
10	20	22	21	15	10	20	23	26	17	06	08	15	20	38	41	21	12	13	18	18	21	26	29	26	24
15	20	22	20	15	12	20	24	24	17	05	08	16	20	38	41	18	15	14	17	18	21	27	28	25	24
20	20	22	19	14	14	22	24	23	13	04	09	17	22	38	41	16	18	14	16	20	22	28	28	25	22
25	20	22	17	15	15	22	24	23	12	05	10	18	26	39	39	13	18	14	15	21	22	28	28	26	24
30	20	22	17	15	15	23	24	22	12	05	10	19	27	40	36	12	18	12	15	21	22	28	28	25	24
35	20	22	16	15	17	23	24	22	12	05	10	19	27	40	34	12	16	10	14	20	23	26	28	25	25
40	20	22	15	14	18	23	24	20	11	04	10	19	28	42	31	12	15	10	14	21	23	27	27	25	24
45	20	22	16	12	18	23	24	18	10	04	10	20	30	41	30	12	15	10	15	21	27	29	26	24	22
50	20	22	16	12	18	25	25	18	09	04	11	20	34	40	30	12	15	09	15	22	27	28	27	24	21
55	20	21	16	11	18	25	25	19	08	05	11	20	36	40	27	12	15	12	15	21	26	29	28	24	21
Faht...																									
Attached Thermometer....		83°0	83°0	83°0	83°0	82°7	82 9	83°1	83°8	84°2	84°4	84°8	85°0	85°2	85°2	84°0	83 8	83°6	83°5	83°4	83°4	83°3	83°4	83°2	83°2

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.....		In. 0·936	In. 0·934	In. 0·940	In. 0·949	In. 0·981	In 1·010	In. 1·028	In. 1·022	In. 0·996	In. 0·970	In. 0·940	In. 0·912	In. 0·882	In. 0·898	In. 0·912	In. 0·928	In. 0·932	In. 0·953	In. 0·976	In. 0·982	In. 0·980	In. 0·970	In. 0·952	In. 0·928
Attached Thermometer.....		80°5	81°0	80°5	80°5	80°5	81°0	81°0	82°0	82°5	83°0	83°0	83°5	84°0	84°5	83°5	82°5	82°5	82°5	82°0	81°5	81°0	80°5	80°5	80°0
Dry Thermometer (standard)		79·5	79·4	78·7	78·7	79·6	81·1	82·8	86·0	87·9	88·6	90·2	90·5	91·0	89·2	83·3	82·3	81·5	81.0	80·7	80·4	80·3	80·4	80·2	80·0
Wet do		76·7	76·6	76·4	77·0	77·6	78·4	79·1	79·3	80·6	80·5	80·4	80·0	80·7	79·5	78·0	78·3	78·0	77·5	77·6	77·7	77·7	78·0	77·8	77·8
Cloudy sky in 8ths.....		7	8	8	7	7	7	5	4	4	3	4	6	6	7	7	7	7	5	4	2	3	4	4	2
Wind. Force.....lb.....		·00	·00	·02	·00	·00	·02	·05	·15	·20	·15	·10	·07	·07	·10	·02	·02	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction		270	225	191	225	236	225	202	214	202	214	191	191	180	315	135	180	169	169	67	67	67	67	45	292
REMARKS ON THE WEATHER.		ny-overcast.....	overcast.	do v-lt-R, sh-lg-s. E.	cu, cir-haze, Nim.....	do	cu, cu-str, cir-haze.....	cu, cir, cir-hz.....	do.....	do.....	cu, cu-str, cir-hz.....	do	do.....	do distant-Th.	cu, cir-hz, Nim, distant Th. lt-R.....	ny-overcast fr, pcals Th, lt-R.....	cu, cir-hz, Nim, Th. lg.s.	ny-overcast, sh-lg. s.	cu, Nim.....	fi-cu, hz, lg-s. E. hor.	cu, hz.....	fi-cu, hazc.....	cu, cir-hz, sh-lg. NW..	cu, cir, cir-hz, lg-SW..	cu, cir-hz, Nim-E....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. 28TH NOVEMBER 1851, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 28th November, 1851.													Saturday, 29th November, 1851									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.
		1664	1660	1660	1660	1665	1670	1675	1667	1662	1650	1647	1653	1654	1660	1660	1654	1660	1661	1660	1659	1659	1662	1661	1660
0	0	64	60	60	60	65	71	75	65	60	50	48	54	55	60	59	54	61	61	60	59	59	62	61	60
5	0	63	60	60	60	65	72	72	64	60	50	47	55	55	59	59	54	60	61	60	59	59	62	61	58
10	0	63	60	60	62	65	72	72	63	60	48	49	57	57	59	59	54	61	61	60	59	59	62	60	58
15	0	62	60	59	62	68	72	71	63	59	46	50	56	59	59	59	55	60	61	60	59	59	62	60	58
20	0	62	60	60	63	66	74	70	62	58	45	50	55	60	60	59	55	61	61	59	59	60	62	60	58
25	0	62	60	60	63	67	75	69	63	57	44	51	55	60	60	58	56	61	61	59	59	60	62	60	58
30	0	62	60	60	63	69	74	69	63	55	44	51	55	60	60	58	58	61	61	59	59	60	62	60	58
35	0	62	60	60	64	69	74	69	63	50	45	51	54	60	59	58	58	61	61	59	59	60	62	60	58
40	0	62	60	60	65	70	75	69	63	50	46	51	52	60	59	56	59	61	60	59	59	61	62	60	58
45	0	62	60	60	65	70	75	68	63	50	47	50	54	60	59	54	60	60	60	59	59	61	62	60	59
50	0	61	60	60	65	70	75	68	62	50	47	52	54	60	60	53	60	60	60	59	59	61	62	60	59
55	0																								

HORIZONTAL FORCE.

2	0	1125	1140	1140	1142	1120	1082	1041	1001	980	984	1003	1034	1070	1092	1084	1078	1080	1099	1121	1121	1117	1115	1110	1107
7	0	25	37	40	42	17	79	38	999	979	987	05	39	71	90	84	78	80	99	21	21	17	15	10	07
12	0	24	34	40	42	12	76	30	995	978	989	16	45	73	89	84	76	80	1102	28	22	17	18	10	02
17	0	22	32	40	40	12	71	25	990	978	989	11	49	78	89	84	74	84	04	28	22	10	18	10	02
22	0	20	32	40	38	18	68	20	987	974	990	18	50	80	88	84	74	89	04	30	22	09	18	10	00
27	0	20	30	40	35	16	66	20	986	977	990	20	50	80	86	84	72	90	05	27	22	10	18	10	1098
32	0	22	33	40	33	14	60	18	984	973	990	21	54	80	88	81	76	90	07	19	24	10	18	10	98
37	0	24	35	40	32	09	57	18	982	975	995	23	57	82	90	79	78	91	07	17	25	10	18	10	98
42	0	24	36	42	31	00	54	09	979	975	1000	27	59	85	84	78	80	94	10	17	27	10	18	10	98
47	0	26	37	42	32	1095	49	06	975	976	00	30	60	90	82	80	80	95	18	19	24	13	13	10	98
52	0	27	39	42	28	90	48	02	979	980	998	32	68	94	82	80	80	97	19	20	19	13	13	07	98
57	0	35	40	42	20	87	44	01	981	982	999	35	69	94	80	80	80	97	21	21	19	15	13	07	98
Faht...																									
Attached Thermometer...		80°0	80°2	80°2	80°2	80°0	79°7	79°7	79°7	79°7	79°7	79°7	79°9	80°0	80°0	79°9	79°8	79°9	80°0	80°1	80°1	80°2	80°3	80°3	80°3

VERTICAL FORCE.

3	0	2695	2705	2674	2680	2697	2752	2658	2696	2735	2729	2716	2677	2653	2626	2626	2592	2602	2599	2598	2588	2591	2570	2577	2570
8	0	95	05	74	80	97	52	58	96	35	29	16	77	53	26	26	92	02	99	98	83	91	70	77	70
13	0	95	05	74	80	97	52	58	96	35	29	16	77	53	35	26	2614	02	2602	98	83	91	70	77	70
18	0	95	00	74	40	2719	52	58	85	43	29	16	77	53	30	26	14	02	02	98	83	91	70	77	70
23	0	95	00	65	07	22	52	70	85	41	29	16	77	56	30	17	14	02	03	98	83	91	70	77	73
28	0	95	00	80	07	40	2685	70	85	44	03	2692	77	56	30	17	14	2580	03	98	83	91	58	73	73
33	0	95	00	80	07	40	42	80	85	45	03	92	77	56	30	17	14	80	03	98	83	95	58	73	73
38	0	95	00	2719	39	31	42	75	95	45	03	92	77	56	26	17	14	80	00	94	83	95	58	73	73
43	0	95	00	19	86	31	42	75	95	45	03	92	77	49	26	20	14	2600	00	94	88	95	80	70	73
48	0	95	00	19	86	31	42	75	95	45	03	92	77	49	26	20	2582	00	00	94	88	82	80	70	73
53	0	95	00	19	86	31	42	75	2726	45	03	92	77	49	26	20	82	00	00	94	88	82	80	70	73
58	0	2705	2660	19	86	31	42	89	27	45	03	92	77	49	26	20	82	00	00	94	94	70	80	70	73
Faht...																									
Attached Thermometer...		80°0	80°0	79°8	79°7	79°5	79°2	79°2	79°2	79°2	79°2	79°4	79°7	79°8	79°9	79°8	79°6	79°6	79°6	79°7	79°8	79°8	79°8	79°8	79°8

INDUCTION INCLINOMETER.

0	20	1640	1640	1640	1639	1632	1636	1639	1630	1629	1620	1620	1623	1625	1630	1629	1625	1630	1631	1630	1629	1629	1630	1629	1628
5	20	40	40	40	38	32	36	39	30	30	20	20	23	26	30	28	25	30	31	30	29	29	30	29	28
10	20	40	40	40	38	31	37	37	30	29	20	20	24	26	29	28	25	30	31	30	29	29	30	30	26
15	20	40	40	39	35	32	37	37	30	29	19	20	25	28	29	27	25	30	31	30	29	29	30	30	26
20	20	40	40	39	33	34	37	37	30	28	18	20	25	29	29	27	25	30	81	30	29	29	30	30	26
25	20	40	40	39	33	32	38	35	30	26	16	21	25	30	30	27	25	31	31	29	29	29	30	29	26
30	20	40	40	40	33	33	38	34	30	23	16	21	25	30	30	26	27	30	31	29	29	30	30	29	26
35	20	40	40	40	32	34	38	34	30	22	16	21	25	29	30	26	28	30	31	29	29	30	30	29	26
40	20	40	40	40	32	34	38	34	30	20	16	21	25	30	30	26	27	31	31	29	29	30	30	28	27
45	20	40	40	40	32	34	38	34	29	20	17	21	23	30	30	25	29	31	31	29	29	30	29	28	27
50	20	40	40	40	32	35	38	32	30	20	17	21	26	31	29	24	30	30	31	29	29	30	29	28	27
55	20	40	40	40	32	35	39	31	29	20	17	22	26	30	30	24	30	30	31	29	29	30	29	28	27
Faht...																									
Attached Thermometer...		79°0	78°9	78°8	78°6	77°8	77°4	77°4	77°6	78°2	78°8	79°2	79°7	79°7	79°7	79°2	79°0	79°0	79°0	79°1	79°1	79°0	79°0	79°0	79°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..		In. 1·020	In. 1·016	In. 1·028	In. 1·032	In. 1·046	In. 1·077	In. 1·096	In. 1·099	In. 1·088	In. 1·069	In. 1·046	In. 1·026	In. 1·008	In. 1·000	In. 1·010	In. 1·006	In. 1·016	In. 1·056	In. 1·080	In. 1·086	In. 1·078	In. 1·062	In. 1·038	In. 1·022
Attached Thermometer.....		77°0	77°0	77°0	76°0	73°0	73·5	74·5	75·5	76·5	77·5	78°0	78·5	78·5	79°0	77·5	77·5	78°0	77·5	77°0	77°0	77°0	77°0	77°0	77°0
Dry Thermometer (standard).....		72·0	71·5	71·2	70·5	71·0	72·7	74·8	76·8	78·7	79·6	80·1	81·3	80·7	79·9	78·4	77·8	77·5	77·3	77·2	76·9	76·9	77·0	77·0	77·0
Wet Do.		69·0	68·8	68·5	68·0	67·0	67·2	67·0	68·2	69·8	70·0	70·3	71·0	71·0	70·2	69·8	70·4	70·4	71·3	71·0	70·9	71·0	71·3	71·0	71·0
Cloudy sky in 8ths.....		0	0	0	0	1	0	0	0	0	0	1	5	7	7	8	8	8	8	8	8	8	8	8	8
Wind: Force..lbs.....		·00	·00	·00	·00	·07	·15	·20	·20	·20	·22	·20	·20	·15	·15	·15	·10	·10	·07	·05	·05	·05	·07	·02	·02
Wind: Directions.... ○		304	304	315	315	326	326	326	326	326	337	337	337	349	349	349	00	00	00	00	00	11	00	00	00
REMARKS ON THE WEATHER		clear.	do.	do.	do.	cu-hor.	clear.	do.	do.	do.	Ny-clear.	fl-cu.	cr-hz, cu.	dense-cir-hz, cu.	do.	cu, cir, cir-str, d-hz.	cu, cir, cir-hz.	do.	ny-overcast.	overcast.	do.	do.	do.	do.	do.

ABSTRACT OF TERM DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH DECEMBER 1851, GOTTINGEN MEAN TIME.

			Wednesday, 24th December, 1851.													Thursday, 25th December, 1851.									
Gottingen Mean Time.			p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
MAGNETICAL OBSERVATIONS.																										
DECLINATION.	m.	s.																								
	0	0	sed. 1650	sed. 1648	sed. 1643	sed. 1644	sed. 1653	sed. 1657	sed. 1670	sed. 1650	sed. 1629	sed. 1640	sed. 1651	sed. 1661	sed. 1660	sed. 1670	sed. 1672	sed. 1665	sed. 1670	sed. 1672	sed. 1663	sed. 1658	sed. 1653	sed. 1652	sed. 1651	sed. 1649
	5	0	50	48	43	44	51	59	70	48	29	40	51	61	61	70	72	66	70	72	62	58	53	52	51	49
	10	0	50	48	43	44	52	60	70	42	28	43	53	63	60	71	72	63	70	72	62	58	51	52	51	49
	15	0	49	48	43	44	52	61	71	40	28	45	55	64	60	72	72	62	70	72	65	54	52	52	51	48
	20	0	49	48	44	47	52	61	71	39	29	45	56	64	61	73	72	64	70	72	63	55	52	52	50	48
	25	0	49	48	45	49	52	63	71	38	29	47	58	64	60	74	70	64	70	72	60	53	52	53	50	47
	30	0	48	48	46	50	52	66	70	37	30	47	60	63	60	72	70	64	70	72	61	52	52	53	50	47
	35	0	48	48	48	52	50	66	68	34	32	47	60	63	60	70	70	64	70	71	60	53	52	53	50	48
	40	0	48	46	47	52	51	68	67	32	32	49	60	62	61	70	70	63	70	70	60	53	52	53	50	49
	45	0	48	46	47	53	53	69	63	32	35	49	60	63	60	70	70	66	72	70	59	53	52	53	50	49
	50	0	48	45	47	52	54	69	60	32	36	50	60	62	64	70	68	67	72	68	58	54	52	52	50	50
	55	0	48	44	45	54	56	69	57	30	39	50	61	62	68	70	68	67	72	64	58	53	52	52	50	50
HORIZONTAL FORCE.																										
	2	0	1063	1088	1080	1098	1102	1059	1019	978	918	908	947	1032	1100	1154	1160	1142	1142	1128	1138	1118	1118	1128	1120	1105
	7	0	66	88	80	98	1096	61	09	970	919	908	953	42	12	56	57	44	48	22	40	02	19	26	20	05
	12	0	69	87	81	97	90	69	00	963	912	908	962	52	16	56	50	48	52	21	35	03	20	24	20	02
	17	0	71	85	82	96	82	69	992	956	922	910	974	58	18	64	50	50	52	21	38	02	24	22	20	01
	22	0	76	84	84	93	74	69	989	947	922	915	984	64	20	66	47	50	52	20	38	05	27	21	22	03
	27	0	80	82	85	90	60	71	987	942	919	920	993	67	24	69	42	50	50	18	30	12	29	20	24	03
	32	0	81	82	88	88	56	70	986	940	913	925	999	77	26	70	40	58	50	18	29	18	29	20	20	03
	37	0	83	81	91	87	52	62	980	932	912	932	1000	80	34	70	40	60	44	18	30	22	29	20	17	03
	42	0	87	81	90	89	50	53	976	922	908	930	10	90	38	74	30	60	46	21	32	22	29	20	15	04
	47	0	87	81	88	92	53	39	972	928	909	932	12	92	40	76	30	62	42	28	39	18	30	20	11	04
	52	0	86	80	88	96	59	31	972	930	907	936	15	94	42	70	36	60	40	30	38	19	30	20	09	06
	57	0	86	80	92	99	58	29	982	919	910	945	22	95	44	70	36	60	28	34	38	18	30	20	07	06
	Faht.		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer		78·0	78·0	78·0	77·9	77·9	77·3	77·3	77·4	77·7	77·8	78·0	78·2	78·2	78·2	78·1	78·1	78·4	78·8	78·8	78·8	78·8	78·9	78·9	78·9
VERTICAL FORCE.	m	s																								
	3	0	sed. 4284	sed. 4284	sed. 4250	sed. 4225	sed. 4225	sed. 4097	sed. 4235	sed. 4473	sed. 4688	sed 4761	sed. 4915	sed. 4905	sed. 4705	sed. 4580	sed. 4475	sed. 4406	sed. 4402	sed. 4395	sed. 4361	sed. 4277	sed. 4320	sed. 4329	sed. 4346	sed. 4307
	8	0	84	84	50	25	4168	4107	53	83	4700	28	37	4894	05	80	75	06	02	48	86	61	43	29	46	07
	13	0	84	84	50	25	68	16	83	4506	30	25	30	94	4670	80	75	06	4390	48	69	61	43	29	46	07
	18	0	84	81	50	25	68	16	95	17	27	65	26	76	70	80	75	06	90	48	64	88	43	29	46	07
	23	0	84	81	50	25	49	16	4321	38	32	68	39	67	70	80	75	06	90	40	64	88	43	29	46	07
	28	0	84	31	50	25	49	16	57	47	42	80	30	67	46	80	75	06	90	40	64	94	43	29	46	07
	33	0	84	81	50	41	49	05	88	63	45	79	45	67	46	51	33	06	90	33	30	94	43	29	46	07
	38	0	84	81	50	41	18	05	4405	75	56	80	32	67	46	51	33	06	90	33	30	4320	57	29	46	07
	43	0	84	81	50	41	18	05	41	58	55	4800	34	4790	4595	26	33	06	90	50	30	18	57	29	46	07
	48	0	84	50	50	41	4095	42	61	4621	45	50	34	90	95	26	15	06	90	50	30	07	57	29	46	07
	53	0	84	50	50	41	4136	76	61	30	40	67	22	90	95	26	15	06	81	60	30	07	57	29	46	07
	58	9	84	50	50	41	36	4200	60	56	40	79	15	90	95	26	15	66	46	60	30	20	57	29	46	07
	Faht.		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer		78·0	77·6	77·5	77·2	77·2	77·2	77·4	77·6	77·9	78·1	78·3	78·5	78·5	78·5	78·4	78·4	78·4	78·4	78·3	78·3	78·3	78·3	78·2	78·1
INDUCTION INCLINOMETER.	m.	s.																								
	0	20	sed. 1616	sed. 1610	sed. 1612	sed. 1609	sed. 1620	sed. 1622	sed. 1633	sed. 1618	sed. 1600	sed. 1610	sed. 1619	sed. 1627	sed. 1627	sed. 1634	sed. 1637	sed. 1630	sed. 1632	sed. 1639	sed. 1629	sed. 1622	sed. 1622	sed. 1621	sed. 1620	sed. 1619
	5	20	16	10	12	09	18	22	33	13	1599	12	20	27	28	35	37	31	31	39	29	22	22	21	20	19
	10	20	15	10	12	09	18	23	33	12	99	11	20	29	30	36	37	30	32	39	29	22	21	21	20	19
	15	20	14	10	12	09	18	23	33	10	99	12	20	29	30	38	37	30	33	39	29	23	21	21	20	19
	20	20	13	11	11	09	19	24	32	08	99	12	20	30	31	39	37	30	32	38	29	23	21	21	20	19
	25	20	12	12	11	11	19	28	32	07	1601	14	22	30	30	40	35	30	32	38	28	22	21	21	20	19
	30	20	12	12	10	13	20	29	32	05	00	14	24	29	30	38	35	30	33	38	28	22	21	21	20	19
	35	20	12	12	10	15	20	30	31	03	02	14	24	29	31	37	35	30	32	38	28	18	21	21	20	19
	40	20	12	12	10	17	21	32	29	02	03	15	24	30	31	36	35	31	32	34	28	18	21	21	20	20
	45	20	12	12	10	18	21	31	29	02	04	15	24	30	30	36	35	31	37	32	24	22	21	21	20	20
	50	20	12	14	10	19	22	32	23	02	04	17	26	29	33	35	33	30	39	30	25	18	21	21	20	20
	55	20	11	14	10	19	22	32	22	01	07	18	26	30	35	35	33	30	38	30	22	22	21	21	20	20
	Faht.		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer		77·0	76·2	76·0	75·7	75·5	75·8	76·5	77·1	77·4	77·8	78·0	78·2	78·2	78·2	78·0	77·7	77·5	77·3	77·2	77·2	77·2	77·2	77·0	77·0
METEOROLOGICAL OBSERVATIONS.																										
Barometer (uncorrected) = 29·0 +			In. 1·118	In. 1·116	In. 1·127	In. 1·130	In. 1·153	In. 1·183	In. 1·212	In. 1·223	In. 1·216	In. 1·191	In. 1·168	In. 1·132	In. 1·116	In. 1·108	In. 1·114	In. 1·120	In. 1·140	In. 1·158	In. 1·178	In. 1·188	In. 1·186	In. 1·176	In. 1·166	In. 1·158
Attached Thermometer			° 73·5	° 73·0	° 73·0	° 73·0	° 72·0	° 72·0	° 74·5	° 75·0	° 76·0	° 77·0	° 78·0	° 78·0	° 78·5	° 78·5	° 78·0	° 77·5	° 76·5	° 75·5	° 75·0	° 75·0	° 75·0	° 75·0	° 75·0	° 75·0
Dry Thermometer (standard)			71·8	70·7	69·9	69·2	69·0	70·9	74·5	77·7	79·5	80·3	80·8	80·7	80·8	80·2	78·9	77·3	76·0	75·1	74·5	74·5	74·7	73·7	71·5	70·5
Wet do.			68·0	67·0	65·3	65·0	65 0	66·2	68 8	68·9	68·7	68·5	68·2	67·2	67·0	67·0	66·2	65·8	66·8	66·2	66·5	66·2	64·9	66·0	64·5	64·0
Cloudy sky in 8ths			4	2	1	1	2	1	0	2	2	0	0	0	0	0	0	2	2	2	4	4	2	2	0	1
WIND. Force lbs.			0·00	·02	·02	·02	·00	·02	·00	·05	·05	·07	·07	·07	·10	·07	·07	·05	·00	·00	·00	·00	·00	·00	·00	·00
WIND. Direction °			315	315	326	326	315	315	326	349	11	22	34	34	34	22	22	22	11	337	00	11	11	22	00	292
REMARKS ON THE WEATHER			sc-cu, cir-hz, Dew...	do. do.	cu, cir-str-hor.	do. do.	cu, cir-hz.....	fi-cu.....	ny-clear.....	cu-str, cir-cu, hz.....	cu, cr-cu, hz. , ...	clear.....	uy-clear.....	do.....	clear.. ...	clear...	clear.....	cu, cu-str, cir-hz...	do do.....	fi-cu, hz ...	cu, cu-str, hz.....	cu-hz....	do.....	cu-hor.....	ny-clear, Dew	fi-cu, Dew..	

MADRAS, 1852.

MAGNETICAL OBSERVATIONS.

$a.\left(1+\frac{H}{F}\right) = 4'03 \times 1{\cdot}000238 = 4'03096$ $\quad a + 7'6 = \rho = 0^{\circ}42'37''2 + 0^{\circ}7'6'' = 0^{\circ}49'43''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
				1·6 *		-0·4 *		0·4 *		0·4 *		0·6 *														*Arc.*
1	1650	1646	1648	1653	1654	1652	1651	1650	1649	1646	1643	1642	1640	1641	1641	1644	1660	1650	1644	1645	1656	1658	1658	1658	1649	° 0 59 56
2	655	651	656	657	655	653	652	651	650	649	648	647	644	644	640	632	646	650	654	658	663	658	656	654	651	1 00 04
3	659	652	651	653	652	652	653	653	652	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	656	660	651	640	642	632	621	645	660	664	662	658	654	654	654	651	00 04
5	678	659	663	660	653	655	658	660	662	661	660	659	657	650	640	639	641	640	630	630	628	632	640	650	650	00 00
6	660	652	651	657	659	655	652	656	659	656	653	650	645	645	638	633	648	659	670	670	658	652	640	642	652	00 08
7	654	659	658	659	656	654	653	653	652	652	651	650	648	642	640	636	653	662	660	655	646	646	650	656	652	00 08
8	652	651	651	653	652	651	651	655	659	657	655	653	650	646	635	630	630	641	652	660	673	658	647	646	650	00 00
9	652	658	650	653	653	657	662	661	660	660	659	656	652	652	648	652	669	671	670	678	660	650	649	660	658	00 32
10	663	659	661	661	658	658	659	661	662	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	660	658	656	652	648	642	650	664	678	680	660	658	660	650	650	659	00 36
12	662	662	661	662	659	659	659	660	660	661	661	660	657	652	647	640	645	655	653	651	659	679	685	675	659	00 36
13	670	665	660	662	660	650	660	661	662	661	660	659	656	652	650	647	651	667	678	687	680	669	652	646	661	00 44
14	657	655	654	659	660	660	660	659	658	654	650	651	650	646	648	648	665	678	680	667	652	659	647	645	657	00 28
15	652	651	654	659	660	659	658	658	658	654	650	650	648	642	640	638	653	676	679	659	653	647	647	653	654	00 16
16	659	655	657	658	656	655	654	652	650	648	646	644	641	635	632	639	660	668	672	677	655	640	630	637	651	00 04
17	646	648	650	656	658	654	650	654	657	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	653	648	645	640	640	638	642	664	673	668	656	660	660	636	642	652	00 08
19	650	648	652	654	653	651	650	649	647	641	635	624	612	610	604	602	601	648	662	698	720	702	670	668	648	0 59 52
20	670	670	674	674	670	674	678	679	680	665	650	652	653	652	639	639	658	664	673	684	670	666	673	674	666	1 01 04
21	674	672	674	670	662	662	662	662	661	660	658	650	640	631	628	623	639	663	670	671	679	674	672	675	660	00 40
22	670	660	666	682	694	689	684	676	668	664	660	658	655	647	637	630	657	680	700	704	694	690	694	690	673	01 33
23	680	670	670	667	660	663	667	672	676	673	670	667	662	655	650	640	648	667	668	666	660	658	664	670	664	00 56
24	666	657	660	663	663	662	662	664	665	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	666	667	670	671	675	660	650	655	652	658	656	652	657	662	670	662	00 48
26	670	670	667	673	676	670	664	662	660	659	657	657	655	655	652	650	660	672	676	680	670	660	660	675	665	01 00
27	670	663	664	668	669	664	660	661	661	660	658	658	656	657	658	659	664	671	660	660	650	635	637	648	659	00 36
28	658	659	660	662	660	658	657	659	660	659	657	656	654	650	651	652	671	684	684	660	644	642	640	650	658	00 32
29	654	659	659	661	659	658	657	658	658	658	657	657	655	650	648	650	667	677	674	668	653	645	646	654	658	00 32
30	660	661	659	661	660	657	654	658	662	661	659	658	655	650	640	634	640	650	650	652	650	662	648	646	654	00 16
31																										
Means	1661	658	659	661	660	659	659	659	660	657	655	653	650	647	641	639	652	664	666	666	662	658	654	657	1657	
Declination	60 44	60 32	60 36	60 44	60 40	60 36	60 36	60 36	60 40	60 28	60 20	60 12	60 00	59 48	59 24	59 16	60 08	60 56	61 04	61 04	60 48	60 32	60 16	60 28	.....	1·00·28
Mean Hourly Variations from General Monthly Mean.	16	4	8	16	12	8	8	8	12	00	−8	−16	−28	−40	−64	−72	−20	28	36	36	20	4	−12	00		
January 31	1652	1650	1659	-0·2 * 1660	1662	-0·7 * 1663	1665	0·6 * 1672	1677	0·0 * —	—	-0·1 * —	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1669	1660	1658	1656	1653	1651	1652	1666	1659	1660	1654	1640	1640	1648	1650	1657	° 1 00 28
2	658	662	658	660	662	659	657	655	652	653	654	653	653	650	652	660	667	674	662	638	640	649	644	650	655	00 20
3	662	661	658	657	657	657	658	658	656	655	654	652	650	648	656	657	660	673	672	653	630	640	648	655	655	00 20
4	662	658	653	653	653	653	654	654	652	651	650	648	647	647	644	645	659	670	677	663	655	648	642	650	654	00 16
5	650	650	646	649	653	653	654	659	662	660	657	651	646	649	649	650	664	670	668	670	657	640	643	640	654	00 16
6	650	651	650	654	659	659	660	667	672	670	667	655	643	642	631	629	633	642	647	657	660	670	668	666	654	00 16
7	660	658	652	659	667	665	664	669	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	670	668	664	660	652	637	638	642	658	656	650	660	677	672	670	660	00 40
9	667	661	659	660	662	660	660	664	666	663	660	656	652	649	643	646	658	677	676	662	661	665	658	650	660	00 40
10	650	652	653	656	659	658	659	660	660	659	658	655	652	649	642	638	648	651	648	643	653	660	650	640	652	00 08
11	644	651	649	651	654	654	656	655	652	652	652	651	650	648	640	645	664	668	666	673	683	672	658	654	656	00 24
12	658	658	659	655	651	651	652	651	648	647	645	642	640	639	640	640	657	662	667	651	652	647	639	639	650	00 00
13	641	645	647	649	651	651	652	653	652	651	650	646	642	640	640	650	659	662	681	661	640	633	630	633	648	0 59 52
14	640	648	652	652	652	650	649	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	646	642	632	623	612	610	620	648	668	672	660	670	687	680	676	650	1 00 00
16	670	678	683	682	681	675	670	676	680	674	668	659	650	652	655	660	678	684	671	675	688	690	673	662	672	01 29
17	668	675	673	678	684	677	671	671	670	665	660	657	655	650	645	630	655	667	650	677	760	691	682	670	670	01 21
18	678	708	692	710	728	715	704	703	700	689	678	664	650	658	652	670	689	682	675	677	680	682	667	655	684	02 17
†19	660	702	678	669	660	659	660	666	670	672	673	671	670	*	*	*	*	693	703	712	718	717	721	717	?	
20	709	704	710	698	686	691	698	694	689	689	688	676	665	650	640	642	650	657	674	670	670	672	675	680	678	01 53
21	672	665	666	672	678	668	660	665	668	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	664	660	655	650	645	640	640	652	654	656	653	646	634	640	647	656	00 24
23	640	640	641	644	648	647	648	650	650	649	647	646	645	638	638	640	640	643	654	658	660	658	662	662	648	0 59 52
24	655	650	645	643	642	638	636	639	640	639	637	635	633	632	632	640	649	650	651	636	629	622	640	643	640	59 20
25	640	634	632	635	638	633	632	632	630	631	632	631	630	630	630	632	640	640	644	641	642	643	646	659	637	59 08
26	644	639	637	637	638	637	637	643	648	644	640	640	640	634	630	634	640	651	650	645	635	638	640	637	640	59 20
27	638	632	632	634	636	636	638	645	650	647	643	641	640	642	643	642	643	645	643	643	640	643	645	644	641	59 24
28	646	643	633	636	639	636	635	637	637	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	639	640	640	640	637	630	635	645	640	638	638	639	640	650	648	639	59 16
Means	1656	657	656	658	660	658	657	659	660	657	655	650	646	644	640	643	654	660	661	656	658	656	654	653	1655	
Declination	60 24	60 28	60 24	60 32	60 40	60 32	60 28	60 36	60 40	60 28	60 20	60 00	59 44	59 36	59 20	59 32	60 16	60 40	60 44	60 24	60 32	60 24	60 16	60 12	.....	1·00·20
Mean Hourly Variations from General Monthly Mean.	4	8	4	12	20	12	8	16	20	8	00	−20	−36	−44	−60	−48	−4	20	24	4	12	4	−4	−8		

N. B.—The numbers in the table are tenths of scale divisions and increasing numbers denote a movement of the North end of the Magnet towards the East.

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

† The Observations of 19th are rejected from the hourly Means.

$a.\left(1+\frac{H}{F}\right)=4'.03\times1.000238=4'.03096$ $\alpha+7'.6=\rho=0°.42'.37''.2+0°.7'.6''=0°.49'.43''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

	Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
	Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41			
					—1·9 *		—0·4 *		0·1 *		0·6 *		0·0 *														*Arc.*
MARCH 1852.	1	1644	1643	1641	1637	1636	1633	1630	1633	1635	1633	1630	1631	1632	1630	1640	1642	1648	1642	1634	1630	1628	1635	1640	1633	1636	° 0 ′ 59 ″ 04
	2	634	639	637	634	635	635	636	636	636	639	640	640	640	647	650	656	670	677	668	646	639	640	645	648	644	59 36
	3	643	637	634	632	633	632	632	635	638	638	636	635	633	635	642	660	677	680	661	636	620	629	632	639	640	59 20
	4	640	637	634	635	639	637	636	638	639	641	641	641	640	640	642	650	663	654	634	613	610	613	622	630	636	59 04
	5	639	638	635	635	638	640	642	645	647	649	650	645	640	639	645	650	676	678	659	631	628	626	630	638	643	59 32
	6	640	641	639	640	644	645	646	648	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	7	—	—	—	—	—	—	—	—	—	646	640	637	634	632	637	647	660	668	660	654	648	648	649	647	646	59 44
	8	650	650	654	651	652	646	640	640	640	637	633	630	627	624	630	643	660	656	658	646	630	630	624	630	641	59 24
	9	632	628	626	627	632	635	639	641	642	642	642	637	632	632	636	640	646	640	622	612	608	614	624	628	632	58 47
	10	632	640	635	635	639	638	638	639	640	639	637	636	634	642	642	660	664	660	655	648	653	635	647	648	642	59 28
	11	643	637	632	630	632	631	631	631	630	631	632	630	627	626	630	642	658	662	652	648	643	648	652	652	639	59 16
	12	662	641	636	639	646	647	648	643	638	636	633	632	630	630	640	651	662	663	660	640	633	631	628	646	642	59 28
	13	632	627	630	633	640	643	647	644	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	14	—	—	—	—	—	—	—	—	—	639	636	633	630	632	640	652	664	670	667	658	642	632	631	639	642	59 28
	15	645	637	634	633	636	637	639	635	630	628	625	627	628	629	632	650	670	678	658	635	632	641	650	657	640	59 20
	16	650	634	630	631	635	634	634	637	640	637	633	633	633	632	640	645	660	665	650	640	642	650	651	647	641	59 24
	17	642	637	644	645	650	647	645	642	638	633	628	628	628	617	642	655	671	676	668	640	631	629	637	644	642	59 28
	18	640	642	649	640	642	640	638	637	636	635	633	632	630	630	637	646	650	646	632	620	618	622	630	630	636	59 04
	19	633	630	638	637	640	639	638	639	640	640	638	636	634	630	638	650	656	658	642	635	629	635	640	638	639	59 16
	20	632	637	648	646	647	649	651	651	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	21	—	—	—	—	—	—	—	—	—	646	640	638	636	632	643	650	653	652	655	650	642	629	632	642	644	59 36
	22	646	642	642	640	641	642	644	645	645	647	648	644	640	634	637	648	652	658	660	653	639	632	639	649	644	59 36
	23	652	651	646	641	640	639	639	641	643	643	642	640	638	640	638	650	658	660	659	642	639	630	629	638	643	59 32
	24	640	633	630	629	631	630	630	632	633	636	638	634	630	630	640	649	653	659	644	635	637	641	642	638	637	59 08
	25	632	628	628	626	628	629	631	633	635	637	637	638	638	638	640	647	649	646	634	620	610	613	622	628	632	58 47
	26	630	628	622	619	619	625	632	635	637	663	688	674	660	670	660	670	668	654	645	633	635	640	651	658	646	59 44
	27	657	655	652	646	643	649	656	653	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	28	—	—	—	—	—	—	—	—	—	650	649	650	650	648	666	675	680	678	653	650	640	638	652	660	654	1 00 16
	29	655	642	644	645	649	649	649	650	650	650	648	648	648	650	663	656	660	658	643	633	632	624	628	628	646	0 59 44
	30	630	638	642	644	649	653	658	657	656	655	652	651	650	648	657	671	678	680	670	652	638	630	632	640	651	1 00 04
	31	642	642	641	638	639	642	645	647	648	654	658	655	652	648	650	667	660	658	638	630	628	629	640	641	645	0 59 40
	Means.....	1641	638	638	637	639	639	641	641	641	642	641	639	637	636	643	653	662	662	651	638	632	632	637	641	1642	
	Declination.....	59 24	59 12	59 12	59 08	59 16	59 16	59 24	59 24	59 24	59 28	59 24	59 16	59 08	59 04	59 32	60 12	60 48	60 48	60 04	59 12	58 47	58 47	59 08	59 24	.....	0·59·28
	Mean Hourly Variations from General Monthly Mean.	-4	-16	-16	-20	-12	-12	-4	-4	-4	00	-4	-12	-20	-24	4	44	80	80	36	-16	-41	-41	-20	-4		
					—1·1 *		—0·7 *		—0·6 *		1·1 *		—0·1 *														
APRIL 1852.	1	1648	1656	1658	1652	1649	1649	1650	1654	1660	1658	1654	1652	1650	1649	1660	1662	1663	1652	1634	1620	1610	1620	1623	1630	1646	° 0 ′ 59 ″ 44
	2	646	644	641	641	643	647	653	656	661	665	667	664	662	659	662	665	663	658	640	628	620	621	628	630	648	59 52
	3	634	636	638	637	639	642	646	647	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	4	—	—	—	—	—	—	—	—	—	654	655	656	657	656	672	688	690	675	646	625	615	629	638	648	649	59 56
	5	648	641	645	647	651	647	644	647	652	653	652	653	655	656	672	680	676	660	638	610	600	608	621	630	645	59 40
	6	638	640	641	642	645	644	644	645	648	650	649	648	648	648	668	680	678	666	640	620	610	612	628	646	645	59 40
	7	654	645	642	640	641	639	639	640	643	644	642	640	638	640	654	670	677	672	652	640	630	628	640	650	646	59 44
	8	644	649	639	635	634	634	636	637	640	646	649	646	643	642	660	669	670	674	661	642	628	630	640	646	646	59 44
	9	650	642	641	644	650	645	642	644	648	648	645	640	636	640	656	662	663	663	655	640	638	647	650	649	647	59 48
	10	642	640	640	637	637	639	642	640	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	11	—	—	—	—	—	—	—	—	—	645	648	648	648	650	662	663	650	647	630	610	600	608	618	626	638	59 12
	12	632	640	646	643	643	643	644	644	646	646	643	642	641	640	667	672	663	643	613	590	592	600	610	630	636	59 04
	13	652	649	648	648	650	648	648	646	645	646	645	644	643	649	677	678	662	653	632	610	610	622	632	640	645	59 40
	14	640	637	632	635	641	640	640	639	640	642	642	639	637	640	660	658	650	645	626	610	606	620	638	650	638	59 12
	15	648	636	642	640	641	639	639	643	648	649	647	644	642	647	660	661	652	638	620	610	604	610	628	640	639	59 16
	16	648	641	648	645	644	645	647	647	648	647	643	642	642	650	664	668	660	641	624	614	604	610	624	630	641	59 24
	17	640	638	637	635	636	637	640	639	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	18	—	—	—	—	—	—	—	—	—	642	642	641	640	640	642	649	642	630	620	618	630	642	658	655	639	59 16
	19	660	656	652	646	643	645	648	644	642	642	640	642	644	648	652	650	640	619	600	600	600	604	610	618	635	58 59
	20	608	609	613	624	638	639	642	650	660	660	657	656	655	655	675	673	670	631	615	600	612	620	648	635	639	59 16
	21	662	650	638	643	650	653	658	658	660	665	668	669	670	670	674	671	660	638	613	605	607	602	615	630	647	59 48
	22	642	651	649	645	643	644	646	647	650	655	658	655	653	650	666	690	680	633	622	614	610	620	628	632	645	59 40
	23	646	649	642	643	646	648	652	654	658	659	658	657	657	657	671	682	672	657	640	620	620	630	640	643	650	1 00 00
	24	652	652	647	645	645	646	649	649	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	25	—	—	—	—	—	—	—	—	—	651	650	649	648	655	678	687	678	660	620	600	590	600	620	640	644	0 59 36
	26	650	648	642	640	640	640	642	645	650	649	645	643	642	650	671	678	671	660	628	604	600	610	620	632	642	59 28
	27	640	648	642	640	640	640	642	641	642	642	640	641	642	657	675	675	674	662	650	630	626	626	634	640	645	59 40
	28	650	648	641	639	639	639	640	640	642	642	640	640	640	655	677	682	670	655	642	627	632	640	636	639	646	59 44
	29	654	648	641	636	634	632	632	634	638	640	640	641	642	654	672	662	640	620	602	600	600	600	618	640	634	58 55
	30	650	639	639	636	635	637	640	640	642	647	650	650	650	657	662	652	634	610	595	582	590	600	617	635	633	58 51
	Means.....	1645	1644	1642	641	642	642	644	645	648	649	649	648	647	651	666	670	663	649	629	614	611	618	629	638	1643	
	Declination.....	59 40	59 36	59 28	59 24	59 28	59 28	59 36	59 40	59 52	59 56	59 56	59 52	59 48	60 04	61 04	61 21	60 52	59 56	58 35	57 35	57 23	57 51	58 35	59 12	.....	0·59·32
	Mean Hourly Variations from General Monthly Mean.....	8	4	-4	-8	-4	-4	4	8	20	24	24	20	16	32	92	109	80	24	-57	-117	-129	-101	-57	-20		

*The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right) = 4'03 \times 1{\cdot}000238 = 4'3096$ $\quad a + 7'6 = \rho = 0°42'37''2 + 0°7'6 = 0°49'43''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41		
				-1·6 *		0·6 *		-0·4 *		0·4 *		-0·4 *														
																										Arc.
1	1644	1648	1636	1632	1631	1635	1638	1638	1638	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		° ′ ″
2	—	—	—	—	—	—	—	—	—	1643	1648	1646	1644	1640	1658	1660	1650	1632	1620	1605	1600	1609	1618	1625	1635	0 58 59
3	640	646	639	636	636	639	640	644	648	649	650	649	648	652	680	684	658	640	630	613	607	610	622	634	641	59 24
4	647	644	636	631	630	636	640	640	640	642	644	643	642	649	668	674	657	628	610	598	595	607	617	627	635	58 59
5	635	632	626	627	632	634	634	640	646	647	648	645	642	655	674	665	642	618	608	604	610	627	642	660	637	59 08
6	664	651	639	633	631	635	638	639	640	641	642	642	642	643	660	660	658	637	630	618	602	620	642	656	640	59 20
7	662	646	638	631	627	628	628	632	636	642	648	648	648	650	660	652	640	612	600	600	602	618	638	640	634	58 55
8	660	661	640	638	640	641	641	643	646	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	643	640	641	642	646	660	672	660	636	618	610	616	631	639	648	642	59 28
10	641	641	640	637	637	641	643	645	648	648	648	648	649	648	660	668	666	652	638	625	632	633	628	637	644	59 36
11	644	639	638	636	638	640	640	644	648	648	648	648	649	650	652	652	648	632	621	615	615	624	627	635	639	59 16
12	639	643	642	639	640	641	640	641	642	643	644	646	648	659	670	667	654	639	625	608	610	623	637	641	641	59 24
13	640	637	633	631	632	633	632	634	636	639	642	642	643	654	668	660	650	625	610	595	600	611	626	637	634	58 55
14	648	647	634	634	638	638	636	637	638	639	640	641	642	654	670	670	650	628	616	600	598	602	600	604	633	58 51
15	626	638	632	633	638	640	640	641	642	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	641	640	641	642	650	665	670	658	630	610	602	599	608	610	620	634	58 55
17	630	631	628	627	630	635	638	640	642	645	648	649	650	662	678	677	662	642	630	617	613	622	627	632	640	59 20
18	632	638	633	632	635	641	646	647	648	644	640	641	642	651	670	672	657	622	590	575	577	589	603	624	631	58 43
19	633	638	626	627	632	637	640	641	642	651	660	661	662	670	686	670	660	645	628	614	620	626	652	650	645	59 40
20	650	650	657	648	643	643	642	651	660	655	650	654	659	670	664	672	652	630	610	605	592	599	631	638	643	59 32
21	642	652	650	643	640	643	644	644	644	647	650	650	650	660	680	682	672	648	632	612	602	616	634	643	645	59 40
22	644	645	639	640	645	647	648	649	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	651	652	651	650	671	687	683	673	650	631	615	610	617	629	628	646	59 44
24	640	647	644	640	639	642	644	645	647	648	648	649	650	653	680	691	687	667	649	632	625	624	622	624	647	59 48
25	632	633	639	635	634	638	640	642	644	644	644	646	648	652	668	671	660	645	632	616	608	609	621	634	639	59 16
26	649	643	637	635	637	640	642	644	646	648	650	650	650	659	678	682	672	648	615	607	620	632	639	650	645	59 40
27	657	650	639	635	634	635	635	647	658	658	658	659	661	670	680	686	670	645	627	607	593	608	620	635	644	59 36
28	648	650	651	644	640	644	646	648	650	651	651	653	655	670	683	685	670	644	616	599	598	610	622	638	644	59 36
29	650	650	639	634	632	637	640	642	645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	647	648	649	650	662	680	670	642	622	607	593	587	597	607	615	635	58 59
31	628	641	634	628	625	632	637	642	648	648	648	649	650	664	684	687	688	659	640	629	622	638	633	634	645	59 40
MAY 1852.																										
Means.....	1643	644	638	635	635	638	640	642	645	646	647	648	648	656	672	672	660	638	621	608	606	616	626	635	1640	
Declination	59 32	59 36	59 12	58 59	58 68	59 12	59 20	59 28	59 40	59 44	59 48	59 52	59 52	60 24	61 29	61 29	60 40	59 12	58 03	57 11	57 03	57 43	58 23	58 59	.....	0·59·20
Mean Hourly Variations from General Monthly Mean.	12	16	−8	−21	−21	−8	00	8	20	24	28	32	32	64	129	129	80	−8	−77	−129	−137	−97	−57	−21		
				-2·4 *		0·1 *		0·2 *		0.4 *		-0·99 *														
																										° ′ ″
1	1639	1638	1637	1635	1638	1639	1639	1640	1640	1641	1642	1644	1648	1658	1670	1677	1673	1656	1633	1620	1610	1612	1618	1624	1640	0 59 20
2	628	633	635	631	631	633	635	634	632	640	648	646	646	658	674	677	663	649	630	609	608	603	609	620	636	59 04
3	630	635	634	629	628	633	638	637	635	643	650	646	644	660	670	677	660	642	623	611	620	622	628	632	639	59 16
4	631	632	649	640	636	637	638	640	642	646	649	650	652	660	680	683	678	660	646	630	624	618	618	623	644	59 36
5	632	640	640	639	642	641	639	642	644	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	642	640	639	640	654	680	684	677	650	638	612	597	588	602	627	639	59 16
7	640	645	650	643	640	639	638	638	637	639	640	643	648	660	680	683	670	650	632	618	603	612	620	630	642	59 28
8	636	650	639	636	637	638	638	639	640	641	642	641	642	644	662	666	660	635	596	588	580	581	608	640	632	58 47
9	658	655	641	635	634	637	639	640	640	642	644	642	642	650	662	670	664	650	630	608	600	612	619	637	640	59 20
10	642	639	635	631	631	632	632	634	635	637	639	640	642	651	668	670	669	652	636	628	612	618	622	632	639	59 16
11	635	642	636	630	628	634	640	639	638	629	620	629	639	638	668	682	682	676	659	640	632	629	633	640	642	59 28
12	648	650	648	646	649	649	649	646	642	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	649	656	653	652	660	678	678	672	660	638	620	612	620	626	648	648	59 52
14	650	647	639	636	638	639	640	643	645	647	648	647	648	660	680	682	668	661	642	618	610	621	623	629	644	59 36
15	638	644	637	631	630	632	634	636	637	645	652	655	660	671	692	700	686	668	649	630	631	624	622	627	647	59 48
16	632	635	632	631	635	638	640	643	645	652	658	660	664	652	662	696	681	660	638	617	618	629	622	620	644	59 36
17	631	640	640	645	654	653	652	651	650	659	668	668	670	688	700	693	689	670	648	628	618	613	608	620	652	1 00 08
18	648	652	658	652	651	653	655	656	657	659	660	662	666	672	685	688	680	670	650	638	618	614	620	632	654	00 16
19	650	660	655	655	660	660	659	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	661	662	664	668	667	683	699	698	680	658	630	622	621	626	639	658	00 32
21	658	665	657	652	652	651	650	650	650	655	660	663	668	670	700	709	708	690	663	638	632	620	627	630	659	00 36
22	645	651	650	648	650	651	652	651	650	656	662	664	668	670	689	692	690	672	650	648	630	625	630	638	655	00 20
23	658	668	660	655	655	656	656	655	653	662	670	666	664	672	690	690	672	644	632	630	640	640	630	640	657	00 28
24	650	662	655	649	648	651	653	652	651	655	659	659	660	662	680	685	679	660	640	628	630	633	638	642	653	00 12
25	642	648	642	641	645	648	650	650	650	655	660	663	667	680	693	695	683	664	642	638	637	634	636	641	654	00 16
26	649	653	648	645	647	649	650	650	649	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	656	662	664	668	678	690	690	675	656	634	620	628	638	637	632	653	00 12
28	648	650	648	644	644	646	647	649	651	652	652	656	662	672	690	684	670	652	630	615	598	608	623	649	647	0 59 48
29	657	654	648	646	648	649	650	650	650	651	652	656	661	668	684	686	675	652	641	622	620	632	649	652	652	1 00 08
30	652	653	655	654	658	655	652	651	650	656	662	660	660	662	688	690	678	660	658	648	640	638	648	656	658	00 32
JUNE 1852.																										
Means.....	1643	648	645	641	643	644	645	645	645	649	652	653	656	663	681	686	677	659	640	624	618	619	625	635	1647	
Declination	59 32	59 52	59 40	59 24	59 32	59 36	59 40	59 40	59 40	59 56	60 08	60 12	60 24	60 52	62 05	62 25	61 49	60 36	59 20	58 15	57 51	57 55	58 19	58 59	.....	0·59·48
Mean Hourly Variations from General Monthly Mean...	−16	4	−8	−24	−16	−12	−8	−8	−8	8	20	24	36	64	137	157	121	48	−28	−93	−117	−113	−89	−49		

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right)=4'03\times 1000238=4'03096$ $\quad a+7'6=\rho=0°42'37''2+0°7''6=0°49'43''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
				−1·4 *		0·0 *		−0·2 *		0·9 *		−0·6 *														*Arc.*
1	1652	1651	1647	1647	1650	1655	1660	1659	1658	1660	1660	1661	1663	1671	1693	1700	1682	1676	1654	1652	1642	1640	1658	1658	1660	1 00 40
2	660	660	651	645	642	651	660	658	657	659	660	662	666	682	700	695	679	658	634	618	616	620	644	660	656	00 24
3	678	673	662	657	655	658	660	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	662	663	663	664	675	693	682	667	653	638	620	620	622	638	654	657	00 28
5	660	661	657	657	660	659	658	660	662	664	664	665	667	662	679	702	697	673	654	645	640	638	635	639	661	00 44
6	657	661	667	660	655	653	651	655	660	664	667	670	675	688	690	680	670	647	641	630	630	638	648	658	659	00 36
7	662	667	663	665	670	666	662	663	664	668	670	670	672	680	690	693	682	658	642	632	630	630	630	626	661	00 44
8	638	653	652	651	653	656	658	659	660	666	670	670	672	679	690	690	678	662	650	637	632	639	647	642	658	00 32
9	642	641	638	638	640	645	650	656	662	664	665	666	668	670	660	668	677	680	664	634	639	634	633	640	653	00 12
10	630	630	632	646	663	667	670	670	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	673	674	675	678	680	694	700	691	680	653	643	641	644	647	642	662	00 48
12	642	641	640	645	652	656	660	666	672	677	680	680	682	690	698	701	688	662	658	648	647	657	660	662	665	01 00
13	670	668	659	656	655	658	660	662	665	669	672	672	674	682	690	692	687	680	670	652	650	659	661	670	668	01 12
14	662	660	658	657	658	660	662	666	670	672	672	674	677	684	692	690	675	660	650	640	640	636	650	660	664	00 56
15	654	660	653	652	653	654	655	661	668	672	675	676	679	690	699	700	684	671	660	634	620	630	650	658	663	00 52
16	660	661	658	654	653	656	659	663	668	670	670	670	671	680	697	699	680	655	637	630	629	640	647	659	661	00 44
17	669	670	667	662	659	661	662	663	664	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	668	670	670	672	680	700	702	691	677	656	640	628	640	645	650	665	01 00
19	655	669	662	659	659	659	658	660	662	667	670	669	670	682	696	690	670	651	619	608	602	608	612	624	653	00 12
20	640	652	659	657	657	658	659	660	662	664	665	664	665	673	687	690	682	663	643	621	611	620	642	650	656	00 24
21	653	662	652	651	652	653	653	656	660	661	661	661	662	670	696	703	709	692	677	644	622	616	618	623	659	00 36
22	650	657	651	649	650	656	661	662	663	666	668	667	667	673	683	677	669	650	630	614	616	620	638	650	654	00 16
23	666	669	660	658	659	660	660	662	665	668	670	670	672	679	695	697	680	658	632	618	620	619	634	640	659	00 36
24	646	656	654	652	653	657	660	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	665	668	668	670	676	692	698	681	673	668	640	634	638	640	660	661	00 44
26	670	664	661	659	659	660	660	660	660	662	662	665	670	673	699	700	690	668	652	636	620	620	633	647	660	00 40
27	652	650	656	650	646	652	658	663	668	670	671	669	669	673	670	682	675	660	651	640	626	642	670	680	660	00 40
28	672	662	670	667	667	664	660	662	665	668	670	669	670	678	678	673	660	642	647	630	620	632	660	670	661	00 44
29	678	678	672	675	680	671	662	662	662	666	668	669	672	679	692	699	680	669	650	625	641	669	682	690	670	01 21
30	681	680	672	669	668	664	660	662	665	667	668	668	670	679	699	702	680	655	640	651	656	669	672	681	670	01 21
31																										
Means.....	658	660	657	655	656	658	659	661	664	667	668	669	671	678	690	692	681	664	649	634	630	635	646	654	1661	
Declination.	60°32″	60°40″	60°28″	60°20″	60°24″	60°32″	60°36″	60°44″	60°56″	61°08″	61°12″	61°17″	61°25″	61°53″	62°41″	62°49″	62°05″	60°56″	59°56″	58°55″	58°39″	58°59″	59°44″	60°16″	.....	1 00 44
Mean Hourly Variations from General Monthly Mean.	−12″	−4″	−16″	−24″	−20″	−12″	−8″	00″	12″	24″	28″	33″	41″	69″	117″	125″	81″	12″	−48″	−109″	−125″	−105″	−60″	−28″		

JULY 1852.

				−1·1 *		−0·99 *		−0·6 *		0·2 *		−0·2 *														
July 31	1690	1680	1671	1664	1659	1657	1657	1658	1660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1664	1667	1668	1670	1684	1701	1704	1688	1660	1632	1623	1627	1637	1650	1662	1664	1 00 56
2	679	680	662	658	656	657	660	661	664	665	665	667	670	681	702	660	690	672	651	649	648	650	661	662	665	01 00
3	669	664	657	653	651	651	652	655	659	664	668	669	670	680	702	702	685	651	640	630	638	640	647	660	661	00 44
4	662	666	659	653	650	652	655	657	660	663	666	667	668	680	700	697	682	662	650	651	640	634	639	648	661	00 44
5	659	649	647	643	642	644	647	651	657	663	669	669	670	685	705	698	683	671	660	651	648	650	658	660	662	00 48
6	669	653	650	648	649	653	658	659	662	664	665	667	670	680	693	690	681	659	642	632	640	640	643	650	659	00 36
7	654	662	660	655	652	654	658	658	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	664	668	669	670	678	690	690	672	645	617	607	612	618	630	645	654	00 16
9	658	663	654	652	652	656	661	662	665	664	662	666	670	678	703	720	712	688	660	645	647	650	648	655	666	01 04
10	662	658	655	651	650	653	658	659	662	664	665	667	670	672	694	699	672	651	626	606	620	626	630	649	655	00 20
11	659	662	650	649	651	655	660	661	664	666	668	670	673	680	709	712	709	678	645	638	637	642	647	660	664	00 56
12	672	668	660	658	659	659	661	663	666	667	668	668	668	679	692	681	660	630	608	610	620	625	632	648	655	00 20
13	660	661	652	652	654	656	660	655	652	656	659	659	660	670	690	685	662	642	630	628	625	633	643	648	654	00 16
14	660	658	650	648	649	648	648	650	654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	653	652	655	658	666	689	690	670	650	630	623	624	629	641	650	652	00 08
16	655	650	644	643	644	645	648	648	650	650	650	650	650	662	682	680	672	644	613	610	602	608	623	639	644	0 59 36
17	660	659	648	645	644	641	640	643	648	649	650	650	650	662	695	700	672	630	600	597	597	608	622	641	644	59 36
18	650	650	641	638	638	642	648	648	650	649	647	649	651	660	690	694	688	670	642	630	620	610	625	643	649	59 56
19	653	648	638	637	639	644	650	650	652	653	654	653	653	662	694	710	692	668	630	610	610	618	631	648	650	1 00 00
20	662	660	645	645	648	650	654	655	658	658	658	656	654	660	688	692	694	670	635	616	614	615	624	640	652	00 08
21	652	652	642	641	643	646	650	652	656	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	655	653	655	658	662	690	704	700	678	648	622	617	620	627	640	653	00 12
23	659	669	672	663	657	657	659	658	658	655	652	652	652	660	674	686	678	655	627	610	620	623	637	655	654	00 16
24	670	686	680	673	669	667	666	667	670	668	665	666	668	678	700	698	690	662	642	620	616	629	643	659	665	01 00
†25	675	675	668	662	659	659	661	660	660	660	660	659	658	650	†698	690	674	655	641	636	635	644	647	659	?	
26	670	670	669	668	670	663	658	657	658	656	654	661	668	675	696	696	680	660	657	640	633	640	650	662	663	00 52
27	670	682	675	669	665	662	661	659	658	659	660	662	665	677	701	702	690	669	653	639	633	646	653	672	666	01 04
28	685	672	671	668	667	661	655	658	662	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	665	668	668	668	680	700	698	662	640	617	618	632	648	662	670	662	00 48
30	672	661	658	656	657	658	660	660	662	664	665	663	662	674	702	700	680	671	648	633	635	635	640	656	661	00 44
31	666	660	659	654	652	655	660	659	660	661	662	661	660	675	700	708	688	652	640	626	622	628	638	650	658	00 32
Means.....	664	663	656	653	653	653	656	656	659	660	661	662	663	673	696	696	683	659	636	626	626	631	640	653	1657	
Declination	60°56″	60°52″	60°24″	60°12″	60°12″	60°12″	60°24″	60°24″	60°36″	60°40″	60°44″	60°48″	60°52″	61°33″	63°05″	63°06″	62°13″	60°36″	59°04″	58°23″	58°23″	58°43″	59°20″	60°12″	.....	1 00 28
Mean Hourly Variations from General Monthly Mean.	28″	24″	−4″	−16″	−16″	−16″	−4″	−4″	8″	12″	16″	20″	24″	65″	177″	177″	105″	8″	−84″	−125″	−125″	−105″	−68″	−16″		

AUGUST 1852.

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

† Found the Cobweb on the Magnet, therefore the Observations of 25th are rejected from the hourly and daily Means.

$a.\left(1+\frac{H}{F}\right) = 4{\cdot}03 \times 1{\cdot}000238 = 4{\cdot}03096$ for { Septr. $a + 7{\cdot}6 = \rho = 0{\cdot}42\ 37{\cdot}2 + 0{\cdot}7{\cdot}6 = 0{\cdot}49{\cdot}43{\cdot}2$ / Octr. $a + 7{\cdot}6 = \rho = 0{\cdot}41\ 8{\cdot}2 + 0{\cdot}7{\cdot}6 = 0{\cdot}48{\cdot}14{\cdot}2$ } East of North. Zero = 1497.

DECLINATION MAGNETOMETER.

SEPTEMBER 1852.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P M. h.m. 4 41	a.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41			
				0·1 *		−0·7 *		−0·2 *		0·4 *		0·0 *														Arc.
1	1657	1651	1649	1646	1643	1647	1652	1663	1674	1672	1670	1671	1672	1680	1699	1693	1680	1668	1650	1640	1636	1628	1637	1653	1660	° 1 00 40
2	666	660	653	656	658	657	658	658	658	660	662	662	662	674	702	709	689	675	656	636	630	622	637	656	661	00 44
3	663	662	658	659	660	660	662	661	660	663	665	666	666	670	681	700	685	672	632	622	620	629	645	658	659	00 36
4	679	670	670	664	658	653	650	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	660	670	670	670	680	690	690	680	662	642	631	630	642	659	670	662	00 48
6	677	661	661	660	659	658	659	658	658	660	661	666	670	674	691	698	689	670	659	650	640	640	648	659	664	00 56
7	668	660	658	661	663	665	668	666	664	666	668	668	668	672	700	708	683	666	632	614	618	622	638	660	661	00 44
8	668	660	665	664	662	661	661	662	664	663	662	664	665	645	672	682	667	650	640	620	610	614	620	639	653	00 12
9	640	630	626	623	619	624	630	633	637	639	640	639	638	642	657	665	648	640	620	616	620	630	640	660	636	0 59 04
10	667	668	652	649	645	640	637	636	635	643	650	652	653	660	670	664	640	622	610	602	630	638	650	662	645	59 40
11	670	640	642	637	631	630	630	632	635	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	643	650	653	655	658	671	665	650	629	610	600	611	620	640	652	640	59 20
13	654	640	634	636	638	637	638	641	644	646	648	649	649	658	680	682	678	660	640	615	604	609	630	648	644	59 36
14	654	643	640	639	638	638	639	639	640	641	642	644	645	650	680	688	675	657	635	610	590	600	620	636	641	59 24
15	642	640	639	639	638	638	640	640	640	641	642	640	638	645	670	680	672	669	642	612	610	610	620	634	641	59 24
16	640	632	630	634	638	638	639	638	638	638	638	635	632	634	652	654	648	658	658	623	612	616	622	636	637	59 08
17	640	643	651	648	645	643	642	641	640	654	668	664	660	662	660	655	640	630	620	610	604	610	614	628	640	59 20
18	632	632	638	638	637	637	638	638	638	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	638	638	639	639	635	655	660	659	649	634	629	630	622	640	648	639	59 16
20	656	647	650	654	658	658	659	656	654	642	630	630	630	635	653	658	650	643	634	628	620	627	630	642	643	59 32
21	635	631	630	635	640	638	638	639	640	640	640	636	632	640	651	662	651	648	649	630	629	631	638	640	639	59 16
22	652	658	661	653	645	643	642	640	639	642	644	642	640	641	662	670	661	650	639	620	620	622	642	651	645	59 40
23	650	648	645	643	641	641	643	642	642	648	654	652	650	652	672	670	657	642	636	620	618	618	624	630	643	59 32
24	640	642	651	646	640	639	640	643	647	645	642	645	647	640	649	652	640	630	620	620	610	620	640	648	639	59 16
25	650	641	642	640	638	639	642	641	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	640	640	639	638	640	661	672	660	642	632	615	609	630	646	650	641	59 24
27	640	633	614	612	610	609	610	609	609	615	620	620	620	622	660	668	655	635	620	605	606	616	630	640	624	58 15
28	633	622	621	621	620	619	620	618	617	624	630	627	624	626	642	643	627	617	611	610	610	612	624	631	623	58 11
29	630	619	620	620	620	621	623	621	620	625	630	630	630	645	640	645	630	618	606	590	600	606	630	630	623	58 11
30	630	626	632	631	630	631	633	634	635	635	635	633	630	639	650	652	652	635	618	600	600	618	620	630	630	58 39
Means.....	651	645	644	643	641	641	642	642	643	645	648	648	647	651	668	672	660	648	632	618	616	621	634	646	1644	
Declination.....	60 04	59 40	59 36	59 32	59 24	59 24	59 24	59 28	59 28	59 32	59 40	59 52	59 52	59 48	60 04	61 12	61 29	60 40	58 52	58 47	57 51	57 43	58 03	58 55	59 44	..... 0 59 36
Mean Hourly Variations from General Monthly Mean.	28	4	00	−4	−12	−12	−8	−8	−4	4	16	16	12	28	96	113	64	16	−49	−105	−113	−93	−41	8		

OCTOBER 1852.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P M. h.m. 4 41	a.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41			
				1·3 *		−0·4 *		0·99 *		0·1 *		−0·2 *														Arc.
1	1633	1628	1635	1634	1631	1634	1638	1640	1640	1638	1636	1635	1634	1632	1640	1650	1648	1642	1634	1612	1602	1600	1618	1628	1632	° 0 57 18
2	630	632	634	637	638	635	633	636	637	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
3	—	—	—	—	—	—	—	—	—	639	641	640	640	640	657	661	660	660	648	632	615	618	640	650	640	57 51
4	647	638	632	632	629	630	631	632	630	629	628	629	630	633	640	638	635	618	601	609	610	634	638	640	630	57 10
5	632	627	639	636	630	630	631	637	640	636	632	631	630	634	640	650	650	642	632	630	625	629	633	630	634	57 26
6	630	621	627	629	628	629	630	632	632	631	630	630	630	636	642	648	659	635	620	610	618	628	637	639	631	57 14
7	632	630	632	636	638	639	640	641	640	636	632	631	630	629	640	648	646	634	620	610	610	610	629	630	632	57 18
8	640	632	641	642	641	640	640	641	640	638	637	634	632	628	630	640	640	632	619	610	610	618	624	638	633	57 22
9	638	637	638	639	638	640	642	644	644	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	644	644	642	640	640	665	675	671	659	640	622	628	631	640	645	644	58 07
11	643	639	644	648	650	650	650	651	650	647	644	640	637	638	652	670	672	659	638	625	638	631	633	648	646	58 15
12	650	645	644	647	647	648	649	650	650	649	648	646	644	644	650	651	653	654	648	633	635	643	650	652	647	58 19
13	648	640	645	649	650	649	648	650	650	648	645	646	647	644	644	650	651	654	640	633	645	649	653	659	647	58 19
14	658	644	645	646	644	645	646	648	648	649	649	647	645	640	652	660	665	660	647	643	646	650	656	656	650	58 31
15	643	636	640	642	641	642	643	647	650	649	647	643	640	637	642	650	653	652	648	645	650	650	658	659	646	58 15
16	650	650	649	650	649	648	648	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
17	—	—	—	—	—	—	—	—	—	651	652	649	647	655	678	690	682	680	658	650	654	665	673	673	658	59 03
18	675	670	652	652	650	651	652	656	658	656	653	651	650	653	664	673	660	643	612	610	629	632	649	659	650	58 31
19	660	650	652	652	650	650	650	651	650	651	651	648	645	642	660	667	670	652	629	620	633	650	652	661	650	58 31
20	670	662	658	655	649	654	660	658	655	653	650	645	640	640	644	652	652	650	638	632	641	652	665	668	652	58 39
21	673	658	651	654	654	656	658	654	648	648	647	645	643	646	644	650	655	642	633	630	636	640	650	652	649	58 27
22	652	652	652	652	650	650	650	652	652	651	650	648	647	640	650	660	660	649	630	624	640	650	651	661	649	58 27
23	660	646	648	649	648	649	650	653	654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
24	—	—	—	—	—	—	—	—	—	652	650	650	650	652	655	648	648	642	638	636	632	641	653	662	649	58 27
25	659	642	645	648	649	648	648	650	650	651	651	650	650	645	654	670	693	685	662	648	652	652	658	672	656	58 55
26	680	671	672	673	672	674	677	680	682	680	678	676	674	672	680	698	702	700	682	668	670	680	683	688	680	1 00 32
27	687	675	678	679	678	683	688	689	690	688	686	684	682	680	680	690	695	680	672	670	677	685	688	690	683	00 44
28	682	680	679	679	677	675	673	673	672	672	672	670	668	664	667	682	690	676	660	650	658	668	668	673	672	00 00
29	672	669	669	670	668	673	679	681	682	685	687	685	684	677	680	678	676	666	660	659	672	683	670	670	675	00 12
30	660	660	665	666	664	671	678	675	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
31	—	—	—	—	—	—	—	—	—	675	680	676	672	666	633	668	672	678	668	677	685	688	693	695	672	00 00
Means.....	654	647	649	650	649	650	651	653	652	652	651	649	647	646	653	662	664	656	641	634	639	645	652	658	1650	
Declination.....	58 47	58 19	58 27	58 31	58 27	58 31	58 35	58 43	58 39	58 39	58 35	58 27	58 19	58 15	58 43	59 19	59 27	58 55	57 55	57 26	57 47	58 11	58 39	59 03		..... 0 58 31
Mean Hourly Variations from General Monthly Mean.	16	−12	−4	00	−4	00	4	12	8	8	4	−4	−12	−16	12	48	56	24	−36	−65	−44	−20	8	32		

* The numbers in these columns are not observed ; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right)=4'03\times1{\cdot}000238=4'03096$ $\quad a+7'6=\rho=0°41'8\cdot2+0'7\cdot6=0°48'14\cdot2$ East of North. Zero=1497.

DECLINATION MAGNETOMETER.

NOVEMBER 1852.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
				0·2		-0·99		0·99		0·4		-0.4														
1	1689	1678	1678	1678	1678	1682	1688	1680	1670	1672	1674	1677	1680	1672	1680	1682	1687	1680	1672	1673	1677	1681	1680	1677	1679	° 1 00 28
2	681	681	677	675	672	671	672	673	672	671	670	670	670	672	678	690	700	696	675	672	670	661	657	660	674	00 08
3	667	670	672	672	671	670	670	674	677	670	662	661	660	660	670	680	690	692	671	658	664	668	666	668	670	0 59 52
4	668	668	673	674	675	674	674	674	672	671	670	667	664	664	672	682	690	688	670	666	674	684	677	671	673	1 00 04
5	670	670	676	677	678	678	679	672	662	666	670	670	670	668	676	682	689	690	685	682	673	662	670	685	675	00 12
6	680	675	682	679	675	676	679	675	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	--	—	674	678	674	670	672	672	692	708	704	693	685	687	680	672	672	680	00 32
8	670	668	674	675	675	676	678	678	675	674	672	669	667	670	668	688	702	710	700	690	690	688	679	685	680	00 32
9	682	672	674	674	674	674	675	675	674	675	676	673	670	670	662	671	680	687	680	670	679	683	680	676	675	00 12
10	672	669	670	673	676	674	674	675	674	672	670	670	670	668	660	667	683	690	695	688	683	690	683	680	676	00 16
11	670	668	672	675	678	677	677	684	690	679	668	666	665	660	660	670	680	690	683	691	702	690	687	688	678	00 24
12	692	688	691	687	683	687	692	688	683	688	692	677	662	658	656	667	680	682	670	661	677	680	697	704	681	00 36
13	692	690	696	694	692	685	680	681	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	681	682	681	680	672	669	680	692	690	680	672	680	689	683	685	684	00 48
15	682	679	684	682	680	679	680	680	679	679	678	675	672	670	662	670	680	682	673	670	678	684	683	682	678	00 24
16	686	681	683	681	679	679	680	678	674	671	668	664	660	670	670	685	698	694	688	690	708	704	695	684	682	00 40
17	673	678	683	684	685	682	680	682	683	678	672	671	670	668	662	668	676	684	686	690	683	687	682	689	679	00 28
18	690	687	691	691	690	689	690	688	685	683	680	675	670	662	662	670	688	702	710	690	675	678	689	692	684	00 48
19	688	679	682	681	680	679	679	680	680	678	675	672	670	670	668	672	678	681	673	662	667	669	670	680	676	00 16
20	685	678	680	680	680	679	680	681	680	—	--	—	—	—	—	—	—	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	—	—	—	680	680	677	674	670	660	669	680	689	687	681	675	680	670	675	678	00 24
22	680	672	676	677	677	677	678	679	678	676	674	672	670	655	660	672	690	694	688	679	676	674	681	672	676	00 16
23	670	672	676	675	674	676	680	678	675	673	670	670	670	665	660	660	682	680	692	700	677	678	676	678	675	00 12
24	673	671	676	678	680	678	678	681	682	681	680	675	670	660	648	660	680	688	690	680	668	676	679	683	676	00 16
25	678	671	673	672	671	672	674	673	670	670	670	664	658	652	640	642	650	665	680	663	666	660	661	667	665	0 59 31
26	668	669	675	675	675	677	680	680	678	679	680	675	670	668	659	657	669	678	700	701	707	715	689	693	680	1 00 32
27	690	680	681	681	681	680	680	681	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	679	678	674	670	670	660	662	678	680	680	675	679	682	679	672	677	00 20
29	683	678	678	682	686	681	678	680	680	680	680	677	675	670	658	660	662	668	670	674	687	705	710	696	679	00 28
30	680	678	681	682	683	681	680	681	680	678	676	669	662	653	634	638	650	672	680	680	684	702	718	710	676	00 16
Means.....	679	676	679	679	679	678	679	679	677	676	675	672	669	666	663	671	682	687	683	679	680	683	681	682	1677	
Declination.....	6 02	60 16	60 28	60 28	60 28	60 24	60 28	60 28	60 20	60 16	60 12	60 00	59 48	59 35	59 23	59 56	60 40	61 00	60 44	60 28	60 32	60 44	60 30	60 40	.....	1 00 20
Mean Hourly Variations from General Monthly Mean.	8	-4	8	8	8	4	8	8	00	-4	-8	-20	-32	-45	-57	-24	20	40	24	8	12	24	16	20		

DECEMBER 1852.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
				0·6 *		—0·6 *		0·4 *		0·2 *		0·4 *														
1	1700	1698	1700	1696	1691	1686	1683	1682	1681	1677	1672	1667	1662	1660	1652	1660	1670	1670	1680	1690	1698	1692	1700	1686	1681	° 1 00 36
2	670	677	680	680	687	692	693	695	692	688	684	680	674	668	666	652	658	665	680	698	710	720	730	732	710	688	01 04
3	708	702	701	697	691	689	688	687	685	682	678	674	670	670	658	650	655	661	661	668	668	680	690	684	679	00 28
4	682	688	688	686	682	681	682	685	687	--	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	679	670	665	660	661	656	650	660	660	672	684	690	698	700	696	678	00 24
6	690	681	679	680	680	680	682	683	683	691	699	693	687	680	670	667	677	685	694	708	700	702	707	690	687	01 00
7	690	691	689	690	689	689	690	692	694	687	680	679	678	670	667	668	676	676	680	689	682	690	680	673	683	00 44
8	681	681	679	681	682	681	682	686	690	690	690	680	670	670	660	665	688	695	690	690	696	702	700	700	685	00 52
9	692	687	690	690	689	686	684	683	682	678	674	667	660	655	633	626	641	658	680	696	705	692	688	687	676	00 16
10	702	691	702	696	689	685	683	682	681	677	672	671	669	660	653	650	644	660	678	680	690	700	708	708	681	00 36
11	700	680	698	689	678	680	683	682	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	676	672	666	660	650	647	642	650	665	680	690	690	710	700	694	678	00 24
13	694	689	689	692	694	692	692	691	690	681	672	668	663	658	647	638	650	660	678	700	708	708	710	711	662	00 40
14	704	693	702	696	688	688	690	686	682	680	678	671	664	668	660	657	668	675	682	685	696	690	680	682	682	00 40
15	690	688	682	682	680	678	678	678	678	675	672	671	670	665	662	662	670	680	685	690	700	688	681	688	679	00 28
16	690	685	680	680	678	676	675	676	677	678	678	676	673	670	668	670	684	692	690	688	688	692	688	680	680	00 32
17	680	684	680	678	675	676	679	676	673	671	668	664	660	658	658	654	658	660	662	664	667	670	680	681	670	0 59 52
18	680	685	684	683	680	678	678	679	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	676	672	671	670	662	658	670	673	680	678	672	685	680	688	690	677	1 00 20
20	688	680	680	681	680	679	679	679	679	677	674	673	672	670	660	660	670	675	674	670	693	693	690	690	678	00 24
21	685	674	680	680	679	678	678	677	676	674	672	668	664	660	655	659	668	670	670	668	660	662	668	683	671	0 59 56
22	682	678	678	677	674	675	677	677	676	675	674	672	670	669	660	649	655	665	684	682	680	684	680	688	674	1 00 08
23	690	680	680	679	677	677	679	680	681	681	680	679	677	655	626	640	640	660	672	675	682	680	680	680	672	00 00
24	685	679	683	682	680	677	676	675	674	676	677	671	664	660	661	660	662	670	665	659	664	660	664	670	671	0 59 56
25	673	674	672	673	672	671	672	671	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	670	670	667	663	658	655	660	670	678	680	678	676	680	675	670	671	59 56
27	672	671	670	672	672	670	670	670	670	668	666	664	662	657	653	652	663	679	689	686	682	695	690	690	672	1 00 00
28	702	682	684	683	681	679	679	677	674	672	670	667	663	658	635	630	638	667	690	699	680	676	680	682	673	00 04
29	690	696	693	692	689	691	695	698	700	695	690	683	676	660	641	643	659	688	671	659	645	660	680	696	679	00 28
30	700	684	684	683	680	678	678	676	673	672	670	668	665	660	655	653	676	695	702	700	697	699	703	702	681	00 36
31	694	686	681	681	680	678	678	678	678	674	670	669	668	662	658	650	659	670	672	672	667	658	670	687	672	00 00
Means.....	689	685	685	685	682	681	682	681	681	678	676	672	668	663	654	653	663	673	680	683	686	688	689	689	1678	
Declination.....	61 08	60 52	60 52	60 52	60 40	60 36	60 40	60 36	60 36	60 24	60 16	60 00	59 43	59 23	58 47	58 43	59 23	60 04	60 32	60 44	60 56	61 04	61 08	61 08	.....	1 00 24
Mean Hourly Variations from General Monthly Mean...	44	28	28	28	16	12	16	12	12	00	-8	-24	-41	-61	-97	-101	-61	-20	8	20	32	40	44	44		

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot.}\ v. = \cdot0003139 \times \text{Cot.}\ 75°15' = \cdot00008264$ sec. 3·3963 = Correction for 1° Faht.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.

do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

JANUARY 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				1·8 *		0·6 *		−0·9 *		−0·2 *		−0·2 *																
1	1054	1076	1118	1104	1087	1079	1070	1088	1107	1103	1100	1093	1087	1078	1069	1048	1021	1008	983	1005	1018	1042	1060	1082	1066	70	1136	1·000653
2	1117	1096	1086	1087	1084	1083	1081	1075	1070	1071	1072	1074	1076	1078	1058	1030	1002	956	912	888	894	936	991	1024	1035	62	1097	0975
3	1039	1040	1032	1039	1043	1059	1074	1061	1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	1070	1090	1116	1142	1159	1130	1088	1048	1012	990	1040	1062	1072	1104	1158	1072	55	1127	0727
5	1180	1197	1161	1139	1114	1117	1119	1124	1130	1124	1118	1111	1105	1100	1082	1072	1014	1010	1000	1000	1010	1032	1054	1084	1092	53	1145	0578
6	1088	1096	1149	1139	1125	1103	1080	1086	1094	1087	1080	1071	1062	1080	1060	1037	1002	977	968	970	990	1014	1042	1070	1061	66	1127	0727
7	1070	1074	1081	1087	1090	1087	1083	1075	1068	1070	1072	1051	1050	1042	1054	990	942	893	868	850	904	970	1010	1050	1022	73	1095	0991
8	1064	1067	1069	1071	1070	1075	1078	1072	1068	1061	1055	1057	1060	1077	1060	1040	1008	950	918	920	920	976	1010	1010	1032	55	1087	1058
9	1082	1070	1080	1092	1100	1135	1169	1143	1118	1118	1119	1118	1118	1112	1090	1062	1047	1021	1018	998	1002	1030	1064	1110	1084	28	1112	0851
10	1147	1140	1119	1120	1117	1117	1115	1107	1100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	1119	1138	1133	1128	1108	1092	1051	1040	998	1020	970	998	1020	1040	1050	1083	23	1106	0901
12	1078	1100	1116	1114	1108	1111	1112	1093	1076	1082	1088	1084	1080	1069	1050	1037	1027	1000	949	952	942	979	993	1030	1053	26	1079	1124
13	1062	1108	1116	1114	1108	1109	1109	1093	1079	1089	1100	1104	1108	1088	1070	1048	1010	980	948	929	919	930	979	1010	1050	38	1088	1050
14	1060	1079	1074	1079	1080	1077	1072	1065	1060	1050	1040	1040	1040	1032	1018	994	960	945	920	912	917	923	951	966	1015	57	1072	1181
15	980	1006	1019	1026	1030	1034	1036	1023	1012	1010	1008	1004	1000	978	948	925	899	885	872	857	880	920	931	950	968	68	1036	1479
16	970	995	1010	1014	1015	1012	1007	1003	1000	995	991	983	975	950	917	899	881	850	823	828	840	877	905	933	945	75	1020	1611
17	965	980	978	1007	1032	1035	1036	1063	1092	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	1055	1018	1014	1010	1002	964	920	892	868	855	870	910	942	960	974	977	75	1052	1347
19	990	991	991	997	999	970	939	895	853	847	842	854	867	885	945	894	836	882	780	1190	1330	1360	1338	1274	990	90	1080	1116
20	1360	1389	1279	1272	1262	1272	1280	1303	1328	1253	1178	1193	1208	1206	1190	1154	1101	1040	1038	1080	1128	1120	1138	1178	1206	59	1265	0·999586
21	1160	1204	1210	1207	1201	1186	1170	1172	1175	1163	1152	1143	1125	1145	1090	1068	1018	968	902	949	935	975	1039	1094	1103	51	1154	1·000504
22	1108	1110	1052	1210	1364	1413	1460	1408	1358	1325	1293	1267	1242	1218	1173	1132	1073	998	1002	1020	1056	1100	1170	1160	1196	25	1221	0·999951
23	1190	1312	1399	1431	1460	1431	1400	1384	1370	1358	1347	1328	1310	1270	1226	1190	1122	1070	1030	1040	1090	1140	1210	1238	1264	6	1270	9545
24	1240	1228	1218	1226	1230	1221	1211	1207	1205	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	1211	1218	1224	1230	1245	1200	1182	1142	1100	1060	1032	1062	1106	1138	1178	1180	4	1184	1·000256
26	1192	1194	1172	1169	1162	1159	1155	1141	1129	1124	1120	1110	1100	1090	1062	1019	1008	1028	1069	990	1060	1088	1132	1194	1111	31	1142	0603
27	1170	1157	1156	1155	1150	1128	1104	1099	1096	1100	1105	1109	1114	1110	1083	1059	1046	994	940	954	980	994	1048	1052	1079	39	1118	0802
28	1080	1078	1079	1087	1092	1090	1087	1079	1072	1065	1059	1054	1050	1040	1032	1010	950	963	880	788	864	930	980	1022	1019	58	1077	1141
29	1025	1030	1021	1031	1038	1030	1021	1020	1021	1020	1020	1028	1037	1030	1027	1002	954	918	874	870	892	910	987	1080	995	85	1080	1116
30	1115	1144	1140	1142	1140	1116	1090	1097	1106	1098	1090	1070	1050	1035	1020	988	932	976	954	964	910	1002	1068	1060	1054	92	1146	0570
31																												
Means.....	1099	1114	1113	1122	1127	1125	1121	1114	1109	1103	1097	1094	1092	1086	1065	1036	1000	973	945	956	981	1015	1052	1078	1067			
Temp.Corrections	34	36	38	41	42	46	49	52	54	57	58	61	62	65	72	77	74	68	61	53	46	41	37	35	.....	52		
Corrected Means.	1133	1150	1151	1163	1169	1171	1170	1166	1163	1160	1155	1155	1154	1151	1137	1113	1074	1041	1006	1009	1027	1056	1089	1113	.....	.....	1119	
Mean Hourly Variations from General Monthly Mean. =·00	−14 -0116	−31 -0256	−32 -0265	−44 -0364	−50 -0413	−52 -0430	−51 -0421	−47 -0389	−44 -0364	−41 -0339	−36 -0298	−36 -0298	−35 -0289	−32 -0265	−18 -0149	6 0050	45 0372	78 0644	113 0934	110 0909	92 0761	63 0521	30 0248	6 0050	$1+\frac{\Delta X}{X}=$	.....	.....	1·000777

JANUARY 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	786	785	785	785	785	784	783	782	782	782	782	781	781	780	780	780	780	781	784	787	791	792	792	792	7843			
2	791	790	789	789	789	789	789	788	788	787	787	786	785	785	783	782	781	781	783	785	786	789	790	790	7868			
3	790	789	788	788	788	788	788	788	788	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	788	789	788	788	788	786	786	786	788	790	791	792	794	793	792	7889			
5	792	791	790	789	789	789	789	788	788	788	788	788	788	787	786	786	788	788	790	791	792	793	793	793	7893			
6	793	790	790	789	788	787	786	786	786	785	785	784	784	783	780	778	780	781	782	785	787	789	789	789	7857			
7	788	788	787	785	784	783	782	781	780	780	780	780	780	780	779	778	778	780	782	786	789	790	791	791	7834			
8	790	789	789	788	788	788	788	787	787	786	786	786	786	785	784	785	787	788	790	792	793	795	797	798	7888			
9	797	796	796	795	795	795	795	795	795	795	795	794	793	793	793	794	796	797	799	800	802	802	803	804	7966			
10	805	803	801	800	800	800	800	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	799	799	797	796	793	790	790	791	792	795	799	801	802	803	802	7983			
12	802	800	800	800	800	800	800	797	795	795	796	795	795	794	793	791	792	794	796	798	799	798	800	802	7972			
13	801	800	800	799	798	797	796	795	794	792	790	790	790	790	789	788	788	789	791	792	794	794	796	797	7938			
14	798	798	796	795	794	792	790	790	790	788	787	786	785	784	782	779	779	780	782	786	787	789	791	792	7883			
15	792	792	791	790	790	789	788	787	786	784	782	781	780	780	778	775	777	779	780	784	788	788	788	790	7850			
16	790	790	789	788	788	785	783	783*	783	782	782	781	780	780	778	774	777	779	780	782	784	785	784	786	7830			
17	788	788	788	788	788	786	784	782	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	781	782	781	780	780	779	776	776	778	780	781	782	785	787	788	7829			
19	788	787	787	785	783	781	780	779	779	776	773	772	772	771	771	770	771	773	777	779	780	782	783	784	7785			
20	786	788	788	789	790	790	790	790	790	789	788	787	786	785	781	780	780	782	785	789	790	792	792	793	7875			
21	794	793	792	791	790	790	790	789	789	788	788	789	790	790	787	784	784	786	788	790	791	793	796	798	7900			
22	797	797	797	798	799	799	799	799	800	799	799	798	797	796	792	790	792	795	797	799	800	801	802	803	7977			
23	804	804	804	804	805	805	805	803	802	801	801	801	801	801	800	798	799	800	802	804	807	808	810	810	8033			
24	810	810	809	809	809	808	807	806	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	803	802	801	801	800	798	795	796	798	800	802	804	804	806	807	8038			
26	806	805	804	802	801	799	798	795	793	793	793	792	791	790	788	786	788	790	793	796	798	800	800	801	7959			
27	800	800	799	798	798	796	795	794	794	793	792	791	791	790	787	782	785	788	790	792	795	797	799	800	7936			
28	800	798	797	796	796	793	791	790	789	788	788	786	785	782	780	778	778	779	780	783	787	789	790	790	7880			
29	791	791	791	789	788	784	781	780	780	779	778	776	775	772	770	766	767	770	774	777	779	784	790	790	7801			
30	790	790	789	786	783	781	780	777	775	774	773	772	772	771	768	765	768	772	774	778	780	782	783	784	7778			
31																												
Means.....	7950	7943	7937	7929	7925	7915	7907	7897	7892	7883	7879	7870	7866	7858	7839	7822	7832	7849	7871	7895	7915	7930	7942	7948	7896			

N. B.—Decreasing numbers denote an increase in the Horizontal Force. In the upper table the numbers are tenths of scale divisions; in the lower table tenths of Fahrenheit degrees, and in the Means hundredths of degrees.

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75^\circ 15' = \cdot00008264$ scd. $3''3963$ = Correction for 1 Faht.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.

do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

FEBRUARY 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				5·9 *		0·9 *		4·7 *		1·7 *		—1·9 *																
January 31	1054	1110	1141	1141	1130	1120	1109	1119	1120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	1104	1085	1069	1057	1031	1052	1019	1017	978	980	1000	990	992	1028	1054	1063	86	1149	1·000545
2	1098	1062	1088	1085	1071	1068	1063	1065	1057	1057	1054	1049	1048	1057	1059	1050	1004	940	868	863	887	933	987	1026	1022	80	1102	0933
3	1032	1037	1038	1036	1022	1046	1068	1069	1060	1046	1029	1036	1047	1040	1028	1002	964	950	932	910	920	977	1012	1028	1014	75	1089	1041
4	1040	1059	1080	1101	1110	1104	1097	1083	1060	1058	1052	1056	1063	1066	1048	1009	998	976	938	917	919	954	1019	1062	1036	56	1092	1016
5	1071	1068	1098	1109	1108	1115	1121	1110	1090	1093	1092	1071	1054	1071	1050	1018	974	950	950	940	957	992	1052	1089	1052	25	1077	1141
6	1100	1118	1112	1126	1128	1134	1139	1153	1158	1158	1155	1145	1139	1142	1119	1042	1084	1034	983	981	994	1040	1055	1110	1098	3	1101	0942
7	1150	1152	1183	1201	1208	1197	1184	1196	1198	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	1177	1152	1131	1113	1128	1118	1082	1053	1031	992	984	990	1038	1032	1050	1114	-5	1109	0876
9	1081	1101	1140	1132	1113	1116	1117	1118	1110	1106	1098	1089	1084	1071	1058	1038	996	933	925	905	940	962	992	1030	1052	7	1059	1289
10	1065	1092	1098	1105	1100	1101	1100	1090	1070	1067	1060	1058	1059	1057	1040	1010	962	923	899	881	868	887	922	970	1020	34	1054	1331
11	1010	1023	1040	1051	1050	1050	1048	1044	1030	1037	1040	1032	1028	1009	980	950	898	847	807	774	779	819	851	892	962	53	1015	1652
12	935	980	1001	1010	1008	1011	1012	1012	1002	1002	998	992	989	1000	1010	992	973	934	871	844	839	895	941	890	964	52	1016	1644
13	963	996	1003	1024	1034	1047	1058	1074	1080	1063	1042	1035	1032	1022	1000	978	934	900	769	790	811	838	870	900	969	40	1009	1702
14	940	969	991	1015	1028	1035	1041	1054	1058	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	1140	1218	1198	1182	1304	1400	1430	1448	1447	1420	1455	1473	1380	1285	1374	1220	18	1238	0·999810
16	1360	1363	1390	1394	1387	1340	1292	1290	1278	1264	1247	1241	1238	1260	1232	1180	1142	1109	1050	1093	1100	1157	1252	1290	1248	-2	1246	9744
17	1340	1260	1281	1266	1239	1255	1269	1269	1260	1248	1232	1243	1257	1250	1218	1082	1030	1103	1167	917	1145	1850	1870	1620	1278	-16	1262	9611
18	1566	1792	1733	1821	1898	1809	1718	1664	1600	1586	1568	1472	1380	1399	1438	1348	1303	1240	1299	1249	1310	1305	1345	1290	1506	-34	1472	7876
19	1298	1451	1428	1465	1490	1456	1420	1424	1418	1447	1472	1659	1850	1819	1700	1650	1530	1584	1698	1695	1850	1760	1827	1890	1595	-39	1556	7182
20	1827	1785	1690	1661	1620	1606	1590	1540	1480	1448	1413	1411	1412	1410	1385	1320	1247	1209	1152	1188	1222	1240	1266	1300	1434	-42	1392	8537
21	1275	1320	1350	1466	1570	1514	1456	1433	1400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	1352	1300	1301	1306	1300	1278	1240	1180	1113	1098	1078	1106	1149	1190	1247	1293	-34	1259	9636
23	1280	1268	1288	1279	1259	1265	1270	1260	1240	1253	1262	1254	1250	1255	1241	1230	1197	1107	1078	1049	1112	1152	1239	1270	1223	-16	1207	1·000065
24	1258	1249	1238	1244	1239	1240	1240	1242	1235	1233	1227	1217	1210	1205	1190	1150	1082	987	932	924	964	1052	1137	1178	1161	0	1161	0447
25	1172	1182	1188	1194	1188	1189	1189	1190	1182	1186	1187	1187	1190	1165	1130	1086	1020	958	910	885	1020	1079	1154	1231	1128	6	1134	0669
26	1270	1246	1230	1247	1252	1258	1262	1276	1280	1273	1262	1253	1247	1220	1210	1184	1160	1111	1087	1067	1070	1101	1127	1162	1202	-18	1184	0256
27	1190	1200	1187	1200	1201	1265	1328	1290	1242	1242	1238	1282	1330	1308	1292	1204	1193	1108	1144	1203	1200	1255	1248	1255	1234	-30	1204	0091
28	1295	1272	1280	1275	1258	1283	1307	1273	1230	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	1232	1230	1224	1221	1236	1180	1144	1129	1060	1010	1033	1070	1127	1202	1229	1200	-33	1167	0397
Means.....	1187	1206	1212	1226	1228	1225	1220	1214	1198	1195	1189	1188	1191	1193	1178	1138	1101	1061	1038	1025	1061	1117	1156	1177	1164			
Temp. Corrections	-8	-5	-1	2	2	5	6	9	10	14	17	20	21	24	32	36	32	27	19	10	4	-2	-8	-12	.....	11		
Corrected Means.	1179	1201	1211	1228	1230	1230	1226	1223	1208	1209	1206	1208	1212	1217	1210	1174	1133	1088	1057	1035	1065	1115	1148	1165	.....	.....	1175	
Mean Hourly Variations from General Monthly Mean. = ·00	-4 -0033	-26 -0215	-36 -0298	-53 -0438	-55 -0454	-55 -0454	-51 -0421	-48 -0397	-33 -0273	-34 -0281	-31 -0256	-33 -0273	-37 -0306	-42 -0348	-35 -0289	1 0008	42 0348	87 0719	118 0975	140 1157	110 0909	60 0496	27 0223	10 0083	.....	$1+\frac{\Delta X}{X}=$	.....	1·000331

FEBRUARY 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
January 31	785	785	784	782	781	780	780	777	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	777	780	779	778	777	773	770	770	773	778	781	784	787	788	790	7798			
2	790	790	789	788	787	785	784	781	779	779	779	779	779	777	772	773	774	775	779	780	781	783	786	788	7815			
3	789	788	786	784	783	783	783	782	782	781	780	780	780	779	778	776	777	778	781	785	788	788	789	790	7829			
4	790	790	789	788	788	788	788	788	788	788	788	788	788	787	782	780	782	783	788	790	790	794	798	800	7885			
5	800	800	799	798	798	798	798	797	797	797	797	795	793	793	791	790	792	793	797	799	802	805	806	808	7976			
6	808	808	804	803	803	803	803	803	804	802	800	800	800	800	800	800	800	801	805	808	810	811	812	813	8042			
7	814	811	810	809	809	809	809	809	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	807	804	803	802	801	800	799	800	801	805	808	809	810	812	812	8064			
9	811	810	809	808	808	807	806	804	803	801	800	800	800	798	796	796	797	798	800	802	803	804	806	806	8030			
10	806	805	802	801	801	800	799	797	796	794	792	791	790	788	787	784	787	789	790	794	796	797	798	799	7951			
11	799	799	798	797	796	794	792	791	790	789	788	787	787	783	782	780	780	781	784	787	788	790	791	792	7894			
12	793	793	793	792	792	791	791	790	790	789	789	788	788	788	786	783	784	788	787	789	790	791	795	796	7898			
13	796	796	795	794	794	793	793	793	794	793	792	791	790	790	788	786	787	789	791	795	797	798	800	800	7931			
14	800	800	800	799	798	797	797	797	798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	799	800	799	799	798	794	795	797	798	800	801	804	807	808	809	7998			
16	810	810	809	809	809	808	808	808	808	805	802	801	800	800	800	798	799	800	803	805	807	809	810	813	8055			
17	815	811	810	810	810	809	809	809	809	808	807	807	807	807	804	804	804	807	809	811	813	814	817	817	8095			
18	817	813	813	816	820	820	820	820	820	818	817	814	812	811	810	809	808	809	810	815	816	816	817	818	8150			
19	819	819	819	819	820	820	820	819	818	816	814	813	812	811	810	810	812	813	815	818	820	820	821	821	8166			
20	821	820	819	820	821	820	820	819	818	817	817	815	813	811	810	810	810	811	814	817	820	822	824	826	8173			
21	824	824	821	819	818	819	820	819	818	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	815	813	812	811	810	806	803	806	808	810	812	814	817	818	820	8149			
23	820	819	815	814	813	812	811	810	810	810	810	809	809	807	803	802	802	803	805	806	807	810	810	810	8095			
24	810	810	809	809	809	808	807	806	806	806	806	804	803	802	799	798	799	800	802	804	805	807	806	808	8051			
25	808	808	808	807	806	804	803	802	802	801	800	799	799	799	796	794	797	800	803	805	807	810	810	811	8033			
26	811	811	811	810	810	809	809	809	809	808	808	807	807	807	806	807	808	808	810	812	815	816	819	820	8103			
27	820	819	818	816	815	814	814	813	812	811	810	810	811	811	809	805	807	809	813	815	817	820	822	822	8139			
28	823	822	821	821	822	821	820	819	818	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	814	810	809	809	809	807	807	808	810	810	811	812	816	818	819	8148			
Means.....	8072	8064	8052	8045	8044	8037	8034	8025	8022	8010	8001	7992	7987	7978	7956	7944	7955	7970	7996	8020	8038	8057	8072	8083	8019			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = 0003139 \times \text{Cot. } 75.15 = \cdot 00008264$ scd. 3·3963 = Correction for 1 Faht.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.
do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

MARCH 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·8		−0·4		−0·7		0·2		−1·7																
1	1257	1213	1231	1221	1202	1205	1208	1206	1206	1188	1170	1178	1190	1192	1170	1120	1094	1067	1054	1120	1108	1123	1152	1183	1169	-21	1148	1·000554
2	1236	1249	1230	1235	1230	1234	1239	1229	1220	1217	1214	1211	1212	1210	1190	1142	1069	1020	1002	1030	1087	1139	1179	1192	1176	-24	1152	0520
3	1189	1189	1201	1210	1209	1211	1214	1213	1214	1212	1210	1203	1200	1194	1184	1141	1080	1028	992	981	1030	1108	1176	1209	1158	-41	1117	0810
4	1204	1200	1212	1224	1226	1238	1250	1233	1217	1224	1230	1236	1246	1200	1180	1130	1062	1004	989	1029	1088	1151	1198	1239	1175	-68	1107	0893
5	1230	1223	1219	1255	1281	1300	1319	1310	1303	1299	1294	1265	1240	1240	1232	1160	1090	1006	1008	1092	1138	1206	1228	1250	1216	-81	1135	0661
6	1263	1259	1273	1305	1328	1320	1313	1313	1315	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	1287	1258	1244	1234	1220	1200	1180	1122	1096	1159	1172	1244	1308	1367	1399	1257	-68	1189	0215
8	1398	1371	1408	1380	1342	1316	1290	1264	1240	1232	1223	1500	1780	1940	1633	1400	1255	1180	1108	1120	1122	1189	1220	1288	1342	-185	1157	0480
9	1298	1300	1346	1340	1324	1316	1308	1214	1122	1121	1120	1563	2010	2210	1370	1350	1279	1165	1097	1076	1100	1184	1260	1297	1324	-212	1112	0851
10	1328	1299	1304	1313	1313	1265	1218	1198	1180	1141	1102	1665	2231	2210	1175	1203	1136	1115	1076	1087	1100	1176	1242	1295	1307	-199	1108	0885
11	1293	1291	1292	1291	1280	1279	1278	1248	1220	1195	1170	1696	2225	—	1610	1390	1235	1137	1125	1084	1107	1133	1180	1254	1305	-204	1101	0942
12	1317	1463	1482	1436	1380	1590	1400	1344	1290	1283	1275	1821	2370	2030	1604	1410	1295	1220	1190	1185	1241	1278	1326	1388	1434	-207	1227	0·999901
13	1392	1369	1343	1351	1350	1342	1335	1333	1332	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	1291	1250	1718	2190	1745	1520	1379	1295	1236	1235	1167	1176	1227	1255	1308	1381	-206	1175	1·000330
15	1385	1400	1367	1358	1340	1350	1360	1313	1268	1274	1280	1673	2070	1900	1560	1425	1275	1173	1138	1157	1204	1273	1278	1293	1380	-230	1150	0537
16	1333	1332	1332	1340	1339	1344	1350	1329	1310	1295	1280	1758	2240	2147	1707	1490	1334	1256	1222	1256	1324	1398	1450	1463	1443	-259	1184	0256
17	1460	1419	1409	1429	1440	1395	1350	1329	1310	1297	1283	1667	2055	2150	1679	1476	1380	1230	1256	1267	1318	1389	1414	1422	1451	-265	1186	0240
18	1382	1370	1380	1378	1367	1358	1350	1343	1338	1332	1325	1778	2234	2108	1760	1553	1389	1300	1218	1253	1267	1294	1340	1349	1449	-271	1178	0306
19	1361	1332	1329	1335	1331	1301	1272	1295	1320	1316	1312	1304	1300	1300	1282	1223	1148	1070	1052	1126	1138	1184	1230	1237	1254	-131	1123	0766
20	1239	1272	1299	1294	1280	1310	1340	1338	1338	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	1298	1258	1272	1290	1282	1268	1218	1149	1078	1099	1070	1159	1213	1262	1278	1246	-106	1140	0620
22	1289	1299	1318	1330	1332	1322	1312	1293	1276	1280	1284	1280	1280	1290	1269	1200	1155	1076	1041	1040	1103	1170	1254	1320	1242	-124	1118	0802
23	1349	1338	1319	1323	1318	1320	1322	1316	1311	1307	1302	1299	1300	1294	1290	1251	1187	1120	1084	1110	1170	1226	1249	1250	1265	-122	1143	0595
24	1238	1233	1248	1261	1264	1267	1270	1264	1259	1253	1246	1247	1252	1258	1224	1162	1087	1025	998	1017	1099	1172	1226	1251	1201	-98	1103	0925
25	1248	1243	1252	1267	1273	1277	1281	1282	1284	1282	1280	1273	1270	1262	1244	1190	1105	1040	1000	1016	1020	1092	1154	1175	1200	-118	1082	1099
26	1161	1140	1129	1132	1125	1120	1116	1132	1150	1332	1514	1485	1460	1496	1468	1420	1350	1290	1252	1314	1368	1432	1448	1452	1304	-142	1162	0438
27	1437	1439	1417	1419	1412	1400	1388	1372	1357	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	1352	1346	1351	1360	1360	1340	1291	1220	1168	1165	1210	1278	1339	1397	1409	1343	-164	1179	0297
29	1386	1397	1378	1390	1392	1391	1390	1380	1371	1348	1324	1331	1342	1350	1317	1276	1208	1170	1206	1249	1280	1299	1317	1320	1326	-166	1160	0455
30	1344	1332	1371	1380	1379	1390	1401	1390	1380	1370	1360	1348	1340	1310	1302	1267	1212	1162	1122	1150	1197	1255	1319	1378	1311	-161	1150	0537
31	1419	1418	1415	1395	1366	1364	1363	1346	1330	1311	1292	1308	1328	1340	1370	1349	1290	1230	1227	1283	1319	1349	1383	1399	1341	-156	1185	0248
Temp. Corrections	1312	1311	1315	1318	1312	1308	1305	1291	1276	1272	1267	1432	1602	1548	1376	1289	1204	1135	1115	1136	1177	1234	1278	1307	1297			
Means	-144	-136	-129	-121	-113	-107	-103	-96	-91	-84	-78	-246	-415	-293	-163	-135	-131	-133	-135	-139	-144	-146	-150	-151	.....	-149		
Corrected Means	1168	1175	1186	1197	1199	1201	1202	1195	1185	1188	1189	1186	1187	1255	1213	1154	1073	1002	980	997	1033	1088	1128	1156	.....	.....	1148	
Mean Hourly Variations from General Monthly Mean. =.00	-20 -0165	-27 -0223	-38 -0314	-49 -0405	-51 -0421	-53 -0438	-54 -0446	-47 -0389	-37 -0306	-40 -0331	-41 -0339	-38 -0314	-39 -0323	-107 -0884	-65 -0537	-6 -0050	75 0619	146 1207	168 1388	151 1248	115 0950	60 0496	20 0165	-8 -0066	.....	$1+\frac{\Delta X}{X}=$		1·000554

MARCH 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	819	819	817	815	813	811	810	810	810	810	810	809	808	806	803	800	804	807	809	810	815	817	819	820	8113			
2	820	820	818	816	814	812	811	810	810	810	810	809	808	806	803	802	806	808	810	811	814	819	820	822	8120			
3	822	821	820	818	816	815	815	815	815	814	813	812	812	812	810	810	811	814	818	820	822	827	828	829	8170			
4	830	829	828	826	824	822	821	821	821	821	822	821	820	820	819	818	820	822	823	829	832	833	837	838	8249			
5	838	837	835	832	830	830	830	829	828	827	827	826	825	822	820	820	822	824	827	829	831	832	834	837	8288			
6	836	834	832	830	828	826	825	824	823	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	823	824	822	820	819	818	817	818	820	821	822	828	829	830	830	8250			
8	830	828	827	826	825	824	824	822	820	820	820	914	1009	1035	910	875	863	854	850	850	850	850	850	850	8594			
9	849	847	844	841	839	835	832	819	807	802	797	938	1080	1101	861	867	867	864	861	859	855	852	851	850	8674			
10	849	844	842	839	837	832	827	819	812	805	798	967	1137	1028	825	821	833	858	861	861	860	858	857	854	8635			
11	854	850	847	843	840	836	832	825	819	813	807	968	1130	—	914	880	869	860	857	853	851	851	851	852	8652			
12	852	846	844	841	838	831	824	823	822	819	816	967	1118	960	887	859	850	852	853	853	855	857	858	858	8660			
13	856	850	849	845	841	840	840	839	839	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	829	820	933	1046	919	880	868	862	858	859	859	860	860	862	861	8656			
15	860	855	853	851	849	844	840	838	837	835	833	945	1058	950	896	880	869	865	865	866	866	864	863	862	8727			
16	860	858	855	852	849	845	842	841	840	834	828	972	1116	1010	908	884	876	870	868	868	869	869	868	867	8812			
17	866	861	859	855	851	859	850	844	838	834	830	959	1089	1032	920	886	877	874	870	870	870	870	869	868	8830			
18	865	859	858	855	852	850	849	847	845	843	842	972	1102	1003	927	902	887	882	875	870	867	863	862	860	8849			
19	859	857	854	852	850	849	848	846	845	843	842	841	840	840	840	836	833	835	837	838	839	841	842	842	8437			
20	842	840	839	838	838	837	837	837	837	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	834	832	831	830	830	828	828	830	833	836	839	842	843	845	848	8364			
22	848	848	845	842	840	840	840	840	840	838	837	836	836	836	835	836	838	840	843	844	848	848	849	850	8415			
23	850	849	847	844	842	841	840	840	840	840	840	840	840	839	838	838	840	842	842	840	839	838	837	837	8410			
24	837	834	833	831	830	830	830	830	831	830	830	832	834	834	832	830	831	833	835	837	840	840	843	844	8338			
25	843	842	840	840	840	840	840	840	840	840	840	838	837	835	832	833	834	836	839	840	840	843	850	851	8397			
26	850	849	848	846	844	843	842	842	842	842	842	843	845	845	843	842	843	846	848	851	853	856	858	859	8468			
27	860	859	856	853	850	850	850	849	849	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	850	852	851	850	850	848	848	850	851	853	857	859	860	862	863	8533			
29	863	862	860	857	855	854	853	852	851	850	850	850	850	848	847	847	849	851	852	855	858	860	860	860	8539			
30	860	859	858	855	852	851	851	850	850	850	850	849	848	847	844	844	847	848	850	855	858	860	860	860	8523			
31	860	858	856	853	850	849	849	848	848	847	847	846	845	843	842	842	846	849	851	855	858	860	861	864	8511			
Means	8473	8450	8431	8406	8384	8366	8353	8333	8318	8297	8281	8774	9271	8912	8530	8449	8435	8443	8449	8460	8474	8481	8491	8495	8490			

* The numbers in these columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75°15 = \cdot00008264$ scd. $3'3963$ = Correction for 1 Falt.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.
do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

APRIL 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P. M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				5·9 *		0·7 *		1·9 *		0·4 *		−0·7 *																
1	1430	1442	1461	1462	1452	1448	1442	1430	1414	1406	1397	1383	1370	1385	1342	1335	1264	1210	1168	1218	1244	1310	1378	1428	1367	−170	1197	1·000149
2	1488	1469	1439	1455	1460	1492	1523	1489	1452	1441	1430	1419	1410	1378	1370	1325	1257	1190	1174	1226	1302	1354	1404	1412	1390	−160	1230	0·999876
3	1388	1360	1387	1402	1405	1394	1381	1376	1368	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	1374	1380	1369	1359	1340	1320	1292	1259	1180	1178	1240	1240	1388	1400	1450	1343	−170	1173	1.000347
5	1474	1436	1400	1474	1536	1488	1439	1387	1332	1331	1330	1339	1349	1357	1328	1288	1252	1177	1158	1140	1216	1284	1358	1352	1343	−166	1177	0314
6	1344	1331	1346	1364	1370	1361	1350	1336	1318	1320	1322	1316	1311	1300	1280	1253	1183	1110	1044	1084	1140	1188	1260	1256	1270	−144	1126	0735
7	1310	1294	1310	1312	1302	1292	1281	1271	1257	1259	1260	1245	1231	1241	1265	1241	1169	1100	1044	960	1062	1140	1270	1282	1225	−153	1072	1181
8	1324	1309	1292	1333	1362	1329	1294	1315	1333	1351	1368	1359	1352	1350	1340	1292	1227	1150	1112	1156	1250	1300	1348	1370	1301	−165	1136	0653
9	1374	1389	1428	1436	1432	1415	1397	1380	1360	1349	1337	1302	1268	1257	1272	1242	1223	1180	1174	1192	1220	1257	1290	1320	1312	−176	1136	0653
10	1347	1358	1369	1364	1348	1330	1310	1307	1301	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	1315	1328	1334	1342	1340	1308	1267	1202	1158	1140	1160	1240	1342	1290	1290	1295	−182	1113	0843
12	1299	1298	1329	1335	1329	1340	1349	1331	1310	1310	1310	1318	1327	1307	1291	1268	1170	1111	1061	1128	1180	1246	1266	1302	1271	−171	1100	0950
13	1330	1360	1379	1385	1379	1362	1344	1329	1310	1304	1297	1288	1280	1267	1230	1217	1191	1137	1168	1260	1270	1348	1390	1348	1299	−155	1144	0587
14	1318	1312	1332	1337	1330	1325	1318	1315	1308	1299	1290	1285	1281	1272	1250	1229	1170	1148	1102	1142	1186	1252	1290	1258	1265	−153	1112	0851
15	1316	1318	1350	1344	1327	1316	1303	1282	1257	1264	1270	1265	1261	1290	1285	1250	1203	1193	1150	1168	1250	1300	1320	1330	1276	−154	1122	0768
16	1348	1354	1400	1390	1368	1376	1382	1368	1350	1339	1327	1318	1310	1300	1272	1242	1172	1099	1080	1115	1174	1240	1300	1312	1289	−167	1122	0768
17	1310	1311	1313	1326	1328	1339	1348	1352	1352	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	1332	1311	1304	1298	1290	1242	1189	1147	1080	1032	1148	1248	1348	1380	1417	1281	−172	1109	0876
19	1420	1395	1379	1387	1384	1384	1382	1369	1348	1334	1320	1309	1300	1297	1282	1260	1192	1104	1054	1149	1313	1322	1390	1360	1310	−181	1129	0710
20	1354	1369	1543	1697	1840	1750	1658	1607	1552	1541	1530	1523	1517	1465	1460	1445	1490	1520	1590	1648	1678	1780	1790	1832	1591	−215	1376	0·998669
21	1840	1820	1800	1775	1738	1711	1682	1643	1600	1555	1510	1523	1538	1544	1515	1447	1372	1368	1343	1351	1387	1434	1500	1548	1564	−237	1327	9075
22	1578	1576	1544	1547	1539	1513	1486	1488	1486	1497	1508	1482	1457	1420	1461	1442	1358	1360	1408	1490	1558	1600	1636	1690	1505	−248	1257	9653
23	1610	1607	1589	1572	1543	1538	1532	1481	1427	1439	1450	1460	1472	1480	1439	1390	1337	1310	1294	1380	1458	1484	1466	1484	1468	−240	1228	9893
24	1528	1521	1489	1496	1491	1485	1478	1486	1490	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	1470	1450	1448	1447	1442	1436	1420	1360	1317	1290	1290	1320	1362	1402	1410	1430	−239	1191	1·000199
26	1428	1449	1442	1433	1412	1431	1448	1446	1440	1436	1431	1425	1420	1417	1400	1373	1300	1258	1222	1256	1290	1328	1358	1374	1384	−236	1148	0554
27	1400	1433	1459	1459	1447	1444	1439	1426	1410	1408	1405	1398	1393	1390	1388	1368	1328	1258	1230	1230	1260	1338	1374	1380	1378	−238	1140	0620
28	1430	1439	1428	1436	1432	1423	1413	1413	1410	1405	1400	1390	1382	1370	1359	1318	1250	1200	1198	1209	1248	1302	1338	1359	1356	−238	1118	0802
29	1380	1382	1369	1372	1364	1362	1358	1361	1360	1354	1347	1347	1349	1360	1328	1293	1230	1176	1194	1218	1260	1290	1302	1365	1322	−239	1083	1091
30	1448	1470	1445	1429	1401	1410	1418	1411	1400	1414	1428	1417	1408	1380	1340	1290	1213	1156	1185	1221	1293	1316	1323	1372	1358	−239	1119	0793
Means.....	1416	1415	1424	1435	1435	1425	1414	1400	1383	1379	1374	1368	1363	1355	1339	1307	1251	1202	1184	1222	1280	1341	1378	1396	1354			
Temp. Corrections	-222	-215	-207	-203	-200	-194	-190	-185	-182	-178	-175	-171	-169	-166	-165	-168	-174	-181	-193	-204	-212	-219	-224	-226	.....	-193		
Corrected Means..	1194	1200	1217	1232	1235	1231	1224	1215	1201	1201	1199	1197	1194	1189	1174	1139	1077	1021	991	1018	1068	1122	1154	1170	.....	.....	1161	
Mean Hourly Variations from General Monthly Mean. = ·00	-33	-39	-56	-71	-74	-70	-63	-54	-40	-40	-38	-36	-33	-28	-13	22	84	140	170	143	93	39	7	-9				
	-0273	-0323	-0463	-0586	-0611	-0578	-0521	-0446	-0331	-0331	-0314	-0298	-0273	-0231	-0108	0182	0694	1157	1405	1182	0769	0323	0058	-0074	.....	$1+\frac{\Delta X}{X}=$	.....	1·000447

APRIL 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	863	860	859	857	856	855	854	852	851	850	850	850	850	850	849	850	851	853	857	858	860	861	863	864	8551			
2	863	860	858	857	856	854	853	852	851	850	850	847	845	841	840	841	845	849	852	854	856	858	859	859	8521			
3	859	853	852	851	851	851	851	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	852	855	853	852	851	851	852	852	856	858	861	864	865	865	865	8550			
5	865	862	860	858	857	855	854	852	850	850	850	850	850	848	848	849	850	850	853	855	856	858	858	858	8540			
6	858	857	856	853	850	849	849	845	842	841	841	840	840	840	838	838	840	843	847	850	852	855	856	858	8474			
7	858	858	857	853	850	847	845	843	842	839	837	837	837	842	843	849	850	850	854	858	860	862	865	866	8501			
8	865	861	859	857	855	854	854	852	850	850	850	848	847	845	845	846	848	848	851	855	860	862	864	863	8537			
9	863	862	860	859	859	858	857	855	853	852	852	851	850	850	850	850	852	855	854	860	862	865	868	869	8569			
10	868	868	861	860	860	860	860	860	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	858	856	853	851	850	850	851	853	857	858	860	861	863	863	863	8585			
12	862	862	860	859	859	857	856	854	853	852	851	851	851	850	847	847	850	851	854	857	860	862	862	862	8554			
13	862	860	858	856	855	851	848	846	845	843	841	840	840	839	840	841	847	850	854	858	860	860	862	862	8508			
14	862	860	859	856	854	852	850	849	848	846	844	842	840	838	838	839	841	846	850	852	854	858	859	862	8500			
15	860	860	857	855	853	850	847	844	842	841	840	840	840	840	840	844	848	850	852	857	860	860	863	863	8503			
16	863	860	860	859	858	855	852	851	850	849	848	847	846	847	847	849	850	850	854	858	860	862	862	862	8541			
17	862	860	859	858	857	855	854	852	851	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	851	851	851	851	847	847	848	849	850	856	859	861	866	870	870	8556			
19	870	867	863	862	861	856	852	851	850	848	846	846	847	849	850	850	852	857	860	865	870	874	878	878	8584			
20	878	875	872	872	873	871	870	868	867	865	863	861	860	860	858	858	860	861	866	870	874	878	880	882	8684			
21	882	880	875	876	878	877	877	876	876	872	869	869	869	869	865	862	863	867	872	878	882	885	887	889	8748			
22	888	884	880	880	880	879	879	878	878	877	877	873	870	868	867	868	869	870	877	880	883	888	890	890	8780			
23	890	885	880	880	880	877	874	873	873	872	871	870	869	867	867	868	869	871	876	878	880	883	882	882	8757			
24	882	880	879	878	877	876	875	874	874	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	873	872	871	871	870	870	870	871	872	876	878	878	879	880	881	8753			
26	881	880	878	876	875	873	872	871	871	870	870	870	869	868	869	870	873	876	879	880	880	882	883		8744			
27	883	881	879	878	878	877	877	875	873	872	871	870	869	867	867	869	870	870	873	877	879	880	882	882	8750			
28	882	881	878	877	877	875	874	873	872	871	870	869	868	867	868	869	870	872	877	879	881	882	884	884	8750			
29	882	880	879	878	878	877	876	874	873	872	872	871	870	869	868	868	870	872	875	878	880	881	882	882	8753			
30	882	880	879	878	877	876	876	875	875	873	872	871	870	870	869	870	870	872	875	877	879	880	881	880	8753			
Means.....	8705	8683	8660	8647	8640	8622	8610	8594	8585	8573	8565	8554	8547	8540	8535	8544	8562	8583	8618	8650	8674	8695	8710	8715	8617			

*The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75^\circ\cdot15 = \cdot00008264$ $\quad$ scd. $3'3963 =$ Correction for 1° Fahr. $\quad$ Zero for Magr. 1497 at Ther. $88^\circ\cdot8$ Corrected Zero 1215.

do for Ther. $80^\circ\cdot5$ or Standard $80^\circ\cdot0$

HORIZONTAL FORCE MAGNETOMETER.

MAY 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				6·7 *		0·9 *		2·1 *		−0·2 *		1·1 *																
1	1407	1468	1469	1469	1455	1472	1488	1461	1430	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	1410	1390	1386	1380	1371	1352	1300	1249	1192	1160	1197	1242	1277	1313	1343	1362	-216	1146	1·000570
3	1357	1337	1338	1345	1339	1369	1398	1375	1348	1336	1325	1325	1322	1320	1284	1200	1162	1123	1098	1130	1140	1184	1220	1238	1276	-197	1079	1124
4	1240	1240	1261	1278	1282	1286	1288	1295	1298	1282	1266	1264	1260	1245	1192	1120	1040	972	950	1001	1068	1120	1170	1165	1191	-161	1030	1529
5	1160	1160	1180	1229	1264	1268	1270	1307	1340	1313	1287	1288	1287	1268	1236	1188	1120	1067	1121	1072	1108	1158	1210	1272	1216	-153	1063	1256
6	1285	1282	1281	1292	1289	1302	1314	1310	1302	1315	1328	1316	1302	1296	1280	1218	1166	1087	1057	1108	1148	1207	1325	1318	1258	-164	1094	1000
7	1337	1372	1351	1334	1304	1295	1285	1288	1286	1263	1240	1242	1242	1247	1226	1212	1142	1100	1088	1118	1143	1307	1322	1340	1254	-180	1074	1165
8	1399	1479	1439	1446	1440	1425	1409	1406	1399	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	1374	1350	1357	1362	1338	1292	1238	1202	1172	1138	1210	1229	1308	1352	1390	1340	-229	1111	0860
10	1412	1426	1399	1408	1403	1402	1400	1386	1368	1354	1340	1331	1320	1328	1320	1298	1260	1252	1199	1175	1206	1224	1270	1345	1326	-237	1089	1041
11	1380	1372	1361	1381	1388	1386	1382	1382	1378	1372	1366	1364	1360	1348	1322	1300	1218	1222	1212	1230	1272	1300	1336	1359	1333	-248	1085	1074
12	1368	1372	1387	1401	1402	1385	1366	1365	1360	1350	1340	1336	1330	1318	1270	1228	1190	1162	1202	1210	1240	1276	1321	1357	1314	-238	1076	1149
13	1370	1366	1389	1396	1389	1385	1380	1381	1378	1373	1368	1365	1360	1342	1320	1276	1214	1228	1210	1267	1310	1380	1420	1404	1345	-273	1072	1181
14	1382	1392	1396	1400	1390	1390	1388	1386	1380	1374	1368	1364	1358	1361	1348	1320	1268	1225	1220	1250	1288	1330	1355	1370	1346	-284	1062	1264
15	1380	1408	1407	1413	1405	1398	1390	1383	1372	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	1348	1325	1323	1318	1308	1272	1220	1163	1118	1100	1112	1127	1190	1255	1297	1293	-261	1032	1512
17	1319	1322	1322	1335	1334	1337	1338	1326	1310	1312	1314	1309	1302	1290	1250	1230	1202	1172	1180	1211	1268	1320	1362	1383	1294	-273	1021	1603
18	1380	1390	1393	1408	1410	1428	1445	1443	1436	1428	1420	1421	1419	1418	1380	1368	1310	1277	1238	1260	1290	1330	1407	1421	1380	-287	1093	1008
19	1387	1373	1359	1383	1393	1407	1420	1403	1382	1366	1350	1360	1368	1370	1370	1326	1262	1297	1319	1407	1420	1488	1585	1541	1389	-291	1098	0967
20	1540	1590	1631	1592	1539	1541	1542	1498	1450	1444	1438	1439	1437	1440	1410	1392	1407	1348	1340	1372	1419	1440	1534	1510	1471	-291	1180	0289
21	1501	1499	1494	1476	1445	1442	1437	1426	1410	1414	1418	1414	1408	1418	1404	1380	1352	1304	1322	1419	1432	1463	1460	1482	1426	-282	1144	0587
22	1450	1440	1443	1446	1435	1403	1370	1367	1360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1385	1410	1407	1401	1385	1340	1290	1232	1187	1176	1218	1281	1331	1376	1432	1357	-275	1082	1099
24	1433	1432	1454	1449	1430	1422	1413	1445	1472	1443	1414	1403	1390	1370	1352	1313	1278	1237	1216	1262	1261	1289	1371	1409	1373	-287	1086	1066
25	1439	1438	1410	1418	1413	1415	1415	1406	1392	1386	1381	1377	1370	1378	1357	1338	1303	1256	1220	1209	1248	1291	1349	1403	1359	-291	1068	1215
26	1431	1410	1412	1418	1410	1411	1411	1403	1390	1390	1390	1385	1378	1352	1332	1280	1250	1252	1209	1264	1342	1460	1551	1589	1380	-298	1082	1099
27	1590	1580	1561	1543	1512	1529	1545	1515	1480	1465	1450	1463	1473	1440	1406	1402	1474	1398	1281	1310	1339	1429	1470	1516	1465	-300	1165	0413
28	1531	1569	1617	1585	1540	1536	1530	1516	1498	1489	1480	1482	1482	1466	1439	1388	1373	1337	1314	1315	1372	1420	1486	1500	1469	-316	1153	0512
29	1480	1462	1469	1476	1469	1474	1478	1472	1462	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	1441	1420	1416	1410	1398	1356	1317	1279	1258	1247	1261	1281	1316	1367	1400	1392	-320	1072	1181
31	1419	1410	1424	1423	1409	1404	1397	1393	1384	1382	1380	1380	1378	1376	1358	1341	1298	1264	1249	1265	1330	1388	1408	1420	1370	-309	1061	1273
Means.....	1399	1407	1410	1413	1403	1404	1404	1398	1387	1377	1368	1366	1362	1354	1326	1288	1247	1212	1195	1225	1262	1319	1369	1392	1345			
Temp.Corrections	-282	-276	-272	-265	-261	-258	-255	-253	-251	-247	-245	-240	-237	-231	-226	-226	-231	-240	-251	-263	-276	-285	-288	-289	.....	-256		
Corrected Means.	1117	1131	1138	1148	1142	1146	1149	1145	1136	1130	1123	1126	1125	1123	1100	1062	1016	972	944	962	986	1034	1081	1103	.....	.....	1089	
Mean Hourly Variations from General Monthly Mean. = ·00	−28	−42	−49	−59	−53	−57	−60	−56	−47	−41	−34	−37	−36	−34	−11	27	73	117	145	127	103	55	8	−14				
	-0231	-0348	-0405	-0488	-0438	-0471	-0496	-0463	-0388	-0339	-0281	-0306	-0298	-0281	-0091	0223	0603	0967	1198	1050	0851	0454	0066	-0116	.....	$1+\frac{\Delta X}{X}=$	.....	1·001041

MAY 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	880	880	880	878	876	876	876	875	875	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	871	867	865	864	862	860	859	859	859	860	860	862	865	866	868	8685			
3	869	869	868	865	863	862	862	862	862	861	861	860	860	859	858	857	857	860	861	865	867	868	868	866	8629			
4	863	859	858	857	856	855	854	853	852	851	850	850	850	850	848	846	847	847	848	850	853	855	855	853	8525			
5	852	852	851	850	850	850	850	849	848	848	848	847	846	846	844	844	847	849	850	852	856	858	858	858	8501			
6	858	857	855	853	852	852	852	852	852	851	850	849	848	847	847	848	850	852	855	857	860	860	861	863	8534			
7	864	864	863	861	860	859	858	857	856	854	852	851	850	849	849	849	851	852	858	860	866	868	870	871	8580			
8	871	871	870	867	865	865	865	865	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	867	870	870	870	870	868	868	870	873	878	880	885	888	889	890	8725			
10	890	890	887	886	885	882	880	879	878	876	875	872	869	864	862	860	862	862	866	869	870	872	875	879	8746			
11	878	877	876	875	875	875	876	875	874	873	872	871	871	870	870	870	874	878	883	889	890	894	894	890	8779			
12	883	881	880	879	878	876	874	872	870	870	870	869	868	867	865	866	868	870	875	877	880	885	888	890	8750			
13	890	890	888	886	885	883	881	880	880	880	880	879	879	878	876	878	880	882	885	890	897	901	900	898	8853			
14	896	892	890	890	890	890	890	889	888	887	887	884	882	880	880	878	880	882	888	890	897	900	900	900	8888			
15	899	897	895	892	890	886	883	882	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	880	878	877	876	872	869	868	870	871	875	880	882	886	888	888	8819			
17	889	889	889	887	885	883	882	882	882	881	880	880	880	880	880	878	880	882	886	890	893	898	898	899	8855			
18	900	898	895	892	890	890	890	889	889	888	888	886	884	881	880	880	880	882	888	890	894	898	898	898	8895			
19	898	892	892	891	890	890	890	889	888	887	887	886	885	883	882	881	883	887	890	893	898	903	905	906	8907			
20	902	898	898	895	892	891	891	890	890	889	888	886	885	883	880	879	882	887	890	892	896	897	898	897	8907			
21	894	891	889	888	887	887	887	886	886	884	883	881	880	880	878	879	880	884	890	896	900	901	901	900	8880			
22	890	890	889	888	887	884	882	882	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	884	886	884	883	880	879	879	880	883	885	887	895	896	896	896	8861			
24	896	896	894	892	890	890	890	890	890	889	888	885	882	880	880	880	881	885	887	891	895	899	899	900	8895			
25	900	900	897	893	890	890	890	889	889	887	885	884	883	881	880	880	881	886	890	895	899	901	902	903	8906			
26	903	900	899	898	897	894	891	891	891	890	890	889	888	883	880	881	883	888	890	897	900	900	901	901	8927			
27	900	900	898	895	892	891	891	891	892	890	889	888	888	887	883	884	884	888	890	897	900	908	908	909	8935			
28	908	903	900	899	898	898	898	897	896	893	891	891	892	890	889	890	891	894	897	900	907	910	910	909	8980			
29	908	907	906	906	906	905	904	902	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	897	895	893	892	890	887	888	889	890	895	899	902	906	908	908	8993			
31	908	904	902	901	900	899	898	896	894	892	890	890	890	889	888	888	890	892	895	898	900	900	901	901	8961			
Means.....	8880	8864	8850	8832	8819	8809	8802	8794	8789	8777	8769	8757	8748	8731	8716	8715	8730	8756	8790	8825	8863	8891	8899	8900	8804			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = 0003139 \times \text{Cot. } 75.15 = \cdot 00008264$ scd. 3·3963 = Correction for 1 Faht.

Zero for Magr. 1497 at Ther. 88·8 Corrected Zero 1215.

do. for Ther. 80·5 or Standard 80·0.

HORIZONTAL FORCE MAGNETOMETER.

JUNE 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				1·7 *		0·9 *		−1·6 *		0·8 *		0·9 *																
1	1423	1420	1419	1420	1417	1414	1410	1404	1401	1399	1396	1392	1390	1372	1349	1322	1280	1260	1240	1248	1271	1295	1334	1360	1360	-291	1069	1·001206
2	1368	1360	1315	1333	1348	1355	1360	1354	1352	1345	1336	1343	1312	1312	1300	1280	1227	1181	1165	1153	1180	1208	1232	1250	1290	-275	1015	1652
3	1278	1305	1312	1312	1308	1308	1306	1301	1300	1301	1300	1305	1312	1310	1297	1288	1224	1156	1148	1163	1220	1282	1300	1318	1277	-283	994	1826
4	1328	1336	1339	1349	1356	1349	1340	1337	1337	1334	1330	1330	1332	1330	1320	1325	1302	1290	1263	1284	1288	1309	1330	1342	1324	-303	1021	1603
5	1350	1358	1358	1360	1358	1357	1355	1351	1350	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	1371	1390	1395	1401	1388	1350	1308	1233	1192	1182	1230	1280	1338	1390	1438	1337	-331	1006	1727
7	1458	1459	1466	1455	1440	1430	1419	1411	1407	1402	1396	1393	1392	1380	1381	1349	1288	1278	1253	1292	1329	1372	1422	1454	1389	-345	1044	1413
8	1490	1493	1472	1467	1459	1464	1468	1441	1417	1429	1440	1429	1420	1420	1401	1381	1342	1298	1270	1278	1312	1350	1407	1468	1409	-360	1049	1372
9	1470	1468	1460	1453	1442	1444	1445	1434	1427	1424	1420	1409	1400	1416	1411	1380	1332	1320	1300	1318	1348	1376	1398	1420	1405	-354	1051	1356
10	1428	1420	1413	1409	1401	1389	1375	1378	1384	1378	1370	1378	1388	1364	1350	1341	1320	1302	1254	1219	1298	1347	1409	1460	1366	-324	1042	1429
11	1483	1489	1468	1466	1460	1450	1439	1428	1420	1444	1467	1482	1498	1520	1562	1508	1538	1530	1541	1528	1520	1544	1585	1618	1500	-307	1193	0182
12	1650	1609	1620	1593	1562	1546	1528	1518	1511	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	1456	1400	1404	1409	1392	1360	1339	1312	1298	1275	1270	1305	1372	1426	1485	1443	-305	1138	0637
14	1483	1473	1459	1445	1428	1423	1417	1405	1397	1389	1380	1369	1360	1350	1332	1302	1261	1240	1223	1228	1260	1304	1372	1420	1363	-296	1067	1223
15	1430	1415	1409	1393	1373	1378	1382	1387	1396	1384	1370	1354	1340	1332	1290	1281	1270	1282	1310	1389	1340	1351	1414	1478	1365	-266	1099	0958
16	1530	1535	1450	1460	1467	1476	1483	1463	1447	1422	1396	1386	1378	1370	1380	1372	1318	1320	1332	1347	1399	1413	1422	1442	1417	-263	1154	0504
17	1483	1520	1502	1454	1403	1412	1419	1423	1430	1426	1420	1414	1410	1400	1366	1348	1320	1278	1238	1240	1279	1312	1388	1432	1388	-285	1103	0925
18	1455	1425	1415	1409	1400	1396	1390	1379	1372	1362	1350	1345	1342	1340	1320	1274	1250	1216	1168	1197	1237	1278	1309	1342	1332	-251	1081	1108
19	1386	1403	1420	1412	1400	1394	1387	1377	1371	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	1332	1292	1288	1286	1290	1297	1282	1250	1197	1130	1128	1140	1193	1238	1281	1299	-209	1090	1033
21	1327	1316	1299	1300	1298	1300	1300	1289	1281	1282	1282	1280	1280	1270	1240	1217	1158	1097	1078	1078	1108	1140	1187	1236	1235	-183	1052	1347
22	1272	1272	1283	1278	1269	1267	1263	1258	1257	1249	1240	1240	1242	1248	1240	1230	1211	1194	1132	1203	1216	1283	1322	1389	1252	-181	1071	1190
23	1420	1400	1390	1371	1348	1343	1337	1334	1334	1328	1320	1313	1308	1300	1278	1239	1189	1152	1180	1180	1176	1230	1242	1300	1292	-203	1089	1041
24	1303	1302	1309	1310	1308	1314	1318	1301	1288	1297	1304	1289	1276	1270	1246	1221	1171	1140	1100	1095	1110	1163	1197	1238	1245	-212	1033	1504
25	1264	1288	1293	1323	1349	1331	1312	1308	1307	1305	1302	1301	1302	1290	1260	1229	1180	1172	1138	1126	1123	1138	1176	1227	1252	-222	1030	1529
26	1268	1292	1299	1301	1300	1306	1310	1311	1315	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	—	—	—	—	—	—	—	—	—	1292	1268	1258	1250	1240	1220	1192	1171	1140	1132	1150	1167	1204	1253	1281	1247	-217	1030	1529
28	1300	1309	1322	1332	1339	1330	1319	1313	1310	1300	1289	1279	1270	1258	1211	1190	1152	1163	1156	1119	1188	1257	1361	1388	1269	-238	1031	1521
29	1371	1342	1328	1332	1332	1327	1320	1315	1314	1315	1314	1311	1310	1301	1274	1249	1191	1172	1160	1178	1182	1191	1246	1290	1278	-235	1043	1421
30	1340	1382	1400	1402	1400	1399	1397	1389	1385	1378	1370	1352	1336	1310	1279	1279	1228	1221	1180	1192	1258	1248	1294	1306	1322	-229	1093	1008
Temp. Corrections	1398	1400	1393	1390	1383	1381	1377	1370	1366	1359	1352	1348	1344	1337	1320	1297	1258	1234	1213	1224	1251	1288	1333	1372	1333			
Means.....	-299	-290	-283	-280	-278	-274	-271	-267	-264	-260	-256	-251	-248	-243	-239	-239	-243	-251	-260	-270	-281	-292	-298	-298	.....	-268		
Corrected Means..	1099	1110	1110	1110	1105	1107	1106	1103	1102	1099	1096	1097	1096	1094	1081	1058	1015	983	953	954	970	996	1035	1074	.....	.....	1065	
Mean Hourly Variations from General Monthly Mean =.00	-34	-45	-45	-45	-40	-42	-41	-38	-37	-34	-31	-32	-31	-29	-16	7	50	82	112	111	95	69	30	-9	.....	$1+\frac{\Delta X}{X}=$	.....	1·001239
	-0281	-0372	-0372	-0372	-0331	-0348	-0339	-0314	-0306	-0281	-0256	-0265	-0256	-0240	-0133	0053	0413	0678	0926	0917	0785	0570	0248	-0074				

JUNE 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*.																
1	900	900	898	897	896	894	892	891	891	889	888	887	887	885	883	883	885	886	889	890	891	891	893	892	8908			
2	892	890	889	888	887	886	885	884	883	882	881	880	880	879	878	879	880	882	887	890	892	894	897	897	8859			
3	898	897	892	891	890	889	888	887	886	884	883	881	880	879	879	879	881	886	890	892	894	897	898	898	8883			
4	898	897	895	894	893	891	890	889	889	888	887	885	884	882	881	882	886	892	898	900	907	914	919	919	8942			
5	919	912	910	908	907	905	903	901	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	899	898	896	895	890	889	889	890	894	900	907	910	913	914	915	9027			
7	913	911	910	909	909	908	907	905	903	901	900	899	898	897	896	897	899	902	907	910	918	921	921	920	9067			
8	920	918	915	914	914	912	911	910	909	907	906	904	902	900	899	900	901	905	910	913	920	922	927	925	9110			
9	922	920	917	916	916	914	913	911	909	906	904	903	902	900	899	898	900	902	907	910	913	914	914	913	9093			
10	910	908	905	904	904	903	902	901	901	900	899	897	896	892	890	890	894	897	900	902	905	906	904	901	9005			
11	900	899	898	898	898	897	896	894	893	891	890	889	889	888	888	889	892	892	894	898	900	905	906	903	8953			
12	902	900	898	898	898	897	896	895	894	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
13	—	—	—	—	—	—	—	—	—	891	889	888	887	887	883	884	887	888	890	895	900	906	910	910	8947			
14	909	903	900	899	899	898	897	894	891	889	888	885	883	881	881	880	882	886	887	890	893	899	900	901	8923			
15	900	892	890	889	888	886	885	884	883	882	882	881	880	878	876	876	876	876	878	880	882	885	888	887	8835			
16	887	885	885	884	884	883	882	881	880	880	880	879	878	876	873	874	876	878	880	884	889	890	892	897	8824			
17	897	897	894	892	891	890	890	890	890	888	886	884	882	880	880	880	880	883	888	890	893	898	898	898	8891			
18	897	893	889	885	881	880	880	879	878	876	874	872	871	870	868	868	870	871	872	878	880	884	885	888	8787			
19	887	882	880	875	871	870	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
20	—	—	—	—	—	—	—	—	—	865	860	859	858	858	857	857	857	859	860	862	867	867	868	869	8666			
21	869	865	862	862	862	861	860	859	859	859	859	858	858	856	854	854	853	855	855	857	859	860	860	861	8590			
22	860	859	860	860	860	859	859	858	858	857	856	854	853	852	852	852	852	854	858	860	861	866	869	870	8583			
23	870	870	870	869	869	868	868	867	867	865	863	862	862	862	860	859	858	860	860	861	862	865	867	868	8647			
24	869	869	868	868	869	869	870	870	870	869	869	866	863	860	860	860	860	862	865	868	870	872	876	877	8675			
25	878	877	876	874	873	872	871	870	870	870	870	870	870	868	867	864	865	866	868	870	870	871	871	872	8705			
26	872	872	870	870	870	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
27	—	—	—	—	—	—	—	—	—	867	866	864	862	860	860	859	860	862	866	870	875	880	883	886	8688			
28	886	882	879	878	878	877	876	874	872	871	870	869	868	867	867	867	868	870	871	875	879	884	888	887	8751			
29	885	881	880	879	878	877	876	874	873	872	872	871	870	870	868	867	867	869	872	877	878	879	879	879	8742			
30	878	875	872	872	872	871	870	869	868	868	868	868	868	868	868	868	868	871	873	876	879	882	882	882	8723			
Means.....	8930	8905	8885	8874	8868	8857	8849	8837	8829	8814	8803	8789	8779	8763	8752	8752	8764	8787	8816	8846	8879	8909	8927	8929	8839			

* The numbers in these columns are not observed ; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75°15 = \cdot00008264$ sed. $3{\cdot}3963$ = Correction for 1° Faht.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.
do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

JULY 1852. Horizontal Force Magnetometer.

Gottingen Mean Time. / Madras Mean Time.	Noon P.M. h.m. 4·41	1 h.m. 5·41	2 h.m. 6·41	3 h.m. 7·41	4 h.m. 8·41	5 h.m. 9·41	6 h.m. 10·41	7 h.m. 11·41	8 h.m. 12·41	9 h.m. 13·41	10 h.m. 14·41	11 h.m. 15·41	12 h.m. 16·41	13 h.m. 17·41	14 h.m. 18·41	15 h.m. 19·41	16 h.m. 20·41	17 h.m. 21·41	18 h.m. 22·41	19 h.m. 23·41	20 h.m. 0·41	21 h.m. 1·41	22 h.m. 2·41	23 h.m. 3·41	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
				3·1 *		1·1 *		−1·3 *		2·1 *		−0·2 *															
1	1320	1310	1308	1321	1328	1310	1290	1285	1282	1286	1285	1282	1280	1264	1257	1240	1248	1190	1170	1148	1182	1230	1280	1304	1267	-229	1038	1·001465
2	1300	1297	1292	1303	1308	1318	1326	1323	1322	1322	1317	1303	1290	1267	1235	1230	1217	1207	1182	1198	1218	1244	1299	1360	1278	-228	1050	1364
3	1352	1338	1332	1333	1328	1319	1308	1303	1300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	1296	1287	1283	1280	1272	1259	1250	1197	1152	1144	1190	1250	1274	1294	1348	1279	-216	1063	1256
5	1356	1339	1336	1326	1310	1311	1310	1302	1297	1291	1281	1275	1270	1287	1272	1268	1243	1190	1160	1163	1198	1250	1300	1358	1278	-210	1068	1215
6	1391	1388	1377	1351	1318	1305	1290	1284	1280	1278	1272	1270	1269	1240	1203	1200	1200	1127	1178	1164	1189	1227	1235	1290	1264	-214	1050	1364
7	1340	1359	1350	1363	1370	1382	1392	1396	1402	1399	1392	1381	1371	1334	1304	1271	1249	1259	1274	1340	1394	1452	1572	1626	1374	-237	1137	0645
8	1618	1542	1508	1490	1465	1443	1418	1418	1420	1407	1390	1381	1372	1369	1323	1295	1279	1259	1274	1261	1255	1283	1317	1342	1380	-246	1134	0669
9	1328	1334	1332	1327	1315	1310	1302	1310	1320	1331	1338	1357	1376	1308	1230	1232	1290	1330	1292	1337	1406	1413	1431	1458	1334	-229	1105	0909
10	1482	1532	1519	1525	1525	1516	1504	1509	1516	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	1444	1368	1362	1356	1346	1298	1334	1311	1284	1257	1234	1297	1293	1292	1339	1393	-240	1153	0512
12	1360	1339	1347	1353	1353	1372	1388	1368	1350	1359	1364	1353	1342	1332	1302	1290	1250	1260	1292	1289	1310	1348	1362	1448	1339	-261	1078	1133
13	1398	1421	1404	1396	1382	1392	1400	1381	1364	1359	1350	1346	1342	1310	1303	1320	1332	1310	1329	1309	1288	1337	1392	1410	1357	-269	1088	1050
14	1390	1403	1399	1409	1413	1417	1418	1397	1378	1377	1372	1361	1350	1330	1329	1308	1300	1262	1231	1260	1264	1348	1432	1421	1357	-282	1075	1157
15	1420	1428	1389	1383	1370	1369	1365	1365	1368	1352	1332	1330	1329	1335	1298	1260	1227	1212	1210	1212	1242	1328	1409	1450	1333	-276	1057	1306
16	1454	1410	1419	1411	1396	1394	1390	1381	1374	1372	1366	1363	1360	1362	1352	1305	1270	1248	1240	1253	1290	1295	1318	1357	1349	-275	1074	1165
17	1365	1362	1364	1368	1365	1365	1362	1360	1360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	1352	1340	1332	1325	1310	1292	1260	1223	1197	1164	1170	1216	1264	1280	1305	1304	-268	1036	1479
19	1324	1348	1362	1361	1353	1349	1342	1336	1332	1328	1320	1318	1317	1308	1291	1268	1215	1209	1198	1190	1190	1222	1250	1282	1292	-267	1025	1570
20	1308	1329	1342	1344	1339	1337	1332	1328	1327	1326	1320	1318	1317	1305	1290	1260	1206	1164	1149	1134	1164	1201	1218	1248	1275	-255	1020	1611
21	1261	1269	1268	1273	1272	1267	1260	1249	1240	1235	1226	1225	1225	1227	1216	1155	1108	1050	1047	1053	1067	1060	1078	1110	1185	-208	977	1967
22	1154	1162	1168	1176	1178	1176	1171	1164	1159	1163	1162	1156	1150	1135	1120	1090	1025	980	960	960	994	1020	1052	1084	1107	-138	969	2033
23	1130	1142	1144	1154	1158	1155	1150	1153	1158	1162	1162	1161	1160	1148	1115	1087	1041	994	967	972	1003	1030	1054	1086	1104	-129	975	1983
24	1128	1148	1146	1148	1143	1143	1140	1143	1149	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	1172	1190	1183	1177	1171	1162	1147	1090	1060	1046	1060	1098	1148	1206	1220	1142	-140	1002	1760
26	1230	1221	1214	1224	1228	1221	1212	1206	1202	1203	1200	1196	1192	1170	1168	1148	1087	1086	1049	1063	1048	1160	1172	1204	1171	-174	997	1802
27	1217	1222	1242	1250	1252	1258	1262	1236	1213	1224	1230	1222	1215	1229	1246	1238	1208	1157	1130	1171	1199	1249	1249	1302	1226	-186	1040	1446
28	1312	1290	1338	1353	1361	1328	1292	1303	1317	1306	1290	1285	1281	1245	1210	1207	1158	1080	1078	1075	1120	1208	1291	1340	1253	-175	1078	1133
29	1325	1332	1371	1348	1319	1306	1290	1275	1262	1257	1247	1258	1270	1282	1253	1202	1248	1201	1201	1222	1254	1234	1256	1272	1270	-162	1108	0885
30	1316	1298	1314	1309	1297	1289	1278	1248	1220	1226	1227	1223	1220	1212	1202	1175	1100	1092	1070	1129	1154	1206	1248	1280	1222	-127	1095	0991
Means.....	1330	1329	1330	1331	1325	1321	1315	1309	1304	1301	1293	1289	1286	1273	1251	1232	1205	1175	1165	1175	1203	1242	1280	1317	1274			
Temp. Corrections	-243	-240	-235	-229	-225	-222	-220	-216	-214	-211	-210	-206	-204	-200	-196	-194	-195	-200	-206	-215	-223	-230	-237	-239	.....	-217		
Corrected Means..	1087	1089	1095	1102	1100	1099	1095	1093	1090	1090	1083	1083	1082	1073	1055	1038	1010	975	959	960	980	1012	1043	1078	.....	.....	1057	
Mean Hourly Variations from General Monthly Mean. =.00	-30	-32	-38	-45	-43	-42	-38	-36	-33	-33	-26	-26	-25	-16	2	19	47	82	98	97	77	45	14	-21	.....	$1+\frac{\Delta X}{X}=$	.....	1·001306
	-0248	-0265	-0314	-0372	-0356	-0348	-0314	-0298	-0273	-0273	-0215	-0215	-0206	-0133	0017	0157	0389	0678	0810	0802	0636	0372	0116	-0173				

JULY 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*															
1	881	879	879	877	875	873	872	871	871	870	870	869	869	868	868	866	865	866	868	870	874	878	880	881	8725			
2	879	877	877	876	876	875	875	873	872	871	870	869	868	868	866	865	865	867	868	869	872	876	880	879	8722			
3	877	874	873	871	870	870	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	866	863	863	863	861	860	860	860	864	865	869	872	876	878	878	8685			
5	874	872	870	870	870	869	868	867	867	865	863	862	861	860	859	858	859	861	864	866	870	873	875	877	8667			
6	878	877	875	872	870	869	868	867	867	865	864	863	863	860	860	860	860	861	863	868	870	874	878	880	8680			
7	880	880	879	877	876	876	876	875	875	874	873	871	870	868	867	867	867	869	871	874	879	880	884	888	8748			
8	888	883	882	880	879	878	878	877	876	875	875	873	872	870	869	869	870	870	874	878	881	884	887	887	8773			
9	887	887	884	878	872	871	870	870	870	869	868	867	866	866	864	864	866	868	870	871	874	878	880	880	8725			
10	880	880	878	876	874	873	872	871	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	873	876	874	872	870	868	868	869	872	878	880	882	884	886	888	8756			
12	888	888	886	883	880	880	880	880	880	879	878	877	876	876	875	875	878	879	881	884	889	890	890	891	8818			
13	893	892	890	888	887	886	886	884	882	880	879	878	877	876	874	873	875	878	881	886	890	895	897	897	8843			
14	895	892	891	890	890	889	889	888	888	886	885	884	883	881	881	881	881	884	886	890	893	895	897	897	8882			
15	896	894	892	891	890	889	889	888	887	885	883	881	880	880	878	878	879	880	882	886	889	890	892	892	8863			
16	892	892	891	889	888	888	888	886	885	883	882	881	880	880	879	879	880	883	885	888	890	891	892	892	8860			
17	892	891	888	886	885	883	882	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	880	881	880	880	880	878	879	880	882	882	886	889	889	890	890	8839			
19	890	892	890	886	883	882	882	881	881	881	881	880	880	879	877	878	880	880	883	884	888	888	890	891	8836			
20	891	890	889	887	885	884	883	882	882	881	881	880	880	880	876	872	870	870	871	874	877	878	879	878	8800			
21	878	878	876	875	874	873	872	871	870	870	870	869	869	868	865	863	860	862	861	860	855	853	850	848	8663			
22	848	848	848	848	849	849	849	849	850	850	850	849	848	845	842	840	840	840	840	841	840	842	844	847	8457			
23	848	848	847	847	847	846	845	844	844	843	842	842	842	840	840	839	839	839	839	840	840	842	844	845	8430			
24	846	845	845	843	842	842	842	841	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	842	845	844	844	842	842	842	845	847	849	850	856	858	860	861	8464			
26	861	860	860	859	858	856	855	854	853	852	852	851	851	851	850	850	850	851	855	857	860	865	868	869	8562			
27	870	870	870	868	867	866	865	862	859	858	857	856	855	854	852	851	851	852	854	856	859	860	862	862	8598			
28	862	861	860	860	860	859	859	858	858	856	855	854	853	851	850	850	850	850	852	855	858	860	862	864	8565			
29	864	862	860	858	857	856	855	853	852	852	852	851	850	850	850	848	848	849	849	850	850	850	850	850	8528			
30	850	850	849	848	848	845	843	841	840	840	840	840	840	839	838	838	836	836	838	840	842	843	847	848	8425			
Means.....	8765	8755	8742	8724	8712	8703	8697	8686	8680	8672	8667	8657	8651	8640	8626	8620	8624	8638	8657	8682	8707	8728	8747	8754	8689			

*The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot.}\, v. = \cdot 0003139 \times \text{Cot.}\ 75°15' = \cdot 00008264$ scd. 3·3963 = Correction for 1° Faht.

Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.

do. for Ther. 80°5 or Standard 80°0.

HORIZONTAL FORCE MAGNETOMETER.

AUGUST 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				4·4 *		0·7 *		−0·9 *		−1·3 *		−0·9 *																
July 31	1274	1263	1239	1255	1262	1247	1231	1230	1230	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	1220	1212	1207	1204	1208	1189	1167	1140	1098	1089	1105	1112	1148	1180	1222	1197	−129	1068	1·001215
2	1250	1242	1233	1229	1217	1218	1218	1209	1202	1200	1201	1194	1188	1180	1159	1142	1102	1067	1090	1080	1100	1125	1149	1175	1174	−143	1031	1521
3	1203	1210	1213	1200	1179	1190	1200	1190	1181	1190	1202	1199	1198	1190	1162	1130	1110	1078	1084	1081	1100	1132	1160	1189	1165	−161	1004	1744
4	1219	1230	1230	1224	1209	1209	1207	1215	1225	1216	1210	1205	1202	1192	1167	1140	1090	1090	1071	1049	1058	1078	1128	1148	1167	−165	1002	1760
5	1180	1209	1212	1209	1197	1184	1170	1157	1145	1150	1158	1157	1158	1190	1180	1162	1105	1120	1140	1150	1210	1221	1218	1215	1175	−185	990	1859
6	1240	1244	1263	1264	1257	1249	1240	1236	1234	1226	1220	1228	1238	1212	1190	1189	1140	1112	1180	1149	1137	1130	1170	1234	1208	−203	1005	1735
7	1280	1258	1290	1284	1269	1269	1268	1263	1260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	1248	1239	1229	1220	1220	1200	1212	1158	1120	1090	1119	1132	1167	1190	1232	1217	−202	1015	1652
9	1260	1266	1269	1269	1261	1265	1268	1264	1262	1249	1238	1237	1238	1232	1211	1180	1138	1087	1078	1100	1105	1127	1157	1222	1208	−206	1002	1760
10	1240	1248	1252	1255	1249	1254	1257	1260	1264	1281	1300	1295	1292	1280	1270	1230	1183	1154	1180	1209	1270	1269	1282	1275	1252	−212	1040	1446
11	1289	1288	1297	1295	1285	1283	1280	1270	1262	1278	1297	1285	1274	1242	1228	1210	1198	1160	1188	1167	1173	1242	1287	1290	1253	−223	1030	1529
12	1320	1332	1312	1326	1332	1344	1354	1347	1341	1324	1310	1299	1290	1279	1258	1242	1212	1190	1168	1160	1191	1210	1251	1293	1279	−234	1045	1405
13	1327	1341	1355	1346	1328	1325	1320	1304	1290	1300	1312	1304	1297	1295	1268	1225	1185	1188	1229	1222	1240	1259	1282	1307	1285	−245	1040	1446
14	1305	1312	1317	1332	1338	1330	1320	1323	1328	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	1319	1312	1304	1298	1292	1268	1234	1198	1174	1203	1210	1220	1260	1297	1318	1284	−260	1024	1578
16	1321	1299	1306	1321	1328	1314	1298	1293	1289	1282	1278	1273	1270	1261	1230	1181	1150	1118	1107	1112	1153	1190	1225	1252	1244	−245	999	1785
17	1270	1263	1260	1264	1259	1255	1250	1249	1250	1248	1248	1246	1245	1232	1212	1182	1130	1092	1120	1100	1127	1155	1180	1190	1209	−221	988	1876
18	1211	1205	1202	1206	1201	1206	1210	1204	1200	1193	1188	1176	1166	1158	1130	1106	1058	1030	1012	1023	1041	1059	1077	1110	1141	−181	960	2107
19	1140	1138	1139	1161	1174	1183	1190	1183	1178	1171	1167	1160	1154	1150	1142	1094	1046	1013	1030	1053	1068	1081	1119	1122	1127	−161	966	2058
20	1150	1159	1160	1168	1168	1163	1156	1154	1154	1147	1142	1139	1138	1130	1122	1086	1039	989	978	985	1019	1030	1051	1082	1105	−132	973	2000
21	1099	1113	1112	1120	1119	1115	1110	1100	1092	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	1116	1142	1144	1148	1130	1119	1062	1006	968	930	950	1013	1090	1170	1227	1091	−122	969	2033
23	1300	1320	1307	1289	1263	1241	1218	1207	1198	1202	1208	1208	1209	1208	1202	1200	1148	1132	1090	1120	1165	1172	1162	1198	1207	−151	1056	1314
24	1246	1270	1306	1348	1381	1370	1357	1302	1248	1252	1258	1238	1219	1205	1192	1209	1190	1181	1175	1250	1274	1270	1287	1310	1264	−178	1086	1066
25	1363	1347	1366	1366	1357	1363	1367	1329	1292	1251	1212	1230	1250	1248	1220	1226	1154	1188	1230	1190	1162	1265	1260	1277	1271	−191	1080	1116
26	1290	1300	1297	1328	1350	1330	1308	1297	1288	1272	1258	1242	1228	1223	1221	1210	1168	1172	1150	1171	1210	1245	1295	1339	1258	−192	1066	1231
27	1355	1377	1367	1353	1330	1319	1307	1283	1260	1263	1268	1265	1264	1252	1235	1246	1167	1128	1131	1171	1200	1267	1331	1363	1271	−199	1072	1181
28	1363	1298	1260	1296	1323	1323	1321	1316	1312	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	1274	1239	1234	1230	1215	1184	1130	1110	1070	1062	1077	1110	1150	1177	1210	1220	−179	1041	1438
30	1201	1191	1205	1218	1223	1232	1240	1224	1210	1209	1210	1199	1189	1180	1170	1132	1089	1048	1028	1011	1030	1079	1122	1160	1158	−147	1011	1686
31	1172	1160	1159	1168	1168	1165	1160	1158	1158	1159	1162	1155	1150	1150	1140	1110	1059	1004	1019	1020	1049	1090	1111	1161	1125	−138	987	1884
Means.....	1254	1255	1257	1263	1260	1257	1253	1243	1235	1231	1229	1224	1221	1213	1195	1172	1129	1103	1106	1112	1136	1167	1197	1227	1206			
Temp. Corrections	−207	−202	−198	−196	−194	−192	−190	−187	−186	−182	−179	−176	−174	−169	−164	−162	−165	−169	−176	−182	−191	−198	−203	−207	.....	−185		
Corrected Means.	1047	1053	1059	1067	1066	1065	1063	1056	1049	1049	1050	1048	1047	1044	1031	1010	964	934	930	930	945	969	994	1020	.....	.....	1021	
Mean Hourly Variations from General Monthly Mean. = ·00	-26 -0215	-32 -0265	-38 -0314	-46 -0381	-45 -0372	-44 -0364	-42 -0348	-35 -0289	-28 -0231	-28 -0231	-29 -0240	-27 -0223	-26 -0215	-23 -0190	-10 -0083	11 0091	57 0471	87 0719	91 0752	91 0752	76 0628	52 0430	27 0223	1 0008	.....	$1+\frac{\Delta X}{X}=$	.....	1·001603

AUGUST 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
July 31	848	846	845	843	842	842	842	841	841	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	840	840	840	840	840	839	838	838	839	840	845	848	850	851	852	8429			
2	853	853	850	849	848	848	848	847	846	845	844	843	842	841	839	839	841	842	847	848	850	854	857	858	8472			
3	858	857	853	853	853	852	851	851	851	850	850	850	850	849	847	847	847	848	850	853	857	858	860	862	8524			
4	862	862	860	856	852	852	852	852	852	851	850	850	850	850	848	847	847	849	851	854	857	860	861	863	8537			
5	864	862	861	861	861	860	860	859	858	858	858	856	855	853	852	851	852	854	858	861	864	869	871	873	8596			
6	873	872	870	870	870	867	864	863	863	862	861	860	860	860	859	859	859	860	862	864	866	868	870	870	8647			
7	870	870	868	868	868	867	867	867	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	864	862	861	860	858	857	857	859	860	860	862	866	868	870	873	8645			
9	874	871	870	870	870	869	868	867	866	865	864	862	861	860	858	857	858	859	861	864	868	870	871	872	8656			
10	872	871	870	870	870	870	870	869	868	868	868	865	863	861	860	861	861	862	864	867	869	870	873	875	8674			
11	875	875	874	873	873	872	871	870	870	869	869	868	868	866	864	863	865	867	868	870	875	877	878	880	8708			
12	879	879	879	878	878	877	876	875	874	872	871	870	869	868	867	866	867	868	870	873	877	880	880	883	8740			
13	883	880	880	880	880	879	878	877	877	876	875	874	873	871	870	870	871	872	877	878	880	882	882	883	8770			
14	885	882	882	882	882	882	882	881	881	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	881	881	880	880	880	878	877	878	878	880	881	883	885	886	887	8814			
16	887	883	882	882	882	882	882	881	880	879	878	876	875	872	870	868	868	870	871	874	876	876	877	878	8770			
17	878	878	878	876	875	874	874	873	872	871	870	870	870	868	868	865	865	864	864	866	866	866	867	867	8702			
18	867	865	865	864	864	863	863	862	862	861	860	859	858	855	852	851	851	851	850	850	852	857	859	860	8584			
19	860	859	858	858	858	857	856	855	854	852	851	850	850	850	849	847	847	848	848	850	850	850	850	851	8524			
20	851	850	850	849	849	848	848	847	847	845	843	842	842	841	840	840	839	840	840	840	840	840	841	842	8439			
21	842	840	840	840	840	840	840	839	839	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	839	840	840	840	840	839	838	838	838	840	840	843	848	850	850	8410			
23	850	850	850	849	849	848	848	847	847	847	848	848	848	846	843	842	842	846	848	851	856	859	861	862	8494			
24	862	860	857	857	857	857	857	856	855	853	852	851	851	851	850	851	853	856	859	860	865	868	869	870	8574			
25	870	870	867	865	864	863	863	861	860	859	858	856	855	853	851	851	854	857	860	862	864	868	869	870	8613			
26	870	865	864	864	864	863	862	861	860	859	859	858	857	853	852	853	856	858	860	864	867	868	869	870	8615			
27	870	869	867	864	862	862	862	861	860	860	860	860	860	861	858	859	859	861	863	867	870	871	871	871	8637			
28	871	870	869	869	870	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	862	855	853	852	850	848	848	847	847	847	848	849	850	851	853	8578			
30	853	851	851	851	851	850	850	849	849	849	849	847	846	843	841	841	844	847	849	849	849	849	850	850	8483			
31	851	850	850	849	848	847	847	846	845	844	844	843	842	842	840	840	840	840	843	843	847	850	852	853	8457			
Means.....	8659	8644	8633	8626	8622	8615	8611	8602	8597	8586	8578	8567	8562	8549	8533	8528	8536	8549	8567	8587	8613	8634	8647	8659	8596			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75°15' = \cdot00008264$ scd. 3·3963 = Correction for 1 Faht. Zero for Magr. 1497 at Ther. 88°8 Corrected Zero 1215.

do for Ther. 80°5 or Standard 80°0

HORIZONTAL FORCE MAGNETOMETER.

SEPTEMBER 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P M. 4·41	5·41	6·41	7·41	8·41	9·41	10·41	11·41	12·41	13·41	14·41	15·41	16·41	17·41	18·41	19·41	20·41	21·41	22·41	23·41	0·41	1·41	2·41	3·41				
				3·9 *		1·4 *		2·6 *		1·3 *		—1·7 *																
1	1157	1162	1192	1213	1227	1207	1184	1190	1190	1181	1170	1160	1154	1150	1140	1120	1090	1088	1086	1104	1142	1170	1208	1218	1163	-135	1028	1·001546
2	1220	1196	1188	1209	1222	1207	1190	1186	1176	1179	1180	1173	1170	1162	1182	1215	1208	1159	1150	1142	1198	1238	1288	1299	1197	-172	1025	1570
3	1283	1258	1261	1261	1253	1241	1227	1230	1227	1236	1242	1237	1235	1220	1200	1180	1127	1084	1079	1122	1189	1220	1250	1302	1215	-189	1026	1562
4	1330	1272	1351	1333	1308	1287	1264	1265	1260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	1264	1266	1259	1255	1257	1252	1220	1180	1150	1132	1145	1172	1200	1213	1220	1244	-209	1035	1487
6	1238	1272	1332	1330	1320	1302	1281	1270	1254	1243	1230	1237	1247	1260	1272	1263	1249	1265	1268	1272	1240	1281	1247	1298	1270	-235	1035	1487
7	1307	1319	1291	1296	1293	1310	1324	1316	1302	1297	1290	1288	1290	1288	1293	1289	1260	1200	1190	1210	1229	1241	1274	1290	1279	-238	1045	1405
8	1280	1311	1298	1299	1293	1290	1284	1280	1270	1271	1270	1257	1247	1242	1256	1242	1218	1180	1150	1150	1170	1219	1274	1330	1253	-212	1041	1438
9	1290	1241	1239	1258	1270	1256	1240	1243	1240	1266	1289	1273	1260	1260	1218	1248	1275	1278	1268	1314	1304	1360	1420	1434	1281	-187	1094	1000
10	1416	1454	1378	1353	1321	1313	1302	1289	1270	1255	1238	1238	1242	1268	1235	1217	1159	1149	1122	1089	1200	1252	1306	1330	1267	-168	1099	0958
11	1286	1233	1243	1245	1240	1221	1200	1198	1190	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1200	1208	1193	1181	1172	1171	1127	1131	1110	1068	1102	1137	1158	1152	1180	1181	-125	1056	1314
13	1170	1150	1161	1187	1205	1201	1195	1200	1200	1195	1188	1182	1180	1182	1192	1172	1127	1088	1071	1095	1120	1159	1190	1200	1167	-119	1048	1381
14	1190	1177	1180	1191	1195	1192	1187	1186	1180	1175	1168	1162	1159	1162	1168	1132	1077	1000	970	997	1066	1134	1196	1211	1144	-121	1023	1586
15	1200	1188	1199	1203	1199	1195	1189	1187	1180	1178	1174	1170	1170	1162	1158	1110	1049	978	932	989	1060	1140	1200	1239	1144	-138	1006	1727
16	1214	1148	1138	1160	1175	1178	1179	1177	1169	1161	1150	1138	1130	1140	1182	1170	1127	1122	1102	1088	1110	1162	1219	1288	1159	-160	999	1785
17	1332	1340	1391	1427	1435	1417	1397	1386	1369	1367	1362	1339	1319	1248	1250	1213	1157	1088	1069	1078	1109	1144	1197	1250	1279	-176	1103	0925
18	1234	1248	1256	1257	1250	1256	1259	1257	1250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	1225	1198	1218	1242	1230	1231	1190	1198	1178	1169	1200	1272	1322	1374	1420	1247	-187	1060	1281
20	1394	1418	1450	1433	1409	1401	1391	1364	1331	1306	1278	1287	1300	1302	1287	1265	1290	1234	1228	1206	1197	1228	1280	1302	1316	-202	1114	0835
21	1335	1303	1321	1339	1350	1352	1352	1337	1317	1316	1312	1333	1358	1333	1375	1348	1270	1240	1231	1298	1354	1390	1450	1414	1335	-210	1125	0743
22	1428	1419	1452	1435	1410	1401	1390	1363	1331	1322	1310	1313	1320	1340	1328	1283	1249	1250	1238	1261	1251	1270	1360	1358	1337	-223	1114	0835
23	1380	1346	1385	1384	1376	1384	1389	1357	1319	1326	1330	1327	1328	1312	1298	1270	1238	1205	1196	1238	1256	1262	1278	1306	1312	-236	1076	1149
24	1300	1348	1341	1342	1335	1319	1300	1308	1310	1310	1308	1301	1298	1297	1282	1259	1186	1150	1128	1150	1218	1268	1299	1318	1278	-226	1052	1347
25	1300	1298	1319	1318	1310	1316	1319	1316	1307	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	1294	1278	1279	1283	1281	1272	1230	1182	1128	1120	1156	1197	1274	1316	1330	1268	-230	1038	1463
27	1302	1272	1282	1289	1288	1285	1279	1269	1254	1254	1252	1248	1248	1242	1227	1188	1129	1073	1008	1060	1138	1222	1260	1272	1223	-233	990	1859
28	1259	1254	1266	1272	1270	1265	1258	1245	1226	1235	1242	1224	1210	1210	1206	1169	1100	1042	1040	1092	1161	1242	1277	1262	1209	-221	988	1876
29	1230	1237	1214	1217	1213	1212	1209	1216	1217	1195	1170	1182	1198	1224	1202	1214	1140	1122	1179	1098	1179	1222	1408	1490	1216	-211	1005	1735
30	1390	1417	1422	1416	1402	1396	1387	1371	1349	1332	1312	1298	1288	1300	1282	1265	1209	1178	1160	1150	1180	1202	1276	1314	1304	-209	1095	0991
Means.....	1287	1280	1290	1295	1291	1285	1276	1269	1257	1253	1247	1243	1243	1240	1237	1215	1178	1144	1129	1146	1187	1230	1277	1303	1242			
Temp. Corrections	-213	-208	-204	-198	-194	-192	-192	-189	-188	-186	-185	-183	-182	-177	-171	-169	-171	-177	-184	-192	-200	-205	-212	-215	.....	-191		
Corrected Means.	1074	1072	1086	1097	1097	1093	1084	1080	1069	1067	1062	1060	1061	1063	1066	1046	1007	967	945	954	987	1025	1065	1088	.....	.....	1051	
Mean Hourly Variations from General Monthly Mean. = ·00	-23	-21	-35	-46	-46	-42	-33	-29	-18	-16	-11	-9	-10	-12	-15	5	44	84	106	97	64	26	-14	-37	.....	$1+\frac{\Delta X}{X}=$	.....	1·001356
	-0190	-0173	-0289	-0381	-0381	-0348	-0273	-0240	-0149	-0133	-0091	-0074	-0083	-0100	-0124	0041	0364	0694	0876	0802	0529	0215	-0116	-0306				

SEPTEMBER 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	850	848	846	845	844	843	843	842	842	841	840	840	840	840	838	840	840	842	845	848	850	853	857	860	8449			
2	862	862	860	859	858	857	857	854	852	851	850	850	850	850	850	850	850	851	854	857	860	862	866	868	8558			
3	869	869	867	863	860	860	860	859	859	859	859	858	858	858	855	853	854	855	858	860	863	865	867	869	8607			
4	870	869	868	866	865	865	865	864	863	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	864	866	865	865	862	860	860	862	863	866	868	874	875	876	878	8666			
6	878	878	878	877	876	875	874	872	871	871	871	870	870	869	869	869	870	872	873	877	879	880	880	881	8742			
7	882	880	879	877	875	874	873	873	873	873	873	872	872	870	869	868	868	870	872	875	876	877	878	878	8740			
8	878	878	876	873	870	869	869	868	868	868	868	867	867	864	862	860	858	859	863	865	864	865	868	868	8673			
9	869	868	866	864	863	862	861	860	860	859	858	857	857	854	854	854	855	857	858	860	862	862	862	862	8602			
10	861	861	860	859	859	859	859	858	858	856	855	854	853	851	850	848	847	847	849	850	852	854	854	852	8544			
11	849	847	845	843	842	841	841	840	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	840	840	840	840	838	837	837	838	840	841	844	846	845	846	846	8419			
13	844	842	841	840	840	840	840	840	840	839	838	837	837	837	834	834	834	837	839	841	844	847	848	848	8400			
14	847	843	842	841	840	840	840	840	840	839	839	838	838	837	833	833	833	837	840	842	846	848	850	852	8408			
15	852	851	850	849	849	848	848	846	845	843	842	841	840	840	838	839	840	842	847	849	850	852	854	856	8456			
16	858	857	856	853	851	850	850	850	850	850	850	850	850	848	847	847	847	849	850	852	855	858	861	862	8521			
17	863	863	862	861	861	860	859	858	858	857	857	856	855	853	850	849	849	849	851	853	857	858	860	861	8567			
18	862	862	861	860	860	859	859	859	859	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	859	860	859	858	856	853	853	854	858	859	861	863	867	870	871	8601			
20	870	868	867	865	863	863	863	862	861	861	861	861	862	861	861	860	860	862	865	868	869	870	871	872	8644			
21	871	870	870	869	868	868	868	867	867	867	867	865	864	862	860	860	860	862	866	867	869	871	873	875	8669			
22	876	873	872	871	870	869	869	869	869	868	868	869	870	870	868	867	867	867	868	870	872	876	878	880	8707			
23	880	876	877	877	878	878	878	877	877	877	877	874	872	868	867	867	868	869	870	872	873	877	879	881	8745			
24	881	880	877	874	872	871	871	871	871	870	870	869	868	867	866	864	864	865	868	870	872	874	878	880	8714			
25	881	880	878	875	872	871	871	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	870	870	870	870	866	867	868	869	871	872	875	878	880	882	8728				
27	882	880	879	876	873	872	872	871	871	870	870	870	870	870	869	868	869	870	872	875	878	878	879	879	8735			
28	879	876	875	872	870	870	870	869	869	869	869	868	868	868	865	864	865	867	868	871	872	873	874	874	8702			
29	874	873	872	871	870	870	870	870	870	869	868	866	864	861	859	858	859	861	863	867	868	869	870	870	8672			
30	870	869	869	869	869	868	868	867	866	864	863	862	862	860	860	860	861	863	867	868	871	872	873	873	8664			
Means.....	8676	8663	8651	8634	8622	8616	8615	8606	8603	8598	8596	8588	8585	8571	8555	8549	8553	8570	8592	8615	8638	8655	8673	8683	8613			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } v. = \cdot0003139 \times \text{Cot. } 75^\circ 15' = \cdot00008264$ scd. 3·3963 = Correction for 1° Faht. Zero for Magr. 1497 at Ther. 88°·8 Corrected Zero 1215.
do. for Ther. 80°·5 or Standard 80°·0.

HORIZONTAL FORCE MAGNETOMETER.

OCTOBER 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h .m. 2·41	h.m. 3·41				
				1·7 *		1·7 *		4·3 *		—1·1 *		—0·9 *																
1	1258	1220	1220	1222	1220	1221	1219	1224	1220	1237	1257	1259	1262	1260	1250	1215	1180	1135	1070	1050	1098	1160	1237	1280	1207	-206	1001	1·001769
2	1290	1279	1300	1298	1292	1282	1268	1256	1235	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	1238	1244	1235	1227	1230	1240	1258	1210	1158	1130	1168	1200	1268	1327	1390	1251	-210	1041	1438
4	1334	1346	1320	1313	1302	1296	1287	1273	1250	1243	1239	1234	1230	1250	1211	1184	1141	1124	1103	1110	1120	1180	1212	1222	1230	-189	1041	1438
5	1240	1353	1385	1339	1290	1273	1253	1259	1256	1245	1237	1228	1221	1220	1222	1220	1182	1125	1054	1110	1148	1200	1235	1259	1231	-183	1048	1381
6	1230	1235	1250	1243	1233	1239	1241	1245	1240	1234	1231	1228	1227	1228	1220	1161	1120	1070	1059	1068	1092	1137	1147	1180	1190	-171	1019	1619
7	1180	1196	1175	1164	1150	1161	1168	1155	1134	1126	1120	1115	1112	1127	1110	1064	1000	952	929	937	998	1029	1080	1100	1095	-77	1018	1628
8	1118	1135	1118	1156	1190	1150	1106	1119	1124	1117	1112	1108	1105	1108	1100	1080	997	927	910	890	947	996	1057	1048	1072	-52	1020	1611
9	1030	1045	1058	1061	1060	1067	1070	1064	1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	—	—	1060	1072	1059	1068	1065	1058	1030	965	910	879	910	979	1040	1099	1110	1034	-33	1001	1769
11	1082	1057	1085	1099	1109	1117	1122	1119	1108	1103	1100	1095	1092	1090	1090	1040	976	898	888	935	998	1060	1129	1188	1066	-74	992	1842
12	1193	1195	1219	1210	1197	1197	1193	1194	1187	1177	1169	1155	1142	1140	1136	1087	1018	978	967	1010	1062	1078	1117	1130	1131	-102	1029	1537
13	1130	1150	1169	1180	1188	1191	1190	1180	1162	1155	1150	1144	1139	1145	1129	1082	1000	941	923	940	1007	1069	1120	1159	1110	-118	992	1842
14	1165	1148	1160	1160	1157	1160	1160	1159	1150	1142	1137	1128	1121	1125	1098	1032	977	907	892	938	997	1050	1110	1158	1093	-130	963	2082
15	1158	1152	1155	1160	1162	1164	1162	1170	1170	1158	1149	1130	1113	1102	1090	1049	972	918	872	864	909	973	1040	1122	1080	-156	924	2405
16	1199	1257	1247	1244	1238	1221	1201	1209	1208	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
17	—	—	—	—	—	—	—	—	—	1223	1241	1233	1227	1232	1225	1186	1125	1067	1048	1062	1129	1172	1237	1260	1195	-130	1065	1239
18	1263	1308	1252	1277	1298	1324	1346	1332	1310	1304	1300	1293	1287	1229	1218	1151	1122	1115	1080	1078	1127	1172	1182	1198	1232	-123	1109	0876
19	1207	1187	1190	1182	1170	1182	1190	1189	1180	1173	1169	1159	1150	1142	1150	1127	1105	1077	1080	1081	1128	1194	1260	1318	1166	-86	1080	1116
20	1370	1272	1254	1244	1230	1232	1230	1201	1163	1156	1152	1134	1118	1122	1118	1110	1058	1011	993	974	1025	1090	1098	1157	1146	-22	1124	0752
21	1140	1138	1119	1094	1066	1097	1124	1096	1060	1064	1070	1055	1052	1055	1044	1012	990	909	900	912	949	982	1024	1040	1042	26	1068	1215
22	1062	1088	1112	1113	1111	1112	1110	1104	1090	1084	1080	1075	1071	1064	1058	1018	959	899	920	888	932	981	1019	1047	1042	-20	1022	1594
23	1053	1080	1085	1091	1093	1097	1097	1105	1104	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
24	—	—	—	—	—	—	—	—	—	1095	1088	1098	1110	1115	1092	1050	1012	976	960	952	992	1038	1063	1066	1063	-65	998	1794
25	1070	1077	1084	1088	1089	1092	1092	1089	1078	1078	1081	1076	1072	1071	1060	1022	982	905	920	930	986	1039	1073	1089	1048	-88	960	2107
26	1067	1048	1094	1073	1079	1095	1108	1108	1100	1095	1092	1085	1079	1070	1052	981	905	846	828	862	918	980	1035	1053	1026	-96	930	2355
27	1060	1082	1089	1150	1208	1228	1245	1237	1220	1202	1187	1168	1150	1131	1118	1058	930	925	893	895	950	1020	1062	1080	1095	-106	989	1867
28	1075	1087	1087	1097	1104	1104	1101	1096	1082	1070	1061	1044	1028	1020	1011	954	908	820	795	819	878	947	1016	1080	1012	-105	907	2546
29	1100	1092	1083	1099	1111	1112	1110	1114	1110	1105	1102	1099	1097	1080	1120	1098	1030	971	960	962	1015	1088	1150	1187	1083	-108	975	1983
30	1158	1127	1130	1160	1186	1163	1136	1142	1140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
31	—	—	—	—	—	—	—	—	—	1119	1100	1090	1082	1069	840	1030	955	1102	949	920	942	985	1050	1117	1071	-79	992	1842
Means.....	1163	1167	1170	1174	1174	1176	1174	1171	1159	1154	1152	1144	1138	1134	1118	1088	1032	987	962	972	1020	1074	1122	1155	1116			
Temp. Corrections	-123	-114	-111	-110	-110	-108	-107	-103	-101	-98	-98	-95	-94	-91	-87	-88	-91	-96	-101	-106	-112	-115	-117	-119	.....	-104		
Corrected Means..	1040	1053	1059	1064	1064	1068	1067	1068	1058	1056	1054	1049	1044	1043	1031	1000	941	891	861	866	908	959	1005	1036	.....	.....	1012	
Mean Hourly Variations from General Monthly Mean. =.00	-28	-41	-47	-52	-52	-56	-55	-56	-46	-44	-42	-37	-32	-31	-19	12	71	121	151	146	104	53	7	-24	.....	$1+\frac{\Delta X}{X}=$	.....	1·001677
	-0231	-0339	-0389	-0430	-0430	-0463	-0454	-0463	-0381	-0364	-0348	-0306	-0265	-0256	-0157	0100	0588	1000	1248	1207	0859	0438	0058	-0198				

OCTOBER 1852. Temperature of Horizontal Force Magnetometer

				*		*		*		*		*																
1	872	870	867	867	867	866	866	865	864	863	862	861	861	860	860	860	860	863	866	869	870	871	873	874	8657			
2	873	870	870	869	869	868	868	867	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	866	866	865	865	862	860	860	862	864	867	868	869	870	871	871	8669			
4	871	869	868	866	865	864	863	860	858	858	858	857	857	853	851	852	854	857	858	860	862	864	866	868	8608			
5	868	861	861	860	859	859	859	858	857	856	856	855	855	854	852	852	854	856	859	860	861	864	866	869	8588			
6	868	861	861	860	860	860	860	859	859	858	858	857	857	855	852	850	850	852	852	852	851	848	846	843	8554			
7	842	840	839	838	837	835	833	831	830	829	828	827	826	826	822	820	820	818	818	819	822	822	822	822	8278			
8	822	821	821	822	823	823	823	822	822	822	822	822	822	821	820	820	820	820	820	818	817	815	814	812	8202			
9	811	810	810	810	810	810	810	809	808	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	-	—	810	812	811	811	811	811	812	814	817	819	822	827	828	830	830	8147			
11	830	825	823	823	823	823	823	823	823	822	822	822	822	822	823	824	827	829	830	832	835	837	840	840	8268			
12	841	838	836	836	836	835	835	834	833	832	832	831	830	830	830	831	835	836	838	839	840	841	843	843	8351			
13	843	840	840	839	839	839	839	838	838	837	837	836	836	836	835	837	838	840	840	841	843	847	848	849	8398			
14	849	846	843	843	843	842	842	841	840	840	840	840	840	839	838	838	840	842	844	846	848	850	853	855	8434			
15	857	854	850	850	850	850	850	849	849	848	848	848	848	848	847	848	849	850	852	857	860	857	852	850	8509			
16	850	847	847	847	847	845	844	844	844	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
17	—	—	—	—	—	—	—	—	—	842	840	839	839	838	837	837	838	839	840	842	846	846	849	850	8432			
18	850	848	845	846	847	846	846	845	845	843	842	841	840	840	839	839	839	838	839	838	838	835	832	832	8414			
19	832	830	830	830	830	830	830	829	829	828	828	828	828	828	827	827	828	828	830	831	834	836	838	835	8302			
20	830	825	824	823	822	820	819	817	816	815	815	814	814	810	809	806	803	801	800	799	799	799	798	797	8115			
21	797	795	795	796	797	797	797	796	795	794	794	793	792	791	791	792	794	796	798	801	806	809	810	812	7974			
22	810	809	809	809	809	809	810	809	809	808	808	807	807	807	806	807	809	810	812	816	819	820	821	823	8110			
23	823	820	820	820	820	820	820	819	819	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
24	—	—	—	—	—	—	—	—	—	822	825	824	824	824	823	823	824	824	824	828	830	833	834	836	8241			
25	833	830	830	830	830	830	830	829	829	829	829	829	829	827	825	826	828	830	831	834	837	837	839	839	8308			
26	838	835	833	833	833	832	832	831	830	830	830	829	829	829	828	828	830	833	836	838	840	841	841	842	8334			
27	840	838	837	837	837	837	837	836	835	834	833	833	833	832	832	832	834	835	837	838	839	840	841	842	8362			
28	842	840	839	839	839	838	838	836	834	833	832	831	831	830	829	830	832	832	836	838	839	840	842	843	8360			
29	843	840	840	839	838	837	837	836	835	834	834	833	832	832	831	832	832	834	837	839	840	843	843	844	8369			
30	842	840	840	840	840	839	838	837	837	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
31	—	—	—	—	—	—	—	—	—	832	827	826	825	823	820	820	820	820	820	819	819	819	819	819	8284			
Means.....	8414	8385	8376	8374	8373	8367	8365	8354	8348	8340	8338	8330	8328	8318	8307	8308	8319	8332	8347	8363	8381	8389	8396	8400	8356			

*The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot.}\, v. = \cdot 0003139 \times \text{Cot.}\ 75^\circ 15' = \cdot 00008264$ scd. $3''3963$ = Correction for 1° Faht.

Zero for Magr. 1497 at Ther. $88^\circ 8$ Corrected Zero 1215.

do. for Ther. $80^\circ 5$ or Standard $80^\circ 0$.

HORIZONTAL FORCE MAGNETOMETER.

NOVEMBER 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				2·4 *		−5·1 *		4·1 *		1·1 *		−1·6 *																
1	1159	1162	1143	1156	1165	1142	1129	1118	1099	1090	1078	1088	1102	1068	1062	1033	1037	1050	990	1020	1063	1087	1120	1160	1097	-51	1046	1·001397
2	1172	1139	1150	1142	1130	1123	1127	1123	1110	1107	1102	1098	1098	1110	1105	1074	1019	959	922	917	959	1002	1058	1095	1077	-66	1011	1686
3	1072	1079	1087	1092	1093	1065	1048	1053	1049	1061	1070	1074	1081	1084	1040	1019	965	935	900	906	950	999	1032	1031	1033	-50	983	1917
4	1048	1058	1073	1081	1084	1076	1079	1088	1088	1084	1078	1068	1062	1051	1020	970	936	869	867	895	958	1012	1062	1057	1028	-36	992	1842
5	1045	1072	1108	1126	1140	1105	1081	1076	1062	1052	1040	1043	1050	1042	1020	1001	960	925	920	952	998	1031	1062	1082	1041	-20	1021	1603
6	1042	1048	1050	1075	1095	1081	1078	1078	1070	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	1047	1022	1024	1030	1029	1008	969	916	882	879	892	931	969	1002	1027	1010	00	1010	1694
8	1022	1022	1033	1034	1030	1032	1044	1031	1010	1015	1017	1012	1010	1010	1008	978	939	893	840	829	860	899	950	990	980	2	982	1925
9	1020	1028	1031	1032	1029	1030	1041	1037	1024	1015	1004	998	995	984	952	900	858	818	821	790	874	926	970	992	965	9	974	1992
10	1001	986	1020	1052	1079	1049	1029	1020	1002	996	987	989	995	998	988	935	897	868	832	838	829	888	939	990	967	-6	961	2099
11	1012	1042	1022	1022	1018	1039	1070	1135	1192	1167	1139	1165	1194	1190	1176	1119	1072	1038	1086	1040	1109	1195	1260	1295	1117	-31	1086	1000
12	1256	1311	1279	1242	1200	1200	1210	1209	1200	1194	1186	1181	1180	1176	1136	1084	1019	980	1002	1010	1033	1088	1159	1200	1156	-46	1110	0868
13	1182	1218	1219	1218	1213	1191	1180	1191	1193	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	1158	1120	1112	1107	1107	1072	1022	978	929	871	810	900	980	1027	1065	1086	-17	1069	1190
15	1082	1083	1081	1084	1082	1071	1070	1074	1070	1066	1060	1053	1050	1040	1040	1012	969	930	899	902	958	1000	1020	1052	1031	-3	1028	1521
16	1060	1054	1051	1048	1040	1049	1069	1050	1022	1022	1020	1031	1046	1038	1022	982	930	892	905	978	999	1047	1090	1102	1023	1	1024	1568
17	1095	1088	1071	1079	1082	1074	1077	1085	1084	1082	1078	1071	1068	1064	1050	1012	999	962	923	918	967	1020	1102	1120	1049	-4	1045	1405
18	1150	1176	1189	1174	1154	1121	1099	1069	1030	1048	1064	1065	1070	1060	1050	1028	979	924	849	882	926	970	1050	1061	1050	5	1055	1322
19	1032	1028	1031	1039	1042	1032	1032	1039	1038	1040	1040	1020	1004	1008	998	957	913	866	847	871	887	927	981	1002	986	8	994	1826
20	1013	1003	1029	1031	1029	1022	1025	1026	1019	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	1006	990	994	1002	981	954	918	876	844	812	805	879	932	970	986	964	7	971	2017
22	991	983	984	990	992	988	995	1001	998	999	997	996	998	1002	962	910	892	880	878	928	958	973	987	992	970	-2	968	2042
23	970	949	943	971	994	998	1012	1010	1000	991	979	982	989	1010	958	908	869	829	800	820	870	942	993	1015	950	5	955	2148
24	1009	990	1006	1006	1002	1005	1018	1019	1012	992	970	973	980	965	932	892	839	801	769	802	868	940	970	987	948	8	956	2140
25	1010	1002	990	989	984	975	975	984	984	988	990	988	990	985	949	910	890	845	828	836	878	921	972	998	953	-1	952	2173
26	999	983	995	994	988	1024	1070	1074	1070	1063	1054	1045	1040	1056	1026	982	947	915	922	944	983	1008	1030	1041	1011	-10	1001	1769
27	1030	1045	1080	1058	1030	1058	1096	1079	1053	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	1037	1018	1017	1020	1012	1000	960	923	869	866	880	891	908	947	982	994	-14	980	1942
29	1000	989	994	1000	1001	991	992	991	982	982	980	973	970	968	962	948	930	890	860	849	869	889	908	930	952	4	956	2074
30	960	972	980	989	993	986	990	994	990	976	960	948	940	930	882	852	762	810	845	912	978	990	1020	1086	948	5	953	2165
Means.....		1055	1058	1063	1066	1065	1059	1063	1064	1056	1049	1040	1039	1041	1037	1014	976	935	900	882	893	938	982	1026	1051	1015			
Temp. Corrections		−28	−24	−21	−18	−16	−14	−13	−11	−11	−7	−5	−2	−2	1	3	4	3	−2	−7	−15	−20	−25	−27	−28	.....	−12		
Corrected Means.		1027	1034	1042	1048	1049	1045	1050	1053	1045	1042	1035	1037	1039	1038	1017	980	938	898	875	878	918	957	999	1023	... .	.....	1003	
Mean Hourly Variations from General Monthly Mean. =·00		−24 -0198	−31 -0256	−39 -0323	−45 -0372	−46 -0381	−42 -0348	−47 -0389	−50 -0413	−42 -0348	−39 -0323	−32 -0265	−34 -0281	−36 -0298	−35 -0289	−14 -0116	23 0190	65 0537	105 0867	128 1058	125 1033	85 0702	46 0381	4 0033	−20 -0165	.....	$1+\frac{\Delta X}{X}=$	.....	1·001752

NOVEMBER 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	819	818	818	818	818	818	818	817	817	817	817	816	816	814	814	815	818	821	824	827	829	830	831	831	8200			
2	831	830	828	825	823	823	823	823	824	822	821	820	820	820	820	820	820	823	826	828	829	830	830	830	8245			
3	828	827	825	823	821	821	822	821	821	820	820	819	819	818	816	815	814	814	814	815	817	820	820	820	8196			
4	820	820	820	819	818	817	817	818	819	817	815	813	812	811	811	810	810	812	812	815	815	816	818	818	8155			
5	817	813	813	812	812	811	811	810	810	809	809	809	809	808	806	808	808	808	810	813	815	815	816	813	8110			
6	811	810	810	809	809	809	809	808	808	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	804	800	799	799	798	798	797	797	799	802	806	808	810	810	810	8050			
8	810	809	809	809	809	807	805	804	803	802	802	801	800	799	799	798	798	800	803	806	807	808	809	809	8044			
9	809	808	806	804	802	802	802	801	800	800	800	799	799	798	797	798	798	800	801	803	806	807	808	809	8024			
10	809	808	805	805	806	806	806	806	806	806	806	805	805	805	803	803	803	804	805	807	809	812	814	818	8068			
11	818	816	815	813	812	811	810	810	810	810	810	810	810	809	808	809	810	813	818	820	821	824	825	827	8141			
12	826	824	823	822	822	821	820	820	820	819	819	818	818	817	817	818	818	818	816	815	813	814	815	816	8187			
13	816	813	813	813	813	812	812	811	811	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	808	806	805	805	805	803	804	806	809	809	810	812	814	814	814	8099			
15	813	812	811	810	809	808	807	806	806	805	804	803	802	800	800	800	800	801	803	805	808	809	810	810	8059			
16	810	808	808	808	808	806	805	804	803	802	802	801	801	800	800	800	800	801	804	806	808	810	810	810	8048			
17	810	810	809	808	808	808	808	807	807	806	806	806	806	806	806	805	803	802	802	803	804	805	807	807	8062			
18	807	806	805	804	803	803	803	803	803	803	803	802	802	802	803	802	802	803	802	803	803	804	806	807	8035			
19	807	807	806	804	803	802	802	801	801	800	800	800	800	800	800	798	798	799	801	805	806	807	808	809	8027			
20	808	807	806	803	801	801	801	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	800	800	800	800	799	798	798	800	802	803	808	809	810	810	810	8031			
22	810	810	808	808	808	807	806	806	806	805	804	803	802	801	800	800	800	802	804	808	809	809	809	809	8056			
23	808	807	806	805	805	803	802	802	802	802	802	801	801	800	799	799	800	801	801	805	808	810	810	810	8037			
24	809	807	806	805	804	803	802	801	800	800	800	800	800	799	799	798	799	800	801	804	808	808	808	809	8029			
25	809	808	807	805	804	802	801	801	802	802	802	802	802	802	801	802	804	807	808	810	810	811	812	812	8053			
26	811	811	810	809	809	809	809	809	809	808	808	809	810	810	805	802	801	803	804	805	807	809	810	810	8078			
27	810	811	813	814	815	815	815	815	816	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	811	807	806	806	804	802	801	802	803	805	808	809	810	810	810	8091			
29	810	809	808	807	807	806	806	805	804	802	801	800	799	799	799	800	800	800	802	802	804	807	808	808	8039			
30	808	808	807	805	804	803	803	802	802	802	802	801	801	800	800	798	796	799	802	807	809	810	810	808	8036			
Means.....	8132	8122	8113	8103	8097	8090	8087	8081	8081	8070	8064	8057	8055	8048	8040	8038	8040	8055	8070	8094	8109	8123	8130	8132	8085			

*The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of Interpolations.

$k = a.\text{Cot. } v. = \cdot 0003139 \times \text{Cot. } 75^\circ 15' = \cdot 00008264$ scd. 3·3963 = Correction for 1° Faht.

Zero for Magr. 1497 at Ther. 88°·8 Corrected Zero 1215.
do for Ther. 80°·5 or Standard 80°·0

HORIZONTAL FORCE MAGNETOMETER.

DECEMBER 1852. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P M. h.m. 4 41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				0·8 *		4·1 *		0·1 *		−1·6 *		0·2 *																
1	1130	1125	1120	1117	1112	1101	1082	1075	1068	1047	1030	1029	1028	1018	960	938	913	899	920	880	932	946	962	1010	1018	16	1034	1·001496
2	1010	1042	1030	1061	1090	1085	1072	1066	1060	1048	1040	1029	1018	988	947	900	874	833	846	890	970	1030	1042	1038	1000	53	1053	1339
3	1060	1102	1108	1066	1022	1044	1057	1044	1031	1010	992	981	970	975	962	922	886	842	834	866	885	896	892	906	973	52	1025	1570
4	920	950	973	981	988	993	990	1006	1021	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	959	900	885	869	928	950	912	893	882	885	886	890	919	920	950	935	20	955	2148
6	986	963	920	964	1006	1012	1009	1012	1014	1045	1079	1061	1042	1038	1009	965	940	922	936	978	1000	1018	1038	1045	1000	-2	998	1794
7	1032	1065	1069	1069	1068	1044	1091	1082	1072	1063	1057	1040	1023	1030	1020	986	978	992	1009	1015	1012	1002	1020	1008	1035	−23	1012	1677
8	1009	1012	1035	1029	1022	1026	1022	1042	1062	1064	1070	1069	1068	1045	1023	1002	997	1000	1030	1036	1066	1044	1039	1058	1036	−22	1014	1661
9	1070	1095	1112	1107	1100	1086	1064	1077	1090	1054	1022	1016	1009	990	953	890	847	818	857	1030	1070	1072	1044	1055	1022	-16	1006	1727
10	1070	1061	1102	1089	1074	1078	1073	1058	1042	1029	1020	1030	1040	1028	1017	990	1003	959	986	998	1021	1042	1080	1070	1040	-1	1039	1454
11	1060	1062	1055	1022	988	1018	1040	1045	1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1032	1018	1014	1009	992	966	925	863	862	878	908	904	966	1002	1000	987	13	1000	1777
13	1002	966	991	1006	1020	1028	1027	1014	1000	1002	1008	1011	1013	990	959	937	908	896	882	892	924	970	960	1028	976	40	1016	1644
14	1050	1016	1050	1045	1038	1029	1011	1002	992	985	982	986	990	989	969	958	913	862	832	840	874	910	950	950	968	41	1009	1702
15	958	974	968	955	940	954	959	960	960	949	942	941	939	940	934	915	892	864	846	825	830	844	882	920	920	62	982	1925
16	944	955	958	959	958	968	970	955	940	934	932	927	922	909	899	878	857	832	810	800	782	810	840	846	899	72	971	2017
17	866	891	890	896	900	913	917	908	898	892	890	900	910	908	888	882	880	901	850	890	870	898	910	940	895	72	967	2050
18	970	966	968	960	950	957	955	963	970	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	954	942	941	940	926	892	848	820	800	800	800	849	872	904	886	910	86	996	1810
20	894	911	910	911	910	911	904	897	890	901	916	903	890	892	878	853	836	818	800	838	852	872	883	893	882	98	980	1942
21	890	887	894	890	884	887	882	872	861	863	869	859	848	836	818	791	742	720	715	724	723	768	802	828	827	103	930	2355
22	822	852	855	860	863	867	862	856	850	839	832	858	884	890	869	831	769	719	769	820	850	879	910	902	846	107	953	2165
23	878	860	905	913	920	944	959	970	980	951	926	917	908	862	859	888	868	889	858	810	850	855	890	913	899	92	991	1851
24	957	1000	1011	1003	994	982	961	961	960	948	940	923	906	892	890	872	840	839	827	835	849	878	889	900	919	111	1030	1529
25	947	950	932	932	930	920	902	908	914	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	900	890	900	910	900	872	839	803	779	760	758	775	790	812	858	870	108	978	1959
27	882	888	880	885	889	892	886	879	872	864	859	862	865	860	855	840	811	770	732	740	739	775	798	855	841	115	956	2140
28	913	940	936	926	914	907	892	880	867	872	880	877	874	865	830	794	789	820	793	830	840	848	895	934	873	136	1009	1702
29	945	900	937	975	1012	1020	1019	980	940	967	998	1012	1025	975	975	953	908	852	843	820	858	910	960	1002	949	135	1084	1083
30	1040	1029	1034	1011	987	987	978	970	962	959	960	958	955	947	932	910	880	851	817	798	825	860	892	931	936	106	1042	1429
	970	973	964	963	960	970	972	963	954	949	948	943	938	922	900	857	809	760	724	690	732	807	869	940	895	80	975	1983
Means.....	973	979	985	985	983	986	984	979	975	966	961	958	955	946	927	899	871	851	846	860	880	907	929	951	939			
Temp. Corrections	46	50	53	55	56	59	59	61	62	64	65	67	68	71	75	78	77	74	68	62	56	51	48	48	.....	61		
Corrected Means.	1019	1029	1038	1040	1039	1045	1043	1040	1037	1030	1026	1025	1023	1017	1002	977	948	925	914	922	936	958	977	999	.....	.....	1000	
Mean Hourly Variations from General Monthly Mean. = ·00	-19 -0157	-29 -0240	-38 -0314	-40 -0331	-39 -0323	-45 -0372	-43 -0356	-40 -0331	-37 -0306	-30 -0248	-26 -0215	-25 -0206	-23 -0190	-17 -0141	-2 -0017	23 0190	52 0430	75 0619	86 0711	78 0644	64 0529	42 0350	23 0190	1 0008	.....	$1+\frac{\Delta X}{X}=$	.....	1·001777

DECEMBER 1852. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	807	807	804	803	803	803	803	803	803	801	800	800	800	800	799	798	798	798	798	798	798	797	796	794	8005			
2	792	790	790	790	790	790	790	790	791	790	790	790	790	789	787	787	787	786	786	788	790	790	790	790	7893			
3	790	790	788	788	788	788	788	787	787	787	787	787	788	787	788	786	787	789	792	794	794	796	797	798	7896			
4	798	798	798	797	797	797	797	796	796	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	796	796	795	795	792	792	792	796	800	803	806	808	810	811	811	7990			
6	810	809	809	808	808	806	805	804	803	802	801	801	801	800	800	801	801	802	805	808	811	812	814	814	8056			
7	813	811	811	810	810	810	810	810	810	810	810	810	810	809	809	808	810	812	813	816	818	818	818	817	8118			
8	817	815	813	812	812	812	813	812	811	810	810	810	810	809	808	808	808	810	810	811	812	813	815	816	8115			
9	816	813	811	811	811	811	811	810	810	809	809	808	808	808	806	805	805	803	806	809	810	812	813	812	8095			
10	811	810	810	809	809	808	808	807	807	805	804	802	801	800	800	800	799	800	802	803	805	807	809	810	8053			
11	809	808	806	805	804	803	803	802	801	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	800	800	800	800	800	798	798	798	800	802	802	802	800	797	794	8013			
13	792	792	790	790	790	790	790	790	791	790	790	790	791	791	791	792	793	796	798	799	800	800	801	800	7932			
14	800	798	797	797	797	795	794	794	794	793	792	791	790	790	789	788	788	788	790	790	792	794	794	794	7929			
15	792	792	792	792	792	791	790	790	790	789	788	786	785	781	780	779	779	780	780	783	785	788	789	789	7868			
16	790	788	787	787	787	787	788	787	787	784	782	781	780	779	778	777	776	778	780	782	785	787	787	787	7838			
17	785	783	782	782	782	782	782	784	787	787	787	787	787	788	786	783	783	781	781	781	782	783	783	782	7838			
18	782	781	781	781	781	780	780	780	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	780	780	780	780	780	779	778	777	778	778	778	779	780	780	780	7797			
20	781	780	780	779	778	777	777	776	776	776	776	775	775	772	770	770	770	770	773	775	776	780	783	783	7762			
21	783	780	780	779	778	777	777	776	776	775	775	773	772	770	768	767	767	768	770	771	774	777	779	780	7747			
22	780	780	777	775	774	773	772	771	771	770	770	770	771	772	773	771	771	770	772	772	773	777	778	778	7734			
23	777	777	779	780	781	781	781	781	781	781	781	779	778	778	775	773	773	772	772	773	777	779	779	779	7778			
24	780	777	777	776	775	773	772	771	771	771	771	770	770	767	764	763	765	767	770	772	774	777	780	780	7722			
25	780	778	778	777	777	774	772	771	770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	772	774	773	772	770	769	768	768	769	770	773	774	775	775	775	7731			
27	775	776	775	774	774	773	772	771	770	770	770	770	770	769	768	767	766	767	768	770	771	772	775	775	7712			
28	775	774	772	771	770	768	767	766	765	764	763	762	761	761	760	758	758	758	759	760	763	766	768	769	7649			
29	769	768	768	768	768	767	767	766	765	764	763	762	762	760	758	755	755	758	762	767	770	773	774	775	7652			
30	776	776	775	773	772	771	771	771	771	770	770	770	770	770	770	770	770	769	771	775	779	780	782	782	7737			
	786	785	783	783	783	782	782	781	780	780	780	779	778	776	774	773	773	776	780	782	786	788	790	792	7813			
Means.....	7913	7902	7894	7888	7986	7877	7875	7869	7868	7861	7859	7852	7850	7840	7829	7820	7822	7832	7850	7867	7885	7901	7910	7910	7869			

* The numbers in these Columns are not observed; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\mathrm{Cot.}\theta\left(\frac{T}{T'}\right)^2 = \cdot0000291 \times \mathrm{Cot.}\ 7'37'45'' \times \left(\frac{6{\cdot}900}{11{\cdot}154}\right)^{s.} = \cdot00008314$ $\quad \frac{q}{k} = \frac{\cdot000360}{\cdot000083} = 4{\cdot}330^{sec.} = 1^{\circ}$ Faht. Zero $80^{\circ}{\cdot}0$ Ther.

VERTICAL FORCE MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−4·3		−7·7		−9·9		−2·4		12·0																
				*		*		*		*		*																
1	4347	4373	4453	4394	4343	4324	4320	4293	4285	4273	4266	4308	4326	4296	4287	4265	4513	4558	4491	4478	4490	4490	4493	4528	4383	70	4453	
2	4440	4343	4324	4318	4320	4312	4320	4292	4283	4281	4283	4287	4267	4267	4246	4112	4113	4233	4303	4385	4708	4802	4679	4438	4348	59	4407	
3	4304	4309	4309	4307	4314	4291	4283	4273	4283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	4209	4139	4182	4202	4276	4276	4204	4204	4310	4464	4524	4671	4703	4590	4670	4346	55	4401	
5	4387	4398	4328	4255	4191	4225	4275	4265	4275	4286	4301	4322	4320	4225	4252	4261	4292	4270	4293	4217	4446	4581	4635	4455	4323	48	4371	
6	4303	4287	4388	4370	4360	4297	4249	4239	4249	4276	4307	4319	4307	4240	4221	4161	4161	4228	4194	4352	4516	4631	4631	4631	4330	62	4392	
7	4491	4399	4347	4343	4347	4315	4298	4277	4275	4273	4275	4308	4318	4251	4290	4200	4200	4264	4213	4393	4600	4667	4605	4503	4352	65	4417	
8	4360	4351	4347	4343	4347	4359	4347	4312	4296	4311	4330	4330	4307	4294	4294	4238	4350	4582	4773	4797	5084	5139	4984	4793	4485	49	4534	
9	4483	4373	4342	4340	4346	4348	4366	4309	4271	4269	4271	4275	4255	4220	4220	4211	4259	4184	4145	4145	4393	4547	4475	4382	4310	15	4325	
10	4319	4229	4229	4211	4202	4200	4214	4205	4215	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	4205	4199	4188	4154	4154	4128	4095	3936	4096	4078	4154	4293	4481	4538	4389	4213	2	4215	
12	4349	4325	4316	4274	4241	4233	4241	4214	4206	4237	4272	4284	4272	4184	4213	4239	4233	4130	3968	3855	3901	4110	4315	4313	4205	4	4209	
13	4344	4252	4218	4214	4218	4207	4212	4196	4199	4228	4262	4274	4262	4169	4169	4191	4193	4354	4530	4613	4993	5173	4935	4727	4381	19	4400	
14	4466	4355	4355	4333	4319	4304	4305	4283	4280	4278	4280	4292	4280	4245	4245	4215	4242	4314	4314	4333	4470	4496	4518	4434	4332	44	4376	
15	4375	4375	4352	4335	4327	4319	4326	4303	4299	4289	4284	4296	4284	4192	4192	4237	4217	4339	4495	4625	4645	4645	4603	4634	4375	52	4427	
16	4474	4474	4402	4384	4375	4354	4349	4330	4330	4299	4272	4284	4272	4272	4272	4228	4342	4475	4388	4379	4538	4354	4420	4252	4355	58	4413	
17	4547	4506	4450	4461	4480	4475	4405	4414	4442	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	4380	4322	4334	4322	4297	4297	4353	4456	4619	4745	4766	4678	4678	4546	4466	4477	63	4540	
19	4450	4423	4412	4408	4412	4317	4237	4257	4297	4295	4297	4317	4313	4510	4394	4334	4409	4301	5199	4592	4626	4736	4554	4605	4446	83	4529	
20	4670	4538	4228	4160	4100	4193	4301	4299	4317	4196	4080	4145	4186	4186	4186	4291	4317	4244	4203	4266	4186	4143	4298	4407	4256	61	4317	
21	4343	4390	4326	4322	4326	4281	4251	4246	4261	4262	4268	4233	4175	4175	4202	4169	4300	4580	4614	4522	4642	4705	4617	4433	4360	38	4398	
22	4373	4355	4266	4393	4529	4430	4346	4290	4254	4238	4226	4231	4213	4139	4175	4214	4277	4470	4410	4363	4183	4117	41 1	4075	4279	12	4291	
23	4148	4400	4384	4330	4285	4223	4176	4188	4219	4217	4219	4205	4168	4110	4145	4165	4251	4440	4499	4528	4528	4458	4461	4306	4294	−19	4275	
24	4278	4203	4194	4395	4604	4586	4584	4574	4584	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	4442	4304	4429	4531	4738	4452	4372	4466	4746	4841	4970	4923	4877	4757	4752	4567	−20	4547	
26	4752	4696	4696	4692	4696	4677	4673	4663	4673	4660	4651	4663	4651	4628	4587	4587	4883	5098	5285	5285	5294	5084	5140	5190	4829	11	4840	
27	4888	4780	4780	4737	4703	4645	4603	4607	4631	4652	4677	4677	4654	4646	4616	4714	4834	5047	5047	5382	5598	5420	5120	4933	4850	20	4870	
28	4939	4816	4801	4804	4816	4795	4789	4771	4773	4771	4773	4759	4722	4685	4644	4705	4705	4897	5055	5224	5449	5359	5094	5044	4883	41	4924	
29	4950	4950	4869	4865	4869	4844	4834	4824	4834	4832	4834	4857	4856	4749	4803	4825	4825	5020	5180	5188	5229	5271	5312	5443	4961	69	5030	
30	5281	5103	4935	4942	4958	4873	4804	4794	4804	4790	4781	4842	4880	4880	4762	4585	4482	4551	4262	4316	4478	5165	4815	4725	4784	84	4868	
Means.....	4502	4462	4425	4420	4424	4400	4389	4374	4378	4363	4353	4371	4365	4347	4330	4314	4364	4475	4538	4563	4675	4724	4664	4597	4451			
Temp. Corrections	12	17	22	27	30	35	38	44	48	51	52	55	57	62	68	74	66	55	45	35	26	18	14	11	.....	40		
Corrected Means	4514	4479	4447	4447	4454	4435	4427	4418	4426	4414	4405	4426	4422	4409	4398	4388	4430	4530	4583	4598	4701	4742	4678	4608	.....	.....	4491	
Mean Hourly Variations from General Monthly Mean =.00	−23 −0191	12 0100	44 0366	44 0366	37 0308	56 0466	64 0532	73 0607	65 0540	77 0640	86 0715	65 0540	69 0574	82 0682	93 0773	103 0856	61 0507	−39 −0324	−92 −0765	−107 −0890	−210 −1746	−251 −2087	−187 −1554	−117 −0973	.....	$1+\frac{\Delta Y}{Y}=$	.....	·002087

JANUARY 1852. Vertical Force Magnetometer.

JANUARY 1852. Thermometer of Vertical Force Magnetometer.

	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta Y}{Y}$
				*		*		*		*		*																
1	786	785	785	784	784	783	782	781	780	780	780	780	780	780	780	780	780	784	786	788	790	792	792	792	7839			
2	791	790	788	787	787	786	786	785	785	785	785	785	785	784	782	784	784	784	786	786	789	790	790	789	7864			
3	789	787	787	786	786	785	785	785	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	785	786	785	785	785	785	786	786	788	790	790	792	794	793	793	7874			
5	792	790	790	789	788	787	787	787	787	787	787	786	786	786	786	786	787	788	790	792	794	795	795	795	7890			
6	794	791	791	789	788	786	785	785	785	784	784	784	784	782	780	777	779	781	785	786	787	791	790	789	7857			
7	788	787	787	786	785	784	784	784	784	784	784	783	782	780	777	776	780	782	785	787	790	792	793	793	7849			
8	792	790	789	788	787	787	787	786	786	785	785	785	785	785	785	785	785	787	790	794	795	795	797	799	7887			
9	798	796	796	795	794	794	794	793	793	793	793	792	792	792	792	793	795	797	800	803	804	805	806	805	7965			
10	805	804	804	803	803	802	801	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	799	798	796	795	794	793	792	793	795	797	800	803	804	805	805	7996			
12	804	803	802	801	801	800	800	798	797	796	795	795	795	794	794	792	796	798	800	801	802	803	805	807	7991			
13	807	805	802	801	800	798	797	795	794	793	792	791	790	790	790	788	789	790	793	795	796	798	800	802	7957			
14	802	800	797	796	796	793	790	790	790	789	788	787	786	785	782	778	779	782	785	788	790	793	795	796	7899			
15	796	795	794	793	793	791	790	788	786	785	785	785	785	783	779	775	780	784	785	787	790	793	795	797	7881			
16	795	793	793	792	791	789	787	786	785	785	785	784	784	781	777	776	779	783	785	787	789	790	789	790	7865			
17	792	792	792	791	790	788	787	785	784	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	784	785	784	784	782	780	776	776	778	784	785	786	787	788	790	7854			
19	790	787	786	784	783	782	782	780	779	777	776	775	775	775	774	773	775	777	780	782	784	786	787	788	7807			
20	790	790	789	788	788	787	786	784	782	781	780	779	778	778	780	780	780	785	788	792	793	795	795	795	7860			
21	796	796	794	793	792	792	792	791	790	789	788	787	786	785	784	782	784	786	792	795	796	798	798	800	7911			
22	799	798	797	797	798	798	798	796	795	794	794	794	794	792	792	792	794	797	798	800	803	804	805	805	7973			
23	806	806	805	805	805	804	803	803	803	802	802	801	800	799	798	798	801	803	805	807	810	811	813	815	8044			
24	814	814	811	810	809	807	806	805	804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	803	803	802	802	801	798	795	797	798	802	805	805	806	806	807	8046			
26	806	805	804	802	801	800	800	797	795	794	794	793	792	792	790	788	790	795	795	798	800	802	804	804	7975			
27	802	801	800	799	798	798	798	796	795	794	793	792	792	790	788	785	789	792	793	795	798	800	800	802	7954			
28	803	802	798	797	796	795	795	792	790	789	789	787	785	783	783	780	780	784	785	786	790	793	794	795	7905			
29	795	795	794	792	790	787	785	785	785	784	783	781	780	777	772	768	770	774	776	780	785	788	793	795	7839			
30	795	794	792	789	787	785	783	779	776	775	774	773	773	772	770	767	772	775	777	780	785	786	787	787	7805			
Means...	7972	7960	7949	7937	7931	7918	7912	7898	7890	7883	7880	7872	7867	7857	7843	7828	7846	7872	7897	7919	7941	7958	7967	7975	7907			

* The numbers in these columns are not observed ; but interpolated for the sake of obtaining the daily Means, and those numbers on the heads of them are the Corrections of interpolations.

$k = a.\text{Cot. } \theta\left(\frac{T}{T}\right)^2 = \cdot0000291 \times \text{Cot. } 7°37'11'' \times \left(\frac{6\cdot902}{11\cdot246}\right)^2 = \cdot00008193$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot082} = 4\cdot394^{\text{scd.}} = 1$ Faht. Zero 80·0 Ther.

VERTICAL FORCE MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·5		—1·5		5·1		14·9		7·7																
Jan. 31	4725	4920	4861	4830	4791	4811	4834	4865	4885	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	4841	4767	4754	4726	4658	4752	4830	4997	5115	5387	5249	5333	5259	5228	5090	4938	84	5022	
2	5004	4794	4858	4855	4843	4842	4843	4819	4784	4821	4828	4836	4828	4776	4763	4745	4745	5085	5727	6131	5927	5633	5275	4881	5027	77	5104	
3	4662	4662	4886	4864	4834	4833	4834	4850	4856	4871	4856	4860	4849	4849	4815	4860	4947	5027	5129	5309	5592	5592	5551	5315	4988	67	5055	
4	5145	5039	5039	4974	4900	4899	4900	4840	4770	4804	4808	4816	4808	4809	4809	4669	4566	4513	4530	4695	5022	5180	5048	4865	4852	45	4897	
5	4825	4825	4840	4842	4835	4834	4835	4778	4710	4759	4779	4710	4625	4766	4766	4901	5098	5172	5243	5346	5825	5940	5521	5445	5009	12	5021	
6	5018	5018	4853	4827	4793	4792	4793	4795	4786	4801	4786	4794	4786	4786	4729	4585	4527	4527	4465	4367	4543	4768	4836	4924	4746	−23	4723	
7	4853	4853	4760	4764	4760	4714	4670	4685	4689	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	4726	4734	4723	4697	4644	4584	4543	4601	4601	4452	4520	4623	4823	4947	4947	4705	−33	4672	
9	4794	4770	4737	4726	4707	4706	4707	4729	4741	4742	4714	4722	4714	4671	4671	4725	4915	5081	5281	5343	5235	5265	5386	5386	4895	−14	4881	
10	5156	4974	4974	4920	4858	4857	4858	4801	4734	4756	4748	4736	4708	4691	4586	4380	4258	4258	4309	4210	4343	4615	4927	4927	4691	20	4711	
11	4861	4861	4764	4768	4764	4759	4756	4723	4680	4709	4708	4688	4653	4574	4495	4381	4381	4629	4867	5030	5200	5271	5304	5287	4796	45	4841	
12	5246	5024	4900	4894	4879	4861	4845	4827	4799	4814	4799	4803	4792	4792	4768	4636	4546	4647	5112	5445	5660	5631	5510	5335	4982	38	5020	
13	5231	5139	5139	5060	4972	4968	4967	4937	4896	4906	4887	4895	4887	4839	4818	4830	4978	5194	6030	5988	5858	6033	5941	5742	5214	25	5239	
14	5467	5387	5130	5114	5089	5088	5089	5126	5153	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4953	4724	4625	4511	4900	4916	4305	3942	4377	4402	3989	3954	4648	5400	5215	4813	·00	4813	
16	4978	4680	4705	4666	4619	4578	4540	4571	4591	4615	4609	4617	4609	4670	4769	4924	5007	5160	5303	5478	6066	5838	5911	5576	4962	−25	4937	
17	5280	4930	4857	4792	4719	4709	4702	4688	4663	4678	4663	4711	4744	4685	4690	4250	4772	4335	3957	3688	†10039	4014	4821	4813	4842	−44	4798	
18	4960	5720	4438	4679	4912	4876	4842	4672	4491	4550	4579	4655	4715	4719	4860	4978	5218	5452	5422	5487	5105	5067	4818	5001	4926	−61	4865	
19	5172	5293	4774	4806	4829	4726	4626	4683	4730	4595	4430	4585	4724	4956	4656	4889	5455	5685	5087	5078	4821	5375	5223	5022	4926	−70	4856	
20	4602	4460	4079	4198	4308	4356	4407	4418	4419	4451	4453	4440	4411	4411	4213	4238	4511	4559	4920	4947	4871	4896	4944	4995	4521	−76	4445	
21	4591	4591	4900	4944	4980	4656	4335	4455	4564	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	4507	4420	4478	4521	4521	4474	4543	4497	4635	4786	4868	5027	5198	5272	4890	4694	−62	4632	
23	4678	4633	4601	4557	4504	4461	4421	4489	4547	4562	4547	4529	4496	4395	4372	4506	4567	4693	4840	4905	4905	4905	4939	4849	4621	−41	4580	
24	4809	4809	4564	4556	4539	4538	4539	4543	4536	4551	4536	4567	4582	4426	4426	4486	4570	4771	5004	5040	5155	5020	4951	4761	4675	−20	4655	
25	4746	4746	4644	4606	4559	4558	4559	4550	4530	4537	4515	4523	4515	4475	4399	4354	4442	4610	4974	5465	5295	5270	5203	5203	4720	−12	4708	
26	4840	4620	4599	4601	4595	4578	4563	4527	4481	4483	4456	4442	4412	4399	4399	4278	4278	4225	4297	4404	4735	4851	4873	4881	4534	−44	4490	
27	4881	4645	4487	4533	4570	4617	4667	4537	4397	4445	4463	4489	4500	4524	4486	4595	4677	4907	5013	4582	4330	4032	4391	4629	4558	−61	4497	
28	4644	4479	4436	4341	4238	4289	4342	4333	4314	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	4445	4546	4554	4546	4411	4257	4572	4903	5309	5494	5406	5193	5193	5260	4913	4684	−65	4619	
Means	4927	4875	4753	4749	4736	4716	4699	4690	4670	4677	4654	4662	4654	4654	4619	4597	4696	4823	4961	4999	5306	5133	5179	5076	4813			
Temp. Corrections	−36	−29	−23	−20	−19	−16	−15	−11	−9	−4	−1	3	6	13	23	29	19	7	−4	−14	−22	−31	−36	−41	....	−10		
Corrected Means	4891	4846	4730	4729	4717	4700	4684	4679	4661	4673	4653	4665	4660	4667	4642	4626	4715	4830	4957	4985	5284	5102	5143	5035	.....	.....	4803	
Mean Hourly Variations from General Monthly Mean. =.00	−88	−43	73	74	86	103	119	124	142	130	150	138	143	136	161	177	88	−27	−154	−182	−481	−299	−340	−232	.....	$\frac{\Delta Y}{Y}$ =	.....	·003941
	−0721	−0352	0598	0606	0705	0844	0975	1016	1163	1065	1229	1131	1172	1114	1319	1450	0721	−0221	−1262	−1491	−3941	−2450	−2786	−1901				

Temperature of Vertical Force Magnetometer.

	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.
				*		*		*		*		*													
Jan. 31	787	786	786	785	784	782	781	780	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1	—	—	—	—	—	—	—	—	—	779	778	777	776	774	770	770	774	775	780	784	786	787	789	792	7809
2	794	792	789	787	786	785	784	781	779	779	779	779	779	777	775	775	775	778	780	782	784	787	788	788	7826
3	789	788	787	786	786	785	785	785	785	783	781	780	780	780	776	776	778	782	786	788	790	792	793	793	7848
4	793	792	790	789	789	788	788	789	790	788	787	787	787	787	785	783	785	786	788	792	793	797	800	800	7897
5	800	800	798	797	796	796	796	796	796	795	795	793	792	792	790	790	793	795	798	801	803	806	807	807	7972
6	808	806	804	804	804	804	804	804	805	804	803	803	803	802	801	800	801	804	806	808	810	813	813	814	8053
7	814	811	810	809	809	808	808	809	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	808	806	805	804	804	802	798	801	805	805	807	808	811	813	814	8075
9	813	812	809	807	806	805	805	805	805	803	802	801	800	797	795	794	796	800	802	803	803	804	804	805	8032
10	805	804	803	803	803	801	800	797	795	793	792	791	790	786	786	784	788	790	794	797	797	797	797	798	7955
11	798	796	795	795	795	794	794	793	793	790	788	787	786	784	780	775	780	785	786	788	790	791	794	795	7897
12	797	795	795	794	794	793	793	791	790	790	790	788	786	785	785	784	787	789	793	794	795	795	795	796	7914
13	796	796	795	795	795	795	795	795	795	794	794	793	792	790	786	785	790	793	794	797	798	798	800	802	7943
14	802	800	800	798	797	797	797	797	797	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	799	802	801	800	796	795	795	796	799	802	803	806	808	808	808	8001
16	809	809	809	808	808	807	807	806	805	804	804	804	804	800	800	796	800	802	804	806	807	810	812	815	8057
17	817	815	812	811	810	809	809	809	809	808	808	808	808	806	802	802	804	806	809	812	814	816	818	818	8100
18	817	814	813	815	818	819	820	819	818	816	815	813	811	810	810	808	805	808	810	814	814	816	817	817	8140
19	817	816	816	817	818	818	818	816	815	814	814	813	812	812	810	810	812	814	816	818	820	822	822	823	8160
20	823	820	819	819	820	819	819	818	817	816	815	814	814	811	809	807	810	814	816	817	820	823	825	827	8172
21	826	823	821	819	818	817	817	816	816	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	815	814	812	810	806	802	800	805	808	809	814	815	817	818	820	8141
23	820	817	814	813	813	812	812	811	810	809	809	808	807	807	804	802	802	803	805	807	808	810	811	812	8094
24	811	810	810	809	808	807	806	805	804	803	803	803	803	802	797	796	798	800	802	804	805	807	807	807	8045
25	807	807	806	805	805	804	804	803	802	801	801	800	800	798	794	792	795	798	801	805	807	809	811	812	8028
26	814	811	811	811	811	810	809	808	807	806	806	805	805	805	805	805	806	808	810	813	815	817	821	821	8100
27	820	819	817	816	815	814	814	813	813	812	811	809	807	806	805	804	806	810	813	815	820	824	824	826	8139
28	826	825	822	822	822	820	819	817	815	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	812	809	808	808	807	805	803	805	808	810	814	816	818	820	822	8147
Means	8081	8066	8052	8046	8044	8036	8034	8025	8020	8008	8002	7993	7986	7970	7948	7934	7957	7984	8008	8033	8050	8070	8083	8093	8022

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.
† 10039 Reading correct but Magnetometer disturbed.

$k = a.\ \text{Cot.}\ \theta \left(\frac{T}{T}\right)^2 = \cdot0000291 \times \text{Cot}\ 7^\circ 37' 43'' \times \left(\frac{6{\cdot}903}{11{\cdot}565}\right)^2 = \cdot00007741$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot077} = 4^{\text{scd}}{\cdot}651 = 1^\circ$ Falit. $\quad$ Zero $80^\circ{\cdot}0$ Ther.

VERTICAL FORCE MAGNETOMETER.

MARCH 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 16 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				6·4		0·3		1·7		13·2		24·2																
1	4862	4533	4588	4524	4448	4448	4448	4500	4549	4478	4381	4440	4450	4450	4404	4545	4757	4995	5230	4892	4713	4886	5245	5191	4665	-51	4614	
2	5032	4627	4442	4451	4447	4447	4447	4413	4376	4411	4419	4443	4419	4404	4282	4235	4348	4566	4805	4824	4712	4599	4468	4568	4504	-56	4448	
3	4493	4499	4452	4441	4417	4375	4332	4343	4350	4341	4305	4329	4305	4292	4274	4393	4671	4998	5364	5556	5556	5369	5035	4599	4629	-84	4545	
4	4270	4455	4463	4429	4382	4355	4328	4266	4200	4274	4322	4363	4355	4111	4150	4341	4635	5191	5269	5103	4857	4571	4339	4145	4466	-116	4350	
5	4195	4277	4260	4327	4381	4381	4381	4297	4209	4223	4210	4199	4140	4080	4130	4341	4874	5282	5550	5139	4987	4846	4604	4619	4497	-139	4358	
6	4516	4484	4459	4479	4487	4443	4398	4371	4341	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	4296	4225	4226	4179	4179	4210	4293	4414	4516	4536	4678	4720	4856	4577	4577	4436	-113	4323	
8	4537	4435	4430	4328	4214	4214	4214	4227	4236	4264	4266	4281	4247	4247	4211	4268	4337	4525	4741	4797	4715	4664	4664	4581	4402	-109	4293	
9	4581	4520	4482	4424	4354	4354	4354	4238	4119	4248	4351	4350	4301	4233	4175	4371	4544	4842	5021	5109	5109	4960	4827	4520	4516	-71	4445	
10	4492	4365	4373	4370	4355	4250	4145	4207	4265	4278	4265	4304	4295	4240	4129	4282	4407	4483	4561	4607	4686	4906	4906	4685	4411	-74	4337	
11	4524	4444	4389	4370	4339	4323	4306	4292	4274	4268	4235	4269	4215	4191	4109	4176	4290	4759	4759	4689	4601	4601	4722	4775	4413	-99	4314	
12	4834	4511	4475	4371	4255	4316	4377	4299	4218	4241	4237	4258	4230	4153	4208	4192	4256	4428	4716	4840	4774	4682	4786	4900	4440	-116	4324	
13	4538	4415	4318	4324	4318	4269	4219	4249	4275	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	4247	4192	4223	4205	4163	4186	4354	4549	4621	4748	4932	4911	4705	4672	4750	4433	-146	4287	
15	4750	4419	4246	4252	4246	4246	4246	4141	4033	4109	4159	4233	4258	4223	4073	4175	4494	4828	5034	5018	4892	4560	4355	4552	4398	-170	4228	
16	4552	4405	4253	4259	4253	4241	4229	4189	4146	4180	4188	4170	4104	4043	4156	4252	4490	4853	5184	5011	4865	4604	4604	4795	4393	-177	4216	
17	4459	4327	4237	4203	4157	4157	4157	4113	4065	4055	4019	4085	4103	3774	3879	3982	4216	4624	4733	4700	4567	4461	4428	4391	4246	-183	4063	
18	4254	4230	4192	4180	4156	4156	4156	4116	4073	4109	4118	4142	4118	4068	4087	4174	4239	4317	4437	4399	4399	4432	4411	4411	4224	-183	4041	
19	4449	4342	4333	4330	4315	4315	4315	4293	4267	4280	4267	4271	4226	4226	4261	4304	4352	4561	4617	4529	4441	4468	4468	4486	4363	-162	4201	
20	4455	4431	4431	4356	4268	4287	4305	4320	4332	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	4374	4390	4429	4419	4375	4403	4438	4510	4587	4620	4510	4489	4414	4327	4327	4408	-156	4252	
22	4252	4247	4251	4257	4251	4229	4206	4191	4173	4186	4173	4201	4181	4155	4124	4152	4286	4479	4571	4707	4707	4595	4497	4419	4312	-185	4127	
23	4381	4355	4355	4336	4304	4290	4275	4259	4240	4244	4222	4246	4222	4184	4102	4183	4193	4279	4366	4531	4451	4365	4204	4204	4283	-187	4096	
24	4182	4223	4213	4217	4208	4208	4208	4194	4176	4205	4207	4214	4173	4184	4166	4214	4258	4328	4450	4512	4422	4336	4276	4276	4252	-151	4101	
25	4271	4268	4282	4283	4271	4262	4253	4255	4253	4258	4236	4240	4236	4228	4204	4240	4283	4384	4517	4539	4449	4417	4381	4350	4308	-176	4132	
26	4350	4319	4319	4321	4311	4311	4311	4339	4364	4418	4446	4438	4381	4402	4296	4296	4387	4407	4427	4501	4395	4395	4162	4186	4353	-214	4139	
†27	4186	4161	4216	4207	4185	4171	4157	4146	4132	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†28	—	—	—	—	—	—	—	—	—	4128	4097	4130	4114	4125	4097	‡	6712	7404	7650	7566	7148	6591	5954	5832	?			
29	5824	6053	5838	5890	5929	5902	5875	5887	5895	5832	5742	5811	5832	5832	5970	6423	6897	7502	7610	7006	6697	6621	6675	6741	6262	-251	6011	
30	6621	6243	6320	6261	6189	6150	6111	6143	6171	6061	5924	5948	5924	5762	5621	5686	5664	6028	6451	6715	6744	6485	6410	6410	6168	-240	5928	
31	6376	6275	6197	6072	5934	5912	5890	5871	5848	5948	6022	6019	5967	6006	6038	6302	6302	6730	6645	6326	6301	6171	6338	6411	6163	-234	5929	
Means.....	4694	4604	4561	4541	4507	4494	4480	4462	4440	4455	4443	4467	4442	4393	4379	4485	4641	4889	5037	5007	4929	4845	4784	4737	4613			
Temp. Corrections	-185	-173	-164	-156	-150	-145	-141	-135	-132	-129	-127	-130	-135	-128	-116	-113	-119	-131	-147	-160	-171	-179	-187	-192	.....	-148		
Corrected Means.	4509	4431	4397	4385	4357	4349	4339	4327	4308	4326	4316	4337	4307	4265	4263	4372	4522	4758	4890	4847	4758	4666	4597	4545	.....	.....	4465	
Mean Hourly Variations from General Monthly Mean. = ·00	-44	34	68	80	108	116	126	138	157	139	149	128	158	200	202	93	-57	-293	-425	-382	-293	-201	-132	-80	.....	$\frac{\Delta Y}{Y}$ =	.....	·003290
	-0341	0263	0520	0619	0836	0893	0975	1068	1215	1076	1153	0991	1223	1548	1564	0720	-0441	-2268	3290	-2957	-2268	-1566	-1022	-0619				

MARCH 1852. Temperature of Vertical Force Magnetometer.

1	822	819	818	816	815	812	809	808	808	809	810	807	805	803	800	798	802	805	809	814	816	816	820	822	8110			
2	823	821	819	816	814	812	811	810	809	808	808	807	806	805	801	800	802	806	809	814	816	820	824	826	8120			
3	825	823	821	819	817	816	815	815	815	814	813	812	812	812	810	810	810	815	819	823	825	829	830	833	8180			
4	832	830	827	824	822	821	821	820	820	821	822	821	820	819	817	817	818	820	826	832	835	837	838	840	8250			
5	842	840	835	833	832	831	830	829	828	827	826	825	825	823	820	820	822	825	829	832	834	835	837	838	8299			
6	837	834	832	827	822	824	826	824	823	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	823	824	822	820	818	816	816	817	820	822	825	826	827	830	830	8244			
8	830	827	826	825	825	824	823	821	820	820	820	820	821	821	820	819	819	820	823	825	825	828	829	830	8234			
9	830	827	825	823	821	818	816	812	808	806	804	806	809	817	805	804	806	810	815	816	820	821	823	823	8152			
10	823	821	820	819	818	816	815	812	810	807	804	810	817	816	810	808	805	810	815	820	824	825	827	828	8158			
11	828	826	823	821	820	820	820	818	817	815	813	817	821	820	815	816	817	820	822	825	826	828	830	830	8212			
12	831	828	827	826	825	824	823	822	822	821	820	824	828	822	822	815	817	820	824	826	829	832	834	835	8249			
13	836	834	833	831	830	830	830	829	829	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	827	825	828	832	825	825	824	826	827	830	835	838	840	842	844	8313			
15	844	842	840	838	836	834	832	831	830	829	829	832	836	834	831	830	832	835	838	842	845	845	845	845	8365			
16	845	842	840	839	839	837	835	835	835	834	833	836	839	837	833	830	832	834	837	841	844	845	846	846	8381			
17	846	844	843	841	840	838	836	835	835	835	835	837	839	837	835	830	833	836	838	843	845	847	849	849	8394			
18	850	846	844	843	843	842	842	841	840	839	838	840	843	839	831	830	830	832	835	837	837	839	842	842	8394			
19	840	840	837	836	836	835	835	835	835	835	835	835	835	834	832	828	827	828	832	832	835	839	840	840	8348			
20	840	834	833	838	833	833	833	832	832	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	831	830	829	829	827	827	827	828	830	834	837	840	844	845	846	8336			
22	845	844	843	841	840	839	838	836	835	835	835	834	833	833	833	834	836	840	844	845	846	846	848	850	8397			
23	850	846	845	844	843	841	840	840	840	840	840	839	838	838	838	838	838	840	843	839	837	837	835	835	8402			
24	835	833	831	830	830	830	830	830	830	830	830	830	830	828	826	826	829	833	835	835	840	841	844	845	8325			
25	845	844	839	838	837	836	836	835	835	834	834	834	834	832	830	832	834	835	839	840	840	845	849	850	8378			
26	850	849	847	846	845	844	843	841	840	841	842	842	842	840	840	840	843	845	848	852	854	855	857	859	8460			
†27	860	857	855	853	852	851	851	850	849	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
†28	—	—	—	—	—	—	—	—	—	850	852	851	850	848	845	‡	853	852	855	857	860	862	864	865	?			
29	865	863	859	857	855	854	853	852	851	850	850	850	850	847	846	847	848	850	853	855	858	860	862	862	8540			
30	861	857	856	854	852	851	850	849	849	848	847	846	846	845	845	845	845	846	852	855	860	860	860	860	8516			
31	860	857	856	853	851	848	845	844	843	844	845	845	845	844	841	844	846	848	852	856	858	859	861	863	8503			
Means.....	8398	8373	8353	8336	8323	8312	8303	8291	8284	8278	8274	8280	8290	8275	8250	8242	8255	8281	8317	8345	8367	8385	8403	8412	8318			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.
† The observations of 27th and 28th are rejected from the hourly and daily Means. ‡ Axes of the needle cleaned.

$k = a.\text{Cot.}\,\theta\left(\frac{T}{T'}\right) = \cdot0000291 \times \text{Cot.}\,7°37'48'' \times \left(\frac{6{\cdot}904}{16{\cdot}470}\right)^2 = \cdot00003817$ $\qquad \frac{q}{k} = \frac{\cdot360}{\cdot038} = 9{\cdot}431 = 1°$ Faht. $\qquad$ Zero $80{\cdot}0$ Ther.

VERTICAL FORCE MAGNETOMETER.

APRIL 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m. 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41	
				−6·1		−6·5		−11·8		7·7		3·9													
1	6454	6244	6207	6051	5908	5892	5886	5874	5886	5911	5921	5897	5866	5866	5866	6107	6368	6713	6943	6905	6762	6112	6343	6429	
2	6543	6235	6120	6139	6170	6217	6274	6148	6046	6064	6066	5990	5906	5925	6061	6265	6509	6769	6816	6709	6346	6346	6376	6312	
3	6244	6194	6194	6146	6110	6105	6110	6073	6060	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	6191	6306	6116	5918	5918	5889	6070	6487	6649	6959	6601	6331	5658	5998	6102	
5	6145	5960	5960	6089	6230	6013	5807	5795	5807	5853	5884	5962	6033	5990	6010	6359	6887	7507	7780	7611	7085	7009	6936	6320	
6	6374	6420	6420	6414	6420	6348	6287	6211	6159	6203	6232	6202	6165	6059	6059	6271	6623	7003	7419	7766	7508	7166	6888	6799	
7	6663	6585	6585	6477	6382	6325	6278	6227	6199	6282	6350	6166	5975	7305	7781	8215	8303	8061	7860	7860	5862	5825	5847	5984	
8	5896	5935	5935	6068	6213	6268	6333	6363	6416	6471	6511	6545	6572	6605	6638	6638	6674	6650	6684	6951	6965	6879	6960	7021	
9	7067	7016	7035	7061	7100	7095	7100	7074	7071	7079	7071	7082	7086	7086	7112	7122	7090	7062	7057	7045	7094	7094	7061	7172	
10	7190	7228	7228	7222	7228	7223	7228	7206	7207	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	7267	7311	7315	7311	7361	7347	7347	7318	7318	7296	7296	7344	7286	7307	7325	
12	7281	7281	7330	7326	7335	7345	7366	7367	7391	7399	7391	7403	7408	7415	7110	7135	7152	7146	7152	†	†	3264	1991	2474	
13	2029	2179	1881	1901	1933	1646	1369	1135	924	1149	1358	2454	3542	6989	9867	11329	12012	12074	12515	‡	‡	‡	‡	‡	
14	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	4324	4814	5004	5096	4589	3870	3348	3422	3779	
15	3986	4095	4245	4239	4245	4228	4222	3858	3518	3635	3736	3781	3818	4014	4456	3164	3606	4262	4112	4513	3843	3433	3213	3016	
16	3169	3034	3184	3198	3224	3219	3224	2855	2510	2488	2450	2566	2674	2833	3202	3527	3794	4622	4788	4690	4318	3746	3415	3248	
17	3370	3456	3371	3333	3308	3270	3243	3231	3243	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	2810	2361	2451	2533	2475	2544	3013	3410	3904	4589	5151	4798	3747	3654	3205	
19	3041	3141	2983	2971	2971	3085	3209	3061	2936	2736	2520	2920	3312	3473	3584	3425	3821	3790	4064	4000	3788	3156	3692	3405	
20	3421	3348	3958	3979	4012	3426	2850	2993	3159	3105	3035	3483	3923	3536	3365	3668	3854	4023	4380	3844	4375	3891	3739	2900	
21	3390	2920	2804	2968	3144	2962	2790	2756	2745	2776	2791	2924	3050	3831	2818	3205	3798	4224	4322	4476	4447	4282	4301	3550	
22	3325	3407	3019	2947	2887	2765	2655	2734	2836	2920	2988	2918	2841	3551	2640	3625	4414	5121	5294	4668	3440	3791	3296	3607	
23	3422	3265	3265	3147	3041	3273	3516	3290	3087	3173	3244	3371	3491	3276	3045	3383	3949	4148	4710	4338	4007	3790	3303	3393	
24	3730	3397	3295	3289	3295	3322	3360	3348	3360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	3351	3327	3310	3286	3076	3174	3502	3502	3887	4173	4296	4190	3862	3504	3630	
26	3572	3572	3508	3266	3036	3260	3495	3390	3308	3316	3308	3291	3266	3083	3379	3811	4407	5187	5324	5324	5043	4790	4558	4494	
27	4278	3871	3794	3638	3494	3449	3415	3403	3415	3423	3415	3386	3350	3303	3558	3580	4084	4919	5566	5330	5065	4931	4858	4657	
28	4268	3807	3719	3655	3603	3518	3445	3433	3445	3401	2341	3345	3341	3320	3472	3839	4307	4415	4629	4704	4489	3914	3615	3659	
29	3865	3865	3658	3585	3524	3511	3508	3508	3531	3509	3471	3475	3471	3571	3816	4293	4239	4465	4425	4254	4020	3589	3589	4127	
30	4534	4159	3671	3601	3544	3539	3544	3439	3357	3501	3629	3582	3527	3435	3553	3659	4031	4563	4930	4735	4152	3415	3806	4016	

APRIL 1852. Temperature of Vertical Force Magnetometer.

1	863	859	858	857	856	854	853	851	850	850	850	849	849	848	849	850	852	853	855	856	859	860	862	863	
2	861	859	856	355	854	851	848	846	845	845	845	843	842	839	838	840	844	847	850	853	855	855	858	859	
3	857	854	852	851	851	849	848	846	845	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	848	852	851	851	850	850	851	854	856	857	860	864	864	864	864	
5	865	859	856	856	857	854	851	850	850	850	850	850	850	848	846	847	850	850	852	853	855	855	856	857	
6	857	854	854	852	851	848	846	844	842	841	841	840	840	839	835	835	837	840	845	848	850	852	854	856	
7	855	854	853	851	850	839	829	830	832	821	810	917	1025	1180	1143	1094	982	950	942	920	910	904	997	993	
8	886	877	864	865	866	864	863	860	857	853	850	848	846	844	845	846	847	847	849	855	860	864	865	865	
9	865	864	862	861	861	859	858	854	850	850	850	849	848	847	850	850	854	854	857	860	862	865	867	869	
10	870	868	864	862	861	860	860	859	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	855	852	851	849	847	849	850	854	855	858	860	860	862	862	862	
12	860	860	859	858	857	856	855	852	850	850	850	849	848	846	845	845	848	850	855	†	†	865	864	863	
13	861	860	860	858	856	845	835	828	823	822	821	879	937	1036	1048	1016	989	972	915	‡	‡	‡	‡	‡	
14	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	‡	842	843	846	948	850	853	856	860	860	
15	860	859	856	855	854	845	836	829	823	821	820	904	988	1010	978	928	894	884	876	878	875	875	875	875	
16	872	870	866	863	861	857	853	849	845	845	845	923	1002	1020	985	920	898	889	880	880	877	877	876	874	
17	870	870	866	864	862	860	859	854	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	848	846	845	844	843	844	846	848	850	853	857	860	865	870	868	
19	868	866	864	863	863	848	834	830	827	823	820	911	1003	1061	1016	917	900	892	885	885	888	888	888	886	
20	885	881	879	878	877	874	872	868	865	864	863	862	861	859	858	858	858	861	865	870	872	877	880	880	
21	880	878	875	875	876	873	871	869	868	866	865	864	863	862	860	861	863	867	873	880	884	885	886	889	
22	887	885	880	879	878	876	875	872	870	869	869	867	865	864	864	869	870	870	875	879	880	885	888	888	
23	886	884	884	882	880	878	876	873	870	869	869	868	867	864	865	865	867	870	875	877	880	882	881	880	
24	880	879	877	876	876	875	874	874	874	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	870	867	866	865	863	869	872	873	874	875	875	876	876	878	880	
26	880	876	875	874	874	874	874	872	870	870	870	869	869	867	867	869	870	872	875	876	879	880	880	882	
27	882	879	877	876	876	876	876	875	874	872	871	869	868	865	866	869	870	870	872	875	877	880	880	880	
28	880	879	878	877	876	875	874	874	874	873	872	871	870	867	867	870	872	873	875	876	880	880	880	880	
29	880	880	879	878	878	877	876	875	874	873	872	871	870	867	866	867	868	870	872	875	878	880	880	880	
30	880	879	876	876	876	875	875	875	875	874	873	871	870	868	869	870	872	872	874	876	878	880	880	880	

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of Interpolations.
† Cleaned the axes of the needle. ‡ Out of the field. Brought the needle nearly level by the adjusting screws.
N. B.—The small figures are Observations made when experimenting on the Temperature.

$k = a.\mathrm{Cot}.\theta\left(\frac{T}{T}\right)^2 = \cdot0000291 \times \mathrm{Cot}.\ 7°38'25'' \times \left(\frac{6\cdot905}{15\cdot420}\right)^2 = \cdot00004350$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot044} = 8\cdot2{}^{\mathrm{scd.}}_{6} = 1°$ Faht. Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.

MAY 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				-13·1		-17·1		6·2		−0·9		10·6																
1	4129	3935	3848	3676	3530	3470	8444	3450	3444	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	3428	3413	3390	3345	3260	3311	3311	3825	4360	4579	4614	4428	4080	3934	3934	3756	-557	3199	
3	3513	3685	3634	3591	3574	3557	3574	3552	3517	3508	3501	3463	3404	3306	3553	4070	4408	4824	5269	5291	4954	4906	5009	4672	4014	-511	3503	
4	4493	4116	3910	3839	3794	3733	3707	3679	3638	3609	3581	3436	3269	3269	3075	3381	3537	3764	4154	4018	3886	3868	3522	3329	3692	-422	3270	
5	3423	3423	3539	3605	3698	3612	3561	3638	3703	3324	2946	3130	3292	3161	3257	3257	3090	3178	2677	3080	3304	3487	3618	3510	3355	-400	2955	
6	3510	3460	3413	3398	3410	3423	3470	3400	3317	3316	3317	3300	3261	2985	3026	2979	3536	4212	4717	4463	4797	4917	3817	3644	3629	-436	3193	
7	3724	3594	3426	3398	3397	3364	3366	3348	3317	3281	3247	3270	3271	3271	2945	2746	2962	3167	3680	4316	5494	4908	4637	3989	3588	-469	3119	
8	4360	3930	3487	3512	3564	3477	3425	3431	3425	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	3426	3429	3440	3429	3217	3082	3562	4268	4760	5037	4937	4865	4527	4235	4096	3872	-593	3279	
10	3662	3612	3546	3533	3546	3529	3546	3517	3476	3419	3363	3465	3545	3207	3103	3292	3624	3963	3542	3915	4165	3817	3621	3644	3569	-612	2957	
11	3644	3440	3440	3447	3481	3433	3420	3411	3390	3378	3367	3346	3304	3175	3025	2980	3192	3353	3154	3442	3040	2984	2984	3061	3287	-640	2647	
12	3379	3603	3575	3584	3620	3526	3466	3426	3374	3373	3374	3389	3383	3444	3506	3558	3813	4020	3956	3626	3356	3356	3492	3634	3535	-608	2927	
13	3585	3554	3609	3579	3575	3511	3482	3425	3356	3402	3449	3460	3449	3348	3453	3568	4004	4347	4748	4210	4047	3805	3092	2858	3622	-699	2923	
14	3239	3615	3473	3460	3473	3429	3419	3424	3416	3415	3416	3393	3349	3335	3656	4011	4260	4347	4541	4782	4685	4722	4369	4010	3806	-720	3086	
15	4010	3812	3698	3656	3640	3581	3557	3607	3645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	3607	3570	3561	3530	3530	3391	3469	3826	4189	4378	4465	4486	4405	3987	3553	3798	-662	3136	
17	3318	3478	3580	3571	3588	3571	3588	3517	3433	3432	3433	3407	3360	3360	3345	3414	3797	4248	4605	5006	4899	4145	3997	3624	3738	-698	3040	
18	3327	3624	3637	3601	3592	3618	3678	3747	3804	3614	3426	3394	3340	3340	3461	3887	4214	4885	5067	4697	4159	4013	3729	3477	3805	-735	3070	
19	3205	3414	3435	3422	3435	3450	3500	3534	3556	3444	3334	3425	3494	3494	3596	3404	3692	4344	4266	3714	3346	3469	3468	3301	3531	-737	2794	
20	3214	3460	3731	3468	3232	3219	3241	3162	3071	3143	3216	3264	3291	3291	3100	3655	3763	4423	4496	4509	3950	4008	4121	4192	3593	-738	2855	
21	3630	3505	3535	3442	3375	3353	3365	3371	3365	3488	3612	3588	3542	3436	3465	3746	4235	4531	4878	4510	3846	3841	3841	3866	3724	-719	3005	
22	3673	3574	3574	3561	3574	3585	3531	3537	3531	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	3544	3559	3570	3539	3479	3555	3446	3658	3889	4052	4539	4217	3826	3845	3657	3687	-702	2985	
24	3512	3632	3794	3618	3469	3452	3469	3471	3460	3500	3541	3516	3469	3129	3203	3160	3693	3949	4383	4571	4512	4859	4991	4248	3775	-718	3657	
25	4088	3761	3602	3589	3602	3606	3645	3596	3535	3534	3535	3521	3486	3329	3010	3256	3527	3950	3990	3958	3635	3620	3582	3671	3610	-734	2876	
26	3804	3680	3660	3647	3660	3589	3552	3526	3488	3508	3529	3540	3529	3291	3291	3364	3887	4207	4141	4582	4932	4606	4175	4201	3808	-756	3052	
27	3676	3592	3356	3372	3415	3398	3415	3365	3302	3374	3447	3576	3683	3309	2975	3278	3430	4010	4073	3942	3915	4394	3811	3627	3572	-756	2816	
28	3340	3764	3805	3632	3485	3468	3485	3524	3551	3510	3470	3423	3355	3452	3712	3904	4238	4293	3948	4270	3977	3944	4012	3773	3722	-803	2919	
29	3672	3622	3596	3565	3561	3545	3563	3557	3539	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	3536	3535	3546	3535	3561	3796	4079	4079	4132	4039	3865	3601	3647	4020	3692	3703	-795	2908	
31	3814	3865	3738	3654	3596	3564	3566	3604	3629	3607	3586	3561	3514	3474	4111	4303	4728	5230	5561	6054	5757	5004	4448	4219	4174	-785	3389	
Means.....	3652	3644	3602	3555	3534	3501	3501	3493	3472	3451	3431	3437	3423	3325	3346	3503	3819	4176	4309	4361	4241	4121	3937	3749	3691			
Temp. Corrections	-710	-699	-686	-679	-676	-665	-657	-650	-647	-637	-631	-620	-612	-593	-581	-582	-598	-620	-641	-665	-694	-712	-720	-723	.....	-654		
Corrected Means..	2942	2945	2916	2876	2858	2836	2844	2843	2825	2814	2800	2817	2811	2732	2765	2921	3221	3556	3668	3696	3547	3409	3217	3026	.....	.....	3037	
Mean Hourly Variations from General Monthly Mean. −.00	95	92	121	161	179	201	193	194	212	223	237	220	226	305	272	116	-184	-519	-631	-659	-510	-372	-180	11	.....	$\frac{\Delta Y}{Y}$=	.....	·002866
	0413	0400	0526	0700	0778	0874	0840	0844	0923	0970	1031	0957	0983	1327	1183	0504	-0800	-2257	-2745	-2866	-2218	-1618	-0783	0048				

MAY 1852. Temperature of Vertical Force Magnetometer

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.
			*		•		*		*		•													
1	880	879	878	877	876	876	876	875	875	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	870	865	864	863	860	860	857	858	858	859	857	860	863	863	865	8673
3	865	865	864	864	864	863	863	862	862	862	862	861	860	857	856	856	856	859	861	863	865	865	865	864	8618
4	860	859	857	855	854	853	852	852	852	852	852	851	850	847	846	842	845	845	847	848	850	852	852	851	8510
5	849	849	850	850	850	850	850	848	847	846	846	845	845	842	842	844	845	847	848	850	853	854	854	855	8483
6	855	855	854	854	854	853	852	853	854	852	851	849	847	845	846	847	849	852	854	855	857	858	859	860	8527
7	862	861	861	861	861	859	858	856	855	853	852	851	850	846	845	847	850	854	856	858	863	866	868	868	8567
8	869	869	868	867	867	866	865	865	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9	—	—	—	—	—	—	—	—	—	868	872	870	869	867	866	866	870	872	875	880	885	886	886	886	8716
10	887	887	886	885	884	883	882	881	880	877	875	872	870	864	860	860	860	864	865	868	868	870	872	875	8740
11	876	875	875	875	876	875	875	875	875	873	872	871	870	870	870	871	876	879	882	885	888	890	892	890	8773
12	883	882	880	877	875	874	874	872	870	869	868	866	865	864	864	865	865	870	873	874	879	883	885	888	8735
13	888	887	886	885	885	882	880	881	882	881	880	879	878	876	875	877	880	883	885	888	895	898	898	898	8845
14	896	892	890	888	887	886	885	885	885	884	883	882	882	880	880	878	880	884	886	889	893	897	897	898	8870
15	898	894	892	891	890	886	882	882	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
16	—	—	—	—	—	—	—	—	—	879	876	875	874	868	866	865	869	871	873	878	880	882	883	883	8800
17	885	885	885	885	885	884	884	883	883	881	880	880	880	879	877	876	880	880	884	887	891	895	897	898	8843
18	898	896	894	892	891	890	889	888	888	887	886	885	884	880	880	880	881	884	888	889	893	895	897	897	8888
19	897	892	890	889	889	889	890	889	889	886	884	883	882	882	880	880	880	884	889	893	897	900	902	902	8891
20	900	896	895	894	894	893	892	891	890	888	886	884	883	880	878	878	884	885	888	891	893	894	894	893	8893
21	892	889	887	886	885	885	886	885	885	885	885	883	882	880	877	877	880	884	888	893	897	898	899	898	8869
22	891	889	887	887	887	884	882	881	881	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
23	—	—	—	—	—	—	—	—	—	882	883	882	881	880	878	878	878	881	884	885	893	894	893	894	8848
24	895	894	891	889	888	886	885	883	882	883	885	883	882	882	880	880	880	883	885	889	890	894	895	896	8867
25	896	895	892	891	891	890	889	889	889	887	885	883	882	882	880	880	880	884	886	890	895	897	897	899	8887
26	898	897	896	895	895	893	892	891	890	890	890	889	888	885	882	882	884	885	887	892	897	898	899	899	8914
27	897	896	895	893	892	892	892	892	892	889	887	886	885	884	880	880	882	885	888	893	900	902	905	907	8914
28	905	901	899	898	897	897	898	896	895	893	892	891	890	890	887	890	892	895	897	900	904	906	908	907	8970
29	907	907	904	901	899	898	897	895	894	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
30	—	—	—	—	—	—	—	—	—	894	895	893	891	886	885	886	889	890	893	897	899	900	903	903	8961
31	903	903	900	903	907	901	895	893	892	891	890	890	890	886	886	887	887	890	892	895	897	898	900	899	8948
Means.....	8858	8844	8829	8820	8817	8803	8794	8786	8782	8770	8762	8749	8740	8716	8702	8703	8723	8749	8774	8803	8839	8860	8870	8874	8790

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of Interpolations.

$k = a.\ \text{Cot.}\ \theta \left(\frac{\dot{T}}{T}\right)^2 = \cdot 0000291 \times \text{Cot}\ 7^\circ 37' 32'' \times \left(\frac{6\cdot906}{15\cdot274}\right)^2 = \cdot 00004443$ $\qquad \frac{q}{k} = \frac{\cdot 360}{\cdot 044} = 8\cdot 102 = 1$ Faht. $\qquad$ Zero 80·0 Ther.

VERTICAL FORCE MAGNETOMETER.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P M. h m. 4 41	h.m. 5·41	h.m. 6 41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				-2·3 *		4·1 *		-11·7 *		13·7 *		8·4 *																
1	4099	4059	4059	4017	3979	3916	3845	3811	3800	3847	3866	3750	3618	3676	3863	4125	4534	4758	4822	4822	4581	4581	4348	3984	4115	-718	3397	
2	3805	3836	4009	3927	3850	3886	3914	3894	3898	3852	3779	3743	3691	3306	3409	3521	3766	4176	4400	4745	4510	4025	3855	3555	3902	-674	3228	
3	3879	3840	3726	3607	3493	3471	3440	3408	3399	3413	3399	3426	3437	3298	3243	3449	3500	3593	3593	3687	4139	4139	3745	3797	3588	-696	2892	
4	3797	3574	3758	3618	3483	3348	3205	3258	3334	3348	3334	3382	3414	3234	3266	3202	3307	3497	3835	3851	4851	3926	3926	3998	3573	-738	2835	
5	3905	3875	3784	3649	3518	3433	3339	3309	3303	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	3381	3432	3440	3432	3255	3312	3370	3646	3748	3819	3986	4134	3965	3882	3882	3617	-815	2802	
7	3971	3924	3862	3694	3530	3534	3530	3486	3465	3495	3498	3502	3490	3453	3564	3305	3343	3255	3519	3519	3356	3609	3860	3593	3557	-850	2707	
8	3683	3778	3569	3512	3459	3481	3494	3472	3473	3537	3573	3486	3382	3305	3026	2800	2967	3267	3157	3157	3335	3431	3431	3505	3387	-886	2501	
9	3268	3268	3432	3444	3461	3465	3461	3427	3417	3474	3503	3440	3360	3426	2989	2683	2802	3177	3247	3180	3384	3601	3750	3947	3359	-868	2491	
10	3947	3620	3527	3525	3527	3459	3383	3349	3338	3352	3338	3392	3430	3446	2766	4022	4325	3587	2992	3483	3822	4111	4147	4106	3583	-796	2787	
11	3914	3914	3717	3715	3717	3644	3563	3510	3480	3300	3093	3275	3440	3361	3990	3769	4355	4733	4205	3910	4274	4460	4660	4562	3857	-750	3107	
12	4328	4101	3801	3789	3781	3724	3658	3646	3658	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	3647	3608	3616	3608	3528	3575	3553	3704	3814	3864	3864	4045	3713	3409	3409	3727	-745	2982	
14	3552	3552	3552	3554	3560	3531	3494	3558	3645	3686	3699	3660	3604	3644	3885	4254	4734	5053	4951	5010	4514	4121	3878	3648	3931	-730	3201	
15	3648	3618	3764	3679	3599	3674	3740	3707	3698	3718	3710	3662	3598	3493	3445	3343	3586	4251	4704	4094	4464	4653	5234	4543	3901	-661	3240	
16	4174	3972	3131	3325	3524	3682	3831	3652	3496	3663	3803	3859	3898	3766	3955	3991	4288	4532	4532	4939	5387	4351	4287	4172	4009	-660	3349	
17	4172	4172	3923	3752	3585	3666	3738	3780	3845	3892	3912	3828	3727	3937	3892	3944	3773	4111	4405	4676	4579	4297	4208	3873	3987	-715	3272	
18	3593	3593	3857	3925	3998	4017	4028	4011	4017	3959	3873	3914	3939	3825	3878	3878	4048	4303	4785	5595	5287	4844	4720	4411	4179	-618	3561	
19	4225	4182	4251	4104	3961	3929	3888	3839	3814	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	3876	3910	3918	3910	3827	3669	3916	4032	4398	4654	5003	5008	5154	4632	4540	4193	-525	3668	
21	4298	4318	4255	4253	4255	4128	3993	3923	3877	3941	3977	3993	3992	3654	3605	3666	3881	4281	4560	4860	4800	4731	4316	4116	4153	-468	3685	
22	3957	3957	4040	3967	3898	3911	3916	3878	3863	3885	3880	3876	3856	3671	3496	3159	3073	3576	3993	4686	4686	4874	4761	4292	3965	-465	3500	
23	3999	3969	3848	3794	3745	3772	3790	3744	3721	3652	3555	3513	3455	3369	3455	3580	3538	3686	3735	3697	3962	3952	3821	3911	3719	-513	3206	
24	3706	3570	3580	3568	3560	3578	3587	3548	3532	3574	3589	3544	3482	3419	3244	3089	3141	3763	3763	3803	3925	3764	3929	3983	3593	-539	3054	
25	3734	3705	3705	3712	3723	3620	3509	3483	3481	3554	3600	3608	3600	3552	3660	3769	3968	4050	3818	3737	3878	3676	3783	3686	3692	-565	3127	
26	3686	3714	3758	3725	3697	3676	3646	3634	3646	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	3636	3599	3577	3538	3606	3689	3837	8715	3836	3738	3685	8474	3676	3895	8895	3691	-545	3146	
28	3851	3851	3835	3767	3704	3668	3623	3557	3515	3469	3395	3455	3498	3524	3658	3689	3689	3621	3410	3751	4467	4462	3780	3642	3703	-594	3109	
29	3461	3492	3530	3572	3618	3596	3565	3525	3508	3550	3564	3589	3597	3431	3298	3102	3261	3304	3360	3629	3527	3481	3744	4016	3513	-595	2918	
30	4090	4028	4028	3909	3795	3766	3729	3683	3661	3543	3397	3354	3295	3333	3525	3779	3779	3953	4125	4340	4187	4064	3817	3755	3789	-574	3215	
Means	3875	3826	3781	3735	3693	3676	3650	3619	3611	3625	3611	3608	3588	3513	3514	3569	3721	3936	3999	4143	4253	4141	4070	3966	3780			
Temp. Corrections	-738	-715	-698	-692	-687	-679	-673	-664	-659	-647	-639	-629	-624	-608	-600	-600	-607	-620	-646	-669	-695	-719	-728	-736	.....	-665		
Corrected Means.	3137	3111	3083	3043	3006	2997	2977	2955	2952	2978	2972	2979	2964	2905	2914	2969	3114	3316	3353	3474	3558	3422	3342	3230	.....	.....	3115	
Mean Hourly Variations from General Monthly Mean = ·00	-22 -0093	4 0018	32 0142	72 0320	109 0484	118 0524	138 0613	160 0711	163 0724	137 0609	143 0635	136 0604	151 0671	210 0933	201 0893	146 0649	1 0004	-201 -0893	-238 -1057	-359 -1595	-443 -1968	-307 -1364	-227 -1008	-115 -0511	.....	$\frac{\Delta Y}{Y} =$	.....	·001968

JUNE 1852. Vertical Force Magnetometer.

JUNE 1852. Temperature of Vertical Force Magnetometer.

1	898	895	890	891	892	892	892	891	891	888	885	885	885	883	882	882	883	884	887	890	890	890	890	890	8886			
2	890	886	880	882	884	883	882	881	880	880	880	879	878	877	877	878	878	880	884	887	890	892	894	895	8832			
3	895	892	890	888	886	885	885	884	883	882	882	881	880	877	877	877	880	881	887	890	894	895	896	895	8859			
4	895	893	890	890	890	888	887	886	885	884	883	882	882	880	880	882	883	888	895	899	903	912	915	915	8911			
5	914	910	907	906	905	903	902	900	899	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	898	898	897	896	890	888	887	888	891	897	900	907	911	910	911	9006			
7	910	909	907	906	906	905	905	903	902	901	900	898	896	895	897	897	897	900	905	908	914	919	919	918	9049			
8	918	916	915	913	912	914	910	910	910	907	905	903	901	899	898	899	899	902	906	910	917	920	924	921	9094			
9	920	916	915	914	914	912	910	909	908	905	903	901	900	898	898	898	898	900	905	907	910	910	910	910	9071			
10	907	904	903	902	902	901	900	899	899	897	896	895	894	890	888	890	893	894	897	899	902	904	901	900	8982			
11	898	896	896	895	894	893	893	891	890	889	888	887	886	885	886	887	888	890	892	895	898	901	902	902	8926			
12	900	897	896	895	894	893	892	892	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	889	887	886	885	884	881	882	883	885	889	893	897	903	905	908	8920			
14	907	902	899	897	896	895	894	891	889	887	885	883	881	880	880	880	882	882	884	887	890	895	894	899	8901			
15	897	890	885	885	885	884	883	882	881	880	880	879	879	877	875	874	874	875	878	880	882	884	885	885	8816			
16	885	884	884	883	883	882	881	880	880	880	880	879	879	875	873	873	876	876	879	883	886	890	890	894	8815			
17	895	894	893	892	891	890	889	888	887	886	885	884	884	881	881	881	882	882	885	890	892	895	895	896	8883			
18	895	890	886	882	879	878	878	876	875	873	872	871	870	867	865	865	867	869	872	875	877	880	883	885	8763			
19	885	881	880	876	872	871	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	863	857	856	856	855	854	855	855	855	857	859	863	865	866	867	8643			
21	867	864	863	862	862	861	860	858	857	856	855	855	856	855	853	853	853	853	855	855	857	858	859	860	8578			
22	860	860	859	859	859	858	857	856	856	855	855	854	854	853	853	852	852	854	855	858	860	865	866	868	8574			
23	870	869	868	867	866	865	865	864	864	863	862	861	860	860	859	858	857	859	860	862	863	865	865	867	8633			
24	869	870	868	868	868	867	867	867	867	866	865	863	862	861	860	860	861	862	865	867	869	874	874	875	8665			
25	875	874	874	874	874	873	872	871	870	870	870	869	869	867	865	863	863	864	866	869	870	870	870	872	8698			
26	874	869	869	869	869	868	868	867	867	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	866	865	863	862	860	858	857	859	860	864	867	872	877	880	885	8673			
28	885	880	875	875	875	874	874	872	871	870	870	869	868	866	865	865	865	868	872	875	878	881	883	883	8733			
29	883	879	879	878	877	876	875	874	873	874	875	873	872	870	867	865	864	865	870	870	875	876	876	879	8735			
30	876	874	871	871	873	870	870	869	868	868	868	867	867	866	867	866	867	869	870	872	875	878	879	880	8709			
Means	8911	8882	8862	8854	8848	8838	8831	8819	8813	8799	8789	8777	8770	8750	8741	8741	8749	8765	8798	8826	8858	8888	8898	8908	8821			

* The numbers in these Columns are not observed, but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$k = a.\text{Cot.}\,\theta\left(\frac{t}{T}\right)^2 = \cdot0000291 \times \text{Cot.}\,7'38''36 \times \left(\frac{6{\cdot}907}{15{\cdot}442}\right)^2 = \cdot00004338$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot043} = 8''{\cdot}298 = 1'$ Faht. Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.

JULY 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				2·9 *		-20·4 *		-8·1 *		7·2 *		17·5 *																
1	3719	3588	3586	3589	3586	3556	3530	3479	3445	3428	3396	3398	3365	3275	3352	3327	3592	3650	3308	3671	3523	3546	3491	3278	3487	-580	2907	
2	3213	3243	3358	3401	3439	3515	3595	3531	3483	3490	3483	3451	3385	3389	3501	3685	3873	3810	3656	3571	3443	3450	3863	3863	3529	-579	2950	
3	3515	3494	3518	3521	3518	3517	3520	3512	3520	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	4976	6418	6413	6374	6204	6139	5710	5159	5424	5504	6087	6058	6026	5921	5815	4994	-566	4428	
5	5780	6003	6178	5930	5677	5708	5744	5736	5744	5751	5744	5684	5589	5428	5506	5984	6160	6006	5881	6230	6753	6701	6638	6305	5953	-534	5419	
6	6080	5780	5921	5910	5893	5795	5701	5711	5737	5727	5703	5720	5703	5579	5579	5464	5404	4715	4905	4713	4593	4905	4873	4999	5463	-552	4911	
7	5176	5457	5795	5798	5795	5795	5799	5791	5799	5738	5663	5680	5663	5665	5765	5988	6020	5817	4911	5348	5746	6071	5987	6079	5723	-608	5115	
8	6079	6041	5585	5536	5482	5456	5435	5427	5435	5535	5620	5555	5456	5696	5523	5391	5544	5635	5776	5695	5755	5715	5584	6008	5624	-627	4997	
9	6076	5960	5792	5736	5674	5690	5710	5702	5710	5820	5915	5698	5427	5353	4856	4570	5793	6414	6655	6661	6371	6051	5577	5916	5797	-592	5205	
10	5576	5755	5564	5653	5737	5622	5511	5503	5511	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	5555	5584	5611	5603	5520	5703	5660	5773	6066	5963	6172	6943	6060	5536	5582	5740	-612	5128	
12	5689	5769	5743	5746	5743	5741	5743	5649	5571	5619	5652	5608	5530	5569	5621	5774	5899	5779	6218	5842	5822	5630	5495	5776	5718	-661	5057	
13	5440	5635	5592	5550	5502	5500	5502	5493	5501	5538	5561	5578	5561	5474	5730	5787	5736	5856	6235	6027	5677	5789	5759	5552	5649	-681	4968	
14	5457	5674	5767	5746	5720	5687	5659	5584	5526	5533	5526	5522	5484	5534	5612	5665	5705	5493	6023	6429	5821	5876	5705	5144	5662	-714	4948	
15	5476	5771	5518	5500	5476	5474	5476	5530	5601	5608	5601	5608	5580	5570	5639	5923	6185	6547	7131	6480	6349	6874	5435	5809	5840	-698	5142	
16	5838	5765	5675	5651	5622	5620	5622	5616	5626	5619	5598	5597	5561	5506	5686	5577	5684	5959	6025	5777	5516	5200	5304	5705	5640	-692	4948	
17	5842	5622	5706	5646	5580	5578	5580	5608	5653	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	5638	5609	5612	5581	5494	5551	5586	5617	5983	6260	6452	6154	5977	5883	5672	5745	-685	5060	
19	5733	5823	5771	5728	5679	5666	5658	5625	5609	5599	5575	5592	5575	5562	5860	5920	6044	6152	5760	5356	5579	6005	6133	5813	5742	-682	5060	
20	5577	5577	5773	5706	5633	5631	5633	5619	5622	5629	5622	5606	5556	5524	5697	5755	6240	6497	6446	5970	5442	4883	4765	5068	5645	-656	4989	
21	5309	5622	5568	5571	5568	5506	5449	5441	5449	5474	5484	5477	5435	5402	5369	4943	5164	5680	5944	5787	5635	5423	5750	5924	5516	-539	4977	
22	6081	5963	5790	5636	5477	5254	5035	4987	4955	4972	4974	4948	4888	4838	4982	4946	5135	5218	5043	4452	4140	3910	4104	4435	5007	-354	4653	
23	4647	4851	4851	4863	4869	4867	4869	4828	4804	4782	4746	4737	4694	4596	4688	4911	5230	5114	4846	4475	4443	4443	4654	4717	4772	-344	4428	
24	4763	4763	4746	4702	4653	4666	4684	4676	4684	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	4634	4570	4587	4570	4542	4653	4829	4873	4887	4668	4321	3984	4023	3646	4063	4549	-378	4171	
26	4419	4665	4665	4636	4601	4599	4601	4570	4556	4563	4556	4547	4504	4424	4607	4635	4955	5196	5064	5011	5071	4572	4577	4844	4685	-454	4231	
27	4912	4805	4936	4804	4666	4670	4679	4671	4679	4662	4631	4558	4451	4652	4514	4458	4670	4867	5085	5433	5050	4840	5238	5200	4797	-494	4303	
28	4809	4491	4885	4832	4773	4727	4686	4674	4679	4660	4627	4636	4610	4509	4459	4357	4357	4123	3874	4007	3803	4764	3574	3491	4434	-451	3983	
29	4055	4710	4774	4777	4774	4630	4491	4425	4376	4383	4376	4535	4660	4421	4444	4510	4622	4139	3973	3791	3564	4042	4361	4564	4392	-429	3963	
30	4979	4895	4704	4632	4555	4471	4392	4384	4392	4391	4376	4393	4376	4367	4454	4631	4804	4910	4871	4805	4490	4267	3985	3614	4506	-339	4167	
Means.....	5163	5220	5222	5185	5142	5113	5089	5068	5064	5128	5177	5167	5122	5081	5134	5153	5317	5382	5386	5329	5220	5194	5071	5124	5177			
Temp. Corrections	-611	-604	-596	-587	-583	-572	-566	-557	-550	-545	-542	-534	-529	-519	-515	-513	-517	-524	-531	-545	-566	-582	-597	-602	.....	-558		
Corrected Means.	4552	4616	4626	4598	4559	4541	4523	4511	4514	4583	4635	4633	4593	4562	4619	4640	4800	4858	4855	4784	4654	4612	4474	4522	.....	.....	4619	
Mean Hourly Variations from General Monthly Mean. = ·00	67	3	-7	21	60	78	96	108	105	36	-16	-14	26	57	0	-21	-181	-239	-236	-165	-35	7	145	97	.....	$\frac{\Delta Y}{Y}$ =	.....	·001037
	0291	0013	-0030	0091	0260	0338	0416	0468	0455	0156	-0069	-0061	0113	0247	0000	-0091	-0785	-1037	-1024	-0716	-0152	0030	0629	0421				

JULY 1852. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	879	878	878	875	872	871	870	868	866	865	865	864	863	863	864	864	865	867	867	870	872	875	877	879	8699			
2	877	875	874	873	872	871	870	870	870	870	870	868	867	865	863	863	865	865	865	867	870	874	877	875	8698			
3	874	873	872	872	872	871	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	867	865	864	863	862	861	860	863	864	865	866	870	873	875	875	8682			
5	872	870	868	866	865	864	864	864	864	863	862	861	861	859	857	857	858	860	860	864	867	870	872	874	8643			
6	874	875	874	872	871	869	868	866	865	864	863	862	862	859	860	860	859	860	862	865	866	870	874	877	8665			
7	877	878	878	877	876	875	875	873	872	872	872	871	870	867	868	867	868	869	869	871	875	878	880	882	8733			
8	884	883	880	878	877	876	876	875	875	873	872	871	870	868	869	870	870	871	872	875	879	880	883	884	8755			
9	883	882	881	878	876	874	872	871	870	869	868	866	865	864	864	863	864	865	867	869	871	874	876	878	8713			
10	877	876	874	874	874	873	872	871	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	872	875	874	873	870	867	867	868	870	873	875	879	881	882	883	8738			
12	884	883	880	880	880	880	880	878	877	876	876	875	875	875	876	876	876	876	879	881	885	888	888	888	8797			
13	888	888	887	886	886	885	884	882	881	879	878	877	876	874	872	874	874	876	880	882	887	890	892	892	8821			
14	890	890	889	889	889	887	886	885	884	883	882	881	881	881	882	882	882	882	885	887	890	892	894	894	8861			
15	894	893	892	889	887	886	886	884	882	881	880	879	879	878	878	878	879	880	881	882	885	887	889	890	8841			
16	890	888	886	885	885	883	882	881	880	880	880	880	880	878	880	879	880	883	883	885	887	888	889	890	8834			
17	890	888	885	884	884	882	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	880	880	879	879	879	879	879	880	882	882	884	885	886	887	888	8826			
19	887	887	886	885	884	883	883	881	880	880	880	879	879	878	877	878	879	880	881	882	885	885	887	888	8823			
20	889	888	886	885	885	884	884	883	882	881	880	879	879	879	875	872	870	870	870	872	875	876	877	875	8790			
21	875	875	875	875	875	873	871	870	870	869	868	866	865	863	861	860	860	860	861	859	855	854	852	845	8649			
22	845	845	845	845	846	845	845	845	845	845	845	844	843	842	840	840	839	839	839	839	839	840	841	844	8427			
23	845	845	845	845	845	844	844	843	842	841	840	840	840	839	839	838	839	840	837	838	840	841	842	843	8415			
24	843	843	843	842	842	842	842	842	842	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	843	844	843	843	842	844	845	845	846	847	848	852	855	857	858	8455			
26	858	858	858	857	856	855	854	852	851	850	850	849	849	849	850	850	852	852	854	855	859	862	865	867	8547			
27	868	867	867	866	866	865	865	862	860	859	859	858	857	855	854	854	853	853	853	854	856	857	860	860	8595			
28	860	859	859	858	858	856	855	855	855	854	853	852	851	848	848	848	849	849	850	852	855	857	860	862	8543			
29	862	858	858	857	856	854	852	852	852	851	851	850	850	848	849	849	849	849	847	848	849	850	850	849	8517			
30	849	847	846	845	845	843	842	841	840	840	840	840	840	840	837	835	835	835	836	837	840	840	844	845	8409			
Means.....	8736	8728	8718	8707	8702	8689	8682	8671	8663	8657	8653	8643	8638	8625	8621	8618	8623	8632	8640	8657	8682	8701	8719	8725	8672			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$k = a.\text{Cot.}\,\theta\left(\frac{T}{T'}\right)^2 = \cdot0000291 \times \text{Cot. } 7°38'02'' \times \left(\frac{\text{s. } 6\cdot909}{15\cdot182}\right)^2 = \cdot00004496$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot045} = \frac{\text{scd. } 8\cdot006}{} = 1$ Faht. Zero 80·0 Ther.

VERTICAL FORCE MAGNETOMETER.

AUGUST 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m 6.41	h.m 7.41	h.m. 8.41	h.m 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				-14·2 *		5·3 *		-24·7 *		-0·1 *		2·5 *																
July 31	3991	4217	3781	3828	3903	3908	3903	2897	3941	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	3908	3876	3858	3836	3716	3794	4034	4064	4500	4437	4468	4737	4693	4325	3853	4061	−338	3723	
2	3702	3913	4006	3970	3963	3992	4010	3935	3909	3922	3936	3906	3871	3871	3793	3686	3545	3506	3552	3487	3721	3669	3882	3882	3818	−371	3447	
3	3832	3832	3904	3856	3836	3816	3785	3801	3867	3953	4039	3956	3869	3869	4054	4420	4821	4942	4644	4644	4692	4276	3882	3790	4099	−409	3690	
4	3726	4034	4034	3977	3948	3999	4040	4015	4040	4018	3996	3936	3872	3872	3537	4106	4065	4123	3927	3927	4054	3955	4282	4373	3994	−424	3570	
5	4267	4217	4115	3960	3853	3809	3775	3821	3916	3833	3751	3822	3889	4063	3637	3705	4071	4290	4430	4202	4065	3859	3458	3415	3925	−470	3455	
6	3794	3794	3794	3752	3738	3728	3707	3722	3786	3786	3786	3752	3714	3644	3702	3846	4054	4054	3875	3690	3625	3969	4072	4240	3818	−516	3302	
7	3875	3875	3753	3722	3720	3757	3783	3732	3731	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	3732	3734	3663	3587	3644	3606	3865	3776	4000	3925	3338	3000	2934	3065	3174	3625	−499	3126	
9	3334	3235	3144	3346	3576	3606	3625	3684	3792	3674	3556	3559	3556	3544	3589	3721	4042	4274	4387	4095	3868	3892	3590	3837	3689	−512	3177	
10	3740	3740	3778	3700	3651	3656	3651	3649	3697	3740	3784	3768	3748	3748	3702	3815	4081	4046	3924	3221	2804	2411	2505	2901	3561	−532	3029	
11	3344	3554	3554	3518	3511	3586	3650	3589	3577	3641	3706	3708	3706	3502	3701	3936	4220	3840	3524	3881	3881	3848	3483	3358	3659	−558	3101	
12	3637	3717	3705	3731	3786	3818	3839	3814	3839	3839	3839	3805	3766	3766	3944	4019	3966	3712	3491	3847	3535	3466	3741	3675	3762	−591	3171	
13	4101	4153	4022	3920	3847	3977	4096	3990	3933	4004	4075	4077	4075	4070	3982	3951	4076	4577	4087	3887	3696	3855	4154	4073	4028	−615	3413	
14	4073	4194	4151	4122	4121	4044	3956	3980	4054	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4084	4115	4117	4115	4059	4118	4234	4528	5035	5428	5180	5134	4624	4482	4378	4347	−644	3703	
16	4313	4313	4313	4268	4251	4228	4195	4154	4163	4146	4130	4132	4130	4034	4240	4575	5105	5389	5508	5856	5813	5388	4997	4734	4599	−607	3992	
17	4598	4536	4416	4323	4259	4264	4259	4264	4318	4318	4318	4278	4234	4109	4263	4821	5476	5610	5114	4716	4347	4247	4059	3775	4455	−555	3900	
18	3775	3664	3756	3959	4190	4195	4190	4154	4167	4167	4167	4131	4091	3976	4122	4560	4870	5244	5197	4991	4631	4187	4251	4251	4287	−460	3827	
19	4021	4169	4169	4195	4250	4255	4250	4164	4128	4128	4128	4106	4080	3990	4134	4528	4793	4876	4841	4408	3955	3700	3864	3864	4208	−404	3804	
20	4049	4090	4130	4073	4045	4083	4111	4053	4045	4045	4045	4029	4009	3919	3969	3997	4226	4226	4327	4070	4005	3822	3844	3920	4047	-347	3700	
21	3920	4403	4155	4050	3974	3949	3913	3888	3913	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	3937	3962	3964	3962	3824	3855	3898	4150	4368	4747	4872	4872	4522	4712	4579	4183	-321	3862	
23	4500	4500	4310	4138	3995	3948	3891	3887	3933	3961	3990	3992	3990	3997	3750	3540	3659	3865	3835	4016	3955	3520	4025	4025	3968	-381	3587	
24	4250	4308	4056	3935	3842	3735	3617	3641	3714	3714	3714	3696	3674	3697	4140	4628	5047	5004	4918	4229	4105	4323	4323	4360	4111	-453	3658	
25	4635	4241	4155	4096	4066	4059	4041	3841	3691	3691	3691	3782	3869	3924	4106	4456	4792	4991	4439	3978	4318	4551	4308	4382	4171	-484	3687	
26	4161	3813	3683	3925	4195	4051	3897	3835	3822	3822	3822	3811	3795	3795	3937	4062	4270	4480	4208	4049	4153	4153	4325	4140	4009	-486	3523	
27	4086	4232	4017	3945	3901	3823	3734	3708	3732	3744	3756	3760	3759	3759	4041	4677	4819	5454	5614	6104	5269	5087	4641	4246	4330	-502	3828	
28	4130	3897	3928	3931	3963	3862	3751	3716	3731	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	3763	3796	3798	3796	3839	3966	4325	4659	4407	4043	3832	3259	3183	3575	3701	3869	-445	3424	
30	3815	3815	3882	3800	3746	3765	3773	3652	3581	3581	3581	3606	3626	3531	3790	4061	4476	4549	4331	4197	4230	3953	3719	3561	3859	-372	3487	
31	3753	3753	3753	3695	3665	3670	3665	3581	3547	3578	3609	3611	3609	3429	3728	4088	4370	4183	3983	3736	3665	3388	3332	3572	3707	-364	3343	
Means	3979	4008	3943	3916	3918	3910	3893	3858	3873	3879	3885	3875	3860	3822	3896	4132	4371	4502	4398	4256	4126	3981	3959	3928	4007			
Temp. Corrections	−510	−504	−498	−492	−488	−483	−480	−473	−472	−463	−459	−451	−446	−429	−423	−419	−428	−440	−449	−463	−477	−494	−503	−511	....	−469		
Corrected Means	3469	3504	3445	3424	3430	3427	3413	3385	3401	3416	3426	3424	3414	3393	3473	3713	3943	4062	3949	3793	3649	3487	3456	3417	.....	.....	3538	
Mean Hourly Variations from General Monthly Mean =.00	69	34	93	114	108	111	125	153	137	122	112	114	124	145	65	−175	−405	−524	−411	−255	−111	51	82	121				
	0310	0153	0418	0513	0486	0499	0562	0688	0616	0548	0504	0513	0557	0652	0292	−0787	−1821	−2356	−1848	−1146	−0499	0229	0369	0544	.....	$\frac{\Delta Y}{Y}$ =	.....	·002356

AUGUST 1852 Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
July 31	845	844	844	843	843	842	842	841	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	841	842	841	840	839	839	837	838	839	841	843	845	847	848	848	8422			
2	849	849	850	848	846	846	846	845	845	845	845	845	845	843	840	840	840	844	846	847	849	852	854	855	8464			
3	855	855	854	853	853	852	851	850	850	849	848	847	847	845	847	846	847	848	849	852	854	856	858	860	8511			
4	860	860	860	857	854	853	852	852	852	851	850	850	850	848	847	846	847	849	851	854	854	856	858	860	8530			
5	860	860	860	860	860	859	859	858	858	857	857	856	855	853	853	853	853	855	857	859	862	867	868	869	8587			
6	869	871	875	872	870	867	865	864	864	863	862	861	860	858	858	858	859	860	862	864	865	867	867	867	8645			
7	867	865	864	864	864	864	864	864	864	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	862	860	859	859	856	856	855	857	859	860	862	863	867	869	872	8623			
9	873	871	870	868	867	866	865	864	864	863	862	861	860	858	856	855	858	860	860	862	865	868	869	871	8640			
10	872	870	869	869	869	868	868	867	867	867	867	865	863	860	860	860	863	864	865	865	867	868	870	872	8665			
11	873	872	872	871	871	870	870	869	869	867	866	866	867	866	865	864	865	865	868	871	873	876	878	879	8697			
12	879	880	879	878	877	876	876	875	875	873	872	871	870	866	866	865	866	869	870	873	875	878	880	882	8738			
13	882	881	880	880	880	879	878	877	876	875	875	873	872	870	870	870	872	875	875	877	879	882	882	882	8768			
14	882	881	880	880	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	881	883	881	880	878	878	878	879	880	880	880	882	882	882	883	8804			
16	884	883	880	880	880	880	880	879	879	877	876	875	875	873	870	867	868	869	871	873	874	874	875	876	8758			
17	877	878	876	875	874	874	874	873	872	871	870	868	866	865	865	864	865	865	865	865	865	865	865	865	8693			
18	866	865	864	863	863	863	863	862	861	860	860	858	857	852	850	849	850	850	850	852	857	858	858	858	8575			
19	857	856	855	854	854	853	853	853	853	852	852	851	851	847	846	845	845	846	847	847	848	848	848	849	8504			
20	849	849	849	847	845	846	847	846	845	844	843	842	841	840	840	840	839	840	840	840	840	841	842	843	8433			
21	843	842	837	837	838	839	840	839	839	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	839	840	840	840	838	839	838	838	837	838	840	843	845	847	847	8401			
23	848	848	847	846	846	846	846	845	845	845	845	845	845	845	843	842	844	845	847	850	854	858	858	859	8476			
24	860	858	856	855	855	855	855	854	854	853	853	852	851	851	852	853	854	856	858	860	864	865	867	867	8566			
25	867	865	864	864	864	863	863	861	860	860	860	858	857	853	850	852	854	855	857	860	862	865	867	868	8604			
26	868	865	864	864	864	862	861	860	860	859	858	857	856	853	852	853	855	857	859	862	865	867	868	868	8607			
27	867	865	864	864	864	863	862	861	860	859	858	858	858	857	857	857	858	860	863	867	869	871	871	872	8627			
28	870	870	870	869	869	868	867	866	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	857	850	850	850	848	846	845	845	845	844	846	847	849	849	850	8556			
30	850	849	849	849	849	848	848	848	848	847	847	846	845	843	840	840	842	845	847	847	847	847	848	848	8465			
31	848	848	848	847	846	845	845	844	844	844	845	845	845	843	841	841	842	844	845	845	847	848	850	852	8455			
Means	8637	8630	8622	8614	8609	8603	8600	8591	8589	8578	8573	8563	8557	8536	8528	8523	8534	8549	8561	8578	8596	8617	8628	8638	8586			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$k = a.\mathrm{Cot}.\theta\left(\frac{T}{T}\right)^2 = \cdot0000291 \times \mathrm{Cot}.\ 7^\circ 37' 21'' \times \left(\frac{6\cdot910}{15\cdot120}\right)^2 = \cdot00004541$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot045} = 7\cdot927^{\mathrm{scd.}} = 1^\circ$ Faht. Zero $80^\circ 0$ Ther.

VERTICAL FORCE MAGNETOMETER.

SEPTEMBER 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				-0·7		-0·1		-13·2		11·9		3·8																
1	3665	3792	3755	3676	3599	3443	3287	3387	3513	3586	3636	3659	3675	3612	4020	4487	5017	5306	5500	5479	4340	3484	3554	3698	3965	-352	3613	
2	3876	3986	3849	3860	3873	3792	3712	3703	3720	3732	3720	3731	3734	3655	4148	4762	5286	5720	6528	5678	4752	4490	3931	3573	4242	-430	3812	
3	3663	3940	4013	3950	3888	3896	3905	3940	4001	4013	4001	3915	3821	3631	3680	5175	4574	5207	5541	5891	4635	4092	3928	4086	4183	-471	3712	
4	4226	4132	4159	4052	3947	3947	3947	3887	3854	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5	—	—	—	—	—	—	—	—	—	3848	3818	3811	3796	3739	3869	4151	4391	4545	4354	4018	3743	3360	3360	3577	3939	-515	3424	
6	4031	4031	4102	3986	3872	3854	3836	3804	3799	3678	3534	3667	3793	3793	4014	4822	5303	5273	4215	3833	3624	3045	3201	3541	3944	-585	3359	
7	3848	3977	3732	3731	3732	3544	3357	3538	3746	3723	3677	3681	3677	3650	3855	4200	4319	4014	3562	3672	3020	3175	3490	3575	3687	-585	3102	
8	3734	3949	3778	3718	3659	3659	3659	3629	3626	3638	3626	3619	3604	3570	3889	4309	4450	4450	4725	4421	4285	4126	4310	4234	3944	-519	3425	
9	3827	3713	3618	3617	3618	3604	3591	3341	3117	3286	3431	3498	3557	3390	3738	4400	5279	5751	6069	5963	5423	4270	4436	4038	4107	-468	3639	
10	3826	3940	3389	3388	3389	3348	3307	3294	3307	3405	3480	3484	3480	3521	3653	4199	4781	5362	5405	4676	3969	3256	2769	2830	3727	-421	3306	
11	3040	3226	3275	3249	3225	3168	3111	3098	3111	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12	—	—	—	—	—	—	—	—	—	3190	3246	3204	3154	3226	3616	4142	4814	5346	5550	4975	4752	3921	3230	3230	3671	-335	3336	
13	3539	3632	3422	3449	3478	3305	3132	3203	3301	3273	3222	3207	3184	3160	3440	3810	4248	4451	4589	4486	4095	3465	3158	3331	3566	-305	3261	
14	3284	3277	3286	3280	3276	3221	3167	3154	3167	3131	3071	3057	3035	2985	3372	3998	4685	5482	6071	6034	5283	4401	3866	3600	3799	-309	3490	
15	3425	3410	3338	3337	3338	3338	3338	3271	3230	3231	3208	3212	3208	3068	3428	4256	4855	5326	6247	5783	5034	4258	3415	3032	3816	-353	3463	
16	3187	3289	3275	3406	3538	3462	3387	3307	3254	3247	3217	3221	3217	3222	3471	3819	4328	4968	5295	5120	5036	4545	4177	4069	3794	-410	3384	
17	3653	3613	3859	3858	3859	3566	3274	3357	3467	3402	3314	3318	3314	3171	3437	3719	4045	4438	4545	4420	4087	3765	3595	3397	3686	-446	3240	
18	3282	3516	3547	3485	3425	3425	3425	3388	3378	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	3268	3134	3281	3421	3416	3677	3788	4015	4471	4190	4462	4367	3841	3802	3682	3654	-470	3184	
20	3720	3655	3705	3420	3137	3312	3488	3421	3380	3285	3166	3264	3354	3422	3346	3706	4244	4084	4144	3962	3934	4201	4493	4090	3664	-509	3155	
21	3784	3348	3492	3491	3492	3471	3451	3360	3295	3320	3321	3325	3321	3284	3518	3717	4046	4356	5145	4908	4406	4540	4045	3709	3756	-515	3241	
22	3810	3546	3633	3430	3228	3228	3228	3200	3199	3224	3226	3260	3286	3201	3505	3800	4422	4911	5155	4738	4214	3974	3965	3827	3717	-545	3172	
23	3725	3374	3580	3428	3278	3142	3007	2934	2888	2982	3053	3057	3053	2909	3093	3544	4026	4026	4298	4098	3539	3365	3660	3603	3403	-568	2835	
24	3411	3469	3160	3185	3212	3212	3212	3149	3113	3119	3101	3166	3224	3049	3093	3488	3963	4532	4636	4299	3891	3587	3366	3150	3449	-560	2889	
25	3219	3305	3286	3274	3264	3224	3184	3171	3184	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	—	3169	3131	3090	3042	2945	3155	3575	4090	4459	4550	4340	3843	3603	3454	3271	3451	-572	2879	
27	3176	3176	3215	3194	3175	3151	3128	3087	3073	3085	3073	3020	2959	2885	3286	3957	4519	4975	5778	5582	5050	4350	3649	3469	3667	-576	3091	
28	3399	3350	3263	3210	3159	3107	3056	3031	3033	3045	3033	2940	2839	2935	3384	4231	5052	5529	5549	5320	4635	3985	3375	3169	3651	-553	3098	
29	3203	3227	3228	3233	3240	3150	3060	3030	3026	3038	3026	3152	3270	3186	3175	3596	3996	4644	5194	4377	3737	3640	4332	3575	3514	-523	2991	
30	2861	3209	3291	3150	3010	2932	2855	2900	2972	2932	2869	2857	2838	2903	2941	3280	3475	3618	3469	3315	3409	3212	3068	3177	3106	-514	2592	
Means.....	3554	3580	3548	3502	3458	3404	3350	3330	3337	3340	3321	3334	3341	3290	3531	3997	4470	4817	5012	4763	4273	3844	3678	3559	3735			
Temp. Corrections	-521	-507	-501	-494	-490	-485	-485	-478	-476	-470	-467	-458	-454	-439	-432	-434	-438	-450	-458	-475	-491	-503	-518	-526	.....	-477		
Corrected Means..	3033	3073	3047	3008	2968	2919	2865	2852	2861	2870	2854	2876	2887	2851	3099	3563	4032	4367	4554	4288	3782	3341	3160	3033	.....	.....	3258	
Mean Hourly Variations from General Monthly Mean. =.00	225	185	211	250	290	339	393	406	397	388	404	382	371	407	159	-305	-774	-1109	-1296	-1030	-524	-83	98	225	.....	$\frac{\Delta Y}{Y}=$	.....	·005885
	1622	0840	0958	1135	1317	1539	1785	1844	1803	1762	1835	1735	1685	1848	0722	-1385	-3515	-5036	-5885	-4677	-2379	-0377	0445	1022				

SEPTEMBER 1852. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	849	844	844	844	844	844	844	844	844	843	842	841	840	838	838	840	842	844	844	845	847	850	854	856	8444			
2	857	857	856	856	856	855	855	853	852	851	851	850	850	850	850	850	851	852	853	855	857	859	861	863	8542			
3	863	863	863	862	862	861	861	860	860	858	857	856	856	855	855	853	854	855	856	859	862	864	865	866	8594			
4	866	866	866	865	865	864	864	863	863	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5	—	—	—	—	—	—	—	—	—	863	863	863	863	861	860	860	860	862	864	866	872	872	873	875	8650			
6	876	876	875	874	874	874	874	873	872	872	872	871	870	868	869	870	870	872	873	876	879	880	880	880	8738			
7	882	879	878	876	875	875	875	874	874	874	874	873	872	870	868	869	869	871	872	872	873	875	876	876	8738			
8	876	876	875	872	870	869	869	867	866	865	865	864	864	862	860	860	857	858	861	862	861	863	865	865	8655			
9	866	866	865	864	864	863	862	861	860	859	858	857	856	853	851	852	853	855	855	857	860	861	861	860	8591			
10	860	859	858	857	857	857	857	857	857	856	855	853	852	850	846	848	847	847	847	849	850	852	853	851	8531			
11	847	845	845	844	843	843	843	842	842	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	843	845	843	842	840	837	838	838	840	840	842	843	842	844	844	8423			
13	843	840	840	840	840	839	839	838	838	837	837	836	835	834	832	834	835	835	836	840	842	844	845	845	8385			
14	845	843	841	839	838	837	837	837	837	837	837	836	836	835	834	833	833	837	838	840	843	845	847	850	8390			
15	850	848	848	846	845	845	845	844	843	843	843	842	842	840	840	838	840	840	842	845	847	849	851	853	8445			
16	855	854	853	852	852	852	852	852	852	851	850	850	850	848	847	846	847	849	850	851	853	855	859	860	8517			
17	862	862	862	861	860	859	859	858	857	856	856	855	854	853	851	849	850	852	852	853	855	856	858	860	8563			
18	860	860	860	860	860	859	859	859	859	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	859	860	858	857	855	853	853	855	857	857	860	862	864	867	869	8593			
20	868	865	865	864	864	864	864	864	864	863	862	862	862	860	862	861	861	863	863	865	867	868	870	870	8642			
21	870	868	867	866	866	865	865	864	864	864	864	863	862	860	858	860	860	862	865	865	867	870	872	872	8650			
22	873	873	871	870	870	869	869	868	868	866	865	865	865	862	864	865	866	866	866	869	871	874	876	878	8687			
23	878	876	876	875	874	874	874	873	873	871	869	867	866	865	865	866	867	867	869	871	872	875	876	880	8716			
24	880	876	875	874	874	873	872	872	872	871	870	868	866	865	865	863	864	865	866	868	871	872	875	878	8706			
25	880	878	876	875	874	873	873	872	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	871	871	869	868	866	865	865	865	868	870	872	874	877	879	880	8722			
27	880	876	876	875	875	874	874	872	871	870	870	870	870	867	866	868	868	870	870	874	876	876	878	878	8727			
28	878	875	874	872	870	870	870	869	869	869	869	868	868	866	865	864	864	866	866	870	872	872	874	875	8698			
29	874	873	872	871	870	869	869	868	868	867	866	864	863	859	857	857	859	860	863	865	865	866	868	870	8660			
30	870	867	866	866	866	865	865	865	865	862	860	860	860	858	859	860	862	865	865	866	870	870	872	873	8649			
Means...	8657	8640	8633	8623	8618	8612	8612	8603	8601	8593	8589	8578	8573	8554	8545	8547	8553	8568	8578	8599	8620	8635	8653	8664	8602			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$k = a.\mathrm{Cot.}\theta\left(\frac{T}{T'}\right)^2 = \cdot0000291 \times \mathrm{Cot.}\ 7'39''03 \times \left(\frac{6\cdot911}{13\cdot258}\right)^2 = \cdot00005886 \qquad \frac{q}{k} = \frac{\cdot360}{\cdot059} = 6\cdot116 = 1^\circ$ Faht. Zero 80°0 Ther.

VERTICAL FORCE MAGNETOMETER.

OCTOBER 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−11·3		0·8		18·5		−3·6		7·2																
1	3017	3044	3159	3127	3117	3039	2960	2919	2841	2815	2797	2804	2797	2749	3125	2791	3268	3566	4017	4088	3996	3761	3407	3104	3180	-398	2782	
2	2892	2892	3086	2974	2885	2876	2866	2965	3028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	2929	2837	2761	2671	2671	2721	2947	3429	3905	4302	4081	3687	3816	3829	3582	3193	-409	2784	
4	2956	2956	2809	2790	2794	2732	2669	2735	2764	2760	2764	2743	2708	2606	2562	2850	3408	3630	3723	3988	4095	3833	3356	3015	3052	-378	2674	
5	2974	3315	3241	2994	2770	2756	2740	2796	2816	2724	2640	2647	2640	2602	2660	2949	3381	3348	3874	3620	3566	3339	3093	3080	3024	-362	2662	
6	2935	2817	2817	2733	2672	2681	2688	2722	2719	2715	2719	2693	2653	2692	2625	2769	3379	3272	3247	3060	3221	3221	3140	3306	2896	-346	2550	
7	3127	2929	2733	2653	2595	2632	2668	2650	2596	2592	2596	2629	2648	2633	2733	2819	3034	3078	3190	3257	3341	3341	3409	3174	2877	-158	2719	
8	2996	2872	2624	2649	2696	2467	2236	2440	2608	2604	2608	2601	2580	2413	2452	2570	2823	3200	3172	3037	3037	2943	2515	2637	2699	-117	2582	
9	2637	2692	2653	2613	2596	2597	2596	2635	2638	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	2574	2517	2494	2456	2376	2752	3280	3953	4550	4969	4775	4324	3545	2980	2716	3080	- 78	3002	
11	2528	2556	2641	2622	2626	2559	2490	2490	2453	2432	2419	2374	2315	2315	2468	2710	3354	4220	4481	4224	3955	3192	2888	2810	2880	-165	2715	
12	2661	2571	2584	2518	2475	2476	2475	2482	2453	2471	2496	2503	2496	2197	2376	2464	2947	3221	3355	3126	2769	2805	2942	2828	2654	-220	2434	
13	2741	2637	2637	2615	2615	2296	1975	2165	2318	2050	1789	1761	1718	1700	1542	1542	1765	2085	2388	2240	2293	2189	1951	1872	2120	-248	1872	
14	2003	1879	1881	1824	1790	1791	1790	1844	1861	1808	1762	1727	1677	1584	1695	1799	2073	2219	2303	2407	2568	2568	2455	2261	1982	-271	1711	
15	2042	1899	1899	1907	1937	1886	1833	1873	1876	1859	1849	1751	1638	1475	1272	1177	1433	1711	2105	2513	3070	3070	2614	2314	1958	-318	1640	
16	2446	2410	2105	2078	2074	1926	1776	1858	1904	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	1897	1897	1958	2004	1915	2014	2390	2766	3191	3415	3230	3150	2905	2470	2329	2338	-268	2070	
18	2369	2700	1682	1788	1916	1953	1988	1818	1611	1607	1611	1539	1453	1293	1549	1685	1974	2032	2046	1800	2035	2035	1900	1900	1845	-254	1591	
19	1819	1555	1473	1425	1400	1401	1400	1504	1571	1531	1499	1454	1395	1234	1370	1820	2092	2340	2353	2064	2154	2496	2545	2297	1758	-180	1578	
20	2297	1594	1230	1231	1255	1322	1388	1239	1053	1198	1350	1336	1308	1353	1432	1515	1626	1656	1667	1890	2274	2194	2159	2139	1571	- 52	1519	
21	1836	1552	1399	1328	1279	1592	1903	2001	2062	2180	2305	2312	2305	2215	2290	2343	2611	2632	3505	2966	2865	3106	3363	3271	2301	45	2346	
22	3094	2720	2623	2554	2507	2200	1892	1884	1840	1836	1840	1835	1816	2086	2161	2414	2573	2867	2951	2924	3014	2859	2582	2642	2405	- 56	2349	
23	2480	2403	2321	2269	2240	1853	1465	1604	1706	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	1642	1586	1684	1767	1789	1915	1981	2337	2491	2551	2332	2507	2637	2468	2310	2097	-147	1950	
25	2159	1844	1844	1833	1844	1855	1865	1810	1719	1701	1690	1697	1690	1661	1620	1731	2088	2258	2175	1911	1981	2143	2143	2164	1893	-185	1708	
26	2054	1790	1821	1830	1862	1863	1862	1902	1906	1877	1856	1823	1775	1716	1754	1833	2251	2647	2725	2507	2368	2114	2035	2095	2011	-207	1804	
27	2095	2099	2054	2182	2333	2260	2185	2113	2005	1921	1845	1813	1766	1766	1721	1680	2022	2160	2161	2085	2119	2227	2175	2228	2042	-225	1817	
28	2228	2211	2165	2170	2197	2198	2197	2174	2114	2095	2083	2009	1921	1904	1966	2087	2455	2698	2709	2604	2660	2449	2571	2499	2265	-226	2039	
29	2402	2300	2240	2284	2350	2312	2272	2286	2263	2234	2213	2199	2171	2167	2368	2300	2396	2816	3060	3375	3587	2987	2671	2537	2491	-230	2261	
30	2360	2215	2231	2282	2356	2276	2195	2198	2165	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	2183	2209	2202	2181	2251	1025	2248	1817	2470	2554	2803	3363	3004	3004	2546	2339	-175	2164	
Means.....	2506	2402	2306	2280	2276	2223	2168	2196	2188	2163	2145	2129	2098	2052	2083	2257	2587	2856	3038	2958	3000	2876	2718	2602	2421			
Temp. Corrections	-260	-239	-232	-228	-226	-221	-219	-213	-210	-205	-203	-198	-194	-187	-182	-188	-194	-201	-212	-222	-232	-239	-244	-249	.....	-216		
Corrected Means..	2246	2163	2074	2052	2050	2002	1949	1983	1978	1958	1942	1931	1904	1865	1901	2069	2393	2655	2826	2736	2768	2637	2474	2353	.....	.....	2205	
Mean Hourly Variations from General Monthly Mean. =.00	-41	42	131	153	155	203	256	222	227	247	263	274	301	340	304	136	-188	-450	-621	-531	-563	-432	-269	-148	.....	$\frac{\Delta Y}{Y}$ =	.....	·003655
	-0241	0247	0771	0901	0912	1195	1507	1307	1336	1454	1548	1613	1772	2001	1789	0800	-1107	-2649	-3655	-3125	-3314	-2543	-1583	-0871				

OCTOBER 1852. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	870	866	866	865	865	864	864	864	864	863	863	863	863	860	859	860	861	863	865	867	869	871	873	874	8651			
2	874	872	869	868	868	866	865	864	864	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	865	866	865	865	863	860	860	862	865	866	868	870	871	872	874	8668			
4	873	872	869	867	865	864	863	861	860	860	860	859	858	855	852	853	854	857	860	860	863	865	866	868	8618			
5	868	864	862	862	862	860	858	857	856	855	855	854	854	854	852	854	855	856	859	860	864	864	866	869	8592			
6	868	864	863	863	863	862	861	860	865	859	859	858	858	855	852	850	851	852	854	854	853	848	846	845	8566			
7	845	840	837	836	835	832	830	829	828	827	826	825	824	822	820	818	817	814	815	816	819	822	822	822	8259			
8	823	822	821	821	821	821	822	822	822	822	822	821	820	820	819	818	818	819	816	815	815	815	813	812	8192			
9	812	808	807	807	807	806	806	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	808	812	811	810	808	809	811	812	815	819	821	825	827	827	830	8128			
11	830	826	824	824	824	824	824	824	824	823	822	822	822	821	822	824	825	827	831	833	835	838	840	840	8270			
12	842	840	839	838	837	836	835	834	834	833	832	831	830	830	831	832	833	835	836	838	840	842	842	844	8360			
13	845	841	840	839	839	839	839	838	838	838	838	837	837	837	837	838	838	840	842	844	845	846	849	850	8406			
14	850	846	846	845	844	843	843	842	841	840	840	840	840	839	837	838	841	843	845	847	849	852	855	856	8443			
15	856	854	854	853	852	852	852	851	850	849	849	848	847	847	847	848	849	852	855	858	860	857	854	853	8520			
16	852	850	848	847	846	845	845	845	845	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	844	843	841	840	838	837	836	838	838	840	843	845	846	850	850	8438			
18	850	846	846	846	846	846	846	845	845	843	842	841	840	840	838	839	838	838	839	839	838	836	835	835	8415			
19	834	830	830	830	830	830	830	829	828	827	827	826	826	826	825	825	826	827	829	832	834	835	835	835	8294			
20	830	825	822	821	820	818	817	815	814	813	813	811	810	804	801	801	798	798	796	797	795	795	795	795	8085			
21	795	792	790	790	790	789	789	788	787	787	787	786	785	784	785	790	792	793	795	800	804	806	808	810	7926			
22	810	806	806	806	807	807	807	807	807	806	805	804	804	804	804	805	809	810	812	815	818	819	820	823	8092			
23	823	821	821	821	821	820	820	819	819	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	822	825	824	823	822	822	823	824	825	825	826	829	833	835	835	8241			
25	835	830	830	829	829	829	829	828	828	827	827	826	826	824	824	825	827	828	834	836	837	839	839	840	8303			
26	840	835	835	834	834	833	833	831	830	830	830	829	829	828	827	828	830	833	836	839	840	843	843	844	8339			
27	844	838	838	838	838	837	836	835	835	834	833	832	832	832	831	833	835	835	836	839	840	842	845	845	8368			
28	845	841	841	840	840	839	838	836	835	833	832	832	832	830	830	830	833	835	836	839	840	842	844	845	8370			
29	845	842	841	840	839	838	838	837	836	834	832	831	830	830	830	833	834	837	839	840	842	844	845	845	8376			
30	845	842	842	841	841	840	840	839	838	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	831	824	823	823	821	824	825	823	820	819	817	817	818	818	818	8287			
Means...	8425	8390	8380	8373	8370	8362	8358	8348	8343	8336	8332	8323	8318	8305	8298	8307	8317	8329	8346	8363	8379	8391	8399	8407	8354			

*. The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$k = a.\text{Cot. } \theta\left(\frac{T}{T'}\right) = \cdot0000291 \times \text{Cot. } 7'38''.15 \times \left(\frac{6.912}{11.920}\right)^2 = \cdot00007297$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot073} = 4''.934 = 1$ Faht. Zero $80^\circ.0$ Ther.

VERTICAL FORCE MAGNETOMETER.

NOVEMBER 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4.41	h.m. 5.41	h.m. 6.41	h.m. 7.41	h.m. 8.41	h.m. 9.41	h.m. 10.41	h.m. 11.41	h.m. 12.41	h.m. 13.41	h.m. 14.41	h.m. 15.41	h.m. 16.41	h.m. 17.41	h.m. 18.41	h.m. 19.41	h.m. 20.41	h.m. 21.41	h.m. 22.41	h.m. 23.41	h.m. 0.41	h.m. 1.41	h.m. 2.41	h.m. 3.41				
				−6·2 *		−2·3 *		−10·2 *		−7·8 *		19·1 *																
1		1950	1518	1328	1395	1474	1321	1188	1234	1301	1249	1213	1299	1347	1057	1156	1186	1633	1802	2455	2608	2431	2394	1926	1729	1591	-88	1503	
2		1626	1509	1499	1439	1392	1382	1392	1407	1442	1434	1442	1481	1481	1366	1340	1279	1380	1843	2073	2472	2540	2475	2370	2095	1673	-127	1546	
3		1799	1795	1891	1842	1806	1711	1635	1868	2122	1941	1776	1770	1726	1656	1545	1611	1650	1819	1752	1614	1665	1987	2013	1909	1788	-98	1690	
4		1883	1865	1841	1808	1788	1778	1788	1739	1710	1675	1655	1621	1549	1427	1719	2237	2397	2692	2676	2779	2779	2384	2147	2062	2000	-71	1929	
5		2062	2199	2178	2172	2178	1987	1815	1844	1894	1693	1508	1753	1959	1784	2009	2165	2333	2587	2686	2884	3027	2628	2689	2606	2193	-46	2147	
6		2218	2206	2156	2064	1985	1930	1894	1884	1894	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7		—	—	—	—	—	—	—	—	—	1853	1827	1808	1750	1750	1673	1641	1934	2074	2367	2608	2570	2455	2225	2063	2035	-20	2015	
8		1877	1816	1789	1676	1575	1565	1575	1514	1474	1462	1466	1485	1466	1400	1376	1304	1366	1458	1512	1626	1752	1851	1795	1750	1580	-15	1565	
9		1750	1770	1763	1743	1735	1725	1735	1713	1711	1703	1711	1731	1712	1745	1772	1702	1750	1750	1823	1858	1783	1760	1760	1828	1751	-7	1744	
10		1739	1666	1664	1655	1659	1649	1659	1616	1593	1585	1593	1601	1571	1543	1586	1570	2913	2770	2953	3142	3213	3552	3579	3275	2139	-30	2109	
11		3275	3220	3136	3130	3136	3177	3238	3128	3039	2877	2731	2931	3092	3126	3203	3389	3322	3494	3295	3691	4590	4110	3953	3445	3322	-64	3258	
12		3396	3436	3151	3009	2880	2982	3104	3094	3104	3077	3065	3060	3016	3016	2910	2961	3190	3595	4046	3801	3656	3656	3957	3555	3280	-88	3192	
13		3040	3278	3201	3195	3202	3121	3060	3050	3060	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14		—	—	—	—	—	—	—	—	—	2951	2857	2856	2816	2639	2547	2383	2564	2893	3398	3681	3909	3785	3457	3229	3091	-45	3046	
15		3372	2834	3095	2824	2565	2617	2689	2809	2949	2941	2949	2900	2813	2746	2594	2516	2661	2905	3219	3717	3871	3966	3707	3495	3031	-27	3004	
16		3274	3123	3106	3056	3019	3032	3064	3054	3064	3056	3064	3029	2956	2930	2921	3019	3190	3342	3286	3320	3537	3592	3650	3262	3164	-15	3149	
17		3129	3082	2958	3027	3109	3042	2994	3037	3101	3023	2961	2952	2904	2863	2863	2769	2780	2926	3195	3516	3567	3487	3161	3161	3067	-23	3044	
18		3273	3154	3154	2986	2830	2797	2783	2818	2874	2832	2805	2824	2805	2672	2754	2838	3007	3406	4108	4383	4210	3915	3530	3133	3162	-16	3146	
19		3133	3064	3064	3058	3064	3044	3044	3034	3044	3036	3044	2972	2861	2760	2789	2835	3114	3522	3957	4083	4120	3861	3550	3263	3222	-12	3210	
20		3093	3133	3138	3071	3017	3007	3017	2970	2944	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21		—	—	—	—	—	—	—	—	—	2939	2910	2929	2910	2787	2832	2864	2994	3210	3429	3694	3613	3487	3261	3132	3099	-15	3084	
22		3173	3106	3119	3098	3089	3079	3089	3074	3080	3024	2984	3003	2984	2917	2914	3001	3261	3629	3739	3511	3395	3293	3121	3121	3159	-26	3133	
23		3069	3045	3045	3097	3161	3089	3036	3026	3036	2988	2956	2975	2956	2986	2904	3019	3397	3727	3879	3988	3904	3667	3493	3297	3239	-20	3219	
24		3277	3230	3240	3213	3199	3189	3199	3189	3199	3122	3061	3080	3061	2975	2975	2929	3192	3587	3840	3889	3700	3310	3212	3303	3257	-17	3240	
25		3350	3335	3285	3279	3285	3248	3231	3221	3231	3223	3231	3214	3159	3159	3083	3144	3186	3422	3712	3862	4111	4059	3870	3652	3398	-28	3370	
26		3430	3430	3431	3425	3431	3452	3492	3482	3492	3421	3366	3310	3216	3302	3407	3445	3597	3824	3626	3601	3765	3986	3927	3730	3525	-28	3497	
27		3536	3565	3590	3455	3333	3415	3517	3471	3446	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28		—	—	—	—	—	—	—	—	—	3404	3377	3396	3377	3340	3334	3267	3383	3621	3861	3825	3910	3910	3810	3727	3536	-30	3506	
29		3594	3496	3496	3490	3496	3489	3501	3445	3410	3402	3410	3369	3289	3330	3247	3130	2965	2932	3036	2950	2899	3051	3436	3675	3314	-8	3306	
30		3565	3437	3371	3365	3371	3318	3285	3275	3285	3212	3154	3132	3072	3072	3000	3084	3048	2887	2931	2734	2223	2813	3793	3793	3176	-9	3167	
Means		2803	2743	2719	2676	2645	2621	2616	2615	2635	2582	2543	2557	2533	2475	2479	2511	2700	2912	3110	3225	3259	3209	3130	2973	2761			
Temp. Corrections		-61	-50	-47	-44	-43	-40	-39	-36	-35	-31	-28	-24	-22	-17	-16	-16	-21	-26	-33	-42	-49	-55	-60	-61	.....	.... -37		
Corrected Means		2742	2693	2672	2632	2602	2581	2577	2579	2600	2551	2515	2533	2511	2458	2463	2495	2679	2886	3077	3183	3210	3154	3070	2912	.....	.....	2724	
Mean Hourly Variations from General Monthly Mean. = ·00		-18 0131	31 0226	52 0379	92 0671	122 0890	143 1043	147 1072	145 1057	124 0904	173 1261	209 1524	191 1393	213 1553	266 1940	261 1903	229 1670	45 0328	-162 -1181	-353 -2574	-459 -3347	-486 -3544	-430 -3136	-346 -2523	-188 -1371	.....	$\frac{\Delta Y}{Y}$ =	.....	·003544

NOVEMBER 1852. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*															
1	818	816	816	815	815	815	815	814	814	813	813	812	812	812	814	815	816	819	822	825	828	829	830	832	8179			
2	832	828	826	826	826	825	825	825	825	824	823	822	821	820	822	822	824	825	827	828	828	829	831	832	8257			
3	830	828	826	825	824	823	823	822	821	820	820	819	818	817	815	815	815	813	812	814	816	819	819	820	8198			
4	819	818	818	817	817	817	817	816	816	815	814	813	812	810	810	809	809	810	812	815	815	815	817	817	8145			
5	816	812	812	811	811	810	809	807	806	806	807	806	806	806	805	805	805	806	808	811	814	815	815	814	8093			
6	812	807	808	808	808	809	810	809	809	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	804	800	800	800	797	796	795	795	798	801	803	805	807	808	809	8041			
8	809	806	806	806	806	805	804	803	802	802	802	801	800	798	797	797	798	799	801	803	804	806	808	809	8030			
9	809	804	804	804	804	803	803	802	801	800	800	799	798	797	796	797	797	799	800	802	804	804	804	805	8015			
10	806	806	806	806	806	806	806	804	802	802	802	801	801	801	801	803	808	806	807	807	810	815	816	816	8060			
11	816	814	813	812	812	811	811	810	810	809	808	807	806	806	805	807	810	814	818	819	821	823	824	826	8130			
12	827	824	822	821	821	820	819	818	818	817	817	817	817	817	816	817	818	816	816	815	812	813	815	816	8179			
13	816	813	812	812	812	811	810	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	807	805	804	804	803	804	804	805	807	808	809	812	813	814	814	8091			
15	813	811	810	808	807	806	806	805	805	805	805	803	802	800	800	799	800	801	803	806	808	808	810	810	8055			
16	810	806	806	805	805	804	803	802	802	801	800	800	800	799	798	799	800	800	802	804	806	807	808	808	8031			
17	808	806	806	805	804	804	804	804	805	805	805	805	805	805	805	805	804	802	803	803	804	804	805	805	8046			
18	805	804	803	803	803	803	804	804	804	803	802	802	802	803	805	804	804	803	802	803	802	803	804	804	8033			
19	804	804	803	803	803	803	803	803	803	802	801	800	800	799	800	798	799	799	802	804	806	806	807	807	8025			
20	807	805	804	803	803	802	801	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	801	802	801	800	798	798	799	800	803	804	807	808	809	810	810	8031			
22	810	807	806	805	805	805	805	805	805	804	804	803	803	802	801	802	802	804	804	807	808	809	809	809	8052			
23	808	806	805	805	805	804	804	804	804	803	803	803	803	801	799	800	800	800	802	805	807	808	808	808	8040			
24	807	806	805	804	804	803	802	802	802	801	801	800	800	798	799	797	800	802	804	807	808	809	810	810	8034			
25	809	806	806	805	805	804	804	803	802	802	802	802	802	801	802	803	805	806	807	810	812	813	813	812	8057			
26	809	809	809	808	808	807	806	806	806	806	806	805	805	804	801	798	802	805	804	803	805	807	808	808	8056			
27	808	808	807	808	809	808	808	807	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	806	805	804	804	802	802	802	804	804	805	806	807	808	808	808	8060			
29	808	805	804	804	804	804	804	803	802	800	799	798	797	796	795	798	799	800	801	800	802	804	806	805	8016			
30	804	804	804	803	803	802	802	802	802	802	802	801	800	797	799	796	794	797	800	804	805	806	807	806	8018			
Means	8123	8101	8095	8089	8088	8082	8080	8073	8070	8062	8057	8049	8045	8034	8033	8033	8043	8053	8067	8085	8099	8111	8121	8123	8076			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

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$k = a.\text{Cot. } \theta\left(\frac{T'}{T}\right)^2 = \cdot0000291 \times \text{Cot. } 7°38'45'' \times \left(\frac{6\cdot913}{10\cdot699}\right)^2 = \cdot00009050$ $\quad \frac{q}{k} = \frac{\cdot360}{\cdot091} = 3\cdot978 = 1$ Faht. Zero 80·0 Ther.

VERTICAL FORCE MAGNETOMETER.

DECEMBER 1852. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·4 *		8·5 *		−16·1 *		−2·2 *		7·8 *																
1	3740	3437	3437	3296	3147	3044	2924	2951	3011	2981	2955	2963	2955	2941	2893	2962	3068	3068	2955	3137	3193	3307	3643	3535	3148	2	3150	
2	3132	3040	3040	3047	3046	3073	3084	2969	2887	2885	2887	2809	2716	2405	2433	2525	2620	2586	2521	2565	2474	2489	2807	2837	2787	52	2839	
3	2949	2949	2625	2524	2414	2454	2478	2463	2481	2514	2551	2528	2490	2490	2420	2310	2222	2364	2364	2364	2472	2408	2539	2683	2502	48	2550	
4	2774	2718	2800	2804	2800	2868	2919	2903	2919	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	2740	2566	2557	2532	2714	2758	2419	2382	2192	2255	2335	2463	2706	3016	3060	2675	12	2687	
6	2935	2677	2629	2724	2810	2692	2558	2542	2558	2684	2814	2758	2687	2642	2601	2496	2449	2600	2596	2502	2451	2606	2889	2942	2660	−21	2639	
7	2837	2864	2787	2771	2747	2755	2747	2670	2625	2598	2575	2643	2696	2654	2714	2754	2777	2625	2559	2608	2649	2805	2750	2627	2702	−43	2659	
8	2696	2696	2784	2784	2775	2589	2386	2580	2806	2738	2675	2683	2675	2651	2676	2611	2722	2668	2380	2285	2216	2554	2850	3125	2650	−47	2603	
9	3064	3034	3034	2943	2843	2851	2843	2793	2775	2753	2736	2744	2736	2680	2680	2605	2785	2650	2979	2781	2640	2820	2819	2912	2813	−33	2780	
10	2925	2811	3349	3026	2695	2725	2738	2722	2738	2736	2738	2747	2740	2668	2730	2725	2725	2751	2658	2675	2755	2805	2776	2650	2775	−17	2758	
11	2724	2731	2731	2629	2519	2527	2519	2490	2494	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	2539	2589	2597	2589	2485	1994	1939	2043	2097	2267	2187	2262	2370	2221	2131	2403	−2	2401	
13	2089	2089	2124	2114	2095	2092	2072	2016	1992	1990	1992	1973	1939	1903	1890	1918	2029	2184	2247	2335	2200	2284	2264	2212	2085	31	2116	
14	2250	2195	2240	2196	2143	2130	2101	2094	2119	2117	2119	2134	2134	2129	2129	2121	2176	2237	2293	2340	2400	2296	2395	2245	2197	32	2229	
15	2212	2255	2200	2189	2170	2178	2170	2163	2189	2187	2189	2174	2144	2124	2124	2091	2113	2119	2119	2177	2269	2431	2378	2297	2194	54	2248	
16	2251	2241	2231	2214	2189	2175	2144	2132	2153	2151	2153	2177	2186	2118	2118	2084	2037	2037	2086	1934	1988	2102	2187	2156	2135	69	2204	
17	2156	2122	2122	2112	2093	2085	2060	2089	2150	2148	2150	2145	2125	2083	2045	2129	2111	1980	1936	1835	1895	1935	2037	2108	2069	67	2136	
18	2162	2041	2041	2039	2028	2025	2005	2026	2079	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	2004	1934	1931	1912	1912	1885	1927	2029	2078	2002	1926	1965	2003	2069	1915	1997	84	2081	
20	1915	1915	1934	1932	1921	1929	1921	1870	1851	1849	1851	1872	1877	1838	1803	1750	1850	1815	1785	1801	1765	1799	1825	1853	1855	97	1952	
21	1916	1939	1939	1929	1910	1918	1910	1878	1879	1877	1879	1884	1874	1826	1906	1872	1954	1954	1882	1829	2143	2347	2288	2124	1952	106	2058	
22	1979	2064	2015	2024	2025	2013	1984	1944	1937	1935	1937	1980	2007	1982	1982	1903	1934	2101	2250	2226	2179	2287	2054	1963	2029	113	2142	
23	1985	1954	2018	2023	2019	2029	2022	2004	2018	1959	1904	1909	1898	1617	1621	1916	2034	2034	1978	1881	2129	2383	2342	2187	1994	99	2093	
24	2041	2041	2041	2012	1974	1958	1925	1892	1892	1939	1990	1998	1990	1899	1936	1991	1991	2006	1972	1944	2144	2289	2176	2056	2004	112	2116	
25	2102	1982	1975	1980	1977	1985	1977	1961	1977	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	1935	1897	1939	1965	1928	1928	1989	2076	2174	2246	2108	2066	2143	2194	2153	2027	107	2134	
27	2045	2000	2000	2001	1994	2002	1994	1957	1953	1932	1916	1924	1916	1880	1916	1845	1897	1929	2143	2199	2280	2526	2407	2203	2036	119	2155	
28	2218	2107	2077	2020	1955	1967	1963	1926	1922	1945	1972	1980	1972	1740	1696	1772	1900	2045	2045	1998	1976	2184	2102	1926	1975	147	2122	
29	1854	1916	2095	2144	2185	2085	1968	1980	2024	2061	2103	2104	2090	1978	1961	1978	1946	2160	2124	2232	2434	2551	2363	2252	2108	145	2253	
30	2226	2081	2081	2027	1964	1972	1964	1941	1950	1964	1982	1962	1926	1832	1857	1844	1918	2025	2098	2300	2527	2560	2429	2256	2070	107	2177	
31	2176	2028	1984	2013	2033	1998	1947	1955	1995	1955	1919	1927	1919	1770	1805	1845	2003	2259	2334	2507	2653	2595	2406	2235	2094	76	2170	
Means.....	2420	2368	2383	2352	2314	2301	2271	2256	2273	2264	2258	2261	2248	2181	2167	2160	2214	2250	2262	2260	2318	2429	2453	2394	2294			
Temp. Corrections	39	45	48	49	49	52	54	56	56	60	61	64	65	70	73	75	73	67	63	56	50	44	41	40	.....	56		
Corrected Means.	2459	2413	2431	2401	2363	2353	2325	2312	2329	2324	2319	2325	2313	2251	2240	2235	2287	2317	2325	2316	2368	2473	2494	2434	.....	.....	2350	
Mean Hourly Variations from General Monthly Mean. = ·00	−109	−63	−81	−51	−13	−3	25	38	21	26	31	25	37	99	110	115	63	33	25	34	−18	−123	−144	−84	.....	$\frac{\Delta Y}{Y}$ =	.....	·001303
	−·0986	−·0570	−·0733	−·0401	−·0118	−·0027	·0226	·0344	·0190	·0235	·0281	·0226	·0335	·0896	·0995	1041	·0570	·0299	·0226	·0308	−·0163	−·1113	−·1303	−·0760				

DECEMBER 1852. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	805	804	804	803	803	803	803	803	803	801	800	800	800	798	796	795	798	799	797	797	796	795	794	791	7995			
2	790	787	785	787	790	789	789	789	789	787	786	785	785	785	785	786	786	785	784	786	788	787	787	787	7868			
3	787	786	786	786	786	785	785	785	785	784	784	784	785	785	786	787	788	790	790	793	794	795	795	796	7878			
4	796	795	795	795	795	795	795	795	795	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	793	792	792	792	791	791	792	796	799	802	804	805	807	809	810	7971			
6	810	807	806	805	805	804	804	803	803	802	802	801	800	800	802	803	803	805	805	807	810	811	814	813	8052			
7	811	810	809	809	809	809	809	809	809	809	809	808	808	808	808	808	810	812	814	815	816	816	816	815	8107			
8	815	814	814	814	814	813	813	812	812	811	810	809	808	806	807	808	808	810	810	812	813	815	816	816	8117			
9	815	813	811	811	811	810	809	809	809	807	805	805	805	805	805	805	804	805	806	807	807	810	812	812	8083			
10	810	810	810	809	808	807	807	806	805	804	804	803	802	798	799	800	800	800	800	802	804	805	806	807	8044			
11	807	806	805	804	804	803	803	802	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	801	800	800	800	797	798	798	799	800	800	800	799	797	795	790	8004			
13	788	788	789	789	790	789	789	789	790	790	790	790	790	790	792	792	793	795	796	797	798	799	800	800	7922			
14	800	797	795	795	795	794	793	793	793	792	792	791	790	788	787	787	788	788	788	788	790	793	795	795	7920			
15	792	792	792	791	791	790	790	789	789	787	786	785	784	782	780	778	778	780	784	784	785	786	788	789	7863			
16	789	787	786	786	786	785	785	784	784	782	781	780	780	780	777	776	775	778	778	781	785	785	785	785	7825			
17	784	784	784	784	784	783	783	783	783	783	784	784	784	785	784	784	783	783	780	780	781	782	782	782	7830			
18	781	781	782	782	782	782	782	781	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	780	780	780	780	777	776	776	776	775	775	775	775	777	778	779	7789			
20	780	777	777	776	776	775	775	775	775	775	775	774	774	772	770	769	770	772	774	775	777	782	783	783	7755			
21	783	778	779	778	777	776	776	775	775	774	773	771	770	768	766	765	765	766	768	770	775	776	778	780	7734			
22	780	777	775	774	774	773	772	771	771	769	768	768	768	768	767	768	767	770	771	770	772	775	775	776	7716			
23	776	776	776	776	776	776	776	776	776	775	775	775	775	774	772	772	770	770	770	774	776	779	779	779	7750			
24	779	776	775	775	775	773	772	771	771	770	770	770	770	766	765	763	765	766	769	773	775	776	779	780	7718			
25	780	778	776	775	775	774	773	771	770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	771	773	773	773	772	769	767	769	770	772	775	775	775	775	775	7732			
27	775	775	774	773	773	772	772	771	771	770	770	770	770	768	765	765	763	763	765	761	769	772	773	774	7700			
28	775	774	772	770	768	766	765	764	763	762	761	759	758	757	758	756	756	757	758	759	761	764	765	766	7631			
29	766	766	765	765	765	764	764	763	762	762	762	761	760	758	756	752	755	758	762	766	770	772	774	775	7635			
30	775	774	773	772	772	772	772	771	771	771	771	771	770	769	768	767	768	772	775	778	779	781	782	784	7732			
31	785	783	782	782	782	781	780	780	780	780	780	778	777	775	775	773	774	775	781	784	787	788	789	791	7809			
Means.....	7901	7887	7880	7876	7876	7868	7865	7859	7858	7849	7846	7839	7836	7823	7816	7812	7817	7831	7842	7859	7875	7889	7898	7900	7858			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21st JANUARY 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATIONS.

Gottingen Mean Time.		Wednesday, 21st January, 1852.														Thursday, 22d January, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1658	1650	1640	1631	1628	1623	1639	1663	1670	1671	1679	1674	1672	1675	1670	1660	1666	1674	1694	1670	1684	1670	1668	1673
5	0	57	50	40	29	28	26	43	66	74	71	78	73	72	75	70	60	67	77	92	69	82	71	68	70
10	0	57	50	40	28	27	26	44	70	71	71	79	75	72	76	69	59	66	79	90	69	81	72	68	68
15	0	56	50	39	26	27	25	46	70	70	75	79	74	72	77	68	58	66	82	88	70	81	74	68	67
20	0	55	48	39	26	27	24	49	70	70	75	78	74	70	77	66	58	68	86	84	71	80	72	69	67
25	0	55	47	38	27	27	24	52	70	70	78	77	73	70	77	64	56	70	89	81	75	80	71	69	66
30	0	54	45	36	29	27	30	54	70	70	78	76	72	70	76	62	54	69	94	78	81	80	71	69	64
35	0	54	45	34	30	25	32	56	70	70	78	74	71	71	76	60	54	67	96	76	85	80	71	69	62
40	0	53	45	34	30	25	32	57	70	70	79	74	70	72	75	60	56	68	99	74	87	78	70	70	62
45	0	51	43	33	30	20	32	60	70	70	79	74	70	72	75	61	60	69	1701	73	89	78	70	71	62
50	0	51	42	32	30	23	34	63	71	70	79	75	70	74	75	60	62	69	01	72	90	75	69	71	61
55	0	51	42	32	30	23	34	62	70	71	79	75	70	75	73	60	62	70	1698	72	90	72	69	71	60

HORIZONTAL FORCE.

2	0	1152	1145	1135	1145	1090	1068	1018	968	902	949	935	975	1039	1094	1108	1110	1052	1192	1364	1544	1460	1339	1358	1329
7	0	52	42	35	42	90	67	10	53	42	43	42	78	52	96	09	14	54	1204	62	59	42	37	56	27
12	0	52	40	35	40	82	66	10	36	78	40	38	83	60	98	10	10	56	13	81	69	34	33	53	20
17	0	55	40	35	36	85	62	11	40	82	37	42	93	64	1100	12	07	59	81	97	84	36	30	50	17
22	0	55	37	34	30	85	61	12	54	81	35	46	1000	70	02	10	05	64	1312	1431	99	37	30	47	14
27	0	57	37	36	27	85	61	10	58	76	31	52	04	74	04	12	1080	70	60	67	1601	30	30	44	09
32	0	57	35	38	22	85	47	08	50	83	30	70	11	74	06	10	70	76	96	69	1570	20	33	40	06
37	0	57	31	40	14	77	40	04	35	73	35	89	18	80	08	07	60	79	70	71	26	12	36	36	04
42	0	57	30	41	10	65	37	00	25	73	40	92	23	88	10	04	54	1134	68	86	01	09	39	30	00
47	0	53	32	42	07	60	36	05	17	58	40	79	34	90	16	06	50	51	64	89	1492	1390	42	26	1298
52	0	50	32	42	05	64	30	10	14	59	40	73	43	84	10	08	50	60	70	1509	90	79	46	27	96
57	0	47	32	44	02	64	23	980	898	50	39	77	49	90	04	06	50	71	71	43	70	50	51	27	94
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		78·8	79·0	79·0	79·0	78·7	78·4	78·4	78·6	78·8	79·0	79·1	79·3	79·6	79·8	79·7	79·7	79·7	79·9	79·9	79·9	79·9	80·0	80·0	80·0

VERTICAL FORCE.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	4268	4210	4175	4175	4202	4169	4300	4580	4614	4522	4642	4705	4617	4433	4373	4355	4266	4471	4529	4659	4346	4157	4254	4254
8	0	68	10	75	75	02	69	00	80	4533	55	18	4652	00	33	73	55	66	98	29	59	46	57	54	54
7	0	68	4198	75	75	02	69	20	4600	11	52	40	85	00	34	73	55	66	4568	29	59	01	57	54	54
13	0	68	98	75	75	02	69	40	00	4477	74	35	87	00	34	73	22	66	4629	49	90	4272	57	54	54
18	0	68	98	75	75	02	69	95	00	75	78	27	80	4524	34	73	22	93	71	75	4731	4313	57	54	54
23	0	50	98	75	88	02	69	95	00	65	66	48	70	24	34	73	22	93	4719	4612	62	13	57	54	54
28	0	50	85	75	88	02	4218	4420	4595	76	56	50	60	4684	34	70	22	93	4801	49	98	13	3950	54	30
33	0	50	85	75	88	4162	18	35	95	4511	74	66	73	84	05	70	22	93	65	52	04	13	50	54	30
38	0	50	85	75	88	40	18	46	95	02	89	88	61	84	05	70	4222	4416	14	52	4613	13	50	54	30
43	0	39	85	75	88	40	18	46	95	02	91	4702	45	84	05	70	22	49	4760	79	07	13	4100	54	30
48	0	39	85	75	88	40	67	46	4607	24	4601	02	24	4466	05	70	22	49	03	91	4451	00	00	54	30
53	0	39	85	75	88	40	67	4543	07	17	04	4689	24	66	05	70	22	49	4612	97	30	00	00	54	30
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		78·8	78·7	78·6	78·5	78·4	78·2	78·4	78·6	79·2	79·5	79·6	79·8	79·8	80·0	79·9	79·8	79·7	79·8	79·8	79·8	79·8	79·8	79·5	79·5

INDUCTION INCLINOMETER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1638	1631	1622	1616	1612	1612	1625	1643	1648	1649	1653	1652	1650	1651	1649	1640	1647	1654	1669	1648	1660	1650	1647	1650
5	20	37	31	22	14	12	16	29	43	50	50	53	51	50	51	49	39	47	57	66	48	59	50	47	49
10	20	37	31	21	13	12	15	30	44	49	50	53	50	50	52	47	39	46	58	63	48	59	50	47	48
15	20	36	30	20	11	12	16	32	44	48	50	52	50	50	52	46	38	46	61	60	49	59	51	47	48
20	20	35	30	20	11	12	15	34	46	48	50	51	50	50	52	45	38	45	65	55	50	58	51	48	47
25	20	35	29	18	12	12	15	37	46	47	50	51	50	50	51	44	37	47	68	52	54	58	51	48	45
30	20	33	27	16	12	12	18	39	46	49	50	50	49	50	51	42	36	49	72	51	59	58	50	48	44
35	20	33	27	16	13	12	19	41	47	49	51	50	48	50	51	41	37	47	74	50	62	58	50	48	43
40	20	33	26	16	14	11	19	42	47	49	51	50	48	51	50	40	38	48	77	49	63	56	50	49	42
45	20	33	24	15	14	08	19	43	47	49	51	50	48	51	50	40	40	49	79	49	64	54	49	49	42
50	20	32	24	15	14	11	19	44	48	49	51	50	48	51	50	41	41	49	79	49	65	53	49	50	42
55	20	32	23	15	14	11	20	40	47	49	51	50	48	51	50	40	42	50	75	49	65	52	48	50	42
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		77·8	77·6	77·5	77·3	76·7	77·0	77·5	78·2	78·9	79·4	79·5	79·7	79·9	80·0	79·6	79·2	79·0	79·1	79·1	79·1	79·0	79·0	78·8	78·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+..		In. 1·076	In. 1·072	In. 1·073	In. 1·082	In. 1·096	In. 1·118	In. 1·142	In. 1·156	In. 1·148	In. 1·120	In. 1.100	In. 1·073	In. 1·060	In. 1·040	In. 1·064	In. 1·082	In. 1·088	In. 1·112	In. 1·128	In. 1.132	In. 1·132	In. 1·128	In. 1·110	In. 1·08
Attached Thermometer..		° 76·0	° 76·0	° 75·0	° 74·0	° 72·5	° 73·0	° 75·0	° 76·5	° 78·0	° 78·5	° 79·0	° 79·5	° 80·0	° 80·0	° 79·5	° 79·0	° 78·5	° 78·5	° 78·0	° 78·0	° 78·0	° 77·0	° 75·5	° 75·0
Dry Thermometer (standard)....		72·1	71·7	71·0	70·8	70·9	73·2	76·0	79·3	81·1	81·7	82·6	82·6	83·0	82·6	81·7	80·2	78·6	78·0	77·7	77·5	77·3	76·8	75·5	75·0
Wet do.....		69·5	69·3	69·2	68·2	69·0	71·2	72·5	73·0	73·2	74·0	73·8	73·7	74·0	73·4	73·0	72·8	72·4	72·4	72·3	72·3	72·4	72·0	72·0	71·4
Cloudy sky in 8ths.....		0	0	0	1	1	0	1	1	1	0	1	0	3	2	2	3	0	1	0	1	1	2	2	4
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·05	·07	·10	·12	·12	·15	·07	·07	·02	·02	·05	·02	·00	·00	·00	·00
Wind. Directions °		00	00	00	00	304	304	315	22	67	67	67	67	67	67	90	79	101	112	101	101	101	101	101	22
REMARKS ON THE WEATHER		clear, dew.....	do.	do.	cu-hor do.....	cu, hz.....	Nearly clear.	sc-cu	do.	do.	Nearly clear...	fl-cu	Nearly clear.	cu, cu-st.....	do.	do.	cu, cu-st, hz.....	Nearly clear...	cu, cr.....	Nearly clear....	cu, cr	fl-cu.....	fl-cu, hz.....	cu, cr-hz	cu, cu-str, hz.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 27TH FEBRUARY 1852, GOTTINGEN MEAN TIME.

		Friday, 27th February, 1852.														Saturday, 28th February, 1852.									
Gottingen Mean Time.		p. m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
MAGNETICAL OBSERVATIONS. DECLINATION.	m. 0 s. 0	scd. 1643	scd. 1652	scd. 1640	scd. 1642	scd. 1643	scd. 1642	scd. 1643	scd. 1645	scd. 1643	scd. 1643	scd. 1640	scd. 1643	scd. 1645	scd. 1644	scd. 1616	scd. 1643	scd. 1633	scd. 1636	scd. 1639	scd. 1637	sed. 1635	sed. 1636	sed. 1637	sed. 1635
	5 0	43	52	40	42	43	42	44	41	44	43	45	49	46	44	47	43	33	36	38	37	35	35	37	35
	10 0	43	52	40	42	42	46	44	42	43	40	50	48	46	43	47	42	33	36	37	37	35	35	37	34
	15 0	43	52	40	44	40	46	46	48	48	43	50	46	47	42	48	42	34	37	35	37	35	36	37	34
	20 0	43	51	40	47	40	47	44	47	47	43	30	43	47	41	49	41	34	37	34	38	34	36	37	34
	25 0	44	51	40	46	42	48	48	46	44	45	49	40	47	40	49	40	34	37	35	38	34	35	37	35
	30 0	46	51	40	45	47	45	48	44	42	45	45	38	48	40	50	39	35	38	35	38	34	35	35	35
	35 0	47	50	40	48	45	44	49	44	40	44	39	40	49	42	48	37	36	38	36	38	34	35	35	35
	40 0	49	50	40	50	47	45	48	43	40	44	33	43	49	42	47	35	37	38	36	38	34	37	35	35
	45 0	49	47	40	48	47	46	49	44	38	45	34	43	48	42	46	34	36	38	36	37	34	37	35	35
	50 0	50	45	41	48	43	43	48	45	39	46	36	43	48	43	45	34	36	39	36	37	33	37	35	35
	55 0	50	43	41	47	41	44	46	44	40	44	40	43	47	43	44	33	36	39	36	36	33	37	35	35
HORIZONTAL FORCE.	m. 2 s. 0	1238	1320	1330	1308	1292	1204	1193	1108	1144	1203	1200	1255	1248	1255	1295	1272	1280	1307	1258	1300	1307	1275	1230	1200
	7 0	42	21	28	05	90	03	85	1031	58	32	23	74	50	60	97	70	80	09	61	02	08	70	28	1198
	12 0	50	24	25	03	87	18	80	40	63	05	41	71	53	64	92	68	82	12	60	09	08	70	30	97
	17 0	57	27	22	07	84	38	78	88	67	06	52	65	60	72	88	65	82	21	60	13	1296	62	30	1200
	22 0	65	28	20	10	84	39	78	1113	81	00	63	63	58	80	85	67	84	24	60	21	90	65	24	00
	27 0	72	29	19	08	78	38	78	12	59	37	60	66	56	85	87	69	89	27	64	24	89	59	20	1194
	32 0	88	31	16	04	72	39	71	1096	41	40	53	67	52	91	89	70	90	24	74	24	86	53	15	90
	37 0	99	32	13	07	69	12	59	1109	39	16	23	55	52	94	90	75	90	19	79	20	80	50	18	88
	42 0	1304	34	10	09	62	08	58	1094	40	1194	15	56	55	92	90	79	96	1293	81	12	84	45	12	82
	47 0	10	34	10	02	49	1199	53	1150	49	1204	24	58	57	92	92	80	98	90	89	09	88	40	10	89
	52 0	19	33	09	1290	20	98	50	79	89	29	35	57	59	94	87	80	1300	61	90	06	83	35	1200	90
	57 0	20	30	09	92	08	98	37	72	82	29	38	55	52	97	80	82	06	52	99	04	80	30	00	85
	Faht.....																								
	Attached Thermometer.....	81·0	81·1	81·1	81·1	80·9	80·5	80·7	80·9	81·3	81·5	81·7	82·0	82·2	82·2	82·3	82·2	82·1	82·2	82·2	82·1	82·0	82·0	81·8	81·5
VERTICAL FORCE.	m. 3 s. 0	sed. 4463	sed. 4722	sed. 4500	sed. 4524	sed. 4486	sed. 4595	sed. 4677	sed. 4907	sed. 5013	sed. 4582	sed. 4330	sed. 4032	sed. 4391	sed. 4629	sed. 4644	sed. 4479	sed. 4436	sed. 4466	sed. 4238	sed. 4426	sed. 4342	sed. 4257	sed. 4314	sed. 4260
	8 0	4564	22	00	24	86	95	4709	77	13	4402	4215	4117	4122	29	62	79	36	66	38	26	42	57	14	60
	13 0	64	22	00	24	86	4624	34	5021	4986	4382	4130	15	47	29	83	79	36	66	38	26	42	57	14	60
	18 0	64	22	00	24	4516	83	43	4994	52	40	4088	10	60	57	83	79	36	91	49	26	29	57	14	60
	23 0	64	22	00	24	16	83	43	04	4891	4535	20	44	82	57	83	50	36	4502	61	51	96	72	14	60
	28 0	64	4673	00	24	82	15	59	04	84	00	46	75	82	57	60	50	36	05	4319	64	96	72	14	60
	33 0	4624	73	00	24	94	95	87	5090	90	4275	80	4225	82	57	44	18	36	05	78	64	96	72	14	60
	38 0	24	73	00	24	85	00	4830	61	65	4410	4176	65	97	84	20	18	23	4470	4401	64	4314	72	00	44
	43 0	24	73	00	24	36	11	4785	4966	4797	85	89	65	97	84	20	18	23	17	09	64	14	60	00	44
	48 0	24	00	00	24	82	33	4822	05	65	32	4290	33	4550	84	20	18	23	4370	09	20	14	60	00	44
	53 0	4722	00	24	4496	90	34	22	05	4627	4333	79	50	77	84	95	18	23	4261	09	01	14	60	00	44
	58 0	22	00	24	96	60	36	22	44	14	07	35	50	83	84	59	18	37	24	4397	4397	14	60	00	44
	Faht.....																								
	Attached Thermometer....	81·1	80·9	80·7	80·6	80·5	80·4	80·6	81·0	81·3	81·5	82·0	82·4	82·4	82·6	82·6	82·5	82·2	82·3	82·2	82·1	81·9	81·7	81·5	81·3
INDUCTION INCLINOMETER.	m. 0 s. 20	sed. 1635	sed. 1646	sed. 1633	sed. 1633	sed. 1633	sed. 1632	sed. 1633	sed. 1633	sed. 1634	sed. 1633	sed. 1630	sed. 1633	sed. 1634	sed. 1632	sed. 1633	sed. 1630	sed. 1624	sed. 1627	sed. 1630	sed. 1629	sed. 1627	sed. 1630	sed. 1630	sed. 1628
	5 20	35	45	33	33	33	32	33	31	34	34	35	37	34	31	33	30	24	27	30	29	27	29	30	28
	10 20	36	45	33	33	32	32	33	31	34	32	37	37	34	31	34	30	24	27	29	29	27	29	30	27
	15 20	36	45	33	34	30	33	33	33	38	33	40	35	34	30	34	30	24	28	28	29	27	29	30	27
	20 20	38	44	32	35	30	37	33	34	37	33	40	33	34	30	34	29	24	28	27	30	27	29	30	27
	25 20	38	44	32	35	32	37	34	32	33	35	39	30	35	30	35	29	25	28	28	30	27	27	30	25
	30 20	40	44	32	36	33	33	33	31	32	35	35	30	35	30	35	28	26	29	28	30	28	27	28	25
	35 20	42	44	32	37	32	33	38	31	30	33	30	30	35	30	34	27	26	29	29	30	28	27	28	25
	40 20	42	43	32	38	32	35	38	31	30	34	26	33	36	30	33	25	27	29	29	30	28	28	28	25
	45 20	44	41	32	36	33	32	38	32	30	35	27	31	36	30	33	24	27	29	29	29	28	28	28	25
	50 20	44	49	33	35	33	32	35	34	32	36	29	33	36	31	32	24	27	30	29	29	27	28	28	25
	55 20	45	36	33	35	32	33	34	34	30	33	30	33	34	32	31	24	27	30	29	28	27	29	28	25
	Faht.. ...																								
	Attached Thermometer....	80·0	80·0	79·8	79·7	79·0	79·2	80·0	80·8	81·4	82·0	82·3	82·6	82·8	82·7	82·5	82·0	81·5	81·4	81·3	81·1	81·0	79·8	80·0	80·0
METEOROLOGICAL OBSERVATIONS.		In. 1·020	In. 1·016	In. 1·024	In. 1·032	In. 1·056	In. 1·084	In. 1·106	In. 1·122	In. 1·108	In. 1·096	In. 1·064	In. 1·038	In. 1·030	In. 1·018	In. 1·016	In. 1·025	In. 1·034	In. 1·057	In. 1·076	In. 1·081	In. 1·082	In. 1·060	In. 1·030	In. 1·010
Barometer (uncorrected)= 29·0 +..																									
Attached Thermometer.....		77·0	77·0	77·0	76·0	75·0	75·0	77·0	79·0	80·5	82·5	83·0	83·5	83·5	83·0	82·5	81·5	80·0	80·0	79·5	78·5	78·5	77·0	76·0	75·0
Dry Thermometer (standard).....		73·5	72·4	71·7	71·5	71·4	74·2	79·2	82·6	85·6	87·4	87·5	87·5	87·0	86·2	85·0	83·0	80·8	79·6	78·3	77·8	77·1	75·3	74·0	73·2
Wet Do.		70·4	70·0	69·6	69·0	69·0	72·7	75·1	75·8	75·2	78·0	78·0	77·5	77·7	77·0	77·0	76·0	75·5	75·2	74·6	74·0	73·5	71·8	71·2	70·8
Cloudy sky in 8ths.....		1	1	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·05	·05	·05	·07	·10	·10	·15	·12	·15	·07	·05	·00	·00	·00	·00	·00	·00	·00
Wind. Directions °		247	236	236	225	180	180	191	191	146	124	135	135	135	135	146	146	146	146	146	146	146	146	247	247
REMARKS ON THE WEATHER		cu, cr-st-hor.....	do do D.....	cu, cr-hz, D.....	do D.....	do.....	cr, cr-st, hz.....	cr-st	Nearly-clear.....	do.....	do	do.....	do.....	clear.....	do	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH MARCH 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 24th March, 1852.														Thursday, 25th March, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon 1	2	3	4	5	6	7	8	9	
m.	s.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.
0	0	1638	1634	1630	1630	1640	1649	1653	1659	1644	1635	1637	1641	1642	1638	1632	1628	1628	1628	1628	1529	1631	1630	1635	1636
5	0	38	33	30	30	41	49	54	59	41	35	38	41	42	38	32	28	28	28	28	29	31	30	35	36
10	0	37	32	30	30	42	49	54	59	41	35	37	41	42	37	32	28	28	28	28	29	31	30	35	36
15	0	37	32	30	30	42	50	55	58	41	34	38	42	42	37	32	28	28	28	28	29	31	32	35	36
20	0	37	31	31	32	42	51	56	56	40	35	38	42	42	36	32	28	28	28	28	29	31	34	35	37
25	0	38	31	30	33	43	51	56	54	40	35	38	41	42	34	31	29	28	28	28	29	32	35	34	37
30	0	38	32	30	35	44	52	57	53	38	35	39	40	42	33	31	28	28	28	28	29	32	35	34	37
35	0	37	31	30	36	44	52	58	52	39	36	39	40	39	33	30	28	28	28	29	29	31	36	34	37
40	0	36	30	30	37	47	52	59	52	39	37	39	40	38	33	29	28	28	28	29	29	31	36	34	37
45	0	35	30	31	39	48	52	59	51	38	37	40	41	38	32	29	28	28	28	29	30	30	36	35	37
50	0	35	30	31	39	48	52	60	50	37	37	40	41	38	32	29	28	29	28	29	30	30	36	35	37
55	0	35	30	31	39	49	52	60	48	36	37	40	42	38	32	29	28	29	28	29	31	30	37	35	37

HORIZONTAL FORCE.

m.	s.																								
2	0	1246	1244	1252	1258	1224	1162	1087	1025	998	1017	1099	1172	1226	1251	1248	1243	1252	1262	1273	1272	1281	1280	1284	1283
7	0	46	40	52	58	20	58	80	18	997	21	1101	77	28	51	48	43	53	62	73	72	81	80	84	83
12	0	40	48	54	55	12	52	74	17	995	25	10	81	30	52	48	43	55	62	73	72	81	81	83	84
17	0	48	50	52	50	10	48	70	13	996	31	23	87	35	52	49	44	57	64	74	72	82	81	83	84
22	0	50	50	52	46	08	40	65	10	997	42	28	94	39	52	49	45	56	64	72	72	82	81	83	84
27	0	46	48	54	40	02	36	60	07	999	48	30	1200	41	51	48	46	55	67	72	72	80	81	82	84
32	0	40	48	54	40	1198	28	54	03	1003	49	33	01	43	50	48	47	57	67	73	72	80	81	82	82
37	0	38	50	54	40	92	25	49	00	03	58	40	09	47	50	47	48	58	69	72	76	79	81	82	82
42	0	40	50	50	40	87	20	43	00	05	70	45	11	49	50	47	48	59	72	72	76	77	81	82	82
47	0	44	50	50	32	80	14	38	999	10	83	51	15	49	49	47	48	60	73	71	78	77	81	82	81
52	0	42	50	54	30	72	12	32	98	13	80	58	20	50	49	44	49	60	74	71	79	76	82	82	81
57	0	40	48	54	30	70	1099	28	97	14	97	64	22	51	48	45	49	61	74	71	80	78	82	82	81
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		83·0	83·0	83·4	83·4	83·2	83·0	83·1	83·3	83·5	83·7	84·0	84·0	84·3	84·4	84·3	84·2	84·0	84·0	84·0	84·0	84·0	84·0	84·0	84·0

VERTICAL FORCE.

m.	s.																								
3	0	4207	4224	4173	4184	4166	4214	4258	4328	4450	4512	4422	4336	4276	4276	4271	4268	4282	4280	4271	4258	4253	4283	4253	4253
8	0	07	24	73	84	66	14	58	51	50	4454	12	18	76	76	71	68	82	80	71	58	53	83	53	53
13	0	07	24	73	84	66	14	58	4409	45	66	07	10	76	76	71	68	82	80	71	58	53	83	53	53
18	0	07	4155	73	84	66	14	4306	09	46	55	4397	07	76	76	71	68	82	80	71	60	53	71	53	53
23	0	07	55	94	56	66	14	06	09	63	50	87	4298	76	77	71	68	82	80	71	60	41	71	53	53
28	0	07	55	94	56	66	20	28	22	55	44	80	90	76	78	71	68	82	80	71	60	41	50	53	53
33	0	07	55	94	56	4205	62	12	22	62	40	34	87	76	78	71	68	82	80	71	46	41	50	53	53
38	0	34	4202	94	56	05	62	12	12	56	54	78	78	76	78	71	68	82	84	64	46	41	42	53	53
43	0	29	02	94	56	20	62	22	12	65	41	65	77	76	78	71	68	82	84	64	40	41	42	53	53
48	0	29	02	94	81	20	62	22	12	58	30	58	73	76	78	71	68	82	84	58	40	41	32	53	53
53	0	29	02	94	81	20	85	28	12	58	30	46	70	76	78	71	68	82	84	58	40	41	32	53	53
58	0	29	02	94	81	20	95	28	12	67	23	42	70	76	78	71	68	80	84	58	40	41	32	53	53
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		83·0	83·0	83·0	82·8	82·6	82·6	82·9	83·3	83·5	83·5	84·0	84·1	84·4	84·5	84·5	84·4	83·9	83·7	83·7	83·7	83·6	83·5	83·5	83·4

INDUCTION INCLINOMETER.

m.	s.																								
0	20	1615	1614	1611	1612	1620	1625	1630	1633	1625	1618	1620	1627	1628	1623	1618	1614	1617	1618	1618	1619	1621	1621	1620	1621
5	20	15	14	11	12	20	24	30	32	23	18	20	27	29	23	18	14	17	18	18	19	21	21	20	21
10	20	15	13	11	12	20	23	30	31	23	18	20	27	29	22	18	14	17	18	18	19	21	21	20	21
15	20	16	13	11	12	21	25	30	30	22	18	21	27	29	22	18	14	18	18	18	19	21	22	20	21
20	20	16	12	12	14	20	27	31	30	21	19	21	27	28	22	18	13	17	18	18	19	21	23	20	21
25	20	16	12	12	14	23	28	31	29	21	19	21	27	28	22	16	12	17	18	18	19	21	23	20	21
30	20	16	12	11	16	23	28	30	29	22	19	21	27	28	22	16	12	17	18	18	19	21	23	20	21
35	20	17	12	11	17	22	28	30	29	21	20	21	28	26	22	15	12	16	18	19	19	21	22	20	21
40	20	16	12	11	17	23	29	32	29	20	20	22	28	25	21	14	13	18	18	19	19	21	22	20	21
45	20	15	12	12	20	24	29	32	29	20	20	23	28	24	20	13	14	18	18	19	20	20	22	20	21
50	20	15	12	12	20	24	30	32	28	19	20	24	28	24	20	14	15	18	18	19	20	20	22	20	21
55	20	15	12	12	20	24	31	32	25	19	20	25	28	24	18	14	15	19	18	19	21	21	21	20	21
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		82·2	82·2	82·0	81·9	81·6	82·1	82·4	83·0	83·3	83·7	84·3	84·4	84·7	84·7	84·2	83·5	83·0	83·0	83·0	83·0	82·9	82·9	82·9	82·7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..		In. 0·962	In. 0·950	In. 0·956	In. 0·970	In. 1·002	In. 1·028	In. 1·040	In. 1·048	In. 1·032	In. 1·008	In. 0·980	In. 0·952	In. 0·928	In. 0·908	In. 0·894	In. 0·888	In. 0·892	In. 0·914	In. 0·932	In. 0·944	In. 0·947	In. 0·928	In. 0·922	In. 0·916
Attached Thermometer.....		° 79·5	° 79·0	° 79·0	° 79·0	° 78 5	° 79·0	° 80·0	° 81·0	° 81·5	° 83·0	° 83·5	° 83·0	° 83·5	° 83·5	° 83·5	° 83·0	° 82·0	° 81·5	° 81·0	° 81·0	° 81·0	° 80·5	° 80·5	° 80·0
Dry Thermometer (standard).....		78·8	78·2	78·2	77·5	78·4	81·5	83·6	85·3	86·8	88·2	88·3	87·8	87·7	87·5	87·0	84·6	82·6	81·8	81·5	81·2	80·6	80·3	79·7	79·3
Wet Do.		76·8	76·4	74·2	73·4	75·4	76·5	78·0	79·0	80·5	80·6	80·0	80·1	79·0	79·0	79·2	78·3	77·4	77·8	77·9	77·7	77·8	78·0	77·3	77·5
Cloudy sky in 8ths.....		4	3	4	4	5	5	5	7	6	6	4	2	2	2	2	2	3	0	0	0	0	0	0	0
Wind. Force lbs.....		·00	·00	·10	·00	·00	·00	·05	·10	·10	·27	·42	·60	·55	·30	·15	·20	·15	·17	·10	·10	·05	·05	·05	·05
Wind. Directions °		112	135	146	214	247	236	56	56	56	56	56	56	56	56	146	146	146	146	146	157	169	169	191	191
REMARKS ON THE WEATHER		cu, cir-hz, Nim.	cu, hz, Nim, lg-N.....	cir-str,cir-hz,cu,lg-E	cu,cir-hz,sh-lg,Thunder, NE.	cu, cu-str, cir-hz	do	cu, cu-str, cir, cir-hz.	cu, cu-str, Nim.....	cu, cu-str, hz.....	hy-cu, cir.....	cu, cir, cir-str	cu, cir, cir-hz.....	do hor	do	cu, cir, cir-str, cir-hz.	do do.....	do do.....	Nearly clear.....	do	do.....	do. sh-lg-SW-hor.	Nearly clear.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21ST APRIL 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 21st April, 1852.														Thursday, 22d April, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon.	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 0	1668	1662	1670	1670	1674	1571	1660	1638	1613	1605	1607	1602	1615	1630	1642	1651	1649	1647	1643	1645	1646	1647	1650	1653
	5 0	67	62	71	70	72	72	60	34	13	06	07	02	13	30	45	52	47	47	43	45	46	48	50	53
	10 0	67	62	72	70	71	72	58	32	12	06	07	03	14	30	47	53	49	47	43	45	46	49	50	52
	15 0	66	62	72	70	72	71	57	31	11	06	07	03	17	32	48	52	49	46	42	45	46	50	50	51
	20 0	66	62	71	71	72	70	57	30	10	06	08	05	18	35	50	52	50	45	43	46	46	50	50	50
	25 0	66	64	70	71	75	70	52	26	09	06	08	07	20	38	50	51	50	44	43	46	46	50	51	52
	30 0	64	65	70	71	72	67	51	22	07	06	07	08	20	40	50	52	48	43	43	46	46	50	52	53
	35 0	64	65	71	72	72	66	50	21	07	06	06	10	20	40	50	51	48	43	43	46	46	50	52	54
	40 0	64	66	71	75	73	66	47	20	06	05	05	10	20	40	50	51	47	42	43	46	45	50	53	56
	45 0	64	67	72	78	73	65	44	17	05	05	04	12	23	40	50	50	46	42	43	47	45	50	53	56
	50 0	64	68	72	78	72	65	41	16	05	05	02	12	26	40	49	49	45	42	45	47	45	50	53	57
	55 0	63	69	71	75	72	63	39	13	04	06	02	14	29	40	49	49	45	42	46	48	45	50	53	58
HORIZONTAL FORCE.	m. s.																								
	2 0	1510	1544	1538	1544	1515	1447	1372	1368	1343	1351	1387	1434	1500	1548	1578	1576	1544	1530	1539	1531	1486	1474	1486	1490
	7 0	17	47	40	46	13	22	80	55	66	65	84	40	18	44	80	76	47	26	39	31	86	70	86	90
	12 0	22	49	40	50	10	10	96	60	55	61	84	52	28	40	84	74	48	24	39	31	80	70	88	90
	17 0	29	50	42	50	03	18	1404	57	50	57	90	58	40	40	88	70	48	32	37	31	64	70	94	90
	22 0	30	51	45	47	1498	18	04	37	40	54	1400	68	40	45	80	60	52	29	37	31	68	69	97	90
	27 0	30	48	49	51	90	13	00	16	28	53	06	68	30	42	80	50	56	28	38	31	67	69	94	90
	32 0	34	42	50	55	82	10	00	33	26	52	06	73	32	42	77	46	50	30	38	30	67	72	91	91
	37 0	36	39	50	35	88	13	00	42	43	65	05	91	28	58	72	46	50	31	30	30	69	76	90	92
	42 0	38	35	52	20	80	03	1383	34	38	50	06	85	24	50	76	40	50	35	30	30	72	78	93	92
	47 0	38	36	54	10	68	1373	84	40	44	58	24	91	40	59	80	42	38	35	26	11	77	79	94	95
	52 0	36	36	49	10	62	88	57	40	47	72	28	98	42	68	82	45	38	36	30	02	79	81	92	98
	57 0	40	38	42	15	53	1403	62	36	65	80	30	1505	45	72	80	40	38	36	32	1496	79	82	91	1502
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer.....	86·9	86·9	86·9	86·9	86·5	86·2	86·3	86·7	87·2	87·8	88·2	88·5	88·7	88·9	88·8	88·4	88·0	88·0	88·0	87·9	87·9	87·8	87·8	87·7
VERTICAL FORCE.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	3 0	2791	2970	3050	2851	2818	3205	3798	4224	4322	4476	4447	4282	4301	3550	3325	3407	3019	2883	2887	2824	2655	2746	2836	2885
	8 0	2817	70	50	70	37	3343	98	75	22	76	47	82	3993	18	25	07	19	83	87	24	55	46	36	85
	13 0	17	70	42	94	2910	3431	98	4354	75	4520	47	82	93	18	84	67	80	83	87	24	55	46	36	85
	18 0	50	70	42	2917	72	3359	3870	70	75	20	31	82	4030	18	84	67	80	83	87	24	55	46	88	85
	23 0	92	70	30	50	3008	3426	3763	4423	4407	45	31	60	59	25	05	3265	80	35	83	39	55	46	3003	85
	28 0	92	50	02	10	3120	26	3933	87	07	45	33	60	3941	80	05	3148	80	35	83	48	55	46	03	85
	33 0	92	11	2979	2877	20	26	75	51	46	45	00	77	41	80	3246	3027	2938	41	83	48	55	2820	03	85
	38 0	2927	11	79	2974	46	76	4027	14	46	46	4395	77	3880	3428	46	10	60	41	83	48	2789	20	2991	85
	43 0	41	2868	55	3015	50	3522	66	14	61	46	72	07	80	48	46	10	60	41	83	48	89	20	91	85
	48 0	41	61	47	2935	90	3681	4125	4356	61	4492	4445	4189	3765	50	46	2970	41	41	83	30	70	20	91	2988
	53 0	41	2917	02	38	3235	81	62	56	70	92	45	89	65	3325	3330	70	33	2905	83	01	40	20	54	88
	58 0	60	80	2851	2845	35	93	92	58	70	97	4355	15	65	25	30	70	33	05	83	2710	40	36	54	88
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer.....	86·5	86·4	86·3	86·2	86·0	86·1	86·3	86·7	87·3	88·0	88·4	88·5	88·6	88·9	88·7	88·5	88·0	88·0	87·8	87·7	87·5	87·2	87·0	87·0
INDUCTION INCLINO-METER.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 20	1636	1632	1639	1640	1642	1641	1630	1611	1597	1587	1586	1584	1599	1611	1620	1624	1620	1620	1617	1617	1618	1618	1620	1622
	5 20	35	32	39	40	41	42	28	10	97	86	86	84	1600	11	21	24	20	20	17	17	18	20	20	22
	10 20	35	32	39	40	41	41	28	10	95	87	85	86	00	11	22	24	21	20	17	17	18	20	20	22
	15 20	35	32	39	40	42	41	27	08	94	86	84	85	02	12	22	24	22	19	16	17	18	21	20	21
	20 20	34	32	40	40	41	39	26	05	91	85	86	86	02	15	22	23	22	18	16	18	18	21	20	21
	25 20	34	33	40	40	42	39	25	03	90	85	88	89	02	17	22	24	22	17	16	18	18	21	21	20
	30 20	33	33	40	40	42	36	24	00	88	87	86	90	03	18	21	24	20	17	16	18	18	20	21	20
	35 20	32	35	41	40	42	34	22	00	89	86	86	92	04	18	21	23	19	16	16	18	18	20	21	19
	40 20	32	36	41	41	42	35	20	00	89	84	85	93	04	19	21	22	18	16	16	18	17	20	22	19
	45 20	32	36	41	44	42	34	19	1599	88	83	85	95	08	20	20	22	18	16	16	19	17	20	22	20
	50 20	32	37	40	44	42	32	17	98	88	85	84	95	10	20	20	21	18	16	17	19	16	20	22	20
	55 20	32	38	40	42	42	32	15	97	88	85	85	99	11	20	20	21	17	16	18	20	16	20	22	21
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer.....	85·6	85·3	85·1	85·0	84·9	85·3	86·2	87·2	89·0	89·5	89·7	89·6	90·0	88·9	88·9	88·0	87·2	87·1	87·1	86·9	86·7	86·4	86·2	86·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.....		1 In. 0·836	In. 0·831	In. 0·844	In. 0·864	In. 0·883	In. 0·902	In. 0·916	In. 0·920	In. 0·916	In. 0·898	In. 0·872	In. 0·842	In. 0·823	In. 0·820	In. 0·814	In. 0·830	In. 0·838	In. 0·858	In. 0·878	In. 0·894	In. 0·891	In. 0·886	In. 0·880	In. 0·880
Attached Thermometer		82·0	82·0	81·0	81·0	81·0	82·5	84·0	85·0	88·0	89·0	89·5	89·0	89·5	89·0	88·0	86·5	85·5	85·5	84·5	84·5	84·5	83·0	83·0	83·0
Dry Thermometer (standard)		81·5	80·7	80·3	79·7	81·5	85·5	88·6	91·4	94·7	95·4	94·6	94·2	94.3	94·2	92·5	91·6	87·3	86·0	85·2	84·6	84·2	83·8	83·5	82·5
Wet Do.....		78·9	77·8	77·5	76·8	77·5	79·2	79·8	80·2	79·6	82·3	82·0	81·5	81·0	80·0	79·6	79·0	78·2	78·6	78·3	78·5	78·4	78·0	78·0	77·6
Cloudy sky In 8ths.....		1	0	0	0	3	3	3	0	0	0	0	0	0	0	0	3	2	0	0	2	2	0	0	2
WIND. Force lbs.....		·00	·00	·00	·00	·20	·50	1·02	1·10	·42	·50	1·05	·90	·87	·45	·40	·25	·20	·25	·22	·20	·17	·10	·05	·00
WIND. Directions °		169	180	202	214	180	169	169	157	157	135	135	135	135	135	135	135	135	135	135	135	135	146	157	169
REMARKS ON THE WEATHER		cu-hor, dew.....	clear do.....	clear do.....	Nearly-clear.....	cir-hz, cum.....	do.....	cu, cir-cu, hz.....	Nearly-clear.....	do	clear	do.....	do.....	do.....	do.	do...	cir, cir-str, cir-hz.....	cir-str, cir-hz.....	Nearly-clear.....	do.....	cir, hz.....	cir, dense-hz.....	Nearly-clear.....	do	cu, cir-hz.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 28TH MAY 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 28th May, 1852.														Saturday, 29th May, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1651	1650	1655	1670	1683	1685	1670	1644	1616	1599	1598	1610	1622	1638	1650	1650	1639	1632	1632	1638	1640	1641	1645	1647
5	0	51	51	55	75	85	85	67	40	16	97	1600	11	23	39	50	49	38	32	32	38	40	41	45	47
10	0	52	52	55	78	85	82	67	39	14	96	00	12	23	39	50	49	37	32	32	38	41	41	45	47
15	0	52	50	56	79	86	80	64	36	12	95	00	12	23	40	50	49	36	32	32	38	41	41	45	47
20	0	51	51	59	79	85	80	63	33	10	92	02	12	22	40	51	48	35	33	32	39	41	41	46	46
25	0	51	53	60	81	85	78	60	30	10	92	04	13	24	41	52	47	34	33	34	39	42	40	46	46
30	0	50	53	60	82	86	79	57	27	09	93	08	13	26	42	52	45	34	33	36	39	42	41	46	46
35	0	50	57	61	82	87	78	56	25	07	93	09	17	29	44	52	44	34	33	36	39	42	42	46	46
40	0	49	55	61	79	87	75	54	23	06	94	10	17	31	45	52	42	34	33	36	39	41	43	46	46
45	0	50	54	62	81	86	74	50	20	04	96	11	17	32	47	52	42	34	33	37	39	41	43	46	46
50	0	51	55	65	82	88	72	47	18	01	98	12	20	34	47	51	41	33	33	38	39	41	43	47	47
55	0	50	54	66	85	87	70	45	17	00	98	12	20	35	48	51	41	33	32	38	39	42	44	47	47

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1480	1480	1482	1466	1439	1388	1373	1337	1314	1315	1372	1420	1486	1500	1480	1462	1469	1471	1469	1470	1478	1478	1462	1456
7	0	84	83	82	62	34	82	77	30	20	20	82	29	90	00	80	60	70	71	69	70	78	74	62	56
12	0	79	88	86	60	32	80	80	30	26	32	87	32	92	00	79	60	70	71	69	70	78	70	62	56
17	0	78	90	84	58	30	78	70	19	23	45	89	37	92	02	75	59	70	71	69	70	78	69	62	60
22	0	78	88	82	56	28	94	74	15	20	50	97	39	92	07	77	55	70	71	69	72	78	67	62	60
27	0	79	82	83	58	20	96	60	15	28	57	1400	49	95	03	79	51	70	71	71	73	82	65	58	62
32	0	80	84	84	60	15	88	65	17	20	60	11	55	97	1497	80	57	71	71	74	74	82	67	58	62
37	0	80	90	85	52	14	88	65	15	15	60	08	60	99	95	80	60	72	69	74	78	84	69	58	65
42	0	80	78	83	54	00	75	55	08	10	60	09	60	1500	95	80	63	72	69	74	79	84	67	58	68
47	0	80	78	82	51	00	70	40	10	04	62	17	70	00	91	75	67	72	69	74	79	84	60	50	70
52	0	80	80	80	46	1394	68	50	09	02	70	20	79	00	87	73	67	71	69	72	81	86	58	50	72
57	0	82	80	75	41	90	72	43	15	09	70	29	84	00	85	71	69	71	69	72	81	85	58	50	72
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		89·1	89·3	89·2	89·0	88·9	89·0	89·1	89·4	89·7	90·0	90·7	91·0	91·0	90·9	90·8	90·7	90·6	90·6	90·6	90·5	90·4	90·2	88·9	88·5

VERTICAL FORCE.

m.	*s.*																								
3	0	3470	3442	3355	3452	3712	3904	4238	4293	3948	4270	3977	3944	4012	3773	3672	3622	3596	3542	3561	3531	3563	3496	3539	3589
8	0	3502	31	50	3553	14	04	38	93	21	4160	77	44	12	73	72	22	96	42	72	31	63	96	39	89
13	0	12	3509	3468	93	24	00	65	33	27	60	77	44	3997	73	72	22	96	42	72	31	63	58	39	89
18	0	12	3474	00	99	51	00	99	4115	02	60	52	44	50	50	72	22	96	42	72	31	63	58	39	96
23	0	3474	74	22	78	30	00	99	25	40	00	52	44	50	50	96	22	96	61	72	31	63	58	52	96
28	0	74	89	22	3659	92	52	4322	4074	40	00	27	94	37	27	96	01	96	61	72	31	63	58	52	96
33	0	38	28	3376	59	65	72	70	74	40	4024	27	94	37	3669	96	01	96	61	72	31	3640	47	52	3642
38	0	3398	28	3414	59	37	4025	70	74	4118	24	36	4075	37	40	96	01	96	61	72	31	40	47	52	42
43	0	3416	3324	62	28	3854	4120	70	38	18	24	3883	75	10	40	96	01	96	61	72	31	40	47	52	42
48	0	20	3294	66	27	3785	72	70	3989	18	24	83	75	10	01	96	01	96	61	72	31	62	47	65	42
53	0	10	28	46	90	3825	72	05	89	4270	24	83	75	10	01	96	01	96	61	72	31	62	47	65	42
58	0	28	3316	20	3726	93	4219	05	20	70	24	83	75	10	01	96	01	96	61	72	31	62	47	65	42
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		89·2	89·3	89·0	89·0	88·7	89·0	89·2	89·5	89·7	90·0	90·4	90·6	90·8	90·7	90·7	90·7	90·4	90·1	89·9	89·8	89·7	89·6	89·4	89·1

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1623	1622	1626	1638	1647	1650	1638	1617	1605	1596	1593	1601	1610	1622	1632	1630	1622	1619	1620	1625	1627	1627	1626	1627
5	20	23	23	26	41	49	49	36	15	03	93	95	00	10	22	32	30	22	19	20	25	27	27	26	27
10	20	24	23	27	43	49	47	35	15	02	92	97	00	12	22	32	29	22	19	20	25	28	27	26	27
15	20	24	23	28	43	49	45	33	11	01	91	99	01	12	23	32	29	21	19	20	26	28	27	26	27
20	20	23	21	30	42	49	46	32	10	00	90	1600	02	12	24	31	29	21	20	20	26	28	26	26	27
25	20	23	22	30	44	49	44	30	08	00	91	00	02	13	25	31	28	21	20	22	26	28	25	27	27
30	20	22	24	30	45	50	44	28	10	00	90	01	02	15	25	31	27	21	20	23	26	28	26	27	27
35	20	21	28	31	45	49	44	27	10	1599	90	01	03	16	27	31	26	21	20	24	26	28	26	27	27
40	20	21	26	31	44	50	42	25	08	99	90	00	03	17	27	30	25	21	20	24	26	28	25	27	27
45	20	22	24	32	45	49	40	23	07	98	92	01	04	19	28	30	24	21	20	24	26	28	25	27	27
50	20	22	24	33	45	50	40	20	07	97	93	02	06	19	28	30	24	20	20	24	26	28	24	27	27
55	20	22	24	34	48	50	38	20	05	95	93	01	09	20	28	30	23	20	20	25	26	29	24	27	27
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		88·5	88·2	88·0	87·8	87·8	88·5	89·3	90·0	90·5	91·4	92·3	92·1	91·7	91·8	91·3	90·5	89·9	89·6	89·5	89·3	89·1	88·9	88·0	87·2

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+..		In. 0·860	In. 0·860	In. 0·870	In. 0·882	In. 0·898	In. 0·916	In. 0·928	In. 0·930	In. 0·922	In. 0·912	In. 0·892	In. 0·856	In. 0·818	In. 0·815	In. 0·824	In. 0·859	In. 0·864	In. 0·874	In. 0·891	In. 0·910	In. 0·920	In. 0·888	In. 0·876	In. 0·860
Attached Thermometer..		° 86·0	° 85·5	° 85·0	° 84·5	° 84·5	° 85·5	° 87·0	° 89·0	° 90·5	° 92·0	° 93·0	° 92·5	° 91·0	° 91·0	° 91·0	° 90·0	° 89·0	° 88·0	° 87·0	° 86·0	° 86·0	° 85·5	° 85·0	° 84·5
Dry Thermometer (standard)....		85·2	84·8	84·3	83·8	86·0	90·0	93·5	97·0	98·3	100·4	101·5	99·0	97·1	95·5	95·3	91·8	89·2	87·7	87·1	86·4	85·9	85·6	85·0	84·7
Wet Do.....		78·0	77·8	77·2	77·0	78·5	79·6	78·9	79·6	79·6	80·1	81·6	82·0	81·5	79·5	80·0	77·5	76·8	76·4	76·8	76·8	77·2	76·2	76·0	76·0
Cloudy sky in 8ths.....		0	0	1	3	3	3	3	4	4	4	4	5	6	7	5	7	5	3	2	2	1	3	5	4
Wind. Force lbs.....		·05	·02	·05	·05	·05	·12	·37	·20	·20	·17	·20	·15	·15	·10	·15	·40	·15	·20	·00	·00	·00	·02	·00	·00
Wind. Directions °		202	202	191	191	202	236	259	270	259	270	225	157	157	169	169	236	247	236	214	191	191	157	169	169
REMARKS ON THE WEATHER		Nearly-clear..	clear.....	cir, cir-str.....	cir, cir-str, cir-hz. ...	do	cu, cu-str, cr, cir-str	do	cu, cir-cu, cir-hz.....	cu, cir-cu, cir-hz.....	do.	cu, cu-str, cir-hz.....	do., Nim.	cu, cir-hz, Nim.....	do., dis-Th	do. do., dis-th.	cu, cir-haz, Nim.....	do. do	cu, cir-str, cir-cu, hz lg-W	lt-cu, cir-str, hz.....	lt-cu, cir-str, cir	cu, cir-str.....	cir-cu, cir-str	cu, cir-cu, cir-str	do.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 23D JUNE 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 23rd June, 1852.														Thursday, 24th June, 1852.									
		p. m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	*m.* *s.*																								
	0 0	scd. 1670	scd. 1663	scd. 1664	scd. 1672	scd. 1690	scd. 1690	scd. 1672	scd. 1644	scd. 1632	scd. 1630	scd. 1640	scd. 1640	scd. 1630	scd. 1640	scd. 1650	scd. 1662	scd. 1655	scd. 1649	scd. 1648	scd. 1650	scd. 1653	scd. 1655	scd. 1651	scd. 1655
	5 0	70	62	64	72	91	90	71	42	33	31	40	40	30	40	51	62	55	49	48	50	53	55	51	55
	10 0	69	62	64	73	91	88	70	41	34	32	40	40	31	40	52	62	53	49	48	50	53	55	50	56
	15 0	68	62	66	76	93	88	70	39	34	35	41	38	31	42	53	62	51	49	48	50	53	53	50	57
	20 0	68	63	69	79	95	85	68	38	34	35	40	36	32	44	54	62	50	49	49	51	53	53	50	57
	25 0	68	63	70	79	97	82	65	34	34	36	40	35	34	46	57	60	50	49	49	51	53	54	50	57
	30 0	66	64	70	80	97	80	61	33	33	38	40	34	35	48	58	60	50	48	49	52	54	54	50	57
	35 0	66	64	70	83	97	79	59	32	32	39	40	32	36	49	59	60	49	48	49	52	54	54	50	58
	40 0	65	64	71	86	97	78	53	30	32	39	41	33	37	50	60	60	49	49	49	53	55	54	51	58
	45 0	65	64	71	88	96	74	52	30	31	39	41	31	38	50	60	59	49	49	49	53	55	52	51	58
	50 0	65	64	72	90	96	72	50	30	31	39	40	30	37	49	60	56	49	49	49	53	55	52	53	58
	55 0	64	64	71	90	93	72	48	30	30	40	42	30	39	49	61	55	49	49	49	53	55	52	53	58
HORIZONTAL FORCE.	*m.* *s.*																								
	2 0	1320	1310	1308	1300	1278	1239	1189	1152	1180	1180	1176	1230	1242	1300	1303	1302	1309	1312	1308	1306	1318	1300	1288	1300
	7 0	20	10	10	02	80	33	84	57	80	75	82	32	49	1299	05	03	06	12	08	10	18	00	88	00
	12 0	20	10	14	02	72	30	80	62	71	71	86	36	57	1300	06	04	04	12	08	10	18	1297	87	02
	17 0	18	10	11	02	68	28	73	70	55	69	89	35	64	02	07	07	01	12	08	15	18	97	87	04
	22 0	18	07	10	1299	60	22	72	68	51	70	92	30	77	03	08	07	02	12	06	16	16	95	87	05
	27 0	18	05	10	94	60	18	70	56	47	71	97	30	85	04	04	08	09	12	06	16	16	95	85	05
	32 0	16	04	08	90	52	12	73	53	36	72	1203	33	89	03	03	09	12	11	06	16	15	92	85	05
	37 0	16	01	05	82	50	08	78	61	40	70	05	37	93	03	02	09	12	11	06	14	14	90	90	06
	42 0	10	1297	02	78	47	02	68	69	62	72	10	38	93	04	02	10	11	10	06	11	14	90	92	07
	47 0	15	95	00	76	43	02	60	67	66	73	13	40	98	02	04	10	11	10	06	10	12	90	99	07
	52 0	14	1300	00	76	42	1199	50	68	70	74	21	38	99	02	05	09	11	10	05	10	10	90	99	07
	57 0	14	02	00	79	40	98	50	74	75	75	26	40	98	02	04	08	11	09	05	16	04	90	99	07
	Faht.....																								
	Attached Thermometer.....	86°3	86°3	86°2	86°2	86°0	85°9	85°8	86°0	86°0	86°1	86°2	86°5	86°7	86°8	86°9	86°9	86°8	86°9	86°9	87°0	87°0	87°0	87°0	86°9
VERTICAL FORCE.	*m.* *s.*																								
	3 0	scd. 3555	scd. 3485	scd. 3455	scd. 3369	scd. 3455	scd. 3580	scd. 3538	scd. 3686	scd. 3735	scd. 3697	scd. 3962	scd. 3952	scd. 3821	scd. 3911	scd. 3706	scd. 3570	scd. 3580	scd. 3538	scd. 3560	scd. 3568	scd. 3587	scd. 3515	scd. 3532	scd. 3557
	8 0	89	85	55	69	55	80	48	86	35	97	62	52	21	11	06	70	80	38	60	68	87	15	32	57
	13 0	89	68	55	69	55	96	88	89	3825	99	81	52	21	11	06	70	80	38	60	3600	87	15	32	57
	18 0	89	68	55	82	98	96	90	80	84	3701	81	52	21	11	06	70	80	38	60	00	87	15	32	29
	23 0	89	68	73	82	3528	90	3635	3708	3927	16	46	02	21	11	06	70	80	38	60	00	87	15	51	29
	28 0	99	45	73	3418	28	67	46	25	27	16	46	02	65	11	3635	70	80	38	60	00	87	15	51	29
	33 0	99	45	73	49	28	60	70	60	58	63	46	3823	65	11	35	70	80	38	60	00	87	07	51	29
	38 0	99	45	73	49	28	27	59	37	88	3813	37	23	65	3801	35	70	62	38	60	00	62	07	80	00
	43 0	57	45	51	69	78	30	71	15	3895	13	37	23	65	01	3593	3602	62	38	60	00	62	07	80	00
	48 0	57	02	51	82	78	28	94	15	55	75	44	23	65	01	93	02	62	38	60	00	62	07	3602	00
	53 0	57	02	24	3500	80	28	3700	15	3776	75	44	3792	65	3790	93	3580	62	38	60	00	30	07	02	00
	58 0	57	02	24	04	95	41	3686	15	24	75	44	92	65	90	93	80	62	49	60	00	30	07	02	00
	Faht.....																								
	Attached Thermometer....	86°2	86°2	86°0	86°0	85°9	85°8	85°7	85°9	86°0	86°2	86°3	86°5	86°5	86°7	86°9	87°0	86°8	86°8	86°8	86°7	86°7	86°7	86°7	86°6
INDUCTION INCLINO-METER.	*m.* *s.*																								
	0 20	scd. 1629	scd. 1626	scd. 1623	scd. 1630	scd. 1643	scd. 1645	scd. 1632	scd. 1611	scd. 1601	scd. 1602	scd. 1612	scd. 1615	scd. 1606	scd. 1612	scd. 1622	scd. 1632	scd. 1625	scd. 1620	scd. 1618	scd. 1620	scd. 1623	scd. 1622	scd. 1624	scd. 1625
	5 20	28	26	22	30	45	43	31	10	02	03	12	13	08	13	23	32	24	20	18	20	23	22	24	25
	10 20	28	26	22	30	46	42	30	09	03	03	12	11	09	15	24	32	23	20	18	20	23	22	24	25
	15 20	28	25	22	32	48	42	30	08	04	05	12	10	09	18	24	32	22	20	18	20	23	23	24	25
	20 20	28	25	27	34	49	41	28	05	03	09	12	10	09	19	25	32	21	20	19	21	23	23	24	25
	25 20	28	25	28	34	49	40	26	03	02	10	12	10	10	20	27	31	21	20	19	21	23	23	24	25
	30 20	28	26	29	35	50	38	23	03	02	10	13	10	10	20	28	31	20	19	19	22	22	23	24	25
	35 20	28	26	29	38	50	38	20	00	03	10	13	09	10	20	29	31	20	19	19	22	22	23	24	25
	40 20	27	26	30	40	50	33	18	00	02	11	15	09	10	20	29	30	20	19	19	23	22	23	24	25
	45 20	28	25	30	41	50	33	17	00	03	11	14	09	11	20	30	30	20	19	19	23	22	23	25	25
	50 20	27	24	30	42	49	32	13	00	03	10	15	08	12	20	30	26	20	19	19	23	22	23	25	25
	55 20	27	24	30	42	48	32	12	00	02	11	15	06	12	20	32	25	20	19	19	23	22	23	25	25
	Faht.. ...																								
	Attached Thermometer....	85°2	85°2	85°0	84°8	84°7	84°8	85°1	85°7	85°9	86°1	86°5	86°9	87°0	87°1	87°0	87°0	86°8	86°7	86°6	86°4	86°3	86°2	86°0	86°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)= 29·0 +..		In. 0·870	In. 0·864	In. 0·876	In. 0·890	In. 0·916	In. 0·922	In. 0·934	In. 0·938	In. 0·930	In. 0·926	In. 0·910	In. 0·896	In. 0·878	In. 0·865	In. 0·858	In. 0·865	In. 0·881	In. 0·900	In. 0·940	In. 0·956	In. 0·957	In. 0·935	In. 0·924	In. 0·900
Attached Thermometer.....		82°5	82°5	82°0	82°0	82°0	82°0	82°5	83°0	84°0	84°5	85°5	86°0	86°0	86°5	86°5	86°0	86°0	86°0	85°0	84°5	84°5	84°0	84°0	83°5
Dry Thermometer (standard).....		82°7	82°0	82°2	81·9	82°2	83°2	84°5	86°7	88°6	89°9	90°6	92°4	92°0	92°3	91°8	90°5	88°8	87°5	86°2	85°6	85°2	84°5	83°7	83°2
Wet Do.		73°4	73°2	73°0	73°0	73°8	75°3	75°7	75·9	76°0	76°0	76.0	77°0	76°6	76°5	77°0	76°1	75°4	74°7	74°6	74°6	74°3	74°5	74°7	74°0
Cloudy sky in 8ths.....		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
WIND. Force lbs.....		·07	·05	·02	·00	·02	·02	·00	·05	·07	·37	·40	·30	·15	·10	·02	·07	·10	·00	·02	·00	·02	·00	·00	·05
WIND. Directions °		247	247	236	247	247	202	202	202	202	202	202	202	214	214	225	225	247	247	225	236	247	247	225	225
REMARKS ON THE WEATHER		Overcast.....	do.....	do.....	do.....	do	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	do.....	Covered with cum and dense haze, Moon faintly visible.....	Overcast.....	Covered with cum and dense haze, Moon very faintly visible.	Overcast.....	do.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21st JULY 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 21st July, 1852.														Thursday, 22nd July, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon 1	2	3	4	5	6	7	8	9	
m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1661	1661	1662	1670	1696	1703	1709	1692	1677	1644	1622	1616	1618	1623	1650	1657	1651	1648	1650	1656	1661	1664	1663	1665
5	0	60	61	62	74	97	02	09	91	74	44	22	15	17	24	51	58	50	48	50	56	61	64	63	65
10	0	60	61	62	76	1700	02	09	91	71	42	20	13	18	27	50	58	50	48	50	56	61	64	64	66
15	0	60	61	62	78	01	02	09	90	69	40	21	12	18	29	50	57	50	48	51	57	61	64	64	67
20	0	60	62	62	79	01	04	04	85	65	40	20	12	18	31	52	57	49	48	51	58	61	64	64	67
25	0	61	62	63	81	00	06	00	87	60	38	20	13	18	32	53	57	49	48	51	58	61	64	64	67
30	0	62	62	64	83	00	08	00	86	60	35	20	15	18	33	54	57	49	48	52	59	61	64	65	67
35	0	62	62	64	88	02	09	1698	85	55	30	20	15	18	36	56	55	49	48	53	59	61	64	65	67
40	0	62	62	66	90	02	10	98	83	52	30	20	13	18	40	56	54	48	48	54	59	62	64	65	67
45	0	62	62	67	92	03	10	99	81	50	27	20	15	19	41	56	54	48	49	54	59	62	64	65	67
50	0	62	62	68	92	02	10	98	80	49	24	19	15	20	44	56	52	48	50	54	60	63	64	65	67
55	0	62	62	69	94	02	10	97	79	48	23	18	17	21	45	55	52	48	50	55	60	63	63	65	67

HORIZONTAL FORCE.

m.	s.																								
2	0	1226	1224	1225	1227	1216	1155	1108	1050	1047	1053	1067	1060	1078	1110	1154	1162	1168	1179	1178	1172	1171	1170	1159	1165
7	0	25	24	25	28	14	52	08	52	48	56	62	61	80	16	54	67	65	79	78	71	71	70	58	64
12	0	23	25	25	28	10	49	07	52	50	56	70	63	84	32	57	69	59	79	78	71	71	70	58	62
17	0	22	25	23	27	08	47	1099	52	50	55	70	62	88	38	59	69	57	67	79	79	71	69	58	60
22	0	22	25	24	27	07	45	95	51	47	59	71	79	92	42	59	67	50	69	79	79	71	68	58	60
27	0	22	29	22	23	02	40	92	50	46	65	72	85	98	45	60	67	44	69	79	79	71	68	58	60
32	0	22	30	20	21	1195	35	89	50	45	55	69	85	90	50	60	67	42	73	76	77	71	68	59	61
37	0	23	29	19	20	90	30	85	50	50	60	60	85	94	48	60	63	40	76	70	77	71	68	59	62
42	0	22	28	19	19	85	25	78	47	45	60	61	75	92	49	60	60	42	76	70	77	72	66	60	62
47	0	21	27	19	17	78	22	70	47	48	59	61	80	92	50	60	60	43	74	69	77	72	64	61	62
52	0	24	27	20	17	63	15	72	49	51	66	60	78	1102	50	62	58	61	76	64	77	72	63	62	62
57	0	25	27	24	17	60	12	68	47	52	69	61	76	09	52	62	58	76	77	64	77	71	61	64	62
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		87·0	87·0	86·9	86·8	86·5	86·3	86·0	86·2	86·1	86·0	85·5	85·3	85·0	84·8	84·8	84·8	84·8	84·9	84·9	84·9	84·9	85·0	85·0	85·0

VERTICAL FORCE.

m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	5484	5435	5435	5402	5369	4943	5164	5680	5944	5787	5635	5423	5750	5924	6084	5963	5790	5548	5477	4959	5035	5330	4955	4955
8	0	84	35	35	02	69	43	64	80	44	72	77	23	50	24	84	63	90	48	77	54	35	30	55	55
13	0	84	35	35	02	69	00	64	81	44	72	77	23	5835	24	54	63	90	48	77	54	35	30	55	55
18	0	84	35	35	02	69	00	78	5705	41	65	77	5542	35	6034	54	63	79	22	77	5016	35	30	55	55
23	0	84	35	35	02	54	05	5369	10	43	65	15	42	64	38	54	51	5533	22	77	16	35	30	55	55
28	0	84	35	01	02	44	00	70	5810	60	50	5598	5372	64	38	04	51	12	22	77	16	27	30	55	55
33	0	84	35	01	02	38	00	85	17	45	50	03	72	64	49	04	51	12	22	77	21	27	30	55	55
38	0	84	35	5368	02	30	15	99	17	5842	50	03	5681	64	49	04	29	12	01	01	43	27	30	55	55
43	0	67	35	68	02	12	20	5450	21	57	37	5487	81	50	33	04	29	12	01	5362	43	27	5280	55	55
48	0	67	35	68	02	20	01	5595	21	20	37	45	5742	50	33	04	5879	12	08	19	43	5198	80	55	55
53	0	67	35	68	02	00	4895	5625	68	34	5692	45	75	50	33	18	79	12	08	5261	43	98	80	55	55
58	0	67	35	68	5380	5107	95	25	68	23	92	24	75	50	39	18	79	12	08	27	43	98	80	55	55
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		86·8	86·7	86·5	86·3	86·1	86·0	86·0	86·0	86·1	85·9	85·5	85·4	85·2	84·5	84·5	84·5	84·5	84·6	84·6	84·5	84·5	84·5	84·5	84·5

INDUCTION INCLINOMETER.

m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1620	1620	1620	1625	1641	1649	1650	1642	1628	1601	1585	1582	1580	1585	1607	1612	1609	1606	1608	1613	1617	1618	1620	1620
5	20	20	20	20	26	43	49	49	40	25	00	84	80	80	87	08	12	09	06	08	13	17	18	20	20
10	20	20	20	20	28	44	49	50	40	21	1599	84	80	80	90	07	12	09	06	08	13	17	18	20	20
15	20	20	20	20	29	44	48	50	40	20	98	85	80	80	92	07	12	09	06	09	14	17	18	20	20
20	20	20	20	20	29	45	50	47	37	17	98	86	80	80	93	09	10	08	06	09	14	17	18	20	20
25	20	20	19	21	30	45	51	46	36	14	95	85	80	80	94	10	10	08	06	09	14	17	18	20	20
30	20	20	19	21	32	45	52	46	35	12	94	85	79	80	95	10	10	07	06	10	15	17	18	20	21
35	20	20	20	22	33	46	52	45	34	09	92	84	78	80	95	11	10	07	06	11	15	17	18	20	21
40	20	20	20	22	33	47	52	47	34	05	90	85	77	80	97	11	10	06	06	11	15	18	18	20	21
45	20	20	20	22	34	49	53	48	32	04	90	83	77	80	1600	11	10	06	07	11	15	18	18	20	21
50	20	20	20	23	34	50	52	46	31	04	88	83	80	82	03	12	10	06	08	11	15	18	18	20	21
55	20	20	20	24	37	49	52	44	29	03	86	83	80	82	04	10	09	06	08	12	16	18	20	20	21
Faht...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...		85·8	85·7	85·2	85·0	84·9	85 0	85·0	85·6	85·3	85·1	83·7	82·7	83·0	83·0	83·0	83·2	83·7	83·8	83·7	83·6	83·6	83·5	83·4	83·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 +...		In. 0·849	In. 0·784	In. 0·806	In. 0·784	In. 0·791	In. 0·801	In. 0·810	In. 0·814	In. 0·822	In. 0·848	In. 0·831	In. 0·838	In. 0·774	In. 0·735	In. 0·739	In. 0·772	In. 0·782	In. 0·804	In. 0·832	In. 0·848	In. 0·858	In. 0·864	In. 0·851	In. 0·829
Attached Thermometer...		83·0	83·0	83·0	81·5	80·5	81·0	81·5	83·0	82·0	79·0	79·0	77·5	77·0	77·0	77·5	79·0	79·0	79·0	79·0	78·5	78·5	78·5	77·5	78·0
Dry Thermometer (standard)...		79·2	78·3	78·3	78·3	80·5	83·0	84·0	84·9	82·6	79·1	78·5	77·4	76·8	77·5	79·4	80·5	79·6	79·1	78·8	78·6	78·5	78·5	78·5	78·5
Wet Do. ...		77·0	76·3	76·7	76·7	77·0	79·0	78·8	78·9	78·0	76·5	76·2	75·0	74·0	75·0	76·2	77·6	77·0	76·5	76·4	76·3	76·2	76·4	76·0	76·0
Cloudy sky in sths...		8	8	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	7	4	5	6	7	8	8
Wind: Force lbs...		·18	·20	·10	·04	·06	·09	·20	·24	·12	·08	·06	·08	·11	·15	·20	·00	·08	·02	·00	·00	·00	·02	·03	·02
Wind: Directions ° ...		225	270	259	270	270	270	304	304	315	202	169	315	146	157	326	337	202	247	270	270	236	259	225	259
REMARKS ON THE WEATHER		ovt., fr-vd.-lg & Th in NE & E., Rain.	ovt. fr-vd.-lg & hy-th, R....	ovt. fr.-lg, Rain....	cu, cir-hz & Nim....	do. ...	cu, cu-str, cir-str & Nim....	do.	ovt., Nim....	ovt., hy-R., Th....	ovt., Rain, lg, Th....	do.	ovt., R....	do.	do.	overcast....	do.	do.	cu, cu-str, Nim....	cu, cir-str, cir-hz. ...	cu, cir-str, hz....	fl-cu, cir-str, hz....	Ny-ovt	overcast, lg-NW....	overcast, lg-N....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 27TH AUGUST 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 27th August, 1852.														Saturday, 28th August, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon.	1	2	3	4	5	6	7	8	9
m.	*s.*	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.
0	0	1660	1658	1665	1677	1701	1702	1690	1669	1653	1639	1633	1646	1653	1672	1685	1672	1671	1668	1667	1657	1655	1660	1662	1662
5	0	60	58	65	80	01	02	89	68	53	37	33	47	55	75	83	72	71	68	68	57	55	60	62	64
10	0	60	58	65	82	01	02	85	66	52	36	35	48	57	78	83	72	70	68	68	57	55	59	62	65
15	0	60	59	67	83	02	02	82	65	51	36	36	49	60	78	81	74	69	68	68	57	55	59	61	67
20	0	60	60	68	87	04	00	80	63	50	37	37	50	62	80	82	73	68	66	68	56	57	60	61	68
25	0	60	60	68	90	05	1698	80	61	50	37	37	51	63	84	80	73	67	66	68	55	58	60	61	68
30	0	60	61	69	90	05	97	80	60	47	37	37	51	65	86	80	71	67	65	65	54	59	60	61	69
35	0	60	61	69	92	07	93	79	59	46	37	38	52	66	86	78	70	67	65	63	54	59	61	61	69
40	0	60	61	70	95	07	93	77	58	45	35	39	51	68	87	78	70	67	65	61	54	60	61	62	70
45	0	59	62	70	98	06	92	75	55	43	33	41	51	68	86	78	70	67	65	60	54	60	61	62	70
50	0	59	62	70	1700	03	92	73	53	43	32	42	50	70	87	76	71	67	65	59	54	60	61	61	70
55	0	58	62	74	01	02	91	72	53	41	32	43	51	73	85	74	71	67	65	58	54	60	61	61	70

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1268	1240	1264	1252	1235	1246	1167	1128	1131	1171	1200	1267	1331	1363	1363	1298	1260	1280	1323	1322	1321	1316	1312	1290
7	0	62	41	63	52	34	47	66	26	23	77	01	70	35	60	66	93	49	81	34	21	21	12	12	90
12	0	60	42	62	50	32	42	56	25	18	84	02	72	40	57	58	98	45	81	34	21	21	12	12	88
17	0	57	47	61	48	31	33	56	22	16	80	06	79	42	61	52	97	45	82	40	18	21	12	09	88
22	0	54	50	60	45	34	17	57	22	15	80	11	81	49	68	42	1300	51	90	39	18	20	15	05	90
27	0	50	56	60	40	38	05	52	13	18	78	22	85	50	73	32	00	62	98	39	18	20	16	05	92
32	0	46	58	60	40	39	1195	49	06	25	80	49	92	55	81	24	1294	63	99	40	18	20	16	02	96
37	0	42	60	60	39	32	86	41	18	16	81	47	99	61	77	17	92	64	1301	24	14	20	19	00	98
42	0	40	62	59	39	38	87	38	28	18	87	45	1300	56	78	13	90	70	02	20	13	20	20	1297	95
47	0	39	62	58	39	42	78	36	33	27	99	51	00	63	76	08	91	70	02	20	18	20	20	94	92
52	0	38	64	53	40	42	70	32	37	50	1200	57	02	66	78	00	90	70	02	20	19	20	20	92	90
57	0	38	65	53	39	42	66	29	33	62	05	59	17	67	63	1298	75	76	02	18	20	21	20	92	90
Faht...																									
Attached Thermometer.....		86°0	86°0	86°0	86°1	85°8	85°9	85°9	86°1	86°3	86°7	87°0	87°1	87°1	87°1	87°1	87°0	86°9	87°0	87°0	87°0	87°0	86°9	86°9	86°8

VERTICAL FORCE.

m.	*s.*																								
3	0	3756	3756	3759	3759	4041	4677	4819	5454	5614	6104	5269	5087	4641	4246	4130	3897	3928	3977	3963	3735	3751	3764	3731	3760
8	0	56	3671	59	59	41	77	19	54	5729	65	69	87	97	4170	30	3935	3832	77	63	35	51	64	31	60
13	0	56	71	59	59	41	4733	80	5512	29	02	69	87	4781	70	4088	4007	32	77	63	35	51	64	31	60
18	0	56	71	59	59	41	33	80	12	29	02	69	5115	47	98	88	54	10	77	63	35	51	64	31	60
23	0	56	71	59	3814	4180	4819	4955	5623	29	02	78	72	18	4317	58	4100	14	61	63	35	51	64	31	60
28	0	56	3759	59	14	4265	19	5044	23	5850	02	78	5214	18	35	20	28	14	61	63	35	74	40	49	72
33	0	56	59	59	14	65	65	5105	5715	5986	5917	56	10	18	56	3950	4072	14	61	10	35	74	40	49	72
38	0	56	59	59	14	4377	65	63	5648	6146	5820	21	4912	12	29	28	72	64	80	3851	35	74	40	49	72
43	0	56	59	59	14	4407	65	5224	91	80	5663	21	4856	4455	4298	02	60	64	80	3705	35	74	31	49	3699
48	0	56	59	59	14	10	65	26	48	6219	01	5190	4795	00	98	3860	90	64	80	19	35	3805	31	49	99
53	0	56	59	59	4008	15	36	5319	48	57	5397	57	4641	4331	45	39	60	64	80	19	35	05	31	49	99
58	0	56	59	59	08	67	36	5407	85	57	5250	57	95	31	4135	62	08	64	80	19	35	05	31	49	99
Faht...																									
Attached Thermometer.....		85°8	85°9	85°8	85°7	85°7	85°7	85°8	86°3	86°3	86°7	86°9	87°1	87°1	87°2	87°0	87°0	87°0	87°0	86°9	86°7	86°7	86°5	86°5	86°5

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1612	1610	1615	1625	1642	1642	1635	1621	1609	1595	1592	1602	1607	1623	1633	1622	1625	1621	1620	1611	1611	1612	1614	1615
5	20	12	10	15	26	42	42	33	20	09	93	93	02	09	25	22	22	24	21	20	11	11	11	14	16
10	20	12	10	15	27	42	42	32	19	09	92	94	02	10	27	29	22	22	21	20	11	11	11	14	16
15	20	12	10	16	28	42	42	30	19	09	92	95	02	12	28	28	23	23	21	20	11	11	11	14	18
20	20	12	11	18	30	43	41	29	17	10	93	97	03	13	31	27	24	21	19	20	10	11	12	14	18
25	20	12	12	19	32	44	40	29	15	09	93	97	03	14	33	27	24	21	19	20	10	11	12	14	19
30	20	12	12	19	33	46	39	28	13	05	94	97	03	15	34	27	24	21	18	20	10	12	12	14	20
35	20	12	12	19	35	47	37	27	12	03	95	98	03	15	35	27	23	21	18	17	10	12	12	14	20
40	20	12	12	20	37	48	37	25	11	01	95	99	04	18	35	27	24	21	18	15	10	12	12	14	20
45	20	12	12	20	38	46	37	23	10	00	93	1600	04	20	35	26	25	21	18	13	10	12	12	14	20
50	20	12	13	20	40	43	37	22	09	1599	93	01	04	22	35	25	25	21	18	11	10	12	12	14	20
55	20	11	13	22	40	42	37	21	09	98	94	01	05	23	34	23	25	21	18	11	10	12	12	14	20
Faht...																									
Attached Thermometer.....		85°0	85°0	85°0	84°8	84°7	85°0	85°6	86°3	87°0	87°6	88°0	88°0	87°8	87°6	88°1	86°6	86°2	86°2	86°2	86°1	86°0	85°9	85°8	85°6

METEOROLOGICAL OBSERVATIONS.

Barometer, (uncorrected)=29·0+.....		In. 1·009	In. 1·010	In. 1·018	In. 1·034	In. 1·050	In. 1·067	In. 1·067	In. 1·058	In. 1·040	In. 1·018	In. 0·992	In. 0·964	In. 0·946	In. 0·934	In. 0·935	In. 0·948	In. 0·960	In. 0·980	In. 1·008	In. 1·024	In. 1·030	In. 1·021	In. 1·006	In. 0·992
Attached Thermometer		81·0	81·0	81·0	81·0	81·0	82·0	83·0	84·0	86·0	87·0	87·0	87·5	87·0	87·0	86·0	85·0	84·0	84·0	83·5	83·5	83·5	83·0	82·5	82·0
Dry Thermometer (standard)		81·8	81·5	81·0	80·6	81·5	84·6	87·0	89·2	91·7	92·0	92·1	92·0	91·0	90·2	89·9	88·1	85·6	84·9	84·5	84·4	84·1	83·5	82·8	82·2
Wet Do.....		76·5	76·4	76·4	76·5	77·0	78·0	78·6	78·2	78·2	79·5	80·0	80·0	80·0	80·2	79·2	79·0	79·1	79·0	78·9	78·9	79·0	78·4	77·0	75·2
Cloudy sky in 8ths.....		3	3	2	2	0	0	0	1	2	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0
Wind. Force lbs.....		·00	·00	·02	·00	·06	·35	·70	·75	·52	·98	·60	a	a	a	·65	·47	·30	·22	·15	·12	·15	·25	·32	·30
Wind. Directions °		191	214	225	214	214	202	191	180	146	146	146	a	a	a	146	146	146	146	146	146	146	157	169	169
REMARKS ON THE WEATHER		cu, cu-st, hz.....	cu, cu-st, cr-hz.....	cu, cr-st, cr-hz	cu, cu-st, cr-hz, Nim-N.E..	Ny-clear.....	do.....	do.....	fl-cu.....	sc-cu.....	do.....	do	do.....	do.....	do.....	Ny-clear.....	clear.....	do.....	do.....	do.....	Ny-clear, lg-N.W...	cu-S.W.,S.E.....	clear	do.....	do.....

a—Anemometer Board stopped.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 22D SEPTEMBER 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 22nd September, 1852.														Thursday, 23rd September, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd,	scd.	scd.
0	0	1644	1640	1640	1641	1662	1670	1661	1650	1639	1620	1620	1622	1642	1651	1650	1648	1645	1645	1641	1643	1643	1641	1642	1650
5	0	44	40	40	41	64	68	60	50	38	19	18	24	43	51	54	49	45	45	41	43	43	39	44	50
10	0	45	40	40	41	68	69	60	50	36	19	15	24	46	52	58	45	45	45	41	43	43	39	45	50
15	0	46	40	40	42	69	68	59	49	37	18	11	27	48	52	60	45	45	45	41	43	43	38	46	50
20	0	47	40	40	42	70	68	59	50	38	18	11	28	49	52	60	44	45	45	41	43	43	37	47	50
25	0	47	40	40	48	69	67	58	47	35	20	12	30	48	53	60	42	45	45	42	43	43	36	48	50
30	0	47	40	40	51	70	65	58	47	32	21	13	30	47	52	60	41	45	45	43	43	44	35	49	50
35	0	48	40	40	54	70	64	57	44	30	20	13	31	49	50	60	41	46	45	44	43	44	34	50	51
40	0	48	40	40	59	69	62	55	42	30	21	17	32	50	50	58	42	47	43	44	43	45	36	50	52
45	0	46	40	40	60	68	62	54	40	25	19	19	35	50	50	58	45	47	42	44	42	44	37	51	52
50	0	45	40	40	62	70	62	53	40	22	20	21	38	50	50	53	43	46	42	44	42	43	39	51	53
55	0	43	40	41	62	71	62	52	40	20	20	22	39	51	50	50	44	45	41	44	42	43	40	50	53

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1310	1312	1320	1340	1328	1283	1249	1250	1228	1261	1251	1270	1360	1358	1380	1346	1385	1374	1376	1356	1389	1362	1319	1328
7	0	10	14	26	46	24	75	46	37	30	60	60	74	70	54	74	38	90	74	76	56	89	49	22	28
12	0	10	16	29	50	21	70	42	37	28	58	62	81	75	50	71	40	90	74	76	56	89	37	27	26
17	0	10	17	30	50	20	72	39	37	40	60	61	98	75	51	65	40	92	74	76	56	92	22	29	25
22	0	11	20	33	45	18	70	38	35	40	60	56	99	79	54	67	42	83	74	76	50	99	10	30	25
27	0	11	20	32	40	10	68	37	47	59	56	50	1308	76	56	70	50	82	84	60	50	99	04	30	25
32	0	09	20	31	29	10	64	37	47	76	52	60	11	80	66	70	56	82	84	54	50	92	1292	31	23
37	0	06	19	31	30	08	59	35	47	70	52	64	30	68	65	70	67	60	84	65	61	90	89	32	21
42	0	05	18	32	32	02	63	33	30	75	50	69	36	70	67	70	72	46	83	65	63	87	95	32	24
47	0	06	19	32	35	1295	69	33	20	81	44	72	42	73	69	70	71	56	83	65	74	80	99	32	26
52	0	09	20	36	38	90	62	45	18	84	49	72	42	71	73	73	77	57	80	65	79	74	1309	34	29
57	0	10	20	38	31	87	57	46	18	79	50	75	52	65	79	60	82	61	80	65	79	70	12	30	30
Faht...																									
Attached Thermometer...		86·8	87·0	87·0	87·0	86·8	86·7	86·7	86·7	86·8	87·0	87·2	87·6	87·8	88·0	88·0	87·6	87·7	87·8	87·8	87·8	87·8	87·8	87·7	87·7

VERTICAL FORCE.

m.	*s.*																								
3	0	3226	3273	3286	3201	3505	3800	4422	4911	5154	4738	4214	3974	3965	3827	3725	3124	3580	3409	3278	2981	3007	2901	2888	2960
8	0	26	73	86	01	72	00	46	11	54	30	4120	74	4005	3789	25	24	80	3369	78	81	07	2820	88	60
13	0	26	73	86	01	72	26	95	11	54	4602	4068	07	3968	47	25	3347	80	69	78	81	2972	2797	2917	60
18	0	28	73	86	01	3606	3945	4530	55	00	4480	3959	3880	68	47	3695	47	80	69	78	81	72	56	40	60
23	0	28	73	86	01	06	45	30	81	00	4300	59	80	32	47	55	90	3485	69	78	81	72	56	88	21
28	0	28	73	74	36	06	45	4605	81	5046	00	16	3906	32	67	55	3415	85	68	3104	48	72	17	88	21
33	0	28	73	74	36	06	4122	05	5002	46	00	16	06	32	87	55	55	85	48	3030	48	60	2650	88	21
38	0	28	73	74	36	20	41	42	02	4988	4209	3891	29	3855	37	55	86	01	48	12	48	60	2595	88	21
43	0	28	73	74	3418	20	4203	4708	5120	50	09	91	29	55	37	3585	3612	01	10	95	48	60	95	88	21
48	0	40	73	74	18	20	03	38	58	25	09	79	37	54	37	56	30	3329	10	60	48	60	2632	88	21
53	0	40	73	74	18	3730	95	38	58	07	78	3912	25	54	37	00	20	3295	3294	60	48	60	2755	88	21
58	0	40	73	74	18	30	4347	4844	96	4822	78	50	25	54	37	3492	20	95	94	60	48	60	90	88	21
Faht...																									
Attached Thermometer...		86·5	86·5	86·5	86·2	86·4	86·5	86·6	86·6	86·6	86·9	87·1	87·4	87·6	87·8	87·8	87·6	87·6	87·4	87·4	87·4	87·4	87·3	87·3	87·1

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1622	1622	1620	1622	1638	1642	1634	1629	1622	1610	1612	1618	1632	1635	1633	1629	1630	1628	1624	1627	1626	1625	1622	1628
5	20	22	22	20	22	38	41	33	29	21	10	10	19	32	35	35	29	26	28	24	27	26	25	23	28
10	20	22	22	20	22	39	42	32	30	20	10	09	20	33	36	38	28	26	28	24	27	26	24	24	28
15	20	23	22	20	22	40	40	32	30	23	10	09	21	33	36	39	26	25	28	24	27	26	23	25	28
20	20	23	21	20	22	42	40	32	29	24	10	10	21	33	34	40	27	26	28	24	27	26	21	26	28
25	20	23	20	20	25	41	39	32	27	23	12	10	22	32	34	39	27	25	28	25	27	26	20	27	28
30	20	23	20	20	28	42	38	32	27	20	12	11	22	34	33	39	27	25	28	26	27	26	19	28	28
35	20	23	20	20	30	42	37	31	24	19	10	12	23	33	33	38	26	26	28	27	27	26	19	28	28
40	20	24	19	20	32	42	36	31	22	18	10	14	23	34	33	37	28	27	26	27	27	26	20	28	28
45	20	23	19	20	35	42	36	31	22	17	10	15	25	34	32	36	30	28	25	27	26	26	20	28	28
50	20	23	19	20	37	43	36	31	23	16	12	17	28	35	32	32	29	28	24	27	26	26	20	28	28
55	20	23	19	21	36	43	35	31	22	15	12	17	30	36	32	30	28	28	24	27	26	26	20	28	28
Faht...																									
Attached Thermometer...		85·7	86·0	86·0	85·8	85·2	85·6	86·1	86·7	87·2	87·5	88·0	88·4	88·4	88·2	87·8	87·0	87·0	86·9	86·9	86·8	86·7	86·7	86·5	86·3

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+..		In. 0·922	In. 0·924	In. 0·926	In. 0·930	In. 0·944	In. 0·968	In. 0·974	In. 0·976	In. 0·971	In. 0·932	In. 0·902	In. 0·874	In. 0·854	In. 0·846	In. 0·854	In. 0·870	In. 0·886	In. 0·911	In. 0·930	In. 0·939	In. 0·938	In. 0·929	In. 0·918	In. 0·900
Attached Thermometer..		82·0	82·0	82·0	82·0	82·5	83·0	84·0	86·0	87·0	88·0	88·5	89·0	89·0	88·0	87·0	86·0	86·0	86·0	85·0	84·5	84·0	83·5	83·5	83·5
Dry Thermometer (standard)....		82·6	82·0	81·5	81·0	81·7	83·5	86·2	88·7	90·3	91·5	92·7	94·0	92·8	92·5	90·7	87·8	86·4	85·4	84·8	84·6	84·1	83·5	83·5	83·1
Wet Do.....		78·5	78·0	78·0	77·4	77·8	79·0	79·0	78·0	75·2	76·2	76·2	77·6	80·0	82·0	81·6	80·1	81·0	80·0	79·8	79·8	78·4	78·0	78·7	79·0
Cloudy sky in 8ths.....		2	3	2	1	3	1	0	1	1	2	2	3	4	3	1	1	2	3	2	5	3	1	2	7
Wind. Force lbs.....		·15	·10	·09	·00	·00	·04	·10	·15	·17	·16	·14	·10	·12	·15	·10	·08	·06	·07	·05	·05	·03	·08	·10	·12
Wind. Directions °		146	180	191	191	191	225	270	270	281	259	259	281	101	101	90	112	124	135	135	146	146	146	146	146
REMARKS ON THE WEATHER		cu, cr-st, cr-hz....	do. do.....	cu, cr-hz	cu, cr-hz-hor.....	cu, cr-cu, cr-hz.....	cr-cu, cr-hz.....	Ny-clear.....	cr, cr-st, hz.....	cu, cr-st, hz.....	cu, cr-hz-N-hor.....	sc-cu, cu-st.....	do.	do.	cu, cu-st.....	cu, hy-cu-SW, N.W-hor.....	cu, cu-st.....	cu, cu-st.....	fl-cu, cu-st, hz.....	cu, cu-st.....	fl-cu, cr-cu, hz	cu, cr-cu, cr-st.....	cr-st, hz....	cu, cr-hz	cu, cr-hz .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH OCTOBER 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 20th October, 1852.													Thursday, 21st October, 1852.									
		p. m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.																								
	0 0	scd. 1650	scd. 1632	scd. 1640	scd. 1640	scd. 1644	scd. 1652	scd. 1652	scd. 1650	scd. 1638	scd. 1632	scd. 1641	scd. 1652	scd. 1665	scd. 1668	scd. 1673	scd. 1658	scd. 1651	scd. 1655	scd. 1654	scd. 1652	scd. 1658	scd. 1650	scd. 1648	scd. 1646
	5 0	50	32	40	40	42	52	51	49	37	32	43	55	64	69	73	56	51	55	53	53	58	50	48	46
	10 0	49	32	40	41	42	52	50	48	36	34	45	55	63	70	72	55	51	55	53	54	58	50	48	46
	15 0	49	30	41	41	42	51	51	47	33	35	45	56	65	72	70	55	51	55	53	54	58	50	49	46
	20 0	48	31	42	41	44	52	52	42	30	35	45	57	69	72	70	55	50	55	53	56	58	50	49	46
	25 0	48	30	40	42	50	52	51	41	30	35	44	58	66	72	70	52	52	59	53	58	57	50	49	46
	30 0	46	30	40	44	50	52	51	40	30	35	45	58	66	72	68	50	52	58	52	58	55	49	48	46
	35 0	44	31	40	46	50	53	51	40	30	36	47	59	64	74	65	50	54	58	52	59	53	49	48	46
	40 0	42	31	39	48	51	52	50	40	30	37	48	60	62	75	64	50	55	56	51	58	53	48	47	46
	45 0	40	31	39	48	52	53	50	40	30	38	47	61	62	77	62	50	55	55	51	56	52	48	47	47
	50 0	37	33	38	48	52	53	50	39	30	40	49	61	64	78	61	50	56	55	51	57	52	48	47	47
	55 0	34	36	40	48	52	53	50	38	30	40	50	63	65	76	60	50	54	55	51	58	51	48	47	47
HORIZONTAL FORCE.	m. s.																								
	2 0	1152	1130	1118	1122	1118	1110	1058	1011	993	974	1025	1090	1098	1157	1140	1138	1119	1111	1066	1120	1124	1104	1060	1058
	7 0	58	25	20	24	19	1091	50	12	81	89	28	1100	1100	50	46	40	16	11	77	18	24	00	55	59
	12 0	62	25	24	29	15	70	48	08	74	95	40	1098	09	41	50	40	10	22	87	16	26	1097	51	60
	17 0	68	20	26	30	10	68	23	17	63	1005	43	1105	15	33	50	31	01	22	90	14	20	92	47	60
	22 0	68	20	26	28	16	62	18	18	56	04	42	1099	20	34	52	29	1098	00	91	16	11	89	42	60
	27 0	64	20	20	28	13	58	30	13	50	00	50	1100	26	38	52	26	99	1059	98	19	11	85	38	60
	32 0	64	18	20	28	18	70	38	22	52	992	53	01	31	39	52	25	1100	29	1104	19	10	80	40	62
	37 0	62	18	20	30	22	78	32	05	70	1000	55	05	40	38	52	24	1097	20	06	19	10	77	46	62
	42 0	62	16	20	34	23	72	32	991	78	08	58	09	49	38	52	22	95	31	08	20	12	72	47	64
	47 0	52	16	24	38	43	78	28	90	75	22	67	00	57	33	53	22	96	31	11	22	10	70	50	65
	52 0	46	10	24	40	50	72	22	92	58	23	76	1094	60	32	49	20	97	34	22	23	10	68	50	65
	57 0	38	12	20	40	42	60	22	92	65	22	85	96	62	38	42	19	1105	49	24	24	10	67	54	65
	Faht.....																								
	Attached Thermometer.....	81·5	81·4	81·4	81·0	80·9	80·6	80·3	80·1	80·0	79·9	79·9	79·7	79·8	79·7	79·7	79·5	79·5	79·6	79·7	79·8	79·7	79·7	79·5	79·4
VERTICAL FORCE.	m. s.																								
	3 0	scd. 1350	scd. 1282	scd. 1358	scd. 1353	scd. 1438	scd. 1545	scd. 1626	scd. 1656	scd. 1667	scd. 1890	scd. 2274	scd. 2194	scd. 2159	scd. 2139	scd. 1836	scd. 1552	scd. 1399	scd. 1389	scd. 1279	scd. 1902	scd. 1903	scd. 2297	scd. 2062	scd. 2212
	8 0	50	40	56	53	38	18	07	56	67	1967	14	94	59	39	36	52	99	89	1391	81	93	50	62	12
	13 0	50	18	56	53	38	1643	10	56	1717	97	2153	94	59	39	36	52	99	89	1527	81	2203	15	62	12
	18 0	50	1084	78	53	49	45	10	56	06	2077	53	2262	59	39	30	1474	99	89	1650	81	91	2192	62	12
	23 0	24	84	78	71	49	45	10	55	06	2113	2096	62	59	00	30	74	99	89	50	94	91	70	62	12
	28 0	24	84	1272	71	38	88	06	55	04	95	2140	62	59	2026	30	74	99	01	1701	94	2344	70	62	12
	33 0	24	1210	72	71	38	86	61	02	1677	2275	40	62	59	26	1700	74	99	1218	19	94	44	70	97	12
	38 0	18	10	72	71	38	1712	78	88	37	97	20	62	55	1959	00	1399	55	1196	94	94	20	51	2152	12
	43 0	18	42	72	1507	37	14	78	90	37	97	20	62	55	59	00	91	55	02	1817	60	20	51	52	12
	48 0	10	68	48	07	1391	46	80	80	1702	65	45	62	55	59	1675	91	55	1033	53	12	20	32	90	12
	53 0	10	68	48	07	91	46	80	45	1837	65	45	62	60	59	75	91	55	1120	53	1849	20	32	2212	12
	58 0	10	63	48	07	1448	40	94	45	37	65	93	2159	60	1893	75	91	1401	1201	53	91	20	32	12	12
	Faht.....																								
	Attached Thermometer....	81·3	81·0	80·7	80·4	80·1	80·1	79·8	79·8	79·6	79·7	79·5	79·5	79·5	79·5	7·95	7·92	79·0	79·0	79 0	7·90	78·9	78·8	78·7	78·6
INDUCTION INCLINO-METER.	m. s.																								
	0 20	scd. 1620	scd. 1612	scd. 1614	scd. 1614	scd. 1618	scd. 1624	scd. 1623	scd. 1620	scd. 1610	scd. 1607	scd. 1613	scd. 1621	scd. 1632	scd. 1636	scd. 1642	scd. 1630	scd. 1628	scd. 1629	scd. 1626	scd. 1623	scd. 1629	scd. 1627	scd. 1622	scd. 1620
	5 20	20	12	14	14	18	24	23	20	09	08	15	24	32	38	42	30	28	29	25	24	29	27	22	20
	10 20	20	11	14	15	17	23	22	20	08	08	16	24	32	39	42	30	28	29	25	25	29	26	22	20
	15 20	20	10	15	15	20	22	22	18	07	09	17	25	33	40	41	30	28	29	25	25	29	26	22	20
	20 20	20	10	15	15	20	22	22	23	06	09	17	26	35	40	40	30	28	29	25	26	28	26	22	20
	25 20	19	10	14	15	20	23	22	19	07	09	16	27	35	40	40	28	29	32	24	27	28	26	22	20
	30 20	19	10	14	17	21	23	23	12	05	08	17	28	34	40	38	27	30	32	24	28	27	25	21	20
	35 20	18	11	12	19	21	23	23	13	06	08	18	29	33	41	36	26	30	30	23	29	27	25	21	20
	40 20	17	11	11	20	22	22	22	12	06	09	19	30	33	42	34	26	30	28	22	29	27	24	21	20
	45 20	18	11	10	20	23	23	20	12	07	09	19	30	33	43	33	25	30	27	22	28	27	22	21	20
	50 20	17	11	10	20	27	23	21	11	07	10	20	30	33	43	32	26	30	27	22	27	27	22	21	20
	55 20	15	12	12	20	23	23	21	11	06	12	20	31	34	43	30	26	29	27	22	29	27	22	21	20
	Faht.. ...																								
	Attached Thermometer....	79·4	78·9	78·7	78·0	78·0	78·0	78·0	78·0	77·8	78·2	78·1	78·0	78 0	78·0	78·0	78·0	78·0	78·0	78·0	77·9	77·9	77·7	77·6	77·4

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)= 29·0 +..		In. 0·912	In. 0·908	In. 0·900	In. 0·910	In. 0·930	In. 0·933	In. 0·944	In. 0·930	In. 0·910	In. 0·876	In. 0·854	In. 0·828	In. 0·815	In. 0·810	In. 0·818	In. 0·828	In. 0·851	In. 0·873	In. 0·888	In. 0·890	In. 0·898	In. 0·904	In. 0·894	In. 0·889
Attached Thermometer.....		75·0	74·0	73·5	73·5	72·5	73·0	74·0	74·5	75·0	75·0	74·5	73·5	73·5	74·0	74·0	74·0	74·0	74 0	74·5	74·5	74·5	74·0	74·0	74·0
Dry Thermometer (standard)		73·7	72·5	72·4	71·8	71·3	71·4	71·6	71·9	72·5	72·6	72·6	72·4	72·7	73·2	73·2	73·4	73·6	73·6	73·4	73·6	74·2	73·5	73·5	73·4
Wet Do.		72·8	71·4	71·0	71·0	70·2	70·8	70·7	71·1	71·2	71·4	71·3	71·2	71·0	71·7	71·6	71·9	72·0	72·1	72·3	72·0	71·8	72·0	71·8	71·9
Cloudy sky in 8ths.....		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Wind. Force lbs.....		2·42	2·30	2·28	3·08	1·68	1·57	1·35	1·80	2·48	1·80	1·92	2·60	2·80	2·62	2·66	2·35	1·85	2·48	3·15	2·95	3·85	3·45	3·02	1·55
Wind. Direction °		326	326	326	315	304	304	292	292	281	281	11	11	11	11	236	225	225	214	214	214	202	191	225	191
REMARKS ON THE WEATHER		Ovt, by-Rain	do. R.....	do. by-R.....	do.	do.	do.	do.	do.	do.	do.	do. R.....	do.	do.	do.	do.	do.	do.	do.	do.	do.	do.	lt-R.....	do.	do.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 26TH NOVEMBER 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 26th November, 1852.														Saturday, 27th November, 1852.									
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon 1	2	3	4	5	6	7	8	9	
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	
0 0	1680	1678	1670	1668	1659	1657	1669	1678	1700	1701	1707	1715	1689	1693	1690	1680	1681	1682	1681	1679	1680	1680	1680	1680
5 0	80	78	69	68	62	56	70	85	02	01	08	10	88	93	90	79	81	82	81	79	81	80	80	80
10 0	80	78	68	70	54	56	72	85	02	01	09	10	87	94	90	78	81	82	81	79	81	80	80	80
15 0	79	79	69	70	54	56	73	86	01	03	11	08	87	95	90	78	82	82	81	79	81	80	80	80
20 0	79	79	69	70	52	57	73	87	02	04	15	05	87	98	90	76	82	82	80	79	81	80	80	80
25 0	79	80	67	68	52	58	76	90	02	05	17	02	88	92	90	75	82	80	80	79	81	80	80	80
30 0	78	80	65	67	52	59	79	90	02	08	16	00	88	92	88	77	82	79	80	79	81	80	80	80
35 0	78	79	62	65	54	61	80	90	02	10	17	1698	89	92	86	78	83	79	80	79	80	80	80	80
40 0	79	77	60	63	51	62	81	90	01	10	17	96	90	91	85	79	84	79	80	79	80	80	80	80
45 0	78	75	60	61	51	65	81	95	00	10	18	95	91	90	83	80	85	80	80	79	80	80	80	80
50 0	78	73	62	59	52	66	81	96	01	11	18	92	91	90	82	80	83	80	80	79	80	80	80	80
55 0	78	73	62	60	53	69	82	98	01	10	15	91	92	90	82	80	80	80	79	79	80	80	80	80

HORIZONTAL FORCE.

m. s.																								
2 0	1054	1060	1040	1056	1026	982	947	915	922	944	983	1008	1030	1041	1030	1045	1080	1087	1030	1079	1096	1081	1053	1060
7 0	50	67	40	50	20	78	29	17	45	41	95	06	30	47	30	47	87	82	31	80	99	81	53	60
12 0	50	70	37	52	20	79	32	20	50	45	84	09	30	49	29	50	90	82	31	80	99	80	54	60
17 0	47	62	42	54	20	82	40	13	51	50	85	10	34	50	27	51	95	82	48	81	99	71	53	59
22 0	42	51	50	49	11	76	35	24	43	58	85	07	40	42	22	56	1100	69	59	72	81	66	53	59
27 0	42	47	50	42	08	70	17	40	50	70	78	10	47	42	22	59	15	62	61	72	81	60	55	59
32 0	40	40	45	44	05	62	05	57	48	74	71	13	50	45	20	70	15	60	64	72	81	54	56	58
37 0	38	40	52	32	09	57	896	50	48	91	82	14	51	47	20	72	07	51	71	81	81	50	58	58
42 0	38	40	56	30	992	50	94	40	46	92	85	18	52	43	25	72	00	40	72	82	80	50	59	58
47 0	48	42	59	30	90	28	93	37	43	81	96	18	57	39	28	72	1090	37	81	87	76	51	60	58
52 0	52	45	60	28	89	26	94	34	53	68	1010	22	59	35	36	71	90	29	94	87	78	52	60	58
57 0	55	45	60	23	88	40	96	32	41	71	06	30	60	33	39	71	87	20	79	90	80	52	60	58
Faht...																								
Attached Thermometer...	80·8	80·7	81·0	81·0	80·5	80·2	80·1	80·3	80·4	80·5	80·7	80·9	81·0	81·0	81·0	81·1	81·3	81·4	81·5	81·5	81·5	81·7	81·6	81·6

VERTICAL FORCE.

m. s.																								
3 0	3366	3406	3216	3302	3407	3445	3597	3824	3626	3601	3765	3986	3927	3730	3536	3565	3590	3552	3333	3508	3517	3475	3446	3446
8 0	66	06	16	02	07	45	3652	24	26	20	70	86	27	00	36	65	90	52	33	08	17	75	46	46
13 0	66	06	16	02	07	45	52	24	00	20	3878	68	27	3667	36	65	90	52	33	08	17	3376	46	46
18 0	66	3378	39	35	07	45	3732	3790	3520	28	3992	52	15	48	21	33	3641	52	3401	08	17	76	46	46
23 0	37	78	39	35	3349	98	32	90	36	60	92	78	15	48	3490	33	41	52	01	3490	17	76	46	46
28 0	37	78	39	35	49	3532	3830	3655	3490	22	96	90	3890	39	90	33	41	17	01	90	17	76	46	46
33 0	37	78	12	35	49	32	30	05	92	22	96	4020	78	25	82	20	41	17	01	90	17	76	46	46
38 0	20	34	3198	3274	49	07	80	05	3505	3591	82	12	78	25	82	20	41	3463	94	90	17	76	46	46
43 0	20	34	98	74	29	3450	3905	20	22	3630	40	3986	51	17	82	56	77	63	94	90	17	3446	46	46
48 0	58	34	98	3384	45	3506	05	20	30	98	16	80	51	17	70	88	77	63	90	61	17	46	46	46
53 0	75	34	98	84	52	06	05	20	30	3726	10	62	40	17	70	3606	00	3391	90	61	17	46	46	46
58 0	98	34	98	84	99	57	05	05	85	55	40	62	3786	17	86	06	00	61	3511	61	3475	46	46	46
Faht...																								
Attached Thermometer...	80·6	80·5	80·5	80·4	80·1	79·8	80·2	80·5	80·4	80·3	80·5	80·7	80·8	80·8	80·8	80·8	80·7	80·8	80·9	80·9	80·8	80·7	80·7	80·6

INDUCTION INCLINOMETER.

m. s.																								
0 20	1628	1624	1616	1615	1603	1606	1616	1622	1639	1639	1645	1648	1630	1632	1630	1627	1625	1629	1627	1623	1624	1624	1622	1620
5 20	28	23	15	16	05	05	17	29	41	38	45	45	30	33	30	25	25	29	27	23	25	22	22	20
10 20	28	23	14	16	00	04	19	29	41	38	45	43	29	33	30	25	25	29	27	23	25	22	22	20
15 20	27	24	14	15	00	05	20	30	40	40	47	40	29	34	30	24	26	29	27	23	25	22	23	20
20 20	27	24	14	15	00	07	20	29	41	42	50	40	29	38	30	23	27	29	26	23	25	22	22	20
25 20	27	24	11	12	00	08	21	31	41	43	51	37	29	32	30	23	27	27	26	23	25	22	23	20
30 20	27	24	10	11	01	09	22	32	41	45	51	35	30	32	29	24	27	26	26	23	26	22	22	20
35 20	27	24	10	10	01	10	23	32	40	48	51	34	30	32	29	24	27	26	25	23	26	22	21	20
40 20	27	22	10	10	1598	13	23	32	39	48	51	32	30	32	29	24	28	26	24	23	27	22	21	20
45 20	27	22	10	09	98	14	24	36	38	47	52	31	31	32	29	24	28	27	24	23	27	22	21	20
50 20	26	21	11	06	99	14	24	37	40	48	52	30	31	32	29	24	29	27	24	23	26	22	21	20
55 20	25	21	12	06	99	16	25	39	39	46	50	30	31	31	29	24	29	27	23	23	25	22	20	20
Faht...																								
Attached Thermometer...	79·8	79·4	79·1	79·1	78·4	78·5	79·1	79·5	79·8	80·0	80·5	80·7	80·9	80·8	80·5	80·3	80·0	80·2	80·3	80·3	80·3	80·2	80·2	80·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..	In. 1·070	In. 1·048	In. 1·038	In. 1·057	In. 1·069	In. 1·090	In. 1·099	In. 1·110	In. 1·100	In. 1·067	In. 1·043	In. 1·020	In. 1·006	In. 1·004	In. 1·011	In. 1·020	In. 1·028	In. 1·040	In. 1·046	In. 1·062	In. 1·060	In. 1·046	In. 1·038	In. 1·014
Attached Thermometer	76·5	76·0	76·0	75·5	75·0	75·0	75·0	76·0	77·0	78·0	79·5	80·0	80·0	80 0	80·0	79·0	79·0	79·0	79·0	79·0	79·0	79·0	78·0	78·0
Dry Thermometer (standard)	75·4	74·7	74·5	74·7	74·7	75·6	76·2	78·2	80·4	81·2	83·0	82·6	82·6	82·0	81·1	80·5	80·4	79·7	80·0	80·1	80·0	80·0	78·4	78·0
Wet Do.	72·5	72·0	71·2	72·0	72·8	73·1	73·4	75·3	76·9	76·7	77·0	76·4	77·0	76·0	75·0	74·5	75·0	75·2	75·3	75·1	75·0	75·2	75·0	74·9
Cloudy sky in 8ths	6	5	4	4	7	6	5	8	7	8	7	7	7	8	8	8	8	S	6	8	8	8	8	8
WIND. Force lbs	·00	·02	·00	·08	·09	·14	·12	·10	·13	·16	·38	·27	·22	·15	·25	·23	·32	·26	·28	·26	·35	·28	·19	·17
WIND. Direction °	326	315	326	326	326	326	337	337	337	34	34	34	34	34	34	34	34	34	22	22	22	22	22	22
REMARKS ON THE WEATHER	cu, cu-st, cr-hz.....	cu, cr, cr-hz..... D...	cr-st, cr-hz..... D...	cu, cr-st, cr-hz.. D...	cu, cu-st, cr-hz, nim.	do. do..	do. do.....	Ny-ovt do...	cu, cu-st, nim..... ..	hy-cu, nim, R	hy-cu, cu.....	cu, cr, cr-hz.....	cu, cr-hz, nim.....	do. do.....	do..... do.....	do..... do.....	do..... do.....	hy-cu, nim, hz, lt-R...	cu, cr-cu, hz.....	hy-cu, nim	do. do.....	do...	do...	do.....	ovt., R.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 22ND DECEMBER 1852, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 22nd December, 1852.													Thursday, 23rd December, 1852.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon.	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.																								
	0 0	scd. 1674	scd. 1672	scd. 1670	scd. 1669	scd. 1660	scd. 1649	scd. 1655	scd. 1665	scd. 1684	scd. 1682	scd. 1680	scd. 1684	scd. 1680	scd. 1688	scd. 1690	scd. 1680	scd. 1680	scd. 1677	scd. 1677	scd. 1678	scd. 1679	scd. 1679	scd. 1681	scd. 1683
	5 0	75	72	70	69	60	49	58	67	83	82	80	80	80	93	86	80	76	77	77	78	80	80	81	84
	10 0	77	72	70	69	60	50	58	68	84	80	81	80	80	92	86	80	76	77	77	78	80	80	81	84
	15 0	77	72	70	68	59	50	60	70	84	80	81	80	80	96	88	80	76	77	77	78	80	80	82	84
	20 0	77	71	69	67	59	51	60	73	84	80	81	82	80	96	84	80	76	77	77	78	80	80	82	83
	25 0	78	70	67	67	56	52	60	76	84	81	80	82	80	94	80	80	75	76	77	78	81	80	82	83
	30 0	78	70	66	65	54	52	61	80	87	81	82	81	80	94	80	80	76	76	77	78	80	80	82	82
	35 0	78	70	65	65	51	53	62	83	89	82	82	80	82	92	80	80	76	76	77	78	80	80	83	82
	40 0	79	70	66	63	52	53	62	83	90	83	82	80	88	90	80	80	76	76	77	78	80	80	83	82
	45 0	76	70	68	61	50	53	63	84	90	81	83	80	89	90	80	80	75	76	77	78	80	80	83	82
	50 0	75	70	70	60	50	53	62	83	88	80	83	80	89	90	80	80	75	76	77	78	80	80	83	81
	55 0	73	70	70	60	50	53	63	84	88	81	84	80	89	90	80	80	76	76	77	78	79	80	83	80
HORIZONTAL FORCE.	m. s.																								
	2 0	832	870	884	890	869	831	769	719	769	820	850	879	910	902	878	860	905	929	920	929	959	979	980	950
	7 0	32	72	86	90	65	28	65	13	68	34	57	79	17	02	70	86	20	24	22	29	59	80	76	50
	12 0	34	72	87	88	62	23	64	20	55	20	65	85	09	898	70	85	20	24	22	29	59	80	74	50
	17 0	34	74	88	87	60	21	65	23	50	26	50	89	09	95	68	86	20	24	24	29	59	82	71	49
	22 0	38	75	85	85	60	16	66	30	50	30	52	92	02	93	60	86	20	24	26	29	68	82	68	47
	27 0	39	77	81	82	58	12	70	40	50	50	52	900	06	93	60	80	22	21	26	31	70	83	62	42
	32 0	42	78	79	80	48	05	73	53	60	60	50	00	08	93	60	88	25	20	26	39	74	83	59	39
	37 0	45	79	78	80	38	00	74	76	72	58	54	08	07	93	60	95	27	20	26	39	79	83	59	39
	42 0	46	80	81	78	38	790	88	74	94	58	50	14	02	86	60	905	30	18	26	39	79	84	60	33
	47 0	50	80	87	73	36	79	75	75	815	59	60	08	02	78	60	08	34	16	26	48	77	84	60	30
	52 0	55	81	90	72	33	77	52	73	24	52	65	05	00	80	62	05	39	16	27	60	76	84	55	30
	57 0	59	82	90	70	32	75	30	72	30	52	88	09	00	80	64	10	35	16	28	58	74	85	52	27
	Faht...																								
	Attached Thermometer.....	77°0	77°0	77°1	77°2	77°3	77°1	77°1	77°9	78°2	77°2	77°3	77°7	77°8	77°8	77°7	77°7	77°9	78°0	78°1	78°1	78°1	78°1	78°1	78°1
VERTICAL FORCE.	m. s.																								
	3 0	scd. 1937	scd. 1991	scd. 2007	scd. 1982	scd. 1982	scd. 1903	scd. 1934	scd. 2101	scd. 2250	scd. 2226	scd. 2179	scd. 2287	scd. 2054	scd. 1963	scd. 1985	scd. 1954	scd. 2018	scd. 2020	scd. 2019	scd. 2019	scd. 2022	scd. 2000	scd. 2018	scd. 1960
	8 0	37	91	07	82	82	00	70	01	89	26	79	87	54	63	56	54	1920	20	19	1969	22	00	18	60
	13 0	37	91	07	56	58	13	70	20	89	34	79	87	54	60	56	70	20	20	19	69	22	00	18	60
	18 0	37	91	07	56	58	14	70	45	2338	34	2230	45	72	60	56	70	20	20	19	69	22	00	1990	60
	23 0	39	91	07	56	58	14	70	60	38	2140	30	24	1992	60	56	95	20	20	19	69	22	00	90	60
	28 0	2004	91	1944	56	58	15	95	2205	38	40	30	02	90	68	56	95	80	20	19	69	22	00	78	47
	33 0	04	91	44	34	31	15	95	60	56	40	48	02	72	90	54	95	80	20	19	69	31	00	78	47
	38 0	04	91	44	34	49	22	2020	31	56	2207	48	35	69	90	54	95	80	20	19	69	31	32	78	47
	43 0	04	91	44	34	60	22	20	30	2294	07	48	35	63	85	54	2018	80	20	19	69	31	32	60	47
	48 0	04	91	44	34	02	22	30	30	94	2178	62	2152	63	85	54	18	2000	20	19	69	31	32	60	47
	53 0	1999	91	44	34	02	22	30	35	72	99	62	2099	63	85	54	18	26	20	19	69	31	32	60	30
	58 0	99	91	44	34	11	22	95	44	46	99	62	99	63	85	54	20	26	20	19	69	31	32	60	12
	Faht...																								
	Attached Thermometer.....	76°8	76°8	76°8	76°8	76°7	76°8	76°7	77°0	77°1	77°0	77°2	77°5	77°5	77°6	77°6	77°6	77°6	77°6	77°6	77°6	77°6	77°6	77°6	77°6
INDUCTION INCLINOMETER.	m. s.																								
	0 20	scd. 1608	scd. 1609	scd. 1602	scd. 1600	scd. 1592	scd. 1584	scd. 1588	scd. 1595	scd. 1610	scd. 1610	scd. 1610	scd. 1616	scd. 1610	scd. 1614	scd. 1620	scd. 1610	scd. 1610	scd. 1611	scd. 1611	scd. 1611	scd. 1612	scd. 1614	scd. 1614	scd. 1616
	5 20	09	09	01	00	92	83	90	98	10	11	11	12	10	20	12	10	10	11	11	11	13	14	14	16
	10 20	10	08	00	00	91	83	90	99	12	10	11	12	10	20	12	10	10	11	11	11	13	14	14	16
	15 20	10	08	00	00	91	82	90	1600	12	08	11	12	10	20	10	10	10	11	11	11	13	14	14	16
	20 20	10	08	00	00	91	84	92	01	11	08	10	12	10	20	10	10	11	11	11	11	13	14	14	16
	25 20	10	08	00	00	89	85	92	04	11	09	10	12	12	20	10	10	12	10	11	11	13	14	14	15
	30 20	10	08	1599	1599	89	86	93	05	12	10	11	12	12	20	10	10	10	10	11	11	13	14	14	15
	35 20	10	07	99	98	89	86	94	09	12	10	11	11	12	20	10	10	11	10	11	11	14	14	15	15
	40 20	10	05	99	98	89	86	95	10	13	11	11	11	14	20	10	10	11	10	11	11	14	14	15	14
	45 20	09	05	1600	97	89	87	93	12	13	10	12	10	15	20	10	10	11	10	11	11	14	14	15	14
	50 20	09	04	00	95	89	87	92	11	12	10	12	10	18	18	10	10	10	10	11	11	14	14	16	14
	55 20	08	03	00	93	87	86	93	10	11	10	14	10	19	15	10	10	10	10	11	11	14	14	16	14
	Faht...																								
	Attached Thermometer.....	75°8	75°8	76°0	76°0	75°9	76°5	76°0	76°1	76°3	76°8	77°2	77°8	77°8	77°2	77°0	76°8	77°0	77°1	77°1	77°0	77°0	77°0	77°0	77°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.....		In. 1·046	In. 1·038	In. 1·047	In. 1·054	In. 1·074	In. 1·102	In. 1·128	In. 1·130	In. 1·122	In. 1·103	In. 1·072	In. 1·047	In. 1·035	In. 1·032	In. 1·034	In. 1·034	In. 1·048	In. 1·079	In. 1·089	In. 1·098	In. 1·089	In. 1·080	In. 1·064	In. 1·054
Attached Thermometer		73°0	73°0	73°0	73°0	72°5	72°5	73°5	74°0	74°5	75°0	75°5	76°0	76°0	76°0	75°5	75°5	75°0	75°0	75°5	75°5	75°5	75°5	75°5	75°5
Dry Thermometer (standard)		72·6	72·5	72·2	72·1	72·4	72·6	73·7	76·3	76·5	77·3	78·8	79·1	79·3	77·5	77·3	76·8	76·5	76·5	76·7	76·6	76·3	76·2	75·8	75·6
Wet Do.....		69·0	69·0	69·0	69·6	70·0	70·8	71·7	72·6	72·5	73·0	72·8	73·0	73·0	73·3	73·0	72·2	71·8	72·0	71·8	71·7	71·3	71·2	71·5	72·0
Cloudy sky In 8ths.....		4	7	8	8	7	7	6	6	7	8	6	7	8	8	8	8	8	8	6	2	1	1	3	6
Wind. Force lbs		·05	·00	·00	·00	·00	·08	·08	·09	·11	·08	·14	·12	·15	·12	·18	·20	·10	·06	·04	·00	·00	·00	·00	·00
Wind. Directions °		326	225	169	281	326	326	326	337	337	349	349	22	00	34	11	11	22	22	34	34	45	45	45	45
REMARKS ON THE WEATHER		cu, cu-st, cr-hz, lt-R.	Ny-ovt., R.....	Ovt.....	do.....	cu,cu-st,hz-nim,r-b-W.	cu, cu-st, nim, hz.....	cu, cu-st, nim	cu, cu-st, nim	cu, cu-st.....	hy-cu, cu-st.....	cu, cu-st, cr.....	hy-cu, cu-st	cu.....	hy-cu, nim.....	cu, cr-hz.....	do.....	Ovt.	do.....	cu, cr-cu.....	cu, cr-hz.	cu, cr, gr-st.....	cu, cr-hz.	do.....	cu, cu-st, hz .....

MADRAS, 1853.

MAGNETICAL OBSERVATIONS.

$a.\left(1+\frac{H}{F}\right)= 4'03 \times 1{\cdot}0002396 = 4'03096$ $\quad a+ 7'6=\rho= 0°41'\ 08''2+ 0°07'06'' = 0°48'14''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JANUARY 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
	scd.	scd.	scd.	scd. 1·6 *	scd.	scd. −0·4 *	scd.	scd. 0·4 *	scd.	scd. 0·4 *	scd.	scd. 0·6 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
1	1690	1678	1677	1679	1678	1679	1680	1679	1678	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1680	° 1 ′ 0 ″ 32
2	—	—	—	—	—	—	—	—	—	1685	1692	1689	1684	1680	1680	1672	1672	1678	1674	1680	1686	1680	1671	1670	1680	
3	689	691	695	694	690	689	689	690	690	689	688	686	682	680	680	690	702	719	721	712	702	689	683	689	1693	1 24
4	692	697	694	697	697	693	690	690	690	687	683	682	680	674	670	675	693	710	718	710	698	690	670	672	1690	1 12
5	681	689	691	687	679	683	687	685	682	681	679	677	674	670	662	677	693	700	710	723	730	680	678	683	1687	1 00
6	696	699	693	697	698	698	698	694	690	687	683	678	672	670	663	660	674	692	701	700	704	700	680	676	1688	1 04
7	688	692	692	693	690	689	689	685	680	678	675	673	669	665	670	665	670	690	702	719	719	710	708	710	1688	1 04
8	710	699	691	697	699	698	698	693	687	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	679	670	669	667	663	670	665	676	673	677	675	690	690	676	673	1683	0 44
10	690	686	681	685	685	682	680	680	680	681	682	681	678	674	662	660	670	670	661	665	678	688	680	670	1677	0 20
11	678	689	686	686	683	682	682	681	680	679	678	678	677	675	672	672	680	692	700	698	696	695	688	680	1684	0 48
12	688	684	684	686	685	682	680	679	678	679	680	678	674	670	664	660	668	675	670	680	680	680	680	685	1678	0 24
13	689	691	692	691	687	688	690	690	690	690	690	686	680	677	660	650	660	690	688	692	700	698	690	697	1686	0 56
14	690	690	688	691	690	689	688	689	690	684	678	679	678	672	665	660	676	690	702	698	680	673	680	666	1683	0 44
15	675	680	682	687	688	686	685	686	687	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	688	688	686	682	679	677	673	677	687	690	699	678	660	668	672	1682	0 40
17	680	670	680	681	679	684	690	691	692	691	690	689	687	683	672	663	674	687	698	692	682	682	684	684	1684	0 48
18	695	690	683	685	683	685	688	694	700	700	700	695	688	690	683	670	688	700	708	720	710	690	679	685	1692	1 20
19	690	692	700	698	692	694	697	696	695	693	690	687	683	683	678	676	692	710	709	710	707	712	710	690	1695	1 32
20	688	690	690	692	691	690	689	689	689	688	686	684	680	672	660	660	685	709	712	710	702	710	682	670	1688	1 04
21	677	688	689	695	697	696	695	693	690	688	685	684	681	673	670	660	670	684	689	690	676	670	660	664	1682	0 40
22	672	681	682	684	683	683	684	682	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	679	678	675	671	663	658	660	680	692	688	677	666	670	662	667	1676	0 16
24	670	670	678	681	681	680	680	680	680	680	679	677	673	666	653	654	673	704	710	708	698	693	692	700	1682	0 42
25	685	680	681	684	683	683	683	682	680	675	670	669	667	658	645	649	664	688	698	688	680	672	681	690	1676	0 16
26	682	682	683	685	683	681	679	680	680	678	675	673	670	669	670	670	690	702	698	690	698	708	704	690	1684	0 48
27	687	672	682	682	679	678	678	679	680	678	675	674	672	665	654	650	679	700	698	672	677	677	672	680	1677	0 22
28	687	682	682	683	681	682	684	685	685	684	682	679	674	672	670	673	685	690	680	680	678	676	668	650	1679	0 28
29	640	642	642	644	642	644	646	646	645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	651	657	655	652	653	651	654	660	670	669	670	670	670	682	682	1656	0 58 55
31	680	681	680	682	680	680	681	682	682	684	685	682	677	674	670	663	670	672	670	682	†683	694	685	680	1679	1 0 28
Means.....	1684	1684	1685	1686	1685	1685	1685	1685	1684	1683	1681	1679	1676	1672	1667	1665	1678	1691	1694	1694	1691	1687	1681	1680	1683	
Declination.....	60′48″	60′48″	60′52″	60′66″	60′62″	60′52″	60′52″	60′52″	60′48″	60′44″	60′36″	60′28″	60′16″	60′00″	69′39″	69′31″	60′24″	61′16″	61′28″	61′28″	61′16″	61′00″	60′36″	60′32″		
Mean Hourly Variations from General Monthly Mean.	4″	4″	8″	12″	8″	8″	8″	8″	4″	0″	−8″	−16″	−28″	−44″	−65″	−73″	−20″	32″	44″	44″	32″	16″	−8″	−12″	.....	° 1 ′ 0 ″ 44

FEBRUARY 1853. Declination Magnetometer.

				−0·2 *		−0·7 *		0·6 *		0·0 *		−0·1 *														
1	1695	1690	1685	1683	1682	1682	1684	1681	1677	1673	1670	1670	1670	1663	1660	1670	1682	1697	1692	1670	1663	1670	1682	1682	1678	° 1 ′ 0 ″ 24
2	680	683	690	694	699	690	682	679	675	676	677	677	677	665	665	670	688	700	702	678	674	670	680	684	1681	0 36
3	690	687	687	683	679	679	680	677	673	674	675	671	667	663	665	670	698	710	690	682	677	678	688	695	1681	0 36
4	695	690	688	685	682	680	680	682	682	676	670	669	668	667	670	673	690	695	675	667	654	671	687	698	1679	0 28
5	697	690	681	680	680	678	678	680	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	678	677	673	670	667	660	645	653	668	670	670	662	670	676	681	1674	0 08
7	692	685	682	680	678	679	681	678	674	675	677	672	667	660	658	655	670	679	680	658	664	659	673	690	1674	0 08
8	689	677	676	677	678	677	677	678	677	678	680	675	670	667	668	668	675	680	672	685	699	701	697	688	1680	0 32
9	678	666	672	671	671	671	672	676	678	674	670	669	668	663	660	660	662	670	672	670	665	680	680	682	1671	0 59 56
10	676	670	670	671	672	673	675	677	678	677	676	673	670	680	660	650	656	665	670	670	674	682	684	688	1672	1 0 00
11	687	679	672	672	673	673	674	675	674	672	670	670	670	670	673	668	663	668	670	669	662	655	668	680	1671	0 59 56
12	680	677	675	674	673	673	674	674	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	668	665	663	662	663	663	663	679	670	660	660	674	670	675	680	1670	59 52
14	684	684	674	688	702	696	692	680	666	678	690	686	682	680	678	678	670	673	668	660	662	675	680	685	1680	1 0 32
15	687	684	687	683	680	679	679	679	678	678	678	675	673	672	670	680	700	720	720	704	695	678	677	689	1685	0 52
16	687	677	675	680	685	678	673	677	680	681	682	681	680	678	676	680	692	690	673	668	672	682	697	702	1681	0 36
17	697	682	680	680	680	679	679	680	680	679	678	674	670	670	670	680	700	712	694	678	680	670	667	674	1681	0 36
18	680	673	670	673	677	674	672	674	674	672	670	665	660	663	660	665	682	686	680	667	666	662	672	679	1672	0 00
19	684	680	679	677	676	675	676	675	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	671	670	662	655	657	666	663	680	686	690	685	680	690	698	703	1677	0 20
21	700	690	676	683	690	689	690	694	697	694	692	688	685	680	670	665	666	670	670	665	665	663	674	686	1681	0 36
22	680	672	680	682	685	683	682	682	680	680	680	679	678	673	672	672	670	674	678	675	673	668	675	677	1677	0 20
23	680	683	686	687	688	682	678	677	674	672	670	665	660	670	670	670	680	682	672	660	654	665	667	670	1673	0 04
24	675	672	678	677	676	673	672	673	672	672	672	672	672	670	672	677	680	683	682	683	690	689	685	690	1677	0 20
25	682	670	670	671	673	674	676	679	680	682	685	682	680	680	670	661	659	658	650	659	667	670	680	690	1673	0 04
26	691	675	668	669	671	672	675	678	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	690	700	695	690	680	670	670	665	660	660	665	669	682	697	700	1678	0 24
28	704	695	686	684	683	682	683	682	680	676	672	674	677	675	673	678	680	680	677	663	655	670	688	692	1680	0 32
Means.....	1687	1680	1679	1679	1681	1679	1679	1679	1677	1677	1677	1674	1672	1670	1667	1668	1677	1682	1678	1671	1671	1674	1681	1687	1677	
Declination.....	61′00″	60′32″	60′28″	60′28″	60′36″	60′28″	60′28″	60′28″	60′20″	60′20″	60′20″	60′08″	60′00″	69′52″	59′39″	59′43″	60′20″	60′40″	60′24″	59′56″	59′56″	60′08″	60′36″	61′00″		
Mean Hourly Variations from General Monthly Mean.....	40″	12″	8″	8″	16″	8″	8″	8″	00″	00″	00″	−12″	−20″	−28″	−41″	−37″	00″	20″	4″	−24″	−24″	−12″	16″	40″	.....	° 1 ′ 0 ″ 20

N. B.—The numbers in the table are tenths of scale divisions, and increasing numbers denote a movement of the North end of the Magnet towards the East.

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

† The Declination bar not moving in accordance with that in the deflection room. Removed the box and found the stirrup resting on the copper bar. Raised it about. ·05in. after which the reading was 169·1 at 1h. 10m. W. S. J.

$a.\left(1+\frac{H}{F}\right)=4''.03\times1.0002396=4''.03096$ $\quad a+7'.6''=\rho=0°.41'.08''.2+0°.07'.06''=0°.48'.14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MARCH 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
	scd.	scd.	scd.	scd. −1·9 *	scd.	scd. −0·4 *	scd.	scd. 0·1 *	scd.	scd. 0·6 *	scd.	scd. 0·0 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
1	1689	1680	1680	1679	1682	1682	1682	1681	1680	1681	1680	1678	1676	1674	1680	1687	1690	1684	1672	1676	1683	1693	1700	1700	1683	1 0 44
2	690	675	674	672	674	676	679	680	680	680	679	679	680	674	674	680	680	685	680	670	680	690	703	703	1681	0 36
3	698	693	685	685	688	687	687	687	687	685	682	676	670	672	670	670	678	688	690	683	690	700	695	695	1685	0 52
4	692	690	688	683	682	683	685	685	685	681	675	677	680	676	670	680	694	694	690	685	680	688	690	694	1684	0 48
5	680	683	685	685	688	686	684	686	688	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	689	688	687	686	680	680	685	682	680	680	680	680	688	690	688	1685	0 52
7	684	680	681	678	678	684	690	693	695	699	701	699	698	697	692	682	698	697	684	682	690	692	710	730	1692	1 20
8	707	716	691	685	683	686	689	692	694	698	701	705	710	693	695	696	689	685	678	685	690	690	710	707	1695	1 32
9	690	690	693	690	691	689	687	689	690	693	694	683	683	690	697	701	702	693	687	678	673	680	684	698	1690	1 12
10	695	690	687	686	688	688	688	688	688	687	684	685	687	690	698	700	704	696	690	675	662	662	665	680	1686	0 56
11	688	682	687	688	693	693	693	693	692	692	690	688	687	683	697	703	716	715	718	703	677	666	680	678	1692	1 20
12	695	690	688	688	691	695	700	696	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	687	680	680	680	678	680	679	688	695	692	687	678	675	685	690	1687	1 00
14	691	688	689	686	687	683	680	682	683	685	685	683	682	680	682	692	696	702	692	680	680	685	686	685	1686	0 56
15	687	690	688	686	687	688	690	692	693	695	695	694	693	684	698	702	718	718	710	702	695	694	697	703	1696	1 36
16	700	690	687	686	688	687	687	689	690	690	688	685	682	680	687	688	699	702	702	680	678	672	680	687	1688	1 04
17	686	682	680	678	680	685	690	695	700	699	697	693	690	693	695	700	700	692	689	677	660	678	692	706	1689	1 08
18	698	704	702	700	701	694	688	692	695	694	692	691	690	688	697	700	703	700	692	687	672	668	680	687	1692	1 20
19	690	688	687	687	690	690	690	691	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	692	690	691	692	683	688	697	700	711	720	696	673	673	685	693	1691	1 16
21	692	684	682	682	686	681	676	679	682	687	691	688	685	680	680	682	690	701	700	690	680	684	698	700	1687	1 00
22	693	688	686	685	687	687	687	689	690	690	688	685	683	680	694	710	723	730	715	688	670	668	685	702	1692	1 20
23	710	700	691	689	690	687	685	688	690	691	690	688	686	686	700	718	731	729	698	671	655	660	680	694	1692	1 20
24	700	688	683	685	690	689	689	691	692	694	695	692	690	690	699	704	722	726	715	695	670	673	690	699	1694	1 28
25	700	690	684	685	689	689	690	695	700	703	705	702	700	700	704	708	702	708	686	670	658	658	671	695	1691	1 16
26	702	690	690	693	700	695	690	695	700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	696	690	686	682	673	672	678	690	690	688	683	679	680	692	698	1689	1 08
28	694	692	688	694	703	697	692	699	705	703	700	695	690	690	700	703	707	707	706	698	692	690	690	680	1696	1 36
29	682	698	763	763	767	777	788			Thread broken.																
Means.....	1694	1689	1687	1686	1688	1688	1687	1689	1691	1691	1690	1688	1687	1684	1689	1694	1700	1701	1695	1684	1677	1679	1689	1696	1689	
Declination.....	61′ 28″	61′ 08″	61′ 00″	60′ 56″	61′ 04″	61′ 04″	61′ 00″	61′ 08″	61′ 16″	61′ 16″	61′ 12″	61′ 04″	61′ 00″	60′ 48″	61′ 08″	61′ 28″	61′ 52″	61′ 57″	61′ 32″	60′ 48″	60′ 20″	60′ 28″	61′ 08″	61′ 36″		
Mean Hourly Variations from General Monthly Mean.	20″	00″	−8″	−12″	−4″	−4″	−8″	00″	8″	8″	4″	−4″	−8″	−20″	00″	20″	44″	49″	24″	−20″	−48″	−40″	00″	28″	.....	1′ 1″ 08

APRIL 1853. Declination Magnetometer.

				−1·1 *		−0·7 *		−0·6 *		1·1 *		−0·1 *														
1																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10										Thread broken.																
11																										
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20														1675	1687	1697	1691	1678	1654	1636	1622	1625	1630	1638		
21	1640	1640	1654		1653		1660		1670		1670		1665	667	680	692	687	670	648	628	630	648	649	651		
22	661	660	665		665		668		670		670		666	669	680	690	682	660	642	643	640	650	660	664		
23	652	653	650		652		665		670		—		—	—	—	—	—	—	—	—	—	—	—	—		
24	—	—	—		—		—		—		672		669	658	670	679	682	680	660	646	640	643	650	661		
25	670	668	658		660		663		670		669		665	666	670	673	675	660	648	630	625	630	632	641		
26	650	659	657		657		662		665		665		667	670	680	682	680	682	670	646	633	639	640	648		
27	657	658	656		651		655		666		670		665	661	662	665	669	672	659	642	637	639	643	650		
28	662	660	652		654		660		665		670		664	668	687	690	690	678	655	632	628	628	632	642		
29	658	660	660		660		662		662		665		662	663	680	687	685	670	659	640	642	643	649	659		

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right)=4''.03\times 1.0005976=4''.032408$ $\quad a+7'.6=\rho=0°.41'.08''.2+0°.07'.06''=0°.48'.14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MAY 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras. Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
	scd.	scd.	scd.	scd. −1·6 *	scd.	scd. 0·6 *	scd.	scd. −0·4 *	scd.	scd. 0·4 *		scd. −0·4 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
April 30	1660	1658	1659	1655	1655	1657	1658	1661	1664	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		° ′ ″
May 1	—	—	—	—	—	—	—	—	—	1664	1663	1665	1668	1675	1690	1690	1680	1670	1650	1628	1618	1629	1638	1640	1658	0 59 03
2	657	660	648	648	651	657	662	666	670	671	672	676	680	690	710	707	684	670	670	645	620	637	651	650	1665	59 32
3	660	667	661	663	669	675	679	683	688	689	690	692	695	700	712	705	688	665	645	632	640	640	645	656	1672	1 00 00
4	664	672	671	669	671	671	670	671	672	672	672	671	670	680	700	709	703	688	664	640	635	642	650	670	1671	0 59 56
5	672	677	674	670	669	671	672	676	680	676	672	671	670	680	700	683	670	655	640	638	641	645	658	678	1668	59 44
6	687	680	671	668	668	671	673	672	672	671	670	671	672	686	700	703	698	672	650	625	633	644	650	660	1669	59 48
7	671	670	662	661	663	663	662	671	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	675	670	670	670	683	700	704	695	675	655	652	650	663	672	677	1671	59 56
9	680	682	668	663	662	663	663	667	672	671	670	672	675	680	685	683	680	670	654	644	642	657	666	672	1668	59 44
10	676	672	675	666	660	671	680	675	670	672	674	672	670	677	682	681	672	658	652	649	642	646	652	659	1667	59 40
11	673	672	667	662	661	663	663	663	664	666	668	669	670	675	690	683	670	660	639	630	637	650	667	668	1664	59 28
12	666	670	662	659	659	659	658	663	668	666	664	667	670	678	686	690	688	665	648	638	630	635	642	646	1662	59 20
13	651	657	652	651	653	657	660	661	663	666	668	669	670	670	680	682	680	680	670	642	633	630	637	648	1660	59 12
14	655	657	656	654	656	658	658	660	662	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	661	660	660	660	668	680	682	678	668	656	651	637	633	630	639	1657	58 59
16	652	658	652	650	652	657	660	662	665	663	660	657	655	650	661	662	650	628	610	609	611	627	642	650	1648	58 23
17	654	652	647	647	650	652	653	656	660	661	662	658	655	652	670	680	685	660	636	612	600	603	620	637	1648	58 23
18	650	655	642	644	650	656	660	660	660	661	662	663	665	668	684	682	670	640	610	600	603	620	632	637	1649	58 27
19	642	650	658	659	664	664	663	662	662	661	660	660	660	670	692	690	672	650	630	616	617	629	647	655	1656	58 55
20	660	660	648	647	650	651	650	654	658	659	660	660	660	672	688	683	670	658	638	617	610	620	642	660	1653	58 43
21	663	662	659	654	652	653	652	654	657	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	658	658	659	660	672	697	692	673	659	642	628	620	630	647	650	1656	58 55
23	658	660	656	651	649	653	656	663	670	665	660	660	660	692	710	700	682	651	627	612	620	628	635	650	1657	58 59
24	680	685	658	643	632	642	650	675	700	699	697	693	690	705	721	730	715	670	645	627	615	631	630	635	1670	59 52
25	643	639	665	666	671	671	670	670	670	670	670	670	670	678	689	680	672	660	645	640	639	642	652	657	1662	59 20
26	653	662	667	663	663	663	662	662	662	662	662	666	670	678	688	688	680	660	650	648	627	623	632	650	1660	59 12
27	662	662	659	655	654	656	656	658	660	660	660	660	661	670	701	703	700	682	650	632	630	644	660	658	1662	59 20
28	665	669	660	658	660	659	657	663	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	668	666	672	678	680	700	700	675	642	630	610	593	615	640	650	1658	59 03
30	652	654	650	651	656	656	655	658	662	667	672	671	670	680	682	680	660	640	628	618	613	622	638	650	1654	58 47
31	660	660	658	659	663	663	661	665	670	669	668	666	665	683	696	692	680	648	628	617	615	625	635	640	1658	59 03
Means	1662	1664	1659	1657	1658	1660	1662	1665	1669	1668	1668	1668	1669	1677	1692	1691	1680	1661	1643	1630	1625	1634	1645	1653	1661	
Declination	59′ 20″	59′ 28″	59′ 07″	58′ 59″	59′ 03″	59′ 12″	59′ 20″	59′ 32″	59′ 48″	59′ 44″	59′ 44″	59′ 44″	59′ 48″	60′ 20″	61′ 21″	61′ 17″	60′ 32″	59′ 16″	58′ 03″	57′ 11″	56′ 50″	57′ 27″	58′ 11″	58′ 43″		
Mean Hourly Variations from General Monthly Mean	4″	12″	−9″	−17″	−13″	−4″	4″	16″	32″	28″	28″	28″	32″	64″	125″	121″	76″	00″	−73″	−125″	−146″	−109″	−65″	−33″	.....	° ′ ″ 0 59 16

JUNE 1853. Declination Magnetometer.

				−2·4 *		0·1 *		0·2 *		0·4 *		−0·99 *														
1	1650	1660	1645	1651	1662	1662	1661	1665	1669	1672	1675	1678	1682	1680	1692	1690	1698	1682	1663	1645	1620	1630	1630	1635	1662	° ′ ″ 0 59 20
2	638	634	640	638	640	650	660	666	672	690	707	694	682	702	708	695	672	648	628	618	620	630	644	650	1659	59 07
3	646	642	646	645	648	651	653	656	658	659	660	660	662	670	692	700	685	656	649	633	640	640	642	645	1656	58 55
4	650	650	646	645	649	646	642	644	645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	648	650	644	640	649	666	660	642	629	610	589	566	575	598	618	1633	57 23
6	632	637	630	624	622	625	628	634	640	639	638	639	642	650	660	642	640	620	600	600	592	600	615	625	1628	57 02
7	630	630	630	623	620	625	630	632	633	637	640	639	640	652	672	676	660	640	628	605	585	592	610	620	1631	57 15
8	640	648	630	625	625	628	631	635	639	637	635	634	635	642	660	660	637	614	582	565	570	560	588	620	1623	56 42
9	644	638	628	624	624	626	628	629	630	631	632	630	630	640	638	640	640	622	598	582	584	600	612	623	1624	56 46
10	635	640	633	630	632	635	638	639	640	639	637	638	640	648	660	673	662	638	610	592	582	600	622	640	1633	57 23
11	645	640	631	627	627	629	630	631	632	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	644	655	652	650	660	688	700	680	654	630	602	595	598	610	630	1639	57 47
13	637	642	635	633	635	639	642	641	639	642	645	643	642	650	662	661	652	632	619	610	608	607	610	600	1634	57 27
14	617	635	629	624	623	626	628	632	635	639	642	650	660	668	672	673	660	652	625	600	590	590	582	620	1632	57 19
15	640	640	635	633	635	637	638	640	641	647	652	656	662	660	687	690	669	650	628	605	600	600	608	625	1641	57 55
16	640	640	625	622	623	627	630	634	638	643	647	648	650	660	672	680	660	639	630	619	610	610	618	625	1637	57 39
17	633	640	625	622	623	627	630	632	633	636	638	639	642	652	658	661	654	634	595	580	583	585	603	615	1627	56 58
18	620	630	625	620	620	624	627	629	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	635	640	640	642	660	665	668	643	622	610	595	572	580	590	622	1625	56 50
20	620	620	615	615	619	623	627	630	633	632	631	635	640	645	659	655	648	632	620	602	588	590	590	600	1624	56 46
21	609	610	607	611	620	625	630	633	635	636	637	638	640	642	659	653	630	608	585	575	564	570	611	610	1618	56 22
22	625	632	628	623	622	626	629	630	630	634	637	638	640	650	672	657	643	645	632	612	600	602	600	595	1629	57 07
23	602	620	620	618	621	624	626	628	630	636	642	645	650	657	662	663	660	622	600	583	580	595	605	611	1625	56 50
24	612	623	621	618	620	622	624	628	632	636	640	636	633	642	668	668	650	630	615	613	610	603	609	607	1628	57 02
25	615	618	610	604	602	606	610	614	618	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	627	635	633	633	642	660	658	643	617	594	586	590	583	584	593	1616	56 14
27	601	606	600	602	609	615	620	622	624	627	630	629	630	632	656	652	632	608	598	570	567	577	573	582	1611	55 54
28	600	588	601	601	605	607	609	620	630	625	620	620	622	630	658	660	652	625	582	570	563	574	590	599	1610	55 50
29	611	611	611	607	607	610	612	622	632	631	630	632	636	640	660	656	637	618	595	575	570	583	590	605	1616	56 14
30	608	612	612	610	612	616	619	623	627	629	630	630	632	638	648	652	644	620	595	580	562	570	580	591	1614	56 06
Means	1627	1630	1625	1623	1625	1628	1631	1634	1637	1640	1643	1643	1645	1652	1667	1667	1654	1633	1612	1596	1589	1594	1604	1616	1630	
Declination	56′ 58″	57′ 11″	56′ 50″	56′ 42″	56′ 50″	57′ 02″	57′ 15″	57′ 27″	57′ 39″	57′ 51″	58′ 03″	58′ 03″	58′ 11″	58′ 39″	59′ 40″	59′ 40″	58′ 47″	57′ 23″	55′ 58″	54′ 53″	54′ 25″	64′ 45″	55′ 26″	56′ 14″		
Mean Hourly Variations from General Monthly Mean.	−13″	00″	−21″	−29″	−21″	−9″	4″	16″	28″	40″	52″	52″	60″	88″	149″	149″	96″	12″	−73″	−138″	−166″	−146″	−105″	−57″	.....	° ′ ″ 0 57 11

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right) = 4''.03 \times 1.0005976 = 4''.032408$ At Zero 1497. $\rho = 0°.41'.8'' + 7'.6'' = 0°.48'.14''$ East of North.

DECLINATION MAGNETOMETER.

JULY 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute declination to the East of North.
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3.41		
	scd.	scd.	scd.	scd. −1·4 *	scd.	scd. 0·0 *	scd.	scd. −0·2 *	scd.	scd. 0·9 *	scd.	scd. −0·6 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
1	1602	1608	1608	1608	1610	1616	1622	1620	1619	1624	1627	1630	1634	1640	1652	1647	1630	1620	1597	1589	1582	1589	1609	1620	1617	° 0 ′ 56 ″ 18
2	621	612	608	609	612	618	625	627	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	—	—	—	—	—	—	—	—	—	627	622	622	623	630	650	652	645	618	604	594	577	580	590	612	1617	56 18
4	615	618	608	608	610	614	618	620	622	627	630	630	632	634	648	660	658	634	610	603	602	603	608	626	1622	56 18
5	630	640	628	625	624	622	620	623	627	630	631	635	640	649	667	674	668	630	607	592	588	582	597	628	1627	56 58
6	633	641	632	632	635	636	638	636	635	638	640	644	650	650	668	662	660	650	640	632	630	624	629	628	1640	57 51
7	640	642	639	634	632	633	635	637	640	642	642	644	647	650	663	662	650	638	626	616	610	610	619	640	1637	57 39
8	639	640	628	631	636	639	642	640	639	641	642	643	645	657	681	678	663	642	622	612	608	612	622	628	1639	57 47
9	630	630	622	620	620	627	635	636	637	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	642	645	646	649	658	682	680	670	650	633	620	610	620	619	630	1638	57 43
11	639	651	640	636	635	632	630	631	632	635	637	642	649	660	682	680	660	640	612	598	592	590	601	628	1635	57 31
12	633	633	628	623	620	624	629	629	630	635	639	647	657	668	700	707	686	652	624	611	608	618	625	628	1640	57 51
13	635	642	643	640	640	644	648	645	642	642	640	638	638	665	685	681	670	660	650	635	620	619	633	643	1646	58 15
14	652	647	641	634	630	630	630	633	637	639	640	645	652	660	670	670	655	635	610	600	598	618	633	639	1637	57 39
15	642	642	640	639	640	642	645	646	648	647	644	642	642	657	675	670	654	650	642	632	630	622	636	639	1644	58 7
16	640	638	630	631	635	634	633	639	645	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
17	—	—	—	—	—	—	—	—	—	644	642	643	645	647	662	662	638	611	600	600	593	590	606	625	1631	57 15
18	637	628	621	619	620	620	620	623	627	629	630	631	634	643	662	661	647	630	618	608	600	602	600	620	1626	56 54
19	625	620	620	619	621	620	620	621	622	623	622	628	635	650	670	670	650	620	600	576	580	610	640	660	1626	56 54
20	653	625	619	614	612	616	620	620	620	621	620	628	637	650	662	664	644	600	593	580	579	582	580	586	1618	56 22
21	600	614	610	608	608	608	608	611	615	618	620	623	627	638	668	670	642	608	590	580	590	610	612	630	1617	56 18
22	630	628	610	610	612	620	628	629	630	637	642	640	650	662	658	649	620	600	589	590	588	593	600		1623	56 42
23	610	620	620	622	626	631	636	633	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
24	—	—	—	—	—	—	—	—	—	633	635	633	632	640	648	650	635	610	593	582	577	580	592	600	1620	56 30
25	615	627	631	628	628	629	630	630	630	636	640	638	638	647	665	670	662	644	638	609	602	612	629	640	1634	57 27
26	642	640	628	626	627	628	630	633	636	639	640	643	647	652	665	665	653	640	618	588	568	564	572	600	1627	56 58
27	602	620	629	629	632	636	640	641	642	648	652	651	651	660	676	670	662	650	635	628	625	612	618	630	1639	57 47
28	632	630	633	628	626	633	640	647	654	655	654	652	652	660	680	680	662	635	630	618	615	626	632	641	1642	57 59
29	640	640	632	629	629	644	660	651	642	647	650	650	652	661	680	688	671	647	630	625	618	610	622	640	1644	58 7
30	647	640	633	631	632	642	653	656	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
31	—	—	—	—	—	—	—	—	—	661	660	662	665	678	698	700	672	649	620	612	620	623	640	660	1651	58 35
Means	1630	1631	1626	1624	1625	1628	1632	1633	1634	1637	1638	1640	1643	1652	1670	1670	1656	1634	1617	1605	1600	1604	1614	1628	1632	
Declination	57′ 11″	57′ 15″	56′ 54″	56′ 46″	56′ 50″	57′ 2″	57′ 19″	57′ 23″	57′ 27″	57′ 39″	57′ 43″	57′ 51″	58′ 3″	58′ 39″	59′ 52″	59′ 52″	58′ 55″	57′ 27″	56′ 18″	55′ 30″	55′ 10″	55′ 26″	56″ 6″	57′ 2″		
Mean Hourly Variations from General Monthly Mean	−8″	−4″	−25″	−33″	−29″	−17″	0″	4″	8″	20″	24″	32″	44″	80″	153″	153″	96″	8″	−61″	−109″	−129″	−113″	−73″	−17″	.....	° 0 ′ 57 ″ 19

AUGUST 1853. Declination Magnetometer.

				−1·1 *		−1·0 *		−0·6 *		0·2 *		−0·2 *														
1	1662	1658	1651	1649	1650	1654	1660	1660	1662	1661	1660	1661	1662	1670	1695	1680	1671	1645	1630	1614	1610	1612	1621	1640	1652	° 0 ′ 58 ″ 39
2	649	651	654	650	649	649	650	653	658	660	662	663	665	675	697	700	688	662	648	640	640	637	647	663	1659	59 7
3	667	660	659	659	662	659	658	658	660	661	662	661	660	680	690	692	670	646	617	603	602	623	629	647	1654	58 47
4	665	668	661	660	662	660	660	654	650	660	670	671	672	680	700	700	688	660	636	625	630	635	650	662	1662	59 20
5	672	667	658	661	666	667	670	664	660	661	662	673	685	690	706	699	680	642	620	600	613	630	650	672	1661	59 16
6	680	674	660	654	650	650	651	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	—	—	660	670	672	675	680	695	710	700	680	660	650	642	640	657	668	1666	59 36
8	676	674	668	662	658	659	662	660	660	664	667	671	675	683	710	709	685	658	640	632	640	650	654	657	1666	59 36
9	678	682	672	667	665	667	670	669	670	669	667	668	670	690	700	710	694	676	650	644	640	649	650	658	1670	59 52
10	670	679	671	670	672	670	669	669	670	670	670	672	675	690	720	740	732	710	680	661	661	667	680	690	1682	1 0 40
11	695	698	705	703	704	701	700	707	715	713	710	707	705	720	738	738	730	710	692	680	678	680	682	692	1704	2 9
12	705	706	705	706	710	708	708	708	710	715	720	722	725	740	756	762	755	735	720	700	689	700	710	712	1718	3 5
13	718	720	712	709	708	705	703	710	718	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	722	726	727	728	735	750	765	752	730	698	681	679	691	705	715	1717	3 1
15	722	720	716	712	710	715	722	724	727	724	720	725	730	735	750	750	742	720	692	682	690	708	722	735	1721	3 18
16	740	734	720	714	710	712	715	715	717	719	720	722	725	730	753	753	740	720	695	688	691	700	713	720	1719	3 9
17	730	725	714	707	702	706	712	706	702	706	710	712	715	725	740	740	718	698	670	660	668	682	692	705	1706	2 17
18	712	718	704	703	704	707	712	710	710	711	712	716	720	730	740	728	710	682	670	653	647	660	688	710	1702	2 1
19	717	710	700	699	700	705	711	714	718	724	730	725	720	735	758	760	750	727	700	680	673	680	688	698	1713	2 45
20	709	712	709	706	705	702	701	708	716	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	—	—	—	713	710	715	720	723	745	748	740	704	685	667	666	665	675	690	1706	2 17
22	701	708	702	697	695	697	700	704	710	713	716	708	700	710	730	730	720	702	672	658	652	662	670	680	1697	1 41
23	682	689	687	687	690	687	686	687	690	690	690	690	690	695	722	730	712	685	660	633	625	644	660	660	1682	0 40
24	663	670	679	677	678	680	683	691	700	699	698	694	690	705	730	740	730	700	680	658	643	642	658	670	1686	0 56
25	688	690	685	684	685	691	698	697	698	698	698	701	705	710	735	742	733	710	679	650	630	645	665	673	1691	1 17
26	690	698	690	691	695	697	700	699	700	700	700	705	710	718	738	749	740	710	684	661	664	662	665	685	1698	1 45
27	700	700	695	692	691	692	695	693	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	686	680	684	688	692	725	732	722	700	670	650	638	648	655	670	1687	1 0
29	680	681	670	671	675	673	672	675	680	675	670	672	674	690	708	700	687	670	644	627	639	652	660	673	1672	0 0
30	681	675	661	657	655	657	660	663	668	669	670	668	666	677	708	700	680	654	630	615	607	620	642	660	1660	0 59 12
31	668	653	643	640	640	644	649	652	657	659	660	663	667	670	692	690	654	618	590	580	572	590	613	636	1642	57 59
Means	1690	1690	1683	1681	1681	1682	1684	1685	1688	1689	1690	1691	1693	1703	1723	1726	1712	1687	1663	1648	1646	1655	1667	1679	1685	
Declination	61′ 13″	61′ 13″	60′ 44″	60′ 36″	60′ 36″	60′ 40″	60′ 48″	60′ 52″	61′ 4″	61′ 8″	61′ 13″	61′ 17″	61′ 25″	62″ 5″	63′ 26″	63′ 38″	62′ 41″	61′ 0″	59′ 24″	58′ 23″	58′ 15″	58′ 51″	59′ 40″	60′ 28″		
Mean Hourly Variations from General Monthly Mean	21″	21″	−8″	−16″	−16″	−12″	−4″	0″	12″	16″	21″	25″	33″	73″	154″	166″	109″	8″	−88″	−149″	−157″	−121″	−92″	−24″	.....	° 1 ′ 0 ″ 52

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right) = 4'03 \times 1{\cdot}0005976 = 4'032408$ At Zero 1497. $\rho = 0°41'8 + 7'6 = 0°48'14$ East of North.

DECLINATION MAGNETOMETER.

SEPTEMBER 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
	scd.	scd.	scd.	scd. 0·1 *	scd.	scd. −0·7 *	scd.	scd. −0·2 *	scd.	scd. 0·4 *	scd.	scd. 0·0 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
1	1655	1655	1642	1646	1650	1650	1652	1651	1650	1649	1647	1652	1658	1662	1680	1682	1650	1610	1598	1607	1620	1650	1647	1660	1647	° 0 58 19
2	672	668	668	675	681	666	652	651	650	645	640	636	632	660	698	689	676	653	634	602	584	595	620	630	1649	58 27
3	650	654	650	653	655	647	641	644	647	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	654	660	661	662	670	703	698	673	650	618	597	580	594	615	639	1646	58 15
5	655	647	647	647	646	651	658	660	662	656	650	656	662	673	712	721	709	680	659	632	613	610	623	655	1658	59 3
6	657	662	679	675	671	666	662	664	667	668	668	673	678	680	709	720	700	680	660	650	633	631	660	685	1671	59 56
7	688	676	670	670	670	668	668	671	674	677	680	685	690	697	712	717	698	676	652	635	630	650	660	682	1675	1 0 12
8	683	688	686	689	692	695	700	697	694	692	690	700	710	702	711	722	713	700	669	650	650	662	678	688	1690	1 1 13
9	698	690	693	694	694	696	700	700	701	705	709	709	710	715	725	739	730	714	704	680	672	670	690	699	1702	2 1
10	706	710	697	698	699	700	702	703	705	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	708	710	710	710	718	740	750	741	702	672	660	655	660	673	690	1701	1 57
12	698	693	700	702	703	703	705	704	703	703	702	704	707	718	740	743	719	682	662	652	645	660	680	694	1697	1 41
13	705	700	692	692	691	690	690	695	700	699	698	699	700	716	742	750	708	680	665	663	658	659	682	700	1695	1 33
14	700	690	687	689	690	695	701	702	703	704	704	706	708	718	740	721	688	660	639	630	622	647	678	692	1688	1 4
15	698	680	673	676	679	677	677	682	688	687	685	687	690	704	748	738	688	642	630	619	621	638	663	680	1677	0 20
16	680	678	673	675	676	678	681	683	686	688	690	690	690	698	732	720	700	682	670	650	656	670	690	702	1685	0 52
17	700	680	680	683	685	683	682	686	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	695	700	707	714	728	748	752	716	698	680	665	655	678	699	704	1696	1 37
19	700	688	687	688	688	687	688	689	690	689	688	694	700	710	720	718	702	672	660	655	655	662	680	690	1688	1 4
20	696	697	697	695	692	690	690	691	692	693	694	692	690	706	730	732	714	700	680	652	645	660	680	696	1692	1 21
21	700	692	687	686	685	686	688	689	691	689	686	693	700	701	720	733	719	683	668	650	651	651	660	685	1687	1 0
22	700	698	690	690	690	690	692	692	692	691	690	690	690	698	720	730	720	698	680	653	660	662	680	693	1691	1 17
23	700	690	685	682	679	679	680	682	685	684	683	681	680	690	709	718	708	688	678	667	672	680	686	700	1687	1 0
24	700	687	676	674	672	674	677	678	679	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	665	650	665	680	690	703	690	673	650	632	628	627	640	654	683	1669	0 59 48
26	698	700	695	692	689	685	682	680	679	681	682	683	684	692	710	710	698	682	668	648	640	640	653	660	1680	1 0 32
27	662	660	672	672	672	671	671	675	680	677	674	671	669	688	700	710	698	692	678	657	650	665	690	708	1678	0 24
28	710	700	712	702	691	688	686	681	677	678	678	680	682	680	682	684	672	662	653	633	630	648	667	680	1677	0 20
29	685	675	671	672	672	673	675	677	680	680	680	680	680	682	703	700	690	676	658	640	639	650	668	680	1674	0 8
30	683	670	674	674	674	669	665	667	670	673	675	674	674	680	692	693	682	668	643	633	640	649	662	678	1669	0 59 48
Means.....	1688	1682	1680	1680	1680	1679	1679	1681	1682	1682	1681	1684	1687	1695	1717	1718	1699	1676	1658	1643	1639	1649	1667	1683	1680	
Declination.....	61 ′ 4 ″	60 40	60 32	60 32	60 32	60 28	60 28	60 36	60 40	60 40	60 36	60 48	61 0	61 33	63 1	63 5	61 49	60 16	59 3	58 3	57 47	58 27	59 40	60 44		
Mean Hourly Variations from General Monthly Mean.	32 ″	8 ″	0 ″	0 ″	0 ″	−4 ″	−4 ″	4 ″	8 ″	8 ″	4 ″	16 ″	28 ″	61 ″	149 ″	153 ″	77 ″	−16 ″	−89 ″	−149 ″	−165 ″	−125 ″	−52 ″	12 ″	.....	° 1 0 32

OCTOBER 1853. Declination Magnetometer.

	scd.	scd.	scd.	scd. 1·3 *	scd.	scd. −0·4 *	scd.	scd. 1·0 *	scd.	scd. 0·1 *	scd.	scd. −0·1 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		
1	1673	1668	1670	1674	1676	1676	1676	1674	1670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		° 0 59 24
2	—	—	—	—	—	—	—	—	—	1671	1672	1668	1664	1670	1681	1675	1663	1642	1640	1632	1628	1632	1651	1660	1663	
3	658	650	651	659	665	664	664	665	665	668	670	665	660	653	670	664	650	627	612	617	622	632	648	652	1652	58 39
4	653	650	655	659	660	661	662	667	670	670	670	665	660	655	668	663	650	641	640	633	634	637	643	652	1655	58 51
5	648	642	645	649	650	651	652	654	655	657	658	654	650	642	656	653	648	638	622	612	610	626	633	642	1644	58 7
6	642	638	640	642	642	649	656	659	660	658	656	653	651	652	660	662	667	660	648	638	625	633	650	658	1650	58 31
7	656	650	648	649	647	648	649	654	658	656	653	650	647	659	665	666	659	652	640	642	638	642	659	662	1652	58 39
8	662	660	654	656	655	657	660	663	664	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	666	667	663	660	662	659	660	657	657	658	654	660	662	674	681	1661	59 16
10	678	670	662	664	664	668	672	673	672	671	670	668	667	670	690	690	679	672	668	660	660	657	665	668	1670	59 52
11	664	662	663	668	670	669	668	668	667	666	665	662	660	665	680	682	678	677	668	665	662	662	675	682	1669	59 48
12	674	668	670	671	670	671	672	673	672	673	674	671	668	670	680	682	684	682	670	660	662	670	673	677	1672	1 0 0
13	670	665	665	666	665	666	667	669	670	668	665	664	663	664	672	671	670	670	665	653	650	650	659	671	1665	0 59 32
14	670	662	658	661	661	665	670	678	685	678	670	670	670	672	690	682	670	658	648	637	630	626	640	650	1663	59 24
15	659	660	660	659	655	660	665	667	668	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	670	672	670	668	666	670	686	700	698	690	677	680	692	693	698	1675	1 0 12
17	692	680	686	681	673	672	671	674	675	673	670	671	673	671	682	700	690	680	667	655	678	680	682	690	1678	0 24
18	685	670	682	678	672	675	678	680	680	682	684	681	678	675	684	688	692	693	682	670	680	680	685	690	1681	0 36
19	682	672	675	679	680	676	672	677	680	679	678	678	679	678	681	692	698	700	686	675	679	673	680	681	1680	0 32
20	677	673	671	675	676	676	677	679	680	680	680	676	672	670	673	685	695	690	690	680	688	690	692	690	1681	0 36
21	690	685	693	690	685	684	684	683	680	680	680	676	672	670	683	692	690	683	668	660	670	680	683	683	1681	0 36
22	692	684	679	681	680	680	680	681	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	680	680	678	677	680	680	700	709	717	715	722	710	700	708	710	1692	1 21
24	713	702	700	702	701	702	703	697	690	690	690	687	685	690	705	713	720	722	719	698	692	700	708	702	1701	1 57
25	702	700	695	699	700	705	710	706	700	695	690	688	687	690	690	695	699	697	695	692	687	683	678	688	1695	1 33
26	690	690	690	691	690	687	685	685	684	684	683	681	680	683	688	692	689	683	673	667	676	682	690	690	1685	0 52
27	687	685	689	690	689	690	692	692	690	685	680	681	683	688	698	708	707	710	704	703	712	720	722	720	1697	1 41
28	712	706	710	711	710	707	705	708	710	710	710	707	705	708	707	710	703	700	690	680	682	700	708	712	1705	2 13
29	702	700	701	703	703	706	710	711	710	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	713	715	709	704	710	707	699	701	697	693	705	710	709	710	710	1706	2 17
31	710	702	700	706	710	716	723	726	727	741	755	742	729	725	722	711	698	696	700	710	720	720	729	724	1718	3 5
Means.....	1679	1673	1674	1676	1675	1676	1678	1679	1679	1679	1679	1676	1674	1675	1682	1685	1683	1679	1671	1665	1667	1671	1679	1682	1677	
Declination.....	60 28	60 4	60 8	60 16	60 12	60 16	60 24	60 28	60 28	60 28	60 28	60 16	60 8	60 12	60 40	60 52	60 44	60 28	59 56	59 32	59 40	59 56	60 28	60 40		
Mean Hourly Variations from General Monthly Mean.....	8 ″	−16 ″	−12 ″	−4 ″	−8 ″	−4 ″	4 ″	8 ″	8 ″	8 ″	8 ″	−4 ″	−12 ″	−8 ″	20 ″	32 ″	24 ″	8 ″	−24 ″	−48 ″	−40 ″	−24 ″	8 ″	20 ″	.....	° 1 0 20

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

$a.\left(1+\frac{H}{F}\right)=4''.03\times 1.0005976=4''.032108$ At Zero 1497. $\rho=0^{\circ}.41'.8+7''.6=0^{\circ}.48'.14''$ East of North.

DECLINATION MAGNETOMETER.

NOVEMBER 1853. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Absolute Declination to the East of North.
Madras. Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41		
	scd.	scd.	scd.	scd. 0·2 *	scd.	scd. −1·0 *	scd.	scd. 1·0 *	scd.	scd. 0·4 *	scd.	scd. −0·4 *	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.		Arc.
1	1720	1733	1713	1717	1720	1719	1720	1718	1715	1718	1720	1715	1710	1700	1720	1723	1730	1723	1718	1718	1727	1731	1730	1727	1719	° 1 ′ 3 ″ 9
2	714	711	714	712	710	713	717	717	715	713	710	709	708	705	712	712	710	700	692	687	698	710	720	718	1709	2 29
3	715	705	712	711	710	709	710	712	712	711	710	707	705	703	720	712	702	690	680	690	707	713	717	718	1708	2 25
4	710	706	709	709	708	708	710	712	712	711	710	710	710	710	718	732	732	712	699	702	712	721	728	727	1713	2 45
5	715	710	712	712	712	710	710	711	710	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	710	710	706	703	702	710	712	730	728	720	720	722	727	728	726	1715	2 53
7	720	715	712	712	712	707	704	709	712	711	710	709	708	705	700	703	712	715	710	700	703	713	719	722	1710	2 33
8	718	710	705	708	711	710	710	712	713	712	710	706	702	693	692	690	700	698	690	700	700	710	720	712	1705	2 13
9	717	715	712	711	710	710	712	712	710	706	702	691	680	672	680	680	692	690	710	707	725	719	717	710	1704	2 9
10	708	715	712	708	703	711	720	721	720	717	713	711	710	710	710	711	710	706	700	709	712	719	716	710	1712	2 41
11	706	708	711	710	709	709	711	712	712	709	706	703	700	700	698	704	710	708	700	701	704	714	713	710	1707	2 21
12	702	700	701	702	702	702	703	704	704	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	703	701	702	703	700	699	700	700	684	690	692	702	720	723	725	1703	2 5
14	715	710	712	708	704	705	708	710	710	708	705	702	700	700	699	700	695	670	670	664	674	680	682	687	1697	1 41
15	683	680	687	688	688	686	685	687	688	684	680	676	672	670	670	670	678	675	667	672	683	690	701	705	1682	0 40
16	700	698	693	692	691	687	685	684	682	681	680	677	675	670	672	668	664	670	670	673	679	690	700	700	1683	0 44
17	691	687	680	681	682	683	685	683	680	680	680	677	675	675	672	670	680	672	670	665	682	693	695	700	1681	0 36
18	693	695	691	690	689	686	685	683	680	684	688	684	680	675	662	670	675	675	680	677	684	690	698	702	1684	0 48
19	700	700	691	687	682	681	682	683	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	679	675	676	677	673	670	675	685	690	689	671	676	690	692	694	1683	0 44
21	690	680	687	687	686	683	682	682	680	678	676	675	675	670	660	663	670	670	669	665	672	681	682	680	1677	0 20
22	694	692	689	686	682	680	680	686	690	690	690	686	682	670	660	662	680	689	690	682	686	690	688	691	1684	0 48
23	688	677	680	680	680	679	680	679	677	674	670	667	665	663	652	660	677	684	690	700	685	680	678	682	1677	0 20
24	677	672	677	678	678	678	679	680	680	680	680	676	672	670	663	668	670	683	685	673	672	670	680	686	1676	0 16
25	674	672	674	677	679	677	677	678	678	674	670	668	666	663	654	645	659	670	666	662	670	660	669	669	1669	0 59 48
26	671	669	669	670	670	669	670	670	669	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	666	663	659	655	655	652	663	670	680	690	682	675	675	665	660	1668	59 44
28	660	657	661	662	662	664	668	670	670	669	668	664	660	650	650	653	670	676	670	669	665	667	672	675	1665	59 32
29	670	667	669	668	667	665	665	668	669	667	665	662	660	657	648	650	665	677	680	677	671	674	673	670	1667	59 40
30	668	660	668	665	662	663	666	669	670	668	665	662	660	654	650	655	660	660	660	668	665	670	675	675	1664	59 28
Means.....	1697	1693	1694	1694	1693	1692	1693	1694	1694	1692	1691	1688	1685	1681	1681	1683	1689	1688	1687	1686	1690	1696	1699	1699	1691	
Declination.....	61 41	61 25	61 29	61 29	61 25	61 21	61 25	61 29	16 29	61 21	61 17	61 4	60 62	60 36	50 36	60 44	61 8	61 4	61 0	60 66	61 13	61 37	61 49	61 49		
Mean Hourly Variations from General Monthly Mean.....	24″	8″	12″	12″	8″	4″	8″	12″	12″	4″	0″	−13″	−25″	−41″	−41″	−33″	−9″	−13″	−17″	−21″	−4″	20″	32″	32″	.....	° 1 ′ 1 ″ 17

DECEMBER 1853. Declination Magnetometer.

				0·6 *		−0·6 *		0·4 *		0·2 *		0·4 *														
1	1670	1665	1662	1664	1664	1661	1660	1660	1660	1659	1658	1658	1658	1652	1650	1652	1654	1648	1651	1666	1670	1680	1683	1685	1662	° 0 ′ 59 ″ 20
2	672	662	670	666	661	660	660	659	658	659	659	659	658	650	645	643	650	655	660	662	670	668	673	675	1661	59 16
3	662	660	660	661	660	659	660	660	659	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	655	650	654	657	649	640	640	650	650	650	666	668	668	670	672	1658	59 3
5	668	662	670	666	660	656	653	653	652	651	650	649	648	645	642	650	650	643	624	637	652	655	660	660	1652	58 39
6	660	649	667	686	704	695	688	694	700	698	695	689	683	682	673	663	658	652	640	648	652	668	670	674	1675	1 0 12
7	675	675	672	672	670	669	670	669	668	665	662	660	658	658	660	663	670	658	652	640	648	660	660	660	1664	0 59 28
8	670	674	670	668	665	664	664	663	662	661	660	660	660	662	658	654	660	652	643	640	650	660	663	665	1660	59 12
9	668	670	670	668	665	663	662	661	660	661	661	657	652	650	648	650	660	660	660	650	645	663	670	670	1660	59 12
10	673	670	667	668	667	664	662	661	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	660	660	657	653	652	648	640	644	650	651	655	660	650	655	663	1658	59 3
12	664	660	660	661	660	658	658	659	659	657	655	649	642	632	620	620	624	628	638	670	665	656	660	655	1650	58 31
13	660	668	670	675	678	676	675	673	670	668	665	662	658	652	643	640	645	658	662	680	684	676	663	666	1665	59 32
14	670	660	660	662	662	660	660	660	659	658	657	654	650	648	644	647	658	662	658	640	650	652	658	660	1656	58 55
15	666	655	653	654	654	652	652	651	650	650	650	649	648	640	642	647	652	650	652	650	644	655	662	667	1652	58 39
16	670	663	656	655	652	649	648	649	650	650	650	645	640	640	645	644	650	645	642	643	638	637	643	654	1648	58 23
17	660	650	650	651	650	648	648	648	647	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	644	640	641	641	640	638	640	642	650	646	654	644	642	655	660	1647	58 19
19	660	650	650	651	650	647	645	644	642	641	640	643	645	642	640	638	641	647	650	642	655	648	646	658	1646	58 15
20	660	654	655	653	650	649	650	650	650	650	650	645	640	638	628	623	630	630	640	631	640	630	633	645	1643	58 3
21	659	670	656	658	658	654	651	651	650	655	660	662	663	658	650	648	646	634	638	640	647	640	649	660	1652	58 39
22	660	650	652	654	654	652	652	651	650	653	655	658	660	649	640	630	634	630	628	640	643	649	665	660	1649	58 27
23	658	650	650	651	650	648	648	649	650	649	647	649	650	648	640	638	655	652	652	650	650	652	653	656	1650	58 31
24	658	652	649	649	648	646	646	644	642	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	643	644	642	640	640	632	633	643	650	650	652	648	642	650	650	1646	58 15
26	654	650	650	650	648	648	650	649	648	644	640	636	632	630	630	640	650	650	648	640	637	640	649	652	1644	58 7
27	655	650	650	651	650	647	646	648	650	646	642	643	643	640	638	640	653	658	640	642	648	651	642	644	1647	58 19
28	650	647	648	652	654	652	652	651	650	647	644	642	640	634	631	640	650	651	653	657	670	660	658	653	1649	58 27
29	655	650	651	651	650	650	652	651	650	650	650	646	642	640	630	631	648	648	650	650	660	663	655	661	1649	58 27
30	664	660	661	661	659	659	660	657	654	652	650	649	648	649	641	649	650	650	653	656	670	670	670	665	1657	58 59
Means.....	1663	1659	1659	1660	1659	1657	1657	1656	1656	1655	1654	1652	1650	1647	1642	1642	1649	1649	1647	1650	1654	1655	1558	1661	1654	
Declination.....	59 21	59 7	59 7	59 12	59 7	58 59	58 59	58 55	58 65	58 51	58 47	58 39	58 31	58 19	57 69	57 59	58 27	58 27	58 19	58 31	58 47	58 61	59 3	59 16		
Mean Hourly Variations from General Monthly Mean.	37″	20″	20″	25″	20″	12″	12″	8″	8″	4″	0″	−8″	−16″	−28″	−48″	−48″	−20″	−20″	−28″	−16″	0″	4″	16″	29″	.....	° 0 ′ 58 ″ 47

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 sec.

Ditto to Ther. = −0°·5

$k = a.\cos.v. = 0{\cdot}0003139 \times \cos.75°{\cdot}15 = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JANUARY 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14.41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				1·8 *		0·6 *		−0·9 *		−0·2 *		−0·2 *																
1	968	970	965	966	963	963	962	955	950	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	967	984	988	992	980	968	958	940	930	938	940	969	1002	1010	1000	968	43	1011	1·001686
3	1000	951	998	1002	1003	1002	1000	995	992	986	980	988	996	982	980	970	960	950	902	860	840	858	852	870	955	14	969	2033
4	900	916	927	940	950	953	955	977	1000	1003	1007	1013	1020	1005	965	925	930	920	912	889	892	930	973	980	953	6	959	2115
5	969	967	964	968	968	967	965	957	950	948	947	939	932	951	938	933	937	899	910	874	859	911	928	965	939	2	941	2265
6	979	1002	1051	1053	1052	1044	1035	1019	1005	998	992	976	960	940	912	858	800	827	790	832	894	967	998	967	956	14	970	2025
7	999	1036	988	986	980	971	960	949	940	936	932	930	929	940	930	875	845	831	837	888	910	960	973	1012	939	29	968	2042
8	1022	1053	1048	1093	1134	1090	1045	998	952	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	931	910	917	924	940	938	920	890	842	825	859	882	899	944	960	955	43	998	1794
10	999	974	928	951	970	948	925	890	857	863	870	877	885	891	910	878	850	829	813	820	833	880	919	922	895	52	947	2215
11	979	992	960	954	944	942	938	926	915	917	920	924	928	920	900	875	843	833	824	809	824	838	860	898	903	56	959	2115
12	910	912	891	887	880	891	900	884	870	870	871	887	904	884	870	850	824	828	801	811	840	860	918	974	876	54	930	2355
13	1010	1039	1007	1026	1042	1031	1018	1009	1002	983	965	945	925	928	910	890	850	848	842	847	840	830	876	897	940	49	989	1867
14	910	938	932	938	940	966	990	975	962	942	922	921	920	926	912	900	866	858	846	878	893	913	962	972	924	38	962	2090
15	927	968	1000	986	969	961	952	950	949	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	953	958	954	951	960	957	950	940	907	910	857	850	912	937	973	943	8	951	2182
17	1005	1030	1039	1045	1048	1041	1033	996	960	975	990	984	978	980	930	914	895	905	876	866	850	862	902	933	960	−22	938	2290
18	953	980	992	1024	1052	1061	1069	1089	1110	1095	1080	1070	1061	1050	1047	1023	1000	953	978	1018	982	1036	1053	1024	1033	−20	1013	1669
19	1068	1099	1102	1094	1082	1081	1079	1084	1090	1080	1070	1063	1057	1042	1027	1005	965	959	924	922	902	932	940	966	1026	−22	1004	1744
20	988	1008	1022	1032	1039	1040	1040	1033	1027	1018	1010	997	984	960	930	890	871	878	890	860	848	865	888	920	960	−20	940	2273
21	966	998	1032	1032	1028	1019	1008	998	990	981	972	970	969	962	940	931	905	872	844	846	840	838	879	910	947	− 4	943	2248
22	952	970	968	975	978	978	976	972	970	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	960	950	948	947	940	925	920	880	837	804	782	800	838	871	897	918	−22	896	2636
24	930	942	939	960	978	985	990	978	968	969	970	977	985	982	950	920	885	854	812	827	869	892	936	978	937	−36	901	2595
25	994	1023	1022	1039	1052	1044	1035	1027	1020	1005	990	977	965	950	940	908	880	833	798	800	789	846	879	927	948	−34	914	2488
26	979	990	1002	1013	1020	1024	1027	1022	1018	1007	997	988	980	970	960	950	910	845	805	792	798	840	899	947	949	−47	902	2586
27	978	990	980	992	1000	1007	1012	1005	1000	996	992	988	985	960	940	910	860	797	788	780	819	872	940	999	941	−52	889	2694
28	1048	1093	1088	1085	1078	1074	1068	1053	1040	1030	1020	1013	1007	1000	978	953	905	867	858	867	872	923	968	1000	995	−39	956	2140
29	1032	1010	1008	1012	1012	1014	1015	1017	1020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	1000	981	989	998	1020	1007	990	955	880	800	756	810	869	910	962	961	−40	921	2430
31	995	999	1022	1048	1071	1047	1021	998	976	973	970	965	961	970	982	980	950	899	850	831	858	909	940	980	966	−29	937	2298
Means.....	979	994	995	1004	1005	1006	1001	991	982	976	971	969	967	963	948	926	898	872	853	850	860	895	929	955	950			
Temp. Corrections	-15	-12	-8	-4	-3	0	2	4	5	6	6	8	8	11	15	17	16	11	5	-1	-7	-12	-15	-18	.....	1		
Corrected Means..	964	982	987	1000	1002	1006	1003	995	987	982	977	977	975	974	968	943	914	883	858	849	853	883	914	937	.....	.....	951	
Mean Hourly Variations from General Monthly Mean. =.00	-13 -0108	-31 -0256	-36 -0298	-49 -0405	-51 -0421	-55 -0454	-52 -0430	-44 -0364	-36 -0298	-31 -0256	-26 -0215	-26 -0215	-24 -0198	-23 -0190	-12 -0100	8 0066	37 0306	68 0561	93 0769	102 0843	98 0810	68 0562	37 0306	14 0116	.....	$1+\frac{\Delta X}{X}=$		1·002182

JANUARY 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	792	791	789	788	788	788	788	787	787	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	789	792	792	792	790	790	790	790	792	794	798	800	802	803	805	7924			
3	805	802	802	801	800	800	800	800	800	799	799	798	798	797	797	798	798	799	800	802	804	806	809	809	8010			
4	809	806	804	802	801	801	801	800	800	800	800	800	800	800	800	799	800	802	804	808	809	810	811	811	8033			
5	810	809	809	808	807	805	804	803	803	802	802	801	801	800	800	800	800	802	804	807	807	809	809	809	8043			
6	809	809	807	805	803	802	801	800	800	800	800	799	799	797	796	793	793	795	798	800	802	804	804	803	8008			
7	803	802	801	800	800	799	798	798	798	797	796	795	795	793	790	789	790	791	792	795	798	798	799	800	7965			
8	800	798	797	796	795	793	792	791	790	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	791	792	791	791	790	787	786	786	788	790	790	792	795	796	798	7923			
10	798	797	795	793	791	790	790	790	790	789	788	787	787	787	785	783	783	785	787	789	790	792	794	796	7898			
11	796	795	794	793	792	790	788	788	788	788	788	787	787	785	782	781	781	783	786	789	791	791	791	792	7886			
12	792	791	790	790	790	789	789	788	788	787	787	787	787	787	785	785	783	784	788	790	793	795	796	796	7890			
13	797	796	793	792	792	791	791	790	790	790	790	790	790	787	784	782	783	786	789	790	791	794	797	798	7905			
14	799	798	797	797	797	796	795	793	792	791	790	790	790	789	788	788	788	789	790	792	797	800	801	801	7937			
15	803	801	800	799	798	798	798	797	797	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	799	802	801	801	800	800	800	801	804	807	809	810	813	813	815	8028			
17	815	814	813	812	811	810	809	809	809	809	809	808	808	807	807	807	808	810	813	815	817	818	818	818	8114			
18	818	817	812	812	812	811	810	810	810	810	810	809	809	809	808	807	807	808	810	810	810	813	815	816	8110			
19	816	815	813	812	812	811	811	810	810	810	810	811	812	812	811	810	810	811	810	810	811	811	812	815	8115			
20	812	812	814	815	817	816	815	814	813	811	810	809	808	807	807	805	806	808	809	810	810	812	812	812	8110			
21	813	811	810	809	809	808	807	806	805	804	803	802	802	801	800	799	800	802	804	808	810	810	811	813	8061			
22	813	812	812	811	810	810	810	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	810	811	811	811	810	810	810	809	808	810	812	815	817	818	819	8116			
24	819	819	818	817	817	817	817	816	815	814	813	813	813	813	813	814	815	815	815	815	816	817	817	817	8156			
25	817	817	817	815	813	812	812	812	812	812	812	812	812	811	811	811	812	815	818	820	820	822	823	824	8151			
26	824	822	822	821	820	819	819	819	819	818	818	817	817	815	813	813	814	815	817	819	820	821	823	825	8188			
27	826	825	822	821	821	820	820	820	820	820	820	820	820	820	820	819	818	817	817	819	820	820	820	820	8202			
28	820	820	819	818	818	817	816	816	816	816	816	815	815	814	812	812	812	814	815	817	818	819	819	820	8164			
29	820	819	818	818	818	818	818	817	817	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	817	817	816	815	814	812	811	811	813	815	817	819	820	820	820	8167			
31	821	820	820	819	818	816	815	813	812	811	810	810	810	810	809	808	809	810	812	812	813	815	817	817	8136			
Means.....	8095	8084	8072	8063	8058	8049	8044	8037	8035	8032	8033	8027	8027	8017	8007	8000	8003	8017	8035	8054	8070	8085	8095	8103	8048			

N. B.—Decreasing numbers denote an increase in the Horizontal Force. In the upper table the numbers are tenths of scale divisions; in the lower table tenths and in the Means hundredths of Fahrenheit's degrees.

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 scd.
Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.
Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

FEBRUARY 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{1+\frac{\Delta X}{X}}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				5·9 *		0·9 *		4·7 *		1·7 *		−1·9 *																
1	987	991	996	1012	1016	1023	1028	1005	972	979	982	961	943	950	937	907	883	862	847	852	923	982	1018	1050	963	−20	943	1·002248
2	1030	1060	1021	1044	1056	1078	1098	1054	1000	997	990	991	995	980	972	950	930	885	847	842	890	902	955	980	981	−16	965	2066
3	970	961	986	1004	1011	996	980	978	966	967	964	948	936	910	900	877	850	810	770	780	827	887	930	962	924	4	928	2372
4	979	968	980	966	941	957	972	959	937	935	929	918	910	913	903	872	830	795	737	717	789	830	880	910	897	33	930	2355
5	921	933	943	944	934	923	910	915	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	905	897	897	900	890	882	837	798	756	714	709	760	829	870	877	869	53	922	2421
7	885	897	910	922	923	916	908	905	892	893	890	897	907	860	850	802	740	662	655	723	800	910	977	1000	864	48	912	2504
8	994	970	958	957	945	939	932	922	902	898	890	886	885	878	860	812	753	698	650	655	740	809	898	933	865	37	902	2586
9	940	910	908	903	886	889	891	891	882	880	875	867	862	840	820	769	698	603	560	580	674	730	804	885	814	41	855	2975
10	890	860	840	857	863	877	890	911	922	902	879	869	862	880	880	842	769	695	640	710	722	810	875	900	839	49	888	2703
11	940	931	934	955	965	962	958	949	930	917	900	896	895	900	898	854	828	764	725	708	732	800	841	880	878	48	926	2388
12	897	910	917	929	929	926	922	913	894	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	854	810	807	808	808	795	760	700	648	632	668	753	840	887	967	832	47	879	2776
14	1050	1099	1148	1140	1120	1184	1246	1199	1142	1124	1103	1067	1035	988	985	960	945	890	900	916	897	967	986	979	1045	49	1094	1000
15	1018	1020	992	993	982	977	971	966	952	948	940	928	920	920	915	883	838	790	755	760	779	824	861	892	909	71	980	1942
16	918	938	953	957	950	959	967	976	976	970	960	952	948	935	905	878	865	810	768	729	808	832	870	898	905	73	978	1959
17	960	980	959	968	966	964	960	950	930	931	929	908	890	887	878	848	785	744	712	728	740	780	840	885	880	79	959	2115
18	902	940	929	933	925	919	912	905	889	875	858	846	838	840	848	820	762	713	709	681	710	777	829	859	842	77	919	2446
19	872	868	878	888	887	891	894	892	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	872	860	854	852	855	855	815	747	730	675	740	780	851	912	999	848	68	916	2471
21	1042	1079	1088	1113	1126	1120	1112	1102	1082	1056	1027	1002	980	977	927	881	832	823	835	859	872	907	942	963	989	69	1058	1298
22	955	968	999	1045	1080	1057	1032	1022	1002	987	968	951	938	940	896	842	758	679	686	722	773	850	942	997	920	48	968	2042
23	1034	1042	1037	1011	974	978	980	970	951	947	940	927	917	915	900	858	805	773	755	752	765	810	857	880	907	19	926	2388
24	897	900	915	934	942	933	922	926	920	918	912	914	920	910	897	860	818	770	767	778	810	819	870	931	883	7	890	2686
25	957	967	963	980	985	985	983	987	981	963	942	949	960	963	940	891	826	782	770	780	809	850	896	920	918	−10	908	2538
26	929	922	940	971	990	983	974	982	980	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	1007	1030	1013	1000	970	962	913	870	790	781	783	827	902	960	990	936	−55	881	2760
28	1051	1070	1036	1049	1050	1062	1072	1071	1061	1037	1010	1013	1020	1020	1012	1008	962	932	897	878	893	937	995	1020	1007	−59	948	2207
Means.....	959	966	968	978	977	979	980	973	956	948	937	928	922	914	901	864	816	767	741	752	795	851	904	944	905			
Temp. Corrections	4	5	14	19	22	26	28	33	35	37	39	42	44	51	61	67	60	49	41	33	23	16	9	4	.....	32		
Corrected Means.	963	971	982	997	999	1005	1008	1006	991	985	976	970	966	965	962	931	876	816	782	785	818	867	913	948	.....	.....	937	
Mean Hourly Deviations from General Monthly Mean = ·00	−26 −0215	−34 −0281	−45 −0372	−60 −0496	−62 −0513	−68 −0561	−71 −0586	−69 −0570	−54 −0446	−48 −0396	−39 −0323	−33 −0273	−29 −0240	−28 −0231	−25 −0206	6 0050	61 0504	121 1000	155 1281	152 1257	119 0984	70 0578	24 0198	−11 −0091	.. ...	$1+\frac{\Delta X}{X}=$	.....	1·002298

FEBRUARY 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	817	817	814	813	813	812	811	810	810	810	810	809	808	808	806	803	805	807	810	810	812	814	814	816	8108			
2	816	815	814	813	812	811	810	810	810	809	808	807	807	807	805	803	805	806	807	809	809	812	812	814	8096			
3	814	813	811	809	808	808	808	806	805	804	803	801	800	800	796	796	796	796	798	800	801	803	806	807	8037			
4	807	806	801	799	798	798	798	797	796	794	793	792	792	790	788	787	788	790	791	792	795	798	799	800	7954			
5	799	799	797	795	794	793	792	791	790	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	789	788	786	784	782	779	778	780	782	785	788	790	792	795	798	7894			
7	797	796	794	792	791	791	791	790	790	789	788	787	787	786	782	781	783	787	790	792	795	798	800	801	7908			
8	801	801	800	799	798	796	795	792	790	790	790	790	790	789	786	785	787	790	792	795	798	799	800	800	7939			
9	801	801	799	798	798	795	793	792	792	791	790	790	790	787	783	781	785	788	790	793	796	798	798	799	7928			
10	799	798	796	795	794	793	793	792	791	790	790	788	787	783	782	780	780	785	788	790	791	794	795	796	7904			
11	795	795	791	790	790	790	790	790	790	790	790	789	789	788	785	782	785	788	790	792	796	798	798	799	7908			
12	799	799	795	794	794	794	794	792	791	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	790	790	789	788	785	782	780	782	785	788	790	793	796	798	799	7911			
14	800	800	797	797	797	796	795	793	792	791	790	788	787	783	780	779	780	784	786	788	790	791	793	793	7904			
15	795	795	791	789	788	786	784	783	782	781	780	780	780	778	774	771	774	778	781	783	788	790	792	793	7840			
16	793	792	790	789	788	786	785	783	782	781	780	780	780	777	774	771	774	778	780	782	786	788	790	792	7834			
17	792	792	790	787	784	783	783	782	781	780	780	778	777	773	770	770	773	777	779	781	784	786	788	790	7817			
18	790	790	790	788	787	784	782	781	780	780	780	779	778	775	771	772	774	777	780	782	786	788	790	792	7823			
19	793	792	790	789	788	787	786	784	782	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	784	787	784	782	780	775	772	776	780	782	786	789	790	791	793	7851			
21	794	795	792	789	787	787	787	784	782	781	780	779	779	778	773	771	774	778	780	784	788	792	797	800	7846			
22	804	803	800	797	794	793	792	791	790	789	788	786	784	782	777	775	777	780	785	789	794	799	805	808	7909			
23	810	810	808	805	802	801	801	799	798	796	794	794	794	792	790	788	790	793	795	800	803	806	808	810	7995			
24	812	811	809	807	806	805	804	802	800	800	800	799	798	795	792	790	794	797	801	805	808	810	812	814	8030			
25	814	813	810	809	809	809	809	808	808	806	805	805	805	806	802	799	800	802	806	810	812	813	815	817	8080			
26	818	818	818	818	819	818	818	818	819	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	820	821	820	820	820	820	820	820	822	824	826	827	828	829	830	8213			
28	831	830	828	826	824	822	821	820	820	820	820	820	820	818	817	814	816	819	820	823	825	827	829	830	8225			
Means.....	8038	8034	8010	7995	7985	7974	7968	7954	7946	7940	7935	7925	7919	7901	7870	7853	7874	7904	7928	7954	7982	8004	8023	8038	7956			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 scd.
Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.
Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

MARCH 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14.41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·8 *		−0·4 *		−0·7 *		0·2 *		−1·7 *																
1	1022	1015	1022	1031	1034	1034	1035	1045	1057	1036	1014	996	982	979	961	932	908	870	870	867	888	950	1000	1035	983	− 54	929	1·002363
2	1032	1005	998	1002	997	1004	1012	1001	992	989	986	975	968	965	948	907	906	850	842	840	886	933	980	1018	960	− 51	909	2529
3	1045	1062	1058	1060	1052	1042	1032	1020	1010	1004	997	1002	1010	1001	992	960	940	895	868	872	912	963	985	1010	991	− 56	935	2314
4	1058	1080	1088	1069	1041	1039	1037	1033	1030	1013	995	1006	1020	1020	1002	965	930	899	907	930	980	1008	1029	1035	1009	− 76	933	2330
5	1037	1033	1040	1045	1041	1045	1050	1039	1030	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	1044	1058	1048	1042	1040	1019	988	950	943	958	980	1025	1045	1050	1002	1023	− 85	938	2290
7	1010	1013	1027	1022	1007	1023	1040	1045	1051	1058	1065	1066	1070	1069	1048	992	971	953	950	945	1048	1102	1120	1140	1035	− 76	959	2115
8	1150	1210	1213	1198	1173	1141	1110	1087	1065	1062	1058	1058	1062	1014	993	1030	1012	991	969	990	1017	1050	1105	1112	1078	− 46	1032	1512
9	1133	1090	1093	1117	1131	1095	1060	1054	1050	1044	1037	1033	1032	1027	1030	998	979	933	930	990	1032	1082	1088	1088	1048	− 26	1022	1594
10	1084	1080	1062	1075	1079	1075	1072	1061	1052	1045	1037	1042	1050	1058	1055	1019	977	950	940	925	978	1037	1060	1080	1037	− 37	1000	1777
11	1090	1130	1120	1119	1109	1111	1114	1091	1070	1063	1055	1051	1050	1072	1060	1037	980	942	940	928	1030	1055	930	1105	1052	− 57	995	1818
12	1140	1100	1088	1084	1070	1064	1059	1060	1062	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	1082	1102	1099	1099	1107	1090	1054	1010	978	978	990	1050	1085	1108	1112	1070	−105	965	2066
14	1132	1082	1128	1133	1129	1130	1132	1127	1124	1115	1105	1096	1090	1093	1082	1068	1009	980	949	955	983	1030	1058	1083	1076	−134	942	2256
15	1117	1125	1128	1125	1112	1108	1105	1097	1090	1086	1082	1084	1089	1090	1088	1064	1020	983	959	960	999	1034	1070	1084	1071	−118	953	2165
16	1083	1085	1074	1080	1076	1075	1075	1071	1068	1064	1060	1052	1048	1044	1030	999	947	907	871	870	900	945	978	1010	1017	−104	913	2496
17	1010	1015	993	1017	1032	1085	1138	1180	1224	1213	1201	1173	1149	1140	1100	1051	994	932	898	985	995	1023	1058	1100	1071	−112	959	2115
18	1124	1152	1183	1176	1159	1163	1167	1156	1147	1134	1120	1095	1074	1066	1051	1010	970	952	920	950	980	1015	1050	1075	1079	−110	969	2033
19	1080	1070	1077	1087	1087	1086	1085	1070	1057	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	1055	1053	1047	1044	1037	1010	981	940	899	881	890	933	995	1028	1053	1023	−102	921	2430
21	1050	1048	1057	1063	1060	1059	1058	1073	1090	1077	1064	1050	1039	1024	1003	960	899	862	852	874	947	1010	1043	1046	1013	−100	913	2496
22	1032	1035	1050	1056	1053	1055	1058	1048	1040	1044	1047	1044	1044	1045	1023	980	927	868	830	842	912	978	1042	1075	1005	−114	891	2678
23	1077	1062	1073	1087	1091	1088	1085	1081	1078	1073	1067	1065	1067	1063	1037	990	910	850	848	892	970	1055	1080	1109	1033	−141	892	2669
24	1139	1180	1166	1173	1170	1165	1161	1150	1140	1139	1138	1126	1117	1100	1098	1055	982	931	929	920	955	1017	1062	1097	1088	−168	920	2438
25	1100	1110	1101	1112	1113	1122	1132	1135	1140	1145	1150	1144	1142	1137	1094	1065	1022	968	938	930	970	1012	1068	1099	1081	−158	923	2413
26	1103	1079	1078	1111	1134	1136	1138	1141	1145	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	1117	1089	1095	1104	1082	1070	1062	1022	958	922	908	883	917	1001	1127	1059	−126	933	2330
28	1139	1122	1104	1131	1148	1134	1121	1109	1099	1089	1078	1076	1077	1086	1052	994	944	875	889	898	926	969	1012	1028	1046	− 97	949	2198
29	1042	1049	1060	1076	1083	1072	1062	1051	1042	1036	1030	1016	1006	1000	975	972	897	860	830	835	880	922	1012	1054	994	−110	884	2735
30	1072	1150	1194	1160	1117	1103	1089	1094	1100	1091	1081	1075	1072	1080	1070	1028	938	872	815	820	885	978	1028	1055	1040	−123	917	2463
31	1160	1212	1199	1194	1179	1177	1175	1137	1100	1095	1089	1082	1078	1072	1085	1040	963	900	847	871	926	987	1069	1127	1074	−130	944	2240
Means.....	1084	1089	1092	1096	1092	1090	1089	1084	1080	1075	1069	1063	1060	1056	1039	1007	961	919	901	913	959	1007	1041	1073	1039			
Temp. Corrections	−125	−121	−115	−110	−106	−102	−99	−95	−93	−89	−88	−83	−80	−75	−69	−66	−71	−79	−88	−98	−108	−116	−123	−127	.....	− 97		
Corrected Means..	959	968	977	986	986	988	990	989	987	986	981	980	980	981	970	941	890	840	813	815	851	891	918	946	.....	... .	942	
Mean Hourly Variations from General Monthly Mean. = ·00	−17	−26	−35	−44	−44	−46	−48	−47	−45	−44	−39	−38	−38	−39	−28	1	52	102	129	127	91	51	24	−4				
	−0140	−0215	−0289	−0364	−0364	−0381	−0396	−0388	−0372	−0364	−0323	−0314	−0314	−0323	−0231	·0008	0430	0843	1066	1049	0752	0421	0198	−0033	.....	$1+\frac{\Delta X}{X}=$	.....	1·002256

MARCH 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	831	830	828	826	824	823	822	821	820	819	819	817	815	812	811	810	813	817	819	820	823	826	829	830	8210			
2	830	830	828	826	825	824	823	821	820	819	818	816	814	809	808	807	810	811	815	818	823	826	828	829	8199			
3	830	829	827	824	821	821	821	820	820	819	819	817	816	813	812	811	812	816	818	822	826	831	835	835	8215			
4	836	835	833	831	830	829	829	828	828	826	825	822	820	819	818	818	820	821	825	828	830	834	836	837	8274			
5	838	838	832	831	831	830	830	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	830	830	829	828	826	822	820	822	826	829	830	832	834	835	837	8300			
7	837	835	833	832	831	830	830	829	829	828	828	825	822	820	818	816	818	820	822	827	830	831	833	834	8274			
8	834	832	830	826	823	821	820	820	820	819	819	815	812	810	807	806	808	810	812	816	818	820	820	823	8184			
9	825	824	822	820	819	815	811	810	810	809	809	808	807	806	803	802	802	807	810	813	815	818	820	820	8127			
10	821	821	820	818	816	815	814	813	812	812	812	811	810	810	810	810	810	812	816	820	822	824	825	826	8158			
11	827	827	826	825	824	823	822	821	820	819	818	817	817	817	813	812	813	817	818	821	826	830	832	839	8218			
12	838	837	834	833	832	831	830	829	828	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	831	834	833	832	830	830	829	830	832	837	840	844	850	855	860	8358			
14	860	854	853	851	850	848	847	845	843	841	840	839	838	837	833	833	833	836	840	842	847	850	854	855	8445			
15	856	853	850	849	848	844	840	839	838	836	835	833	832	830	830	828	830	832	837	840	842	843	844	845	8398			
16	846	845	843	842	841	839	837	835	833	831	830	830	830	829	826	826	828	829	830	835	838	841	844	845	8355			
17	846	845	842	841	840	840	840	838	837	836	835	833	831	830	828	828	830	832	837	840	843	846	848	849	8381			
18	849	848	845	844	843	841	839	838	837	836	835	833	831	828	826	823	827	830	834	838	840	842	844	845	8373			
19	844	844	841	840	839	836	833	832	831	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	832	834	832	830	830	827	826	828	830	832	836	840	841	842	843	8351			
21	842	841	840	839	838	837	836	834	832	831	830	830	830	828	825	824	827	830	832	836	840	840	842	844	8345			
22	844	843	841	840	840	839	838	837	836	835	835	833	832	831	830	830	832	837	839	840	844	846	850	850	8384			
23	851	850	849	848	848	846	845	844	844	843	842	843	844	845	840	840	841	843	845	849	851	853	856	858	8466			
24	858	858	857	858	859	859	859	858	858	856	855	854	853	850	846	844	847	848	850	852	855	855	859	859	8545			
25	860	858	856	855	855	854	853	851	850	849	849	848	847	846	843	843	845	847	850	852	855	856	857	857	8515			
26	854	852	852	851	850	850	850	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	843	837	836	835	835	835	836	835	835	835	836	837	838	838	838	8420			
28	837	835	834	833	832	831	831	830	830	830	830	830	830	831	831	831	830	834	836	837	839	841	841	841	8335			
29	841	840	840	839	838	837	837	836	836	834	833	832	832	832	833	833	833	834	836	840	842	845	847	847	8374			
30	847	847	845	843	842	841	840	840	840	840	840	840	840	840	839	837	837	837	835	837	840	845	849	850	8413			
31	850	848	845	843	842	841	840	840	840	840	840	839	839	838	838	839	840	841	843	848	849	850	851	852	8432			
Means.....	8419	8407	8387	8373	8363	8350	8340	8329	8323	8313	8308	8294	8284	8271	8253	8245	8260	8283	8308	8338	8367	8391	8413	8425	8335			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 sed.
Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.
Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

APRIL 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 6·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				6·9 *		0·7 *		1·9 *		0·4 *		−0·7 *																
1	1162	1119	1087	1104	1110	1100	1088	1089	1087	1083	1078	1083	1089	1090	1072	1017	940	901	860	908	986	1052	1096	1140	1056	−150	906	1·002554
2	1159	1132	1118	1131	1132	1121	1109	1111	1110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	1116	1121	1110	1100	1092	1070	1021	942	891	876	919	978	1027	1093	1140	1067	−178	889	2694
4	1149	1130	1130	1136	1130	1126	1120	1114	1105	1100	1095	1090	1086	1073	1053	1002	950	860	831	856	910	979	1043	1088	1048	−193	855	2975
5	1070	1139	1285	1246	1196	1195	1192	1186	1177	1184	1190	1202	1215	1230	1230	1148	1129	1010	980	1053	1095	1149	1199	1260	1165	−203	962	2090
6	1281	1327	1331	1323	1304	1286	1266	1275	1280	1263	1245	1224	1205	1202	1180	1177	1095	1000	1050	1129	1186	1237	1290	1330	1229	−195	1034	1496
7	1309	1240	1201	1208	1203	1196	1188	1172	1152	1154	1155	1152	1150	1139	1124	1055	980	917	902	932	998	1060	1128	1170	1120	−142	978	1959
8	1196	1151	1197	1212	1215	1193	1169	1174	1175	1170	1165	1155	1146	1150	1130	1077	1028	972	942	989	1050	1100	1158	1180	1129	−138	991	1851
9	1202	1210	1157	1192	1216	1218	1219	1196	1170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	1145	1120	1114	1110	1102	1060	1045	977	930	882	940	999	1044	1081	1132	1103	−143	960	2107
11	1156	1165	1190	1204	1207	1185	1161	1140	1115	1113	1110	1100	1091	1060	1048	1005	970	940	930	997	1040	1099	1167	1120	1096	−109	987	1884
12	1100	1082	1117	1144	1159	1159	1158	1147	1132	1121	1110	1099	1090	1082	1080	1047	980	891	890	918	989	1040	1099	1115	1073	−136	937	2298
13	1108	1108	1130	1143	1145	1148	1149	1141	1130	1128	1125	1117	1110	1108	1085	1035	961	897	880	908	959	1010	1069	1105	1071	−158	913	2496
14	1118	1115	1118	1125	1121	1130	1138	1143	1145	1136	1126	1128	1132	1125	1110	1070	997	929	900	938	990	1050	1079	1081	1081	−180	901	2595
15	1093	1105	1110	1117	1112	1108	1102	1103	1100	1095	1090	1088	1088	1080	1079	1040	967	891	881	912	960	1015	1063	1078	1053	−188	865	2892
16	1087	1090	1096	1101	1095	1093	1089	1089	1085	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	1083	1080	1085	1091	1095	1090	1075	1020	1010	980	980	982	1012	1032	1069	1063	−179	884	2735
18	1100	1123	1099	1110	1110	1106	1100	1092	1080	1075	1070	1068	1068	1020	1010	970	891	860	807	880	940	990	1007	1035	1025	−171	854	2983
19	1050	1081	1115	1117	1107	1119	1130	1157	1180	1156	1132	1110	1090	1085	1080	1047	992	930	917	950	969	1007	1049	1068	1068	−173	895	2644
20	1082	1080	1076	1085	1083	1080	1076	1073	1067	1081	1094	1091	1090	1102	1080	990	930	880	830	880	930	980	1018	1050	1030	−178	852	2999
21	1087	1089	1117	1124	1120	1122	1123	1118	1110	1106	1102	1069	1037	1042	1020	1002	1062	1019	1000	1003	1034	1080	1108	1100	1075	−203	872	2834
22	1118	1138	1164	1169	1163	1163	1162	1153	1140	1161	1182	1165	1150	1128	1088	1041	999	930	1017	1003	1069	1100	1159	1208	1115	−196	919	2446
23	1200	1180	1186	1196	1195	1193	1190	1174	1155	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	1139	1122	1118	1115	1110	1087	1060	1000	937	890	892	950	1018	1080	1140	1097	−202	895	2644
25	1160	1152	1152	1158	1152	1136	1118	1126	1130	1121	1112	1106	1101	1095	1070	1052	990	947	890	922	972	1030	1088	1130	1080	−214	866	2884
26	1130	1128	1138	1148	1147	1146	1144	1094	1040	1075	1110	1119	1130	1121	1105	1065	1002	930	890	903	969	1020	1090	1122	1074	−229	845	3057
27	1131	1124	1130	1136	1130	1125	1118	1118	1115	1108	1100	1099	1100	1090	1067	1040	970	905	860	870	932	983	1028	1072	1056	−227	829	3190
28	1110	1100	1105	1117	1117	1108	1098	1096	1090	1091	1092	1088	1085	1071	1050	1010	952	870	850	872	950	1003	1050	1099	1045	−229	816	3297
29	1118	1114	1121	1131	1129	1130	1130	1134	1134	1127	1120	1115	1112	1107	1120	1115	1076	990	960	987	1033	1069	1121	1162	1098	−241	857	2959
Means.....	1139	1137	1147	1155	1152	1147	1141	1137	1128	1125	1122	1116	1111	1104	1088	1048	992	929	908	942	995	1046	1096	1128	1085			
Temp. Corrections.	−202	−200	−190	−185	−183	−181	−181	−178	−177	−174	−173	−170	−168	−163	−162	−164	−169	−176	−183	−189	−195	−199	−203	−206	.....	−182		
Corrected Means..	937	937	957	970	969	966	960	959	951	951	949	946	943	941	926	884	823	753	725	753	800	847	893	922	.....	.....	903	
Mean Hourly Variations from General Monthly Mean. = ·00	−34 −0281	−34 −0281	−54 −0446	−67 −0555	−66 −0546	−63 −0521	−57 −0471	−56 −0463	−48 −0396	−48 −0396	−46 −0381	−43 −0356	−40 −0331	−38 −0314	−23 −0190	19 0157	80 0661	150 1240	178 1471	150 1240	103 0851	56 0463	10 0083	−19 −0157	.....	$1+\frac{\Delta X}{X}=$	.....	1·002578

APRIL 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	853	852	850	849	849	848	848	847	846	845	845	844	844	843	843	843	846	848	850	852	856	858	859	860	8491			
2	860	860	857	855	853	852	852	852	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	855	858	857	857	856	854	854	853	856	858	861	863	867	868	868	8574			
4	868	868	862	861	860	860	860	860	860	860	860	859	858	856	856	857	857	858	860	863	868	870	871	872	8618			
5	872	871	869	867	865	863	862	861	861	860	860	860	860	858	860	860	860	861	865	868	870	871	872	876	8647			
6	878	875	870	867	865	865	865	864	863	863	863	862	862	861	860	861	863	864	863	858	853	851	851	851	8624			
7	851	852	850	849	849	848	847	846	845	843	842	841	841	841	842	842	844	847	848	850	850	851	853	854	8469			
8	854	852	850	848	847	846	846	846	846	845	844	842	841	840	840	840	841	843	845	847	848	849	850	850	8458			
9	850	850	849	848	848	847	847	846	845	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	847	849	849	849	848	847	847	848	849	847	847	845	843	843	845	8472			
11	844	842	840	839	838	837	837	836	835	834	833	832	831	830	830	830	831	834	837	840	842	843	846	848	8370			
12	848	848	846	844	843	843	843	843	843	842	842	841	840	840	840	840	841	845	848	850	852	853	855	855	8452			
13	857	856	851	850	850	850	850	850	850	849	848	847	847	845	845	846	848	850	852	855	859	860	860	862	8515			
14	862	861	860	859	859	858	858	857	856	855	854	853	852	850	851	852	854	857	860	861	862	865	866	868	8579			
15	868	867	860	860	860	860	860	859	859	858	858	857	856	855	855	856	858	859	861	862	862	865	868	868	8605			
16	868	866	862	861	860	860	860	860	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	857	855	853	852	851	850	850	851	853	856	858	859	860	860	861	8576			
18	862	862	860	858	857	856	855	854	854	852	851	850	850	848	847	849	850	852	855	859	860	862	862	862	8553			
19	862	861	860	859	858	858	858	856	855	854	854	852	850	849	849	850	851	853	857	858	860	860	861	862	8561			
20	862	862	860	859	859	858	857	856	855	853	852	852	853	852	851	850	853	856	858	860	863	865	866	867	8575			
21	868	868	865	866	867	867	868	867	867	867	867	864	862	859	857	857	859	861	862	864	866	868	868	869	8647			
22	869	869	867	865	863	862	862	861	860	860	860	859	859	856	855	857	859	860	862	865	867	868	869	870	8627			
23	870	870	868	865	863	863	863	862	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	861	861	860	859	858	858	859	860	863	865	868	871	873	873	873	8645			
25	872	872	870	868	867	867	867	867	867	866	865	863	862	861	861	862	865	868	870	870	873	876	877	878	8681			
26	878	878	874	873	872	872	872	871	870	870	870	869	869	866	864	867	870	870	871	874	878	878	879	880	8723			
27	880	879	874	872	871	871	871	871	871	870	870	870	870	868	866	867	868	870	870	872	875	875	877	878	8719			
28	878	878	872	871	871	870	870	870	870	869	869	869	869	867	866	868	870	870	873	877	878	879	880	880	8723			
29	880	880	877	876	875	875	876	875	874	873	873	871	870	869	870	872	873	874	876	880	882	882	885	887	8760			
Means.....	8646	8640	8609	8596	8588	8582	8582	8575	8570	8563	8561	8550	8545	8531	8527	8534	8549	8568	8588	8608	8625	8637	8648	8658	8587			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\cos.v. = 0{\cdot}0003139 \times \cos.75°\,15' = 0{\cdot}00008264$

HORIZONTAL FORCE MAGNETOMETER.

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

MAY 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				6·7 *		0·9 *		2·1 *		−0·2 *		1·1 *																
April 30	1158	1160	1164	1171	1565	1165	1164	1166	1164	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	1158	1153	1151	1147	1132	1104	1070	1023	960	885	958	1016	1089	1160	1156	1110	−262	848	1·003033
2	1195	1207	1211	1226	1228	1220	1210	1213	1212	1226	1240	1220	1198	1183	1170	1240	1225	1160	1195	1262	1310	1414	1452	1418	1243	−267	976	1975
3	1397	1398	1386	1404	1408	1357	1305	1317	1325	1327	1330	1309	1285	1255	1275	1260	1210	1203	1220	1180	1191	1250	1270	1294	1298	−270	1028	1546
4	1307	2300	1322	1338	1340	1321	1300	1277	1249	1252	1255	1249	1240	1233	1226	1250	1220	1168	1190	1150	1186	1260	1317	1322	1261	−267	994	1826
5	1311	1307	1290	1299	1294	1280	1265	1262	1255	1253	1252	1247	1240	1235	1215	1177	1160	1120	1128	1170	1180	1261	1310	1327	1243	−268	975	1983
6	1305	1272	1261	1266	1257	1259	1260	1246	1228	1224	1220	1221	1220	1195	1175	1150	1090	1030	1012	1042	1151	1162	1190	1215	1194	−264	930	2355
7	1227	1220	1262	1258	1241	1252	1262	1225	1184	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
8	—	—	—	—	—	—	—	—	—	1197	1210	1211	1210	1215	1174	1120	1065	1000	1000	1026	1097	1150	1199	1218	1176	−267	909	2529
9	1223	1220	1222	1228	1221	1219	1216	1211	1202	1201	1200	1199	1195	1195	1165	1110	1040	987	1000	1040	1070	1091	1130	1167	1156	−262	894	2653
10	1150	1120	1109	1114	1106	1107	1107	1108	1105	1102	1100	1091	1080	1080	1102	1068	1015	977	975	950	988	1060	1101	1164	1078	−268	810	3347
11	1193	1207	1208	1207	1192	1171	1148	1135	1118	1131	1144	1140	1133	1130	1117	1092	1042	998	990	988	1010	1068	1112	1180	1119	−284	835	3140
12	1201	1192	1193	1199	1191	1105	1098	1121	1140	1157	1174	1173	1170	1155	1147	1123	1090	1040	1002	1097	1045	1050	1070	1115	1127	−300	827	3207
13	1160	1220	1200	1208	1202	1206	1208	1215	1218	1229	1240	1228	1213	1210	1190	1150	1105	1070	1050	1042	1080	1133	1169	1220	1174	−329	845	3057
14	1241	1250	1247	1255	1250	1251	1250	1242	1230	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
15	—	—	—	—	—	—	—	—	—	1225	1220	1221	1220	1200	1180	1162	1120	1110	1078	1080	1119	1142	1177	1215	1195	−363	832	3165
16	1257	1270	1262	1268	1260	1254	1247	1249	1247	1243	1240	1241	1240	1237	1225	1180	1150	1146	1140	1160	1155	1147	1142	1164	1214	−371	843	3074
17	1197	1226	1259	1266	1260	1262	1262	1251	1236	1233	1230	1224	1215	1212	1203	1163	1133	1112	1102	1140	1187	1230	1252	1261	1213	−372	841	3091
18	1284	1299	1299	1306	1299	1292	1284	1284	1280	1272	1264	1255	1243	1240	1227	1230	1177	1150	1140	1166	1193	1225	1252	1270	1247	−377	870	2851
19	1230	1277	1340	1388	1422	1411	1399	1379	1355	1327	1299	1284	1266	1230	1218	1190	1165	1133	1150	1217	1220	1250	1298	1310	1282	−374	908	2538
20	1321	1308	1300	1299	1284	1285	1285	1281	1273	1271	1270	1266	1260	1240	1202	1170	1120	1083	1058	1078	1127	1192	1260	1307	1231	−379	852	2999
21	1300	1304	1299	1310	1308	1311	1312	1319	1322	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
22	—	—	—	—	—	—	—	—	—	1284	1247	1235	1220	1195	1157	1120	1070	1029	1040	1097	1130	1190	1272	1328	1225	−364	861	2926
23	1389	1399	1385	1380	1361	1321	1279	1272	1260	1255	1250	1247	1241	1199	1183	1150	1138	1102	1091	1080	1148	1183	1215	1223	1240	−318	922	2421
24	1265	1235	1262	1238	1200	1247	1292	1303	1310	1305	1300	1279	1255	1315	1325	1360	1379	1555	1665	1697	1583	1462	1440	1430	1363	−304	1059	1289
25	1426	1400	1550	1542	1520	1480	1438	1441	1440	1426	1413	1400	1385	1367	1347	1330	1295	1270	1223	1199	1213	1267	1313	1365	1377	−310	1067	1223
26	1380	1406	1400	1397	1380	1376	1370	1343	1312	1331	1350	1343	1333	1330	1315	1290	1240	1200	1158	1107	1170	1224	1290	1345	1308	−331	977	1967
27	1357	1358	1352	1353	1340	1335	1328	1331	1330	1314	1298	1300	1300	1307	1285	1260	1210	1180	1170	1238	1330	1400	1430	1428	1314	−362	952	2173
28	1418	1392	1395	1400	1391	1403	1414	1420	1422	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
29	—	—	—	—	—	—	—	—	—	1371	1320	1301	1280	1255	1240	1273	1237	1200	1225	1297	1322	1350	1318	1327	1332	−362	970	2025
30	1330	1329	1322	1308	1280	1295	1309	1307	1300	1290	1280	1259	1236	1242	1250	1220	1238	1187	1190	1218	1228	1242	1250	1290	1267	−327	940	2273
31	1302	1313	1302	1307	1298	1295	1291	1294	1292	1277	1263	1258	1250	1238	1229	1221	1193	1172	1180	1190	1240	1253	1280	1285	1259	−316	943	2248
Means.....	1279	1281	1289	1294	1285	1277	1270	1267	1260	1255	1250	1243	1232	1223	1209	1190	1154	1124	1121	1143	1174	1213	1247	1272	1231			
Temp. Corrections	−346	−343	−335	−329	−326	−319	−314	−312	−311	−306	−301	−298	−296	−291	−285	−287	−294	−301	−309	−320	−330	−340	−346	−350	.....	−316		
Corrected Means..	933	938	954	965	959	958	956	955	949	949	949	945	936	932	924	903	860	823	812	823	844	873	901	922	.....	.....	915	
Mean Hourly Variations from General Monthly Mean. =.00	−18	−23	−39	−50	−44	−43	−41	−40	−34	−34	−34	−30	−21	−17	−9	12	55	92	103	92	71	42	14	−7		$\frac{\Delta X}{X}$ =		
	−·0148	−·0190	−·0323	−·0413	−·0364	−·0356	−·0339	−·0331	−·0281	−·0281	−·0281	−·0248	−·0173	−·0140	−·0074	·0100	·0454	·0761	·0851	·0761	·0586	·0348	·0116	−·0058	.....	$1+\frac{\Delta X}{X}$ =	.....	1·002479

MAY 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
April 30	888	887	882	881	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	879	879	878	878	877	877	878	880	882	883	885	887	890	890	890	8821			
2	890	890	889	888	887	884	881	880	880	880	880	880	880	878	876	879	880	882	884	885	888	890	890	891	8838			
3	892	891	889	888	887	885	884	883	882	881	880	880	880	879	877	879	880	882	884	886	888	888	890	890	8844			
4	890	889	888	887	887	883	880	880	880	880	880	880	880	879	878	879	880	882	883	886	889	890	890	891	8838			
5	891	891	890	888	887	884	882	881	880	880	880	880	880	880	878	878	880	882	883	885	887	888	889	890	8839			
6	890	890	888	886	885	882	880	880	880	880	880	879	878	877	876	878	879	880	883	885	886	888	888	889	8828			
7	890	890	888	885	883	881	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	880	881	880	880	879	878	879	880	881	884	887	889	892	892	893	8838			
9	893	893	889	888	887	883	880	880	880	880	880	880	880	880	876	873	872	875	878	880	883	885	889	889	8822			
10	889	888	886	884	883	881	880	880	880	880	880	880	880	880	879	880	880	882	885	887	889	891	894	897	8840			
11	897	896	892	891	890	888	887	887	887	885	883	882	881	880	880	880	881	883	885	889	895	900	905	907	8888			
12	906	903	900	897	895	893	891	890	890	889	888	886	884	882	882	882	886	890	893	898	900	905	907	908	8935			
13	909	908	908	907	906	903	901	900	900	899	898	897	896	894	891	890	893	895	896	900	906	915	917	918	9020			
14	918	917	914	913	912	911	910	909	909	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	909	910	909	908	904	902	903	907	909	910	915	918	920	924	927	9120			
16	925	921	920	919	918	915	913	914	915	913	911	909	908	905	904	905	908	910	912	917	920	920	921	923	9144			
17	922	920	919	918	918	915	913	913	913	911	910	910	910	907	903	905	908	910	911	915	919	925	927	928	9146			
18	928	926	921	920	919	916	914	913	912	911	910	909	908	908	904	905	907	910	915	818	921	926	929	929	9158			
19	927	923	922	920	918	916	915	913	912	910	909	908	908	904	903	904	907	910	912	917	922	924	925	928	9149			
20	928	928	924	922	920	918	916	916	916	914	912	911	910	908	906	906	907	908	910	915	918	925	928	930	9165			
21	930	929	925	923	922	921	920	919	918	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	911	905	904	903	902	900	902	903	907	908	909	910	910	909	908	9124			
23	908	908	907	905	904	902	901	900	900	898	896	894	893	890	888	887	890	891	895	899	902	904	904	904	8988			
24	903	902	900	897	895	894	893	892	891	890	890	890	890	888	888	887	888	890	894	897	900	902	903	903	8945			
25	902	901	900	899	898	898	898	898	898	895	892	891	890	888	887	886	890	891	894	897	900	902	906	909	8963			
26	910	911	909	907	905	902	900	899	899	898	898	897	897	895	894	896	898	900	900	902	907	910	913	917	9027			
27	917	918	913	912	911	910	910	910	910	908	907	906	906	907	904	900	902	905	910	915	918	923	929	930	9117			
28	930	928	924	924	924	923	922	921	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	912	904	902	900	899	897	898	900	901	904	907	908	910	910	910	9116			
30	910	910	909	908	908	905	903	901	900	899	898	896	894	891	890	890	894	897	899	902	906	907	908	908	9014			
31	905	904	902	901	901	898	895	894	894	893	892	891	891	890	889	890	893	896	898	902	906	908	910	910	8980			
Means.....	9070	9060	9036	9021	9011	8989	8974	8968	8965	8950	8938	8929	8923	8908	8891	8896	8916	8937	8960	8993	9023	9051	9069	9080	8982			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JUNE 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				1·7 *		0·9 *		−1·6 *		0·8 *		−0·9 *																
1	1290	1300	1276	1306	1332	1328	1322	1316	1313	1302	1290	1289	1290	1288	1273	1257	1276	1307	1320	1372	1450	1495	1538	1568	1337	−324	1013	1·001669
2	1582	1560	1559	1516	1470	1427	1382	1394	1410	1327	1242	1294	1348	1346	1321	1302	1249	1248	1220	1240	1308	1320	1360	1400	1368	−352	1016	1644
3	1390	1402	1420	1417	1410	1391	1370	1373	1380	1371	1361	1355	1350	1342	1320	1290	1268	1248	1230	1230	1260	1305	1348	1378	1342	−408	934	2322
4	1380	1385	1408	1412	1413	1404	1393	1394	1398	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	1373	1347	1324	1302	1300	1280	1248	1200	1169	1170	1153	1190	1280	1320	1358	1317	−427	890	2686
6	1398	1375	1374	1370	1363	1361	1358	1336	1317	1327	1335	1326	1318	1319	1308	1299	1292	1291	1250	1280	1305	1350	1375	1375	1333	−452	881	2760
7	1377	1380	1363	1358	1350	1351	1351	1354	1361	1356	1349	1344	1340	1300	1276	1230	1220	1207	1196	1205	1235	1260	1278	1305	1306	−442	864	2901
8	1338	1352	1355	1349	1339	1335	1330	1322	1317	1312	1305	1302	1300	1290	1268	1232	1190	1132	1124	1165	1223	1255	1300	1335	1282	−427	855	2975
9	1330	1320	1302	1290	1275	1259	1241	1228	1218	1233	1247	1218	1190	1193	1210	1208	1199	1202	1200	1284	1345	1410	1415	1432	1269	−418	851	3008
10	1400	1391	1402	1391	1376	1365	1353	1343	1337	1329	1320	1310	1302	1288	1260	1233	1190	1143	1124	1148	1188	1223	1250	1267	1289	−404	885	2727
11	1257	1255	1258	1252	1242	1242	1241	1227	1217	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1217	1216	1212	1210	1198	1198	1160	1118	1080	1051	1080	1124	1170	1242	1275	1198	−339	859	2942
13	1260	1265	1260	1267	1271	1274	1276	1266	1260	1255	1249	1241	1235	1218	1183	1160	1134	1095	1090	1154	1170	1185	1188	1225	1216	−338	878	2785
14	1290	1362	1366	1403	1436	1419	1400	1386	1375	1358	1340	1319	1300	1289	1262	1230	1169	1097	1072	1080	1142	1190	1223	1290	1283	−336	947	2215
15	1355	1410	1350	1345	1336	1329	1320	1304	1292	1272	1250	1264	1280	1257	1230	1175	1123	1087	1129	1133	1157	1168	1200	1240	1250	−330	920	2438
16	1255	1220	1214	1219	1220	1233	1245	1227	1213	1217	1220	1223	1227	1218	1150	1100	1038	990	996	1022	1040	1100	1125	1138	1160	−288	872	2834
17	1174	1190	1179	1191	1200	1208	1215	1208	1205	1193	1180	1184	1190	1180	1157	1148	1110	1048	1012	1040	1070	1089	1146	1150	1153	−270	883	2743
18	1158	1177	1182	1173	1160	1162	1162	1144	1130	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	1167	1202	1185	1170	1151	1128	1092	1071	1033	1018	1048	1080	1100	1165	1213	1136	−280	856	2967
20	1225	1220	1184	1214	1240	1230	1219	1220	1225	1213	1200	1186	1173	1162	1106	1100	1069	1088	1098	1095	1102	1125	1180	1222	1171	−311	860	2934
21	1205	1210	1222	1222	1218	1238	1257	1247	1241	1253	1263	1237	1212	1179	1171	1159	1085	1048	1025	1065	1060	1125	1188	1230	1182	−330	852	2999
22	1245	1262	1232	1235	1230	1224	1217	1192	1170	1196	1220	1214	1210	1208	1235	1231	1198	1220	1194	1173	1179	1213	1267	1290	1219	−330	889	2694
23	1310	1320	1310	1320	1326	1330	1332	1319	1310	1312	1313	1292	1272	1250	1210	1191	1170	1148	1122	1132	1155	1180	1248	1280	1256	−350	906	2554
24	1290	1297	1289	1292	1292	1281	1269	1263	1260	1258	1255	1247	1240	1230	1208	1172	1143	1112	1090	1097	1128	1150	1179	1178	1218	−342	876	2801
25	1218	1242	1244	1239	42·0	1221	1210	1208	1209	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	1190	1169	1138	1108	1159	1131	1132	1014	1095	1123	1183	1237	1231	1262	1295	1187	−347	840	3099
27	1300	1302	1300	1299	1295	1274	1252	1287	1326	1304	1280	1253	1228	1250	1203	1202	1131	1161	1175	1160	1224	1292	1373	1373	1260	−359	901	2598
28	1333	1350	1320	1315	1307	1305	1302	1289	1280	1266	1250	1249	1250	1248	1217	1180	1150	1115	1120	1133	1187	1233	1330	1318	1252	−369	883	2743
29	1317	1320	1308	1303	1295	1287	1277	1277	1280	1272	1262	1251	1242	1245	1218	1205	1133	1125	1120	1132	1163	1202	1223	1249	1238	−351	887	2711
30	1260	1261	1253	1239	1222	1217	1210	1205	1203	1197	1190	1197	1206	1200	1162	1130	1060	1010	987	990	1023	1105	1200	1237	1165	−321	844	3066
Means.....	1305	1313	1305	1305	1302	1296	1289	1282	1279	1272	1264	1256	1250	1243	1219	1195	1154	1135	1125	1146	1183	1221	1266	1293	1246			
Temp. Corrections	−392	−387	−375	−369	−365	−362	−360	−354	−350	−346	−344	−339	−336	−329	−323	−323	−328	−334	−342	−351	−364	−379	−390	−394	.....	−356		
Corrected Means..	913	926	930	936	937	934	929	928	929	926	920	917	914	914	896	872	826	801	783	795	819	842	876	899	.....	.....	890	
Mean Hourly Variations from General Monthly Mean −.60	−23	−36	−40	−46	−47	−44	−39	−38	−39	−36	−30	−27	−24	−24	−6	18	64	89	107	95	71	48	14	−9	.....	$1+\frac{\Delta X}{X}=$	.....	1·002686
	−·0190	−·0298	−·0331	−·0381	−·0389	−·0364	−·0323	−·0314	−·0323	−·0298	−·0248	−·0223	−·0198	−·0198	−·0050	·0148	·0529	·0736	·0884	·0785	·0586	·0396	·0116	−·0074				

JUNE 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	910	908	901	900	900	900	900	899	898	897	897	895	893	892	892	892	895	898	900	900	904	909	915	920	9006			
2	920	917	912	910	908	907	907	905	903	902	902	903	904	900	899	899	900	902	906	910	914	920	926	931	9086			
3	935	938	934	932	930	929	928	925	923	921	919	918	918	913	912	912	914	917	919	922	928	933	940	943	9251			
4	940	940	934	932	931	930	930	929	929	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	928	928	925	923	920	919	919	920	921	928	930	936	943	950	955	9308			
6	956	952	947	943	940	940	940	938	937	934	932	931	930	930	927	928	929	930	932	936	940	947	950	948	9382			
7	948	946	940	938	937	935	934	932	931	930	930	929	928	925	924	924	928	929	932	937	942	948	947	946	9350			
8	942	940	932	931	931	931	931	930	929	927	926	925	924	922	920	920	921	924	929	932	935	940	946	946	9306			
9	942	938	933	931	930	929	928	926	924	922	921	920	920	919	917	919	920	924	928	930	933	938	940	941	9280			
10	941	938	932	931	930	929	929	927	926	924	922	921	920	918	915	914	917	918	919	920	922	922	920	915	9238			
11	912	911	910	910	910	909	909	908	907	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	902	898	896	895	892	892	892	897	898	900	905	910	915	920	918	9048			
13	915	912	908	905	902	901	900	900	900	900	900	898	897	897	897	898	899	900	902	909	910	918	920	920	9045			
14	918	914	910	909	909	906	904	902	901	900	900	900	900	898	897	896	897	899	900	903	905	909	910	910	9040			
15	910	910	910	908	907	906	905	904	903	902	901	900	900	900	897	897	896	896	896	898	900	902	904	903	9023			
16	903	901	900	899	898	897	897	895	893	891	890	890	890	887	882	881	880	880	880	880	882	882	887	890	8898			
17	890	890	887	886	885	885	885	883	882	881	880	880	880	880	879	880	880	880	883	884	887	890	895	896	8845			
18	898	894	890	887	884	884	884	883	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	885	888	886	884	881	880	880	881	882	886	890	893	898	900	903	8876			
20	903	902	900	900	900	899	899	897	896	894	893	891	890	888	886	887	890	890	893	898	900	905	908	910	8966			
21	910	910	909	907	905	903	901	900	900	899	898	897	896	893	891	891	894	898	900	903	905	914	916	916	9023			
22	913	912	909	907	906	904	902	901	901	899	898	898	898	898	893	892	894	896	897	900	902	909	912	917	9024			
23	920	916	911	911	912	912	912	910	909	908	908	905	902	899	898	896	899	900	903	905	910	915	918	918	9082			
24	918	916	913	911	910	909	908	906	905	903	901	900	900	899	898	897	898	900	902	904	907	910	911	911	9057			
25	910	910	909	908	908	907	907	906	905	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	905	906	905	905	902	900	901	902	904	906	908	913	914	915	917	9072			
27	918	920	919	917	915	914	913	911	909	908	907	905	903	901	898	901	903	904	906	908	914	917	920	923	9106			
28	923	923	920	919	918	917	916	913	910	909	908	906	905	902	901	901	903	907	910	913	918	923	928	930	9135			
29	928	922	919	917	915	914	913	911	910	908	907	904	902	900	898	895	895	897	899	902	907	911	913	913	9083			
30	911	910	908	906	905	903	901	900	899	899	900	898	897	894	890	890	890	891	892	895	899	903	907	905	8997			
Means.....	9205	9188	9153	9137	9125	9115	9109	9093	9082	9068	9062	9048	9040	9019	9001	9001	9016	9033	9057	9085	9122	9167	9199	9210	9097			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\,15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JULY 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				3·1 *		1·1 *		−1·3 *		2·1 *		−0·2 *																
1	1226	1219	1212	1218	1218	1200	1179	1188	1200	1206	1208	1201	1194	1182	1150	1126	1100	1070	1065	1075	1096	1150	1182	1204	1170	−313	857	1·002959
2	1205	1178	1202	1219	1229	1236	1240	1242	1247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	1232	1212	1211	1210	1200	1190	1163	1120	1112	1120	1110	1153	1195	1237	1250	1196	−337	859	2942
4	1254	1230	1227	1226	1219	1221	1220	1208	1198	1206	1210	1205	1200	1177	1151	1118	1082	1040	1033	1060	1085	1118	1151	1161	1167	−326	841	3091
5	1178	1172	1150	1141	1125	1127	1127	1117	1110	1105	1095	1087	1080	1075	1040	1010	967	903	877	892	944	999	1080	1100	1063	−249	814	3314
6	1101	1089	1088	1095	1096	1091	1085	1094	1105	1100	1090	1063	1037	1025	1008	980	949	900	876	880	917	954	989	1040	1027	−211	816	3297
7	1065	1087	1078	1077	1070	1076	1080	1079	1080	1066	1047	1033	1020	1035	1012	988	955	913	892	907	890	893	945	974	1011	−211	800	3430
8	1002	1070	1120	1153	1180	1165	1148	1128	1110	1108	1102	1094	1087	1060	1022	995	943	930	920	920	937	974	1005	1060	1051	−222	829	3190
9	1036	1073	1070	1077	1077	1087	1095	1089	1085	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	1112	1135	1132	1129	1100	1087	1090	1058	1038	993	1030	1042	1089	1122	1156	1083	−205	878	2785
11	1150	1152	1152	1152	1145	1130	1112	1109	1108	1106	1100	1097	1095	1087	1058	1050	1009	985	959	1010	1076	1109	1200	1248	1100	−216	884	2735
12	1228	1262	1252	1239	1220	1191	1160	1154	1150	1172	1189	1205	1222	1299	1360	1310	1220	1300	1104	1300	1334	1295	1303	1322	1241	−241	1000	1777
13	1330	1332	1327	1322	1310	1302	1292	1288	1287	1260	1229	1238	1247	1230	1242	1210	1170	1130	1092	1100	1140	1177	1213	1243	1238	−249	989	1867
14	1254	1252	1250	1249	1242	1252	1259	1232	1208	1214	1215	1212	1210	1200	1195	1172	1148	1128	1110	1059	1102	1130	1179	1185	1194	−251	943	2248
15	1214	1202	1210	1238	1260	1264	1265	1255	1247	1236	1220	1212	1204	1182	1150	1112	1097	1054	1076	1090	1103	1140	1154	1167	1181	−252	929	2363
16	1182	1198	1196	1201	1200	1199	1196	1192	1190	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	1201	1208	1205	1202	1170	1118	1133	1100	1060	1070	1052	1113	1185	1219	1246	1168	−275	893	2661
18	1249	1240	1252	1256	1253	1248	1240	1229	1220	1231	1237	1223	1210	1190	1172	1160	1140	1119	1078	1081	1110	1144	1192	1238	1196	−319	877	2793
19	1258	1251	1258	1257	1250	1241	1230	1219	1210	1209	1203	1195	1187	1178	1154	1123	1079	1010	1001	1049	1097	1149	1190	1210	1175	−321	854	2983
20	1220	1210	1229	1237	1238	1233	1225	1216	1210	1210	1205	1200	1195	1183	1160	1140	1129	1126	1118	1120	1112	1140	1170	1193	1184	−323	861	2926
21	1206	1195	1180	1190	1194	1191	1185	1181	1180	1176	1167	1159	1152	1145	1075	1028	995	957	970	1002	1060	1099	1130	1188	1125	−331	794	3479
22	1230	1293	1322	1333	1338	1345	1350	1304	1260	1252	1240	1227	1215	1190	1162	1140	1115	1075	1040	1064	1110	1109	1159	1202	1211	−310	901	2595
23	1250	1290	1282	1311	1334	1306	1275	1256	1240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	1203	1162	1166	1170	1160	1142	1120	1084	1019	982	979	1020	1068	1120	1170	1171	−291	880	2768
25	1200	1208	1191	1193	1189	1181	1170	1139	1110	1121	1128	1124	1120	1108	1100	1093	1030	937	892	915	970	1038	1090	1122	1099	−265	834	3149
26	1138	1147	1138	1143	1142	1132	1120	1119	1120	1128	1132	1136	1140	1128	1107	1096	1078	1075	1059	1032	1070	1098	1137	1162	1116	−257	859	2942
27	1178	1179	1171	1179	1180	1172	1162	1139	1118	1131	1140	1134	1128	1117	1104	1056	1010	970	960	986	1000	1038	1065	1100	1101	−257	844	3066
28	1118	1139	1149	1156	1156	1154	1149	1145	1144	1139	1130	1126	1122	1113	1100	1090	1057	1045	1027	1038	1042	1060	1090	1140	1110	−254	856	2967
29	1158	1139	1131	1134	1131	1133	1132	1117	1105	1105	1100	1094	1088	1091	1092	1090	1063	1032	1020	1042	1097	1127	1180	1172	1107	−249	858	2951
30	1150	1158	1156	1156	1150	1145	1137	1130	1125	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	1135	1141	1136	1132	1122	1089	1038	990	978	1018	1062	1127	1170	1157	1165	1115	−257	858	2951
Means.....	1184	1191	1192	1198	1198	1193	1186	1176	1168	1168	1163	1158	1154	1144	1125	1101	1065	1035	1014	1033	1067	1102	1141	1170	1139			
Temp. Corrections	−296	−292	−286	−282	−279	−275	−272	−269	−267	−263	−262	−256	−252	−246	−243	−243	−246	−251	−260	−266	−275	−286	−293	−295	.....	−269		
Corrected Means.	888	899	906	916	919	918	914	907	901	905	901	902	902	898	882	858	819	784	754	767	792	816	848	875	.....	.....	870	
Mean Hourly Variations from General Monthly Mean. = ·00	−18	−20	−36	−46	−49	−48	−44	−37	−31	−35	−31	−32	−32	−28	−12	12	51	86	116	103	78	54	22	−5		$1+\frac{\Delta X}{X}=$	.....	1·002851
	−0149	−0240	−0298	−0381	−0405	−0397	−0364	−0306	−0256	−0289	−0256	−0265	−0265	−0231	−0100	0100	0421	0711	0959	0851	0644	0446	0182	−0041	.. ...			

JULY 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	905	902	902	901	900	899	898	897	897	896	895	894	893	891	890	890	892	892	894	895	899	902	906	906	8973			
2	905	904	902	901	901	900	899	898	897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	901	906	904	903	900	900	900	900	902	905	908	912	915	919	920	9043			
4	920	917	912	910	909	908	907	904	901	901	901	899	898	895	892	891	890	892	895	896	897	899	897	893	9010			
5	892	890	887	883	880	880	880	879	879	877	875	873	872	871	870	869	870	872	876	878	880	880	882	882	8782			
6	878	872	870	870	870	870	870	868	867	864	862	861	861	861	861	861	862	864	868	869	870	870	872	870	8671			
7	870	870	870	870	870	870	870	868	867	865	863	862	861	860	860	860	860	863	867	868	871	874	876	876	8671			
8	876	874	873	873	873	873	873	872	871	870	870	869	869	867	867	866	867	868	869	870	870	870	871	872	8705			
9	871	871	871	870	870	870	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	865	861	860	860	860	859	860	859	860	860	862	867	869	868	870	8655			
11	870	870	870	870	870	870	870	869	869	867	865	863	862	862	861	861	862	864	868	870	871	878	880	882	8685			
12	882	881	880	880	880	879	878	877	877	876	875	873	871	869	868	868	869	870	872	874	876	880	883	884	8759			
13	886	885	883	881	880	880	880	880	880	877	875	874	873	871	870	871	871	873	876	879	880	883	886	886	8783			
14	885	882	882	882	882	880	879	879	879	878	878	876	875	872	870	871	872	873	878	880	883	886	886	886	8789			
15	886	886	886	885	884	882	880	880	880	878	877	876	875	873	872	872	872	873	876	878	880	882	884	884	8792			
16	884	884	883	881	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	882	885	884	883	882	881	883	883	884	888	890	895	900	904	905	8859			
18	905	908	905	904	903	901	900	900	900	899	898	895	893	890	888	889	890	890	893	897	900	906	910	912	8990			
19	912	910	908	905	903	901	900	900	900	900	900	898	896	892	890	892	893	893	895	898	900	900	901	905	8997			
20	905	908	906	905	904	903	903	902	902	899	897	895	894	893	891	891	891	894	897	899	900	906	907	907	9000			
21	907	907	908	909	910	909	908	906	904	903	903	900	897	893	892	891	893	896	898	900	902	907	908	910	9025			
22	910	910	908	904	900	899	898	897	896	894	892	891	890	889	887	886	887	888	890	893	897	899	902	905	8963			
23	906	904	901	899	898	895	892	891	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	888	887	885	883	882	882	880	880	882	885	887	890	895	897	900	8908			
25	899	897	892	891	890	887	885	882	880	880	880	878	876	872	874	874	875	877	878	880	883	887	889	890	8832			
26	889	888	887	885	884	882	881	880	880	879	879	877	875	872	872	873	874	875	878	880	883	885	888	890	8807			
27	890	889	887	884	882	881	880	880	880	879	878	877	877	875	872	873	876	877	878	880	882	887	888	888	8808			
28	888	887	882	881	881	879	878	878	878	877	877	877	877	873	871	872	873	875	877	881	885	887	890	889	8797			
29	888	886	882	881	880	878	877	876	875	874	874	872	871	871	870	872	872	874	877	880	882	886	890	890	8783			
30	888	885	884	883	882	880	879	878	878	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	879	880	878	877	876	874	874	875	878	880	880	884	888	889	888	8807			
Means.....	8922	8910	8893	8880	8872	8860	8852	8843	8837	8826	8820	8804	8793	8774	8763	8765	8772	8788	8815	8835	8861	8893	8913	8919	8842			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of Interpolations.

Correction for 1° Faht. = 3·3963 sed.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

AUGUST 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14.41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·4		0·7		−0·9		−1·3		−0·9																
1	1137	1140	1138	1143	1139	1140	1140	1133	1128	1127	1129	1121	1115	1110	1112	1090	1045	990	980	972	996	1040	1099	1140	1096	−253	843	1·003074
2	1150	1161	1159	1153	1138	1136	1132	1130	1130	1120	1112	1100	1090	1083	1060	1050	1010	1000	1020	1045	1090	1110	1123	1132	1101	−253	848	3033
3	1152	1170	1182	1190	1190	1174	1156	1146	1138	1139	1142	1121	1102	1088	1070	1059	1048	1040	1030	998	1019	1043	1078	1108	1108	−248	860	2934
4	1127	1132	1133	1135	1128	1126	1123	1120	1118	1109	1102	1095	1090	1085	1053	1020	980	968	970	1000	1025	1086	1140	1152	1084	−261	823	3239
5	1160	1147	1138	1134	1122	1116	1108	1103	1100	1097	1097	1090	1085	1080	1057	1026	980	945	970	977	1000	1014	1020	1045	1067	−259	808	3364
6	1062	1070	1062	1065	1059	1047	1034	1032	1031	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	1070	1112	1110	1110	1095	1100	1122	1095	1070	1090	1080	1065	1090	1102	1120	1079	−250	829	3190
8	1133	1145	1138	1143	1139	1146	1152	1135	1120	1117	1116	1108	1102	1100	1090	1110	1032	988	978	1066	1072	1102	1135	1150	1105	−257	848	3033
9	1142	1149	1165	1167	1160	1151	1140	1124	1110	1105	1102	1098	1095	1090	1073	1030	1006	965	940	985	1018	1052	1080	1092	1085	−239	846	3049
10	1121	1142	1142	1141	1132	1131	1128	1114	1102	1098	1097	1092	1088	1080	1062	1033	960	920	900	943	960	1000	1030	1044	1061	−212	849	3024
11	1059	1062	1067	1072	1068	1060	1050	1049	1050	1044	1040	1027	1015	1010	990	963	910	883	860	880	912	935	960	987	998	−172	826	3215
12	1028	1037	1032	1043	1045	1042	1038	1033	1030	1030	1032	1020	1010	1000	984	960	935	915	905	935	957	980	1005	1015	1000	−154	846	3049
13	1020	1031	1027	1029	1022	1016	1009	1006	1004	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	1026	1050	1050	1052	1032	1018	973	940	903	907	938	975	1007	1030	1048	1005	−179	826	3215
15	1052	1035	1040	1044	1040	1030	1019	1011	1005	998	993	992	992	982	970	939	905	886	882	920	964	1000	1045	1050	991	−190	801	3422
16	1046	1018	1027	1037	1038	1020	1000	989	980	979	980	982	985	980	988	926	898	840	826	781	820	833	860	915	948	−186	762	3743
17	960	1010	1030	1028	1018	1011	1002	1008	1016	1014	1014	1006	1000	1012	998	962	918	888	890	890	910	960	980	1006	980	−188	792	3495
18	1022	1020	1016	1030	1035	1041	1045	1042	1040	1034	1030	1027	1025	1010	992	945	918	885	880	872	909	921	915	977	985	−186	799	3438
19	1037	1013	997	1015	1025	1048	1070	1079	1090	1083	1079	1045	1013	1020	1070	1062	1013	975	970	990	1020	1071	1085	1130	1042	−200	842	3082
20	1155	1127	1112	1123	1125	1150	1174	1141	1110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	1095	1082	1094	1108	1100	1080	1038	977	991	958	998	1047	1108	1090	1062	1085	−216	869	2859
22	1094	1132	1125	1102	1070	1076	1080	1053	1027	1042	1060	1065	1072	1057	1046	1010	977	898	920	900	928	970	1032	1065	1033	−199	834	3149
23	1071	1080	1075	1092	1100	1090	1079	1079	1080	1064	1050	1057	1065	1048	1048	1015	960	918	903	890	928	999	1040	1082	1034	−209	825	3223
24	1115	1124	1102	1109	1108	1110	1110	1098	1088	1088	1090	1089	1090	1078	1060	1040	975	955	930	964	980	997	1030	1090	1059	−224	835	3140
25	1101	1077	1070	1100	1121	1127	1131	1109	1088	1084	1082	1083	1085	1082	1077	1061	995	1000	958	982	1005	1044	1080	1100	1068	−224	844	3066
26	1132	1138	1138	1143	1140	1119	1097	1109	1122	1095	1070	1090	1112	1086	1092	1070	1029	990	997	1030	1047	1081	1145	1205	1095	−231	864	2901
27	1197	1160	1190	1191	1184	1186	1186	1172	1160	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	1147	1136	1123	1112	1107	1090	1047	978	935	932	970	1000	1051	1100	1120	1103	−258	845	3057
29	1135	1127	1123	1134	1136	1139	1140	1135	1132	1130	1130	1119	1110	1105	1103	1081	1055	1038	1046	1068	1082	1090	1087	1100	1106	−267	839	3107
30	1099	1107	1105	1116	1119	1110	1100	1098	1097	1093	1092	1084	1078	1070	1050	1022	1082	975	985	1030	1045	1069	1086	1092	1075	−262	813	3322
31	1083	1079	1087	1094	1092	1101	1109	1109	1110	1113	1118	1105	1093	1105	1080	1031	974	955	965	1002	1015	1057	1080	1120	1070	−283	787	3537
Means.....	1096	1098	1097	1103	1100	1098	1095	1087	1082	1079	1079	1074	1070	1063	1052	1025	985	952	948	967	992	1026	1054	1080	1054			
Temp. Corrections	-248	-246	-236	-232	-230	-228	-227	-224	-223	-219	-216	-212	-210	-205	-200	-199	-203	-209	-217	-227	-235	-242	-247	-250	.....	−224		
Corrected Means.	848	852	861	871	870	870	868	863	859	860	863	862	860	858	852	826	782	743	731	740	757	784	807	830	.....	... .	830	
Mean Hourly Variations from General Monthly Mean. = ·00	-18	-22	-31	-41	-40	-40	-38	-33	-29	-30	-33	-32	-30	-28	-22	4	48	87	99	90	73	46	23	00	.....	$1+\frac{\Delta X}{X}=$	.....	1·003182
	-0149	-0182	-0256	-0339	-0331	-0331	-0314	-0273	-0240	-0248	-0273	-0265	-0248	-0231	-0182	0033	0397	0719	0818	0744	0603	0381	0190	0000				

AUGUST 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	888	888	884	882	880	878	877	876	876	875	875	874	873	873	873	872	873	877	878	881	886	888	890	890	8795			
2	890	890	887	885	883	883	883	882	882	879	876	873	871	870	870	872	872	874	877	879	880	883	885	884	8796			
3	883	885	883	881	880	879	879	877	876	874	873	871	870	870	869	869	870	873	877	880	882	886	889	890	8778			
4	890	890	886	885	884	884	884	882	880	879	879	877	875	874	872	872	873	875	880	883	887	889	890	890	8817			
5	890	890	889	896	884	883	883	881	880	880	880	878	876	875	873	872	874	877	880	880	880	885	887	888	8813			
6	889	888	883	882	881	881	881	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	876	872	871	870	870	868	869	870	872	876	880	884	885	887	887	8784			
8	888	887	883	882	881	880	880	879	879	878	877	876	875	875	872	872	874	878	880	885	889	890	890	890	8808			
9	888	886	880	879	879	879	879	878	878	875	873	871	870	869	867	867	868	868	870	873	875	878	878	878	8753			
10	878	879	877	875	874	872	870	870	870	870	870	870	870	867	861	860	858	858	858	859	860	860	863	865	8673			
11	865	864	860	860	860	859	859	858	857	855	853	852	852	850	848	848	849	850	853	857	858	857	855	855	8556			
12	854	853	850	850	850	850	850	850	850	849	848	846	845	845	843	843	846	848	850	854	858	859	860	860	8505			
13	861	861	858	858	858	858	858	857	856	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	856	856	855	855	854	852	852	852	852	855	858	860	864	868	868	8576			
15	866	865	861	860	860	859	859	858	858	858	858	858	858	855	855	855	856	858	860	865	868	870	874	873	8611			
16	871	870	865	862	860	860	861	860	860	859	858	857	857	857	855	852	854	855	856	858	859	860	862	864	8597			
17	864	864	861	860	860	860	860	859	858	858	858	857	856	855	855	856	858	860	862	865	865	865	866	866	8603			
18	867	865	861	860	860	860	860	859	859	858	858	856	855	852	850	853	855	858	860	861	864	866	868	868	8597			
19	868	868	863	862	861	861	861	860	860	860	860	859	859	858	858	859	860	863	866	869	870	872	875	878	8638			
20	878	877	871	870	870	869	869	868	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	869	870	869	868	866	864	864	863	865	865	867	868	869	869	870	8686			
22	869	869	867	866	865	865	865	865	865	864	864	862	860	860	860	858	857	857	858	860	864	867	868	868	8635			
23	869	869	868	868	868	867	867	867	867	866	865	863	862	860	860	861	863	865	867	868	870	870	872	876	8666			
24	879	880	879	877	876	875	874	873	872	871	870	870	870	868	865	863	864	865	867	868	870	870	870	870	8711			
25	870	870	870	870	870	870	870	869	868	868	868	868	868	865	865	866	867	869	872	877	880	882	882	882	8711			
26	882	880	876	875	874	872	871	870	870	869	868	868	869	867	865	863	868	869	870	874	879	882	887	886	8731			
27	885	880	880	881	882	882	882	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	881	882	881	880	880	877	875	874	875	878	880	883	887	887	888	8809			
29	889	889	889	888	887	886	886	886	886	884	882	881	880	879	875	876	875	877	880	883	886	887	887	888	8836			
30	889	890	887	886	885	884	884	883	882	880	879	878	877	875	872	872	874	877	880	881	885	889	890	892	8821			
31	893	892	891	890	890	890	890	889	889	886	883	882	882	880	880	880	881	884	888	890	893	895	900	902	8883			
Means.....	8779	8774	8744	8733	8727	8721	8719	8710	8706	8695	8687	8675	8668	8655	8639	8637	8647	8666	8690	8717	8742	8761	8777	8784	8711			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

SEPTEMBER 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				3·9 *		1·4 *		2·6 *		1·3 *		−1·7 *																
1	1134	1140	1143	1157	1164	1178	1190	1186	1177	1165	1150	1103	1060	1019	969	1110	1074	1070	1020	1236	1520	1590	1593	1540	1195	−306	889	1·002694
2	1503	1460	1578	1587	1588	1536	1482	1423	1358	1371	1382	1298	1218	1338	1367	1368	1322	1375	1350	1420	1462	1460	1480	1532	1427	−324	1103	0925
3	1582	1626	1587	1560	1526	1479	1430	1423	1410	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	1336	1260	1257	1258	1232	1198	1157	1094	1068	1060	1110	1160	1200	1231	1240	1312	−334	978	1959
5	1245	1220	1221	1228	1228	1223	1216	1218	1215	1214	1210	1202	1198	1190	1186	1160	1115	1057	1032	1022	1058	1155	1207	1268	1179	−309	870	2851
6	1337	1399	1418	1447	1469	1413	1355	1343	1325	1312	1297	1276	1258	1249	1232	1213	1169	1140	1092	1055	1070	1146	1170	1183	1265	−283	982	1925
7	1179	1160	1162	1170	1171	1171	1168	1162	1150	1140	1127	1131	1138	1144	1147	1121	1070	1010	970	945	972	1028	1100	1132	1111	−236	875	2809
8	1165	1162	1168	1173	1170	1167	1162	1157	1147	1145	1140	1134	1132	1122	1110	1082	1020	933	893	900	930	986	1040	1097	1089	−237	852	2999
9	1090	1082	1100	1108	1108	1110	1110	1108	1100	1107	1112	1101	1093	1090	1088	1050	982	955	930	942	970	1002	1045	1082	1061	−224	837	3124
10	1100	1104	1091	1094	1089	1091	1090	1082	1069	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	1081	1090	1089	1092	1092	1072	1045	1018	987	998	1030	1073	1095	1085	1093	1073	−225	848	3033
12	1125	1133	1121	1113	1098	1100	1099	1096	1087	1084	1078	1072	1069	1060	1055	1042	1000	976	972	995	1040	1063	1065	1080	1068	−233	835	3140
13	1095	1090	1098	1108	1110	1098	1084	1087	1084	1076	1065	1055	1048	1037	1048	1031	985	970	994	1019	1032	1022	1062	1065	1057	−241	816	3297
14	1073	1070	1084	1111	1131	1129	1125	1126	1122	1110	1095	1083	1074	1060	1038	998	973	950	938	1002	1060	1094	1125	1122	1071	−244	827	3207
15	1100	1105	1099	1153	1199	1183	1165	1161	1152	1145	1135	1104	1077	1055	1042	1068	1012	988	980	968	1033	1048	1115	1103	1091	−250	841	3091
16	1158	1112	1106	1120	1126	1132	1135	1124	1107	1102	1095	1086	1080	1073	1049	998	950	922	908	960	997	1040	1112	1095	1066	−229	837	3124
17	1083	1092	1082	1086	1082	1082	1079	1076	1067	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	1136	1202	1182	1165	1177	1182	1190	1121	1067	1110	1105	1144	1195	1199	1205	1130	−234	896	2636
19	1190	1176	1166	1164	1155	1153	1148	1123	1093	1083	1070	1094	1122	1139	1110	1058	1010	969	958	980	997	1033	1060	1088	1089	−221	868	2868
20	1127	1142	1160	1159	1150	1130	1107	1111	1110	1102	1091	1085	1082	1097	1082	1046	988	967	929	950	997	1035	1057	1090	1075	−201	874	2818
21	1110	1110	1101	1106	1104	1098	1090	1101	1107	1098	1087	1091	1099	1100	1105	1090	1005	911	868	858	925	974	1009	1042	1050	−215	835	3140
22	1054	1058	1070	1087	1097	1100	1100	1101	1097	1097	1095	1086	1080	1079	1075	1034	969	902	863	867	920	975	1022	1055	1037	−215	822	3247
23	1063	1068	1069	1087	1097	1095	1090	1088	1081	1087	1090	1082	1077	1068	1065	1019	950	888	842	865	890	937	990	1032	1026	−219	807	3372
24	1040	1038	1046	1052	1051	1043	1033	1034	1030	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	1024	1016	1020	1028	1025	1020	999	964	918	868	945	976	1038	1097	1156	1019	−213	806	3380
26	1218	1245	1270	1254	1231	1214	1195	1175	1150	1136	1120	1113	1110	1105	1088	1065	1032	990	978	980	1025	1068	1066	1080	1121	−231	890	2686
27	1085	1100	1111	1118	1118	1127	1135	1128	1117	1105	1090	1118	1150	1206	1260	1290	1228	1220	1218	1257	1302	1378	1429	1472	1198	−256	942	2256
28	1475	1448	1419	1375	1324	1318	1309	1243	1172	1181	1187	1175	1167	1160	1160	1150	1090	1069	1062	1102	1134	1172	1167	1148	1217	−246	971	2017
29	1143	1165	1178	1183	1181	1181	1179	1182	1180	1175	1167	1147	1130	1128	1112	1110	1058	1012	999	1028	1070	1145	1160	1179	1133	−251	882	2751
30	1192	1183	1198	1198	1191	1171	1148	1148	1142	1131	1118	1124	1133	1130	1115	1041	1002	970	955	993	1659	1107	1160	1192	1117	−267	850	3016
Means.....	1179	1180	1186	1192	1191	1182	1170	1162	1148	1144	1137	1127	1121	1122	1114	1098	1046	1011	992	1021	1070	1115	1148	1168	1126			
Temp. Corrections.	-274	-269	-262	-259	-256	-252	-249	-246	-244	-241	-239	-235	-233	-229	-223	-221	-225	-231	-238	-248	-260	-267	-273	-274	.....	-248		
Corrected Means..	905	911	924	933	935	930	921	916	904	903	898	892	888	893	891	877	821	780	754	773	810	848	875	894	.....	.....	878	
Mean Hourly Variations from General Monthly Mean. =·00	-27	-33	-46	-55	-57	-52	-43	-38	-26	-25	-20	-14	-10	-15	-13	1	57	98	124	105	68	30	3	-16		$\frac{\Delta X}{X}$		
	-0223	-0273	-0381	-0454	-0471	-0430	-0356	-0314	-0215	-0206	-0165	-0116	-0083	-0124	-0108	0008	0471	0810	1025	0967	0562	0248	0025	-0133	.....	$1+\frac{\Delta X}{X}=$	.....	1·002785

SEPTEMBER 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	902	900	898	898	898	898	898	896	895	893	892	891	890	890	888	885	888	888	890	892	898	901	905	909	8951			
2	910	910	907	905	904	903	902	901	900	899	898	896	894	891	890	890	890	893	895	898	903	908	910	914	9005			
3	916	915	911	910	910	908	907	906	905	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	902	900	899	898	893	892	891	894	896	898	900	905	908	909	908	9034			
5	907	904	902	901	900	899	898	896	895	893	892	891	890	889	886	883	887	888	890	893	898	900	905	905	8959			
6	905	902	898	897	897	896	895	894	893	892	891	890	890	889	884	880	880	878	878	875	876	879	880	881	8883			
7	881	880	879	878	878	876	874	873	872	871	871	870	870	870	868	867	869	871	872	876	879	881	881	882	8745			
8	882	882	880	879	879	877	875	875	875	875	875	873	872	870	868	868	868	870	870	872	876	878	879	876	8747			
9	874	873	873	873	873	871	870	870	870	869	869	869	869	868	867	866	868	870	870	872	873	874	876	877	8710			
10	875	874	871	870	870	869	869	868	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	869	870	870	870	870	868	868	867	868	869	871	876	879	880	880	8712			
12	880	880	878	877	877	876	875	873	872	871	870	870	870	868	867	865	868	869	870	875	878	880	880	881	8737			
13	883	881	880	879	879	878	877	876	875	873	872	871	870	870	870	870	872	872	874	878	880	880	882	882	8760			
14	882	881	880	879	878	877	876	875	875	873	872	871	870	870	870	870	870	872	876	880	884	885	885	887	8766			
15	887	885	882	881	880	879	878	877	877	875	874	873	873	870	870	870	871	873	877	882	887	890	890	882	8785			
16	880	879	878	876	875	873	872	871	870	869	869	868	868	868	864	864	867	868	870	873	877	879	880	881	8725			
17	880	878	876	874	873	872	872	871	871	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	871	872	871	871	871	870	869	870	870	872	876	880	882	882	881	8740			
19	881	880	877	876	875	872	870	870	870	869	869	869	869	868	868	864	861	860	862	865	868	870	873	875	8700			
20	875	871	865	863	861	860	860	860	860	860	860	860	860	858	858	858	860	861	863	869	870	873	876	878	8641			
21	876	876	873	872	871	870	870	870	870	869	868	867	866	866	864	862	862	864	864	865	866	866	870	871	8682			
22	870	870	870	870	870	870	871	870	870	870	870	867	865	862	860	860	860	862	866	870	873	873	875	877	8684			
23	877	875	873	872	871	870	870	870	870	869	868	867	866	865	862	862	862	867	869	870	873	874	874	875	8696			
24	874	872	870	870	870	868	866	864	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	862	862	861	860	860	860	860	861	862	867	870	878	881	883	883	8677			
26	882	880	876	875	874	872	871	870	870	869	868	868	868	866	863	865	868	870	871	874	878	884	885	888	8731			
27	889	889	886	885	884	882	880	879	878	876	875	873	871	870	870	871	872	878	880	884	889	891	889	886	8803			
28	885	883	881	880	880	878	877	876	875	874	873	872	871	870	870	870	872	875	878	880	883	884	885	885	8774			
29	885	883	882	881	880	878	877	876	876	875	875	873	872	871	870	870	871	873	879	882	885	890	893	893	8787			
30	892	890	888	887	887	886	886	884	883	882	881	879	878	878	873	874	876	879	880	884	889	890	891	893	8837			
Means.....	8858	8843	8821	8811	8805	8792	8783	8773	8768	8758	8752	8742	8735	8723	8708	8701	8713	8730	8750	8779	8816	8838	8853	8858	8780			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

OCTOBER 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				1·7 *		1·7 *		4·3 *		−1·4 *		−0·9 *																
1	1190	1208	1239	1240	1238	1212	1182	1165	1140	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1117	−264	853	1·002991
2	—	—	—	—	—	—	—	—	—	1122	1107	1104	1102	1095	1083	1048	990	957	945	1002	1055	1110	1142	1128	1065	−275	790	3512
3	1110	1100	1110	1117	1121	1124	1123	1131	1130	1109	1090	1094	1100	1090	1075	1020	970	875	906	925	980	1044	1098	1122	1076	−262	814	3314
4	1110	1100	1102	1104	1103	1119	1131	1130	1120	1120	1122	1110	1099	1087	1098	1077	1019	960	930	952	1013	1061	1080	1083	1026	−253	773	3652
5	1077	1080	1091	1092	1090	1086	1079	1084	1080	1075	1072	1055	1040	1027	1038	997	932	865	857	870	930	986	1040	1071	1015	−256	759	3768
6	1070	1072	1068	1074	1076	1085	1090	1084	1070	1066	1065	1057	1050	1052	1048	1010	947	875	799	832	887	939	990	1044	1012	−252	760	3760
7	1059	1049	1055	1061	1063	1065	1064	1066	1060	1057	1057	1048	1040	1035	1038	1002	947	900	858	862	904	957	1000	1037	1017	−249	768	3694
8	1060	1060	1054	1059	1060	1066	1068	1078	1080	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1056	−234	822	3247
9	—	—	—	—	—	—	—	—	—	1054	1030	1025	1021	1012	1040	1013	980	940	927	900	922	952	982	1024	1027	−218	809	3355
10	1040	1048	1059	1066	1069	1065	1058	1082	1098	1083	1071	1065	1060	1057	1048	1020	991	984	980	990	1042	1090	1137	1150	1003	−213	790	3512
11	1125	1090	1069	1079	1086	1081	1072	1070	1060	1054	1050	1038	1027	1030	1008	967	920	985	890	918	930	983	1037	1080	989	−207	782	3578
12	1088	1072	1053	1057	1058	1068	1074	1061	1040	1026	1015	1006	998	992	985	940	898	890	933	920	928	970	990	1010	1055	−201	854	2983
13	1019	1028	1043	1048	1050	1052	1050	1048	1037	1034	1033	1028	1025	1002	1007	960	917	872	859	864	867	902	968	1019	1060	−198	813	3322
14	998	1037	1013	1040	1063	1104	1142	1150	1150	1116	1085	1087	1090	1090	1067	1042	987	958	950	972	999	1044	1060	1068	1011	−198	813	3322
15	1060	1063	1065	1064	1060	1081	1098	1081	1056	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1042	−188	807	3372
16	—	—	—	—	—	—	—	—	—	1047	1040	1034	1030	1018	1010	978	960	887	879	884	908	960	1002	1009	995	−188	807	3372
17	1042	1080	1100	1081	1058	1056	1050	1048	1037	1006	977	993	1010	1025	1028	985	930	868	830	874	925	922	970	990	1020	−194	826	3215
18	1002	1030	1130	1108	1082	1086	1086	1071	1048	1043	1040	1038	1037	1030	1027	998	940	901	895	923	962	978	1010	1018	977	−174	803	3405
19	1020	1017	1021	1033	1042	1043	1040	1039	1030	1019	1010	1017	1025	1025	1009	961	880	832	859	844	863	901	940	975	978	−169	809	3355
20	988	1000	1032	1060	1084	1068	1048	1049	1042	1040	1040	1022	1005	990	970	932	900	847	831	828	859	899	954	980	937	−114	823	3239
21	994	1009	1060	1079	1095	1072	1045	1032	1010	997	987	983	980	971	925	872	800	762	725	719	768	827	872	898	1055	−201	854	2983
22	918	922	925	930	932	939	942	969	988	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1060	−198	813	3322
23	—	—	—	—	—	—	—	—	—	986	987	993	1000	1005	970	942	839	822	818	810	829	888	949	1006	1042	−188	807	3372
24	1050	1071	1078	1080	1079	1078	1074	1046	1010	995	982	974	967	959	973	955	892	860	854	860	889	944	998	978	1020	−194	826	3215
25	1020	1080	1107	1106	1102	1103	1100	1062	1015	1017	1022	1010	1000	975	960	945	920	900	882	870	881	911	917	938	977	−174	803	3405
26	968	990	1002	1006	1007	1008	1005	1002	990	986	985	982	980	957	940	915	883	797	798	828	858	894	948	995	993	−169	809	3355
27	1005	1022	1012	1004	992	983	970	980	982	966	953	956	960	950	940	903	867	820	780	802	838	881	928	960	947	−128	819	3272
28	962	968	970	967	960	957	950	954	950	945	942	936	932	930	910	866	799	733	700	729	788	837	880	892	936	−119	817	3289
29	890	897	902	923	940	934	925	924	915	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	894	−109	785	3553
30	—	—	—	—	—	—	—	—	—	913	913	911	910	885	858	818	794	718	674	675	710	776	822	830	852	− 61	791	3504
31	809	850	939	1002	1062	1100	1134	1156	1170	1099	1030	1057	1085	1070	1020	938	869	880	910	939	995	1015	1022	1013	1007	− 39	968	2042
Means.....	1026	1036	1050	1057	1060	1063	1062	1060	1050	1038	1027	1024	1022	1014	1003	966	914	873	857	869	905	949	990	1012	997			
Temp. Corrections	−206	−201	−192	−188	−187	−186	−185	−183	−181	−178	−176	−171	−169	−163	−160	−160	−166	−171	−177	183–	−189	−193	−196	−198	.....	−182		
Corrected Means.	820	835	858	869	873	877	877	877	869	860	851	853	853	851	843	806	748	702	680	686	716	756	794	814	.....	.....	815	
Mean Hourly Variations from General Monthly Mean. =·00	−5 −0041	−20 −0165	−43 −0356	−54 −0448	−58 −0479	−62 −0513	−62 −0513	−62 −0513	−54 −0446	−45 −0372	−36 −0298	−38 −0314	−38 −0314	−36 −0298	−28 −0231	9 0074	67 0554	113 0934	135 1115	129 1066	99 0818	59 0488	21 0173	1 0008	.....	$1+\frac{\Delta X}{X}=$	.....	1·003305

OCTOBER 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	893	892	890	889	888	885	882	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8829			
2	—	—	—	—	—	—	—	—	—	879	879	878	878	876	873	872	873	877	880	883	888	890	892	892	8859			
3	894	893	890	890	890	888	886	884	883	881	880	879	879	878	878	879	880	881	885	888	890	893	896	896	8821			
4	895	895	891	889	888	887	886	884	883	881	880	879	878	876	874	873	873	874	876	879	880	882	883	885	8796			
5	886	885	881	880	880	880	880	880	880	879	879	877	876	873	871	871	873	875	878	880	882	886	889	890	8804			
6	890	888	883	882	881	881	881	880	880	879	879	877	876	873	873	873	876	878	878	880	882	885	887	888	8791			
7	888	887	880	880	880	880	880	880	880	878	877	876	875	872	870	871	874	876	878	880	882	882	885	888	8781			
8	887	885	881	880	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8740			
9	—	—	—	—	—	—	—	—	—	878	877	876	875	872	870	871	872	875	877	878	880	880	880	880	8691			
10	880	878	878	876	875	875	875	875	875	874	873	872	872	870	870	868	869	870	871	874	875	876	878	878	8676			
11	878	876	872	871	871	870	870	869	869	868	867	865	863	861	860	861	863	867	868	870	872	875	875	878	8660			
12	878	875	872	871	870	870	870	869	868	866	865	863	861	860	860	860	863	864	866	868	869	870	872	873	8642			
13	873	871	870	869	868	868	868	868	868	866	864	862	861	859	858	859	861	863	864	868	868	868	870	870	8632			
14	870	870	869	868	868	867	867	866	865	863	862	860	859	857	854	856	859	860	861	864	868	868	870	870	8604			
15	870	870	866	865	865	865	865	863	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8620			
16	—	—	—	—	—	—	—	—	—	861	860	860	860	858	857	857	860	860	861	863	865	867	868	868	8563			
17	868	866	862	862	862	861	861	860	860	859	859	856	854	853	854	854	857	858	860	861	863	865	866	868	8549			
18	866	863	860	860	861	861	861	861	861	861	861	860	860	860	860	860	861	863	866	868	868	867	860	860	8387			
19	861	860	860	859	858	858	858	856	855	854	853	854	855	855	851	850	851	852	855	858	858	860	860	860	8353			
20	860	858	861	862	863	862	862	861	860	860	860	857	854	852	851	848	848	848	850	848	848	848	848	848	8400			
21	848	848	843	842	842	842	842	842	842	841	840	838	836	833	832	833	834	835	836	837	836	835	836	836	8418			
22	835	834	830	830	830	830	830	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8426			
23	—	—	—	—	—	—	—	—	—	832	835	834	833	833	833	835	837	838	840	840	841	843	846	848	8402			
24	847	844	841	840	840	840	840	840	840	839	839	837	835	833	833	834	837	838	840	841	842	845	847	848	8370			
25	848	846	844	842	840	840	840	840	840	840	840	839	838	838	839	837	838	840	843	842	846	845	848	849	8230			
26	849	848	845	843	842	842	842	841	840	840	840	839	839	837	837	837	839	840	843	848	848	848	848	848	8164			
27	848	846	841	840	840	840	840	840	840	840	840	839	838	836	833	835	836	837	839	840	842	843	847	845				
28	843	841	840	839	839	839	839	837	836	835	834	833	833	832	832	833	834	836	838	839	840	840	838	838				
29	838	835	832	831	830	830	830	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	825	820	820	820	819	817	816	815	814	814	814	817	818	818	819				
31	819	818	816	814	813	813	813	812	812	811	811	814	817	813	813	815	816	818	820	823	825	824	824	820				
Means.....	8658	8643	8615	8605	8602	8598	8595	8588	8584	8573	8567	8555	8548	8530	8520	8522	8538	8553	8572	8590	8606	8617	8627	8632	8585			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3″·3963 scd.
Ditto to Ther. = −0°·5

$k = a.\text{cotan}.v. = 0{\cdot}0003139 \times \text{cotan}.75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.
Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

NOVEMBER 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{1+\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 16·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				2·4 *		−5·1 *		4·1 *		1·1 *		−1·6 *																
1	1002	1010	990	995	995	1010	1035	1012	980	978	974	966	962	950	920	862	797	753	738	755	810	887	920	913	926	−35	891	1·002678
2	900	895	908	921	930	924	928	922	908	910	909	910	915	905	888	839	798	740	735	760	801	840	860	877	872	−19	853	2991
3	882	879	888	891	890	869	859	879	890	886	879	873	870	860	832	771	715	692	700	743	792	832	858	867	837	− 9	828	3199
4	892	901	932	941	946	919	902	893	875	874	871	869	870	867	848	800	748	670	668	721	780	835	860	869	848	−10	838	3116
5	857	847	850	853	852	850	859	859	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	—	—	—	834	815	807	803	795	799	780	720	687	620	650	690	732	771	794	791	21	812	3330
7	790	781	789	795	796	788	790	780	762	772	780	769	762	760	742	700	650	606	580	600	642	650	693	770	731	64	795	3471
8	800	808	862	878	890	870	860	869	870	880	888	860	835	820	790	758	717	690	692	708	720	710	742	776	804	56	860	2934
9	800	856	918	916	909	915	932	936	931	912	890	867	847	838	882	870	907	893	920	990	1054	1033	998	989	917	57	974	1992
10	1002	1030	1000	1046	1087	1033	990	974	950	948	943	927	915	910	883	844	802	787	790	830	837	871	915	897	925	24	949	2198
11	900	910	899	899	894	876	869	883	889	877	862	866	874	862	848	809	760	725	745	760	790	821	850	871	847	21	868	2868
12	868	868	882	887	888	865	853	853	844	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
13	—	—	—	—	—	—	—	—	—	872	897	892	890	882	857	820	747	730	722	745	811	860	875	880	845	− 2	843	3074
14	870	865	854	854	850	847	854	856	850	852	852	843	838	822	802	772	730	675	660	692	737	772	790	810	806	6	812	3330
15	825	860	850	854	853	846	850	858	858	856	852	849	850	833	818	795	750	717	718	740	770	821	883	905	825	−20	805	3388
16	891	871	886	900	910	895	891	891	882	886	888	891	898	890	870	823	788	750	710	740	815	890	930	972	865	−40	825	3223
17	981	970	928	931	930	918	916	913	902	902	900	900	903	882	860	829	800	770	762	755	840	860	891	890	881	−53	828	3199
18	915	910	930	942	950	945	951	923	887	900	910	902	897	900	890	845	788	730	715	720	752	816	881	927	872	−57	815	3305
19	937	925	931	923	911	905	910	914	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
20	—	—	—	—	—	—	—	—	—	881	850	851	856	840	815	770	737	710	704	699	721	761	810	833	838	−45	793	3487
21	851	860	861	870	875	885	905	891	868	865	860	853	850	837	826	810	768	740	730	750	780	792	800	858	833	−32	801	3422
22	920	947	901	894	882	882	892	906	912	886	858	857	860	850	820	795	743	730	740	731	755	790	820	829	842	− 2	840	3099
23	833	846	854	858	857	847	848	839	821	821	818	807	800	798	760	742	720	700	703	681	710	750	792	810	792	11	803	3405
24	824	831	844	844	840	830	830	836	834	834	832	823	818	815	790	749	730	725	715	701	748	755	813	850	800	2	802	3413
25	822	811	814	816	813	806	809	814	810	806	799	804	812	815	794	772	731	700	692	680	724	748	788	810	783	5	788	3529
26	815	809	819	827	830	826	832	833	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
27	—	—	—	—	—	—	—	—	—	824	820	820	823	815	790	755	753	710	695	705	740	785	810	820	795	−10	785	3553
28	832	825	828	835	838	829	830	831	823	819	812	810	812	808	780	750	732	705	697	707	750	800	819	825	796	− 2	794	3479
29	830	821	829	828	823	816	819	819	810	807	802	802	805	797	770	735	700	670	660	658	695	750	798	802	777	12	789	3520
30	810	812	810	812	810	804	809	816	815	810	803	792	785	790	771	760	732	710	682	680	700	740	773	795	776	13	789	3520
Means.....	871	875	879	885	887	877	878	877	868	865	860	854	852	844	825	791	752	720	711	727	768	804	836	855	832			
Temp. Corrections	−15	−12	−10	−8	−7	−4	−3	0	1	3	4	6	6	9	13	13	9	5	−1	−3	−9	−11	−13	−14	.....	−2		
Corrected Means..	856	863	869	877	880	873	875	877	869	868	864	860	858	853	838	804	761	725	710	724	759	793	823	841	.....	.....	830	
Mean Hourly Variations from General Monthly Mean. = ·00	−26	−33	−39	−47	−50	−43	−45	−47	−39	−38	−34	−30	−28	−23	−8	26	69	105	120	106	71	37	7	−11	.....	$1+\frac{\Delta X}{X}=$	.....	1·003182
	−0215	−0273	−0323	−0389	−0413	−0356	−0372	−0389	−0323	−0314	−0281	−0248	−0231	−0190	−0066	0215	0570	0867	0992	0876	0586	0306	0058	−0091				

NOVEMBER 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	819	819	819	818	818	818	818	818	818	817	817	817	817	816	814	813	812	811	810	810	810	811	812	813	8152			
2	813	812	812	812	812	811	811	811	811	811	811	811	811	810	810	810	810	809	809	808	809	809	809	809	8105			
3	808	808	808	807	807	806	806	807	808	808	808	807	807	805	805	805	805	807	810	810	810	810	810	810	8076			
4	810	809	809	809	809	809	809	808	808	808	808	808	808	806	805	803	805	806	807	808	809	810	810	810	8080			
5	810	809	808	808	808	807	806	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	802	800	799	798	797	795	795	795	794	793	793	791	788	784	784	7989			
7	784	783	783	783	783	784	785	785	785	785	785	785	785	786	788	788	788	788	789	789	790	790	789	789	7862			
8	790	790	790	790	790	789	789	789	789	788	788	788	788	789	789	789	789	788	788	788	786	786	786	786	7885			
9	786	786	786	786	786	785	785	784	784	783	783	783	784	784	783	784	786	789	794	796	798	800	800	801	7882			
10	801	800	799	798	798	798	798	797	797	796	795	794	793	792	793	793	795	797	799	801	802	803	804	804	7978			
11	803	802	802	801	800	800	800	799	798	796	795	794	794	794	792	792	795	798	800	800	802	803	804	806	7988			
12	806	806	802	802	802	801	800	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	804	809	808	808	806	806	805	807	809	810	810	810	810	808	806	8056			
14	806	804	804	803	803	803	803	801	800	800	800	800	800	800	799	799	800	802	805	806	808	809	810	811	8032			
15	811	810	810	810	810	809	809	808	808	808	808	807	807	807	807	808	810	810	813	815	818	819	820	820	8109			
16	820	819	819	818	817	816	815	814	814	814	814	813	812	812	811	813	815	817	819	820	821	822	823	825	8168			
17	825	823	822	821	820	820	820	820	820	819	818	817	817	817	815	817	819	820	821	822	823	824	827	827	8206			
18	827	825	825	824	824	823	822	821	820	820	820	820	820	819	818	817	819	820	821	821	823	824	825	825	8218			
19	825	825	822	821	821	820	819	818	818	818	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	—	818	817	817	816	812	813	814	815	816	817	818	819	819	819	8182			
21	819	818	818	817	817	816	815	815	815	813	812	811	810	810	809	810	812	814	815	815	816	817	817	817	8145			
22	817	815	812	811	811	810	810	808	806	804	802	801	800	799	798	797	797	800	801	803	806	808	808	808	8055			
23	808	807	806	805	805	803	802	801	800	800	800	799	799	797	794	795	797	799	800	802	804	806	808	809	8019			
24	809	807	807	807	807	806	806	804	802	801	801	800	800	800	800	799	800	803	804	806	808	808	808	810	8043			
25	810	809	808	807	806	804	802	801	801	800	799	800	801	801	798	798	799	800	803	803	807	808	810	810	8035			
26	810	809	811	812	813	813	813	811	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	807	805	805	805	802	800	800	802	802	804	807	810	812	813	813	8079			
28	811	810	810	809	808	807	807	806	806	806	806	805	804	802	800	800	800	801	805	805	806	807	808	808	8057			
29	808	807	807	806	806	803	801	800	800	800	800	799	799	798	795	794	796	798	800	800	802	804	808	808	8016			
30	808	805	803	802	802	801	800	800	800	800	800	800	800	798	795	795	798	799	800	802	804	805	807	807	8013			
Means.....	8094	8083	8078	8072	8070	8062	8058	8050	8047	8042	8039	8034	8032	8024	8012	8012	8025	8037	8052	8060	8074	8082	8087	8090	8055			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of Interpolations.

Correction for 1° Faht. = 3″·3963 scd.
Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.
Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

DECEMBER 1853. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				0·8 *		4·1 *		0·1 *		−1·6 *		0·2 *																
1	810	808	809	809	808	813	810	805	800	788	780	764	747	749	731	702	658	630	622	672	728	797	845	823	763	19	782	1·003578
2	830	853	849	839	827	828	821	806	790	794	802	801	800	800	780	761	718	665	648	660	700	765	808	846	783	23	806	3380
3	835	820	825	833	840	839	829	823	817	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	828	842	821	800	807	790	781	750	738	694	700	755	798	840	855	803	29	832	3165
5	840	842	849	855	859	838	809	805	800	789	782	775	768	750	740	729	688	660	648	660	670	712	708	713	762	37	799	3438
6	772	840	920	1112	1302	1275	1240	1235	1230	1203	1179	1159	1138	1109	1069	999	919	870	872	890	915	938	940	977	1046	31	1077	1141
7	1028	1000	970	968	964	972	972	961	950	955	964	934	903	888	882	885	857	850	841	854	840	840	835	845	915	43	958	2124
8	870	882	883	892	900	904	900	889	877	881	888	883	877	862	850	827	800	789	786	798	812	824	820	822	855	40	895	2644
9	830	853	847	849	849	850	842	840	838	835	836	838	840	838	822	798	768	804	749	722	737	773	800	818	816	31	847	3041
10	830	845	847	842	836	832	820	815	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	799	792	787	782	780	742	710	682	641	632	642	660	702	735	755	763	37	800	3430
12	762	780	804	804	803	803	795	785	775	761	750	750	750	702	668	673	638	588	542	532	610	697	755	826	723	46	769	3685
13	894	940	1006	1035	1063	1016	960	930	900	893	890	875	860	842	832	819	793	760	728	738	718	735	806	840	870	56	926	2388
14	865	868	860	851	841	839	828	828	827	822	820	821	822	812	790	778	730	690	650	664	682	745	795	830	794	64	858	2951
15	855	827	820	817	813	811	800	800	800	788	780	790	800	790	770	740	730	690	678	677	694	720	763	828	774	67	841	3091
16	844	890	905	877	848	836	815	819	822	809	800	798	795	810	773	748	729	710	718	698	692	733	775	826	795	68	863	2909
17	870	912	916	902	887	882	868	855	842	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	819	800	801	802	777	768	742	712	677	652	647	657	698	750	787	793	62	855	2975
19	810	807	811	807	802	793	775	768	760	753	749	757	764	760	749	739	712	678	658	622	627	656	710	762	743	67	810	3347
20	765	790	794	796	796	805	805	799	793	780	770	746	722	708	656	683	700	652	620	620	592	605	597	610	717	79	796	3463
21	662	747	866	892	916	860	795	788	780	793	810	811	812	797	761	731	688	678	670	680	700	723	742	780	770	93	863	2909
22	830	803	800	806	810	813	807	810	813	803	797	784	770	763	758	749	739	682	666	637	680	664	715	738	760	82	842	3082
23	730	755	790	816	840	839	830	819	808	800	795	778	760	742	740	710	740	732	709	717	720	740	733	772	767	91	858	2951
24	800	805	791	797	801	802	795	787	778	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	763	752	735	718	710	720	712	709	700	689	660	677	698	703	716	742	91	833	3157
26	730	741	741	754	766	762	749	756	762	749	739	736	732	727	732	724	729	698	684	670	682	740	762	757	734	87	821	3256
27	745	750	754	758	760	755	742	747	752	747	745	747	748	738	722	710	688	650	644	668	718	736	741	723	729	59	788	3529
28	715	734	763	788	812	793	766	775	783	768	756	755	753	740	717	690	695	667	655	730	737	772	808	778	748	54	802	3413
29	770	783	780	791	800	824	839	815	790	773	760	758	756	738	710	680	662	650	652	646	680	715	730	740	743	64	807	3372
30	776	793	772	772	770	774	769	767	765	761	760	752	743	737	726	714	682	668	678	715	760	795	778	767	750	61	811	3339
Means.....	810	826	837	849	858	852	838	832	825	817	813	806	799	788	769	751	728	701	684	689	709	743	769	790	785			
Temp. Corrections.	36	40	45	49	50	52	52	54	54	58	60	65	66	72	79	83	79	74	66	58	51	46	41	38	.....	57		
Corrected Means..	846	866	882	898	908	904	890	886	879	875	873	871	865	860	848	834	807	775	750	747	760	789	810	828	.....	.....	842	
Mean Hourly Variations from General Monthly Mean. = ·00	−4 −0033	−24 −0198	−40 −0331	−56 −0463	−66 −0556	−62 −0513	−48 −0397	−44 −0364	−37 −0306	−33 −0273	−31 −0256	−29 −0240	−23 −0190	−18 −0149	−6 −0050	8 0066	35 0289	67 0554	92 0761	95 0785	82 0678	53 0438	32 0265	14 0116	.....	$1+\frac{\Delta X}{X}=$	.....	1·003082

DECEMBER 1853. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	807	806	802	801	801	801	801	800	800	799	799	797	796	793	791	791	795	796	798	800	801	803	803	803	7993			
2	803	802	801	801	801	800	800	800	800	799	799	798	798	795	792	791	791	792	795	797	800	800	802	802	7983			
3	802	801	800	799	799	798	798	797	797	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	797	797	794	792	790	790	790	790	791	794	797	799	800	801	802	7965			
5	802	800	799	798	798	798	798	796	794	793	793	791	790	790	787	786	788	789	790	793	795	795	797	799	7941			
6	798	798	795	795	796	797	799	799	799	797	796	797	798	796	792	790	790	790	791	794	795	797	799	800	7958			
7	800	799	797	796	796	794	793	791	790	789	789	788	788	788	787	786	788	788	790	792	795	797	798	799	7924			
8	799	798	796	795	794	793	793	792	792	792	792	791	790	788	789	789	788	790	791	794	797	798	799	800	7933			
9	800	800	798	796	795	795	795	794	794	794	794	794	795	793	792	791	792	794	797	798	800	800	802	802	7960			
10	802	801	800	799	798	797	797	797	797	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	794	791	790	790	790	786	783	787	789	790	792	795	796	797	798	7940			
12	798	798	795	793	792	791	791	791	791	790	790	790	790	788	786	784	785	788	790	790	794	795	796	798	7914			
13	798	797	795	794	793	791	790	789	788	788	788	787	787	783	780	780	781	783	788	788	787	790	790	792	7886			
14	791	790	790	789	788	787	786	786	786	786	786	785	785	783	780	780	780	782	783	787	786	790	791	791	7862			
15	790	790	790	788	787	787	787	786	786	785	785	783	782	781	779	778	780	780	782	785	786	787	790	790	7852			
16	790	790	789	788	787	786	785	785	785	785	785	783	782	780	779	777	779	780	782	785	786	787	790	792	7849			
17	791	790	790	788	787	787	787	786	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	786	787	786	786	782	779	778	780	781	784	788	791	791	793	795	7866			
19	795	792	791	790	789	788	787	786	786	785	784	782	780	780	778	777	778	780	781	783	785	788	790	790	7852			
20	790	790	786	785	785	785	785	784	783	782	781	780	779	778	773	771	773	777	778	780	782	785	785	785	7818			
21	785	785	784	782	781	780	779	779	779	778	777	776	776	773	769	768	768	771	773	776	778	780	780	784	7775			
22	784	782	783	783	784	784	785	784	784	783	783	781	780	776	775	772	773	776	778	780	783	783	784	785	7810			
23	784	783	780	780	780	779	779	778	778	778	778	775	773	772	771	771	772	773	778	780	782	784	785	787	7783			
24	787	785	783	782	781	785	790	789	789	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	780	772	771	770	770	769	768	770	770	772	775	777	779	780	780	7781			
26	780	780	778	778	778	777	776	777	778	778	778	777	777	777	777	777	778	778	780	782	784	786	788	789	7795			
27	790	789	788	788	788	786	785	785	785	784	784	784	785	785	783	782	783	787	790	791	792	794	796	796	7875			
28	797	794	793	792	791	790	790	790	790	789	788	787	787	785	782	780	780	782	786	789	790	793	795	795	7890			
29	795	792	790	790	790	789	788	788	788	786	784	783	782	780	779	778	778	778	780	785	788	791	793	792	7861			
30	793	792	790	789	789	789	789	789	789	787	786	785	785	783	781	779	778	782	785	785	789	790	790	792	7869			
Means.....	7943	7932	7917	7907	7903	7898	7897	7892	7890	7878	7872	7860	7855	7838	7818	7807	7817	7833	7856	7879	7899	7915	7928	7938	7882			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 4{\cdot}382$ scd. $\quad k = a.\cos.\theta.\left(\frac{\dot{T}}{T}\right)^2 = 0{\cdot}0000291 \times \cos.\ 7^\circ\ 36'\ 36'' \times \left(\frac{6{\cdot}914}{11{\cdot}258}\right)^2 = 0{\cdot}00008215$ $\quad$ Adopted Thermometer 80°.

VERTICAL FORCE MAGNETOMETER.

JANUARY 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−4·3 *		−7·7 *		−9·9 *		−2·4 *		12·0 *																
1	2153	2181	2098	2094	2098	2115	2148	2138	2148	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	1951	1758	1788	1794	1794	1742	1826	1890	1932	1851	1864	2148	1928	1956	1895	1970	38	2008	
3	1850	1825	1830	1826	1830	1813	1811	1807	1823	1759	1700	1712	1700	1583	1582	1595	1576	1618	1627	1627	1681	1715	1715	1645	1719	− 2	1717	
4	1645	1634	1621	1614	1616	1599	1598	1584	1589	1573	1561	1572	1559	1559	1560	1566	2277	2532	2486	2371	2336	2336	2294	2236	1847	−13	1834	
5	2189	2158	2112	2098	2093	2085	2093	2070	2067	2052	2041	2038	2011	2011	1977	1961	1995	2011	2011	2030	2075	2060	2042	2031	2055	−19	2036	
6	2014	2014	1994	1990	1994	1988	1997	1993	2008	1984	1965	1983	1977	1977	2798	3111	3042	3087	3087	3071	3059	3009	3017	3017	2424	− 5	2419	
7	2991	2991	2930	2887	2852	2844	2852	2843	2853	2812	2775	2820	2842	2839	2867	2899	2902	2945	2983	2983	2961	2961	2940	2940	2896	14	2910	
8	2915	2935	2920	2916	2920	2912	2920	2888	2876	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	2858	2844	2856	2844	2830	2866	2869	2882	2916	2916	2897	2917	2971	2940	2940	2898	39	2937	
10	2926	2908	2860	2872	2892	2869	2861	2838	2835	2862	2894	2919	2921	2865	2860	2860	2863	2888	2851	2878	2878	2909	2909	2857	2878	47	2925	
11	2857	2881	2877	2867	2866	2858	2866	2853	2860	2858	2860	2861	2838	2854	2855	2855	2844	2864	2864	2901	2828	2845	2925	2976	2867	53	2920	
12	2901	2852	2843	2835	2835	2827	2835	2844	2873	2858	2848	2842	2812	2924	2955	2893	2893	2875	2915	2915	2884	2894	2894	2929	2874	51	2925	
13	2929	2918	2896	2896	2905	2883	2876	2869	2882	2883	2889	2894	2875	2889	2925	2861	2820	2900	2900	2967	3023	2996	2996	2956	2910	42	2952	
14	2956	2928	2901	2877	2861	2877	2908	2895	2901	2899	2901	2901	2877	2904	2883	2883	2922	2969	3018	2994	2983	2953	2957	2926	2920	33	2953	
15	2915	2915	2905	2901	2905	2897	2905	2882	2879	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	2875	2875	2887	2875	2919	2894	2894	2871	2896	2924	2924	2976	2976	2936	2946	2907	− 9	2898	
17	2946	2946	2902	2898	2902	2886	2886	2860	2854	2850	2850	2854	2835	2849	2840	2810	2810	2781	2803	2856	2891	2891	2894	2894	2866	−49	2817	
18	2860	2860	2877																	4214	4539	4760	4611	4387				
19	4413	4559	4289	4224	4168	4160	4168	4039	3929	4021	4117	4096	4051	4069	4078	4039	4059	4065	3916	3909	4015	4085	4133	4206	4117	−45	4072	
20	4229	4142	4043	4031	4028	3990	3968	3938	3928	3913	3903	3876	3826	3826	3730	3615	3671	3759	3682	3843	4048	4316	4483	4326	3963	−37	3926	
21	4166	4110	4095	4023	3960	3918	3891	3871	3871	3858	3849	3842	3811	3790	3819	3782	3764	3857	3914	3953	3967	4080	4115	4180	3933	−21	3912	
22	4105	4002	3895	3882	3878	3858	3853	3816	3799	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	3758	3721	3718	3692	3659	3688	3658	3662	3850	3896	3927	3991	4190	4247	4008	3865	−46	3819	
24	3889	3768	3715	3728	3750	3770	3806	3676	3506	3549	3537	3533	3506	3565	3565	3597	3707	3679	3857	3960	3982	3982	4075	3984	3739	−63	3676	
25	3872	3818	3716	3684	3660	3624	3604	3589	3594	3571	3553	3552	3527	3489	3525	3547	3600	3785	3850	3834	3813	3859	3859	3923	3685	−65	3620	
26	3757	3629	3598	3594	3598	3560	3538	3503	3487	3472	3461	3452	3419	3439	3406	3486	3738	4099	4219	4300	4165	3938	3785	3270	3663	−79	3584	
27	3113	3034	3009	3033	3065	3033	3017	2981	2965	2963	2965	2948	2907	2888	2898	2900	3003	3348	3696	3620	3605	3496	3316	3291	3129	−88	3041	
28	3159	3260	3161	3128	3104	3064	3039	2990	2961	2968	2980	2976	2949	2963	3011	3075	3165	3394	3592	3832	3809	3529	3449	3407	3207	−61	3146	
29	3234	3080	3058	3061	3072	3029	3002	3016	3050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	2886	2726	2751	2752	2762	2730	2714	2830	2954	3189	3280	3319	3187	3025	2993	2988	−67	2921	
31	2970	2918	2915	2922	2938	2864	2805	2781	2776	2786	2801	2773	2722	2774	2787	2756	2795	3010	3153	3182	3141	3156	3057	3020	2908	−57	2851	
Means.....	3084	3056	3007	2995	2992	2973	2970	2943	2935	2913	2895	2898	2877	2881	2914	2922	2983	3081	3124	3157	3180	3170	3158	3112	3009			
Temp. Corrections	−40	−33	−24	−21	−20	−16	−13	−10	−8	−7	−8	−5	−4	0	5	6	1	−5	−12	−23	−31	−38	−42	−46	.....	−16		
Corrected Means.	3044	3023	2983	2974	2972	2957	2957	2933	2927	2906	2887	2893	2873	2881	2919	2928	2984	3076	3112	3134	3149	3132	3116	3066	.....	.....	2993	
Mean Hourly Variations from General Monthly Mean. = ·00	−51	−30	10	19	21	36	36	60	66	87	106	100	120	112	74	65	9	−83	−119	−141	−156	−139	−123	−73	.....	$\frac{\Delta Y}{Y} =$	.....	·001282
	−0419	−0246	0082	0156	0173	0296	0296	0493	0542	0715	0871	0822	0986	0920	0608	0534	0074	−0682	−0978	−1158	−1282	−1142	−1010	−0600				

JANUARY 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	792	789	790	788	787	787	787	786	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	787	790	790	790	789	789	790	790	791	793	797	799	802	803	803	7914			
3	803	803	803	802	801	800	799	798	798	797	797	797	797	796	796	797	798	799	801	802	805	806	807	809	8005			
4	808	805	802	801	801	800	800	800	800	800	800	800	800	800	799	799	800	802	804	807	810	812	811	812	8030			
5	810	807	806	805	805	804	804	803	802	802	802	802	802	801	800	799	801	802	804	806	806	809	810	810	8043			
6	809	806	805	804	804	802	801	800	800	800	800	799	799	798	797	793	794	797	799	802	804	805	805	805	8012			
7	805	802	801	800	800	799	798	798	798	796	795	794	794	793	789	788	790	792	795	796	798	799	800	800	7967			
8	800	796	796	795	795	793	792	790	788	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	788	788	787	787	787	786	785	786	788	790	792	794	795	795	796	7912			
10	796	795	794	793	792	791	790	788	787	786	786	785	785	785	785	784	785	785	786	790	792	794	795	795	7893			
11	795	794	793	792	791	790	789	788	787	787	787	786	786	785	782	783	781	783	785	789	788	788	789	790	7878			
12	790	788	790	789	789	788	788	787	787	786	786	785	785	784	785	785	786	788	790	792	794	796	796	796	7883			
13	796	794	793	793	793	792	791	790	790	790	790	789	788	785	784	782	784	785	787	789	794	795	796	798	7903			
14	799	796	794	794	794	794	794	793	792	791	790	789	788	786	785	786	787	790	790	794	796	798	801	800	7925			
15	801	801	796	796	796	796	796	795	795	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	799	803	802	802	800	800	800	801	803	805	807	810	813	815	815	8020			
17	815	814	812	811	811	810	809	809	809	809	809	808	807	807	805	806	808	810	813	816	817	818	818	818	8112			
18	819	817	814																	811	812	815	816	816				
19	816	815	813	812	812	811	810	810	810	809	809	808	808	808	807	807	808	809	808	809	810	810	814	815	8103			
20	814	812	810	811	812	810	809	808	807	806	805	805	805	805	804	804	804	806	807	809	810	812	813	815	8085			
21	815	815	808	807	807	805	804	803	802	801	800	799	798	798	796	796	799	801	803	807	810	812	813	815	8048			
22	815	814	809	808	808	807	807	806	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	809	812	811	811	809	807	806	806	806	809	813	815	817	818	820	8104			
24	820	820	814	814	814	814	814	814	814	813	812	812	812	811	811	812	815	816	815	815	815	815	816	816	8143			
25	817	816	814	813	813	813	813	812	812	811	811	810	810	810	810	811	812	814	817	819	822	825	825	825	8148			
26	825	825	821	820	820	819	818	817	817	816	815	814	813	812	811	812	814	815	816	819	822	824	824	826	8181			
27	826	825	822	822	822	821	820	820	820	820	820	820	820	819	817	817	816	815	815	819	820	822	822	822	8201			
28	822	820	817	816	816	815	814	813	812	812	812	811	811	809	809	808	810	812	814	815	816	816	817	818	8140			
29	818	816	815	815	815	814	814	814	814	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	814	815	814	814	814	812	811	812	812	815	816	819	820	822	823	8153			
31	822	822	817	817	817	815	814	814	814	813	812	810	809	808	806	807	808	808	810	811	812	814	816	817	8130			
Means.....	8092	8076	8054	8047	8046	8036	8030	8022	8018	8017	8018	8011	8008	8000	7988	7987	7998	8011	8028	8052	8070	8086	8096	8104	8037			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

N. B.—Decreasing numbers denote an increase in the Vertical Force. In the upper table the numbers are tenths of scale divisions; in the lower table, tenths of Fahrenheit degrees; and in the Means, hundredths of degrees.

Jan. 18 2h Gottingen Mean Time. The observations discontinued in consequence of a sudden change of about 2000 scd. Cleaned the knife edges and replaced the needle at 18h. The regular

Corr. for 1° Faht. $= \frac{q}{k} = 2''.294$. $k = a.\ \text{cotan.}\ \theta.\left(\frac{\dot{T}}{T}\right)^2 = 0.0000291 \times \text{cotan.}\ 7°\ 36'\ 49'' \times \left(\frac{6''.915}{8''.145}\right)^2 = 0.00015691$. Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

FEBRUARY 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·5 *		−1·5 *		5·1 *		14·9 *		7·7 *																
1	3020	2977	2944	2948	2944	2901	2860	2860	2849	2864	2849	2873	2881	2881	2812	2791	2921	3098	3186	3321	3284	3258	3074	2991	2974	−23	2951	
2	2991	3057	2995	3029	3055	3054	3055	3000	2935	2998	3032	3040	3032	2939	2953	2914	2966	3107	3339	3530	3490	3239	3195	3136	3087	−19	3068	
3	3059	3030	3090	3094	3090	3058	3028	3025	3011	3046	3051	3038	3010	2972	3008	2981	3065	3214	3354	3356	3566	3456	3293	3236	3130	− 8	3122	
4	3135	3135	3188	3192	3188	3167	3149	3154	3149	3140	3101	3109	3101	3100	3108	3086	3117	3238	3404	3552	3460	3363	3236	3208	3199	12	3211	
5	3234	3263	3235	3227	3211	3183	3157	3162	3157	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	3176	3165	3173	3165	3151	3145	3104	3094	3164	3268	3322	3309	3240	3159	3135	3192	25	3217	
7	3195	3242	3195	3199	3195	3181	3169	3163	3147	3162	3147	3158	3154	3154	3137	3124	3193	3362	3585	3550	3456	3242	3065	3095	3220	24	3244	
8	3133	3187	3187	3191	3187	3184	3184	3182	3169	3184	3169	3183	3182	3142	3164	3219	3314	3497	3611	3557	3457	3295	3126	3126	3243	15	3258	
9	3187	3234	3223	3227	3223	3222	3223	3236	3239	3237	3206	3214	3206	3172	3196	3233	3291	3409	3545	3768	3744	3574	3360	3212	3308	16	3324	
10	3175	3260	3261	3275	3280	3279	3280	3276	3261	3276	3261	3248	3220	3276	3247	3211	3169	3328	3452	3533	3558	3497	3373	3280	3303	24	3327	
11	3297	3297	3314	3311	3299	3298	3299	3290	3270	3282	3265	3274	3268	3291	3282	3267	3315	3377	3437	3485	3515	3439	3408	3408	3333	21	3354	
12	3360	3340	3291	3292	3285	3284	3285	3290	3285	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	3287	3259	3279	3284	3284	3283	3283	3311	3394	3503	3565	3498	3372	3328	3448	3337	20	3357	
14	3481	3511	3417	3415	3404	3403	3404	3384	3353	3349	3315	3303	3276	3312	3341	3341	3291	3325	3336	3320	3388	3502	3462	3407	3377	26	3403	
15	3442	3388	3361	3365	3361	3357	3355	3383	3400	3415	3400	3394	3373	3359	3341	3341	3394	3505	3586	3654	3692	3636	3636	3591	3447	36	3483	
16	3538	3505	3474	3478	3474	3456	3440	3449	3448	3463	3448	3439	3415	3392	3382	3372	3415	3487	3550	3528	8550	3522	3566	3571	3473	39	3512	
17	3612	3515	3476	3467	3449	3448	3449	3447	3434	3449	3434	3420	3391	3400	3400	3393	3454	3590	3706	3686	3721	3690	3663	3600	3512	43	3555	
18	3573	3573	3525	3506	3478	3474	3472	3466	3450	3465	3450	3446	3427	3424	3424	3416	3450	3457	3482	3462	3520	3545	3545	3512	3481	42	3523	
19	3482	3519	3494	3484	3465	3464	3465	3466	3456	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	3466	3447	3443	3423	3423	3442	3406	3423	3483	3540	3542	3583	3643	3664	3633	3494	36	3530	
21	3633	3559	3559	3542	3517	3495	3475	3476	3466	3470	3445	3460	3459	3441	3427	3408	3342	3315	3276	3309	3278	3044	2870	2916	3383	38	3421	
22	2957	3009	3009	3013	3009	2985	2964	2969	2964	2967	2940	2946	2937	2936	2994	3045	3086	3185	3282	3364	3406	3440	3345	3250	3083	21	3104	
23	3202	3202	3154	3107	3052	3069	3089	3094	3089	3086	3054	3053	3037	3059	3048	3046	3030	3057	3083	3110	3146	3214	3143	3163	3099	00	3099	
24	3186	3186	3143	3147	3143	3113	3086	3088	3080	3095	3080	3083	3070	3053	3069	3069	3129	3216	3216	3155	3118	3195	3227	3262	3134	− 4	3130	
25	3227	3166	3133	3137	3133	3112	3094	3099	3094	3096	3068	3073	3062	3060	3035	3014	3005	3062	3112	3105	3073	3021	3145	3052	3091	−15	3076	
26	3063	3079	3065	3198	3323	3303	3285	3282	3268	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	3286	3274	3265	3241	3202	3211	3182	3245	3307	3356	3399	3521	3432	3284	3246	3263	−46	3217	
28	3373	3373	3323	3327	3323	3310	3300	3305	3300	3294	3258	3274	3274	3274	3311	3347	3299	3367	3456	3556	3523	3476	3414	3378	3351	−52	3299	
Means.....	3273	3275	3252	3257	3254	3242	3232	3231	3220	3231	3213	3216	3204	3196	3198	3191	3222	3314	3403	3447	3452	3389	3316	3286	3271			
Temp. Corrections	−7	−7	00	3	6	8	9	12	14	15	17	19	21	26	31	33	28	22	16	11	5	00	−3	−6	.....	11		
Corrected Means..	3266	3268	3252	3260	3260	3250	3241	3243	3234	3246	3230	3235	3225	3222	3229	3224	3250	3336	3419	3458	3457	3389	3313	3280	.....	.....	3282	
Mean Hourly Variations from General Monthly Mean. = ·00	16	14	30	22	22	32	41	39	48	36	52	47	57	60	53	58	32	−54	−137	−176	−175	−107	−31	2	.....	$\frac{\Delta Y}{Y}$ =	.. ...	·002762
	0261	0220	0471	0345	0345	0502	0643	0612	0753	0665	0816	0737	0894	0941	0832	0910	0502	−0847	−2150	−2762	−2746	−1679	−0486	0031				

FEBRUARY 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	817	817	812	812	812	812	812	810	809	808	807	806	806	806	805	805	806	807	809	810	812	814	815	815	8102			
2	815	814	812	811	810	809	808	808	808	807	807	806	806	805	804	803	805	805	806	807	808	811	812	814	8084			
3	815	814	810	808	807	806	805	805	806	805	804	803	802	801	796	795	796	796	797	800	802	803	805	806	8036			
4	806	806	801	798	796	795	795	795	795	795	795	794	793	791	788	786	787	790	791	793	795	797	797	798	7949			
5	798	798	796	795	794	792	790	790	790	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	788	787	786	786	783	780	778	780	783	785	787	788	790	794	797	7890			
7	797	795	793	792	792	789	786	785	785	785	785	785	785	785	785	785	785	787	789	792	795	797	798	800	7897			
8	801	801	798	797	797	796	795	793	792	791	790	789	789	786	785	785	787	790	793	795	797	798	799	799	7935			
9	800	800	799	797	796	795	794	794	795	793	792	790	789	786	783	783	785	787	790	793	795	797	798	798	7929			
10	798	798	795	794	794	793	793	791	790	790	790	788	786	782	780	780	780	785	787	789	790	793	793	793	7897			
11	793	793	792	791	791	791	791	790	790	788	787	787	787	786	786	785	786	787	792	794	797	798	798	799	7908			
12	799	799	796	795	795	794	794	793	792	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	791	790	788	786	785	782	781	783	785	787	790	793	796	797	799	7913			
14	800	800	796	793	790	790	790	789	788	787	786	785	785	781	778	776	780	784	787	789	792	793	793	793	7885			
15	795	795	792	790	788	787	787	785	784	783	782	780	778	775	773	772	775	778	780	782	787	790	792	793	7843			
16	793	792	790	789	788	786	784	782	780	780	780	780	780	776	773	771	775	779	782	783	787	788	788	790	7832			
17	792	792	788	786	785	784	784	782	780	780	780	777	775	773	771	772	774	776	778	780	783	785	787	788	7813			
18	789	790	787	786	785	784	784	782	780	778	776	775	775	773	772	773	774	778	780	782	786	787	789	791	7815			
19	792	792	788	786	785	785	785	783	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	782	784	782	780	778	773	772	777	780	783	787	789	790	792	793	7841			
21	794	794	790	788	787	786	785	783	782	781	780	779	778	775	773	770	775	778	781	784	787	789	792	796	7836			
22	799	801	800	797	795	794	793	791	790	790	790	788	786	780	775	775	778	781	785	789	795	800	804	807	7910			
23	810	810	808	806	804	802	801	799	798	797	796	796	796	792	790	788	791	794	796	800	804	805	808	810	8000			
24	812	812	808	806	805	804	803	801	800	797	794	794	794	793	792	790	795	798	799	804	807	810	812	814	8018			
25	814	813	810	808	807	807	807	806	805	804	803	802	802	800	797	797	801	804	807	808	810	812	814	816	8064			
26	817	817	815	815	815	815	815	814	813	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	817	822	821	820	820	820	820	821	823	824	825	826	828	828	828	8200			
28	828	829	826	825	824	824	824	823	822	821	820	820	820	817	816	815	816	819	822	823	825	827	829	830	8227			
Means	8031	8030	8001	7985	7976	7967	7960	7948	7940	7933	7928	7917	7910	7887	7865	7857	7880	7906	7929	7953	7979	7999	8014	8028	7951			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1''.378$. $k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^3 = 0.0000291 \times \text{cotan.}\ 7°\ 36'\ 47'' \times \left(\frac{6''.917}{6''.315}\right)^3 = 0.00026121$. Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

MARCH 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				6·4 *		0·3 *		1·7 *		13·2 *		24·2 *																
1	3378	3378	3357	3363	3357	3327	3297	3293	3286	3314	3316	3340	3316	3290	3305	3351	3475	3731	3847	—	4606	4574	4551	4520	—	—	—	
2	4479	4449	4431	4434	4425	4425	4425	4396	4364	4416	4441	4427	4365	4365	4397	4430	4477	—	5265	5236	5236	5180	5217	5269	—	—	—	
3	5236	5236	5211	5199	5175	5150	5124	5136	5145	5158	5145	5169	5145	5178	5135	5212	5265	5340	5389	5374	5337	5357	5298	5270	5224	-27	5197	
4	5290	5263	5215	5199	5170	5159	5148	5146	5140	5130	5093	5153	5164	5164	5183	5203	5225	5250	5243	5243	5112	5060	5026	5148	5172	-36	5136	
5	5231	5231	5219	5210	5188	5170	5151	5138	5121	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	5144	5140	5172	5156	5160	5185	5185	5235	5284	5274	5270	5162	5121	5093	5122	5182	-41	5141	
7	5211	5211	5201	5207	5201	5215	5229	5231	5229	5202	5148	5186	5175	5168	5191	5237	5291	5320	5292	5315	5101	5067	5020	5117	5199	-36	5163	
8	5211	5258	5215	5199	5170	5170	5170	5158	5142	5187	5206	5247	5239	5153	5190	5325	5333	5406	5406	5399	5362	5299	5328	5297	5253	-26	5227	
9	5297	5253	5249	5255	5249	5238	5226	5216	5203	5216	5203	5240	5229	5214	5254	5317	5359	5373	5448	5439	5383	5300	5227	5259	5277	-18	5259	
10	5259	5277	5235	5241	5235	5237	5238	5247	5253	5266	5253	5263	5224	5237	5194	5221	5296	5379	5419	5419	5359	5324	5277	5277	5276	-23	5253	
11	5259	5237	5237	5256	5263	5187	5111	5098	5082	5095	5082	5177	5224	5234	5201	5240	5280	5348	5433	5480	5516	5431	5377	5315	5257	-33	5224	
12	5315	5244	5251	5243	5223	5194	5165	5167	5165	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	5223	5254	5250	5197	5192	5192	5211	5258	5326	5371	5349	5349	5324	5308	5308	5253	-53	5200	
14	5278	5251	5218	5224	5218	5218	5218	5226	5231	5217	5177	5203	5180	5175	5196	5257	5289	5373	5434	5409	5409	5376	5372	5344	5271	-64	5207	
15	5311	5262	5252	5242	5220	5199	5178	5180	5178	5220	5235	5259	5235	5195	5165	5233	5297	5379	5443	—	5493	5501	5472	5420	5286	-55	5231	
16	5420	5417	5348	5354	5348	5348	5348	5327	5303	5340	5351	5353	5307	5307	5337	5354	5398	5464	5582	5611	5591	5549	5516	5450	5405	-51	5354	
17	5435	5422	5359	5378	5384	5404	5424	5401	5374	5387	5374	5395	5368	5335	5311	5285	5356	5385	5397	5407	5307	5354	5402	5402	5377	-54	5323	
18	5402	5414	5414	5375	5323	5323	5323	5336	5346	5359	5346	5369	5343	5316	5316	5340	5371	5383	5417	5532	5532	5502	5479	5452	5388	-51	5337	
19	5404	5373	5370	5362	5342	5326	5309	5311	5309	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	5328	5321	5325	5281	5281	5313	5378	5435	5503	5580	5580	5547	5455	5386	5386	5384	-50	5334	
21	5371	5417	5389	5383	5364	5364	5364	5353	5338	5351	5338	5350	5314	5301	5301	5346	5427	5525	5554	5599	5532	5425	5371	5371	5394	-49	5345	
22	5406	5421	5381	5377	5360	5268	5176	5238	5296	5300	5278	5316	5306	5295	5269	5321	5409	5538	5661	5717	5643	5552	5437	5385	5390	-52	5338	
23	5337	5375	5362	5354	5333	5309	5285	5302	5315	5315	5288	5213	5090	5030	5043	5100	5169	5295	5424	5404	5347	5275	5197	5176	5264	-65	5199	
24	5181	5167	5105	5109	5101	5075	5048	5162	5272	5288	5277	5301	5277	5020	5036	5052	5097	5194	5282	5282	5256	5191	5149	5135	5169	-73	5096	
25	5135	5135	5054	5070	5074	5074	5074	5065	5053	5066	5053	5074	5047	5024	4975	5058	5166	5255	5305	5305	5284	5248	5139	5110	5118	-71	5047	
26	5089	5089	5080	5094	5095	5065	5034	5036	5034	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	5040	5019	5042	5016	4969	4986	5013	5052	5052	5076	5056	5036	5100	5181	5148	5058	-57	5001	
28	5066	5066	5016	5022	5016	5002	4987	4970	4950	4978	4979	5003	4979	4970	4965	4994	5065	5114	5193	5206	5194	5194	5217	5160	5054	-46	5008	
29	5701	5046	5034	5027	5008	4987	4965	4999	5029	5042	5029	5001	4923	4923	4856	4850	4866	4879	4967	5012	5042	5016	5016	4993	4984	-53	4931	
30	4972	5046	5017	4975	4921	4915	4908	4926	4940	4953	4940	4974	4959	4959	4917	4950	4994	5062	5182	5234	5252	5133	5026	5026	5008	-56	4952	
31	5097	5052	4996	4972	4936	4906	4876	4861	4843	4899	4928	4952	4928	4867	4972	5032	5105	5510	5324	5369	5361	5003	5133	5024	5039	-60	4979	
Means	5253	5247	5221	5213	5197	5180	5163	5169	5172	5188	5178	5199	5172	5147	5147	5189	5241	5317	5364	5375	5340	5286	5258	5244	5227			
Temp. Corrections	-63	-58	-53	-51	-50	-47	-46	-44	-42	-41	-39	-37	-35	-32	-30	-33	-40	-46	-51	-56	-61	-64	-66	-67	.....	-48		
Corrected Means..	5190	5189	5168	5162	5147	5133	5117	5125	5130	5147	5139	5162	5137	5115	5117	5156	5201	5271	5313	5319	5279	5222	5192	5177	.....	.....	5179	
Mean Hourly Variations from General Monthly Mean. = ·00	-11 -0287	-10 -0261	11 0287	17 0444	32 0836	46 1202	62 1620	54 1410	49 1280	32 0836	40 1045	17 0444	42 1097	64 1672	62 1620	23 0601	-22 -0575	-92 -2403	-134 -3500	-140 -3657	-100 -2612	-43 -1123	-13 -0340	2 0052	.....	$\frac{\Delta Y}{Y} =$	.....	.003657

MARCH 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*											*					
1	830	830	826	825	824	823	822	821	820	819	818	816	814	810	810	810	813	815	818	—	833	835	836	836	—			
2	834	829	825	824	824	823	823	822	821	820	820	816	812	804	796	799	806	—	820	823	827	830	832	833	—			
3	832	827	822	821	820	818	817	816	815	814	813	811	809	804	804	805	812	819	823	827	831	836	839	840	8198			
4	839	833	829	827	825	825	825	825	825	822	820	817	815	815	810	814	818	820	827	835	835	840	842	842	8260			
5	840	837	831	830	829	828	827	826	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	825	825	823	822	820	815	818	825	830	835	838	840	841	842	843	8298			
7	841	836	833	831	829	826	823	821	819	819	819	817	816	815	812	815	819	824	829	834	835	837	839	839	8262			
8	837	834	828	825	822	820	819	817	816	814	813	811	810	803	800	802	810	816	820	821	825	826	830	830	8187			
9	829	826	822	819	817	814	811	809	808	806	805	804	804	802	797	798	805	809	815	820	823	824	825	827	8133			
10	825	823	818	817	816	814	813	810	808	807	806	805	804	803	807	810	815	819	823	828	830	834	835	835	8169			
11	834	831	827	825	824	823	823	821	820	819	818	816	814	812	813	810	815	821	825	830	835	840	841	847	8243			
12	845	840	836	835	834	832	830	828	826	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	829	832	831	830	827	828	830	834	839	844	849	854	861	863	865	8384			
14	864	858	853	851	850	848	847	846	845	842	840	837	835	830	830	830	836	841	846	850	855	860	861	861	8465			
15	860	856	850	848	846	843	840	838	837	835	834	832	830	826	822	820	830	836	842	—	850	850	850	850	8402			
16	850	847	844	843	842	839	836	834	832	831	830	828	826	823	820	822	828	834	838	840	845	850	850	851	8368			
17	850	847	844	842	841	839	838	837	837	835	834	832	830	826	822	823	831	838	843	846	850	853	854	854	8394			
18	852	848	845	843	842	839	837	835	834	833	832	828	825	820	820	819	831	835	840	843	846	848	850	850	8373			
19	848	846	841	839	838	835	832	830	829	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	830	832	831	830	825	820	822	830	836	840	843	845	847	848	848	8360			
21	845	841	839	837	836	835	834	832	830	829	828	826	825	822	822	824	829	835	840	844	846	847	849	849	8352			
22	848	845	841	839	838	835	832	830	829	827	825	825	825	824	823	830	839	842	844	846	852	853	855	855	8376			
23	854	850	848	847	846	845	845	843	842	841	841	841	842	840	836	840	845	847	851	855	857	860	861	862	8475			
24	861	859	855	854	854	853	853	852	852	850	848	846	845	842	840	842	846	849	853	860	861	863	863	862	8526			
25	861	857	854	853	853	852	852	851	850	848	847	845	843	841	840	844	848	850	853	857	860	860	860	860	8516			
26	857	853	850	850	850	850	851	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	842	835	834	833	833	834	835	835	834	835	835	836	837	837	837	8414			
28	834	832	828	829	830	830	830	830	830	829	828	827	826	825	830	830	830	838	840	840	845	846	846	846	8333			
29	845	844	839	837	836	835	835	834	834	833	832	831	830	830	831	832	834	837	843	845	848	850	851	850	8382			
30	848	845	843	842	841	840	839	839	839	839	839	838	838	837	835	835	840	835	835	840	846	849	850	850	8409			
31	848	845	843	842	842	841	840	839	838	837	837	836	835	834	833	840	842	843	847	852	855	856	858	857	8433			
Means	8459	8424	8385	8370	8360	8344	8332	8317	8308	8294	8285	8269	8257	8232	8218	8236	8291	8331	8372	8408	8442	8467	8480	8484	8348			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

March 1, 19*h*. Gottingen Mean Time.—The Vertical Force needle, which had been used up to this time *nearly* in the magnetic Meridian, was turned at right angles thereto, agreeably to the directions given in the Royal Society's "*Report on Physics including Meteorology*, &c."

* 19h. Gottingen Mean Time.—The Needle and Micrometer were adjusted. The observations of the 1st and 2d instant rejected in taking the hourly and daily Means.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1.34. $k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^3 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 37'\ 38'' \times \left(\frac{6{\cdot}917}{6{\cdot}220}\right)^3 = 0{\cdot}00026874.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

APRIL 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−6·1		−5·6		−11·3		7·7		3·9																
1	4958	4944	4907	4892	4889	4884	4889	4879	4892	4919	4931	4921	4903	4863	4893	4940	5051	5241	5281	5290	5120	5132	5051	5070	4989	- 67	4922	
2	5024	4943	4850	4871	4904	4888	4883	4876	4892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	4888	4868	4853	4831	4831	4874	4916	4916	4967	5044	5074	5074	5056	5056	5016	4933	- 78	4855	
4	4988	4935	4921	4889	4870	4865	4870	4858	4870	4892	4898	4873	4841	4865	4843	4920	4952	4996	5062	5108	5030	4955	4955	4944	4925	- 84	4841	
5	4944	5034	5040	4959	4890	4881	4882	4874	4890	4889	4872	4898	4916	4916	4932	4972	5073	5022	5061	5082	4890	4839	4828	4887	4936	- 88	4848	
6	4902	4956	4894	4866	4850	4845	4850	4858	4889	4879	4853	4857	4853	4883	4915	5063	5180	5336	5380	5249	5219	5131	4919	4973	4983	- 82	4901	
7	4938	4857	4883	4877	4883	4885	4898	4884	4893	4901	4893	4877	4853	4855	4892	4999	5202	5246	5282	5220	5106	5045	4983	4969	4972	- 61	4911	
8	4960	4919	4916	4911	4919	4872	4836	4850	4888	4896	4888	4874	4853	4874	4878	4922	5072	5161	5176	5176	5152	4964	4906	4942	4950	- 61	4889	
9	4972	4972	4915	4909	4916	4903	4900	4888	4900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	—	—	4884	4852	4849	4839	4794	4819	4902	4902	5036	5158	5219	5177	5046	5009	5009	4949	- 62	4887	
11	4967	4947	4941	4911	4894	4865	4847	4854	4885	4893	4885	4899	4905	4818	4886	4947	5050	5170	5234	5149	5147	5174	4966	4966	4967	- 49	4918	
12	4961	4913	4912	4906	4912	4881	4860	4846	4855	4849	4828	4832	4828	4788	4840	4905	5013	5141	5200	5192	5091	5045	4889	4889	4932	- 62	4870	
13	4898	4898	4898	4856	4826	4824	4832	4817	4825	4833	4825	4815	4798	4782	4815	4870	4965	5027	5061	5066	5099	5042	4967	4916	4898	- 70	4828	
14	4916	4891	4891	4870	4862	4857	4862	4851	4864	4854	4828	4832	4828	4756	4771	4884	4965	5054	5135	5153	5104	5014	4908	4908	4911	- 79	4832	
15	4896	4896	4818	4812	4818	4818	4828	4802	4800	4808	4800	4797	4786	4763	4775	4856	4987	5090	5147	5124	5036	5036	4996	4911	4892	- 80	4812	
16	4911	4879	4879	4865	4863	4845	4837	4825	4837	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
17	—	—	—	—	—	—	—	—	—	4824	4800	4804	4800	4834	4759	4879	4983	4874	4955	4982	4968	4930	4930	4914	4874	- 76	4798	
18	4914	4939	4846	4843	4853	4841	4840	4824	4832	4843	4838	4832	4818	4748	4806	4840	4909	4994	5077	5001	4929	4892	4800	4800	4869	- 74	4795	
19	4868	4887	4887	4881	4887	4883	4889	4862	4858	4847	4821	4804	4779	4779	4783	4848	4921	5044	5085	5025	4952	4952	4967	4922	4893	- 76	4817	
20	4922	4865	4865	4849	4846	4826	4816	4788	4784	4814	4828	4816	4796	4790	4755	4831	4920	5004	5040	4999	4970	4942	4952	4956	4874	- 77	4797	
21	4941	4895	4895	4854	4825	4808	4801	4766	4754	4774	4779	4759	4731	4773	4773	4915	4945	4978	5029	5051	5051	4938	4872	4872	4866	- 84	4782	
22	4862	4862	4875	4869	4875	4844	4823	4790	4780	4788	4780	4771	4755	4737	4764	4881	5026	5101	4964	5003	4861	4914	4864	4864	4861	- 85	4776	
23	4829	4829	4829	4823	4829	4817	4816	4804	4816	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
24	—	—	—	—	—	—	—	—	—	4794	4756	4774	4784	4734	4749	4804	4879	4970	5015	5038	5037	4989	4883	4813	4850	- 87	4763	
25	4847	4847	4820	4815	4822	4801	4791	4805	4842	4817	4777	4764	4744	4741	4752	4821	4931	5007	5099	5069	5014	4980	4856	4794	4857	- 92	4765	
26	4794	4811	4811	4805	4811	4799	4797	4802	4830	4799	4752	4745	4731	4765	4771	4812	4895	4987	5080	5120	5120	5062	4993	4893	4866	- 96	4770	
27	4847	4834	4810	4776	4754	4764	4785	4780	4797	4805	4797	4777	4749	4749	4721	4721	4783	4870	4870	4883	4912	4877	4877	4803	4806	- 96	4710	
28	4803	4789	4805	4799	4805	4779	4763	4745	4750	4758	4750	4767	4776	4730	4734	4782	4832	4942	5026	5044	5021	4854	4761	4741	4815	- 98	4717	
29	4769	4815	4811	4796	4794	4773	4762	4753	4767	4775	4767	4758	4741	4719	4772	4819	4825	4910	5004	5004	4969	4855	4786	4806	4815	-102	4713	
Means	4905	4894	4877	4860	4856	4842	4838	4827	4840	4841	4827	4822	4810	4795	4811	4882	4967	5047	5099	5093	5042	4987	4919	4903	4899			
Temp. Corrections	-91	-88	-81	-79	-77	-76	-75	-73	-72	-71	-70	-69	-68	-65	-67	-71	-75	-79	-83	-88	-91	-93	-94	-94	.....	-79		
Corrected Means..	4814	4806	4796	4781	4779	4766	4763	4754	4768	4770	4757	4753	4742	4730	4744	4811	4892	4968	5016	5005	4951	4894	4825	4809	.....	.....	4820	
Mean Hourly Variations from General Monthly Mean. = ·00	6	14	24	39	41	54	57	66	52	50	63	67	78	90	76	9	-72	-148	-196	-185	-131	-74	-5	11	.....	$\frac{\Delta Y}{Y} =$	.....	·005267
	0161	0376	0645	1048	1102	1451	1532	1774	1397	1344	1693	1801	2096	2419	2042	0242	-1935	-3977	-5267	-4972	-3521	-1989	-0134	0296				

APRIL 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	857	854	850	848	847	846	846	844	843	842	842	841	841	841	843	844	846	850	853	859	862	863	864	865	8496			
2	865	862	858	856	853	851	850	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	852	855	853	852	850	851	853	856	859	862	866	869	872	872	872	8579			
4	870	870	862	861	861	860	860	859	858	857	856	855	854	852	854	856	859	862	864	869	873	876	877	877	8626			
5	876	875	868	865	863	861	860	860	860	860	860	858	856	855	855	858	861	864	867	874	877	878	879	880	8654			
6	880	878	870	867	865	864	863	861	860	860	860	859	858	858	857	860	863	866	865	856	852	850	852	853	8615			
7	854	852	848	846	845	843	841	840	840	839	838	837	837	837	837	841	844	849	850	855	856	857	857	856	8458			
8	855	853	848	846	845	844	844	843	843	842	841	839	838	837	835	837	841	846	850	851	853	854	855	855	8456			
9	855	853	847	846	846	844	843	843	843	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	844	846	845	844	843	844	849	849	852	848	846	845	845	846	846	8463			
11	845	843	837	836	835	833	832	831	830	830	830	830	830	825	823	829	832	836	841	844	848	850	852	852	8364			
12	852	850	846	845	844	843	843	843	843	841	840	839	838	835	837	841	843	848	853	856	859	860	860	860	8466			
13	860	856	853	851	850	848	847	846	845	844	844	843	842	841	843	846	848	852	857	859	865	868	868	870	8519			
14	867	864	860	858	856	855	855	854	854	853	853	853	853	849	850	853	856	859	865	868	870	870	871	872	8591			
15	870	867	861	859	857	856	856	854	852	852	852	851	851	850	853	856	858	860	865	869	867	870	870	872	8595			
16	870	867	864	862	861	858	856	855	855	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	851	848	847	847	845	846	848	853	855	859	862	862	865	865	866	8570			
18	865	863	857	856	855	854	853	851	850	848	846	844	842	841	843	847	852	857	859	864	865	868	870	868	8549			
19	865	865	860	860	860	857	855	853	851	850	850	848	847	844	845	849	852	855	860	864	865	866	868	868	8565			
20	866	865	860	858	856	855	855	854	853	851	849	849	850	846	847	851	856	861	862	865	867	868	868	871	8576			
21	872	870	863	863	863	862	862	861	860	859	859	856	853	851	853	856	858	863	865	870	872	872	874	875	8630			
22	875	871	864	863	862	862	862	860	859	857	856	854	853	851	852	857	862	864	867	870	874	875	876	875	8634			
23	874	870	865	864	863	862	861	859	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	858	858	856	855	851	853	859	864	866	870	874	878	880	880	878	8648			
25	877	875	870	868	867	866	866	866	866	864	863	862	861	857	859	863	865	867	868	875	880	882	882	883	8688			
26	880	880	875	874	873	872	872	868	865	865	865	864	863	860	862	866	868	868	873	879	884	885	885	885	8721			
27	884	880	874	872	871	871	871	870	870	869	868	866	864	862	864	865	866	868	870	878	880	880	882	884	8720			
28	883	880	874	872	871	870	870	869	868	866	865	865	865	863	865	869	870	875	878	883	885	885	886	886	8735			
29	885	883	876	875	875	872	870	869	868	868	868	866	865	863	868	871	872	877	880	886	889	890	894	892	8759			
Means	8681	8658	8604	8588	8578	8564	8557	8545	8538	8529	8525	8512	8504	8483	8496	8530	8558	8592	8620	8657	8679	8692	8701	8704	8587			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}355$ scd. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 38'\ 59'' \times \left(\frac{0{\cdot}917}{6{\cdot}247}\right)^2 = 0{\cdot}00026562.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

MAY 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−13·1 *		−17·1 *		6·2 *		−0·9 *		10·6 *																
April 30	4806	4827	4825	4812	4825	4789	4787	4796	4793	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	4754	4716	4713	4689	4724	4763	4797	4844	4897	4943	4904	4872	4831	4794	4794	4804	-111	4693	
2	4830	4810	4762	4748	4760	4714	4703	4709	4703	4712	4722	4742	4741	4737	4737	4805	4769	4880	5186	5040	5040	4777	4725	4706	4794	-114	4680	
3	4764	4724	4719	4709	4725	4656	4621	4627	4621	4649	4679	4713	4725	4685	4762	4817	4872	4948	4865	4900	4930	4930	4779	4779	4758	-114	4644	
4	4748	4773	4774	4760	4773	4716	4693	4697	4689	4702	4716	4707	4677	4677	4736	4860	4942	4980	5005	5135	5006	4971	4881	4790	4809	-115	4694	
5	4723	4759	4724	4711	4724	4707	4724	4729	4722	4716	4712	4711	4689	4689	4740	4774	4832	4873	4917	4847	4770	4692	4730	4730	4748	-113	4635	
6	4698	4683	4683	4672	4687	4670	4688	4703	4705	4704	4705	4707	4687	4687	4732	4843	4982	5058	5098	5062	5023	4874	4789	4720	4786	-113	4673	
7	4720	4746	4774	4746	4745	4728	4745	4753	4748	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	4698	4650	4661	4650	4674	4691	4759	4881	4969	4989	4949	4855	4776	4705	4644	4761	-116	4645	
9	4644	4717	4728	4697	4692	4662	4666	4673	4667	4660	4654	4683	4691	4655	4593	4652	4740	4886	4886	4849	4801	4766	4723	4683	4711	-111	4600	
10	4735	4735	4720	4707	4720	4688	4690	4697	4691	4685	4681	4671	4639	4627	4627	4660	4737	4793	4872	4936	4927	4856	4856	4737	4737	-114	4623	
11	4710	4710	4710	4686	4688	4634	4615	4621	4615	4647	4680	4682	4672	4636	4685	4685	4702	4768	4844	4894	4920	4837	4837	4776	4719	-119	4600	
12	4745	4717	4717	4719	4747	4730	4747	4729	4699	4698	4699	4718	4715	4660	4710	4710	4758	4823	4872	4915	4945	4907	4876	4845	4767	-128	4639	
13	4797	4797	4760	4735	4736	4706	4711	4717	4711	4719	4728	4717	4684	4684	4705	4690	4714	4863	4984	5038	4953	4953	4906	4878	4787	-139	4648	
14	4834	4530	4530	4614	4725	4723	4755	4756	4744	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4730	4718	4729	4718	4680	4737	4718	4784	4795	4816	4869	4923	4867	4867	4798	4748	-153	4595	
16	4766	4766	4781	4749	4743	4716	4724	4731	4725	4733	4742	4765	4766	4730	4689	4690	4771	4771	4825	4760	4751	4775	4775	4729	4749	-155	4594	
17	4765	4800	4770	4750	4756	4735	4749	4756	4750	4754	4760	4747	4712	4721	4686	4686	4815	4767	4858	4807	4766	4766	4830	4855	4765	-155	4610	
18	4855	4816	4770	4751	4758	4721	4719	4726	4720	4727	4736	4747	4736	4755	4763	4823	4899	4949	4949	4949	4924	4899	4831	4760	4796	-157	4639	
19	4824	4863	4847	4791	4761	4744	4761	4767	4761	4732	4704	4715	4704	4738	4766	4811	4879	4934	4963	4868	4830	4787	4723	4723	4792	-156	4636	
20	4780	4793	4730	4708	4713	4696	4713	4733	4740	4739	4740	4736	4711	4744	4720	4720	4775	4792	4849	4889	4856	4815	4837	4811	4764	-157	4607	
21	4811	4792	4792	4773	4781	4771	4796	4802	4796	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	4759	4724	4713	4681	4681	4721	4747	4779	4849	4945	4945	4905	4905	4820	4786	4795	-152	4643	
23	4797	4797	4755	4696	4664	4647	4664	4670	4663	4682	4703	4714	4703	4735	4756	4768	4812	4835	4803	4894	4894	4827	4766	4720	4749	-132	4617	
24	4737	4716	4751	4711	4698	4739	4814	4801	4775	4774	4775	4723	4649	4731	4779	4872	4872	4839	4930	4610	4850	4684	4726	4771	4764	-127	4637	
25	4771	4645	4784	4715	4673	5651	4664	4719	4761	4760	4761	4740	4698	4681	4704	4677	4677	4772	4822	4880	4919	4919	4892	4810	4754	-129	4625	
26	4786	4750	4726	4719	4739	4705	4706	4713	4707	4720	4735	4729	4702	4718	4718	4679	4744	4716	4779	4842	4876	4876	4825	4772	4749	-140	4609	
27	4743	4745	4752	4726	4726	4709	4726	4730	4721	4731	4743	4739	4714	4731	4712	4705	4727	4765	4857	4853	4812	4773	4762	4778	4749	-152	4597	
28	4757	4784	4760	4731	4728	4708	4722	4740	4745	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	4731	4719	4745	4749	4699	4762	4785	4763	4848	4959	4890	4838	4743	4743	4763	4767	-149	4618	
30	4775	4775	4737	4725	4740	4723	4740	4749	4745	4737	4730	4741	4730	4745	4717	4689	4708	4736	4804	4840	4840	4814	4792	4761	4754	-134	4620	
31	4798	4728	4732	4719	4732	4705	4712	4719	4713	4698	4685	4714	4721	4735	4755	4843	4871	4867	4867	4811	4766	4727	4727	4698	4752	-133	4619	
Means.....	4767	4752	4745	4725	4732	4707	4717	4725	4720	4717	4715	4719	4702	4702	4721	4751	4802	4851	4907	4894	4880	4825	4794	4764	4764			
Temp. Corrections	-148	-143	-137	-135	-133	-131	-129	-128	-127	-125	-123	-121	-120	-117	-117	-122	-126	-131	-136	-141	-146	-149	-151	-151	.....	-133		
Corrected Means..	4619	4609	4608	4590	4599	4576	4588	4597	4593	4592	4592	4598	4582	4585	4604	4629	4676	4720	4771	4753	4734	4676	4643	4613	.....	.....	4631	
Mean Hourly Variations from General Monthly Mean. = ·00	12 0319	22 0584	23 0611	41 1089	32 0850	55 1461	43 1142	34 0903	38 1009	39 1036	39 1036	33 0877	49 1302	46 1222	27 0717	2 0053	-45 -1195	-89 -2364	-140 -3719	-122 -3241	-103 -2736	-45 -1195	-12 -0319	18 0478	.....	$\frac{\Delta Y}{Y} =$	.....	·003719

MAY 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
April 30	890	888	884	881	879	879	879	878	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	873	870	869	868	867	875	879	882	885	889	890	893	895	895	895	8817			
2	893	890	886	884	883	881	880	880	880	879	878	876	875	874	875	880	881	885	890	891	893	894	895	895	8841			
3	895	891	887	886	885	882	880	880	880	878	877	876	875	875	875	879	881	885	888	889	892	893	894	895	8841			
4	893	890	885	884	884	883	883	881	880	879	878	878	878	875	875	879	882	885	890	892	894	895	895	894	8847			
5	892	889	886	884	883	880	878	877	877	877	877	876	875	875	876	880	881	884	887	889	890	892	893	893	8830			
6	891	888	886	884	883	880	878	878	878	878	878	877	877	874	875	879	880	885	890	890	893	895	895	895	8836			
7	893	889	885	883	882	881	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	880	880	880	880	876	879	882	884	885	888	892	896	897	897	897	8853			
9	895	890	886	884	883	881	880	880	880	880	880	879	878	875	872	870	870	877	880	883	886	889	890	890	8816			
10	888	887	884	882	881	880	879	878	878	878	878	877	876	875	878	880	881	885	890	892	893	897	899	900	8840			
11	897	894	891	888	886	886	886	884	883	881	880	878	877	875	876	879	882	886	890	895	899	904	908	909	8881			
12	908	902	897	895	894	892	890	890	890	888	886	884	882	880	881	886	890	894	898	902	908	910	912	912	8946			
13	911	909	906	905	904	902	901	900	900	898	896	895	894	891	888	893	895	899	902	906	910	919	922	923	9029			
14	920	917	915	913	912	911	910	908	906	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	907	908	905	902	900	900	905	910	912	915	919	925	930	932	933	9131			
16	927	923	917	916	916	915	914	913	912	910	908	905	902	900	900	907	910	915	917	922	925	927	927	925	9147			
17	925	921	917	916	915	913	912	911	910	908	906	905	905	902	900	905	909	911	915	922	925	930	932	933	9145			
18	930	926	920	918	916	915	910	910	910	908	906	905	905	904	900	905	910	914	920	923	928	930	933	931	9156			
19	928	922	919	918	918	916	915	912	909	907	905	903	902	900	900	905	910	913	918	926	931	931	930	930	9153			
20	929	927	922	919	916	913	911	910	910	908	906	905	905	905	904	905	905	908	913	918	924	932	937	939	9155			
21	935	929	925	923	921	919	917	916	916	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	910	904	902	900	896	898	900	904	909	908	912	913	914	911	909	9121			
23	908	905	901	900	900	898	897	896	896	894	892	891	890	885	885	887	893	895	897	901	906	906	906	905	8973			
24	905	898	895	892	890	889	888	887	886	886	886	886	886	884	885	886	890	895	900	902	906	907	908	908	8935			
25	906	903	898	897	896	895	894	892	890	888	886	883	880	880	884	886	890	895	899	905	907	908	914	916	8955			
26	917	913	906	904	902	900	898	896	895	895	895	895	895	893	893	897	900	902	905	907	913	916	918	919	9031			
27	918	916	914	912	911	909	907	906	906	905	905	904	903	901	902	902	906	910	914	920	924	930	935	936	9123			
28	934	928	922	919	916	914	913	911	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	906	902	901	900	896	893	896	898	903	906	910	912	915	915	912	9097			
30	912	909	904	902	900	899	899	897	896	894	892	890	888	886	885	888	895	899	902	906	910	910	908	908	8991			
31	907	902	900	898	897	895	892	891	890	890	890	890	890	886	883	890	896	900	904	906	910	912	915	912	8978			
Means	9091	9054	9014	8995	8983	8965	8952	8941	8935	8920	8907	8894	8884	8863	8866	8900	8931	8969	9006	9041	9076	9103	9117	9116	8980			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·383 scd. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^2 =$ 0·0000291 × cotan. 7° 39′ 10″ × $\left(\frac{6{\cdot}917^{s.}}{6{\cdot}310}\right)^2 =$ 0·00026025. Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JUNE 1853. Vertical Force Magnetometer.

Göttingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−2·3 *		4·1 *		−11·7 *		13·7 *		8·1 *																
1	4776	4787	4707	4705	4707	4728	4740	4716	4716	4722	4700	4728	4740	4658	4712	4685	4853	4905	4905	4877	4918	4875	4787	4728	4766	-139	4627	
2	4728	4747	4743	4741	4743	4703	4655	4629	4626	4615	4576	4657	4721	4721	4710	4804	4854	4915	4978	4942	4844	4745	4705	4744	4744	-151	4593	
3	4744	4784	4764	4762	4764	4755	4738	4741	4767	4781	4767	4767	4751	4728	4749	4749	4781	4781	4872	4900	4841	4787	4787	4814	4778	-177	4601	
4	4833	4825	4825	4797	4773	4771	4761	4749	4761	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	4796	4803	4811	4803	4771	4806	4806	4834	4834	4834	4869	4869	4874	4889	4889	4816	-182	4634	
6	4894	4823	4785	4779	4777	4784	4782	4760	4762	4806	4822	4807	4775	4794	4826	4740	4775	4814	4814	4877	4844	4878	4786	4804	4805	-192	4613	
7	4844	4844	4794	4794	4799	4803	4799	4775	4774	4785	4769	4777	4769	4758	4797	4813	4837	4882	4882	4891	4850	4920	4928	4876	4823	-188	4635	
8	4876	4887	4815	4793	4775	4784	4784	4760	4760	4766	4745	4756	4751	4751	4781	4781	4768	4859	4955	5036	4959	4868	4760	4760	4814	-180	4634	
9	4855	4887	4803	4801	4803	4791	4770	4743	4749	4754	4740	4754	4752	4763	4799	4799	4840	4889	4975	4999	5023	4847	4768	4768	4819	-176	4643	
10	4831	4875	4780	4771	4766	4781	4787	4766	4768	4782	4768	4773	4761	4747	4747	4716	4750	4817	4892	4887	4829	4840	4811	4862	4796	-168	4628	
11	4878	4878	4810	4808	4810	4794	4770	4758	4770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	4781	4764	4772	4764	4721	4776	4776	4790	4790	4796	4840	4852	4867	4845	4792	4800	-141	4659	
13	4792	4767	4767	4755	4747	4751	4747	4725	4727	4741	4727	4723	4703	4724	4747	4716	4762	4756	4756	4712	4712	4770	4827	4771	4747	-143	4604	
14	4830	4814	4775	4773	4775	4735	4687	4684	4705	4719	4705	4715	4709	4709	4694	4644	4644	4652	4652	4702	4637	4816	4707	4833	4722	-141	4581	
15	4889	4814	4715	4709	4707	4720	4725	4697	4693	4707	4693	4704	4699	4719	4758	4769	4769	4808	4775	4811	4811	4737	4718	4738	4745	-140	4605	
16	4755	4697	4697	4695	4697	4685	4664	4691	4741	4734	4699	4720	4725	4696	4696	4750	4766	4825	4825	4780	4679	4603	4540	4654	4709	-122	4587	
17	4796	4796	4729	4727	4729	4735	4733	4721	4733	4735	4709	4717	4709	4724	4696	4705	4655	4702	4702	4638	4657	4635	4677	4694	4711	-118	4593	
18	4694	4722	4722	4720	4722	4704	4678	4666	4678	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	4688	4671	4669	4650	4685	4768	4772	4735	4735	4769	4799	4806	4643	4599	4653	4706	-123	4583	
20	4636	4678	4636	4667	4702	4716	4721	4677	4656	4670	4656	4669	4666	4687	4698	4770	4785	4835	4864	4773	4753	4759	4698	4704	4712	-136	4576	
21	4704	4726	4706	4704	4706	4705	4695	4664	4657	4671	4657	4665	4656	4651	4725	4773	4794	4847	4879	4844	4807	4745	4720	4711	4726	-141	4585	
22	4494	4558	4571	4552	4538	4542	4538	4477	4440	4519	4570	4575	4564	4517	4600	4480	4505	4561	4572	4631	4646	4706	4667	4560	4558	-141	4417	
23	4537	4557	4567	4566	4570	4563	4547	4536	4548	4543	4511	4520	4512	4527	4542	4552	4637	4661	4691	4665	4661	4694	4694	4664	4586	-147	4439	
24	4616	4590	4590	4564	4543	4547	4543	4533	4547	4557	4539	4547	4539	4529	4529	4535	4570	4662	4740	4797	4805	4732	4732	4621	4604	-147	4457	
25	4583	4577	4577	4555	4537	4541	4537	4537	4561	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	4554	4520	4528	4520	4560	4537	4612	4731	4722	4692	4613	4590	4590	4512	4512	4575	-151	4424	
27	4512	4559	4559	4542	4529	4533	4529	4425	4345	4361	4350	4463	4559	4546	4546	4512	4539	4596	4541	4489	4452	4566	4566	4606	4509	-154	4355	
28	4512	4580	4560	4534	4512	4516	4512	4504	4520	4534	4520	4538	4540	4540	4564	4513	4523	4586	4609	4609	4580	4584	4584	4685	4552	-157	4395	
29	4685	4718	4681	4661	4645	4649	4645	4637	4653	4661	4641	4656	4655	4655	4671	4724	4767	4693	4729	4695	4673	4699	4689	4698	4678	-147	4531	
30	4698	4707	4690	4663	4641	4645	4641	4638	4659	4671	4664	4663	4646	4646	4597	4597	4619	4646	4707	4786	4786	4809	4774	4713	4630	-136	4544	
Means.....	4730	3738	4706	4698	4693	4692	4682	4662	4666	4679	4665	4680	4678	4674	4695	4696	4726	4761	4785	4787	4765	4753	4722	4725	4711			
Temp. Corrections	-169	-163	-158	-155	-153	-151	-149	-147	-145	-143	-142	-140	-138	-136	-136	-139	-143	-148	-152	-157	-162	-167	-171	-171	.....	-151		
Corrected Means.	4561	4575	4548	4543	4540	4541	4533	4515	4521	4536	4523	4540	4540	4538	4559	4557	4583	4613	4633	4630	4603	4586	4551	4554	.....	....	4560	
Mean Hourly Variations from General Monthly Mean. =·00	-1 -0026	-15 0390	12 0312	17 0442	20 0521	19 0494	27 0703	45 1171	39 1015	24 0625	37 0963	20 0521	20 0521	22 0573	1 0026	3 0078	-23 -0599	-53 -1379	-73 -1900	-70 -1822	-43 -1119	-26 -0677	9 0234	6 0156	.....	$\frac{\Delta Y}{Y} =$	.....	·001900

JUNE 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	909	904	901	900	900	898	897	896	895	894	893	891	890	888	888	894	897	899	905	906	909	913	920	925	9005			
2	922	917	910	907	905	905	905	903	902	900	899	898	898	896	897	900	905	908	912	915	920	925	930	940	9091			
3	942	942	937	934	931	929	927	926	925	922	919	917	915	911	910	916	919	922	925	930	935	940	945	948	9278			
4	944	939	935	934	933	931	929	927	925	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	925	925	922	919	916	916	920	925	929	931	935	941	946	949	956	9313			
6	957	950	945	943	941	939	938	936	935	933	932	931	930	925	923	927	934	935	940	943	946	953	952	950	9391			
7	948	945	939	937	935	934	933	932	931	929	928	926	925	921	924	928	930	934	937	942	948	952	950	950	9358			
8	943	935	930	930	930	928	926	925	925	924	923	921	920	918	918	924	926	930	934	936	942	946	950	948	9305			
9	943	937	931	928	926	924	923	920	917	915	913	913	913	912	917	920	925	929	934	935	940	942	945	946	9270			
10	942	937	932	931	930	928	926	923	920	917	915	915	915	912	912	910	915	919	922	923	925	925	918	910	9218			
11	906	906	905	904	904	902	901	899	897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	896	895	893	891	890	890	892	898	904	905	910	910	918	920	918	9023			
13	915	908	904	903	902	901	900	897	894	893	892	890	888	890	895	897	902	905	908	911	915	922	925	920	9032			
14	917	910	909	907	906	904	902	900	898	896	895	895	895	892	894	895	895	897	904	906	906	910	910	910	9022			
15	910	910	909	907	906	905	904	903	903	901	900	898	896	895	893	894	895	896	896	900	903	905	905	904	9016			
16	904	900	897	896	895	894	893	891	890	888	887	886	885	882	878	878	879	880	884	884	885	885	886	890	8882			
17	890	888	886	886	886	886	886	884	882	880	879	878	878	878	880	880	881	883	886	890	890	894	897	898	8853			
18	897	894	890	887	885	884	883	882	881	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	883	886	884	883	880	880	880	885	888	890	895	900	904	906	905	8888			
20	905	905	907	903	900	898	897	896	895	894	893	891	890	890	886	888	894	897	900	903	906	910	910	910	8987			
21	911	910	909	907	906	902	899	896	894	892	890	890	890	888	890	894	896	899	905	907	911	920	922	920	9020			
22	916	912	906	904	902	900	898	897	896	894	892	893	895	894	890	892	894	898	900	905	909	914	920	920	9017			
23	925	918	907	906	906	906	906	903	900	899	898	896	895	895	896	896	900	905	906	910	914	918	925	925	9065			
24	922	915	914	911	908	906	905	904	904	902	900	899	898	895	895	896	899	905	905	910	910	911	914	915	9060			
25	914	913	910	908	907	906	905	904	904	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	904	905	903	902	900	902	901	904	908	912	915	920	921	921	924	9089			
27	922	921	919	915	912	910	909	908	907	906	905	902	900	898	900	903	905	908	910	915	920	924	927	931	9115			
28	927	925	920	917	915	912	910	908	907	906	905	902	900	900	900	904	906	910	914	917	922	928	932	931	9133			
29	928	921	915	912	910	908	906	903	900	900	900	899	898	895	892	895	897	899	903	906	910	915	917	916	9060			
30	914	910	904	903	902	899	897	895	894	894	894	892	890	888	888	889	890	891	895	900	903	906	910	907	8981			
Means.....	9220	9182	9143	9123	9109	9092	9079	9061	9047	9033	9024	9010	9000	8980	8982	9005	9037	9068	9101	9134	9169	9210	9233	9237	9095			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}358$. scd. $k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 40'\ 2'' \times \left(\frac{6{\cdot}917}{6{\cdot}247}\right)^2 = 0{\cdot}00026501$. Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JULY 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 8·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				3·1 *		1·1 *		−1·3 *		2·1 *		−0·2 *																
1	4713	4683	4666	4669	4666	4676	4684	4671	4660	4670	4675	4659	4643	4643	4671	4706	4771	4807	4771	4717	4682	4643	4643	4613	4683	−132	4551	
2	4613	4653	4695	4680	4659	4644	4626	4625	4626	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	4636	4641	4641	4641	4636	4670	4708	4750	4753	4783	4737	4670	4651	4637	4641	4667	−144	4523	
4	4641	4641	4672	4662	4645	4646	4645	4632	4621	4595	4565	4565	4565	4605	4562	4616	4653	4681	4600	4571	4660	4676	4641	4641	4625	−134	4491	
5	4641	4641	4632	4616	4593	4594	4593	4576	4561	4569	4573	4573	4573	4599	4582	4627	4586	4586	4558	4558	4631	4596	4489	4470	4584	−102	4482	
6	4520	4625	4625	4642	4652	4653	4652	4638	4626	4628	4626	4600	4575	4575	4546	4521	4577	4555	4555	4555	4676	4624	4624	4690	4607	− 89	4518	
7	4690	4582	4582	4592	4596	4597	4596	4593	4592	4594	4592	4574	4557	4560	4532	4532	4516	4474	4474	4490	4490	4461	4461	4479	4550	− 92	4458	
8	4565	4609	4609	4619	4622	4593	4561	4549	4540	4530	4516	4527	4539	4539	4569	4569	4593	4655	4720	4720	4698	4660	4545	4545	4591	− 98	4493	
9	4489	4559	4595	4597	4593	4592	4588	4587	4588	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	—	—	4559	4525	4513	4501	4501	4576	4629	4594	4594	4634	4583	4583	4571	4512	4525	4566	− 89	4477	
11	4549	4575	4595	4598	4595	4607	4617	4614	4614	4616	4614	4593	4572	4551	4594	4636	4691	4767	4826	4826	4814	4754	4786	4676	4653	− 94	4559	
12	4596	4659	4576	4547	4511	4512	4511	4489	4470	4472	4470	4477	4485	4581	4611	4554	4664	4618	4681	4675	4684	4649	4680	4646	4576	−103	4473	
13	4600	4576	4602	4605	4602	4590	4575	4574	4575	4552	4525	4558	4591	4562	4603	4596	4625	4648	4585	4514	4481	4485	4471	4516	4567	−109	4458	
14	4584	4623	4593	4596	4592	4593	4592	4561	4532	4563	4589	4589	4589	4549	4572	4621	4670	4713	4735	4770	4770	4770	4755	4755	4637	−106	4531	
15	4725	4666	4666	4669	4665	4625	4583	4594	4607	4609	4607	4625	4644	4644	4601	4577	4564	4611	4611	4527	4561	4561	4561	4608	4613	−108	4505	
16	4608	4657	4644	4647	4644	4645	4644	4658	4675	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	4655	4630	4630	4630	4568	4540	4595	4647	4615	4732	4695	4600	4520	4524	4548	4623	−119	4504	
18	4601	4619	4637	4640	4637	4650	4660	4643	4628	4630	4628	4621	4614	4595	4633	4657	4711	4684	4598	4598	4635	4675	4675	4704	4641	−136	4505	
19	4660	4619	4630	4628	4620	4621	4620	4620	4622	4632	4637	4614	4591	4591	4614	4614	4640	4693	4693	4686	4630	4546	4486	4554	4619	−136	4483	
20	4684	4684	4684	4660	4630	4631	4630	4630	4632	4648	4659	4625	4592	4628	4645	4695	4760	4691	4601	4606	4606	4652	4631	4547	4644	−137	4507	
21	4547	4630	4628	4616	4598	4586	4571	4589	4610	4590	4566	4558	4550	4598	4610	4639	4665	4683	4708	4681	4681	4590	4522	4580	4608	−137	4471	
22	4612	4612	4609	4583	4550	4551	4550	4520	4492	4510	4523	4523	4523	4535	4577	4544	4565	4605	4564	4580	4580	4612	4612	4500	4560	−128	4432	
23	4566	4566	4566	4557	4542	4543	4542	4547	4555	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	4551	4542	4542	4542	4505	4551	4582	4618	4682	4733	4788	4754	4754	4700	4700	4605	−124	4481	
25	4596	4545	4561	4564	4561	4562	4561	4571	4584	4569	4549	4549	4549	4535	4557	4559	4609	4723	4765	4698	4583	4510	4470	4511	4577	−113	4464	
26	4511	4605	4568	4571	4568	4553	4536	4550	4567	4569	4567	4554	4541	4556	4533	4572	4610	4680	4735	4766	4780	4809	4809	4700	4617	−109	4508	
27	4641	4629	4616	4609	4596	4597	4596	4551	4508	4545	4578	4568	4559	4534	4563	4500	4451	4537	4550	4550	4401	4326	4433	4520	4540	−110	4430	
28	4520	4600	4595	4598	4595	4566	4535	4560	4587	4562	4533	4533	4533	4545	4564	4569	4587	4582	4582	4542	4570	4631	4631	4686	4575	−108	4467	
29	4595	4595	4578	4581	4578	4569	4558	4544	4532	4534	4532	4521	4511	4533	4601	4641	4670	4701	4736	4736	4600	4475	4439	4439	4575	−106	4469	
30	4527	4588	4562	4559	4550	4554	4556	4567	4581	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	4573	4560	4555	4551	4551	4581	4630	4657	4721	4721	4619	4532	4389	4348	4509	4564	−108	4456	
Means.....	4600	4617	4615	4612	4602	4598	4592	4587	4584	4583	4578	4573	4568	4570	4587	4603	4632	4656	4664	4646	4629	4600	4580	4589	4603			
Temp. Corrections.	−128	125	−120	−118	−117	−114	−113	−111	−110	−108	−107	−105	−103	−100	−100	−102	−106	−111	−115	−119	−124	−128	−129	−129	.....	−114		
Corrected Means..	4472	4492	4495	4494	4485	4484	4479	4476	4474	4475	4471	4468	4465	4470	4487	4501	4526	4545	4549	4527	4505	4472	4451	4460	.....	.....	4489	
Mean Hourly Variations from General Monthly Mean. = ·00	17	−3	−6	−5	4	5	10	13	15	14	18	21	24	19	2	−12	−37	−56	−60	−38	−16	17	38	29	.....	$\frac{\Delta Y}{Y} =$	.....	·001590
	0451	−0080	−0159	−0133	0106	0133	0265	0345	0398	0371	0477	0557	0636	0504	0053	−0318	−0981	−1484	−1590	−1007	−0424	0451	1007	0769				

JULY 1853 Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	906	904	902	901	900	899	898	896	894	893	892	891	890	888	886	890	892	895	895	898	902	905	908	908	8972			
2	908	905	904	903	902	900	899	898	897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	899	902	901	900	900	901	902	902	905	910	912	915	920	930	924	9058			
4	924	914	909	906	904	903	903	900	898	897	896	895	895	892	887	887	888	890	895	898	899	900	896	891	8986			
5	891	888	879	877	875	874	874	872	870	869	868	866	865	863	863	864	868	873	878	880	885	885	884	883	8748			
6	880	866	864	863	863	864	865	864	863	861	860	859	859	858	857	859	863	867	870	874	875	874	873	872	8655			
7	870	870	870	870	870	870	870	868	867	865	863	861	859	855	857	856	861	866	869	872	875	878	880	880	8676			
8	878	876	876	875	875	875	875	873	871	870	869	868	868	866	866	865	866	869	873	875	875	876	876	877	8722			
9	875	875	872	870	869	868	867	866	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	862	858	857	857	856	856	856	859	862	865	866	870	875	875	876	8658			
11	875	875	871	871	871	870	870	868	867	865	864	862	860	857	858	860	865	868	870	874	877	880	881	882	8692			
12	883	882	882	881	880	879	878	876	875	873	872	869	867	864	863	863	869	874	876	880	883	886	887	887	8762			
13	889	889	886	884	882	881	880	880	880	877	874	872	870	868	865	871	873	876	880	884	887	890	892	892	8801			
14	886	884	883	881	880	878	876	874	872	871	870	868	867	865	870	870	873	877	880	884	887	891	890	890	8778			
15	889	888	887	884	882	881	880	878	877	875	874	872	871	868	870	871	875	877	879	884	888	889	888	887	8798			
16	886	886	884	882	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	882	884	883	883	881	883	885	885	890	892	895	900	906	908	909	8877			
18	907	909	906	904	903	902	902	900	899	897	895	892	890	885	888	890	891	895	898	899	905	910	914	914	8998			
19	914	910	906	904	902	901	900	899	898	897	897	894	892	890	890	895	896	898	900	903	905	907	910		9005			
20	910	910	906	906	906	904	902	901	900	897	895	892	890	888	890	890	894	896	900	904	906	910	910	909	9007			
21	907	907	905	904	904	903	902	898	894	894	894	893	893	890	888	890	895	900	904	907	908	911	912	915	9008			
22	915	910	902	898	895	893	892	891	890	890	890	888	887	884	881	883	885	888	892	897	900	904	906	910	8946			
23	908	905	898	897	896	893	890	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	887	884	882	880	880	880	878	880	885	888	890	896	900	902	905	8910			
25	902	897	889	887	886	883	881	880	880	880	880	877	874	870	870	870	874	879	883	885	888	892	893	893	8830			
26	889	886	884	883	882	881	880	880	880	878	877	874	872	868	866	865	875	878	880	883	890	890	892	895	8803			
27	890	890	884	883	883	881	880	880	880	877	875	873	872	869	870	875	877	878	879	886	888	890	892	890	8809			
28	890	887	881	880	880	878	876	875	875	873	872	871	870	868	868	870	876	880	883	887	892	894	895	894	8798			
29	890	887	881	880	879	875	872	871	870	870	870	868	867	864	866	870	875	878	882	886	890	891	895	891	8778			
30	890	886	884	883	882	876	871	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	872	875	872	870	868	874	874	878	880	885	885	889	892	893	893	8797			
Means.....	8943	8918	8883	8868	8858	8843	8832	8818	8809	8797	8788	8769	8757	8733	8736	8750	8783	8817	8848	8880	8913	8940	8953	8953	8841			

* The numbers in these columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1.389$ scd. $\quad k. = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0.0000291. \times \text{cotan.}\ 7°\ 40'\ 26'' \times \left(\frac{6.917^{s.}}{6.314^{s.}}\right)^2 = 0.00025919.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

AUGUST 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−14·2 *		5·3 *		−24·7 *		−0·1 *		2·5 *																
1	4569	4616	4570	4556	4570	4576	4571	4544	4566	4566	4566	4575	4580	4566	4649	4671	4783	4774	4741	4760	4760	4735	4627	4546	4627	−111	4516	
2	4567	4594	4599	4579	4587	4592	4587	4562	4586	4595	4604	4615	4621	4555	4606	4662	4686	4686	4719	4648	4623	4623	4582	4603	4612	−111	4501	
3	4630	4630	4649	4600	4579	4569	4549	4520	4541	4541	4541	4564	4582	4516	4557	4539	4562	4509	4447	4502	4524	4588	4588	4627	4561	−107	4454	
4	4588	4588	4593	4579	4593	4606	4609	4568	4577	4577	4577	4591	4600	4585	4585	4609	4630	4630	4611	4584	4536	4474	4520	4458	4578	−114	4464	
5	4528	4585	4585	4531	4505	4535	4555	4518	4531	4540	4549	4547	4541	4541	4596	4585	4600	4646	4620	4584	4543	4543	4490	4465	4553	−114	4439	
6	4520	4560	4546	4542	4567	4572	4567	4530	4543	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	4536	4530	4537	4540	4542	4541	4614	4626	4666	4659	4609	4585	4585	4544	4637	4571	−110	4461	
8	4487	4487	4588	4574	4588	4589	4580	4536	4542	4542	4542	4561	4575	4550	4549	4567	4603	4627	4629	4557	4435	4390	4358	4328	4533	−113	4420	
9	4459	4499	4513	4499	4513	4517	4510	4485	4510	4530	4551	4566	4577	4523	4556	4595	4595	4607	4685	4685	4665	4642	4585	4585	4561	−104	4457	
10	4628	4605	4605	4591	4605	4613	4611	4553	4545	4545	4545	4554	4559	4552	4512	4567	4593	4689	4657	4560	4515	4462	4427	4466	4565	− 91	4474	
11	4508	4573	4564	4542	4549	4542	4524	4499	4524	4528	4533	4539	4540	4620	4582	4582	4604	4588	4585	4578	4633	4583	4604	4556	4562	− 73	4489	
12	4654	4630	4630	4616	4630	4605	4569	4545	4570	4565	4561	4547	4529	4532	4568	4601	4674	4720	4765	4782	4724	4666	4630	4588	4621	− 69	4552	
13	4545	4576	4573	4559	4573	4568	4553	4528	4553	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	4545	4537	4539	4537	4513	4536	4599	4676	4717	4750	4713	4735	4677	4645	4595	4598	− 80	4518	
15	4570	4613	4563	4542	4550	4555	4550	4532	4563	4561	4559	4539	4514	4537	4507	4541	4596	4667	4631	4550	4481	4410	4382	4460	4541	− 85	4456	
16	4540	4576	4576	4552	4557	4533	4499	4475	4500	4508	4516	4522	4523	4516	4551	4534	4534	4625	4547	4547	4630	4658	4518	4576	4546	− 82	4464	
17	4549	4591	4562	4548	4562	4566	4560	4535	4560	4550	4541	4547	4549	4563	4527	4527	4543	4590	4664	4616	4645	4633	4586	4586	4571	− 84	4487	
18	4501	4536	4536	4522	4536	4530	4513	4507	4550	4550	4550	4556	4558	4507	4534	4496	4425	4475	4395	4433	4473	4520	4475	4540	4509	− 85	4424	
19	4540	4522	4506	4495	4512	4543	4564	4530	4545	4558	4571	4527	4478	4471	4520	4537	4624	4699	4672	4664	4705	4628	4508	4508	4559	− 89	4470	
20	4487	4560	4560	4546	4560	4551	4532	4507	4532	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	4512	4493	4532	4566	4562	4522	4544	4611	4690	4625	4467	4369	4393	4352	4415	4520	− 96	4424	
22	4556	4595	4585	4534	4512	4517	4512	4500	4537	4521	4506	4541	4571	4541	4524	4557	4620	4716	4756	4717	4641	4561	4533	4460	4567	− 88	4479	
23	4460	4556	4556	4542	4556	4564	4562	4545	4577	4577	4577	4584	4587	4524	4557	4568	4599	4677	4740	4665	4694	4694	4612	4554	4589	− 92	4497	
24	4554	4581	4604	4569	4563	4568	4563	4540	4566	4566	4566	4576	4582	4597	4565	4569	4594	4637	4600	4520	4370	4409	4490	4602	4556	− 99	4457	
25	4565	4565	4550	4553	4585	4589	4583	4548	4563	4563	4563	4577	4587	4544	4554	4686	4732	4805	4724	4658	4604	4653	4677	4610	4610	−100	4510	
26	4610	4579	4617	4603	4617	4610	4593	4570	4596	4603	4611	4585	4554	4540	4588	4686	4794	4862	4966	4714	4700	4639	4677	4676	4650	−103	4547	
27	4621	4635	4695	4649	4632	4612	4582	4566	4599	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	4600	4602	4603	4600	4600	4651	4762	4864	4946	4892	4772	4772	4709	4681	4653	4679	−113	4566	
29	4686	4709	4686	4672	4686	4678	4660	4635	4660	4653	4646	4647	4644	4643	4679	4679	4712	4705	4647	4584	4540	4507	4550	4589	4646	−115	4531	
30	4624	4665	4657	4642	4655	4660	4655	4626	4646	4634	4623	4618	4608	4612	4735	4779	4862	4936	4936	4901	4807	4702	4627	4658	4703	−115	4588	
31	4703	4703	4698	4660	4651	4664	4667	4646	4674	4684	4695	4692	4684	4665	4696	4764	4764	4773	4857	4853	4770	4729	4678	4663	4710	−126	4584	
Means.....	4565	4590	4591	4570	4578	4579	4570	4543	4565	4565	4565	4570	4570	4556	4576	4608	4648	4691	4686	4638	4610	4586	4554	4556	4589			
Temp. Corrections	−110	−108	−104	−102	−102	−99	−98	−96	−94	−93	−92	−90	−88	−85	−84	−88	−91	−96	−100	−105	−109	−112	−113	−113	.....	− 99		
Corrected Means.	4455	4482	4487	4468	4476	4480	4472	4447	4471	4472	4473	4480	4482	4471	4492	4520	4557	4595	4586	4533	4501	4474	4441	4443	.....	.....	4490	
Mean Hourly Variations from General Monthly Mean. = ·00	35	8	3	22	14	10	18	43	19	18	17	10	8	19	−2	−30	−67	−105	−96	−43	−11	16	49	47	.....	$\frac{\Delta Y}{Y} =$	.....	·002721
	0907	0207	0078	0570	0363	0259	0467	1114	0492	0467	0440	0259	0207	0492	−0052	−0778	−1737	−2721	−2488	−1114	−0285	0415	1270	1218				

AUGUST 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	891	887	884	882	880	877	875	873	872	870	869	868	867	867	868	874	875	880	882	887	892	898	899	898	8798			
2	897	892	887	886	885	883	882	879	877	874	872	871	870	866	866	866	870	876	880	886	888	888	889	885	8798			
3	883	885	883	881	880	878	877	874	872	871	870	868	866	862	861	866	870	876	881	884	888	892	894	894	8773			
4	892	889	886	885	885	882	880	880	880	876	873	871	870	868	870	872	874	879	884	888	890	895	898	896	8818			
5	894	891	886	885	885	883	882	880	878	877	876	875	875	875	870	872	875	881	882	885	885	888	892	893	8819			
6	892	892	880	880	881	881	881	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	875	870	868	867	865	865	866	870	875	880	884	889	889	892	892	8789			
8	890	890	884	882	881	879	878	876	875	875	875	872	870	868	866	860	864	866	869	874	877	880	881	881	8814			
9	890	886	881	880	879	878	877	876	875	872	870	868	866	860	860	864	866	869	874	877	880	881	881	880	8746			
10	880	880	880	877	875	873	871	869	868	867	866	865	865	860	858	855	853	853	855	858	859	861	863	863	8656			
11	863	863	861	859	857	855	853	852	852	850	849	846	844	844	842	845	845	848	852	858	857	857	854	852	8524			
12	852	852	850	850	850	848	846	846	846	845	845	843	841	840	840	845	846	851	855	858	858	862	863	863	8498			
13	863	863	858	857	856	856	856	856	856	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	855	855	853	852	850	852	854	854	853	857	862	863	867	868	867	8576			
15	865	864	863	862	862	859	856	856	856	855	854	853	852	850	852	855	858	862	865	867	870	874	877	876	8610			
16	873	869	864	862	861	861	861	858	856	855	854	854	854	850	850	853	855	857	859	862	865	867	867	867	8592			
17	867	865	862	861	860	858	857	856	855	854	854	853	852	850	852	856	860	864	866	870	870	870	870	870	8605			
18	870	868	865	865	865	864	863	861	860	858	856	854	852	848	849	852	857	860	865	866	868	869	868	866	8612			
19	865	864	865	864	863	862	862	861	860	859	858	855	853	850	854	859	863	866	870	873	877	877	879	880	8641			
20	880	879	875	874	874	872	871	869	868	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	866	865	865	865	863	860	864	864	865	869	872	872	872	872	870	8694			
22	868	865	866	866	866	865	865	865	865	863	862	861	860	858	855	855	855	856	859	863	865	869	872	870	8631			
23	868	867	865	865	865	865	866	865	865	863	862	861	860	860	860	861	865	869	870	870	873	876	877	879	8665			
24	881	881	879	877	876	874	873	871	870	869	868	866	865	860	860	864	865	868	870	871	873	875	876	876	8712			
25	874	874	871	871	871	868	866	865	865	865	865	865	865	860	861	869	870	873	877	880	886	889	888	887	8719			
26	884	881	876	876	876	872	869	867	865	865	865	865	865	863	862	866	872	872	874	880	886	888	891	890	8738			
27	885	880	880	879	879	878	878	877	876	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	880	885	883	882	878	875	875	875	877	880	885	888	890	890	890	8810			
29	890	888	887	886	886	883	880	879	879	879	880	880	880	876	875	876	877	880	885	887	890	890	889	889	8830			
30	890	890	887	885	884	882	880	880	880	879	878	876	875	870	870	874	880	880	881	883	889	894	896	897	8825			
31	897	895	894	893	892	891	890	887	885	884	884	882	880	880	880	883	885	890	895	895	898	901	903	910	8906			
Means.....	8794	8778	8748	8737	8731	8714	8702	8688	8680	8667	8659	8645	8634	8609	8606	8634	8657	8688	8723	8755	8782	8804	8816	8813	8711			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}352$ scd. $k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 39'\ 0'' \times \left(\frac{6{\cdot}917\ \text{s.}}{6{\cdot}240}\right)^2 = 0{\cdot}00026622$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

SEPTEMBER 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				0·7 *		−0·1 *		−13·2 *		11·9 *		3·8 *																
1	4704	4756	4731	4732	4731	4695	4659	4646	4659	4638	4593	4575	4550	4560	4672	5050	4936	4786	4850	5070	4842	4665	4460	4556	4713	−131	4582	
2	4653	4653	4812	4788	4763	4721	4680	4631	4608	4637	4643	4601	4552	4705	4794	4821	4950	5004	5000	4957	4938	4783	4722	4762	4757	−138	4619	
3	4762	4772	4703	4679	4654	4622	4590	4564	4564	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	4618	4649	4653	4649	4634	4693	4786	4890	4996	5047	4959	4833	4797	4747	4715	4732	−142	4590	
5	4698	4698	4707	4700	4692	4681	4670	4663	4682	4677	4648	4661	4666	4621	4735	4849	4906	5001	5066	5030	4980	4900	4834	4798	4773	−128	4645	
6	4680	4724	4660	4649	4637	4588	4540	4554	4594	4606	4594	4597	4593	4561	4626	4728	4795	4914	4949	4981	5017	4888	4689	4609	4699	−116	4583	
4	4609	4647	4645	4628	4610	4610	4610	4581	4579	4581	4559	4579	4592	4592	4623	4660	4761	4910	4941	4988	4907	4813	4732	4683	4685	− 99	4586	
8	4614	4661	4654	4644	4633	4633	4633	4607	4608	4614	4596	4598	4593	4570	4516	4511	4610	4715	4796	4796	4687	4603	4563	4563	4626	−100	4526	
9	4610	4638	4631	4632	4631	4631	4631	4594	4583	4595	4583	4594	4597	4597	4537	4546	4591	4601	4650	4650	4584	4629	4624	4624	4608	− 94	4514	
10	4669	4644	4615	4608	4600	4577	4555	4542	4555	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	4582	4585	4586	4580	4562	4544	4669	4785	4785	4836	4813	4772	4679	4679	4694	4647	− 96	4551	
12	4721	4656	4643	4644	4643	4618	4593	4566	4566	4587	4584	4588	4585	4577	4655	4794	4894	4958	4939	4868	4760	4714	4714	4695	4690	−101	4589	
13	4672	4615	4623	4608	4591	4578	4566	4566	4592	4604	4592	4583	4567	4562	4701	4909	4909	4904	4829	4782	4720	4671	4741	4741	4676	−105	4571	
14	4682	4637	4637	4638	4637	4615	4593	4567	4567	4579	4567	4566	4557	4557	4647	4795	4836	4802	4753	4697	4619	4537	4537	4579	4633	−106	4527	
15	4629	4639	4577	4634	4690	4623	4557	4544	4557	4555	4530	4531	4524	4536	4680	4836	4772	4685	4685	4719	4642	4642	4629	4588	4625	−108	4517	
16	4663	4586	4586	4589	4590	4605	4620	4607	4620	4622	4600	4590	4572	4586	4645	4695	4771	4847	4877	4853	4775	4725	4690	4645	4665	− 98	4567	
17	4628	4652	4615	4616	4615	4590	4566	4553	4566	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	4589	4588	4592	4588	4599	4624	4758	4766	4871	4932	4795	4768	4707	4592	4570	4656	−102	4554	
19	4591	4591	4564	4574	4582	4582	4582	4554	4552	4564	4552	4570	4581	4574	4574	4591	4624	4624	4684	4626	4593	4556	4599	4599	4587	− 96	4491	
20	4651	4649	4634	4587	4539	4555	4572	4558	4571	4584	4573	4585	4589	4548	4635	4684	4684	4731	4761	4671	4644	4644	4635	4674	4623	− 88	4535	
21	4652	4623	4591	4592	4591	4568	4546	4533	4546	4554	4539	4568	4589	4515	4497	4580	4707	4746	4775	4753	4710	4698	4609	4578	4611	− 92	4519	
22	4598	4575	4592	4569	4545	4536	4528	4498	4494	4526	4535	4529	4515	4490	4490	4533	4623	4713	4747	4692	4718	4648	4607	4565	4578	− 93	4485	
23	4565	4539	4539	4530	4519	4513	4507	4514	4548	4560	4548	4536	4517	4489	4546	4615	4718	4754	4794	4695	4637	4605	4548	4520	4577	− 96	4481	
24	4545	4569	4569	4551	4532	4514	4496	4483	4496	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	4520	4520	4524	4520	4510	4562	4621	4620	4668	4668	4756	4719	4647	4678	4711	4583	− 94	4489	
26	4667	4619	4585	4586	4585	4536	4488	4475	4488	4491	4471	4498	4517	4503	4565	4617	4695	4724	4724	4650	4627	4627	4585	4619	4581	−100	4481	
27	4661	4605	4583	4572	4560	4555	4551	4527	4530	4542	4530	4564	4591	4629	4699	4728	4728	4800	4821	4717	4665	4665	4556	4617	4625	−113	4512	
28	4626	4584	4561	4524	4486	4486	4486	4447	4435	4474	4490	4505	4512	4482	4522	4561	4630	4725	4779	4699	4672	4629	4569	4540	4559	−106	4453	
29	4569	4580	4552	4546	4538	4530	4522	4499	4502	4501	4476	4496	4509	4499	4536	4620	4668	4733	4746	4629	4560	4485	4420	4543	4552	−110	4442	
30	4627	4599	4578	4579	4578	4578	4578	4528	4504	4531	4535	4539	4535	4545	4594	4671	4781	4890	4912	4790	4740	4556	4486	4580	4618	−117	4501	
Means	4644	4635	4623	4615	4607	4590	4574	4554	4560	4574	4565	4570	4567	4562	4612	4701	4756	4803	4829	4794	4736	4674	4625	4630	4642			
Temp. Corrections	−119	−115	−110	−109	−107	−105	−104	−102	−101	−100	−99	−97	−96	−94	−93	−95	−99	−105	−110	−114	−119	−121	−122	−121	.....	−106		
Corrected Means	4525	4520	4513	4506	4500	4485	4470	4452	4459	4474	4466	4473	4471	4468	4519	4606	4657	4698	4719	4680	4617	4553	4503	4509	.....	.....	4536	
Mean Hourly Variations from General Monthly Mean. = ·00	11	16	23	30	36	51	66	84	77	62	70	63	65	68	17	−70	−121	−162	−183	−144	−81	−17	33	27	.....	$\frac{\Delta Y}{Y} =$	.....	·004872
	0293	0426	0612	0799	0958	1359	1757	2236	2050	1651	1864	1677	1730	1810	0452	−1864	−3221	−4313	−4872	−3834	−2156	−0452	0879	0719				

SEPTEMBER 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	908	903	900	899	898	897	897	896	895	894	893	891	890	886	886	884	889	894	898	900	904	905	910	912	8970			
2	910	908	906	906	906	904	903	901	900	898	896	894	892	890	890	895	897	897	900	905	910	913	915	918	9023			
3	920	915	911	910	910	908	907	905	904	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	900	896	895	895	892	890	894	897	901	905	907	912	914	914	912	9048			
5	909	906	901	899	898	896	895	892	890	887	884	884	884	883	880	885	888	893	899	905	907	910	908	8945				
6	905	902	896	895	894	893	893	891	889	888	887	886	886	885	881	876	875	873	875	872	875	876	880	880	8855			
7	880	879	877	875	874	872	870	869	868	867	866	864	863	863	865	865	870	876	879	880	884	885	885	885	8734			
8	882	881	878	877	876	875	874	873	872	871	870	870	870	867	864	863	866	867	874	879	882	885	885	878	8741			
9	876	875	871	870	869	867	866	864	863	862	862	862	862	862	862	863	866	870	875	878	879	881	881	881	8695			
10	876	873	869	867	865	864	864	863	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	866	870	869	868	868	868	866	864	868	875	879	881	885	885	884	8708			
12	884	881	877	876	876	874	873	871	870	869	868	867	866	865	865	865	871	875	879	880	884	885	885	886	8747			
13	886	882	880	878	876	875	875	875	875	874	873	871	870	866	870	870	877	880	881	884	885	885	886	885	8775			
14	884	882	880	879	878	877	876	875	875	873	871	870	870	868	870	870	874	880	885	886	891	892	889	890	8785			
15	888	885	882	880	878	877	877	877	877	874	872	871	870	870	867	872	876	880	885	888	893	895	894	883	8796			
16	880	878	876	875	874	873	872	870	869	868	867	864	862	860	863	865	867	868	876	880	883	885	886	886	8728			
17	882	878	876	875	875	874	873	872	871	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	871	872	871	870	870	870	868	867	874	879	882	885	887	886	886	8756			
19	884	880	877	875	874	872	870	871	872	871	870	868	867	865	865	863	860	862	866	870	873	876	880	880	8713			
20	876	870	862	861	860	859	858	857	857	856	856	856	856	855	855	860	865	868	872	875	879	880	883	880	8648			
21	878	875	872	871	870	869	868	867	867	866	865	863	862	860	860	860	863	868	866	870	870	872	875	875	8680			
22	872	870	870	870	870	869	868	867	866	865	865	864	864	861	857	858	864	870	872	876	877	878	880	880	8689			
23	878	876	875	873	871	870	869	868	868	867	867	866	865	862	862	862	866	874	876	876	878	880	880	880	8712			
24	876	875	871	870	869	865	862	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	860	860	860	860	858	856	860	866	870	874	879	884	888	890	888	8693			
26	884	880	874	872	871	870	870	869	868	866	865	865	865	862	862	866	872	876	880	882	886	890	895	896	8744			
27	895	889	884	884	884	882	881	880	880	879	879	875	871	870	872	876	880	884	888	892	897	899	890	887	8833			
28	886	884	881	880	880	878	876	874	873	871	870	870	870	868	870	870	878	882	885	888	891	890	889	888	8788			
29	886	885	882	881	880	879	878	877	876	875	874	872	870	870	868	874	877	884	887	891	895	898	900	900	8816			
30	896	894	891	889	887	886	885	884	883	882	882	879	877	875	871	876	879	884	888	890	896	899	900	900	8864			
Means	8877	8848	8815	8803	8793	8779	8769	8757	8750	8739	8731	8718	8710	8693	8689	8700	8735	8774	8813	8842	8877	8896	8905	8895	8788			

* The numbers in these Columns are not observed but Interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of Interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}355$ scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 27'' \times \left(\frac{6{\cdot}917^{s.}}{6{\cdot}251}\right)^2 = 0{\cdot}0002656.$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

OCTOBER 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−11·3 *		0·8 *		18·5 *		−3·6 *		7·2 *																
1	4671	4630	4612	4601	4612	4551	4489	4518	4511	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	4551	4599	4561	4508	4508	4586	4704	4814	4803	4803	4710	4592	4551	4482	4527	4604	-115	4489	
3	4577	4577	4584	4569	4577	4573	4568	4587	4569	4547	4533	4551	4555	4524	4608	4678	4752	4841	4805	4805	4765	4710	4683	4585	4630	-120	4510	
4	4585	4583	4589	4578	4589	4588	4585	4576	4530	4524	4526	4524	4507	4507	4608	4696	4773	4885	4882	4789	4687	4545	4531	4576	4615	-112	4503	
5	4576	4578	4577	4566	4577	4570	4561	4582	4566	4562	4566	4558	4536	4536	4619	4709	4796	4950	4922	4900	4800	4726	4670	4630	4651	-111	4540	
6	4624	4624	4624	4596	4590	4584	4577	4589	4565	4545	4532	4529	4512	4488	4549	4600	4675	4755	4787	4729	4685	4650	4650	4632	4612	-112	4500	
7	4621	4621	4573	4562	4573	4565	4555	4579	4567	4567	4575	4567	4545	4505	4550	4627	4725	4776	4710	4721	4700	4701	4701	4676	4619	-110	4509	
8	4644	4580	4552	4541	4552	4552	4550	4575	4564	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	4530	4504	4500	4481	4517	4537	4576	4574	4625	4679	4631	4688	4716	4646	4599	4580	-111	4469	
10	4566	4536	4540	4529	4540	4553	4565	4576	4551	4540	4536	4543	4536	4500	4576	4662	4685	4623	4576	4576	4558	4599	4599	4618	4570	-103	4467	
11	4564	4521	4529	4518	4529	4528	4526	4548	4534	4526	4526	4516	4491	4516	4528	4575	4643	4687	4715	4659	4651	4651	4611	4644	4572	- 96	4476	
12	4621	4581	4546	4535	4546	4543	4539	4556	4537	4510	4491	4498	4491	4502	4537	4573	4643	4747	4695	4666	4698	4614	4614	4635	4580	- 96	4484	
13	4635	4594	4560	4549	4560	4547	4533	4552	4534	4531	4536	4534	4518	4495	4544	4567	4636	4681	4691	4686	4641	4590	4621	4621	4582	- 93	4489	
14	4599	4631	4586	4575	4586	4598	4609	4588	4531	4540	4556	4561	4552	4534	4608	4673	4721	4740	4711	4597	4555	4538	4575	4592	4598	- 92	4506	
15	4592	4594	4549	4528	4530	4546	4560	4577	4558	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	4545	4539	4546	4539	4510	4500	4537	4565	4606	4636	4636	4659	4688	4640	4640	4576	- 90	4486	
17	4623	4623	4580	4569	4580	4565	4548	4576	4567	4543	4527	4534	4527	4511	4511	4562	4590	4638	4638	4580	4600	4612	4676	4610	4579	- 87	4492	
18	4570	4570	4604	4559	4537	4526	4513	4538	4526	4501	4483	4505	4513	4479	4509	4557	4685	4774	4796	4730	4692	4641	4641	4619	4586	- 89	4497	
19	4599	4550	4540	4529	4540	4527	4513	4530	4511	4496	4489	4514	4525	4476	4481	4522	4587	4654	4659	4684	4719	4752	4746	4652	4575	- 78	4497	
20	4600	4559	4543	4538	4555	4542	4527	4538	4513	4511	4516	4507	4483	4483	4451	4478	4569	4576	4593	4593	4624	4345	4336	4307	4512	- 70	4442	
21	4274	4274	4276	4265	4276	4256	4234	4227	4183	4179	4183	4178	4158	4147	4617	4684	4718	4775	4820	4724	4781	4594	4579	4527	4414	- 53	4361	
22	4527	4512	4506	4495	4506	4534	4560	4578	4560	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	4542	4531	4538	4531	4491	4468	4593	4653	4525	4560	4722	4703	4703	4664	4664	4569	- 52	4517	
24	4593	4550	4536	4508	4503	4504	4503	4498	4456	4475	4502	4496	4476	4476	4517	4561	4632	4745	4790	4756	4821	4799	4747	4697	4589	- 60	4529	
25	4681	4681	4641	4600	4582	4623	4663	4641	4583	4579	4583	4580	4562	4562	4599	4600	4600	4630	4622	4619	4724	4760	4760	4738	4634	- 61	4573	
26	4713	4669	4610	4595	4602	4603	4602	4603	4568	4568	4576	4583	4576	4553	4576	4621	4651	4661	4685	4621	4620	4660	4700	4719	4622	- 63	4559	
27	4694	4675	4616	4605	4616	4600	4582	4638	4658	4604	4557	4580	4588	4597	4597	4684	4650	4765	4778	4795	4814	4747	4749	4749	4664	- 61	4603	
28	4705	4689	4655	4633	4634	4634	4632	4645	4622	4618	4622	4615	4593	4593	4628	4697	4804	4867	4910	4895	4815	4769	4742	4742	4698	- 52	4646	
29	4701	4694	4694	4667	4662	4663	4662	4674	4650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	4626	4610	4643	4662	4662	4599	4651	4670	4665	4660	4698	4727	4727	4685	4653	4667	- 29	4638	
31	4653	4667	4688	4667	4668	4669	4668	4675	4645	4609	4581	4618	4640	4640	4630	4734	4491	4472	4413	4576	4562	4526	4550	4599	4610	- 24	4586	
Means.....	4608	4591	4573	4557	4562	4559	4555	4568	4545	4533	4530	4534	4523	4512	4559	4620	4665	4710	4713	4696	4688	4651	4638	4625	4596			
Temp. Corrections.	-96	-91	-86	-84	-82	-81	-80	-78	-78	-76	-75	-73	-72	-70	-69	-73	-78	-81	-85	-90	-93	-95	-96	-94	.....	-82		
Corrected Means..	4512	4500	4487	4473	4480	4478	4475	4490	4467	4457	4455	4461	4451	4442	4490	4547	4587	4629	4628	4606	4595	4556	4542	4531	.....	.....	4514	
Mean Hourly Variations from General Monthly Mean. = ·00	2	14	27	41	34	36	39	24	47	57	59	53	63	72	24	-33	-73	-115	-114	-92	-81	-42	-28	-17	.....	$\frac{\Delta Y}{Y} =$	. ....	·003054
	0053	0372	0717	1089	0903	0956	1036	0637	1248	1514	1567	1408	1673	1912	-0637	-8877	-1939	-3654	-3028	-2443	-2151	-1116	-0744	-0452				

OCTOBER 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	896	896	891	889	888	884	881	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	878	876	876	876	873	870	876	879	882	886	892	895	898	900	900	8851			
3	900	896	889	889	890	888	886	885	885	882	880	879	879	878	876	880	884	887	890	895	900	904	905	901	8887			
4	900	895	892	889	887	884	882	881	880	878	877	876	876	876	872	871	873	874	877	885	890	890	891	890	8828			
5	890	886	885	882	880	880	880	880	880	879	878	876	874	872	870	871	875	878	882	888	892	895	897	896	8819			
6	893	890	885	882	880	880	880	880	880	878	877	875	873	870	870	875	879	883	886	887	892	895	895	895	8825			
7	892	890	884	882	881	880	880	878	877	875	874	872	871	870	870	873	877	879	884	889	891	892	895	895	8813			
8	892	890	886	884	883	883	883	882	881	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	879	878	877	877	874	868	875	878	884	885	887	889	886	885	885	8821			
10	882	877	878	876	876	875	875	875	875	875	875	873	872	870	870	870	872	872	877	881	882	885	885	882	8762			
11	879	877	880	875	870	869	869	867	866	864	862	861	860	859	860	865	867	870	871	875	882	885	885	885	8710			
12	882	880	875	873	872	870	869	867	865	863	862	861	860	858	856	863	867	870	871	877	880	882	885	885	8705			
13	882	880	874	872	870	868	866	865	865	863	861	859	858	855	856	859	863	867	870	877	880	880	882	882	8689			
14	880	875	872	870	868	867	866	865	865	862	860	858	857	854	851	858	865	868	870	874	878	880	880	880	8676			
15	880	876	870	868	867	866	866	865	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	861	858	857	856	853	855	860	865	865	866	870	876	877	877	876	8665			
17	875	872	865	863	862	862	862	861	860	860	860	857	855	853	854	856	862	865	867	871	875	876	876	875	8643			
18	872	866	865	864	864	864	864	864	864	863	862	861	860	858	859	863	865	866	870	875	875	870	868	866	8653			
19	866	862	862	860	859	856	854	853	853	851	850	850	850	849	848	853	855	857	861	865	866	867	870	868	8577			
20	865	861	858	857	856	855	854	854	855	854	853	851	850	849	848	845	845	847	848	845	846	849	849	850	8518			
21	850	846	845	845	845	845	842	840	838	837	836	835	833	832	833	835	834	837	840	837	835	837	839	8392				
22	836	834	830	830	830	830	830	828	827	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	832	837	836	835	834	834	840	843	845	847	847	849	854	855	855	8383			
24	852	846	844	843	842	841	840	840	840	839	838	836	835	833	832	839	844	846	850	855	855	855	856	855	8440			
25	855	851	845	840	835	839	844	842	840	840	840	839	839	837	838	838	841	845	854	855	855	855	858	857	8451			
26	855	850	846	845	845	844	843	842	842	841	840	839	838	835	836	839	845	847	852	856	856	857	858	858	8462			
27	855	850	845	844	843	842	841	840	840	840	840	839	838	836	835	841	845	848	849	850	855	856	858	.853	8451			
28	848	845	842	841	840	839	838	835	833	832	832	831	831	830	830	833	835	837	840	848	848	845	842	842	8382			
29	840	836	830	828	827	827	827	827	828	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	823	819	818	818	816	814	812	810	808	810	812	816	820	820	820	8211			
31	820	816	815	813	812	812	812	811	810	810	810	811	812	810	811	814	821	826	830	830	831	831	830	822	8175			
Means	8707	8670	8636	8617	8604	8596	8591	8580	8575	8562	8552	8540	8533	8513	8506	8539	8573	8596	8627	8664	8689	8700	8707	8697	8607			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1.279$ sed. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^2 = 0.0000291 \times \text{cotan.}\ 7^\circ\ 38'\ 57'' \times \left(\frac{6.917^s}{6.070}\right)^2 = 0.00028136.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

NOVEMBER 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−6·2		−9·8		−10·2		−7·8		19·1																
				*		*		*		*		*																
1	4616	4598	4586	4599	4625	4595	4584	4555	4546	4528	4525	4565	4566	4610	4611	4710	4783	4841	4838	4761	4721	4652	4586	4613	4634	-16	4618	
2	4613	4569	4569	4566	4576	4566	4576	4558	4560	4552	4560	4569	4539	4510	4558	4597	4652	4652	4679	4623	4596	4586	4586	4553	4582	-10	4572	
3	4585	4552	4585	4568	4563	4553	4563	4560	4578	4547	4531	4550	4531	4498	4542	4589	4630	4689	4642	4581	4552	4510	4542	4598	4568	- 6	4562	
4	4568	4595	4595	4577	4571	4561	4571	4555	4560	4552	4560	4560	4522	4524	4531	4621	4695	4695	4663	4688	4631	4582	4540	4584	4588	- 9	4579	
5	4602	4560	4569	4556	4556	4546	4556	4552	4569	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	4577	4601	4594	4549	4549	4528	4528	4574	4647	4770	4820	4782	4734	4682	4651	4611	5	4616	
7	4617	4617	4577	4571	4577	4567	4577	4573	4589	4573	4572	4576	4541	4562	4528	4447	4471	4530	4517	4474	4524	4582	4582	4556	4554	24	4578	
8	4610	4549	4565	4538	4523	4513	4523	4522	4541	4533	4541	4544	4509	4507	4470	4532	4627	4677	4614	4568	4527	4628	4628	4552	4556	19	4575	
9	4552	4606	4606	4554	4514	4499	4504	4494	4504	4479	4469	4488	4469	4495	4518	4511	4592	4571	4685	4630	4575	4580	4540	4502	4539	15	4554	
10	4515	4515	4467	4473	4491	4481	4491	4473	4475	4459	4458	4477	4458	4445	4510	4494	4539	4584	4543	4579	4556	4556	4528	4461	4501	2	4503	
11	4506	4506	4483	4465	4460	4450	4460	4458	4476	4451	4442	4466	4451	4442	4442	4457	4527	4621	4594	4623	4592	4618	4618	4572	4508	0	4508	
12	4522	4524	4511	4500	4501	4489	4497	4487	4497	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	4487	4493	4505	4479	4451	4453	4514	4594	4610	4560	4564	4576	4504	4441	4441	4508	- 8	4500	
14	4479	4479	4454	4448	4454	4444	4454	4448	4463	4459	4471	4471	4432	4436	4436	4517	4597	4556	4612	4634	4667	4558	4591	4525	4504	- 7	4497	
15	4503	4525	4511	4505	4511	4484	4477	4470	4484	4462	4455	4472	4450	4417	4445	4478	4517	4611	4524	4557	4557	4534	4494	4475	4497	-17	4480	
16	4491	4455	4455	4437	4431	4421	4431	4424	4437	4446	4470	4486	4464	4470	4451	4486	4512	4550	4550	4521	4420	4475	4445	4489	4467	-26	4441	
17	4515	4515	4451	4457	4476	4466	4476	4472	4488	4464	4455	4474	4455	4494	4430	4507	4599	4630	4576	4598	4598	4615	4546	4520	4512	-33	4479	
18	4541	4541	4515	4508	4514	4480	4465	4455	4465	4463	4477	4498	4480	4495	4388	4361	4361	4459	4557	4596	4596	4561	4559	4519	4494	-34	4460	
19	4542	4512	4507	4488	4481	4468	4474	4464	4474	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	4458	4458	4477	4458	4445	4457	4453	4525	4621	4760	4740	4689	4689	4599	4570	4534	-28	4506	
21	4570	4548	4548	4519	4503	4503	4523	4502	4502	4471	4455	4501	4508	4463	4484	4499	4529	4574	4564	4564	4555	4617	4600	4640	4531	-21	4510	
22	4667	4559	4516	4514	4525	4515	4525	4529	4554	4497	4455	4505	4516	4516	4486	4524	4568	4631	4596	4630	4630	4607	4575	4530	4549	- 9	4540	
23	4552	4552	4507	4518	4541	4531	4541	4527	4533	4525	4533	4566	4561	4514	4531	4521	4587	4635	4701	4701	4770	4713	4661	4604	4580	- 5	4575	
24	4604	4575	4598	4574	4563	4539	4535	4525	4536	4528	4536	4563	4552	4520	4557	4541	4611	4660	4712	4725	4675	4653	4741	4683	4596	- 9	4587	
25	4567	4567	4545	4544	4556	4532	4527	4520	4533	4538	4559	4557	4517	4538	4520	4537	4580	4639	4700	4718	4751	4753	4704	4610	4588	- 8	4580	
26	4570	4591	4560	4554	4561	4551	4561	4558	4575	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	4566	4572	4577	4544	4544	4559	4594	4548	4609	4635	4700	4667	4620	4586	4566	4582	-13	4569	
28	4615	4587	4592	4572	4565	4555	4565	4557	4569	4552	4551	4597	4604	4527	4577	4573	4645	4733	4774	4822	4850	4749	4653	4575	4623	-11	4612	
29	4565	4600	4586	4557	4540	4545	4570	4560	4571	4575	4595	4600	4567	4567	4543	4599	4660	4725	4821	4829	4805	4700	4579	4521	4616	- 7	4609	
30	4571	4564	4564	4561	4570	4566	4581	4580	4600	4592	4600	4597	4555	4561	4525	4574	4641	4699	4726	4758	4729	4677	4613	4613	4609	- 8	4601	
Means.....	4564	4552	4539	4528	4529	4516	4523	4515	4526	4513	4515	4532	4511	4504	4503	4529	4583	4633	4651	4654	4638	4617	4585	4559	4555			
Temp. Corrections	-17	-13	-10	-8	-8	-6	-5	-4	-4	-3	-3	-2	-1	0	0	-2	-7	-11	-13	-15	-17	-18	-18	-18	....	- 8		
Corrected Means..	4547	4539	4529	4520	4521	4510	4518	4511	4522	4510	4512	4530	4510	4504	4503	4527	4576	4622	4638	4639	4621	4599	4567	4541	.....	.....	4547	
Mean Hourly Variations from General Monthly Mean. = ·00	0	8	18	27	26	37	29	36	25	37	35	17	37	43	44	20	-29	-75	-91	-92	-74	-52	-20	6	.....	$\frac{\Delta Y}{Y} =$	.....	·002589
	0000	0225	0506	0760	0732	1041	0814	1013	0703	1041	0985	0478	1041	1210	1238	0563	-0814	-2110	-2560	-2589	-2083	-1463	-0563	0169				

NOVEMBER 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	818	818	816	815	815	815	815	815	815	814	813	813	813	812	812	810	806	806	806	808	809	810	812	812	8124			
2	812	810	809	809	810	810	810	810	810	810	810	810	810	810	808	806	805	805	804	804	806	805	805	804	8080			
3	803	802	802	802	803	802	801	800	800	801	802	802	802	802	802	804	806	810	814	814	813	812	811	810	8050			
4	810	808	807	807	807	807	808	807	806	806	806	804	802	802	801	804	805	805	806	808	810	811	812	811	8067			
5	810	808	806	806	806	805	804	803	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	801	800	798	797	795	792	792	792	790	790	788	786	782	778	779	7963			
7	779	778	777	777	778	778	778	778	778	779	780	780	780	782	784	786	786	786	786	785	785	785	785	785	7815			
8	786	786	786	786	787	786	786	785	785	785	785	785	785	785	786	785	785	785	785	784	785	783	784	784	7852			
9	783	782	782	782	782	781	780	780	780	780	780	781	782	782	784	786	790	793	800	802	803	805	806	806	7880			
10	804	802	798	797	797	797	797	796	795	794	793	791	790	790	791	795	796	798	805	807	809	809	809	810	7988			
11	808	805	802	801	800	799	798	797	796	794	792	791	790	790	792	795	800	805	805	807	808	808	808	809	8000			
12	810	805	805	804	803	802	802	802	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	804	806	804	802	802	805	805	810	814	814	812	810	810	807	807	8061			
14	806	803	803	803	803	802	801	802	804	802	800	798	796	795	799	802	805	810	810	812	814	817	818	818	8051			
15	818	815	811	809	808	807	807	806	806	806	806	805	804	802	805	810	815	820	825	826	828	828	829	829	8135			
16	827	823	822	821	821	819	817	815	814	813	812	812	812	812	812	816	820	824	826	828	829	832	833	835	8206			
17	835	834	823	822	822	822	822	821	820	819	818	818	818	816	816	821	825	830	832	834	835	836	837	837	8255			
18	836	834	830	828	827	824	821	820	820	819	818	817	816	815	816	820	826	830	830	833	837	837	837	837	8262			
19	835	831	828	825	822	821	820	818	817	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	816	815	815	815	814	812	815	820	825	826	827	827	827	826	824	8217			
21	823	820	817	816	816	815	815	813	812	812	812	811	810	806	806	811	820	822	825	823	823	823	823	822	8165			
22	822	819	815	813	812	809	807	804	802	801	800	798	796	794	794	798	800	806	807	810	814	815	815	814	8069			
23	812	808	806	805	804	802	801	800	800	798	797	796	796	795	791	795	800	804	805	809	812	815	817	817	8040			
24	817	814	806	805	804	804	804	804	805	802	800	798	796	795	796	800	806	810	813	816	817	818	818	818	8069			
25	817	813	809	808	807	803	800	800	800	798	797	796	796	795	793	797	803	808	813	815	815	819	820	819	8059			
26	818	815	812	810	808	807	806	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	805	806	805	805	805	800	803	807	810	810	815	819	823	823	822	8102			
28	820	817	810	808	806	806	806	805	805	804	804	804	804	802	800	800	803	808	812	813	816	817	817	817	8085			
29	814	811	809	807	806	804	802	801	800	799	798	798	798	798	792	795	800	805	810	811	814	815	820	816	8051			
30	814	807	806	805	804	804	805	805	805	803	802	801	800	796	789	793	805	810	812	815	816	816	816	814	8060			
Means	8130	8103	8076	8066	8061	8050	8043	8035	8032	8025	8020	8012	8006	7997	7992	8017	8052	8084	8104	8118	8131	8138	8141	8137	8066			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means, and the small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·269 scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 =$ 0·0000291 × cotan. 7° 39′ 53″ × $\left(\frac{6{\cdot}917}{6{\cdot}038}\right)^2 =$ 0·00028377. Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

DECEMBER 1853. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 5·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				4·4 *		8.5 *		−16·1 *		−2·2 *		7·6 *																
1	4586	4619	4602	4604	4597	4596	4578	4571	4597	4582	4572	4566	4545	4545	4555	4555	4615	4596	4596	4700	4664	4542	4542	4588	4588	- 5	4583	
2	4624	4628	4628	4616	4595	4606	4600	4563	4558	4556	4558	4579	4584	4584	4552	4516	4564	4625	4717	4696	4744	4706	4665	4637	4613	- 2	4611	
3	4596	4596	4631	4635	4631	4624	4600	4592	4616	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	4621	4630	4614	4582	4582	4555	4599	4646	4740	4799	4782	4736	4667	4667	4622	4640	1	4641	
5	4586	4630	4630	4634	4630	4622	4598	4582	4598	4577	4560	4583	4591	4581	4594	4633	4681	4804	4804	4740	4784	4762	4694	4666	4649	5	4654	
6	4719	4906	4734	4787	4832	4741	4634	4651	4700	4685	4674	4647	4605	4596	4622	4608	4664	4708	4588	4548	4521	4545	4625	4625	4665	4	4669	
7	4671	4588	4588	4592	4588	4613	4621	4608	4628	4605	4586	4594	4586	4576	4609	4609	4681	4739	4714	4585	4520	4629	4662	4630	4618	6	4624	
8	4630	4658	4628	4622	4608	4616	4608	4600	4624	4600	4580	4595	4595	4595	4567	4592	4655	4685	4686	4719	4719	4586	4624	4608	4625	5	4630	
9	4635	4616	4616	4620	4616	4609	4585	4553	4553	4573	4598	4601	4588	4563	4563	4604	4629	4629	4643	4699	4699	4724	4634	4646	4617	0	4617	
10	4615	4611	4611	4603	4586	4594	4586	4557	4561	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	4577	4597	4596	4579	4579	4593	4593	4631	4695	4719	4723	4709	4768	4729	4682	4629	2	4631	
12	4682	4628	4627	4625	4615	4603	4574	4566	4590	4588	4590	4597	4588	4511	4556	4527	4550	4579	4646	4825	4957	4822	4741	4663	4635	6	4641	
13	4829	4759	4797	4718	4630	4595	4543	4565	4619	4626	4638	4618	4582	4569	4598	4566	4566	4589	4589	4630	4737	4818	4797	4722	4654	12	4666	
14	4683	4683	4670	4654	4630	4626	4605	4586	4599	4597	4599	4601	4587	4567	4566	4613	4629	4702	4739	4739	4855	4800	4708	4669	4654	14	4668	
15	4630	4639	4654	4658	4654	4650	4630	4614	4630	4610	4595	4640	4669	4609	4628	4570	4586	4586	4569	4603	4630	4651	4704	4704	4630	17	4647	
16	4684	4694	4705	4684	4654	4650	4629	4625	4653	4651	4653	4655	4641	4636	4638	4592	4623	4623	4647	4634	4665	4750	4751	4751	4662	14	4676	
17	4724	4729	4729	4697	4657	4665	4657	4623	4621	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	4641	4665	4669	4658	4625	4642	4597	4597	4629	4691	4780	4917	4917	4832	4727	4695	13	4708	
19	4661	4689	4689	4683	4668	4666	4647	4631	4647	4638	4634	4642	4634	4608	4588	4549	4586	4586	4657	4687	4772	4864	4846	4719	4666	15	4681	
20	4681	4702	4668	4672	4668	4660	4635	4629	4655	4653	4655	4629	4588	4609	4558	4520	4535	4477	4527	4527	4672	4766	4711	4711	4630	19	4649	
21	4670	4812	4724	4716	4700	4697	4678	4599	4553	4619	4690	4670	4634	4627	4636	4644	4685	4690	4691	4642	4652	4723	4748	4687	4674	24	4698	
22	4723	4664	4662	4657	4643	4646	4632	4632	4665	4663	4665	4658	4636	4651	4626	4638	4677	4742	4773	4773	4732	4699	4724	4672	4677	23	4700	
23	4616	4621	4621	4632	4634	4642	4634	4591	4580	4578	4580	4606	4616	4598	4611	4581	4634	4651	4616	4586	4586	4621	4616	4646	4612	22	4634	
24	4665	4626	4599	4597	4586	4581	4560	4544	4560	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	4579	4603	4611	4603	4601	4600	4569	4614	4659	4659	4664	4652	4681	4783	4860	4627	25	4652	
26	4827	4800	4774	4773	4763	4771	4763	4753	4775	4765	4759	4767	4759	4732	4745	4745	4774	4811	4811	4846	4884	4884	4822	4803	4788	22	4810	
27	4845	4803	4803	4801	4790	4773	4740	4701	4694	4671	4653	4714	4759	4759	4755	4774	4825	4907	4937	4937	4947	4901	4852	4820	4798	13	4811	
28	4820	4848	4821	4825	4821	4799	4761	4756	4785	4783	4785	4776	4751	4751	4738	4759	4832	4878	4908	4805	4862	4927	4877	4820	4812	10	4822	
29	4820	4757	4757	4774	4783	4810	4820	4775	4762	4760	4762	4764	4750	4754	4771	4771	4868	4899	4899	4838	4882	4861	4861	4822	4805	14	4819	
30	4848	4810	4792	4796	4792	4806	4804	4795	4819	4793	4772	4780	4772	4772	4772	4805	4856	4925	4925	4837	4785	4654	4697	4776	4799	11	4810	
Means.....	4695	4697	4683	4680	4668	4664	4643	4625	4640	4638	4641	4645	4634	4622	4625	4620	4662	4698	4713	4713	4742	4741	4727	4703	4672			
Temp. Corrections	-1	4	8	11	12	13	15	16	17	18	19	20	22	24	27	24	16	9	4	1	-1	-3	-5	-4	.....	11		
Corrected Means..	4694	4701	4691	4691	4680	4677	4658	4641	4657	4656	4660	4665	4656	4646	4652	4644	4678	4707	4717	4714	4741	4738	4722	4699	.....	.....	4683	
Mean Hourly Variations from General Monthly Mean. =·00	-11	-18	-8	-8	3	6	25	42	26	27	23	18	27	37	31	39	5	-24	-34	-31	-58	-55	-39	-16	.....	$\frac{\Delta Y}{Y}=$	.....	.001646
	-0312	-0511	-0227	-0227	0085	0170	0709	1192	0738	0766	0653	0511	0766	1050	0880	1107	0142	-0681	-0965	-0880	-1646	-1562	-1107	-0454				

DECEMBER 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	812	808	806	805	804	804	804	804	804	802	800	797	794	792	790	793	799	805	809	810	811	813	815	813	8039			
2	808	805	803	802	802	801	801	800	800	799	798	795	793	791	793	794	796	800	805	806	810	812	813	812	8016			
3	808	803	800	800	800	799	799	797	796	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	796	796	794	792	790	787	788	795	799	802	806	809	811	810	810	7995			
5	807	804	801	799	798	796	795	793	792	791	791	789	788	785	785	786	788	796	802	803	805	806	806	805	7963			
6	802	799	796	796	796	795	794	793	792	792	792	791	790	790	786	790	796	798	802	805	806	806	809	808	7968			
7	806	802	798	796	795	793	791	790	790	789	789	788	787	785	788	788	792	797	800	800	804	805	806	806	7952			
8	805	800	796	795	795	794	794	793	792	791	790	789	788	786	785	786	791	797	803	805	806	808	810	810	7962			
9	806	801	800	798	797	796	796	795	795	794	794	794	794	790	788	793	798	804	808	809	810	810	812	811	7997			
10	807	804	802	800	799	798	797	796	795	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	793	792	791	790	787	782	787	794	800	802	805	806	807	810	810	7981			
12	807	807	797	795	794	793	792	791	790	789	788	786	785	784	782	790	798	804	805	806	806	808	807	7954				
13	805	800	796	793	790	788	786	785	785	785	785	784	783	780	778	780	790	795	797	800	797	797	800	800	7908			
14	798	795	791	789	788	787	786	785	785	784	783	783	783	782	780	780	785	789	794	796	797	800	800	796	7890			
15	792	790	787	786	786	784	783	781	780	779	779	778	778	777	776	778	786	792	796	799	798	800	800	801	7869			
16	797	792	790	787	785	784	783	783	783	782	781	780	780	780	776	778	787	794	797	800	798	802	805	804	7887			
17	799	793	792	790	788	787	786	785	785	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	785	785	783	782	778	775	779	785	789	795	800	800	803	803	804	7896			
19	800	795	793	790	788	786	785	784	784	783	782	781	780	777	775	776	784	790	794	796	797	800	800	800	7883			
20	796	792	787	786	786	785	785	783	782	780	779	777	776	775	770	771	779	786	790	793	795	796	797	796	7851			
21	793	789	786	785	784	782	781	779	778	776	775	772	770	766	760	766	775	780	785	787	790	795	795	794	7810			
22	790	786	783	781	780	779	778	777	777	776	776	775	774	772	772	775	782	785	789	791	795	791	793	794	7821			
23	790	786	782	781	781	780	780	779	778	777	777	775	773	770	770	768	777	785	789	792	795	796	796	798	7823			
24	794	790	785	783	782	781	780	779	779	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	775	772	770	768	767	766	769	775	782	785	786	788	790	792	792	7804			
26	790	787	787	783	780	779	778	776	775	775	775	775	774	775	779	782	785	789	792	793	795	797	796	7830				
27	794	790	787	786	786	784	782	782	782	781	780	780	780	782	785	785	788	794	798	801	803	804	806	806	7894			
28	804	800	796	794	792	791	790	790	790	788	787	786	785	782	780	780	783	788	794	798	799	804	805	805	7921			
29	803	797	793	790	788	787	786	786	786	785	784	782	780	775	775	777	782	788	791	795	800	804	804	800	7891			
30	800	795	794	794	794	792	790	787	785	785	785	785	785	784	776	780	785	793	794	795	800	801	804	803	7911			
Means	8005	7965	7934	7917	7907	7894	7885	7874	7869	7858	7852	7838	7828	7808	7791	7811	7871	7927	7967	7990	8007	8024	8037	8031	7912			

* The numbers in these Columns are not observed but Interpolated for the sake of obtainingthe daily Means, and the small figures heading them are the Corrections of interpolations.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH JANUARY 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 19th January, 1853.														Thursday, 20th January, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd,	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1690	1690	1683	1683	1678	1676	1692	1710	1709	1710	1709	1712	1710	1690	1688	1690	1690	1692	1691	1691	1689	1689	1689	1689
5	0	90	90	83	83	77	76	94	10	09	10	07	12	10	90	88	90	90	92	91	91	89	89	89	89
10	0	90	90	82	83	74	76	94	10	09	10	10	11	10	90	88	90	90	92	91	91	89	89	88	89
15	0	90	90	82	83	72	77	96	10	10	10	10	11	09	90	88	89	90	93	91	90	89	89	88	89
20	0	90	89	82	83	69	78	99	11	10	09	10	10	06	90	88	88	90	93	91	90	89	89	87	89
25	0	90	89	82	83	70	79	99	12	11	09	11	10	02	90	88	89	90	93	91	90	89	89	87	89
30	0	91	88	84	84	71	79	1700	11	11	08	11	10	00	90	88	89	91	92	91	91	88	88	87	89
35	0	91	88	84	82	72	84	03	11	11	09	11	10	00	89	88	89	92	91	90	90	88	88	87	89
40	0	91	88	85	81	73	88	07	11	10	10	12	10	1699	89	88	89	93	90	90	90	89	88	86	87
45	0	91	87	86	80	74	88	08	10	11	10	13	10	96	89	88	89	93	90	90	90	89	88	88	87
50	0	91	87	84	80	75	89	09	10	11	09	13	10	93	88	88	89	93	91	90	90	89	88	88	86
55	0	90	85	82	80	75	90	10	10	11	09	12	10	91	88	89	90	93	91	90	89	89	89	88	86

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1070	1070	1057	1042	1027	1005	965	959	924	922	902	932	940	966	988	1008	1022	1034	1039	1044	1040	1032	1027	1017
7	0	70	70	55	40	25	04	970	959	924	920	910	935	940	968	988	07	23	34	37	44	40	32	27	17
12	0	70	69	55	40	28	03	974	958	929	910	912	930	944	970	988	07	24	35	35	44	40	32	25	17
17	0	70	69	51	40	22	01	972	952	935	909	914	932	946	971	989	09	24	36	33	44	40	33	23	17
22	0	70	68	50	40	18	00	970	948	939	908	915	930	948	972	990	10	25	37	37	44	40	33	20	17
27	0	70	66	50	39	10	994	965	943	930	913	917	930	950	976	992	12	25	37	37	43	40	33	20	17
32	0	70	66	50	39	08	990	965	937	930	915	920	935	954	978	994	15	25	39	37	42	36	32	18	17
37	0	70	65	52	37	08	998	967	936	934	912	920	935	957	981	995	15	29	32	37	46	33	30	18	17
42	0	70	65	59	35	08	999	968	933	919	912	922	934	960	982	997	16	30	33	37	47	30	30	13	15
47	0	70	65	60	34	07	999	967	930	917	918	925	936	962	984	999	17	32	37	37	44	30	28	15	15
52	0	70	64	56	31	07	980	963	929	912	911	925	937	965	986	1002	17	34	40	46	41	30	28	15	15
57	0	70	62	50	30	07	972	960	927	914	904	931	938	965	987	03	20	35	40	45	40	30	28	15	13
Faht...																									
Attached Thermometer...		81°0	81°2	81°2	81°2	81°1	81°0	81°0	81°1	81°0	81°0	81°1	81°1	81°2	81°5	81°2	81°2	81°4	81°6	81°7	81°6	81°5	81°5	81°3	81°2

VERTICAL FORCE.

m.	*s.*																								
3	0	4147	4147	4051	4069	4078	4039	4059	4065	3916	3909	4015	4085	4133	4206	4229	4142	4043	4044	4028	4008	3968	3959	3928	3920
8	0	47	47	51	69	78	39	59	65	16	09	15	85	33	06	29	42	43	44	28	08	68	59	28	40
13	0	47	47	51	69	55	39	59	65	16	09	46	97	33	06	29	42	43	44	28	08	68	59	28	40
18	0	47	47	51	69	10	39	90	65	02	57	46	97	74	06	29	4099	43	44	28	06	68	59	46	40
23	0	47	47	51	69	15	39	90	44	02	50	59	97	74	06	29	99	47	58	17	06	68	59	42	45
28	0	47	20	51	69	19	39	90	37	28	70	59	4103	74	06	14	99	47	58	17	06	68	59	36	45
33	0	47	20	37	69	19	39	90	37	28	91	59	03	74	06	14	99	47	58	17	02	68	59	28	45
38	0	47	20	37	81	19	39	45	3995	28	91	28	03	74	54	14	99	38	58	17	02	68	59	28	45
43	0	47	20	37	81	18	03	52	95	28	79	28	03	74	54	14	99	30	35	17	02	68	59	28	40
48	0	47	20	37	81	19	03	64	65	40	79	4108	03	74	54	14	56	30	35	17	02	68	59	28	40
53	0	47	20	49	81	19	22	60	42	40	4012	08	34	74	54	14	56	52	35	17	02	68	59	28	10
58	0	47	20	49	81	19	58	52	42	40	12	08	34	4206	54	14	56	52	35	24	3972	68	55	28	10
Faht...																									
Attached Thermometer...		80°9	80°8	80°8	80°8	80°7	80°7	80°8	80°9	80°8	80°9	81°0	81°0	81°4	81°5	81°4	81°2	81°0	81°2	81°2	81°0	80°9	80°9	80°7	80°5

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1622	1622	1619	1616	1611	1609	1622	1638	1636	1640	1634	1639	1638	1620	1618	1620	1620	1622	1621	1621	1619	1620	1620	1619
5	20	22	22	19	16	10	08	23	38	35	40	34	39	38	20	18	20	20	22	21	21	19	20	20	19
10	20	22	22	18	16	09	07	24	39	35	39	35	39	36	20	18	20	20	22	21	21	19	20	20	19
15	20	22	21	18	16	07	08	26	39	35	37	35	39	35	20	18	20	20	23	21	20	19	20	20	19
20	20	22	21	17	16	05	09	29	39	36	37	37	37	33	20	18	20	21	23	21	20	19	20	19	20
25	20	22	21	16	16	06	11	30	39	37	37	37	36	31	20	18	20	21	23	21	20	19	20	18	20
30	20	22	21	16	16	07	11	30	39	39	36	39	36	29	20	18	20	22	22	20	20	19	20	18	20
35	20	22	20	16	15	07	17	32	39	40	35	40	36	28	20	18	20	23	22	20	19	18	20	18	20
40	20	22	20	17	15	07	19	33	39	40	35	40	36	26	20	18	20	23	21	20	19	19	20	17	18
45	20	22	20	17	15	08	20	35	39	40	34	40	37	25	20	18	20	23	21	20	19	20	20	17	17
50	20	22	20	17	14	09	20	36	39	40	32	40	37	23	19	18	20	23	22	20	19	20	20	18	16
55	20	22	20	16	12	09	21	37	37	40	32	39	38	21	19	18	20	23	22	20	19	20	20	19	16
Faht...																									
Attached Thermometer...		80°0	80°1	80°1	79°9	79°8	79°9	80°0	80°2	80°3	80°3	80°5	80°7	81°0	81°0	80°7	80°2	80°4	80°4	80°2	80°1	80°0	80°0	79°8	79°6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0-+ ..		In. 1·118	In. 1·112	In. 1·110	In. 1·118	In. 1·131	In. 1·164	In. 1·188	In. 1·199	In. 1·197	In. 1·172	In. 1·141	In. 1·116	In. 1·090	In. 1·088	In. 1·086	In. 1·100	In. 1·130	In. 1·156	In. 1·181	In. 1·182	In. 1·180	In. 1·168	In. 1·140	In. 1·124
Attached Thermometer.....		78°0	78°0	78°0	78°0	77°0	77°5	78°0	78°0	79°0	79°0	79°0	79°0	79°5	80°0	79°5	79°0	78°5	78°5	78°5	78°0	78°0	77°5	77°5	77°0
Dry Thermometer (standard).....		77·2	76·6	76·0	75·7	76·0	77·9	77·3	79·4	80·3	81·7	81·1	82·5	82·8	82·0	80·6	79·6	79·0	78·7	78·4	78·2	78·0	77·6	77·5	77·2
Wet Do.		73·6	73·5	72·9	73·0	74·2	74·9	74·5	76·4	75·1	76·7	76·1	76·7	76·3	76·0	75·3	74·5	74·3	74·2	74·1	73·4	73·0	73·0	73·2	72·8
Cloudy sky in 8ths.....		0	0	7	6	6	8	8	6	6	7	7	7	4	5	6	4	5	3	5	3	4	4	1	2
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·04	·16	·20	·00	·18	·00	·25	·23	·24	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		45	34	34	00	349	45	67	67	67	67	67	67	67	67	56	56	56	56	56	56	67	67	79	79
REMARKS ON THE WEATHER		clear.....	do.....	Ny-ovt, lt-R.....	cu, nim, D.....	do.....	Ny-ovt.....	do.....R...	cu, cu-st, nim.....	do.....lt-R....	hy-cu.....	Hy-cu, cu-st.....	cu, cu-st, cr.....	cu, cu-st, cr-hz.....	do.....nim...	do.....do. ...	do.....do. ...	do.....do. ...	fl-cu,cr-st,hz,sh-lg-w.	hy-cu, cr-st, hz.....	cu, cir-cu, cr-st.....	fl-cu, cr-st, hz.....	fl-cu, cr-lz.....	cr, cr-hz.....	cu, cr-hz.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 25TH FEBRUARY 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 25th February, 1853.													Saturday, 26th February, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*																								
0	0	scd. 1685	scd. 1684	scd. 1680	scd. 1680	scd. 1670	scd. 1661	scd. 1659	scd. 1658	scd. 1650	scd. 1659	scd. 1667	scd. 1670	scd. 1680	scd. 1690	scd. 1691	scd. 1675	scd. 1668	scd. 1671	scd. 1672	scd. 1674	scd. 1675	scd. 1680	scd. 1680	scd. 1681
5	0	84	84	80	80	70	60	59	57	51	60	68	71	80	90	90	74	68	71	72	73	75	80	80	81
10	0	83	84	80	80	70	60	59	54	51	60	68	71	82	90	90	72	69	71	72	72	75	80	80	81
15	0	83	85	80	80	68	59	59	53	51	61	68	73	83	91	88	71	69	71	72	73	76	80	80	81
20	0	83	85	80	80	67	58	59	53	52	61	68	75	83	92	87	69	70	72	72	74	76	80	80	80
25	0	85	85	80	80	62	57	59	52	55	62	68	77	84	93	85	68	70	72	72	74	77	80	81	80
30	0	85	84	80	80	62	57	59	52	55	63	68	78	84	95	83	66	70	72	72	74	77	80	81	80
35	0	85	83	80	80	62	57	58	52	55	64	68	78	86	95	82	66	70	72	72	75	77	80	81	80
40	0	85	82	80	78	60	58	58	52	56	64	68	78	86	96	81	67	70	72	73	75	78	80	81	80
45	0	84	80	80	77	61	59	58	51	57	64	69	79	87	94	80	67	71	72	74	75	78	80	80	80
50	0	83	80	80	75	61	59	57	51	58	66	69	80	88	93	79	67	71	72	75	75	78	80	80	80
55	0	83	80	80	73	61	59	59	50	58	67	70	80	89	93	77	67	71	72	75	75	79	80	80	80

HORIZONTAL FORCE.

m.	*s.*																								
2	0	942	960	960	963	940	891	826	782	770	780	809	850	896	920	929	922	940	970	990	973	974	986	980	990
7	0	942	960	960	963	940	888	823	780	770	783	810	853	899	920	929	920	940	981	990	971	974	987	980	990
12	0	946	960	960	964	940	882	820	780	773	787	815	857	900	922	928	920	947	984	987	970	974	988	980	990
17	0	950	960	960	962	936	877	814	780	773	789	817	861	904	924	928	920	952	987	987	972	977	988	980	991
22	0	950	960	960	960	933	870	810	780	773	789	822	866	907	926	928	920	952	984	988	972	977	988	982	991
27	0	955	960	962	960	926	864	809	778	774	792	816	870	909	927	928	924	954	984	985	971	978	987	984	991
32	0	960	958	962	956	922	859	806	778	772	792	814	874	910	929	926	927	955	988	983	971	979	985	987	991
37	0	960	958	965	954	915	854	804	776	772	794	830	877	912	930	925	930	957	989	980	972	979	981	988	991
42	0	962	958	965	950	910	848	801	777	772	795	841	882	914	929	923	931	959	991	979	973	980	982	988	991
47	0	962	960	965	950	911	840	796	776	773	797	840	885	918	928	923	935	962	991	979	973	984	981	989	992
52	0	962	960	965	947	903	835	790	773	775	800	846	890	919	928	923	939	966	991	976	974	986	981	989	993
57	0	962	960	964	943	900	830	789	772	778	802	848	892	919	927	922	939	968	991	975	974	986	980	989	993
Faht...																									
Attached Thermometer...		80·5	80·5	80·5	80·6	80·2	79·9	80·0	80·2	80·6	81·0	81·2	81·3	81·5	81·7	81·8	81·8	81·8	81·9	81·9	81·8	81·8	81·9	81·9	81·8

VERTICAL FORCE.

m.	*s.*																								
3	0	scd. 3068	scd. 3095	scd. 3062	scd. 3060	scd. 3035	scd. 3014	scd. 3005	scd. 3062	scd. 3112	scd. 3105	scd. 3073	scd. 3021	scd. 3045	scd. 3052	scd. 3063	scd. 3079	scd. 3065	scd. 3316	scd. 3323	scd. 3318	scd. 3285	scd. 3277	scd. 3268	scd. 3268
8	0	68	95	62	60	35	14	05	62	12	22	73	21	45	52	63	79	95	16	23	18	85	77	68	68
13	0	68	95	62	60	35	14	05	72	12	22	73	21	45	52	63	79	3152	16	23	18	85	77	68	68
18	0	68	73	62	60	35	14	12	72	12	3068	73	51	45	52	87	79	52	16	23	18	89	77	68	68
23	0	68	73	62	60	35	14	12	72	12	68	38	51	45	52	87	79	52	16	23	18	89	77	68	68
28	0	68	73	62	60	15	2993	12	72	05	68	38	51	32	52	87	79	52	16	23	18	89	77	68	68
33	0	68	65	62	60	15	90	12	72	05	70	38	29	32	52	3103	79	52	16	17	18	89	77	68	68
38	0	70	65	62	60	15	90	30	72	05	70	21	29	32	52	03	79	59	16	17	18	89	77	68	57
43	0	70	65	62	45	16	91	30	97	05	72	21	20	32	40	03	79	59	16	17	22	89	77	68	57
48	0	70	65	62	45	26	91	30	97	3092	72	45	20	32	40	03	79	3301	16	17	22	89	77	68	57
53	0	70	65	62	45	26	91	43	97	90	72	45	20	32	40	03	79	01	16	18	22	89	77	68	57
58	0	70	65	62	45	19	3000	55	75	90	72	45	20	32	40	03	79	01	16	18	22	89	77	68	57
Faht...																									
Attached Thermometer...		80·3	80·3	80·2	80·0	79·7	79·7	80·1	80·4	80·7	80·8	81·0	81·2	81·4	81·6	81·7	81·7	81·5	81·6	81·5	81·5	81·5	81·4	81·3	81·2

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	scd. 1650	scd. 1650	scd. 1650	scd. 1648	scd. 1637	scd. 1632	scd. 1633	scd. 1632	scd. 1629	scd. 1633	scd. 1640	scd. 1642	scd. 1652	scd. 1659	scd. 1660	scd. 1647	scd. 1640	scd. 1641	scd. 1642	scd. 1643	scd. 1644	scd. 1648	scd. 1648	scd. 1648
5	20	50	50	50	48	37	32	33	32	28	35	41	43	52	60	60	45	40	41	42	43	44	48	48	48
10	20	50	50	50	48	36	32	33	30	30	37	41	43	52	60	60	44	40	41	41	42	45	48	48	48
15	20	50	50	50	48	33	31	34	30	30	37	41	47	52	60	59	42	40	41	41	43	45	48	48	48
20	20	50	50	50	48	32	31	34	29	32	37	41	50	52	60	58	40	40	42	41	44	45	48	48	48
25	20	50	50	50	48	32	31	34	29	31	38	41	50	53	62	57	39	40	42	42	44	46	47	48	47
30	20	50	50	49	45	30	32	34	29	31	38	41	51	54	62	55	39	40	42	42	44	46	47	48	47
35	20	50	50	49	43	31	31	33	29	31	39	41	51	55	64	54	39	40	42	42	44	46	47	48	47
40	20	50	50	49	40	31	32	34	29	32	39	41	51	55	63	54	39	41	42	42	44	46	47	48	47
45	20	50	50	49	40	32	33	33	28	32	39	41	51	56	63	52	39	41	42	42	44	47	47	48	47
50	20	50	50	49	40	32	33	33	28	32	40	42	51	57	62	51	39	41	42	43	44	47	47	49	47
55	20	50	50	48	40	32	32	32	28	33	40	42	52	57	61	49	39	41	42	44	44	48	48	49	47
Faht...																									
Attached Thermometer...		79·0	79·0	79·0	79·8	78·0	78·4	79·3	80·3	80·8	81·2	81·3	81·5	81·8	82·0	81·8	81·4	81·2	81·0	80·9	80·9	80·8	80·8	80·6	80·5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 + ..		In. 1·100	In. 1·086	In. 1·084	In. 1·092	In. 1·112	In. 1·142	In. 1·170	In. 1·194	In. 1·192	In. 1·180	In. 1·152	In. 1·125	In. 1·107	In. 1·096	In. 1·091	In. 1·103	In. 1·114	In. 1·126	In. 1·140	In. 1·151	In. 1·155	In. 1·136	In. 1·118	In. 1·114
Attached Thermometer		77·0	75·5	74·0	74·0	73 5	74.0	76·0	79·0	80·0	80·5	81·0	81·5	81.5	82·0	81·5	81·0	80·0	80·0	80·0	79·5	79·5	79·5	79·0	79·0
Dry Thermometer (standard)		74·5	73·5	73·0	73·0	73·1	75·5	78·5	82·7	83·8	84·6	84.5	85·3	84·7	84·5	83·8	82·3	80·6	80·1	79·8	79·5	79·3	78·8	78·6	78·3
Wet Do.		71·2	70·5	71·0	71·0	71·0	72·8	73·9	73·8	74·7	74·0	74·2	74·9	73·8	74·5	74·0	74·0	73·0	73·1	73·2	73·3	73·6	73·2	73·0	73·0
Cloudy sky in 8ths		2	3	2	2	3	2	3	3	3	2	2	2	3	1	1	1	1	1	1	1	1	1	1	2
Wind. Force lbs		·00	·00	·00	·00	·00	·00	·00	·00	·15	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		34	34	34	34	34	34	45	56	56	56	56	56	67	67	56	45	45	45	45	45	67	56	56	56
REMARKS ON THE WEATHER		sc-cu. ..	cu, cu-st.	sc-cu.	do	do.	do.	fl-cu, cu-st.	do.	sc-cu, hz.	sc-cu.	do.	do.	do., cr-cu.	sc-cu, hz.	do.	do.	do.	cu, cr-st.	cu.	do.	do.	cu, cr.	cu.	do.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 23RD MARCH 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 23rd March, 1853.														Thursday, 24th March, 1853.									
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon.	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1690	1684	1686	1686	1700	1718	1731	1729	1698	1671	1655	1660	1680	1694	1700	1688	1683	1687	1690	1690	1689	1690	1692	1695
5 0	90	84	87	87	02	19	32	25	93	70	52	62	82	96	1699	87	83	88	90	90	89	90	92	96
10 0	90	84	86	88	03	20	32	24	90	70	50	64	85	98	99	86	83	88	91	90	89	91	92	96
15 0	90	85	86	89	06	22	31	23	89	70	50	67	88	98	98	85	83	88	91	90	89	92	92	96
20 0	90	85	87	91	08	23	32	21	89	70	50	68	88	99	96	87	83	88	91	90	89	92	93	96
25 0	90	85	86	92	09	25	33	18	86	69	50	68	89	99	95	87	83	88	91	90	90	92	93	96
30 0	88	86	86	92	09	27	33	18	82	65	50	70	90	1700	94	88	82	88	92	90	90	92	93	96
35 0	88	87	86	94	10	28	32	15	80	62	50	70	92	00	92	88	82	88	92	90	92	92	93	97
40 0	86	87	85	97	11	29	32	11	80	60	50	72	92	00	91	85	82	88	92	89	94	92	94	97
45 0	85	87	86	98	11	29	31	08	80	59	50	75	92	00	90	84	82	88	93	89	93	92	94	97
50 0	85	88	85	98	14	29	31	03	77	55	55	78	95	01	90	83	83	88	90	89	91	92	94	97
55 0	84	87	86	1700	17	30	30	00	75	55	58	80	94	01	90	83	83	89	90	89	90	92	95	97

HORIZONTAL FORCE.

m. s.																								
2 0	1067	1068	1067	1063	1037	990	910	850	848	892	970	1055	1080	1109	1139	1180	1166	1148	1170	1166	1161	1150	1140	1133
7 0	67	69	67	62	32	985	905	842	850	898	967	60	86	10	41	82	63	50	70	66	61	49	40	33
12 0	67	69	65	62	30	982	902	842	850	905	968	63	89	12	47	82	61	50	69	64	61	48	40	32
17 0	67	70	64	60	26	979	900	845	854	912	968	70	95	22	50	85	60	50	68	64	61	48	39	32
22 0	67	70	65	60	23	970	890	845	853	923	975	73	1100	25	59	85	60	56	68	62	59	47	39	33
27 0	67	70	65	60	23	962	875	850	855	937	979	77	00	30	60	83	55	59	68	62	59	46	38	33
32 0	68	68	65	60	23	950	868	853	860	940	988	80	06	30	63	82	50	59	67	62	59	45	38	33
37 0	68	66	65	58	20	950	864	850	866	940	996	82	02	30	67	79	51	55	63	62	58	45	38	33
42 0	67	68	67	55	15	945	858	849	867	942	1005	80	00	31	69	75	49	56	65	62	56	45	38	34
47 0	65	67	68	51	12	940	853	846	870	940	17	80	00	32	73	72	49	60	65	62	54	44	36	35
52 0	65	68	68	48	04	934	850	847	878	956	33	80	03	32	77	69	47	69	62	62	52	43	35	35
57 0	66	68	64	42	00	925	850	848	880	962	46	80	06	32	77	69	47	69	64	62	50	42	34	36
Faht...																								
Attached Thermometer...	84·2	84·3	84·4	84·5	84·0	84·0	84·1	84·3	84·5	84·9	85·1	85·3	85·6	85·8	85·8	85·8	85·7	85·8	85·9	85·9	85·9	86·0	85·8	85·7

VERTICAL FORCE.

m. s.																								
3 0	5288	5101	5090	5030	5043	5100	5169	5295	5424	5404	5347	5275	5197	5176	5181	5167	5105	5070	5101	5081	5048	5278	5272	5272
8 0	88	01	90	30	43	00	69	5324	24	04	47	75	97	76	81	67	05	70	01	81	48	78	72	72
13 0	88	5086	86	30	64	00	69	24	24	5374	65	50	97	76	81	67	05	70	01	81	48	78	72	72
18 0	88	90	86	13	64	14	69	24	24	74	65	50	62	55	81	67	05	70	01	81	48	78	72	72
23 0	88	88	86	13	64	14	5200	75	24	74	71	42	62	55	81	67	05	70	01	81	48	78	72	72
28 0	88	88	86	29	64	14	13	75	25	74	71	42	48	55	81	67	5079	70	01	81	48	78	72	72
33 0	5090	88	34	24	64	14	13	5429	25	35	44	05	48	55	81	67	79	70	5062	81	48	78	72	72
38 0	90	88	30	24	64	20	13	29	25	35	44	05	72	55	81	67	79	70	62	81	48	78	72	72
43 0	98	84	26	30	96	22	13	29	25	35	44	05	72	55	81	67	79	70	62	81	48	78	72	72
48 0	92	89	29	30	96	22	54	29	25	35	44	5192	72	55	81	67	70	70	62	81	5270	78	72	72
53 0	5101	89	29	30	5108	22	54	29	25	22	20	92	72	55	81	40	70	89	62	81	70	78	72	72
58 0	01	89	21	30	08	69	54	37	25	30	5296	92	72	55	81	40	70	89	62	81	70	78	72	72
Faht...																								
Attached Thermometer...	84·1	84·4	84·2	84·0	83·6	84·0	84·5	84·7	85·1	85·5	85·7	86·0	86·1	86·2	86·2	85·9	85·5	85·5	85·4	85·4	85·3	85·3	85·2	85·0

INDUCTION INCLINOMETER.

m. s.																								
0 20	1620	1618	1620	1619	1628	1643	1651	1648	1625	1610	1599	1602	1617	1628	1630	1620	1619	1621	1626	1625	1623	1626	1628	1628
5 20	20	18	20	19	31	45	51	45	22	10	97	07	17	28	30	20	19	22	26	25	23	26	28	28
10 20	20	18	20	20	32	46	51	45	20	10	92	10	18	29	30	20	19	22	27	24	23	26	28	28
15 20	20	19	20	20	34	47	52	44	20	10	90	10	19	29	30	20	19	22	27	24	23	26	28	28
20 20	20	19	20	21	35	48	52	48	20	10	90	10	20	30	29	21	19	22	27	24	23	26	27	27
25 20	20	19	20	22	38	49	52	44	19	08	92	10	20	30	27	21	19	24	28	24	23	25	27	27
30 20	21	20	20	22	39	49	52	40	14	02	92	10	21	30	26	21	19	24	28	24	23	25	27	27
35 20	21	20	20	23	39	49	51	38	13	00	92	10	22	30	24	21	19	24	28	22	24	25	27	27
40 20	20	20	19	24	39	50	50	36	12	00	93	12	22	30	22	20	19	24	28	22	25	26	27	28
45 20	20	20	19	25	40	50	50	31	10	00	93	12	25	30	21	20	19	25	28	22	25	27	27	28
50 20	19	20	19	26	42	50	50	30	10	00	98	14	25	30	21	20	19	25	25	22	25	27	28	28
55 20	18	20	19	28	43	50	50	28	10	00	1600	16	26	30	20	20	19	25	24	22	25	27	28	28
Faht...																								
Attached Thermometer...	83·5	83·4	83·3	83·0	82·1	82·7	83·6	84·2	84·7	85·2	85·8	86·0	86·3	86·3	86·1	85·7	85·2	85·0	85·0	85·0	85·0	84·8	84·8	84·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+..	In. 1·015	In. 1·000	In. 1·007	In. 1·023	In. 1·028	In. 1·058	In. 1·080	In. 1·081	In. 1·072	In. 1·050	In. 1·020	In. 0·998	In. 0·980	In. 0·971	In. 0·967	In. 0·976	In. 0·988	In. 1·014	In. 1·040	In. 1·058	In. 1·056	In. 1·052	In. 1·028	In. 1·008
Attached Thermometer..	81·5	82·0	81·5	81·0	79·0	80·0	81·0	82·5	84·0	85·0	85·0	86·0	86·0	86·5	86·0	85·5	84·0	84·0	83·5	83·5	83·5	83·0	82·5	82·0
Dry Thermometer (standard).....	80·0	78·2	77·4	77·1	78·0	81·4	85·4	87·2	89·2	90·1	90·7	91·2	91·3	90·8	90·0	88·1	85·5	84·5	84·0	83·6	83·1	82·5	82·2	81·4
Wet Do.	77·0	75·7	74·7	74·6	75·8	78·0	80·0	82·1	80·5	79·6	80·0	80·8	80·7	80·0	80·2	80·0	78·9	78·2	78·2	78·3	78·2	78·0	78·0	77·5
Cloudy sky in 8ths.....	2	0	1	2	1	1	4	3	2	2	3	2	1	1	1	0	0	0	0	0	0	0	1	0
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Directions °	90	90	22	22	22	270	281	135	90	90	79	112	112	112	112	112	101	90	101	90	112	112	112	112
REMARKS ON THE WEATHER	cr-hz, cr-cu.....	clear.....	sc-cu, cr-hz.....	sc-cu, lt-hz.....	cu, cr-hz.....	do.....	do.....	do.....	do.....	do.....	cu, cu-st, cr-hz	do.....	cu, cr, cr-hz.....	do.....	do.....	ny-clear.....	do.....	clear.....	do.....	do.....	do.....	do.....	sc-cu.....	clear.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH APRIL 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 20th April, 1853.													Thursday, 21st April, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1672	1676	1672	1675	1687	1697	1691	1678	1654	1636	1622	1625	1630	1638	1640	1640	1654	1654	1653	1656	1660	1664	1670	1670
5	0	72	74	72	75	87	98	89	76	51	34	21	26	31	38	40	40	55	54	53	56	60	64	70	70
10	0	75	73	73	76	90	97	88	74	50	33	21	26	31	39	40	41	55	54	53	56	60	64	70	70
15	0	75	72	73	76	89	97	88	72	49	30	21	27	31	40	40	41	56	54	53	57	60	66	70	70
20	0	75	72	73	76	89	97	86	71	48	28	21	27	31	40	40	41	58	54	53	58	60	66	70	70
25	0	79	72	73	77	88	97	82	70	46	27	21	27	32	40	40	42	56	54	53	58	61	68	70	70
30	0	79	72	73	79	88	93	81	69	45	25	22	27	32	40	40	42	55	54	53	58	61	70	70	70
35	0	79	71	72	80	89	92	81	65	43	24	22	28	34	40	40	42	55	54	54	58	62	70	70	70
40	0	80	72	72	81	90	92	81	63	42	23	23	28	35	40	40	42	55	54	55	58	62	70	70	70
45	0	80	74	73	81	92	91	80	60	40	23	23	29	35	40	40	45	55	54	54	59	63	70	70	70
50	0	79	73	73	82	92	91	80	60	39	23	23	29	37	40	40	47	55	54	54	59	63	70	70	70
55	0	79	73	73	82	95	90	80	59	38	22	24	29	37	40	40	50	55	54	55	59	63	70	70	70

HORIZONTAL FORCE.

m.	s.																								
2	0	1094	1094	1092	1102	1080	990	930	880	830	880	930	980	1018	1050	1087	1089	1117	1102	1120	1117	1123	1122	1110	1100
7	0	90	90	90	06	79	987	918	880	840	880	934	980	20	54	88	91	18	00	20	17	21	22	10	00
12	0	90	92	90	09	60	1010	910	875	842	882	939	984	27	56	89	93	18	00	21	17	20	24	12	00
17	0	82	90	90	12	60	15	910	870	851	889	941	989	30	59	89	94	16	00	19	17	19	20	12	03
22	0	82	91	90	12	60	08	895	870	854	892	946	990	30	61	89	95	13	00	17	19	19	20	10	04
27	0	95	91	97	19	62	06	880	861	857	897	950	992	30	62	90	98	11	02	14	19	18	18	10	04
32	0	1107	95	97	10	50	994	880	860	860	900	956	995	32	63	90	1100	08	02	11	18	16	18	10	04
37	0	11	95	1102	1090	40	973	878	850	866	903	959	995	32	69	90	04	04	06	11	18	16	15	10	02
42	0	10	1100	1097	87	23	970	872	845	871	909	961	997	36	73	90	07	02	07	13	18	20	15	10	03
47	0	1092	1099	90	87	18	940	878	825	875	910	969	1000	38	79	90	10	00	07	15	19	20	15	07	03
52	0	92	97	99	80	11	938	879	825	875	918	970	02	41	81	91	16	1094	09	17	20	20	12	07	03
57	0	93	97	99	86	00	938	879	825	879	926	970	02	47	83	91	18	98	09	17	20	20	12	02	03
Faht...																									
Attached Thermometer.....		85·2	85·3	85·3	85·2	85·1	85·0	85·3	85·6	85·8	86·0	86·3	86·5	86·6	86·7	86·8	86·8	86·5	86·6	86·7	86·8	86·8	86·7	86·7	86·7

VERTICAL FORCE.

m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	4828	4797	4796	4790	4756	4831	4920	5004	5040	4999	4970	4942	4952	4956	4941	4895	4895	4788	4825	4798	4801	4795	4754	4768
8	0	28	97	96	90	56	31	20	04	40	99	70	42	52	56	41	95	95	88	25	98	01	95	54	68
13	0	28	4810	96	90	56	31	41	04	40	99	70	42	52	56	41	95	95	88	25	98	01	95	54	68
18	0	4789	10	96	82	39	31	40	04	40	99	70	42	52	56	41	95	73	88	25	98	01	95	54	68
23	0	89	10	87	82	39	69	40	40	37	99	70	42	52	56	41	95	73	88	25	98	01	95	54	68
28	0	92	4785	87	82	39	69	62	40	37	70	70	42	52	56	41	95	73	88	25	98	01	95	54	68
33	0	92	85	87	33	39	90	85	40	20	70	70	42	52	56	41	95	47	88	25	98	01	95	54	68
38	0	92	85	97	33	59	90	85	40	20	70	70	42	52	56	41	95	47	4801	25	98	01	95	54	68
43	0	92	4812	97	33	59	90	85	40	20	70	70	42	52	56	41	95	47	01	25	98	01	95	54	68
48	0	4828	12	4805	17	85	4914	85	40	20	70	70	42	52	56	41	95	09	01	25	98	01	95	54	68
53	0	03	07	4789	17	85	14	85	40	20	70	70	42	52	56	08	95	08	01	25	98	01	95	54	68
58	0	17	07	89	17	85	14	93	40	20	70	70	42	52	41	08	95	08	01	4796	98	01	95	54	68
Faht...																									
Attached Thermometer.....		84·9	85·0	85·0	84·6	84·7	85·1	85·6	86·1	86·2	86·5	86 7	86·8	86·8	87·1	87·2	87·0	86·3	86·3	86·3	86·2	86·2	86·1	86·0	86·0

INDUCTION INCLINOMETER.

m.	s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1612	1611	1610	1611	1624	1631	1628	1615	1598	1583	1578	1579	1580	1585	1589	1589	1594	1594	1592	1595	1598	1600	1601	1603
5	20	12	10	10	11	24	32	27	14	95	82	78	79	81	85	89	89	94	94	92	95	98	00	01	03
10	20	12	10	10	12	29	32	25	12	95	82	77	79	81	86	89	89	94	94	92	95	98	00	01	03
15	20	14	10	10	12	30	32	24	12	93	81	77	80	81	86	88	89	94	94	92	96	98	02	01	02
20	20	14	10	11	12	28	31	21	11	92	80	77	80	81	88	88	90	94	94	92	97	98	02	02	02
25	20	14	10	11	12	27	31	20	11	91	80	77	80	82	89	88	90	94	93	92	97	98	01	02	02
30	20	14	10	11	16	27	30	20	09	90	79	77	80	.82	89	89	90	94	93	93	97	98	01	02	03
35	20	15	10	11	19	28	30	19	06	89	79	77	80	82	89	89	90	94	93	94	97	1600	02	02	03
40	20	15	10	11	20	29	30	19	05	89	79	77	80	83	89	89	90	94	93	94	97	00	02	02	03
45	20	14	11	12	20	30	29	19	01	87	79	78	80	84	89	89	91	95	93	94	96	00	02	02	03
50	20	13	10	11	21	30	28	19	00	86	78	78	80	84	89	89	92	95	93	93	97	00	02	02	03
55	20	12	10	11	21	31	28	18	00	84	78	78	80	84	89	89	93	95	93	94	97	00	02	02	03
Faht...																									
Attached Thermometer.....		84·0	84·0	84·0	83·7	83·8	84·6	85·2	85·7	86·0	86·6	87·0	87·9	87·6	87·0	86·9	86·7	86·0	86·0	85·9	85·8	85·8	85·7	85·6	85·5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+...		In. 0·932	In. 0·934	In. 0·946	In. 0·952	In. 0·979	In. 1·006	In. 1·028	In. 1·031	In 1·026	In. 1·016	In. 0·991	In. 0·959	In 0·929	In. 0·917	In. 0·912	In. 0·919	In. 0·924	In. 0·947	In. 0·969	In. 0·990	In. 0·993	In. 0·982	In. 0·970	In. 0·960
Attached Thermometer		80·0	80·0	79·5	79·0	79·5	81·0	82·5	84·0	85·0	86·0	87 0	87·0	87·0	87·0	86·5	85·5	85·0	84·0	84·0	84·0	84·0	83·5	83·0	83·0
Dry Thermometer (standard)		79·5	79·2	78·7	78·0	81·0	84·6	87·9	90·4	91·0	91·9	91·6	91·5	91·4	91·0	90·2	88·6	86·0	85·2	84·6	84·2	83·7	83·1	83·0	82·7
Wet Do.		76·6	76·7	76·0	75·8	78·2	79·8	80·8	81 2	81·0	82·0	81·2	81·3	81·4	81·5	81·0	80·5	79·8	79·3	79·3	79·3	79·2	79·1	79·0	79·0
Cloudy sky in sths.....		0	1	0	0	0	0	3	3	5	2	1	1	1	1	1	2	2	2	1	2	2	2	2	4
Wind. Force lbs		·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·10	·05	·02	·08	·05	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Directions °		247	247	247	247	236	180	180	191	146	146	146	146	135	135	124	135	112	124	135	135	135	124	112	112
REMARKS ON THE WEATHER		ny-clear.	sc-cu	clear	do	lt-cu	do	fl-cu, cr-st, hz	do	sc-cu, cu-st, hz	cu-hor	do	do	do	do	cu, cr-st-hor	cu, cr-cu, cr-hz	do	lt-cu, cr-st, hz, lg-W-hor	cr-st, hz	cr-cu, cr-st, hz	cr-st, hz	cr,cr-st	cr, cr-hz	cu, cr, cr-hz

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 27TH MAY 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 27th May 1853.														Saturday, 28th May 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1660	1660	1661	1670	1701	1703	1700	1682	1650	1632	1630	1644	1660	1658	1665	1669	1660	1659	1660	1659	1657	1664	1670	1670
5	0	60	60	61	70	01	03	00	79	50	30	30	48	60	58	65	69	60	59	60	60	57	64	70	70
10	0	60	60	60	71	02	03	1695	75	50	30	30	50	60	59	66	69	59	59	60	61	57	65	71	70
15	0	61	61	60	74	05	03	94	73	50	28	30	50	60	60	66	68	59	59	60	61	57	64	71	70
20	0	62	60	62	75	08	03	94	70	49	26	30	50	60	60	66	67	59	59	60	61	57	63	72	70
25	0	60	60	63	79	09	03	91	69	43	22	30	55	60	61	67	67	59	59	61	61	57	62	72	70
30	0	59	60	64	83	05	03	90	64	40	20	30	60	60	62	67	67	59	59	62	61	58	62	72	70
35	0	59	60	66	86	04	03	90	62	40	20	30	60	60	62	68	65	59	60	62	61	60	64	71	70
40	0	58	60	67	89	03	01	89	60	40	20	30	60	60	62	68	64	59	60	61	60	60	65	71	70
45	0	59	61	68	91	02	00	86	60	38	22	33	60	59	62	68	62	59	60	60	60	61	67	71	70
50	0	59	61	69	91	02	00	82	58	36	25	39	60	59	63	68	61	59	60	58	60	62	69	70	70
55	0	59	61	70	91	03	00	81	52	34	28	42	60	59	63	68	60	59	59	57	59	63	69	70	70

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1298	1297	1300	1307	1285	1260	1210	1180	1170	1238	1330	1400	1430	1428	1418	1392	1395	1406	1391	1404	1414	1428	1422	1428
7	0	98	97	00	07	80	41	00	83	80	40	38	03	33	26	18	92	95	07	91	06	13	25	22	29
12	0	92	97	1299	02	77	39	1196	82	80	44	45	08	38	26	15	90	97	07	91	08	13	23	24	29
17	0	90	99	99	02	77	37	94	80	85	48	50	10	40	25	13	90	97	07	91	08	13	23	25	28
22	0	95	99	95	02	79	30	90	72	89	52	43	16	40	22	10	88	97	1398	90	08	13	22	27	28
27	0	1300	99	1304	1299	78	30	83	61	90	58	40	20	40	20	08	85	97	98	90	08	21	20	27	29
32	0	02	1300	05	97	70	31	86	60	1200	65	40	28	40	19	05	84	97	98	91	08	25	20	27	30
37	0	00	00	09	95	68	29	83	48	15	78	46	30	40	19	02	86	98	97	92	10	28	20	27	30
42	0	00	00	09	95	55	20	76	40	22	80	55	30	40	19	00	87	98	97	92	11	30	20	27	30
47	0	1298	02	10	92	47	15	74	40	28	80	70	30	39	17	1399	89	98	96	92	12	30	20	27	30
52	0	97	02	12	90	53	11	75	50	30	1308	78	30	37	17	99	90	98	92	93	14	29	21	28	30
57	0	97	02	15	90	60	10	78	50	35	20	88	30	35	17	95	90	1401	90	96	16	28	22	28	30
Faht.....		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer.....		90·7	90·6	90·6	90·7	90·4	90·0	90·2	90·5	91·0	91·5	91·8	92·3	92·9	93·0	93·0	92·8	92·4	92·4	92·4	92·3	92·2	92·0	92·0	92·0

VERTICAL FORCE.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3	0	4743	4717	4714	4731	4712	4705	4727	4765	4857	4853	4812	4773	4762	4778	4757	4784	4760	4741	4728	4740	4722	4745	4745	4725
8	0	43	17	14	31	12	05	27	65	57	53	12	73	62	78	57	84	60	41	28	40	22	45	45	25
13	0	43	17	14	31	12	05	27	65	57	53	12	73	62	78	57	84	42	41	28	40	22	45	45	25
18	0	62	32	14	10	24	05	27	72	58	53	35	60	62	78	57	84	16	41	28	40	22	45	45	25
23	0	62	32	29	4696	24	05	27	72	42	53	35	60	62	78	57	84	48	41	28	40	22	45	45	25
28	0	42	32	29	96	24	05	27	4805	42	53	35	40	62	78	40	84	48	41	28	40	22	45	45	25
33	0	11	32	29	96	24	05	37	05	42	53	35	40	62	78	40	84	48	41	28	40	22	45	45	25
38	0	11	39	11	81	24	4694	37	05	42	75	28	40	62	78	40	97	48	41	28	40	22	45	45	25
43	0	11	39	11	81	06	94	37	45	42	75	28	35	62	78	40	97	48	41	28	40	22	45	25	25
48	0	4690	39	11	81	04	94	37	45	60	75	47	35	62	78	60	97	42	41	28	40	45	45	25	25
53	0	90	39	19	72	04	94	62	46	60	75	30	35	62	78	60	97	42	41	28	40	45	45	25	25
58	0	90	39	19	4709	04	94	62	48	60	45	30	35	62	78	60	97	42	41	28	40	45	45	25	25
Faht.....		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer....		90·5	90·4	90·3	90·1	90·2	90·2	90·6	91·0	91·4	92·0	92·4	93·0	93·5	93·6	93·4	92·8	92·2	91·8	91·6	91·5	91·3	91·2	91·0	90·8

INDUCTION INCLINOMETER.

m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd,	scd.	scd.	scd.	scd.	scd·	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	20	1608	1610	1611	1619	1635	1639	1640	1625	1601	1590	1587	1602	1620	1615	1616	1618	1605	1601	1602	1602	1602	1610	1613	1613
5	20	08	10	11	17	36	40	39	22	00	90	87	05	20	16	16	18	04	01	02	03	02	11	13	13
10	20	08	10	10	19	37	40	38	20	00	87	88	08	19	16	16	18	04	01	02	04	02	11	13	14
15	20	08	10	10	20	38	40	37	20	00	87	88	10	19	16	16	17	02	01	02	04	02	10	14	14
20	20	09	10	12	20	39	40	35	18	00	87	90	10	19	16	16	15	01	01	02	04	02	10	14	14
25	20	09	11	14	22	40	40	34	15	1596	85	90	12	19	16	16	15	01	01	03	04	02	10	14	14
30	20	09	11	14	22	40	40	33	12	93	85	88	14	18	16	16	14	01	01	04	04	03	10	14	14
35	20	08	11	15	25	40	40	31	10	92	82	88	17	18	16	16	13	01	02	04	04	05	10	14	14
40	20	08	11	16	29	38	39	30	09	92	80	90	18	18	16	16	11	01	02	03	04	05	11	14	14
45	20	09	11	18	30	38	40	29	05	92	80	92	18	16	16	16	09	01	02	02	04	06	12	13	14
50	20	09	11	19	30	39	40	28	02	90	82	98	18	16	16	17	07	01	02	00	04	08	12	13	15
55	20	09	11	19	31	39	40	26	01	90	85	1600	18	16	16	17	06	01	01	00	04	10	12	13	15
Faht.. ...		°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer....		90·0	90·0	89·9	89·6	89·6	89·8	90·4	91·2	91·8	93·0	93·5	94·2	94·9	94·7	93·8	93·0	92·2	91·5	91·2	91·1	91.0	90·8	90·8	90·7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..		In. 0·857	In. 0·868	In. 0·876	In. 0·880	In. 0·908	In. 0·924	In. 0·938	In. 0·936	In. 0·930	In. 0·920	In, 0·898	In. 0·870	In. 0·850	In. 0·826	In. 0·817	In. 0·824	In. 0·846	In. 0·878	In. 0·908	In. 0·923	In. 0·920	In. 0·908	In. 0·894	In. 0·880
Attached Thermometer.....		° 87·0	° 87·0	° 87·0	° 87·0	° 87·0	° 87·5	° 89·0	° 90·0	° 91·0	° 92·5	° 93·5	° 94·0	° 95·0	° 94·5	° 93·5	° 91·0	° 88·5	° 88·0	° 88·0	° 88·0	° 87·5	° 86·0	° 85·5	° 85·5
Dry Thermometer (standard).....		87·3	87·0	86·5	86·0	88·0	90·3	93·9	96·0	98·8	101·4	101·1	102·6	103·4	100·5	97·7	94·7	89·6	88·0	88·2	88·0	87·4	87·2	86·8	86·5
Wet Do.		80·2	79·2	77·4	77·9	76·4	77·7	79·4	79·3	81·0	80·8	81·0	80·5	81·2	82·0	82·2	82·5	81·7	81·8	80·9	81·1	81·0	81·0	81·0	80·9
Cloudy sky In 8ths.....		7	7	6	4	6	4	2	2	3	4	3	2	2	2	1	2	2	2	2	2	3	3	2	1
Wind. Force lbs.....		·00	·00	·00	·00	·30	·22	·08	·05	·02	·05	·00	·00	·00	·00	·02	·05	·12	·28	·05	·27	·25	·15	·00	·00
Wind. Direction °		101	124	135	146	157	169	169	169	169	157	157	146	146	45	146	146	146	157	169	180	169	180	180	225
REMARKS ON THE WEATHER		ny-ovt.....	do.....	cu, cr-cu, cr-hz.....	cr-cu, cr-hz.....	cr-cu, cr.....	cu, cr-cu, cu-st.....	cu, cr, cr-hz.....	cr-cu, cu-st, cr-hz.....	cr-cu, cr-st, hz.....	do	do.....	sc-cu, hz.....	do.....	do.....	cu-hor.....	do.....	cu, hz, nim-W., fr-lg.	cu, cu-st, lg-N.W.-hor	cu, cr-st, hz, lg-S.W., N.W.-hor...	cu, cr-st, hz, lg-S. W.	cu, cr-st, hz, lg-S.W.	cr, cr-st, cr-hz.....	cu, cr-cu, cr-hz.....	cr-cu, cr-hz..... ...	

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 22ND JUNE 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 22nd June, 1853.													
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1637	1662	1640	1650	1672	1659	1643	1645	1632	1612	1600	1602	1600	1595
5 0	37	59	40	52	71	53	42	44	30	10	00	02	00	95
10 0	39	55	39	50	70	49	42	42	31	09	00	02	00	95
15 0	40	51	40	50	71	49	43	42	31	08	02	02	00	94
20 0	40	48	40	54	70	49	44	39	30	08	02	00	00	92
25 0	40	49	40	57	68	48	44	40	30	06	02	00	00	92
30 0	41	49	40	62	65	48	45	40	29	04	02	00	00	92
35 0	41	48	42	67	64	48	45	39	27	03	02	00	00	90
40 0	40	47	42	69	63	48	46	39	25	02	02	00	1598	90
45 0	70	47	43	69	63	48	45	39	22	01	02	00	98	96
50 0	70	43	43	70	58	48	45	36	20	00	02	1599	96	98
55 0	68	40	47	70	59	48	46	34	16	00	02	99	96	98

Gottingen Mean Time.	Thursday, 23rd June, 1853.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1602	1620	1620	1622	1621	1622	1626	1630	1630	1637
5 0	02	24	20	22	22	22	26	30	30	38
10 0	02	24	20	22	22	22	27	31	30	38
15 0	06	27	20	22	22	22	28	31	29	38
20 0	09	28	20	22	22	22	29	31	29	38
25 0	12	26	20	21	22	22	30	31	27	39
30 0	15	26	20	20	22	22	30	31	29	40
35 0	16	27	22	19	22	22	30	30	30	40
40 0	19	22	22	19	22	22	29	30	32	40
45 0	20	22	22	18	22	23	29	30	33	41
50 0	20	20	22	18	22	23	30	30	34	41
55 0	20	20	22	18	22	24	30	30	35	41

HORIZONTAL FORCE.

	Wednesday, 22nd June, 1853.													
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
m. s.														
2 0	1220	1110	1210	1208	1235	1231	1198	1220	1194	1173	1179	1213	1267	1290
7 0	20	1091	17	12	50	31	1201	12	90	70	81	12	78	86
12 0	20	1112	20	07	50	30	26	1194	82	66	85	11	88	83
17 0	18	24	25	02	52	12	18	94	75	60	88	10	96	80
22 0	17	32	25	16	54	08	28	90	76	63	91	14	98	85
27 0	17	60	27	19	50	28	34	90	76	66	96	17	98	85
32 0	24	82	30	02	42	28	18	90	77	69	99	21	95	80
37 0	31	80	30	00	41	34	18	98	78	72	1200	27	95	80
42 0	35	89	30	27	57	21	15	1202	79	76	04	30	93	89
47 0	1110	1200	30	29	58	00	30	07	80	79	07	37	93	95
52 0	27	18	29	35	48	1189	38	02	78	81	10	46	90	98
57 0	40	02	10	35	47	72	25	00	76	80	16	52	90	99
Faht...														
Attached Thermometer...	89°8	89°7	89°8	89°8	89°3	89°2	89°4	89°6	89°7	90°0	90°2	90°9	91°2	91°7

	Thursday, 23rd June, 1853.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.										
2 0	1310	1320	1310	1309	1326	1331	1332	1315	1310	1309
7 0	10	20	10	09	26	32	31	12	10	07
12 0	12	20	10	08	26	32	31	10	10	06
17 0	15	25	10	07	26	32	31	10	12	04
22 0	18	25	15	09	27	33	28	11	12	01
27 0	20	22	15	11	27	33	27	11	15	00
32 0	20	20	16	12	28	33	27	11	14	02
37 0	20	16	16	12	29	33	25	11	14	05
42 0	20	16	12	16	29	34	24	11	14	05
47 0	20	16	10	19	28	36	24	10	14	07
52 0	20	14	09	20	28	33	20	10	12	09
57 0	20	14	09	20	29	32	18	10	12	10
Faht...										
Attached Thermometer...	92°0	91°6	91°1	91°2	91°2	91°2	91°2	91°0	90°9	90°8

VERTICAL FORCE.

	Wednesday, 22nd June, 1853.													
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
m. s.														
3 0	4570	4483	4564	4517	4650	4480	4505	4561	4572	4631	4646	4706	4667	4562
8 0	70	83	64	17	50	80	21	61	72	31	46	06	67	62
13 0	70	61	79	05	50	36	00	65	72	31	46	06	67	62
18 0	52	61	79	05	72	51	00	65	88	31	46	06	67	62
23 0	52	14	88	09	72	51	00	65	88	31	46	06	24	62
28 0	52	14	88	09	4583	51	40	65	88	31	46	06	24	62
33 0	4495	4566	4600	44	83	60	40	67	88	31	46	06	24	62
38 0	95	66	00	44	83	73	40	67	97	31	46	4667	10	62
43 0	95	89	00	44	4614	82	40	80	4616	31	95	67	10	62
48 0	4559	89	25	62	14	90	54	80	16	31	95	67	10	62
53 0	59	87	25	90	4540	92	54	76	16	46	95	67	10	62
58 0	59	87	25	90	41	4517	54	76	16	46	95	67	10	62
Faht...														
Attached Thermometer...	89°4	89°2	89°5	89°4	89°0	89°2	89°4	89°8	90°0	90°5	90°9	91°4	92°0	92°0

	Thursday, 23rd June, 1853.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.										
3 0	4537	4557	4567	4544	4570	4553	4547	4513	4548	4525
8 0	37	57	67	44	70	95	47	13	48	25
13 0	37	57	67	44	70	95	47	13	48	25
18 0	37	57	67	44	70	95	47	13	48	25
23 0	37	57	67	44	53	95	47	13	48	25
28 0	37	57	67	44	53	95	47	13	48	25
33 0	37	57	67	44	53	95	47	13	48	25
38 0	37	84	67	44	53	95	47	13	48	25
43 0	40	84	67	44	53	95	47	13	48	25
48 0	40	50	67	44	53	95	47	13	48	25
53 0	40	50	67	44	53	95	47	13	48	25
58 0	40	50	67	44	53	95	47	13	48	25
Faht...										
Attached Thermometer...	92°5	91°8	90°7	90°7	90°6	90°6	90°6	90°5	90°0	90°0

INDUCTION INCLINOMETER.

	Wednesday, 22nd June, 1853.													
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 20	1600	1623	1603	1611	1627	1615	1609	1607	1598	1586	1576	1580	1579	1580
5 20	00	20	03	12	25	11	08	06	97	85	76	80	79	80
10 20	01	17	02	10	23	11	07	07	96	84	77	80	77	78
15 20	02	16	03	10	23	10	08	07	95	84	77	80	75	78
20 20	02	14	03	15	22	10	08	02	95	82	77	79	80	78
25 20	02	12	03	18	22	10	06	03	93	80	78	78	80	80
30 20	02	12	03	21	22	10	07	02	92	80	78	78	80	80
35 20	02	10	04	24	22	11	07	02	91	79	78	77	80	80
40 20	02	09	05	24	22	11	07	02	91	79	78	77	80	80
45 20	30	09	06	25	22	11	05	02	90	78	78	78	80	80
50 20	31	07	06	25	18	11	07	02	88	78	79	78	80	80
55 20	27	04	09	23	18	10	06	1599	87	77	79	79	80	80
Faht...														
Attached Thermometer...	89°0	88°6	88°4	88°0	88°0	88°3	89°0	89°7	90°0	90°8	91°2	92°0	92°8	93°0

	Thursday, 23rd June, 1853.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 20	1582	1590	1590	1589	1590	1589	1594	1597	1598	1599
5 20	82	90	90	89	90	89	94	97	98	99
10 20	82	90	90	89	90	89	94	97	98	99
15 20	80	90	90	89	90	89	94	97	96	1600
20 20	80	90	90	87	90	89	94	98	96	00
25 20	80	90	90	86	90	89	94	98	95	00
30 20	80	90	90	86	90	89	95	98	95	00
35 20	80	90	90	85	90	90	95	98	96	00
40 20	82	90	90	84	90	90	96	98	96	00
45 20	86	90	90	84	90	91	96	98	96	00
50 20	88	90	90	84	90	92	96	98	97	00
55 20	90	90	89	84	90	93	96	98	97	00
Faht...										
Attached Thermometer...	93°1	91°0	90°2	90°1	90°1	90°1	90°1	90°0	89°8	89°7

METEOROLOGICAL OBSERVATIONS.

	Wednesday, 22nd June, 1853.													
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
Barometer (uncorrected)=29·0+..	In. 0·876	In. 0·878	In. 0·880	In. 0·888	In. 0·914	In. 0·930	In. 0·946	In. 0·949	In. 0·938	In. 0·922	In. 0·894	In. 0·869	In. 0·833	In. 0·816
Attached Thermometer.....	83°5	83°0	84°0	83°5	83°0	84°0	85°0	87°0	88°0	90°0	91°5	92°5	92°5	92°5
Dry Thermometer (standard)....	84°0	83°3	82°6	81°8	84°4	86°4	89°3	91°7	94°4	96°5	98°6	99°9	101°9	101°8
Wet Do.	76°8	76°2	76°4	76°2	78°1	78°2	78°4	77°8	77°8	79°0	80°1	80°0	81°0	78°5
Cloudy sky in 8ths.....	4	3	3	3	3	5	3	3	2	3	3	3	3	6
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·25	·45	·28	·80	·25	·08	·10
Wind. Direction °	247	225	247	247	247	247	247	236	236	247	247	247	225	247
REMARKS ON THE WEATHER	cu, cr-st,cr-hz.....	cu, cr-cu, cr-st.....	cu, cu-st, cr.....	cu, cr-cu, cr.....	cu, cr-cu.....	cu, cu-st, cr-cu, hz...	cu, cr-cu, cr, hz.....	do.....	cr, cr-st.....	sc-cu, cr-hz.....	cu, cr-cu, cr-st.....	do.....	do.....	cu, cu-st, cr-hz.....

	Thursday, 23rd June, 1853.									
	Noon	1	2	3	4	5	6	7	8	9
Barometer (uncorrected)=29·0+..	In. 0·820	In. 0·828	In. 0·836	In. 0·856	In. 0·882	In. 0·896	In. 0·907	In. 0·899	In. 0·890	In. 0·884
Attached Thermometer.....	92°5	91°0	89°5	88°5	88°5	88°0	88°0	87°5	87°5	87°5
Dry Thermometer (standard)....	98°3	91°9	89°0	88°2	87°6	87°4	87°7	88°0	87°6	86°8
Wet Do.	79°0	79°8	80°3	79°8	80°0	80°7	78°9	76°0	75°5	75°0
Cloudy sky in 8ths.....	7	8	7	6	6	7	2	2	6	6
Wind. Force lbs.....	·00	·08	·07	·00	·00	·00	·02	·05	·02	·00
Wind. Direction °	169	157	169	180	180	180	281	270	281	292
REMARKS ON THE WEATHER	do.....nim...	do.....nim...	fl-cu, nim,.....lt-R...	cu, cr-st, hz.....	cu, nim, hz,.....	cu, d-hz.....	cu, cr-cu, cr-st, hz...	cu, cr-hz.....	do	cu, cr-hz, nim .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH JULY 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 20th July, 1853.														Thursday, 21st July, 1853.									
	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1620	1630	1637	1650	1662	1664	1644	1600	1593	1580	1579	1582	1580	1586	1600	1614	1610	1606	1608	1608	1608	1610	1615	1620
5 0	24	30	37	51	62	64	40	00	92	80	78	83	80	87	01	15	09	06	08	08	08	10	16	20
10 0	28	30	39	51	62	63	40	00	91	80	77	84	80	87	02	17	08	06	08	08	08	10	16	20
15 0	31	31	39	54	63	62	36	1599	91	78	77	85	80	87	04	17	08	06	08	08	08	10	17	20
20 0	30	32	39	51	63	61	32	97	91	77	77	84	80	87	06	18	07	06	08	08	08	10	17	20
25 0	32	32	40	50	63	61	30	94	90	78	75	83	81	88	08	18	06	06	08	08	08	10	17	20
30 0	35	33	42	56	63	60	27	93	89	78	73	83	82	90	09	18	05	06	08	08	08	12	16	20
35 0	36	34	42	58	62	59	23	93	87	78	73	82	82	91	10	16	03	06	08	08	08	12	15	20
40 0	36	34	44	60	62	57	20	92	86	78	75	81	83	93	11	15	03	06	08	08	10	12	17	20
45 0	32	35	46	60	63	57	17	92	84	78	77	80	84	95	12	14	03	07	08	08	10	14	17	20
50 0	30	35	48	61	63	54	09	92	82	78	79	80	85	97	12	12	04	07	08	08	10	14	17	20
55 0	28	35	48	61	64	50	06	93	80	79	80	80	86	99	12	11	04	07	08	08	10	14	18	20

HORIZONTAL FORCE.

m. s.																								
2 0	1205	1198	1195	1183	1160	1140	1129	1126	1118	1120	1112	1140	1170	1193	1206	1195	1180	1199	1194	1192	1185	1182	1180	1185
7 0	05	98	95	80	58	35	27	26	18	19	11	42	72	95	04	93	80	99	94	92	86	80	78	82
12 0	07	98	92	80	56	34	26	26	19	17	11	43	74	95	02	90	80	99	94	90	87	80	75	80
17 0	03	98	92	78	53	35	25	25	20	15	10	45	76	97	00	85	82	99	94	90	87	80	72	78
22 0	02	98	90	77	52	33	25	24	18	14	10	48	79	97	1197	82	82	99	94	90	87	80	72	75
27 0	00	98	90	75	50	32	26	23	17	17	14	51	80	99	93	79	87	99	94	90	87	80	72	70
32 0	00	98	92	71	51	30	27	21	14	22	17	53	84	1202	95	75	90	99	94	90	87	80	75	70
37 0	00	96	90	68	50	31	26	20	13	28	20	57	90	04	98	71	92	99	94	89	88	80	75	70
42 0	04	96	87	68	49	29	25	19	13	25	19	60	93	05	99	68	92	1200	94	89	88	80	77	67
47 0	05	96	85	67	47	29	26	19	13	21	18	64	95	08	99	70	96	00	94	88	85	80	77	67
52 0	02	96	87	64	45	28	26	19	16	20	22	67	98	08	97	74	97	00	94	88	85	80	80	67
57 0	00	96	87	62	43	28	26	18	19	19	29	69	97	06	98	77	97	1197	94	88	85	80	80	67
Faht...																								
Attached Thermometer...	89°7	89°7	89°4	89°3	89°1	89°1	89°1	89°4	89°7	89°9	90°0	90°6	90°7	90°7	90°7	90°7	90°8	90°9	91°0	91°1	90°8	90°5	90°4	90°4

VERTICAL FORCE.

m. s.																								
3 0	4659	4628	4592	4628	4645	4695	4760	4691	4601	4606	4606	4652	4631	4547	4547	4630	4628	4603	4597	4578	4571	4571	4610	4610
8 0	59	28	92	28	45	95	60	91	01	06	06	52	31	47	47	30	28	03	97	78	71	71	10	10
13 0	59	28	92	28	45	95	60	91	01	06	06	52	31	47	47	15	28	03	97	78	71	71	10	10
18 0	72	10	79	42	45	4700	60	91	01	06	06	52	31	47	47	15	28	03	97	78	71	71	10	10
23 0	72	10	79	42	45	00	60	91	01	06	06	52	31	47	47	97	28	03	97	78	71	71	10	10
28 0	72	10	79	42	45	13	60	91	01	06	06	52	31	47	47	97	28	03	97	78	71	71	10	90
33 0	72	10	58	61	56	13	60	50	01	06	06	52	31	47	51	97	04	03	97	78	71	71	10	90
38 0	72	10	58	61	56	13	60	70	01	06	06	52	17	47	51	02	04	03	97	78	71	71	10	90
43 0	89	10	58	61	70	13	60	70	01	06	06	52	17	47	51	02	04	03	97	78	71	71	10	66
48 0	89	10	58	61	70	13	40	35	01	06	06	52	17	47	51	02	04	03	95	78	71	71	10	66
53 0	89	01	72	61	88	40	40	35	01	06	52	52	17	47	51	02	04	03	93	78	71	71	10	66
58 0	89	01	72	61	95	60	40	35	01	06	52	52	17	47	51	02	04	03	92	78	71	71	10	66
Faht...																								
Attached Thermometer...	89°5	89°3	89.0	88°8	89°0	89°0	89°4	89°6	90°0	90°4	90°6	91°0	91°0	90°9	90°7	90°7	90°5	90°5	90°4	90°3	90°2	90°0	89°5	89°0

INDUCTION INCLINOMETER.

m. s.																								
0 20	1600	1610	1614	1618	1618	1620	1601	1570	1572	1562	1562	1568	1563	1567	1580	1591	1584	1582	1583	1583	1583	1582	1590	1590
5 20	02	10	14	18	19	20	1598	72	73	62	62	68	63	67	80	91	84	82	83	83	83	80	90	90
10 20	02	10	15	18	20	20	97	73	73	62	62	69	62	67	81	91	83	82	83	83	83	80	90	90
15 20	03	10	15	14	19	20	94	74	72	62	61	70	62	68	81	91	82	82	83	83	83	80	90	90
20 20	03	11	15	11	20	19	93	73	72	61	61	70	62	68	82	92	82	82	83	83	83	80	90	90
25 20	04	12	15	13	20	19	90	72	71	62	61	70	62	68	84	92	81	82	83	83	83	80	90	92
30 20	05	12	15	16	21	18	89	72	69	62	61	70	62	69	86	92	81	82	83	83	83	80	90	92
35 20	07	12	16	19	21	17	87	70	67	62	61	69	62	71	87	90	80	82	83	83	85	83	90	92
40 20	07	13	16	19	21	14	86	70	65	62	61	68	65	72	89	89	80	82	83	83	88	83	90	92
45 20	04	13	16	20	22	13	82	70	64	62	62	66	65	74	90	89	81	82	83	83	88	87	90	92
50 20	02	13	16	20	21	09	78	70	63	62	65	65	66	76	90	87	81	82	83	83	85	87	90	92
55 20	02	13	17	20	20	06	73	72	63	62	66	64	66	78	90	85	81	83	83	83	84	87	90	92
Faht...																								
Attached Thermometer...	88°6	88°2	88°0	88°0	88°0	88°3	88°9	89°3	89°8	90°2	90°7	91°4	91°0	91°0	90°9	90°8	90°5	90°4	90°2	90°0	89°8	89°3	89°0	89°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 0·826	In. 0·820	In. 0·806	In. 0·804	In. 0·836	In. 0·850	In. 0·876	In. 0·884	In. 0·874	In. 0·854	In. 0·834	In. 0·814	In. 0·800	In. 0·785	In. 0·781	In. 0·790	In. 0·800	In. 0·821	In. 0·833	In. 0·860	In. 0·872	In. 0·858	In. 0·850	In. 0·846
Attached Thermometer.....	87°5	86°0	86°0	85°0	84°5	85°0	86°0	87°0	88°0	89°5	90°5	91°5	92°0	92°0	92°0	91°5	90°5	90°0	89°5	89°0	88°0	86°0	85°0	85°0
Dry Thermometer (standard)....	85·0	84·2	83·5	82·7	84·6	86·7	89·0	91·0	92·9	94·8	95·8	98·0	96·9	96·2	96·0	94·8	92·5	90·0	89·1	89 1	86 6	85·0	85·0	85·0
Wet Do.	72·0	71·8	71·0	71·2	72·5	74·0	74·4	74·8	76·5	76·6	77·0	77·4	77·2	77·0	77·3	78·0	78·0	76·6	76 0	76·0	76·5	76 4	75·5	74·5
Cloudy sky in 8ths.....	2	2	1	1	3	2	3	5	5	6	7	7	7	7	8	7	7	7	7	8	8	8	8	8
Wind. Force lbs.....	·25	·10	·37	·32	·00	1·25	1·15	1·22	·95	1·20	·38	·25	·02	·00	·00	·00	·00	·12	·00	·00	·80	·00	·00	·01
Wind. Direction °	270	270	270	281	281	281	281	281	281	281	281	281	281	281	281	281	259	247	236	247	236	202	270	270
REMARKS ON THE WEATHER	cr-st, cr-hz.....	do	do.....	cr, cr-hz.....	do.....	do.....	do.....	cr, cr-hz, cr-st.....	do.....	cn, thi-cr-hz.....	cu, cr-st, thi-cr-hz...	do.....nim...	do.....nim...	cu, cr-hz, nim.....	do.....	do.....	do.....	hy-cu, hz, nim.....	ny-ovt, nim.....	ovt, nim.....	ovt, lt-R.....	ovt.....	ovt.....	ovt.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 26TH AUGUST 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		FRIDAY, 26TH AUGUST 1853.														SATURDAY, 27TH AUGUST, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.																								
	0 0	scd. 1700	scd. 1706	scd. 1710	scd. 1718	scd. 1738	scd. 1749	scd. 1740	scd. 1710	scd. 1684	scd. 1661	scd. 1664	scd. 1662	scd. 1665	scd. 1685	scd. 1700	scd. 1700	scd. 1695	scd. 1690	scd. 1691	scd. 1695	scd. 1695	scd. 1690	scd. 1692	scd. 1690
	5 0	02	07	11	18	39	50	38	10	82	61	64	62	66	88	00	00	95	90	91	95	94	90	92	90
	10 0	02	09	11	19	41	49	37	02	80	60	65	62	66	90	03	1698	94	90	91	95	94	90	92	90
	15 0	01	09	14	20	42	48	32	02	80	60	65	63	67	90	06	96	93	90	91	95	94	90	91	90
	20 0	00	10	14	22	42	48	31	1697	77	60	65	63	69	93	07	94	92	90	91	95	94	90	91	90
	25 0	00	10	15	24	45	48	30	98	75	60	65	63	70	96	07	94	92	90	91	95	93	92	91	90
	30 0	00	10	15	27	47	48	30	95	72	60	64	63	70	1700	09	92	92	91	91	95	93	92	91	90
	35 0	01	10	15	28	48	44	22	90	70	60	64	64	73	00	06	90	91	91	92	95	93	92	91	90
	40 0	02	10	15	30	48	44	20	90	66	60	63	64	76	00	04	90	90	91	92	95	93	92	91	90
	45 0	02	10	14	31	48	43	20	87	63	61	63	65	80	00	02	90	89	91	94	95	92	92	90	90
	50 0	02	10	12	35	50	43	20	84	62	62	62	65	80	00	02	93	89	91	94	95	91	92	90	90
	55 0	04	10	12	38	51	41	12	84	61	62	62	65	82	00	00	94	89	91	94	95	91	92	90	90
HORIZONTAL FORCE.	m. s.																								
	2 0	1070	1106	1112	1086	1092	1070	1029	990	997	1030	1047	1081	1145	1205	1197	1160	1190	1167	1184	1208	1186	1160	1160	1158
	7 0	76	10	15	88	1102	70	39	990	1002	30	47	85	49	05	96	60	90	67	84	06	84	60	60	58
	12 0	76	15	15	82	05	60	39	989	08	30	55	87	53	08	95	60	85	67	84	04	80	60	62	57
	17 0	76	15	11	77	06	89	39	989	17	30	60	90	69	10	92	62	80	66	84	04	79	60	62	55
	22 0	77	17	10	81	00	89	38	990	26	32	67	95	70	07	90	62	72	66	84	04	79	62	62	55
	27 0	79	22	10	80	00	69	26	995	23	32	69	1104	70	08	90	65	70	66	84	03	70	63	63	55
	32 0	79	20	1090	80	1092	68	27	990	22	38	70	10	72	08	86	65	67	69	90	03	63	64	64	54
	37 0	81	17	80	81	89	58	08	990	24	41	70	11	78	04	83	65	63	69	97	03	60	62	63	54
	42 0	82	20	77	82	89	58	02	992	27	44	70	10	85	03	78	65	60	69	1205	03	54	61	64	54
	47 0	82	20	81	90	89	57	02	989	31	45	72	19	90	00	72	69	43	69	06	00	53	60	62	52
	52 0	82	20	83	87	78	57	02	990	30	48	75	24	94	00	70	75	60	72	06	1192	55	60	62	52
	57 0	89	14	83	90	79	38	998	992	29	49	80	30	97	00	65	86	69	78	08	88	58	60	60	52
	Faht...																								
	Attached Thermometer...	86·8	86·9	86·9	86·7	86·5	86·3	86·8	86·9	87·0	87·4	87·9	88·2	88·7	88·6	88·5	88·0	88·0	88·2	88·2	88·2	88·2	88·0	88·0	88.0
VERTICAL FORCE.	m. s.																								
	3 0	scd. 4611	scd. 4602	scd. 4554	scd. 4540	scd. 4588	scd. 4686	scd. 4794	scd. 4862	scd. 4966	scd. 4718	scd. 4700	scd. 4639	scd. 4677	scd. 4676	scd. 4621	scd. 4635	scd. 4695	scd. 4641	scd. 4632	scd. 4632	scd. 4582	scd. 4599	scd. 4599	scd. 4600
	8 0	11	4593	54	40	88	86	94	62	4823	18	00	39	77	76	21	35	95	41	32	32	82	99	99	00
	13 0	11	93	54	40	88	92	94	60	4680	18	00	39	77	76	21	35	95	41	32	32	82	99	99	00
	18 0	11	93	47	49	88	4706	94	60	40	27	4671	39	77	76	28	50	95	41	32	32	82	99	4600	00
	23 0	42	75	47	49	4607	08	4808	60	00	27	71	39	77	50	28	50	95	41	32	32	82	99	00	00
	28 0	42	75	47	49	07	61	08	60	26	27	71	39	77	50	28	50	92	41	32	32	82	99	00	00
	33 0	42	79	47	35	30	65	08	60	53	40	71	39	77	50	28	50	90	41	32	32	82	99	00	00
	38 0	42	79	30	20	30	60	12	60	80	40	71	39	77	35	00	50	72	46	32	33	82	99	00	00
	43 0	49	79	30	20	30	60	45	60	4707	40	71	39	77	35	00	50	69	46	32	32	82	99	00	00
	48 0	49	62	30	20	30	66	50	45	35	40	71	39	77	35	74	50	27	46	32	32	82	99	00	00
	53 0	49	62	43	20	69	66	50	20	35	40	71	39	77	35	74	75	27	40	32	32	88	99	00	00
	58 0	49	62	43	70	69	85	57	08	35	40	71	39	77	35	74	75	27	40	32	32	88	99	00	00
	Faht...																								
	Attached Thermometer...	86·5	86·5	86·5	86·3	86·2	86·6	87·2	87·2	87·4	88·0	88·6	88·8	89·1	89·0	88·5	88·0	88·0	88·0	87·9	87·9	87·8	87·8	87·6	87·5
INDUCTION INCLINO-METER.	m. s.																								
	0 20	scd. 1770	scd. 1773	scd. 1772	scd. 1780	scd. 1803	scd. 1811	scd. 1807	scd. 1782	scd. 1759	scd. 1745	scd. 1747	scd. 1749	scd. 1753	scd. 1770	scd. 1778	scd. 1772	scd. 1770	scd. 1768	scd. 1767	scd. 1770	scd. 1771	scd. 1768	scd. 1770	scd. 1768
	5 20	70	73	72	80	04	11	03	82	56	45	47	49	54	70	72	72	70	68	67	70	71	69	70	68
	10 20	70	73	72	81	04	11	02	73	54	45	48	49	54	70	72	72	69	68	67	71	71	69	70	68
	15 20	70	73	73	81	04	14	01	73	53	45	48	49	56	70	74	70	69	68	67	71	71	69	70	68
	20 20	70	72	73	84	08	14	00	67	52	45	49	49	58	72	74	70	69	68	67	71	71	69	70	68
	25 20	70	72	73	87	09	12	00	68	51	45	50	49	60	72	75	70	69	68	67	72	70	68	70	68
	30 20	70	72	74	89	10	12	00	64	51	44	50	49	60	74	75	70	69	68	67	72	70	68	70	68
	35 20	70	72	73	90	11	09	1792	62	49	44	50	50	62	73	75	70	69	68	67	72	70	69	70	69
	40 20	70	72	73	94	11	09	92	62	48	44	50	50	64	74	74	70	69	68	68	72	70	70	69	69
	45 20	70	72	73	97	11	09	90	60	46	44	50	51	64	76	74	70	68	68	68	72	70	70	69	69
	50 20	70	72	72	1800	11	09	90	59	45	44	50	51	65	76	73	70	68	68	68	72	69	70	69	69
	55 20	73	71	72	02	11	07	83	58	45	45	49	51	68	76	73	70	68	68	68	72	69	70	69	70
	Faht...																								
	Attached Thermometer	86·0	86·0	85·9	85·5	85·4	86·0	86·4	86·8	87·2	88·0	88·8	89·5	89·8	89·0	88·5	87·4	87·2	87·2	87·2	87·2	87·2	87·0	86·6	86·4

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..		In. 0·872	In. 0·862	In. 0·866	In. 0·867	In. 0·878	In. 0·894	In. 0·910	In. 0·917	In. 0·916	In. 0·899	In. 0·876	In. 0·852	In. 0·829	In. 0·810	In. 0·816	In. 0·824	In. 0·832	In. 0·851	In. 0·877	In. 0·894	In. 0·901	In. 0·898	In. 0·890	In. 0·880
Attached Thermometer.....		82·5	82·5	83·0	82·0	82·0	82·5	84·0	85·0	86·0	87·5	89·5	90·0	90·0	89·5	88·0	86·0	85·0	85·0	85·0	84·5	84·0	83·5	83·0	83·0
Dry Thermometer (standard)....		80·5	80·0	80·3	79·8	81·0	84·0	87·4	88·6	91·7	93·3	95·3	96·6	96·5	93·5	90·0	86·6	86·0	86·0	85·3	84·5	84·1	82·6	82·0	81·1
Wet Do.		74·8	74·3	74·7	75·0	76·0	76·8	77·9	77·3	77·9	78·0	78·0	78·2	78·5	79·8	79·7	79·4	80·2	80·6	80·5	80·2	80·2	79·0	78·0	78·0
Cloudy sky in 8ths.....		7	7	8	6	3	3	3	6	4	3	5	7	7	7	8	5	5	2	3	3	7	7	6	5
WIND. Force lbs.....		·30	·05	·00	·00	·00	·00	·10	·17	·05	·12	·15	·08·	·02	·00	·00	·00	·00	·00	·00	·00	·00	·18	·15	·10
WIND. Direction °		270	281	281	270	259	259	259	259	281	270	304	270	270	101	90	180	180	135	191	191	191	236	225	225
REMARKS ON THE WEATHER		cu, cu-st, cr, cr-hz...	do.....	ovt.....	cr, cr-cu, cr-hz.....	cr-cu, cu.....	cu, cr-cu, cr-st, hz....	cu, cr, cr-st, hz.....	cu, cr, cr-st, d-hz....	cu-st, cr-hz.....	do.....	cu, cr-bz, cr-cu.....	do.....	d-cr-hz, cu.....	cu,cu-st, cr, cr-hz, nim	fl-cu, nim, lt-R.....	fl-cu, nim.....	do.....	cu, cr-st, lg-S.....	cu, cr, lg-S.....	cu, cu-st, cr-st.....	ny-ovt, lg-W.....	cu, cu-st, cr-hz, nim.	do.....lg-N.W....	cu, cr-cu, cr-hz.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21ST SEPTEMBER 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 21st September, 1853.														Thursday, 22nd September, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd,	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1686	1690	1700	1701	1720	1733	1719	1683	1668	1650	1651	1651	1660	1685	1700	1698	1690	1686	1690	1690	1692	1693	1692	1693
5	0	86	92	02	02	21	33	18	82	68	50	51	51	66	86	00	95	90	86	90	90	92	93	91	93
10	0	86	92	02	02	23	34	17	81	65	50	51	52	69	88	00	95	90	87	90	90	92	93	91	93
15	0	86	92	00	05	23	33	15	80	62	50	51	52	70	88	00	95	90	87	90	90	92	93	91	93
20	0	86	94	00	07	28	32	12	79	61	50	49	53	70	90	02	92	90	87	90	90	92	93	91	92
25	0	88	94	1698	09	29	30	10	75	59	49	48	55	70	90	02	90	89	87	90	90	92	93	92	92
30	0	88	96	98	10	30	29	08	75	57	48	48	56	70	93	03	90	89	88	90	90	92	92	92	92
35	0	88	96	1700	12	30	28	05	73	56	48	48	57	69	96	03	90	87	88	90	90	92	92	92	92
40	0	89	96	01	12	31	28	02	72	54	48	48	58	69	98	03	90	87	89	90	91	92	92	92	91
45	0	89	96	00	16	32	25	1698	72	52	49	48	59	72	98	01	90	87	90	90	91	92	92	92	91
50	0	89	98	00	20	32	23	92	70	51	50	49	59	77	70	00	90	87	90	90	91	93	92	92	91
55	0	89	98	00	20	32	22	88	69	51	50	51	60	80	70	00	90	86	90	90	92	93	92	92	90

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1087	1098	1099	1100	1105	1090	1005	911	868	858	925	974	1009	1042	1054	1058	1070	1086	1097	1100	1100	1095	1097	1092
7	0	87	99	1102	02	07	82	994	900	868	864	924	978	09	42	54	58	70	87	98	00	00	93	97	92
12	0	90	1100	05	02	02	75	988	897	859	870	921	980	09	44	55	58	70	89	99	00	00	93	97	92
17	0	90	05	02	1098	02	70	980	895	858	876	920	983	20	44	55	58	73	89	1100	00	00	90	97	94
22	0	90	05	1098	1100	00	62	975	893	852	880	922	988	20	44	55	58	73	89	00	01	00	90	96	94
27	0	86	05	98	00	00	54	969	892	852	887	924	989	22	47	56	60	72	91	00	02	00	94	96	94
32	0	86	03	1100	00	00	50	960	890	850	889	929	991	29	47	56	60	74	91	00	02	00	94	96	94
37	0	83	01	00	02	00	42	951	885	845	888	938	992	30	50	56	60	76	92	00	02	1097	97	95	95
42	0	83	1097	00	02	1098	35	943	880	849	890	956	995	28	52	56	62	78	92	00	01	97	97	94	95
47	0	89	92	01	04	97	30	932	878	856	896	961	997	32	52	53	65	78	92	1099	01	95	97	94	95
52	0	89	94	01	04	95	19	920	878	860	900	969	997	39	55	56	68	78	93	99	01	95	99	94	96
57	0	92	95	02	05	93	17	915	875	859	912	972	999	40	55	56	68	82	94	1100	00	95	99	92	96
Faht...																									
Attached Thermometer...		86·8	86·8	86·6	86·6	86·4	86·2	86·2	86·4	86·4	86·5	86·6	86·6	87·0	87·1	87·0	87·0	87·0	87·0	87·0	87·1	87·1	87·0	87·0	87·0

VERTICAL FORCE.

m.	*s.*																								
3	0	4539	4549	4589	4515	4497	4580	4705	4746	4775	4753	4710	4698	4609	4578	4598	4575	4592	4550	4545	4545	4528	4528	4494	4500
8	0	39	49	89	15	97	4605	05	46	75	53	10	98	09	78	98	75	92	50	45	45	28	28	94	00
13	0	39	49	89	15	97	20	05	46	75	53	10	98	09	78	98	75	92	50	45	54	28	28	94	00
18	0	39	55	80	29	99	30	20	61	90	53	10	98	09	78	98	75	92	50	45	54	28	28	94	00
23	0	47	55	80	4492	4507	40	40	61	90	53	10	98	09	78	98	75	44	50	45	54	28	28	94	00
28	0	47	55	80	92	07	35	62	62	90	53	10	98	03	78	98	50	44	50	45	54	28	28	80	00
33	0	47	65	80	64	07	40	62	62	85	53	10	4704	03	78	98	50	44	50	45	54	28	28	80	00
38	0	47	65	45	64	07	52	80	72	85	53	10	04	03	78	67	50	44	50	45	54	28	28	80	00
43	0	35	65	45	64	14	52	4810	72	85	08	10	04	03	78	67	50	44	50	45	30	28	28	80	00
48	0	35	65	45	51	20	52	10	72	85	08	02	03	80	78	67	50	48	50	45	30	28	28	80	00
53	0	35	72	45	51	35	52	24	72	85	08	02	4696	80	78	67	50	48	50	45	30	28	28	80	00
58	0	35	72	45	51	52	52	00	72	53	08	02	90	80	78	67	50	48	45	45	30	28	28	80	00
Faht...																									
Attached Thermometer...		86·5	86·5	86·2	86·0	86·0	86·0	86·3	86·8	86·6	87·0	87·0	87·2	87·5	87·5	87·2	87·0	87·0	86·7	87·0	86·8	86·8	86·7	86·6	86·6

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1783	1786	1792	1790	1812	1813	1804	1772	1759	1742	1748	1749	1757	1775	1790	1785	1780	1777	1778	1777	1775	1775	1777	1778
5	20	83	87	93	92	12	13	02	69	59	42	48	49	59	76	90	82	80	77	78	77	75	75	77	78
10	20	83	87	93	91	13	13	02	69	59	42	48	49	60	78	90	82	80	77	78	77	75	75	77	78
15	20	83	87	90	94	13	14	02	69	55	42	48	49	62	78	90	82	80	77	78	77	75	75	77	78
20	20	83	88	90	97	10	17	01	67	52	42	46	49	63	80	90	80	80	78	78	77	74	75	77	78
25	20	85	88	89	99	10	18	00	65	52	40	45	49	63	80	90	80	79	78	78	77	74	76	77	78
30	20	85	89	89	1800	11	17	1797	66	51	41	44	50	63	83	90	80	79	78	78	77	74	76	77	78
35	20	85	89	90	02	12	16	93	64	52	41	44	51	64	85	90	80	78	78	78	77	74	76	77	78
40	20	86	89	90	02	12	12	90	63	50	42	43	52	66	85	90	80	78	78	78	76	74	76	77	78
45	20	86	90	90	05	13	10	85	63	48	42	45	55	69	87	87	80	78	78	78	76	75	76	77	78
50	20	86	90	89	10	13	08	80	61	48	42	46	55	72	87	87	80	78	78	77	76	75	76	77	79
55	20	86	90	90	10	13	07	77	59	45	44	49	56	72	90	87	80	78	78	77	75	75	76	77	79
Faht...																									
Attached Thermometer...		86·0	85·7	85·6	85·6	85·2	85·2	85·4	85·8	86·1	86·2	86·6	86·9	87·5	87·2	86·8	86·4	86·4	86·4	86·4	86·4	86·2	86·0	86·0	86·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+.		In. 0·908	In. 0·902	In. 0·909	In. 0·914	In. 0·930	In. 0·940	In. 0·954	In. 0·954	In. 0·948	In. 0·944	In. 0·916	In. 0·898	In. 0·887	In. 0·880	In. 0·884	In. 0·890	In. 0·908	In. 0·941	In. 0·966	In. 0·964	In. 0·956	In. 0·950	In. 0·930	In. 0·916
Attached Thermometer.....		83·0	82·5	82·0	81·5	81·5	82·0	83·5	83·5	83·5	84·5	85·0	86·0	87·0	86·0	85·5	85·0	85·0	84·5	84·0	84·0	83·5	83·0	82·5	82·5
Dry Thermometer (standard)....		81·0	80·5	80·1	80·0	80·4	82·0	83·3	84·7	86·6	87·5	89·4	90·0	89·3	87·5	86·5	85·7	85·2	84·6	84·4	83·6	83·4	83·2	82·5	82·3
Wet Do.		78·2	76·5	76·0	75·4	76·0	76·9	76·5	77·1	78·2	79·0	79·9	79·2	79·4	79·2	79·0	79·2	80·0	79·7	80·0	79·8	79·5	79·2	79·2	79·0
Cloudy sky in 8ths.....		8	8	8	8	8	8	8	8	8	8	8	7	7	7	8	8	8	8	8	5	7	6	7	7
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction o		247	247	270	259	270	270	292	304	326	349	349	349	45	45	56	67	67	67	67	67	135	135	214	236
REMARKS ON THE WEATHER		ovt, sh-lg-N.W.....	do. lg-W.....	cu, cr-cu, cr-hz.....	cr, cr-hz, cr-cu.....	cr-cu, cr-hz, cu.....	ovt.....	do.....	do.....	do.....	do.....	do.....	ny-ovt.....	do.....	do.....	ovt.....	do.....	do.....	do. sh-lg-S, W.....	do.....	cu, cu-st, cr-hz, fr-sh-lg-S.W.....	ny-ovt, viv sh-lg-N & S.W.....	do.....	cr-cu,cr-hz,sh-lg-NW	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH OCTOBER 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 19th October, 1853.													Thursday, 20th October, 1853.									
m.	s.	p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
0	0	scd. 1678	scd. 1676	scd. 1679	scd. 1678	scd. 1681	scd. 1692	scd. 1698	scd. 1700	scd. 1686	scd. 1675	scd. 1679	scd. 1673	scd. 1680	scd. 1681	scd. 1677	scd. 1673	scd. 1671	scd. 1674	scd. 1676	scd. 1676	scd. 1677	scd. 1680	scd. 1680	scd. 1679
5	0	78	78	79	79	81	93	98	00	84	76	79	74	80	81	77	72	71	74	76	76	77	80	80	79
10	0	79	78	78	79	81	93	99	1698	82	78	78	75	80	80	77	72	72	74	76	76	77	80	80	78
15	0	79	79	78	79	81	98	99	98	80	78	78	75	80	79	77	71	72	74	76	76	77	80	80	79
20	0	77	79	80	78	82	97	1700	93	78	78	78	75	80	79	76	70	72	74	76	76	77	80	80	80
25	0	77	77	80	79	83	98	00	93	76	77	77	75	80	78	75	70	72	74	76	76	77	80	80	80
30	0	75	76	80	79	87	99	00	92	77	79	77	76	81	77	74	70	72	74	76	77	78	80	80	80
35	0	75	76	78	80	88	99	00	91	76	80	77	77	81	77	74	70	72	74	76	77	78	80	80	80
40	0	74	78	78	80	88	98	00	90	75	79	76	78	82	77	74	70	72	74	76	77	78	80	80	80
45	0	72	79	79	81	89	96	00	89	75	79	77	78	82	77	74	70	73	74	76	77	78	80	80	80
50	0	73	80	78	80	89	96	00	88	73	79	77	79	82	77	74	70	73	76	76	77	78	80	80	80
55	0	73	80	78	80	91	96	00	88	73	79	74	80	82	77	74	70	73	76	76	77	80	80	80	80

HORIZONTAL FORCE.

m.	s.																							
2	0	1010	1007	1025	1025	1009	961	880	832	857	844	863	901	940	975	988	1000	1032	1064	1084	1069	1048	1038	1042	1040
7	0	10	07	25	25	07	952	880	831	856	847	863	907	944	977	990	02	34	65	85	69	48	38	42	40
12	0	10	09	20	25	07	952	880	840	858	850	863	909	947	978	992	05	40	65	85	68	48	40	43	40
17	0	05	11	20	20	998	940	872	850	860	849	863	910	950	978	995	08	42	65	85	66	48	40	43	40
22	0	07	13	20	20	995	930	869	850	856	849	868	914	952	980	999	10	49	66	85	65	48	38	43	42
27	0	11	15	20	21	992	924	862	860	854	848	870	919	955	980	999	12	49	68	85	65	48	42	43	42
32	0	05	15	21	20	989	913	863	860	852	852	875	922	958	982	999	13	49	70	86	60	48	46	40	42
37	0	05	12	22	20	982	905	860	850	850	859	879	927	959	982	998	15	52	71	86	55	44	46	40	44
42	0	02	16	22	21	980	900	852	851	850	862	884	929	962	985	998	19	56	72	83	50	44	43	40	44
47	0	00	20	25	20	972	895	850	852	850	863	888	930	967	985	999	21	59	74	80	50	40	43	40	40
52	0	00	24	25	17	972	890	838	852	846	860	892	935	970	985	999	26	61	76	77	49	40	42	40	40
57	0	02	25	27	14	970	886	837	854	844	861	898	939	972	985	1000	29	62	80	74	48	38	42	40	40
Faht...																									
Attached Thermometer...		85°3	85°3	85°5	85°5	85°1	85°0	85°1	85°2	85°5	85°8	85°8	86°0	86°0	86°0	86°0	85°8	86°1	86°3	86°3	86°3	86°2	86°1	86°0	86°0

VERTICAL FORCE.

m.	s.																							
3	0	scd. 4489	scd. 4475	scd. 4525	scd. 4476	scd. 4481	scd. 4522	scd. 4587	scd. 4654	scd. 4659	scd. 4684	scd. 4719	scd. 4752	scd. 4746	scd. 4652	scd. 4600	scd. 4559	scd. 4543	scd. 4545	scd. 4555	scd. 4529	scd. 4527	scd. 4489	scd. 4513	scd. 4500
8	0	89	75	25	76	81	22	87	54	59	84	19	52	46	52	00	59	43	45	55	29	27	89	13	00
13	0	89	75	25	76	81	23	88	57	59	84	19	52	46	52	00	59	43	45	55	29	27	89	13	00
18	0	72	82	01	4509	89	37	88	57	59	84	19	52	46	52	00	59	43	45	55	29	27	89	13	00
23	0	72	82	01	09	4501	58	4613	69	59	84	43	52	25	52	00	59	43	45	55	29	27	89	13	00
28	0	72	95	01	4485	01	55	13	69	59	84	43	52	25	52	00	59	43	45	55	29	27	89	13	26
33	0	81	95	4492	85	49	55	14	68	59	4724	43	52	25	22	74	59	43	45	55	24	27	89	13	26
38	0	81	95	92	85	49	55	32	68	78	24	43	52	25	22	74	43	43	45	55	24	27	89	13	26
43	0	81	95	92	85	49	70	32	68	78	24	60	52	01	22	74	43	43	45	55	24	27	89	13	26
48	0	99	4510	84	4551	50	70	38	68	78	24	60	52	01	22	74	43	43	45	55	24	00	89	13	26
53	0	99	10	84	51	50	77	43	68	78	24	60	46	01	22	74	43	43	45	55	24	00	89	13	26
58	0	99	10	84	4482	50	77	43	68	78	24	60	46	01	22	74	43	43	45	55	24	00	89	13	26
Faht...																									
Attached Thermometer...		85°0	85°0	85°0	84°9	84°8	85°3	85°5	85°7	86°1	86°5	86°6	86°7	87°0	86°8	86°5	86°1	85°8	85°7	85°6	85°5	85°4	85°5	85°5	85°3

INDUCTION INCLINOMETER.

m.	s.																							
0	20	scd. 1770	scd. 1773	scd. 1771	scd. 1771	scd. 1773	scd. 1783	scd. 1788	scd. 1792	scd. 1777	scd. 1770	scd. 1770	scd. 1769	scd. 1773	scd. 1772	scd. 1770	scd. 1769	scd. 1770	scd. 1773	scd. 1775	scd. 1775	scd. 1678	scd. 1780	scd. 1780
5	20	70	73	71	71	73	83	89	92	73	71	70	69	74	72	70	69	70	73	75	75	75	78	80	80
10	20	70	73	71	71	73	83	89	88	71	72	69	69	74	72	70	69	70	73	75	75	75	79	80	80
15	20	70	73	71	72	73	83	88	88	69	72	69	69	74	72	70	69	70	73	75	75	75	79	80	80
20	20	69	72	72	72	73	85	92	82	69	71	69	68	73	72	70	69	70	73	75	75	75	79	80	80
25	20	69	70	72	72	73	86	92	82	70	70	70	68	72	71	70	69	71	73	75	75	75	80	80	80
30	20	69	70	72	72	79	88	93	82	70	70	70	68	72	71	69	69	71	73	75	75	76	80	80	80
35	20	70	70	72	73	79	87	92	82	70	72	70	69	72	71	69	70	71	73	75	76	76	80	80	80
40	20	70	72	72	73	80	88	92	80	70	72	69	70	72	71	69	70	71	73	75	76	76	80	80	80
45	20	70	72	73	73	82	87	92	78	70	71	70	70	72	71	69	70	72	73	75	76	78	80	80	79
50	20	71	72	72	72	82	87	92	78	69	70	70	70	72	71	69	70	72	74	75	76	78	80	80	79
55	20	72	72	72	72	83	88	92	78	69	70	70	70	72	71	69	70	72	74	75	76	78	80	80	79
Faht...																									
Attached Thermometer...		84°1	84°0	84°0	83°8	83°6	84°1	84°6	85°1	85°3	85°8	85°9	86°0	86°2	85°8	85°5	85°0	85°0	85°1	85°1	84°9	84°8	84°7	84°5	84°5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+..		In. 0·995	In. 0·990	In. 1·002	In. 1·013	In. 1·021	In. 1·040	In. 1·058	In. 1·076	In. 1·062	In. 1·044	In. 1·013	In. 0·991	In. 0·974	In. 0·972	In. 0·976	In. 0·982	In. 1·002	In. 1·028	In. 1·047	In. 1·053	In. 1·044	In. 1·036	In. 1·032	In. 1·008
Attached Thermometer.....		79°5	79°0	79°0	79°0	78°5	79°0	80°5	82°0	83°0	84°0	84°5	85°0	85°0	84°5	84°0	83°0	82°5	82°5	82°0	81°5	81°5	80°5	80°5	80°5
Dry Thermometer (standard).....		78·3	77·8	77·7	77·5	78·3	80·7	83·4	85·5	87·7	88·8	88·8	88·5	87·8	85·7	84·6	83·5	83·0	82·6	82·3	81·9	81·2	80·5	80·5	80·4
Wet Do.		76·0	75·6	75·8	75·5	76·1	77·2	78·8	77·8	78·7	78·8	79·4	78·4	78·8	78·6	78·1	78·0	77·8	78·0	78·3	78·5	78·3	78·3	78·5	78·4
Cloudy sky in 8ths.....		2	1	2	4	6	5	6	6	6	7	7	7	7	7	7	8	4	4	5	6	5	5	7	7
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·03	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		101	101	349	349	11	11	11	45	22	22	101	79	79	79	45	45	45	45	45	34	34	34	337	326
REMARKS ON THE WEATHER		cr, cr-st.....	do.....	cr-hz, cr-st.....	cu-st, cr, cr-hz.....	cr, cu, cr-hz.....	cr-cu, cr-st, hz.....	do.....	cu, cr, d-hz.....	do	cu, cu-st, d-cr-hz.....	do	do.....	do.....	cu, cr-cu, cr-hz.....	do.....	do	cu, cr-hz	cu, d-hz	cu, cr-st, hz.....	cu, cu-st, cr-cu, hz...	cu, cu-st, cr-cu, hz...	cu, cr, cr-hz	ny-cyt.....	ny-cyt, lt.-R, dis-Th.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 25TH NOVEMBER 1853, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Friday, 25th November 1853.														Saturday, 26th November, 1853.									
		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon.	1	2	3	4	5	6	7	8	9
m.	*s.*																								
0	0	scd. 1670	scd. 1670	scd. 1666	scd. 1663	scd. 1654	scd. 1645	scd. 1659	scd. 1670	scd. 1666	scd. 1662	scd. 1670	scd. 1660	scd. 1669	scd. 1669	scd. 1671	scd. 1669	scd. 1669	scd. 1670	scd. 1670	scd. 1670	scd. 1670	scd. 1670	scb. 1670	scd. 1669	scd. 1670
5	0	70	70	67	62	54	45	60	68	64	62	70	60	70	70	71	69	69	70	70	70	70	70	69	70
10	0	69	70	68	61	54	45	61	70	62	63	70	60	70	70	71	68	69	70	70	70	70	70	69	70
15	0	68	70	69	60	52	45	62	69	60	64	68	60	70	70	71	67	70	70	70	70	70	70	69	70
20	0	68	68	65	60	52	47	63	70	60	66	66	60	69	70	70	67	70	70	70	70	70	70	69	70
25	0	68	67	62	60	51	48	64	70	60	68	64	60	67	71	70	67	70	70	70	70	70	70	69	70
30	0	67	66	61	62	50	49	66	70	60	69	61	60	66	71	70	66	70	70	70	70	70	70	69	70
35	0	67	66	61	61	49	51	69	70	60	70	58	60	65	71	70	66	70	70	70	70	70	69	70	70
40	0	69	64	62	60	47	52	69	70	60	70	56	62	65	71	70	67	70	70	70	70	70	69	70	68
45	0	70	63	62	58	46	54	70	70	61	70	54	65	64	71	70	67	70	70	70	70	70	69	70	68
50	0	70	63	62	57	47	56	69	68	62	70	56	66	66	71	70	68	70	70	70	70	70	68	70	68
55	0	70	63	61	56	47	59	69	68	62	70	58	67	67	71	69	68	70	70	70	70	70	68	70	65

HORIZONTAL FORCE.

m.	*s.*																								
2	0	799	810	812	815	794	772	731	700	692	680	724	748	788	810	815	809	819	819	830	829	832	830	825	830
7	0	799	812	812	812	792	772	730	700	686	682	727	749	790	810	814	809	819	819	830	829	833	830	825	830
12	0	800	809	814	812	794	770	729	700	680	685	730	750	792	811	814	810	819	819	830	829	833	828	825	830
17	0	804	809	815	814	790	770	729	705	680	687	730	754	793	811	812	810	820	819	830	829	833	828	825	830
22	0	804	812	816	815	790	770	729	708	682	690	728	757	795	813	812	811	820	819	830	829	833	828	825	830
27	0	808	814	820	915	787	765	729	710	685	695	729	760	797	813	811	811	822	820	830	829	834	826	825	830
32	0	810	810	820	817	786	760	729	706	687	699	730	764	799	813	810	813	822	822	830	829	832	826	825	830
37	0	810	810	822	810	785	752	720	702	687	706	732	769	801	815	810	813	822	822	830	829	830	826	827	830
42	0	809	812	820	805	782	750	716	697	688	709	737	772	803	817	810	815	822	820	830	829	830	826	827	830
47	0	807	822	823	803	779	745	712	697	688	711	740	778	805	818	810	816	822	829	830	829	830	826	828	830
52	0	807	818	819	802	777	742	704	700	687	714	744	782	807	818	809	816	820	829	830	830	830	825	830	830
57	0	809	815	815	800	776	738	702	696	684	718	747	785	808	817	809	817	819	829	830	830	830	825	830	830
Faht...																									
Attached Thermometer...		79·9	80·1	80·1	80·1	79·8	79·8	79·9	80·0	80·3	80·3	80·7	80·8	81·0	81·0	81·0	80·9	81·1	81·2	81·3	81·4	81·3	81·2	81·0	81·0

VERTICAL FORCE.

m.	*s.*																								
3	0	scd. 4559	scd. 4589	scd. 4517	scd. 4538	scd. 4520	scd. 4537	scd. 4580	scd, 4639	scd. 4700	scd. 4718	scd. 4751	scd. 4753	scd. 4704	scd. 4610	scd. 4570	scd. 4591	scd. 4560	scd. 4554	scd. 4561	scd. 4561	scd. 4561	scd. 4536	scd. 4575	scd. 4590
8	0	59	89	17	38	20	37	80	39	00	18	51	53	04	10	70	91	60	54	61	61	61	36	75	90
13	0	59	89	17	38	12	37	80	39	00	18	51	53	04	10	70	91	60	54	61	61	61	36	75	90
18	0	59	89	17	21	12	37	80	39	07	18	51	53	04	10	70	91	60	54	61	61	61	36	75	90
23	0	67	72	02	21	12	37	80	39	07	18	51	53	4690	10	70	91	60	54	61	61	61	36	75	90
28	0	67	72	02	21	12	42	80	39	4697	18	51	53	90	4591	70	91	60	54	61	61	61	36	75	90
33	0	67	72	02	29	12	42	80	57	87	18	51	22	72	91	70	91	60	54	61	61	61	36	75	90
38	0	81	50	02	29	12	49	67	75	87	51	51	22	72	91	70	91	60	54	61	61	61	36	75	90
43	0	81	22	02	29	25	59	67	75	87	51	51	22	72	91	70	80	60	54	61	61	61	36	75	90
48	0	81	22	54	09	25	59	67	75	87	51	51	22	72	91	70	80	60	54	61	61	61	36	75	90
53	0	81	22	54	09	25	64	67	4700	87	51	51	22	50	91	70	80	60	54	61	61	61	36	75	90
58	0	81	22	54	09	25	79	67	00	87	51	51	22	50	91	70	80	60	54	61	61	61	36	75	90
Faht...																									
Attached Thermometer...		79·7	79·7	79·6	79·5	79·3	79·7	80·3	80·8	81·3	81·5	81·5	81·9	82·0	81·9	81·8	81·5	81·2	81·0	80·8	80·7	80·6	80·6	80·5	80·4

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	scd. 1800	scd, 1799	scd. 1795	scd. 1791	scd. 1784	scd. 1776	scd. 1790	scd. 1796	scd. 1796	scd. 1792	scd. 1802	scd. 1789	scd. 1802	scd. 1801	scd. 1802	scd. 1801	scd. 1800	scd. 1801	scd. 1801	scd. 1800	scd. 1800	scd. 1800	scd. 1800	scd. 1800
5	20	00	99	96	91	84	76	91	98	95	93	02	90	02	01	02	01	00	01	01	00	00	00	00	00
10	20	1799	99	98	90	84	76	92	99	94	93	02	90	02	01	02	01	00	01	01	00	00	00	00	00
15	20	97	99	99	90	82	75	92	1800	92	93	00	90	02	01	02	01	00	01	01	00	00	00	00	00
20	20	97	98	96	90	82	76	93	1799	92	96	1797	90	02	01	02	00	00	01	01	00	00	00	00	00
25	20	97	97	92	90	82	76	95	99	92	97	95	90	01	01	02	00	01	01	01	00	00	00	00	00
30	20	97	96	90	92	81	76	97	98	92	98	91	90	00	01	02	00	01	01	01	00	00	00	00	00
35	20	97	93	90	90	80	76	97	98	91	99	88	90	00	01	02	00	01	01	01	00	00	00	00	00
40	20	98	91	90	90	79	78	97	99	90	1800	86	92	00	01	02	00	01	01	01	00	00	00	00	1799
45	20	99	90	91	88	78	79	97	98	90	00	83	94	00	01	02	00	01	01	01	00	00	00	00	98
50	20	99	92	90	87	77	82	98	97	90	00	85	96	00	01	02	00	01	01	01	00	00	00	00	98
55	20	99	92	90	86	77	86	98	97	91	01	88	98	01	02	01	00	01	01	01	00	00	00	00	96
Faht...																									
Attached Thermometer...		78·7	78·6	78·5	78·4	78·1	78·8	79·1	79·6	80·0	80·3	80·7	80·8	81·0	80·9	80·7	80·3	80·2	80·1	80·1	80·1	80·0	79·9	79·8	79·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 +..		In. 0·997	In. 0·996	In. 1·002	In. 1·024	In. 1·039	In. 1·070	In. 1·086	In. 1·096	In. 1·086	In. 1·066	In. 1·038	In. 1·015	In. 1·000	In. 0·996	In. 1·001	In. 1·008	In. 1·031	In. 1·050	In. 1·066	In. 1·077	In. 1·064	In. 1·044	In. 1·032	In. 1·016
Attached Thermometer..		75·5	75·0	74·5	73·5	73·5	74·5	76·5	78·0	79·5	81·0	80·5	80·5	81·0	81·0	80·5	79·5	78·5	78·5	78·5	78·5	78·0	77·0	77·0	75·5
Dry Thermometer (standard).....		73·4	73·0	72·3	72·2	72·5	75·6	78·9	81·1	82·2	83·5	83·2	83·0	83·0	82·4	81·1	79·8	78·7	78·6	78·4	78·1	77·8	77·5	76·2	74·2
Wet Do.		70·8	70·3	69·7	70·0	70·0	71·9	73·0	72·0	72·1	73·0	72·2	73·0	72·7	72·8	72·1	72·4	72·0	71·9	71·8	71·8	71·4	71·2	71·0	70·5
Cloudy sky in 8ths.....		3	1	1	0	0	0	1	3	4	4	4	4	3	2	0	0	0	0	0	0	0	0	0	0
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·02	·08	·05	·18	·10	·27	·18	·15	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		11	11	11	11	11	349	349	45	45	34	22	34	45	45	22	22	22	22	22	22	22	22	22	349
REMARKS ON THE WEATHER		cr-cu, cr, cr-hz.....	cu, cr, fg.....	do	ny-clear	clear	ny-clear	cu, cu-st	do.....	do.....	do	do	do.....	do.....	cu, hz.....	ny-clear	do.....	clear	do.....	ny-clear	do.....	clear.....	do.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21ST DECEMBER 1853. GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Wednesday, 21st December, 1853.															Thursday, 22nd December, 1853.									
Gottingen Mean Time.		p.m. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	s.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.	sed.
0	0	1660	1660	1663	1658	1650	1648	1646	1634	1638	1640	1647	1640	1649	1660	1660	1650	1652	1653	1654	1654	1652	1650	1650	1654
5	0	60	58	62	58	50	48	45	32	36	41	47	40	49	60	60	50	52	53	54	54	52	50	50	55
10	0	60	58	62	59	49	48	42	33	39	42	45	40	50	60	60	50	52	53	54	54	52	50	50	55
15	0	62	58	60	60	47	43	40	33	35	42	44	40	50	60	60	50	52	53	54	54	52	50	49	55
20	0	62	60	60	60	47	47	40	34	34	40	43	40	51	60	60	50	52	53	53	54	52	50	49	56
25	0	62	60	60	60	45	48	40	34	32	41	42	42	52	60	60	50	53	53	53	54	52	50	49	56
30	0	60	60	60	62	39	43	40	38	33	42	42	45	52	60	60	50	53	53	53	54	52	50	49	57
35	0	60	61	60	58	40	43	40	38	33	42	42	45	52	60	58	50	53	53	53	54	51	50	49	57
40	0	60	63	59	56	41	42	40	39	34	42	42	45	55	60	58	50	53	53	53	54	51	50	50	56
45	0	60	63	59	53	42	43	39	40	34	44	42	47	57	60	56	50	53	53	53	54	51	50	50	56
50	0	60	61	59	53	42	48	36	40	36	46	42	48	59	60	53	50	53	53	53	54	50	50	51	55
55	0	60	61	57	51	43	48	33	40	38	47	41	49	59	60	50	50	53	53	53	53	50	50	53	55

HORIZONTAL FORCE.

m.	s.																							
2	0	810	792	812	797	761	731	688	678	670	680	700	723	742	780	830	803	800	818	810	826	807	823	813	810
7	0	810	792	810	795	757	731	690	671	660	680	705	724	748	783	830	807	800	818	810	824	811	821	813	810
12	0	810	790	810	790	756	718	685	670	664	682	709	726	753	788	830	810	797	818	810	821	818	820	813	810
17	0	814	790	810	794	752	718	681	667	665	682	711	729	759	794	826	810	796	815	810	819	820	820	812	811
22	0	814	790	810	790	750	712	681	664	664	683	715	732	756	792	820	803	796	810	810	812	820	817	812	811
27	0	817	800	814	790	752	703	680	662	664	665	718	731	753	790	815	798	799	813	810	809	820	817	811	812
32	0	814	805	817	795	752	692	680	660	666	668	719	730	757	807	815	795	800	814	810	796	821	815	811	812
37	0	810	810	810	790	750	688	687	662	666	674	720	731	760	810	810	795	807	816	814	794	821	815	811	812
42	0	810	812	807	788	751	689	680	667	667	682	720	732	775	815	806	795	809	814	817	793	823	815	810	808
47	0	812	812	802	780	749	690	678	675	669	688	720	736	787	820	800	797	811	810	821	792	825	815	810	805
52	0	810	815	800	780	743	699	675	677	667	692	720	737	782	828	800	798	814	810	828	792	825	813	810	805
57	0	807	815	799	776	743	692	670	674	676	696	721	740	782	830	800	798	818	810	829	801	825	813	810	805
Faht...																									
Attached Thermometer.....		77·7	77·7	77·6	77·3	76·9	76·8	76·8	77·1	77·3	77·6	77·8	78·0	78·0	78·4	78·4	78·2	78·3	78·4	78·4	78·5	78·5	78·5	78·4	78·3

VERTICAL FORCE.

m.	s.																							
3	0	4690	4659	4634	4627	4636	4644	4685	4690	4691	4642	4652	4723	4748	4687	4723	4664	4662	4657	4643	4645	4632	4617	4665	4665
8	0	90	59	34	27	36	46	85	90	91	42	52	23	48	87	23	64	62	57	43	45	32	17	65	65
13	0	90	59	34	27	36	46	85	90	91	42	52	23	48	87	23	64	62	57	43	45	32	17	65	65
18	0	72	59	15	71	59	63	85	91	31	42	52	23	48	87	23	64	62	57	43	45	32	17	65	65
23	0	72	40	15	71	59	64	85	91	31	07	52	23	20	87	23	64	62	57	43	45	32	47	65	65
28	0	72	40	25	71	59	64	85	91	31	07	52	23	20	87	4690	50	62	57	43	45	30	47	65	65
33	0	84	40	25	89	55	65	85	91	31	96	4710	23	20	87	90	50	62	57	43	45	30	47	65	65
38	0	84	40	59	89	56	95	85	4785	21	96	10	23	20	4700	90	50	62	57	43	45	30	47	65	65
43	0	84	32	59	89	55	4705	95	85	21	96	10	23	00	00	78	50	62	57	43	45	17	47	65	65
48	0	84	32	59	24	56	05	95	85	21	96	10	43	00	00	78	50	62	57	43	45	17	47	65	65
53	0	84	32	90	24	56	4689	95	4655	23	96	10	43	00	00	78	50	62	57	43	45	17	47	65	65
58	0	84	32	90	24	56	89	95	52	23	52	10	43	00	00	78	50	62	57	43	45	17	47	65	65
Faht...																									
Attached Thermometer.....		77·5	77·2	77·0	76·6	76·0	76·6	77·5	78·0	78·5	78·7	79·0	79·5	79·5	79·4	79·0	78·6	78·3	78·1	78·0	77·9	77·8	77·8	77·7	77·7

INDUCTION INCLINOMETER.

m.	s.																							
0	20	1798	1794	1792	1787	1780	1778	1778	1772	1779	1782	1788	1782	1790	1800	1800	1790	1792	1792	1793	1792	1790	1789	1789	1791
5	20	98	93	92	87	80	78	77	72	79	82	88	82	90	00	00	90	92	92	93	92	90	89	89	91
10	20	98	93	92	88	80	78	75	73	79	83	85	82	90	00	00	90	92	92	93	92	90	89	90	91
15	20	98	92	91	89	79	78	73	73	78	83	85	82	90	00	00	90	92	92	93	92	90	89	90	91
20	20	98	92	91	88	78	78	75	74	78	84	85	82	91	00	00	90	92	92	93	92	90	89	90	91
25	20	99	92	91	88	77	78	76	75	77	84	85	84	92	00	00	90	93	92	93	92	90	89	90	91
30	20	98	91	91	89	78	78	75	77	78	85	86	88	93	00	00	90	93	92	93	92	90	89	90	92
35	20	98	91	90	86	79	77	75	78	78	85	86	88	93	00	00	90	93	92	93	92	90	89	90	92
40	20	98	92	88	85	78	78	76	79	79	85	86	88	94	00	1798	90	93	92	93	92	90	89	90	92
45	20	98	92	89	83	78	79	75	80	79	86	85	89	95	00	97	90	93	92	93	92	89	89	91	93
50	20	98	92	88	82	78	80	73	80	79	87	85	90	97	00	94	90	93	92	93	91	89	89	91	93
55	20	98	92	87	81	78	80	73	79	80	87	84	90	98	00	92	90	93	92	92	91	89	89	91	93
Faht...																									
Attached Thermometer.....		76·5	75·8	75·2	74·8	74·4	75·0	75·9	76·3	77·0	77·2	77·8	78·0	78·0	78·3	78·0	77·3	77·3	77·3	77·1	77·0	77·0	77·0	76·9	76·8

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) - 29·0+...		In. 1·108	In. 1·164	In. 1·114	In. 1·116	In. 1·133	In. 1·170	In. 1·206	In. 1·206	In. 1·196	In. 1·174	In. 1·140	In. 1·115	In. 1·106	In. 1·090	In. 1·104	In. 1·122	In. 1·138	In. 1·162	In. 1·174	In. 1·183	In. 1·180	In. 1·175	In. 1·167	In. 1·154
Attached Thermometer.		71·5	70·5	69·0	68·0	67·5	70·0	72·5	74·5	75·5	76·0	77·0	78·0	78·0	78·0	77·5	76·5	76·5	76·0	75·5	75·5	75·5	75·5	75·0	75·0
Dry Thermometer (standard)		69·5	67·0	66·6	65·8	65·5	68·6	73·0	76·7	79·3	79·0	80·6	80·9	79·7	79·5	78·3	76·5	75·4	74·6	73·4	72·9	74·9	74·7	74·0	73·3
Wet Do.		63·8	63·6	63·2	63·0	62·6	65·3	68·0	68·3	67·0	67·8	69·0	69·9	69·0	68·3	68·0	67·8	67·5	67·2	67·2	67·3	67·0	66·0	65·4	65·0
Cloudy sky in 8ths.....		0	0	0	0	0	0	0	1	3	2	3	3	3	2	1	0	0	0	1	5	6	2	5	7
Wind { Force lbs		·00	·00	·00	·00	·00	·00	·00	·00	·08	·10	·10	·05	·08	·10	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind { Direction °		11	11	337	337	337	337	337	349	45	34	45	45	34	34	11	11	11	11	11	11	34	22	00	00
REMARKS ON THE WEATHER		clear, D.....	do.....	do.....	fl-cu,D	ny-clear.....	fl-cu.....	do.....	do.....	cu, cu-st.....	fl-cu, cu-st, hz.....	do.....	do.....	do.....	sc-cu.....	do.....	ny-clear.....	do.....	do	cuF.....	fl-cu, nim.....	cu, nim.....	cu-hor.....	cu, cr-hz.....	cu, cr-hz, nim.....

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CALIFORNIA.

MADRAS, 1854.

MAGNETICAL OBSERVATIONS.

$a\left(1+\frac{H}{F}\right)=4''03\times 1{\cdot}000598=4''03241$ $\quad a+7'\,6''0=\rho=0^\circ\,41'\,8''2+7'\,6''0=0^\circ\,48'\,14''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JANUARY 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
				1·6 *		−0·4 *		0·4 *		0·4 *		0·6 *														° ′ ″
December 31	1660	1660	1662	1662	1659	1660	1662	1661	1660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1655	1650	1643	1635	1622	1630	1618	1645	1645	1635	1638	1652	1662	1669	1670	1651	0 58 35
2	664	666	669	666	660	665	670	675	680	675	670	664	657	640	639	624	634	637	630	629	672	690	690	686	661	59 16
3	670	652	660	661	658	656	654	657	660	661	662	660	656	650	640	640	654	652	632	630	642	660	662	663	654	58 47
4	650	640	650	654	655	652	650	650	650	649	648	650	650	642	640	640	650	644	617	628	629	638	657	665	646	58 15
8	650	640	646	648	646	643	640	646	651	649	647	645	642	638	638	652	677	670	660	634	632	660	660	662	649	58 27
6	654	648	650	652	650	649	648	648	647	646	645	644	642	638	642	650	650	622	612	604	610	630	640	648	640	57 51
7	654	650	654	655	653	655	657	654	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	650	650	651	650	651	648	666	688	678	654	640	652	632	648	665	654	58 47
9	675	680	680	681	679	675	672	671	670	669	668	667	664	669	670	697	715	706	686	670	669	670	675	675	677	1 0 20
10	678	670	670	673	672	671	670	668	666	664	662	659	655	653	654	659	683	687	644	615	627	646	650	659	661	0 59 16
11	670	680	680	679	674	672	671	668	665	664	662	658	652	650	648	668	692	701	686	674	660	659	659	673	669	59 48
12	678	670	678	681	680	676	673	673	673	668	662	657	651	645	642	647	657	660	652	641	647	660	665	670	663	59 24
13	672	672	678	677	672	671	670	665	660	660	660	661	660	655	655	656	666	677	672	655	643	660	668	666	665	59 32
14	662	670	673	674	671	673	675	673	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	665	659	657	653	650	645	646	658	670	676	658	658	670	680	680	665	59 32
16	670	660	669	673	673	675	677	673	668	665	662	660	657	660	657	635	657	661	645	637	638	652	660	680	661	59 16
17	680	680	671	674	673	671	670	671	672	670	667	669	669	660	663	654	660	670	660	670	670	678	687	688	671	59 56
18	687	679	679	678	674	672	670	670	670	671	672	672	670	668	664	658	663	664	658	640	648	665	667	673	668	59 44
19	686	680	672	673	670	672	675	674	672	671	670	669	666	660	660	653	660	657	646	650	650	672	691	690	668	59 44
20	675	668	670	677	680	675	670	667	664	662	660	661	660	655	647	653	656	662	670	634	629	652	664	670	662	59 20
21	672	660	661	667	670	665	660	656	652	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	650	648	647	644	642	640	638	649	654	638	636	644	643	640	644	651	58 35
23	658	652	652	653	650	650	650	653	655	658	660	659	657	652	643	641	649	661	650	638	642	642	632	632	650	58 31
24	638	644	650	653	652	651	650	650	650	650	650	655	658	660	640	643	650	660	670	670	662	660	648	644	652	58 39
25	648	642	641	643	642	642	643	644	645	645	644	643	641	634	630	630	640	660	660	636	630	637	643	644	642	57 59
26	645	649	650	652	650	647	645	650	655	648	640	640	638	630	632	638	643	654	660	645	640	640	638	643	645	58 11
27	652	650	648	650	648	645	642	641	640	640	640	640	638	637	630	634	648	657	650	635	635	640	638	635	642	57 59
28	640	640	645	646	643	641	640	635	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	644	658	655	651	650	635	631	625	637	641	640	643	662	670	662	644	58 7
30	665	648	652	654	653	654	655	663	670	664	658	657	654	650	638	624	616	620	622	610	620	642	652	662	646	58 15
31	660	650	659	657	652	652	653	652	650	653	656	654	650	643	650	650	660	672	660	647	637	640	653	657	653	0 58 43
Means.....	1663	1659	1662	1663	1661	1660	1660	1660	1659	1658	1657	1655	1653	1648	1645	1646	1657	1661	1651	1641	1644	1654	1659	1663	1656	
Declination.....	59 24	59 7	59 20	58 24	59 16	59 12	59 12	59 12	59 7	59 3	58 59	58 51	58 43	58 23	58 11	58 16	58 59	59 16	58 35	57 55	58 7	58 47	59 7	59 24	.....	0 58 55
Mean Hourly Variations from Monthly Mean.	29	12	25	29	21	17	17	17	12	8	4	−4	−12	−32	−44	−40	4	21	−20	−60	−48	−8	12	29		

FEBRUARY 1854. Declination Magnetometer.

				−0·2 *		−0·7 *		0·6 *		0·0 *		−0·1 *														° ′ ″
1	1655	1650	1653	1656	1660	1658	1658	1658	1657	1658	1660	1656	1652	1650	1643	1643	1650	1664	1662	1645	1644	1662	1658	1650	1654	0 58 47
2	650	658	665	667	669	666	665	666	666	665	665	662	660	660	658	658	669	685	688	674	668	660	666	673	666	59 36
3	671	670	672	671	670	669	670	671	670	670	670	668	667	660	658	652	660	670	680	671	671	680	682	677	670	59 52
4	682	680	691	685	679	676	675	674	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	669	666	663	660	655	645	645	650	668	670	673	670	672	673	677	670	59 52
6	675	670	672	673	674	672	672	671	668	665	663	661	660	650	648	655	665	676	680	673	667	663	665	664	667	59 40
7	672	675	671	669	667	667	668	672	674	672	670	665	660	655	652	656	665	670	670	667	674	678	676	676	668	59 44
8	671	673	672	671	670	668	668	669	668	669	670	665	660	653	648	650	662	679	686	680	670	668	667	670	668	59 44
9	677	666	668	668	668	668	670	671	670	665	660	658	656	650	640	648	665	670	669	667	650	645	650	660	662	59 20
10	660	657	657	663	669	670	672	681	688	693	698	683	668	670	662	660	668	660	670	653	650	665	680	684	670	59 52
11	687	691	680	687	695	692	690	693	694	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	674	655	652	650	644	646	650	663	678	680	664	650	640	648	658	669	59 48
13	660	662	665	666	667	668	670	675	678	680	682	676	670	667	660	660	665	666	668	659	646	640	637	650	664	59 28
14	657	660	663	671	679	681	685	685	683	683	684	682	680	669	655	670	675	680	680	666	657	648	663	660	672	1 0 0
15	657	658	670	672	675	673	672	672	670	675	680	675	670	670	653	655	662	670	678	673	687	680	677	667	670	0 59 52
16	662	673	667	671	676	672	670	675	678	679	680	675	670	665	650	627	642	665	662	672	668	665	667	683	667	59 40
17	675	677	676	673	670	664	660	666	670	667	665	662	659	650	650	645	650	659	669	663	659	655	642	646	661	59 16
18	651	659	664	662	660	658	658	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	655	650	650	650	650	643	643	650	660	650	644	640	638	637	633	651	58 35
20	630	637	645	645	645	642	640	642	643	643	644	639	635	640	630	632	635	642	640	630	633	629	644	647	639	57 47
21	649	645	645	646	647	647	648	649	648	646	645	642	640	637	639	630	635	640	654	642	635	633	630	629	642	57 59
22	635	640	643	644	645	646	648	650	650	645	640	640	640	638	636	640	650	656	658	650	642	632	641	642	644	58 7
23	650	650	655	654	653	651	650	652	653	651	650	647	645	645	650	658	662	671	670	662	652	661	658	660	655	58 51
24	662	656	652	653	655	657	660	674	686	678	671	666	661	660	660	655	658	664	671	660	655	655	660	677	663	59 24
25	690	680	672	679	686	684	683	679	673	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	671	670	664	659	665	660	661	665	671	680	668	663	672	671	669	672	1 0 0
27	670	666	663	671	679	675	672	677	680	675	671	675	680	670	670	678	695	697	701	684	678	677	670	671	677	0 20
28	667	666	664	648	633	649	667	673	678	677	677	676	675	672	666	670	680	680	680	670	650	657	662	663	667	0 59 40
Means.....	1663	1663	1664	1665	1666	1666	1666	1669	1670	1668	1666	1663	1659	1656	1651	1652	1660	1668	1672	1663	1657	1657	1659	1662	1663	
Declination.....	59 24	59 24	59 28	59 32	59 36	59 36	59 36	59 48	59 52	59 44	59 36	59 24	59 7	58 55	58 35	58 39	59 12	59 44	60 0	59 24	58 59	58 59	59 7	59 20	.....	0 59 24
Mean Hourly Variations from Monthly Mean.	0	0	4	8	12	12	12	24	28	20	12	0	−17	−29	−49	−45	−12	20	36	0	−25	−25	−17	−4		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4''{\cdot}03 \times 1{\cdot}000598 = 4''{\cdot}03241$ $\quad a + 7'\,6''{\cdot}0 = \rho = 0°\,41'\,8''{\cdot}2 + 7'\,6''{\cdot}0 = 0°\,48'\,14''{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MARCH 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
				−1·9 *		−0·4 *		0·1 *		0·6 *		0·0 *														° ′ ″
1	1670	1672	1670	1674	1681	1678	1676	1674	1672	1672	1670	1671	1673	1670	1667	1670	1680	1686	1680	1672	1660	1654	1648	1653	1671	0 59 56
2	657	660	666	665	668	669	670	672	673	673	671	665	660	652	660	660	678	680	682	670	662	661	658	652	666	59 36
3	654	668	669	666	667	669	672	670	668	666	663	657	652	650	652	660	670	672	682	686	668	648	648	648	664	59 28
4	674	672	676	671	670	670	670	669	668	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	671	673	666	660	660	650	659	670	680	680	675	671	672	676	672	670	59 52
6	680	674	680	673	670	671	673	672	670	670	668	667	666	660	657	666	670	680	680	672	670	664	661	676	670	59 52
7	685	670	681	676	675	672	670	670	670	670	668	668	668	670	672	682	688	680	680	662	653	655	661	670	672	1 0 0
8	678	672	669	667	669	669	670	671	672	672	670	667	664	662	668	675	680	680	670	655	655	644	652	660	667	0 59 40
9	667	670	671	670	673	672	672	671	670	671	670	669	668	663	670	680	691	699	699	686	660	653	660	670	673	1 0 4
10	682	680	672	669	670	669	668	669	670	670	668	669	670	668	672	680	685	689	688	665	655	653	660	679	672	0 0
11	673	667	670	668	670	669	669	669	668	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	669	668	665	663	668	670	680	690	702	692	677	662	664	663	665	672	0 0
13	670	670	670	668	669	671	673	675	677	677	676	677	678	680	675	673	680	679	670	658	641	647	655	665	670	0 59 52
14	680	678	677	677	680	680	680	681	682	681	679	676	673	673	680	680	690	698	691	672	657	658	667	675	678	1 0 24
15	680	677	672	669	670	672	674	681	687	691	693	699	705	709	697	696	700	692	680	670	662	660	678	680	683	0 44
16	683	678	696	686	680	681	683	687	690	696	700	695	690	691	689	678	682	690	680	655	658	667	680	680	683	0 44
17	676	678	673	671	673	674	676	677	678	675	670	671	672	670	676	670	671	670	670	666	660	669	680	682	673	0 4
18	682	675	669	669	672	671	670	671	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	673	673	671	670	670	667	663	668	670	662	660	658	655	653	652	667	0 59 40
20	657	659	659	660	665	666	668	669	670	670	668	666	664	670	670	675	689	688	687	682	672	665	662	662	669	59 48
21	663	665	669	669	673	673	673	675	676	678	679	678	678	672	679	687	698	704	700	683	680	683	694	692	680	1 0 32
22	689	677	675	672	672	676	680	682	683	683	681	679	678	680	698	692	686	679	679	672	671	680	680	683	680	0 32
23	681	682	675	676	680	678	676	678	679	680	680	679	679	680	690	690	690	684	678	670	668	669	674	678	679	0 28
24	679	675	670	672	677	675	674	679	683	682	679	679	680	680	685	693	690	688	674	665	660	655	667	680	677	0 20
25	682	678	680	679	682	682	682	685	687	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	689	690	689	688	690	696	700	693	680	664	653	650	656	665	680	680	0 32
27	680	678	673	675	681	680	680	684	688	686	683	689	695	700	716	710	711	680	675	660	670	672	671	700	685	0 52
28	687	688	688	701	717	713	710	711	712	702	690	684	678	680	680	688	682	680	670	652	650	660	670	678	686	0 56
29	680	680	680	687	698	698	698	698	697	696	694	688	682	680	690	700	701	700	697	670	652	667	673	680	687	1 0
30	682	680	681	680	682	683	685	686	687	689	689	685	682	674	680	677	671	670	665	649	643	662	669	670	676	0 16
31	692	684	681	680	682	682	683	685	687	686	683	682	682	680	683	690	692	690	688	670	660	668	671	680	682	1 0 40
Means.....	1676	1674	1675	1674	1677	1676	1677	1678	1679	1679	1678	1676	1675	1674	1677	1681	1685	1685	1680	1668	1660	1662	1667	1673	1675	
Declination.....	60 16	60 8	60 12	60 8	60 20	60 16	60 20	60 24	60 28	60 28	60 24	60 16	60 12	60 8	60 20	60 36	60 62	60 52	60 32	59 44	59 12	59 20	59 40	60 4	.....	1 0 12
Mean Hourly Variations from Monthly Mean.	4	−4	0	−4	8	4	8	12	16	16	12	4	0	−4	8	24	40	40	20	−28	−60	−52	−32	−8		

APRIL 1854. Declination Magnetometer.

				−1·1 *		−0·7 *		−0·6 *		1·1 *		−0·1 *														
1	1680	1678	1680	1679	1680	1680	1682	1681	1682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		° ′ ″
2	—	—	—	—	—	—	—	—	—	1684	1683	1683	1684	1686	1691	1700	1705	1709	1700	1690	1678	1688	1685	1685	1686	1 0 56
3	680	675	675	677	682	682	683	683	684	685	683	681	680	679	686	690	685	682	673	658	651	663	672	683	678	0 24
4	690	681	678	676	677	677	678	679	682	684	684	682	680	682	697	700	692	689	670	642	638	652	670	688	678	0 24
5	692	687	687	683	682	681	681	683	686	686	684	683	682	687	700	700	692	680	665	650	638	645	668	682	679	0 28
6	692	690	688	683	680	680	682	682	683	686	686	685	684	687	698	694	684	677	660	644	640	649	660	672	678	0 24
7	680	680	682	680	680	680	682	683	685	687	686	685	684	680	700	710	712	707	684	650	650	659	677	690	683	0 44
8	688	691	681	679	680	680	681	682	684	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	686	686	686	687	687	699	702	702	700	690	672	665	670	668	677	684	0 48
10	681	678	678	678	680	681	684	686	690	689	685	683	681	688	691	708	709	704	680	683	660	700	665	718	687	1 0
11	744	684	677	681	688	688	689	694	700	701	700	695	690	688	688	692	709	699	694	682	666	662	670	686	690	1 13
12	686	690	686	684	685	686	688	688	690	690	688	684	680	680	693	710	718	710	693	672	656	660	672	680	686	0 56
13	690	689	682	680	680	682	685	687	690	690	688	685	682	678	698	702	708	700	690	661	636	638	647	662	680	0 32
14	683	690	680	676	675	683	692	695	700	705	708	699	690	698	718	718	708	692	678	660	644	640	640	648	684	0 48
15	670	680	686	687	691	690	691	691	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	691	688	685	682	680	700	708	713	710	690	672	662	650	665	673	685	0 52
17	678	687	682	679	678	679	681	682	685	687	687	686	686	683	695	710	710	706	695	688	680	680	682	680	687	1 0
18	679	680	676	675	677	677	678	678	680	681	680	678	676	684	700	710	710	685	676	660	655	652	650	670	678	0 24
19	680	680	671	672	675	681	689	693	698	698	695	692	690	700	711	715	700	686	673	653	642	655	667	674	683	0 44
20	675	680	684	683	684	685	687	685	685	691	695	694	693	704	705	710	706	682	662	643	648	630	640	655	679	0 28
21	669	675	675	674	675	677	680	683	688	690	690	690	690	697	716	729	710	692	673	652	638	642	635	640	678	0 24
22	656	670	677	674	674	676	679	680	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	690	695	691	688	697	710	710	712	690	675	650	642	648	652	662	678	0 24
24	675	670	656	656	658	668	680	684	690	690	687	686	685	676	692	690	678	660	638	631	625	642	642	660	667	0 59 40
25	658	663	652	653	657	658	661	665	670	669	665	664	664	668	680	691	690	675	650	620	614	630	640	638	658	59 3
26	662	670	664	663	664	658	653	661	670	675	678	676	675	680	690	690	687	667	648	640	645	658	668	670	667	59 40
27	680	679	660	669	680	676	674	677	682	681	678	688	698	703	732	745	726	697	695	693	688	689	690	700	691	1 1 17
28	719	722	720	719	720	718	718	713	710	714	716	723	730	735	749	745	730	710	670	669	675	692	705	702	714	2 49
29	725	745	750	747	746	747	750	748	747	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	746	742	744	747	752	760	754	734	712	700	700	662	666	675	686	729	1 3 50
Means.....	1684	1685	1681	1680	1682	1683	1685	1687	1689	1691	1690	1689	1688	1691	1704	1709	1705	1693	1677	1661	1652	1658	1664	1675	1683	
Declination.....	60 48	60 52	60 36	60 32	60 40	60 44	60 52	61 0	61 8	61 17	61 13	61 8	61 4	61 17	62 9	62 29	62 13	61 25	60 20	59 16	58 39	59 3	59 28	60 12	.....	1 0 44
Mean Hourly Variations from Monthly Mean.	4	8	−8	−12	−4	0	8	16	24	33	29	24	20	33	85	105	89	41	−24	−88	−125	−101	−76	−32		

The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$\alpha\left(1+\frac{H}{F}\right) = 4'03 \times 1{\cdot}000598 = 4'03241$ $\quad a + 7'\,6{\cdot}0'' = \rho = 0°\,41'\,8{\cdot}2'' + 7'\,6{\cdot}0'' = 0°\,48'\,14{\cdot}2''$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MAY 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
				−1·6 *		0·6 *		−0·4 *		0·4 *		−0·4 *														° ′ ″
1	1696	1709	1740	1736	1736	1742	1747	1742	1738	1739	1740	1740	1740	1755	1745	1750	1745	1722	1690	1668	1662	1666	1672	1701	1722	1 3 22
2	716	724	722	724	730	731	730	730	731	736	740	740	740	744	762	760	740	710	694	687	659	690	689	700	722	3 22
3	720	717	696	697	702	706	709	709	710	713	715	714	713	708	720	718	710	696	680	671	657	662	691	690	701	1 57
4	691	689	691	689	691	694	695	701	708	709	710	711	712	730	736	740	730	700	680	678	674	687	693	709	702	2 1
5	713	722	733	729	728	726	722	722	722	721	720	719	718	735	758	760	748	720	690	683	684	700	716	722	721	3 18
6	733	729	726	721	720	726	730	730	730	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	—	—	739	748	750	752	757	760	762	750	730	700	680	686	695	717	737	730	3 54
8	739	736	732	728	728	735	740	745	750	755	760	761	762	760	772	768	750	728	699	690	680	705	700	718	735	4 14
9	730	733	732	730	732	732	730	748	767	767	766	760	755	770	787	779	753	720	712	700	702	716	727	732	741	4 38
10	740	742	742	735	732	742	750	751	752	755	758	754	750	762	770	758	730	710	690	675	684	700	717	731	735	4 14
11	733	730	727	721	719	721	722	726	730	734	738	744	750	760	768	770	752	720	700	688	680	692	724	725	728	3 46
12	730	730	722	719	719	725	730	735	740	736	732	736	740	752	760	753	740	712	690	675	678	683	702	717	723	3 26
13	727	728	728	724	724	725	725	722	720	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	723	725	736	748	740	745	743	728	702	680	668	675	687	702	710	718	3 5
15	713	705	715	717	722	728	732	734	737	740	742	750	758	767	770	760	742	710	683	674	683	685	690	695	723	3 26
16	710	723	709	713	720	726	730	737	744	746	748	742	737	746	772	770	738	718	705	680	685	688	697	705	725	3 34
17	713	717	710	709	712	715	717	723	730	730	730	728	727	742	755	756	738	710	708	702	697	700	710	713	721	3 18
18	722	720	717	716	719	722	723	726	730	729	728	729	730	740	740	738	730	711	690	694	675	688	686	692	716	2 57
19	700	708	709	707	709	716	721	724	728	729	730	731	733	735	748	760	745	710	692	671	668	660	675	687	712	2 41
20	698	710	709	712	719	720	720	721	722	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	—	—	—	719	715	713	712	730	733	735	728	703	680	675	670	680	682	687	708	2 25
22	690	698	697	695	697	701	703	705	708	709	710	710	710	714	723	725	718	702	688	653	665	680	676	682	698	1 45
23	691	700	700	696	695	694	692	697	702	706	710	711	712	720	730	740	728	700	680	658	647	658	678	690	697	1 41
24	689	695	692	692	695	696	696	698	700	701	702	701	700	705	720	725	720	710	683	670	663	669	654	652	693	1 25
25	678	690	687	680	677	684	690	695	700	699	698	700	702	722	731	726	718	692	682	675	657	645	663	677	690	1 13
26	692	704	700	698	700	699	697	698	699	700	700	701	702	710	721	720	710	698	670	650	640	643	654	666	691	1 17
27	670	678	685	674	667	671	673	680	688	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	685	682	681	680	679	686	692	690	680	660	652	645	649	651	650	673	0 4
29	666	672	676	676	680	689	697	688	680	680	680	680	680	682	698	700	684	665	645	632	625	630	640	643	670	0 59 52
30	663	670	670	669	672	677	681	680	680	680	680	681	682	685	700	708	699	690	660	649	638	648	670	678	675	1 0 12
31	680	685	679	675	674	680	685	683	681	682	683	684	685	682	694	695	681	668	652	640	630	632	641	666	672	1 0 0
Means.....	1705	1710	1709	1707	1708	1712	1714	1717	1720	1721	1722	1722	1723	1731	1741	1741	1728	1705	1685	1672	1667	1675	1686	1695	1709	
Declination.....	62 13	62 33	62 29	62 21	62 25	62 41	62 49	63 1	63 13	63 18	63 22	63 22	63 26	63 68	64 38	64 38	63 46	62 13	60 52	60 0	59 40	60 12	60 56	61 33	.....	1 2 29
Mean Hourly Variations from Monthly Mean.	−16	4	0	−8	−4	12	20	32	44	49	53	53	57	89	129	129	77	−16	−97	−149	−169	−137	−93	−56		

JUNE 1854. Declination Magnetometer.

				−2·4 *		0·1 *		0·2 *		0·4 *		−0·99 *														° ′ ″
1	1675	1677	1672	1670	1672	1675	1678	1678	1678	1678	1678	1678	1680	1690	1700	1715	1708	1690	1663	1651	1646	1643	1643	1650	1675	1 0 12
2	663	674	680	675	674	677	679	680	680	679	678	676	675	686	693	700	700	682	660	645	636	649	650	652	673	0 4
3	661	665	665	662	663	667	670	672	674	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	676	678	676	675	680	692	700	688	672	660	650	651	657	653	656	669	0 59 48
5	663	666	660	660	664	667	670	675	680	680	679	679	680	685	692	693	685	660	645	632	630	631	636	640	665	59 32
6	653	661	660	659	662	665	667	669	670	672	673	672	672	672	685	690	683	674	665	643	633	637	642	653	664	59 28
7	654	660	658	657	660	665	670	671	672	674	675	672	670	684	698	698	690	678	662	660	649	654	655	660	669	59 48
8	672	680	674	680	690	692	693	691	688	684	680	682	686	692	702	708	700	689	668	662	659	663	677	682	683	1 0 44
9	680	675	671	669	672	671	670	686	702	705	708	708	710	710	718	730	730	710	706	682	679	677	684	687	693	1 25
10	692	703	688	687	690	692	693	692	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	695	700	700	702	710	728	718	710	693	677	660	650	657	651	660	689	1 8
12	671	677	687	686	690	698	705	713	720	721	721	731	742	718	730	730	720	704	685	663	658	653	650	662	697	1 41
13	670	683	677	677	682	685	687	691	694	722	750	729	710	716	720	719	710	698	683	672	659	659	664	668	693	1 25
14	683	700	706	704	707	714	720	711	702	701	700	700	702	707	720	720	708	698	682	660	650	645	644	660	694	1 29
15	670	680	692	690	693	698	702	705	708	708	707	703	700	700	722	730	720	709	692	660	650	647	637	650	691	1 17
16	654	670	672	670	673	680	687	694	700	704	708	707	707	710	708	710	700	688	680	676	670	663	670	688	687	1 0
17	683	694	730	717	708	710	711	713	715	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	718	720	719	720	720	740	740	728	720	702	686	682	680	693	700	710	2 33
19	712	719	721	723	729	732	734	733	732	730	728	723	720	729	740	745	742	722	704	700	696	694	694	714	722	3 22
20	715	715	712	720	732	733	733	732	730	733	735	731	728	729	736	734	730	722	710	695	690	683	685	690	719	3 9
21	710	712	718	716	719	725	730	731	732	734	735	731	728	735	750	747	734	720	706	700	690	685	692	695	720	3 13
22	700	705	698	696	699	701	702	705	708	709	710	709	710	710	720	712	699	682	671	660	660	672	680	695	696	1 37
23	700	690	671	679	692	696	700	702	704	702	700	699	700	702	715	712	703	693	680	660	650	663	670	680	690	1 13
24	692	694	689	684	684	691	698	699	700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	700	700	700	702	712	720	728	726	708	690	680	690	700	703	708	700	1 53
26	720	726	718	713	712	717	722	720	717	714	710	710	712	720	728	733	732	720	698	688	675	675	690	712	712	2 41
27	715	712	712	706	705	706	707	710	712	716	720	720	722	731	738	742	732	702	678	665	670	679	670	693	707	2 21
28	706	725	720	714	712	711	710	709	708	709	710	713	718	722	740	750	750	740	710	692	670	680	679	689	712	2 41
29	707	712	700	703	710	715	719	719	718	717	716	717	720	720	729	745	750	742	752	735	729	727	726	730	723	3 26
30	740	734	731	730	734	737	740	738	735	733	730	729	730	738	750	752	750	738	720	710	704	709	708	712	731	1 3 58
Means.....	1687	1693	1692	1690	1693	1697	1700	1702	1703	1704	1706	1704	1705	1709	1720	1723	1716	1702	1687	1673	1666	1669	1671	1680	1696	
Declination.....	61 0	61 25	61 21	61 13	61 25	61 41	61 63	62 1	63 5	62 9	62 17	62 9	62 13	62 29	63 13	63 26	62 57	62 1	61 0	60 4	59 36	59 48	59 56	60 32	.....	1 1 37
Mean Hourly Variations from Monthly Mean.	−37	−12	−16	−24	−12	4	16	24	28	32	40	32	36	52	96	109	80	24	−37	−93	−121	−109	−101	−65		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right)=4''.03\times 1.000598=4''.03241$ $\quad a+7'\,6''.0=\rho=0^\circ\,41'\,8''.2+7'\,6''.0=0^\circ\,48'\,14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JULY 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
				−1·4 *		0·0 *		−0·2 *		0·9 *		−0·6 *														° ′ ″
1	1717	1721	1722	1725	1730	1728	1726	1728	1730	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	—	—	—	—	—	—	—	—	—	1736	1740	1740	1742	1742	1750	1756	1757	1750	1740	1726	1705	1695	1702	1714	1730	1 3 54
3	710	710	711	711	713	726	740	740	740	741	740	739	740	757	755	760	754	740	717	693	680	690	698	700	725	3 34
4	707	717	718	718	721	738	755	749	743	742	740	743	747	748	760	769	770	760	740	734	731	723	728	730	739	4 30
5	722	723	722	725	731	731	732	731	730	732	732	733	735	735	745	746	740	728	716	708	697	700	704	706	725	3 34
6	710	714	712	713	716	717	718	728	738	735	730	725	722	730	740	740	730	720	700	692	684	689	700	703	717	3 1
7	700	697	709	712	718	719	720	725	730	734	736	735	735	742	760	769	757	740	720	703	692	690	703	720	724	3 30
8	725	729	728	727	729	739	750	747	745	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	748	750	744	740	743	777	770	760	752	736	721	706	701	713	728	738	4 26
10	736	744	740	745	753	751	750	748	746	754	760	754	750	740	768	760	759	752	742	720	710	720	727	740	745	4 54
11	732	737	740	737	736	742	748	749	760	747	742	743	745	754	770	775	765	750	728	707	695	696	692	700	737	4 22
12	714	718	724	721	720	723	726	730	735	735	733	735	738	744	763	766	750	740	710	686	688	690	695	707	725	3 34
13	712	715	712	711	713	715	718	722	727	729	730	730	732	740	748	740	725	715	705	694	690	685	698	707	717	3 1
14	710	712	705	706	709	714	720	721	722	727	730	725	722	725	735	744	738	730	720	717	714	710	710	706	720	3 13
15	710	709	712	710	710	714	718	720	723	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	728	732	730	730	730	737	742	738	730	714	700	693	690	690	694	717	3 1
17	702	718	720	719	720	721	722	721	720	722	722	721	722	728	734	740	732	730	715	702	695	690	697	700	717	3 1
18	705	710	707	702	700	696	692	706	720	721	720	720	722	728	740	750	742	729	718	703	701	698	702	699	714	2 49
19	702	710	700	699	700	705	710	712	715	716	715	717	720	720	728	720	707	700	695	696	702	698	692	702	708	2 25
20	698	699	697	696	697	699	702	706	710	711	711	711	712	713	727	723	713	702	690	686	687	684	687	693	702	2 1
21	691	695	692	691	692	698	705	702	700	702	702	703	706	710	728	729	719	701	689	673	672	680	694	702	699	1 49
22	698	690	688	687	689	684	680	680	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	696	710	708	708	712	720	726	720	712	700	690	694	692	699	713	699	1 49
24	718	717	715	709	706	710	715	717	720	721	720	714	710	720	730	730	715	700	690	692	697	712	704	699	712	2 41
25	705	702	691	689	690	693	696	698	700	701	701	704	708	709	714	712	708	695	692	682	679	677	683	690	697	1 41
26	695	693	692	687	685	687	690	690	690	691	690	691	693	700	706	700	698	689	674	670	670	674	668	667	687	1 0
27	675	684	701	696	693	691	689	689	690	695	698	696	695	700	712	718	705	682	673	666	660	661	667	672	688	1 4
28	682	680	681	678	678	683	688	692	697	700	702	700	700	700	710	712	703	690	682	673	667	671	673	675	688	1 4
29	678	680	680	682	687	688	690	691	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	697	700	699	700	710	730	730	710	680	670	661	660	667	673	682	689	1 8
31	684	680	688	687	689	689	690	695	700	702	702	704	708	700	712	716	710	692	685	671	672	680	676	673	692	1 1 21
Means.....	1705	1708	1708	1707	1709	1712	1715	1717	1719	1722	1723	1722	1722	1726	1738	1740	1732	1720	1706	1695	1690	1691	1695	1701	1713	
Declination.....	62° 13′	62° 25′	62° 25′	62° 21′	62° 29′	62° 41′	62° 53′	63° 1′	63° 9′	63° 22′	63° 26′	63° 22′	63° 22′	63° 38′	64° 26′	64° 34′	64° 2′	63° 13′	62° 17′	61° 33′	61° 13′	61° 17′	61° 33′	61° 57′	.....	1 2 45
Mean Hourly Variations from Monthly Mean.	−32″	−20″	−20″	−24″	−16″	−4″	8″	16″	24″	37″	41″	37″	37″	53″	101″	109″	77″	28″	−28″	−72″	−92″	−88″	−72″	−48″		

AUGUST 1854. Declination Magnetometer.

				−1·1 *		−1·0 *		−0·6 *		0·2 *		−0·2 *														° ′ ″
1	1679	1678	1683	1685	1690	1689	1690	1692	1695	1693	1690	1695	1700	1708	1715	1718	1710	1690	1684	1680	1678	1681	1685	1686	1691	1 1 17
2	688	682	680	680	682	681	682	680	680	685	690	691	692	697	706	700	689	680	680	677	674	678	679	675	685	0 52
3	676	669	665	669	675	688	702	700	700	708	715	716	718	720	730	722	710	688	682	675	671	671	674	673	692	1 21
4	687	697	689	690	694	699	706	702	700	708	715	714	713	720	732	730	722	705	686	682	689	692	682	687	702	2 1
5	698	702	694	699	707	708	710	704	700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	710	720	721	722	720	738	730	720	700	680	682	670	677	680	697	704	2 9
7	710	710	709	707	707	713	721	721	722	722	722	721	720	730	748	754	743	735	710	695	694	679	685	692	715	2 53
8	712	718	708	708	710	712	715	722	730	730	730	734	738	736	742	742	730	710	685	668	682	688	693	702	714	2 49
9	704	706	702	706	712	710	710	713	718	723	727	728	730	740	748	761	752	732	710	685	682	688	700	719	717	3 1
10	728	730	732	721	712	719	727	725	725	723	720	723	726	738	753	762	760	742	728	707	700	702	710	712	726	3 38
11	725	737	731	730	732	729	728	733	740	738	736	738	740	745	766	778	775	760	738	717	709	704	707	711	735	4 14
12	720	730	733	730	730	729	730	731	733	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	733	732	734	737	740	758	763	760	748	722	709	710	713	718	724	732	4 2
14	733	731	727	724	724	727	731	730	730	731	732	736	740	750	762	759	743	724	710	700	692	697	700	725	727	3 42
15	735	733	729	727	728	730	733	733	735	734	732	736	740	745	762	765	760	744	730	710	705	708	707	720	733	4 6
16	725	722	726	724	725	727	731	735	740	740	740	741	742	743	753	755	741	722	714	706	695	708	710	720	729	3 50
17	727	726	727	725	726	728	731	731	732	734	735	736	737	740	755	760	750	734	720	708	691	693	701	717	728	3 46
18	726	730	724	724	727	728	731	730	730	730	730	734	738	740	760	758	740	730	720	711	716	721	727	730	731	3 58
19	733	725	714	715	719	720	722	720	720	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	734	747	745	743	747	765	760	744	732	730	721	727	731	730	733	732	4 2
21	735	730	738	737	739	739	740	741	743	744	745	747	750	755	770	766	756	750	730	720	710	718	728	730	740	4 34
22	740	741	732	731	732	735	739	739	740	740	740	741	743	750	762	761	758	740	732	717	710	720	685	694	734	4 10
23	700	688	680	679	680	681	684	682	682	681	680	684	688	700	718	720	711	690	673	655	647	662	678	687	685	0 52
24	690	690	679	678	679	679	680	683	688	686	683	684	685	690	700	716	710	695	683	665	651	663	670	685	684	0 48
25	705	690	683	684	688	684	682	680	680	681	682	681	680	685	712	716	698	677	663	655	645	657	667	677	681	0 36
26	688	683	676	675	676	678	681	685	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	690	690	691	692	700	728	739	725	710	678	660	654	658	669	683	687	1 0
28	692	687	684	681	680	680	682	684	688	689	690	691	692	698	720	732	713	686	669	653	650	662	670	673	685	0 52
29	682	685	681	679	680	679	680	682	685	688	690	690	690	700	718	722	714	694	662	668	670	672	674	670	686	0 56
30	680	677	677	677	680	681	684	686	690	693	695	696	698	703	723	728	707	682	660	650	640	662	668	677	684	0 48
31	685	684	674	675	679	684	690	689	690	690	690	688	687	693	720	727	716	700	692	684	672	668	678	686	689	1 1 8
Means.....	1708	1707	1703	1702	1704	1706	1709	1709	1711	1713	1715	1716	1718	1723	1739	1742	1732	1715	1699	1687	1683	1688	1692	1699	1709	
Declination.....	62° 25′	62° 21′	62° 6′	62° 1′	62° 9′	62° 17′	62° 29′	62° 29′	62° 37′	62° 45′	62° 53′	62° 57′	63° 5′	63° 26′	64° 30′	64° 42′	64° 2′	62° 53′	61° 49′	61° 0′	60° 44′	61° 4′	61° 21′	61° 49′	.....	1 2 29
Mean Hourly Variations from Monthly Mean	−4″	−8″	−24″	−28″	−20″	−12″	0″	0″	8″	16″	24″	28″	36″	57″	121″	133″	93″	24″	−40″	−89″	−105″	−85″	−68″	−40″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4''03 \times 1{\cdot}000598 = 4''03241$ $\quad a + 7'\ 6''0 = \rho = 0^\circ\ 41'\ 8''2 + 7'\ 6''0 = 0^\circ\ 48'\ 14''2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

SEPTEMBER 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
				0·1 *		−0·7 *		−0·2 *		0·4 *		0·0 *														° ′ ″
1	1690	1685	1681	1684	1686	1686	1688	1688	1688	1688	1687	1687	1687	1695	1710	1709	1697	1679	1665	1655	1650	1658	1657	1663	1682	1 0 40
2	679	686	683	682	681	684	688	689	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
3	—	—	—	—	—	—	—	—	—	690	690	689	689	692	707	704	682	667	658	650	650	654	666	680	680	0 32
4	692	688	680	680	680	683	688	689	690	689	688	689	690	700	718	717	695	674	660	650	652	666	680	690	685	0 52
5	691	686	686	684	682	681	682	685	689	690	690	690	690	698	711	710	699	670	640	630	632	648	670	690	680	0 32
6	698	692	684	683	682	680	680	682	685	687	689	693	698	708	725	720	699	670	646	635	638	650	670	690	683	0 44
7	698	690	685	683	680	681	683	685	688	689	690	691	692	700	720	726	708	682	660	640	639	645	660	688	683	0 44
8	693	683	683	682	680	679	680	683	687	691	695	695	695	710	722	738	710	681	658	640	638	660	673	690	685	0 52
9	698	690	681	681	680	680	681	682	684	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
10	—	—	—	—	—	—	—	—	—	687	690	694	698	702	708	710	695	682	658	637	640	659	670	688	682	0 40
11	694	688	704	702	700	704	710	707	704	702	700	700	700	704	720	715	695	685	672	654	650	660	680	692	693	1 25
12	692	689	690	686	681	682	685	687	690	695	700	700	700	702	730	740	722	702	675	660	660	665	685	692	692	1 21
13	700	696	688	686	683	685	688	689	690	691	692	692	692	698	712	706	704	680	665	646	645	650	670	685	685	0 52
14	688	689	685	686	686	685	685	687	690	689	688	685	682	689	702	715	717	710	692	664	661	670	680	708	689	1 8
15	710	692	688	684	680	681	683	685	687	688	688	687	686	690	710	720	695	680	662	643	658	670	680	685	685	0 52
16	690	682	688	688	688	687	687	688	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
17	—	—	—	—	—	—	—	—	—	689	688	689	690	697	710	712	700	673	672	670	669	670	685	698	688	1 4
18	700	694	688	688	687	687	689	690	692	694	695	691	688	692	712	722	702	684	672	664	655	670	688	688	689	1 8
19	686	680	680	680	680	681	683	685	687	688	688	686	685	690	710	707	690	674	665	654	660	670	690	705	684	0 48
20	700	690	686	685	684	682	682	685	688	687	685	682	680	681	703	702	692	676	652	641	640	650	676	678	679	0 28
21	680	674	670	675	679	681	685	687	690	690	690	690	690	694	720	722	702	680	660	640	641	650	661	677	680	0 32
22	682	680	679	680	680	682	685	687	690	690	690	688	687	690	710	709	690	680	672	658	650	649	668	680	682	0 40
23	688	680	673	673	672	674	678	678	679	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
24	—	—	—	—	—	—	—	—	—	677	675	675	675	680	700	695	673	658	635	624	626	639	662	678	669	0 59 48
25	680	672	675	673	670	671	673	675	678	674	670	672	675	683	700	695	682	668	658	638	629	638	660	676	670	59 52
26	680	670	667	667	666	667	670	671	672	671	670	671	672	682	698	705	697	672	645	620	620	635	663	680	668	59 44
27	688	680	675	676	677	676	677	677	678	679	680	685	690	690	707	710	700	682	660	640	622	645	668	684	677	1 0 20
28	693	688	685	683	680	679	680	681	682	686	690	691	692	695	710	708	695	675	650	640	632	650	675	690	680	0 32
29	690	680	679	680	680	679	679	683	688	689	690	689	688	695	722	713	697	672	659	643	642	657	675	690	682	1 0 40
Means.....	1691	1685	1683	1682	1681	1681	1684	1685	1687	1688	1688	1688	1688	1694	1712	1713	1698	1678	1660	1645	1644	1655	1672	1687	1682	
Declination.....	61 17	60 52	60 44	60 40	60 36	60 36	60 46	60 52	61 0	61 4	61 4	61 4	61 4	61 29	62 41	62 45	61 45	60 24	59 12	58 11	58 7	58 51	60 0	61 0	.....	1 0 40
Mean Hourly Variations from Monthly Mean.	37	12	4	0	−4	−4	8	12	20	24	24	24	24	49	121	125	65	−16	−88	−149	−153	−109	−40	20		

OCTOBER 1854. Declination Magnetometer.

				1·3 *		−0·4 *		1·0 *		0·1 *		−0·2 *														° ′ ″
September 30	1692	1682	1683	1683	1681	1684	1688	1690	1690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1688	1685	1686	1688	1690	1710	1708	1698	1682	1670	1669	1659	1670	1687	1693	1686	1 0 56
2	694	685	687	689	688	689	690	691	690	689	688	689	690	690	707	711	711	690	662	631	630	650	679	690	684	0 48
3	690	686	690	691	689	688	688	690	690	690	689	688	687	682	709	710	700	685	663	659	663	678	697	703	688	1 4
4	698	690	691	691	689	689	689	690	690	689	687	683	680	685	689	694	690	671	652	640	632	643	660	673	679	0 28
5	675	669	670	672	672	672	672	674	675	675	675	672	670	670	688	690	690	689	683	670	660	668	683	687	676	0 16
6	680	668	669	672	672	672	672	677	680	679	677	676	675	672	684	683	678	664	658	642	650	640	662	679	670	0 59 52
7	684	678	672	672	669	669	670	673	674	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—		—	—	—	—	681	687	688	690	700	702	695	682	672	670	659	660	668	680	693	679	1 0 28
9	694	680	680	681	680	681	682	682	680	680	680	679	678	676	698	700	692	680	670	660	662	678	686	690	681	0 36
10	690	677	677	679	679	679	680	683	684	682	680	678	677	678	687	697	706	697	677	670	673	680	682	687	682	0 40
11	682	672	670	673	673	675	678	680	680	677	674	674	675	674	680	689	690	675	660	652	658	672	680	684	675	0 12
12	684	674	672	674	674	682	690	690	689	680	671	670	669	682	678	677	670	660	650	658	660	669	680	683	674	0 8
13	680	675	672	677	679	679	680	682	683	682	680	680	680	683	697	702	700	688	670	652	658	661	670	680	679	0 28
14	683	677	689	688	684	685	687	687	685	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	679	673	672	672	672	690	690	688	674	664	652	659	665	670	683	678	0 24
16	688	682	680	681	679	677	676	678	678	678	677	676	675	673	682	694	691	680	655	650	660	672	681	687	677	0 20
17	683	675	675	675	672	669	667	672	675	674	672	668	665	662	670	665	660	653	641	646	660	671	677	679	668	0 59 44
18	676	670	674	678	680	680	681	682	681	681	680	677	674	680	681	680	675	668	650	647	651	660	680	682	674	1 0 8
19	680	679	673	675	675	676	677	681	683	683	683	680	678	675	686	691	691	682	663	658	665	670	680	686	678	0 24
20	682	680	681	681	679	679	680	682	682	681	680	680	680	678	682	685	680	670	660	652	650	658	673	687	676	0 16
21	684	678	678	680	679	682	685	685	683	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	683	682	681	680	681	676	680	681	670	662	657	670	682	693	697	680	0 32
23	690	679	674	676	675	676	677	679	680	679	678	676	675	674	680	680	680	660	658	660	678	688	683	685	677	0 20
24	686	676	670	675	677	680	684	687	688	687	685	684	683	682	680	672	670	670	670	662	688	690	697	700	681	0 36
25	684	682	683	681	677	681	685	683	680	681	682	686	690	687	682	680	680	670	672	684	694	692	704	683	0 44	
26	700	685	689	684	677	676	676	674	670	677	684	681	678	676	680	693	700	700	690	690	700	709	704	702	687	1 0
27	694	680	680	680	677	678	680	681	680	679	678	676	675	672	678	680	685	692	690	680	690	699	695	691	683	0 44
28	682	672	674	675	673	672	672	674	675	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	675	674	672	670	670	674	678	682	688	682	683	690	692	700	700	679	0 28
30	690	682	687	688	687	687	688	691	692	690	688	685	683	680	672	675	680	680	670	668	678	687	690	687	684	0 48
31	684	687	688	688	686	688	690	690	688	686	683	681	680	678	674	682	690	694	685	680	690	703	700	700	687	1 1 0
Means.....	1686	1679	1679	1680	1679	1679	1681	1683	1682	1682	1680	1679	1678	1679	1686	1688	1687	1678	1666	1660	1666	1675	1684	1689	1679	
Declination.....	60 56	60 28	60 28	60 32	60 28	60 28	60 38	60 44	60 40	60 40	60 32	60 28	60 24	60 28	60 56	61 4	61 0	60 24	59 36	59 12	59 38	60 12	60 48	61 8	.....	1 0 28
Mean Hourly Variations from Monthly Mean.	28	0	0	4	0	0	8	16	12	12	4	0	−4	0	28	36	32	−4	−52	−76	−52	−16	20	40		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

$a\left(1+\frac{H}{F}\right)=4''.03\times 1.000598=4''.03241$ $\quad a+7'\,6''.0=\rho=0^\circ\,41'\,8''.2+7'\,6''.0=0^\circ\,48'\,14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

NOVEMBER 1854. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily & Monthly Means.	Absolute Declination to the East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
										0·4 *		−0·4 *														° ′ ″
1	1692	1690	1688	1689	1693	1691	1692	1692	1700	1695	1690	1688	1686	1683	1679	1680	1685	1682	1678	1677	1688	1692	1702	1700	1689	1 1 8
2	700	695	691	697	690	690	693	692	690	691	692	686	680	679	673	681	680	688	682	678	688	693	695	700	689	1 8
3	703	692	694	695	689	688	690	690	690	689	688	687	687	683	680	690	690	690	688	690	695	698	700	703	691	1 17
4	697	688	687	687	688	682	682	680	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5	—	—	—	—	—	—	—	—	—	682	683	681	680	678	664	673	684	690	690	693	704	703	690	690	686	0 56
6	682	680	680	681	680	676	678	678	680	677	673	671	670	668	665	670	672	678	673	668	682	690	680	676	676	0 16
7	679	680	681	678	674	672	677	675	677	674	670	668	667	660	658	670	680	689	690	694	701	700	695	688	679	0 28
8	682	689	694	689	685	682	682	682	684	682	680	676	672	670	662	660	670	670	672	674	693	697	692	688	680	0 32
9	682	680	680	682	682	680	680	680	680	681	682	679	677	679	677	680	680	680	672	662	673	674	675	677	678	0 24
10	680	679	675	679	676	675	677	676	678	675	672	672	672	670	663	680	688	678	673	677	685	692	685	680	677	0 20
11	682	680	676	676	677	678	678	679	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12	—	—	—	—	—	—	—	—	—	675	670	668	666	665	660	669	670	666	662	670	688	682	680	680	674	0 8
13	678	683	678	678	679	677	675	677	677	676	675	672	670	668	662	670	682	680	672	687	695	692	684	677	678	0 24
14	680	678	677	675	674	677	680	678	680	678	676	672	668	662	662	672	685	695	689	682	683	687	681	673	678	0 24
15	674	676	679	680	680	680	680	680	680	679	678	673	668	670	660	660	664	669	670	670	683	700	692	683	676	0 16
16	680	680	678	678	679	680	680	680	680	678	676	673	670	662	654	660	680	682	677	662	676	688	683	686	676	0 16
17	682	679	679	679	680	680	681	680	677	677	676	673	670	662	658	662	672	679	680	683	692	701	683	672	677	0 20
18	680	678	679	680	679	676	680	680	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	679	675	676	678	662	655	660	674	689	687	684	683	687	673	675	677	0 20
20	682	679	677	676	674	672	673	673	672	675	678	670	663	665	652	669	660	660	658	660	672	678	681	682	671	0 59 56
21	682	677	678	675	677	673	674	678	674	677	680	676	672	670	658	658	672	675	670	672	689	697	690	683	676	1 0 16
22	678	678	677	678	676	676	675	680	678	679	680	675	670	670	653	667	670	672	680	677	675	675	672	680	675	0 12
23	682	684	680	680	680	675	680	680	680	680	680	676	672	670	670	669	676	675	678	690	697	706	700	694	681	0 36
24	692	688	684	690	682	682	688	688	688	689	690	690	691	689	676	679	688	690	689	690	706	716	710	705	691	1 17
25	699	693	690	689	688	687	686	690	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	—	687	683	681	680	680	670	664	668	680	683	684	696	700	688	682	685	0 52
27	688	687	688	688	685	682	690	690	690	683	675	670	665	660	653	665	672	688	680	675	680	687	684	680	679	0 28
28	685	692	697	699	698	702	700	700	697	690	682	675	668	670	660	659	669	678	692	707	700	700	701	703	689	1 8
29	696	692	691	691	691	691	690	689	690	687	683	680	678	670	658	650	659	668	679	692	697	692	688	680	683	0 44
30	681	685	688	690	690	690	690	695	690	685	680	673	666	665	655	650	660	680	692	684	693	700	693	688	682	1 0 40
Means.....	1685	1684	1683	1684	1683	1681	1683	1683	1683	1682	1680	1676	1673	1670	1663	1668	1675	1680	1679	1680	1689	1693	1688	1686	1680	
Declination	60′ 52″	60′ 48″	60′ 44″	60′ 48″	60′ 44″	60′ 36″	60′ 44″	60′ 44″	60′ 44″	60′ 40″	60′ 32″	60′ 16″	60′ 4″	59′ 62″	59′ 24″	59′ 44″	60′ 12″	60′ 32″	60′ 28″	60′ 32″	61′ 8″	61′ 28″	61′ 4″	60′ 56″	.....	1 0 32
Mean Hourly variations from Monthly Mean.	20″	16″	12″	16″	12″	4″	12″	12″	12″	8″	0″	−16″	−28″	−40″	−68″	−48″	−20″	0″	−4″	0″	36″	53″	32″	24″		

DECEMBER 1854. Declination Magnetometer.

1										0·2 *		0·4 *														° ′ ″
2	1680	1682	1688	1684	1692	1697	1706	1702	1710	1708	1705	1702	1698	1659	1667	1659	1660	1670	1688	1701	1710	1707	1701	1690	1690	1 1 13
3	690	700	698	694	695	692	694	690	690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	687	683	684	685	678	662	662	670	675	678	680	688	693	693	700	686	0 56
5	690	688	690	690	687	690	690	687	685	685	685	679	672	670	660	660	668	671	680	682	684	690	700	700	683	0 44
6	693	690	698	689	684	681	684	682	680	680	680	676	672	670	667	660	670	678	680	686	688	699	700	700	683	0 44
7	688	684	684	683	682	681	685	687	688	685	682	680	677	678	672	669	678	683	680	670	684	700	700	692	683	0 44
8	690	685	683	685	683	683	680	680	679	680	681	679	676	670	670	670	675	684	690	690	695	702	700	700	684	0 48
9	703	695	688	688	688	688	682	682	680	680	680	675	670	670	660	654	670	682	690	677	683	690	688	690	681	0 36
10	693	690	683	684	686	684	682	680	679	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	680	680	679	678	673	669	670	672	678	670	666	670	680	695	694	680	0 32
12	690	682	676	675	677	674	678	680	680	675	670	666	662	662	670	673	682	689	680	680	688	690	690	695	679	0 28
13	704	700	690	688	687	684	683	680	680	679	678	679	680	676	678	678	676	678	665	655	660	670	672	680	679	0 28
14	688	684	683	686	686	683	682	686	682	681	680	677	674	672	668	655	671	670	672	678	677	678	676	680	678	0 24
15	682	680	686	688	686	690	690	687	686	681	675	673	670	670	668	672	680	690	692	680	673	685	690	685	682	0 40
16	684	683	682	681	680	680	680	680	681	678	675	674	673	670	665	668	660	654	650	655	670	673	682	683	673	0 4
17	688	685	687	682	682	680	680	681	683	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	677	670	671	672	660	665	670	676	680	670	670	671	672	666	672	675	0 12
19	676	670	670	674	678	678	679	680	677	679	680	674	668	665	660	655	660	665	664	656	650	662	672	675	669	0 59 48
20	673	675	667	672	672	672	671	675	677	678	678	675	672	670	662	668	672	668	662	660	670	680	682	672	672	1 0 0
21	670	670	666	666	672	670	672	671	674	672	670	666	662	665	661	662	667	669	658	648	656	668	677	682	667	0 59 40
22	680	670	675	670	668	668	667	670	680	674	667	665	662	660	660	652	658	660	658	660	683	700	690	695	671	59 56
23	690	683	682	680	678	673	677	680	678	679	680	679	678	675	667	665	670	675	670	680	690	686	691	702	680	1 0 32
24	702	689	685	685	680	680	678	679	679	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	676	672	671	669	670	670	672	680	682	670	674	677	671	678	689	678	0 24
26	693	690	687	687	682	682	680	680	680	679	677	675	672	673	670	670	677	680	664	663	670	680	690	693	679	0 28
27	690	687	688	686	686	682	682	683	685	680	675	674	672	670	673	665	679	680	668	660	664	672	678	682	678	0 24
28	690	688	682	682	679	677	677	675	672	671	670	670	670	669	674	685	694	709	728	703	682	675	680	690	683	0 44
29	692	687	685	687	686	687	687	686	679	676	672	666	660	663	668	665	677	699	700	705	†	670	662	679	680	0 32
30	684	682	682	681	683	686	688	690	684	677	670	669	668	665	660	652	659	668	660	665	676	650	660	678	672	0 0
31	682	684	678	688	682	679	679	680	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	—	—	—	—	—	—	—	—	—	675	670	671	672	660	660	652	665	680	690	698	704	699	675	678	678	1 0 24
Means.....	1688	1685	1683	1683	1682	1682	1682	1682	1682	1680	1677	1675	1672	1669	1666	1665	1672	1678	1676	1675	1679	1682	1684	1688	1679	
Declination	61′ 4″	60′ 52″	60′ 44″	60′ 44″	60′ 40″	60′ 40″	60′ 40″	60′ 40″	60′ 40″	60′ 32″	60′ 20″	60′ 12″	60′ 0″	59′ 48″	59′ 36″	59′ 32″	60′ 0″	60′ 24″	60′ 16″	60′ 12″	60′ 28″	60′ 40″	60′ 48″	61′ 4″	.....	1 0 28
Mean Hourly variations from Monthly Mean.	36″	24″	16″	16″	12″	12″	12″	12″	12″	4″	−8″	−16″	−28″	−40″	−52″	−56″	−28″	−4″	−12″	−16″	0″	12″	20″	36″		

The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

† December 28, 20h. Gottingen Mean Time.—Determined the Zero of the Scale.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JANUARY 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.		Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.		P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
					1·8 *		0·6 *		−0·9 *		−0·2 *		−0·2 *															
1853 Decr.	31	755	772	780	783	783	777	770	774	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	1	—	—	—	—	—	—	—	—	—	740	700	701	702	680	643	595	628	528	550	568	610	685	700	710	696	82	778	1·003612
	2	792	840	877	890	899	919	938	983	1030	997	965	932	900	898	883	822	794	824	852	853	900	957	968	940	902	93	995	1818
	3	890	910	908	896	881	891	900	895	891	875	860	853	847	800	755	701	633	561	578	632	704	772	820	818	803	110	913	2496
	4	800	784	780	784	784	780	775	769	764	762	760	757	755	740	728	688	640	606	614	658	699	740	771	773	738	123	861	2926
	5	752	754	762	776	787	739	690	713	737	739	742	735	728	720	697	632	562	532	524	578	627	699	727	736	695	125	820	3264
	6	748	748	739	748	754	752	749	739	730	730	731	725	720	707	695	680	630	590	580	618	660	700	739	755	707	112	819	3272
	7	743	728	734	736	734	758	780	759	740	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	8	—	—	—	—	—	—	—	—	—	771	802	792	782	778	780	772	700	645	610	650	692	739	767	782	741	71	812	3330
	9	804	814	818	822	823	821	817	804	792	801	810	806	802	790	785	750	732	690	685	718	760	808	822	828	788	36	824	3231
	10	821	824	823	818	810	810	808	804	802	796	790	782	774	766	749	718	672	630	586	567	590	642	697	765	744	24	768	3693
	11	780	792	792	819	843	830	816	813	812	803	795	788	782	770	740	700	672	640	618	646	699	748	799	828	764	46	810	3347
	12	826	856	838	837	832	823	812	830	850	825	800	793	787	772	742	720	675	620	577	603	670	738	799	818	768	58	826	3215
	13	815	817	830	817	800	797	793	782	772	771	770	770	770	764	734	695	652	624	604	617	670	738	780	797	749	66	815	3305
	14	792	792	780	796	808	789	768	777	788	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	15	—	—	—	—	—	—	—	—	—	790	792	783	774	760	720	665	609	562	570	614	688	752	803	808	741	67	808	3364
	16	793	789	777	784	787	782	776	780	785	780	775	771	768	770	749	715	720	668	620	667	698	767	829	830	758	59	817	3289
	17	874	947	928	891	851	821	790	806	824	812	800	805	810	750	762	740	694	670	624	662	718	777	813	834	792	48	840	3099
	18	829	840	864	854	840	836	830	808	787	793	800	798	797	790	774	732	682	660	617	610	635	706	754	779	767	46	813	3322
	19	811	831	820	803	782	852	920	905	892	861	830	820	810	770	765	772	719	674	673	660	680	729	793	849	793	47	840	3099
	20	858	831	825	804	780	818	855	812	770	777	785	792	799	790	788	757	713	680	662	630	653	708	757	782	768	63	831	3174
	21	808	782	798	791	780	816	850	818	788	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	22	—	—	—	—	—	—	—	—	—	769	750	748	747	742	737	698	660	620	580	591	653	678	700	730	735	52	787	3537
	23	748	770	792	802	808	815	821	834	848	841	835	819	804	798	776	765	770	772	730	728	761	780	789	777	791	48	839	3107
	24	782	809	822	839	852	839	825	815	807	×02	798	784	770	755	732	710	687	664	640	632	648	672	699	719	754	63	817	3289
	25	730	741	740	744	745	743	740	739	740	734	729	719	710	680	685	688	650	640	625	627	618	642	650	682	698	78	776	3628
	26	739	770	745	742	735	733	730	727	726	717	708	699	690	666	650	637	620	604	610	617	625	642	670	681	687	83	770	3677
	27	692	712	734	729	720	721	720	714	710	705	700	690	681	666	652	628	595	556	550	557	590	632	670	673	667	97	764	3727
	28	670	688	698	696	690	677	663	662	662	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	29	—	—	—	—	—	—	—	—	—	701	740	737	735	710	697	678	630	590	574	560	599	658	717	788	676	95	771	3669
	30	840	828	768	772	772	782	790	789	790	765	740	746	752	749	730	720	693	680	669	652	683	700	739	760	746	96	842	3082
	31	778	772	809	791	769	770	770	751	733	736	740	725	711	720	720	699	650	602	570	560	605	672	698	733	712	98	810	3347
Means.....		788	798	799	799	794	796	796	793	791	785	780	773	767	752	736	707	670	635	618	632	672	722	758	777	747			
Temp. Corrections		53	56	61	64	66	68	69	71	72	75	76	80	84	91	98	102	98	89	80	74	67	62	58	55		74		
Corrected Means.		841	854	860	863	860	864	865	864	863	860	856	853	851	843	834	809	768	724	698	706	739	784	816	832	.....	.....	821	
Mean Hourly Variations from Monthly Mean.	=·00	−20	−33	−39	−42	−39	−43	−44	−43	−42	−39	−35	−32	−30	−22	−13	12	53	97	123	115	82	37	5	−11		$\frac{\Delta X}{X}$		
		−0165	−0273	−0323	−0348	−0323	−0356	−0364	−0358	−0348	−0323	−0289	−0265	−0248	−0182	−0108	0100	0438	0802	1018	0950	0678	0306	0041	−0091	.....	$1+\frac{\Delta X}{X}=$	.....	1·003256

JANUARY 1854. Temperature of Horizontal Force Magnetometer.

					*		*		*		*		*																
1853 Decr.	31	791	790	789	787	785	783	782	781	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	1	—	—	—	—	—	—	—	—	—	780	780	779	779	775	774	772	773	775	778	780	781	782	783	784	7810			
	2	784	784	782	781	780	780	780	780	780	779	779	778	778	773	769	766	767	772	774	775	779	780	780	781	7775			
	3	781	780	780	779	778	777	777	776	775	774	773	771	770	767	762	760	763	765	768	770	772	774	776	777	7727			
	4	778	776	772	771	771	770	770	769	769	768	768	768	768	763	760	760	760	763	767	769	770	772	772	774	7687			
	5	776	773	773	772	771	770	769	768	767	766	766	765	765	763	761	760	760	762	765	769	770	772	776	778	7682			
	6	778	776	773	772	771	771	771	771	771	770	770	769	768	768	768	765	766	768	770	772	778	779	780	780	7719			
	7	780	780	779	778	777	776	776	775	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	8	—	—	—	—	—	—	—	—	—	781	787	786	785	783	780	780	782	785	789	794	795	797	798	798	7840			
	9	794	792	792	791	790	791	792	792	792	791	791	790	790	790	790	791	793	797	798	801	803	803	804	805	7943			
	10	804	803	800	800	800	800	800	799	799	798	797	796	795	793	793	792	793	795	795	797	799	800	800	800	7978			
	11	800	800	798	797	796	794	793	793	793	791	790	790	790	789	786	784	784	786	787	789	790	791	792	793	7915			
	12	794	792	790	790	790	790	790	790	790	789	788	786	785	785	782	780	781	783	786	787	789	790	790	791	7878			
	13	791	790	789	788	788	788	788	788	788	787	786	785	784	782	778	776	778	780	783	785	787	788	790	790	7857			
	14	790	790	788	787	787	786	786	785	784	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	15	—	—	—	—	—	—	—	—	—	784	785	783	782	781	780	778	779	782	784	785	789	790	791	792	7853			
	16	793	792	790	790	790	790	790	789	788	786	785	784	783	782	781	780	781	784	788	790	790	792	793	794	7877			
	17	795	794	793	793	793	791	790	790	790	790	790	789	789	789	785	783	785	787	790	791	792	795	797	798	7908			
	18	798	798	795	795	795	793	792	791	790	789	788	789	790	789	788	785	783	785	790	791	793	795	796	798	7915			
	19	799	798	798	798	798	798	798	798	799	797	795	790	786	781	780	779	781	783	785	788	789	790	790	790	7912			
	20	790	790	789	788	788	787	787	787	787	786	785	784	783	780	781	781	781	784	786	788	789	790	790	790	7863			
	21	790	790	790	789	789	789	789	789	789	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	22	—	—	—	—	—	—	—	—	—	789	790	790	790	789	785	784	785	788	790	790	792	795	796	797	7898			
	23	798	797	794	793	792	791	791	790	790	790	790	789	789	788	785	785	786	788	790	790	792	793	793	795	7908			
	24	795	795	792	791	790	790	790	790	790	789	788	785	782	780	778	775	776	778	781	783	785	788	789	790	7863			
	25	790	790	788	787	787	786	785	785	785	783	781	779	777	773	770	770	771	775	778	780	783	788	790	790	7821			
	26	790	790	787	786	785	784	784	783	783	781	780	778	777	772	771	770	771	775	777	779	780	781	784	785	7805			
	27	785	785	783	782	781	780	780	780	780	778	777	774	772	768	765	765	767	770	773	774	778	779	780	781	7765			
	28	781	780	780	780	780	780	780	779	778	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
	29	—	—	—	—	—	—	—	—	—	777	777	774	772	770	770	769	770	772	775	779	780	780	782	782	7770			
	30	784	782	780	780	780	780	780	778	777	775	774	772	770	770	768	768	770	772	775	778	780	780	782	783	7766			
	31	785	784	781	780	780	780	780	778	777	774	772	771	770	770	765	766	768	770	774	776	779	780	782	785	7761			
Means.....		7894	7836	7869	7861	7856	7850	7848	7842	7839	7830	7827	7813	7803	7783	7761	7750	7761	7787	7813	7833	7853	7868	7880	7889	7833			

N. B.—Decreasing numbers denote an increase in the Horizontal Force. In the upper table the numbers are tenths of scale divisions; in the lower table tenths of Fahrenheit degrees, and in the Means, hundredths of degrees.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

FEBRUARY 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				5·9 *		0·9 *		4·7 *		1·7 *		−1·9 *																
1	742	750	762	769	765	779	791	780	759	751	740	720	703	700	705	699	680	653	625	630	644	685	723	750	721	84	805	1·003348
2	769	785	796	801	795	784	771	781	781	776	768	766	768	753	750	720	708	672	650	645	690	737	769	790	751	37	788	3529
3	801	798	799	802	794	799	803	802	792	786	777	793	812	780	753	748	730	693	678	625	597	655	710	770	754	11	765	3718
4	800	811	882	877	860	856	850	849	839	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	840	838	837	840	834	805	773	720	725	710	715	722	755	770	835	806	− 1	805	3348
6	860	855	849	859	857	858	858	848	829	821	810	818	830	818	796	772	745	710	702	703	742	771	804	829	806	− 2	804	3397
7	872	865	850	849	836	834	830	844	848	841	830	826	825	812	783	733	700	672	679	688	752	774	809	830	799	− 6	793	3487
8	854	874	870	868	855	841	826	819	802	814	822	812	805	792	763	712	680	645	609	630	690	739	778	800	779	− 7	772	3660
9	808	815	825	836	835	843	850	836	813	843	870	840	814	848	810	823	802	753	701	710	680	692	789	900	806	−13	793	3487
10	931	945	913	930	935	919	902	910	908	911	910	913	920	923	888	829	777	736	755	745	810	919	995	1077	892	− 9	883	2745
11	1120	1161	1123	1134	1134	1172	1209	1229	1239	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	1046	850	866	885	859	837	809	748	705	685	700	720	811	878	890	950	−17	933	2330
13	900	917	907	935	951	947	942	947	942	948	950	938	930	922	910	878	830	794	766	731	752	799	852	840	885	−47	838	3116
14	842	857	898	960	1010	1012	1013	996	970	983	992	979	970	898	865	870	836	795	830	805	853	878	940	952	917	−54	863	2909
15	942	1000	960	1009	1046	1044	1040	1015	980	977	970	962	958	930	879	870	872	857	832	820	910	892	904	930	942	−49	893	2661
16	999	980	971	974	965	973	980	965	940	927	910	911	915	905	894	880	855	828	820	814	819	830	871	950	912	−52	860	2934
17	970	962	953	928	891	871	849	893	928	907	883	889	898	881	883	885	888	830	788	760	752	790	819	867	874	−41	833	3157
18	900	927	910	920	918	915	910	894	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	871	870	862	857	859	840	829	797	782	740	731	780	818	863	870	856	−22	834	3149
20	887	869	862	867	860	859	856	857	849	848	843	835	830	825	802	778	748	725	720	713	733	757	787	802	813	−15	798	3447
21	820	831	840	850	848	851	853	842	822	829	832	824	820	812	800	781	750	726	702	730	775	790	801	804	806	−14	792	3495
22	797	790	814	817	809	810	810	819	818	810	798	791	788	780	757	728	681	658	652	670	700	740	785	802	768	− 8	760	3760
23	820	841	838	835	820	821	820	825	820	827	830	824	822	802	772	742	700	669	670	675	680	731	755	762	779	− 9	770	3677
24	770	780	788	794	788	804	819	892	956	938	916	911	910	908	892	821	840	851	860	827	820	854	890	1001	860	−12	848	3033
25	1082	1024	922	967	1000	1030	1058	999	930	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	936	939	909	882	870	868	831	790	808	780	795	840	883	879	880	913	−19	894	2653
27	890	912	920	956	980	956	931	914	888	879	867	872	880	868	860	829	851	797	740	750	792	850	917	970	878	−26	852	2999
28	958	938	916	936	945	958	969	949	920	908	892	876	863	880	862	828	757	694	690	658	692	770	832	912	858	−34	824	3231
Means	881	887	882	895	896	897	898	896	885	876	863	857	855	844	824	799	770	741	724	720	748	788	830	867	838			
Temp. Corrections	-35	-33	-24	-21	-19	-18	-17	-15	-13	-10	-7	-3	-1	4	12	16	10	1	-8	-16	-23	-30	-35	-39	.....	−14		
Corrected Means..	846	854	858	874	877	879	881	881	872	866	856	854	854	848	836	815	780	742	716	704	725	758	795	828	.....	.....	824	
Mean Hourly Variations from Monthly Mean. = ·00	-22	-30	-34	-50	-53	-55	-57	-57	-48	-42	-32	-30	-30	-24	-12	9	44	82	108	120	99	66	29	-4				
	-0182	-0248	-0281	-0413	-0438	-0454	-0471	-0471	-0397	-0348	-0265	-0248	-0248	-0198	-0100	0074	0364	0678	0892	0992	0818	0546	0240	-0033	.....	$1+\frac{\Delta X}{X}=$	.....	1·003231

FEBRUARY 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	788	786	783	782	781	781	781	780	780	778	776	774	773	770	770	770	770	775	779	782	786	790	795	798	7803			
2	798	798	795	794	793	792	792	791	791	790	790	790	790	789	787	786	788	791	795	798	800	803	806	808	7940			
3	808	808	804	803	802	801	801	801	801	800	799	799	799	797	795	794	797	800	801	803	807	808	808	810	8019			
4	810	810	810	808	807	807	807	806	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	804	802	801	801	800	798	797	798	800	803	806	809	810	811	813	8052			
6	813	811	810	808	807	807	806	806	806	805	804	802	801	801	800	799	800	802	804	805	808	809	810	811	8057			
7	813	811	810	810	810	809	809	808	808	807	806	803	801	800	800	798	800	801	805	806	810	811	812	814	8068			
8	814	814	810	810	810	810	810	809	808	806	805	804	803	801	800	798	800	801	805	807	808	810	811	813	8070			
9	813	812	810	810	810	810	810	810	810	809	808	806	804	802	802	800	801	806	807	810	812	814	815	816	8086			
10	817	816	811	810	810	809	809	808	808	807	806	804	803	800	798	798	799	802	806	809	810	811	812	814	8074			
11	815	815	811	810	810	810	810	809	808	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	808	809	808	808	806	802	800	802	806	810	811	813	817	818	818	8098			
13	820	819	816	815	814	815	817	817	817	816	815	814	814	814	814	814	816	819	821	825	828	830	830	830	8188			
14	828	827	823	823	823	822	822	821	820	820	820	820	820	820	818	816	818	819	819	819	820	821	822	824	8210			
15	825	825	822	821	821	820	820	820	820	820	820	818	817	815	812	810	812	815	818	819	821	825	826	827	8195			
16	827	826	821	820	820	820	820	820	820	819	818	818	818	817	815	816	817	820	820	821	822	823	823	825	8203			
17	825	823	820	820	820	819	818	818	818	816	815	814	814	812	811	810	812	813	815	817	819	820	820	820	8170			
18	820	820	818	817	816	814	813	812	812	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	811	810	809	809	808	803	801	803	805	808	810	811	813	814	817	8114			
20	817	816	812	811	810	810	810	810	810	809	808	808	808	806	801	801	802	804	808	809	810	812	814	815	8092			
21	815	814	811	810	810	809	809	809	810	809	809	808	807	806	802	801	802	805	808	810	811	814	815	815	8091			
22	815	814	811	810	810	810	810	809	808	806	805	803	802	800	800	798	800	801	804	808	810	812	814	815	8073			
23	815	814	811	810	810	810	810	808	807	805	804	803	803	801	800	800	800	804	807	809	810	812	813	815	8075			
24	816	816	813	812	810	810	810	809	808	807	807	807	807	805	802	800	801	802	805	808	810	811	813	813	8084			
25	815	816	815	815	816	814	813	811	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	810	810	809	808	805	801	800	801	804	807	810	813	816	818	819	8107			
27	819	819	819	818	817	814	812	811	810	809	808	808	808	807	803	801	805	808	810	813	820	822	824	823	8128			
28	823	823	822	821	820	819	819	817	815	813	812	811	810	809	807	803	805	808	810	812	815	819	824	826	8151			
Means.....	8154	8147	8120	8112	8107	8102	8100	8092	8088	8077	8069	8059	8053	8038	8017	8005	8020	8046	8073	8095	8118	8139	8153	8166	8090			

*The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.
Ditto to Ther. = −0°5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°8 = 1497.
Ditto. reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

MARCH 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				4·8 *		−0·4 *		−0·7 *		0·2 *		−1·7 *																
1	940	937	895	915	925	924	924	906	890	885	880	875	873	868	860	822	783	744	730	732	770	805	860	895	860	− 35	825	1·003223
2	912	902	909	911	904	901	898	888	879	885	890	857	827	790	820	790	748	731	700	685	674	731	792	800	826	− 53	773	3652
3	837	873	913	931	939	904	869	873	878	873	867	842	820	856	849	828	788	748	727	700	698	766	867	890	839	− 52	787	3537
4	924	938	971	952	924	907	890	904	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	915	910	900	894	884	890	838	772	720	684	680	714	772	850	898	860	− 78	782	3578
6	960	945	932	939	937	928	920	899	880	897	914	916	922	890	884	858	810	760	768	780	805	868	903	996	888	− 92	796	3463
7	988	962	992	988	975	961	948	952	958	949	940	932	927	920	900	884	849	800	792	812	850	890	936	965	928	−107	813	3322
8	1000	978	979	978	968	968	969	970	972	966	960	943	930	918	918	870	830	800	790	795	823	878	922	960	920	−142	778	3612
9	962	957	970	979	978	990	1003	983	964	967	970	959	952	950	930	889	840	797	769	778	808	857	910	958	922	−147	775	3636
10	980	968	968	964	950	949	949	948	949	949	948	942	939	922	905	870	841	760	736	775	826	897	935	955	909	−137	772	3660
11	938	945	941	945	940	945	950	944	940	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	920	900	880	863	872	871	823	780	760	730	757	800	873	897	928	881	−116	765	3718
13	930	913	909	908	897	919	942	930	919	924	928	921	918	879	852	825	757	700	668	665	745	793	876	960	862	−106	756	3793
14	985	972	973	980	977	968	959	947	937	926	915	901	890	900	890	810	753	681	677	703	735	798	865	913	877	−102	775	3636
15	933	920	912	907	893	901	910	909	910	916	921	935	953	989	1030	1075	970	872	820	848	917	985	1060	1083	940	− 86	854	2983
16	1057	1083	1081	1075	1060	1048	1037	978	920	953	986	966	949	970	962	905	867	849	847	880	957	1010	1062	1022	980	− 76	904	2570
17	1013	990	1003	996	980	968	957	958	960	951	941	922	906	902	884	860	814	766	760	724	768	843	882	913	903	− 73	830	3182
18	923	946	941	944	938	926	915	921	928	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	917	906	896	890	880	865	814	762	704	660	675	715	780	831	871	856	− 68	788	3529
20	890	898	892	907	912	892	873	881	891	895	899	883	870	865	827	815	780	739	720	722	762	833	880	907	851	− 52	799	3438
21	900	886	890	913	926	926	927	913	900	896	892	880	872	867	839	802	748	699	763	725	768	835	897	900	857	− 92	765	3718
22	883	905	900	909	908	929	950	945	942	917	892	903	918	906	890	855	785	736	717	760	805	850	870	892	874	−113	761	3752
23	900	910	930	957	975	971	967	954	942	946	950	938	930	927	900	883	860	822	790	790	834	882	906	929	908	−142	766	3710
24	929	923	921	922	914	913	912	926	942	936	930	918	910	902	870	837	769	708	652	690	763	842	897	930	869	−136	733	3983
25	948	940	960	986	1002	990	978	962	947	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	940	932	939	950	940	961	932	887	828	831	882	912	946	976	995	940	−139	801	3422
27	966	972	986	964	932	940	949	939	931	921	910	923	940	938	941	950	960	940	971	1002	1050	1190	1290	1291	992	−127	865	2892
28	1287	1327	1228	1260	1282	1239	1197	1173	1150	1105	1060	1049	1042	1051	1022	1032	967	930	915	938	990	1049	1087	1085	1103	−148	955	2148
29	1090	1096	1100	1128	1147	1123	1099	1096	1095	1098	1100	1074	1052	1039	1027	964	902	847	838	866	938	1016	1060	1075	1036	−155	881	2760
30	1082	1089	1065	1067	1059	1054	1050	1029	1010	1023	1035	1026	1022	968	902	850	789	715	712	745	817	898	973	1055	960	−154	806	3380
31	1118	1135	1100	1098	1086	1066	1047	1042	1038	1029	1020	1009	1002	1005	992	937	880	830	790	820	889	968	1010	1029	998	−155	843	3074
Means.....	973	974	973	979	975	969	963	954	948	944	941	931	924	918	907	875	826	777	761	775	820	884	937	966	912			
Temp. Corrections	-136	-133	-123	-118	-115	-112	-109	-105	-103	-99	-97	-92	-88	-82	-75	-73	-81	-89	-100	-110	-121	-129	-134	-139	.....	−107		
Corrected Means..	837	841	850	861	860	857	854	849	845	845	844	839	836	836	832	802	745	688	661	665	699	755	803	827	.....	.....	805	
	-32	-36	-45	-56	-55	-52	-49	-44	-40	-40	-39	-34	-31	-31	-27	3	60	117	144	140	106	50	2	-22		$\frac{\Delta X}{X}$		
Mean Hourly Variations from Monthly Mean. = ·00	-0265	-0298	-0372	-0463	-0454	-0430	-0405	-0364	-0331	-0331	-0323	-0281	-0256	-0256	-0223	0025	0496	0967	1190	1157	0876	0413	0017	-0182	.....	$1+\frac{\Delta X}{X}=$	.....	1·003388

MARCH 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	827	826	824	822	820	820	820	818	816	813	810	809	808	805	802	800	804	808	810	812	820	823	826	827	8154			
2	828	829	826	824	822	821	820	820	820	820	820	818	817	812	811	810	812	815	818	820	825	828	828	830	8206			
3	830	830	828	826	825	823	822	821	820	819	818	816	815	812	810	809	810	812	817	820	823	825	827	828	8203			
4	828	828	825	823	822	821	820	820	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	825	830	829	828	826	825	823	827	829	831	835	838	840	841	841	8281			
6	841	840	836	834	833	832	831	830	830	830	830	829	828	825	822	820	823	828	830	834	836	840	842	844	8321			
7	843	842	840	838	836	835	834	833	833	831	830	830	830	828	827	828	830	832	837	840	845	850	852	855	8366			
8	856	855	850	849	848	846	845	844	844	842	841	840	839	837	838	837	839	840	848	851	856	859	860	861	8469			
9	860	859	852	851	850	850	850	849	848	846	845	842	840	840	840	840	841	844	848	850	851	853	854	855	8483			
10	855	854	851	850	850	849	849	848	848	846	844	842	840	839	838	838	839	838	840	843	844	846	848	850	8454			
11	850	849	848	845	842	841	840	839	839	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	838	838	835	833	832	830	830	830	832	837	839	841	843	845	848	8393			
13	848	846	842	841	840	839	838	837	836	834	832	831	830	829	825	823	826	830	832	837	840	843	845	848	8363			
14	849	848	842	841	840	839	838	835	833	831	830	829	829	828	823	824	827	828	831	835	839	840	842	843	8352			
15	846	844	840	839	838	836	834	832	831	829	827	823	820	820	817	816	818	821	825	829	831	835	837	838	8303			
16	839	838	833	832	832	831	830	827	824	823	823	821	820	820	818	818	820	822	825	829	830	832	833	835	8273			
17	839	839	836	834	833	831	829	827	826	825	824	823	822	818	813	811	816	820	823	825	829	830	832	833	8266			
18	833	833	830	829	828	826	825	824	824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	824	824	822	820	820	818	817	820	820	823	825	828	827	829	833	8251			
20	831	830	828	826	825	823	821	819	818	816	815	814	814	810	807	808	810	816	820	822	824	827	830	832	8203			
21	833	833	831	830	830	830	830	830	830	829	829	828	828	828	828	828	830	832	835	838	840	840	840	842	8322			
22	843	843	840	839	839	839	839	838	838	837	836	836	836	834	831	830	833	834	836	838	841	843	846	849	8383			
23	850	850	850	850	850	850	850	850	850	849	848	845	842	838	836	837	838	840	842	847	850	851	853	854	8467			
24	853	852	850	849	849	847	845	844	843	842	841	839	838	838	836	836	838	840	844	848	850	851	853	854	8450			
25	855	854	851	850	849	849	849	848	848	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	844	840	840	840	839	838	837	839	840	842	847	850	851	852	853	8460			
27	853	852	850	848	847	843	840	839	839	838	837	837	838	835	832	831	835	839	840	843	848	850	851	853	8424			
28	853	850	850	849	849	849	849	849	850	849	849	847	845	845	841	840	842	844	849	850	853	856	856	855	8487			
29	855	855	850	849	849	849	849	848	848	847	847	846	845	842	841	841	845	848	850	855	863	864	864	864	8506			
30	862	861	858	857	857	856	855	853	851	850	849	845	842	841	840	839	840	843	846	849	850	853	854	856	8503			
31	857	857	853	852	851	850	850	850	850	849	849	847	845	842	842	842	846	849	850	852	855	859	860	860	8507			
Means.....	8451	8443	8413	8399	8390	8380	8371	8360	8354	8343	8336	8320	8308	8290	8270	8264	8288	8313	8344	8375	8407	8429	8444	8460	8365			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = − 0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75^\circ\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperatnre 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

APRIL 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				5·9 *		0·7 *		1·9 *		·0·4 *		−0·7 *																
1	1041	1050	1032	1037	1030	1022	1012	1009	1003	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	992	980	985	992	990	994	945	891	829	775	790	847	899	956	1009	963	−178	785	1·003553
3	1022	1020	1032	1074	1105	1088	1070	1042	1010	1012	1014	1007	1002	999	1000	952	912	879	854	890	939	984	1013	1030	998	−185	813	3322
4	1040	1028	1025	1027	1018	1021	1022	1018	1010	1014	1018	1002	987	994	995	986	920	859	798	819	850	921	980	1019	974	−184	790	3512
5	1022	1034	1078	1059	1028	1045	1061	1052	1040	1044	1048	1032	1018	1004	982	945	900	845	818	820	870	932	993	1040	988	−196	792	3495
6	1048	1044	1107	1112	1105	1072	1038	1036	1030	1023	1015	1002	990	983	1000	960	932	890	882	912	970	1032	1068	1090	1014	−215	799	3438
7	1093	1087	1042	1067	1080	1085	1089	1086	1080	1077	1073	1066	1060	1051	1035	1010	958	922	932	960	1022	1079	1122	1150	1051	−227	824	3231
8	1120	1132	1112	1104	1085	1084	1082	1085	1084	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	1068	1052	1045	1040	1029	1041	994	948	948	954	950	1001	1058	1070	1104	1050	−247	803	3405
10	1117	1102	1110	1114	1107	1103	1097	1098	1095	1087	1078	1054	1032	1054	998	1130	1162	1310	1426	1603	1578	1585	1554	1806	1225	−269	956	2140
11	1783	1615	1560	1536	1500	1466	1430	1394	1355	1336	1316	1292	1269	1249	1262	1170	1126	1087	940	1010	1069	1117	1168	1220	1303	−274	1029	1537
12	1244	1268	1233	1239	1233	1233	1232	1228	1220	1216	1212	1186	1162	1151	1156	1130	1050	985	877	887	960	1020	1088	1156	1140	−274	866	2884
13	1178	1158	1151	1171	1179	1190	1199	1210	1217	1196	1175	1169	1165	1150	1128	1085	1029	961	913	849	893	978	1095	1117	1107	−269	838	3116
14	1102	1108	1110	1147	1172	1197	1220	1266	1309	1335	1360	1333	1307	1249	1231	1210	1158	1099	1065	1088	1160	1199	1219	1264	1205	−266	939	2281
15	1291	1327	1350	1362	1363	1338	1312	1272	1229	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	1185	1140	1138	1137	1120	1125	1095	1028	944	900	942	991	1047	1114	1190	1164	−278	886	2719
17	1170	1151	1143	1149	1143	1142	1140	1138	1132	1126	1120	1114	1110	1095	1100	1057	1004	949	925	947	993	1040	1085	1112	1087	−274	813	3322
18	1130	1127	1137	1130	1112	1098	1082	1078	1070	1066	1062	1055	1050	1020	1006	980	950	890	910	940	1008	1080	1103	1146	1051	−286	765	3718
19	1132	1100	1100	1116	1121	1139	1156	1142	1125	1123	1120	1114	1110	1118	1104	1092	1051	1060	1055	1088	1082	1117	1110	1102	1107	−278	829	3190
20	1108	1128	1117	1130	1132	1129	1124	1106	1085	1092	1098	1093	1090	1103	1070	1097	1060	1020	1001	1020	1050	1090	1100	1124	1090	−276	814	3314
21	1125	1109	1100	1103	1095	1092	1088	1095	1098	1094	1090	1078	1067	1080	1065	1070	1032	1021	1010	1018	1030	1070	1085	1102	1076	−282	794	3479
22	1120	1159	1166	1169	1160	1147	1132	1124	1113	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1123	1132	1124	1117	1122	1145	1160	1170	1122	1094	1122	1190	1240	1259	1308	1155	−339	816	3297
24	1366	1369	1382	1402	1410	1406	1400	1365	1327	1299	1271	1251	1232	1180	1160	1112	1070	1072	1058	1110	1172	1214	1200	1182	1250	−358	892	2669
25	1173	1180	1192	1202	1200	1191	1181	1172	1160	1156	1152	1144	1137	1127	1102	1043	1000	979	960	997	1037	1086	1132	1148	1119	−330	789	3520
26	1154	1148	1120	1127	1122	1117	1111	1088	1062	1061	1060	1055	1051	1037	1020	972	953	940	953	965	1010	1082	1120	1160	1062	−296	766	3710
27	1157	1162	1149	1138	1115	1098	1079	1071	1060	1041	1022	1023	1025	1020	1000	972	948	940	950	980	1018	1069	1073	1065	1049	−247	802	3413
28	1068	1050	1045	1047	1037	1020	1002	1003	1000	992	983	978	975	962	955	940	900	891	910	1000	1062	1078	1108	1115	1005	−236	769	3685
29	1100	1080	1059	1050	1030	1035	1039	1038	1034	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	1032	1030	1019	1010	1002	990	988	970	964	960	972	993	1049	1080	1099	1026	−242	784	3562
Means.....	1156	1149	1146	1152	1147	1142	1136	1129	1118	1112	1105	1094	1085	1076	1067	1044	1005	976	957	987	1032	1083	1116	1154	1090			
Temp. Corrections	-294	-285	-274	-267	-263	-258	-255	-251	-248	-245	-244	-238	-235	-230	-226	-229	-237	-250	-262	-276	-285	-293	-300	-302	.....	-260		
Corrected Means..	862	864	872	885	884	884	881	878	870	867	861	856	850	846	841	815	768	726	695	711	747	790	816	852	.....	.....	830	
	-32	-34	-42	-55	-54	-54	-51	-48	-40	-37	-31	-26	-20	-16	-11	15	62	104	135	119	83	40	14	-22		$\frac{\Delta X}{X}$		
Mean Hourly Variations from Monthly Mean = ·00	-0265	-0281	-0348	-0454	-0446	-0446	-0421	-0397	-0331	-0306	-0256	-0215	-0165	-0133	-0091	0124	0513	0859	1115	0984	0686	0331	0116	-0182	.....	$1+\frac{\Delta X}{X}=$	.....	1·003182

APRIL 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	860	860	858	856	855	856	857	855	854	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	854	854	854	854	853	852	853	856	857	859	860	861	864	866	867	8573			
3	867	865	863	862	862	861	860	860	860	858	857	855	854	852	851	852	853	856	859	860	862	864	866	868	8595			
4	868	867	863	861	860	860	860	860	860	858	856	854	852	851	850	851	854	856	858	860	862	866	868	869	8593			
5	869	868	866	864	862	861	860	860	860	860	860	858	857	856	853	855	857	860	862	867	870	871	873	875	8627			
6	876	874	871	870	869	869	869	867	865	863	862	861	861	860	860	861	862	865	868	871	877	880	880	880	8684			
7	880	880	875	874	874	873	872	871	870	869	868	866	864	863	861	862	864	867	870	875	878	880	883	886	8719			
8	885	881	880	878	877	875	873	872	871	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	872	874	872	871	871	870	870	871	877	879	881	888	890	890	891	8775			
10	891	890	889	887	885	884	883	882	882	882	882	880	878	875	876	877	878	879	881	888	891	893	894	895	8843			
11	894	893	890	890	890	888	887	884	881	880	880	880	880	880	879	880	880	882	885	890	890	891	892	893	8858			
12	893	891	890	888	887	885	884	883	882	881	881	880	880	880	880	880	880	882	886	889	890	892	895	896	8856			
13	894	891	890	888	886	884	883	881	880	880	880	879	879	877	878	878	880	880	882	887	889	890	891	891	8841			
14	891	890	887	884	881	881	881	880	880	880	880	879	878	878	878	879	880	880	882	889	890	891	892	894	8835			
15	895	892	890	889	888	886	885	884	884	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	883	883	882	882	882	882	881	884	885	888	890	891	892	894	894	8869			
17	893	890	889	887	885	884	884	882	881	880	880	880	880	879	878	880	880	882	885	891	893	898	898	899	8857			
18	898	896	891	890	890	890	890	889	889	887	886	884	883	882	882	882	885	888	890	891	893	895	898	897	8894			
19	896	893	890	889	888	887	887	885	883	882	882	883	885	885	883	882	883	884	886	889	890	891	892	893	8870			
20	894	892	891	892	893	892	892	890	889	887	885	882	880	877	875	876	878	880	882	885	888	890	892	892	8864			
21	891	890	888	886	885	885	885	884	883	882	881	880	880	880	880	880	881	884	888	892	897	902	912	915	8880			
22	920	915	910	908	906	903	901	900	899	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	898	898	897	897	895	893	894	897	898	902	908	910	917	925	925	9048			
24	922	920	917	915	913	911	910	909	908	908	908	908	908	905	902	899	899	900	905	909	913	917	918	918	9101			
25	918	914	910	908	907	904	902	901	900	899	898	896	895	892	890	892	893	898	900	904	908	909	909	909	9023			
26	908	902	898	897	896	894	892	891	890	889	889	886	883	880	880	881	884	886	890	895	899	900	900	901	8921			
27	900	899	896	889	883	878	873	871	870	868	866	863	860	857	853	857	864	877	882	888	890	892	895	893	8777			
28	890	880	873	869	866	864	863	861	860	859	859	855	851	850	848	851	862	878	895	910	912	910	909	910	8744			
29	900	890	880	875	870	868	867	865	864	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	865	866	863	860	856	857	860	870	880	887	891	894	899	900	899	8761			
Means	8917	8889	8858	8838	8823	8809	8800	8787	8778	8770	8766	8751	8741	8726	8716	8725	8746	8784	8820	8864	8890	8913	8933	8940	8816			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Themr. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

MAY 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				6·7 *		0·9 *		2·1 *		−0·2 *		1·1 *																
1	1118	1096	1059	1073	1074	1064	1052	1040	1023	1026	1029	1016	1000	1003	1002	981	960	942	940	960	991	1044	1075	1083	1027	−229	798	1·003447
2	1074	1063	1073	1088	1090	1068	1044	1049	1049	1033	1018	1011	1002	999	978	959	935	915	920	960	990	1018	1046	1063	1019	−215	804	3397
3	1073	1070	1061	1062	1050	1045	1039	1037	1030	1020	1010	1011	1010	1000	982	970	956	945	930	935	947	954	980	987	1004	−216	788	3529
4	1009	1022	1019	1036	1040	1037	1032	1023	1010	1001	993	1000	1004	1028	992	1017	1000	1000	1014	980	1044	1074	1098	1130	1025	−236	789	3520
5	1161	1191	1211	1197	1170	1157	1142	1128	1110	1106	1102	1092	1080	1060	1040	1008	990	967	970	983	1014	1052	1074	1078	1087	−249	838	3116
6	1060	1053	1058	1061	1050	1048	1045	1050	1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			752	
7	—	—	—	—	—	—	—	—	—	1045	1040	1036	1030	1020	989	958	930	912	912	924	960	1010	1040	1066	1014	−262	791	3826
8	1070	1075	1062	1063	1050	1048	1045	1027	1004	1037	1070	1079	1085	1080	1084	1040	1005	993	995	1032	1070	1122	1137	1152	1059	−268	898	3504
9	1167	1197	1243	1263	1269	1253	1235	1220	1200	1239	1278	1238	1195	1138	1113	1100	1082	1080	1097	1100	1117	1140	1152	1187	1179	−281	827	2620
10	1180	1204	1228	1220	1199	1180	1159	1142	1120	1134	1148	1120	1090	1080	1022	1018	980	972	978	1007	1058	1082	1160	1151	1110	−283	826	3207
11	1173	1169	1178	1181	1171	1186	1200	1180	1155	1145	1136	1118	1098	1110	1066	1032	990	962	970	990	1015	1057	1100	1128	1105	−279	836	3215
12	1142	1151	1161	1164	1153	1168	1181	1180	1174	1161	1148	1135	1120	1103	1052	1010	960	932	940	954	1070	1097	1102	1134	1100	−264		3132
13	1148	1160	1152	1158	1150	1138	1125	1125	1120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		760	
14	—	—	—	—	—	—	—	—	—	1093	1067	1065	1060	1045	1020	975	898	810	792	850	908	940	977	1099	1036	−276	862	3760
15	1152	1130	1178	1210	1228	1228	1227	1236	1240	1226	1213	1191	1167	1135	1126	1102	1062	1029	1020	1030	1054	1040	1077	1120	1143	−281	863	2917
16	1133	1119	1110	1126	1129	1160	1190	1197	1200	1187	1174	1172	1168	1150	1160	1147	1090	1072	1038	1082	1110	1127	1199	1210	1144	−281	838	2909
17	1229	1200	1231	1208	1172	1162	1150	1136	1117	1103	1089	1091	1090	1102	1110	1089	1065	1029	985	972	1039	1073	1140	1160	1114	−276	793	3116
18	1168	1150	1138	1140	1128	1125	1120	1122	1119	1109	1099	1096	1090	1088	1060	1030	977	930	915	940	982	1027	1080	1120	1073	−280	801	3487
19	1139	1145	1138	1140	1129	1124	1118	1125	1128	1117	1106	1104	1100	1098	1071	1055	1003	987	970	960	990	1040	1107	1140	1085	−284		3422
20	1162	1180	1169	1161	1139	1135	1130	1112	1090	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			798	
21	—	—	—	—	—	—	—	—	—	1100	1110	1106	1100	1097	1102	1092	1042	1020	1017	1049	1093	1102	1117	1130	1106	−308	786	3447
22	1152	1169	1156	1153	1137	1134	1130	1133	1132	1136	1140	1132	1122	1105	1080	1055	1018	1000	993	970	1051	1060	1102	1149	1100	−314	780	3545
23	1163	1170	1170	1181	1178	1163	1147	1144	1137	1134	1132	1132	1130	1122	1106	1080	1042	1022	1015	1011	1040	1104	1150	1187	1119	−339	739	3595
24	1196	1185	1162	1170	1165	1154	1141	1163	1180	1157	1135	1115	1092	1077	1064	1031	990	954	946	940	928	978	1032	1045	1083	−344	785	3933
25	1108	1152	1270	1249	1215	1199	1182	1188	1189	1176	1163	1163	1160	1150	1120	1107	1088	1052	1030	998	1063	1157	1230	1279	1154	−369	780	3553
26	1292	1290	1302	1278	1240	1240	1238	1225	1208	1209	1210	1202	1192	1185	1158	1124	1060	1080	1003	988	1030	1098	1182	1230	1178	−398		3595
27	1250	1278	1277	1279	1268	1266	1262	1253	1239	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			766	
28	—	—	—	—	—	—	—	—	—	1224	1210	1205	1198	1182	1170	1145	1124	1088	1055	1080	1114	1144	1200	1256	1199	−433	764	3710
29	1277	1270	1284	1307	1317	1279	1239	1233	1222	1216	1210	1211	1210	1197	1183	1152	1110	1078	1030	1065	1091	1134	1197	1220	1197	−433	750	3727
30	1230	1245	1244	1249	1240	1232	1222	1209	1192	1186	1180	1180	1177	1160	1142	1123	1097	1045	1042	1081	1128	1180	1260	1290	1181	−431	740	3843
31	1282	1256	1239	1241	1230	1217	1202	1200	1193	1189	1185	1175	1162	1160	1184	1150	1125	1068	1075	1066	1094	1172	1256	1288	1184	−444		3925
Means.....	1160	1163	1169	1173	1162	1156	1148	1144	1134	1130	1126	1118	1109	1099	1081	1057	1021	996	985	997	1037	1075	1121	1151	1105			
Temp. Corrections	-342	-333	-323	-316	-312	-305	-299	-294	-291	-288	-286	-282	-280	-274	-271	-276	-284	-295	-309	-321	-331	-341	-348	-351	.....	-307		
Corrected Means..	818	830	846	857	850	851	849	850	843	842	840	836	829	825	810	781	737	701	676	676	706	734	773	800	.....	.....	798	
Mean Hourly Variations from Monthly Mean } =·00	-20	-32	-48	-59	-52	-53	-51	-52	-45	-44	-42	-38	-31	-27	-12	17	61	97	122	122	92	64	25	-2		$1+\frac{\Delta X}{X}=$		
	-0165	-0265	-0397	-0488	-0430	-0438	-0421	-0430	-0372	-0364	-0348	-0314	-0256	-0223	-0100	0121	0504	0802	1009	1009	0761	0529	0206	-0017	.....	.....	.....	1·003447

MAY 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	894	886	878	875	872	870	869	867	865	863	862	859	856	853	851	857	863	870	878	884	890	893	894	891	8725			
2	888	882	878	874	870	866	863	861	860	860	860	857	855	853	853	857	860	867	872	877	880	882	883	882	8683			
3	879	874	872	871	870	870	870	869	868	867	866	864	862	861	859	860	863	865	868	870	872	874	877	878	8687			
4	878	877	874	873	872	870	869	869	870	870	870	870	870	868	868	870	871	873	878	888	882	885	889	889	8744			
5	888	884	882	881	880	879	878	876	875	874	874	873	872	871	870	870	874	877	878	880	882	884	886	887	8781			
6	887	883	882	881	880	879	879	878	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	878	880	879	879	878	878	878	880	881	883	888	888	890	891	892	8820			
8	892	890	889	888	887	883	880	880	880	879	878	878	878	877	875	876	878	880	885	888	891	892	895	898	8840			
9	897	897	893	891	890	887	885	885	885	883	882	881	881	880	879	879	880	884	889	892	894	896	897	897	8877			
10	898	897	892	891	891	889	887	887	887	885	884	882	881	880	879	880	882	885	890	892	894	896	898	898	8885			
11	899	898	895	893	892	889	886	885	885	883	882	881	880	878	878	880	881	883	886	889	890	892	892	895	8872			
12	895	895	891	888	886	884	883	881	880	879	879	877	876	873	871	873	877	880	882	884	886	888	889	891	8828			
13	890	890	888	887	886	884	883	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	882	885	883	881	880	879	880	882	885	890	892	895	896	897	898	8864			
15	898	896	892	891	890	888	886	885	885	883	881	880	880	879	878	880	883	884	889	894	895	897	898	898	8879			
16	898	898	894	892	891	889	888	885	883	882	882	881	880	879	878	880	882	883	888	891	893	895	897	898	8878			
17	898	896	892	891	890	887	885	883	882	881	880	880	880	875	876	878	880	883	888	890	892	894	895	896	8863			
18	896	895	893	891	890	888	886	885	884	882	880	880	880	879	878	880	881	884	889	891	895	895	897	898	8874			
19	898	897	894	892	891	888	885	883	882	882	882	881	880	880	880	881	883	888	890	895	898	899	900	901	8888			
20	901	900	899	897	896	895	894	893	893	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	893	894	893	892	890	888	890	891	893	896	900	901	902	905	904	8958			
22	903	900	900	898	897	896	895	893	892	891	890	890	890	890	889	890	894	895	899	904	910	910	911	910	8974			
23	910	910	906	905	904	903	903	901	900	900	900	899	899	898	897	898	899	902	905	910	914	918	918	918	9049			
24	918	917	913	911	910	907	904	902	900	900	900	899	899	896	895	897	899	903	906	910	914	916	918	920	9064			
25	920	920	918	917	917	915	913	911	910	907	905	902	900	900	900	900	902	908	912	918	923	931	936	940	9135			
26	938	933	930	928	926	924	923	921	920	918	917	917	917	915	910	909	910	913	916	920	925	930	935	940	9223			
27	942	940	939	937	936	934	932	930	929	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	928	927	925	923	920	920	921	923	928	933	935	939	943	946	951	9325			
29	949	945	940	937	935	931	928	926	925	924	923	923	923	921	921	922	925	929	934	938	941	946	950	948	9327			
30	946	941	936	933	930	929	928	926	924	923	922	921	920	920	921	922	923	930	935	938	942	951	953	953	9320			
31	950	946	940	939	938	935	932	931	930	929	929	927	925	923	922	923	928	930	935	940	945	953	956	954	9358			
Means.....	9056	9032	9000	8982	8969	8948	8931	8916	8908	8899	8894	8882	8874	8858	8849	8863	8887	8920	8961	8996	9026	9055	9075	9083	8953			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JUNE 1854.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				1·7 *		0·9 *		−1·6 *		0·6 *		−0·9 *																
1	1278	1263	1282	1273	1260	1250	1238	1232	1230	1223	1214	1204	1195	1180	1160	1127	1097	1042	1060	1047	1108	1149	1204	1255	1190	−433	757	1·003785
2	1265	1260	1262	1265	1265	1247	1227	1214	1204	1198	1190	1184	1180	1167	1158	1125	1078	1040	1032	1027	1094	1150	1180	1220	1176	−441	735	3966
3	1233	1234	1230	1207	1180	1184	1187	1189	1195	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	1207	1217	1208	1200	1172	1147	1120	1115	1080	1082	1126	1158	1200	1240	1260	1182	−444	738	3942
5	1230	1230	1220	1223	1222	1221	1218	1211	1207	1194	1180	1183	1187	1170	1167	1135	1138	1108	1097	1092	1127	1146	1205	1220	1180	−430	750	3843
6	1220	1210	1207	1201	1192	1183	1173	1160	1150	1147	1142	1136	1132	1130	1119	1075	1030	993	980	980	1043	1124	1202	1242	1132	−412	720	4091
7	1262	1280	1262	1248	1230	1229	1227	1212	1200	1189	1177	1165	1154	1150	1121	1113	1097	1062	1059	1070	1102	1155	1188	1212	1174	−414	760	3760
8	1197	1200	1198	1197	1192	1179	1165	1156	1150	1146	1140	1134	1130	1122	1089	1062	985	963	965	1003	1060	1107	1142	1170	1119	−385	734	3975
9	1164	1149	1148	1141	1130	1125	1118	1106	1097	1093	1088	1077	1068	1050	1034	1004	962	927	934	942	993	1040	1072	1098	1065	−331	734	3975
10	1112	1120	1110	1108	1103	1092	1080	1085	1093	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	1062	1030	1028	1028	1020	1000	1032	1019	1090	1112	1122	1117	1103	1149	1157	1082	−329	753	3818
12	1209	1220	1249	1246	1240	1235	1229	1203	1190	1176	1170	1140	1112	1110	1095	1120	1063	1077	1069	1095	1149	1205	1232	1280	1171	−328	843	3074
13	1362	1324	1262	1245	1225	1219	1212	1192	1175	1183	1190	1177	1165	1148	1140	1126	1130	1052	1027	1017	1030	1080	1117	1190	1166	−378	788	3529
14	1250	1273	1239	1218	1193	1187	1180	1173	1170	1163	1154	1151	1150	1150	1147	1132	1107	1090	1022	1000	972	1050	1110	1163	1144	−380	764	3727
15	1201	1209	1209	1208	1203	1207	1209	1208	1210	1206	1200	1176	1154	1164	1154	1125	1069	1015	998	1050	1082	1133	1199	1270	1161	−383	778	3612
16	1287	1241	1238	1225	1208	1203	1197	1193	1192	1175	1157	1153	1150	1152	1145	1132	1098	1080	1095	1120	1188	1215	1232	1243	1180	−385	795	3471
17	1210	1205	1210	1204	1195	1189	1182	1169	1159	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	1151	1142	1144	1148	1133	1110	1090	1052	1036	1010	1030	1040	1077	1138	1170	1133	−361	772	3660
19	1168	1169	1154	1149	1141	1135	1128	1122	1120	1116	1110	1109	1110	1100	1079	1060	1029	1010	1004	1030	1055	1125	1135	1166	1105	−346	759	3768
20	1180	1192	1167	1166	1162	1157	1150	1137	1127	1122	1115	1113	1113	1112	1100	1077	1048	1022	1010	1022	1027	1030	1082	1138	1107	−351	756	3793
21	1168	1160	1163	1161	1155	1152	1147	1138	1133	1106	1078	1108	1140	1130	1095	1075	1055	1013	979	980	1012	1070	1112	1150	1103	−371	732	3991
22	1172	1158	1160	1166	1169	1167	1164	1152	1143	1121	1097	1069	1042	1099	1070	1040	1034	1000	992	1032	1100	1172	1202	1200	1113	−386	727	4033
23	1155	1110	1112	1133	1150	1161	1170	1158	1150	1147	1142	1131	1122	1120	1103	1082	1041	1000	972	1010	1015	1040	1072	1132	1101	−371	730	4008
24	1130	1142	1150	1145	1137	1132	1126	1119	1115	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	1068	1020	1018	1018	1010	1005	1000	991	980	972	985	994	1003	1009	1016	1054	−309	745	3884
26	1024	1026	1029	1027	1022	1022	1021	1018	1018	1010	1000	1004	1010	1000	993	986	978	972	978	956	910	968	1030	1095	1004	−265	739	3933
27	1090	1095	1060	1060	1057	1049	1040	1028	1019	1020	1020	1019	1020	1013	980	960	925	883	872	893	928	970	1015	1053	1003	−274	729	4016
28	1070	1073	1061	1056	1048	1041	1033	1021	1012	1012	1010	995	982	968	960	972	943	914	880	896	913	938	997	1055	994	−285	709	4181
29	1080	1094	1070	1077	1080	1080	1078	1068	1062	1061	1058	1048	1040	1030	1027	999	960	929	900	910	940	962	1008	1036	1025	−292	733	3983
30	1048	1040	1019	1022	1021	1016	1010	1003	1000	1006	1010	1004	1000	998	975	962	940	922	920	915	933	962	978	1010	988	−262	726	4041
Means.....		1183	1180	1172	1168	1161	1156	1150	1141	1135	1127	1117	1111	1106	1100	1084	1067	1038	1012	1001	1013	1042	1084	1125	1162	1110			
Temp. Corrections		-402	-394	-381	-375	-371	-364	-360	-355	-351	-345	-341	-337	-335	-328	-324	-327	-332	-341	-351	-362	-374	-385	-394	-396	.....	−360		
Corrected Means.		781	786	791	793	790	792	790	786	784	782	776	774	771	772	760	740	706	671	650	651	668	699	731	766	.....	.....	750	
Mean Hourly variations from Monthly Mean. = 0		-31	-36	-41	-43	-40	-42	-40	-36	-34	-32	-26	-24	-21	-22	-10	10	44	79	100	99	82	51	19	-16				
		-0256	-0298	-0339	-0356	-0331	-0348	-0331	-0298	-0281	-0265	-0215	-0198	-0173	-0182	-0083	0083	0364	0653	0826	0818	0678	0421	0157	-0133	.....	$1+\frac{\Delta X}{X}=$	.....	1·003843

JUNE 1854.

				*		*		*		*		*																
1	950	945	940	937	935	933	932	931	930	927	925	922	920	919	919	919	921	925	930	934	940	945	950	948	9324			
2	946	945	941	939	938	935	932	931	930	929	929	928	928	923	920	922	927	931	935	939	943	946	947	948	9347			
3	946	941	937	936	935	933	932	931	930	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	930	930	929	929	929	928	929	930	935	940	941	945	949	949	944	9358			
5	941	938	937	937	937	935	933	931	930	928	927	926	926	920	920	921	923	925	929	931	935	939	946	945	9317			
6	941	939	935	933	931	929	927	924	922	921	920	920	920	915	915	916	918	920	922	926	931	935	935	937	9263			
7	939	939	936	934	932	929	927	925	924	922	920	918	916	913	914	914	917	919	922	929	933	940	942	940	9268			
8	934	930	930	927	925	923	921	920	919	915	912	910	908	908	909	910	910	911	914	917	920	921	922	920	9182			
9	918	916	914	912	911	908	906	903	900	900	900	900	900	895	892	892	892	894	895	898	900	901	906	908	9025			
10	910	910	906	903	900	899	898	898	898	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	898	899	897	896	894	892	893	897	900	904	907	910	911	913	916	9020			
12	919	917	912	910	909	904	900	898	897	896	895	892	890	890	889	890	892	894	898	901	905	908	915	923	9018			
13	930	930	927	923	920	918	917	915	913	911	910	908	907	904	903	905	907	910	912	915	918	924	928	933	9162			
14	936	932	925	923	920	917	914	913	912	911	910	909	909	904	905	907	910	911	914	917	920	925	928	930	9168			
15	930	928	920	919	918	918	918	916	915	912	910	909	909	908	906	908	910	913	915	919	922	927	935	939	9177			
16	932	929	922	921	920	920	920	918	917	915	913	912	910	908	908	909	910	911	915	920	923	929	930	930	9184			
17	930	924	920	917	914	912	911	910	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	909	908	906	905	902	900	900	901	904	907	910	915	919	920	919	9114			
19	915	914	911	910	908	907	906	904	903	902	901	900	900	900	898	900	900	902	906	910	912	915	921	920	9069			
20	920	918	913	912	910	909	907	905	903	902	901	900	900	900	898	900	901	903	908	911	915	918	922	924	9084			
21	921	920	919	917	915	915	915	912	910	909	909	910	912	910	907	907	907	910	913	915	920	921	922	924	9142			
22	924	920	920	921	923	921	920	919	918	915	912	911	910	909	908	910	910	912	917	923	930	933	934	930	9188			
23	926	922	921	920	920	918	917	915	914	912	910	910	910	909	907	907	908	910	911	914	914	914	914	915	9141			
24	914	913	910	910	910	908	907	905	903	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	896	890	889	888	885	881	881	882	887	889	890	891	892	893	893	8961			
26	891	890	890	885	880	881	882	881	880	879	878	877	876	874	874	876	878	880	882	885	890	895	895	896	8832			
27	899	897	892	891	890	886	883	882	881	880	880	880	880	879	878	879	880	881	883	887	890	892	895	895	8858			
28	898	898	892	891	890	890	890	888	887	885	883	881	880	879	880	881	882	887	888	890	894	898	901	902	8890			
29	902	901	897	895	894	893	893	892	891	890	889	888	888	886	883	882	883	885	889	890	890	893	894	894	8909			
30	893	890	882	881	881	880	880	879	878	878	878	878	878	879	878	876	877	878	880	882	885	890	890	890	8822			
Means.....		9233	9210	9173	9155	9142	9123	9111	9095	9083	9066	9053	9042	9037	9016	9004	9013	9028	9054	9085	9117	9152	9184	9211	9217	9109		

Temperature of Horizontal Force Magnetometer.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd. | Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto to Ther. = — 0°·5 | $k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$ | Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JULY 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				3·1 *		1·1 *		—1·3 *		2·1 *		—0·2 *																
1	1057	1050	1050	1048	1040	1036	1030	1026	1024	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	1034	1040	1032	1025	1040	1003	1000	999	949	926	940	951	997	1046	1020	1015	-269	746	1·003876
3	1011	1039	1032	1040	1041	1059	1075	1047	1022	1014	1002	1005	1008	990	980	971	970	988	940	935	927	965	1033	1060	1006	-243	763	3735
4	1072	1054	1037	1035	1027	1025	1020	1018	1018	1001	980	986	992	979	952	935	910	875	887	890	930	943	988	1012	982	-232	750	3843
5	1042	1057	1071	1074	1071	1053	1032	1025	1020	1022	1020	1017	1015	1010	995	990	953	942	940	950	957	969	990	1020	1010	-263	747	3868
6	1060	1072	1066	1063	1053	1048	1040	1031	1025	1025	1020	1011	1002	990	973	934	879	840	812	832	848	920	973	1020	981	-277	704	4223
7	1046	1050	1058	1063	1061	1054	1045	1041	1040	1036	1028	1018	1008	980	953	947	893	900	864	871	914	947	1030	1153	1000	-276	724	4058
8	1199	1180	1151	1129	1101	1138	1172	1119	1068	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	1073	1073	1067	1062	1040	999	989	940	910	859	830	839	902	955	1030	1034	-245	789	3520
10	1087	1099	1113	1100	1080	1092	1102	1092	1084	1094	1100	1092	1084	1092	1078	1080	1062	1040	1010	1028	1077	1130	1145	1138	1087	-210	877	2793
11	1121	1101	1090	1094	1092	1083	1072	1069	1068	1063	1054	1051	1048	1030	1009	980	950	922	920	911	939	970	1025	1087	1031	-205	826	3215
12	1120	1134	1100	1103	1100	1088	1074	1069	1066	1050	1030	1040	1050	1048	1037	1017	960	899	887	890	960	1040	1067	1098	1039	-247	792	3495
13	1110	1091	1065	1061	1050	1045	1037	1037	1040	1038	1032	1026	1020	1010	990	972	920	910	910	855	849	908	1020	1093	1004	-233	771	3669
14	1110	1127	1099	1088	1070	1065	1057	1052	1050	1041	1028	1020	1012	1010	1020	1012	979	950	938	957	970	982	994	1004	1026	-219	807	3372
15	1015	1012	992	988	978	975	970	961	955	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	947	934	938	942	940	942	940	912	870	833	820	831	855	898	962	934	-164	770	3677
17	1000	1012	1000	992	977	974	968	968	970	968	962	956	950	950	942	928	887	869	840	821	837	863	899	967	938	-183	755	3801
18	1007	1012	997	1003	1002	992	980	979	981	980	974	975	976	980	960	930	909	880	860	847	861	890	902	970	952	-215	737	3950
19	992	1015	1012	1015	1012	1007	1000	1045	1092	1063	1029	1014	1000	995	978	968	940	920	917	920	928	974	1000	1030	994	-251	743	3900
20	1036	1067	1061	1070	1072	1070	1066	1053	1042	1039	1031	1022	1013	995	980	952	920	890	842	819	950	962	1010	1066	1001	-305	696	4289
21	1090	1100	1099	1098	1090	1077	1062	1050	1040	1037	1030	1025	1020	1010	992	960	937	900	878	885	911	968	995	1037	1012	-287	725	4049
22	1048	1051	1051	1058	1059	1056	1050	1045	1042	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	1048	1050	1040	1030	1020	1010	990	950	904	910	922	980	990	1017	1050	1015	-278	737	3950
24	1167	1210	1230	1194	1151	1123	1092	1091	1092	1085	1073	1066	1060	1059	1040	1025	1002	970	970	955	1017	1088	1113	1130	1083	-262	821	3256
25	1157	1170	1139	1129	1112	1110	1105	1096	1090	1088	1081	1084	1087	1070	1050	1028	998	949	930	941	954	979	1037	1071	1061	-282	779	3603
26	1094	1100	1094	1095	1090	1087	1082	1076	1072	1069	1062	1061	1060	1049	1048	1051	1010	974	950	947	949	980	1031	1108	1047	-307	740	3925
27	1135	1180	1199	1197	1188	1195	1200	1198	1198	1174	1145	1142	1139	1118	1079	1020	1001	944	909	919	937	1002	1035	1050	1096	-311	785	3553
28	1070	1064	1050	1054	1051	1058	1062	1055	1050	1051	1047	1038	1030	1032	1006	1002	970	950	962	995	1031	1062	1089	1077	1036	-312	724	4058
29	1080	1105	1129	1108	1080	1076	1070	1057	1046	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	1052	1053	1057	1062	1057	1049	1028	990	950	975	969	1010	1045	1088	1110	1052	-319	733	3983
31	1131	1120	1124	1115	1100	1091	1080	1078	1078	1071	1060	1056	1052	1050	1037	1020	1012	998	963	1057	1070	927	952	987	1051	-297	754	3810
Means.....	1079	1087	1081	1077	1067	1065	1059	1053	1049	1045	1036	1032	1029	1021	1004	987	956	927	909	912	940	971	1013	1052	1019			
Temp. Corrections	-285	-282	-276	-272	-269	-264	-262	-259	-257	-252	-249	-245	-243	-237	-231	-229	-231	-237	-246	-253	-263	-273	-280	-284	.....	-257		
Corrected Means.	794	805	805	805	798	801	797	794	792	793	787	787	786	784	773	758	725	690	663	659	677	698	733	768	.....	.....	762	
Mean Hourly Variations from Monthly Mean. cm·00	-32	-43	-43	-43	-36	-39	-35	-32	-30	-31	-25	-25	-24	-22	-11	4	37	72	99	103	85	64	29	-6				
	-0265	-0356	-0356	-0356	-0298	-0323	-0289	-0266	-0248	-0256	-0206	-0206	-0198	-0182	-0091	0033	0306	0595	0816	0851	0702	0529	0240	-0050	.....	$1+\frac{\Delta X}{X}=$	.....	1·003743

JULY 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	891	890	888	887	886	885	885	884	883	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	885	888	886	885	882	881	880	880	880	881	881	881	883	884	885	8842			
3	886	886	884	883	882	882	882	879	876	874	872	871	871	870	870	869	870	870	871	874	877	878	880	880	8765			
4	880	879	876	875	874	872	870	874	878	875	872	870	869	865	865	863	865	868	870	871	875	880	884	887	8732			
5	888	887	887	885	884	883	882	885	888	883	878	876	875	873	872	872	876	878	880	882	887	890	894	896	8825			
6	898	895	893	891	890	890	890	887	885	883	882	881	880	879	877	877	879	880	882	885	888	892	895	897	8865			
7	898	896	892	892	892	890	888	885	882	881	880	879	879	878	878	880	881	883	886	888	889	890	892	893	8863			
8	894	894	892	891	890	887	885	885	885	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	883	882	881	880	880	870	862	859	859	860	860	862	866	869	870	8769			
10	870	870	870	869	868	868	868	868	868	867	866	864	863	860	858	857	858	860	864	870	874	878	875	871	8668			
11	870	868	867	865	863	863	863	862	862	861	860	859	859	858	858	858	860	862	865	870	874	879	882	885	8655			
12	889	889	882	882	882	881	881	880	880	877	874	872	870	870	869	869	868	870	872	877	880	881	882	882	8775			
13	882	881	880	879	878	876	875	872	870	870	870	870	870	870	869	868	868	869	870	871	873	875	877	880	8735			
14	880	880	880	879	878	876	875	873	872	871	870	869	868	866	863	863	862	864	864	864	864	863	863	863	8696			
15	861	861	860	860	860	858	857	854	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	851	850	848	846	845	843	843	843	846	849	851	855	858	861	865	8532			
17	865	864	861	860	860	859	859	859	859	857	855	853	852	851	852	852	853	853	857	860	863	866	869	871	8588			
18	872	870	870	869	869	867	866	866	867	866	865	864	864	862	862	862	862	864	868	870	874	879	880	882	8683			
19	882	882	881	880	879	878	878	877	877	875	874	874	875	874	872	870	871	873	876	879	882	889	896	898	8788			
20	898	898	899	899	900	900	900	900	901	899	897	894	892	888	885	883	883	888	890	890	892	897	900	901	8948			
21	901	900	898	895	893	892	892	891	890	889	888	886	885	882	880	880	880	882	887	889	890	893	894	894	8896			
22	895	897	896	894	892	891	890	889	888	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	885	882	881	881	880	879	879	880	880	882	885	887	890	891	890	8868			
24	887	887	886	885	884	883	882	882	882	881	880	880	880	878	877	875	876	878	879	880	882	886	888	890	8820			
25	893	891	890	890	890	889	889	888	888	887	886	885	884	882	881	882	881	882	888	889	892	893	896	897	8880			
26	898	898	897	896	895	894	893	892	892	891	891	890	890	890	889	889	890	890	896	898	903	908	910	913	8955			
27	911	908	904	902	901	899	897	895	893	891	890	889	889	886	884	886	888	890	892	898	903	907	908	908	8966			
28	909	908	903	901	900	898	897	896	896	894	892	891	890	890	888	888	890	890	892	897	902	903	907	907	8970			
29	906	902	902	901	900	898	897	895	894	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	897	900	900	900	898	893	892	892	895	898	898	901	903	905	908	8990			
31	908	910	908	903	899	896	894	892	890	890	890	888	887	887	884	883	883	885	888	888	890	891	893	895	8926			
Means.....	8889	8881	8864	8851	8842	8829	8821	8812	8807	8793	8782	8770	8763	8748	8730	8724	8730	8746	8772	8794	8823	8853	8875	8888	8808			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of Interpolations.

Correction for 1° Faht. = 3·3963 scd. Ditto to Ther. = — 0°·5

$k. = a.$ cotan. $v. = 0{\cdot}0003139 \times$ cotan. $75° 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

AUGUST 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				4·4 *		0·7 *		−0·9 *		−1·3 *		−0·9 *																
1	1011	1030	1070	1070	1062	1062	1060	1046	1033	1030	1030	1029	1030	1022	1010	990	946	920	920	936	960	985	1007	1032	1012	−293	719	1·004099
2	1055	1062	1060	1063	1058	1051	1042	1034	1028	1018	1010	1004	1000	982	970	964	932	896	855	860	880	891	939	995	985	−309	676	4454
3	1050	1034	1051	1080	1100	1091	1080	1084	1090	1083	1079	1084	1090	1038	1053	1050	1078	1005	1039	1013	988	1000	1037	1095	1058	−293	765	3718
4	1150	1127	1109	1119	1120	1101	1080	1064	1049	1061	1075	1059	1045	1060	1012	1042	1020	977	972	968	961	1017	1032	1072	1054	−274	780	3595
5	1090	1083	1080	1104	1120	1113	1105	1106	1109	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	1081	1055	1048	1043	1040	1033	1010	972	942	924	950	973	992	1015	1028	1042	−273	769	3685
7	1065	1087	1088	1079	1061	1059	1055	1047	1040	1039	1040	1024	1010	1013	985	954	918	900	912	939	943	1011	1059	1093	1018	−260	758	3777
8	1080	1058	1064	1061	1050	1043	1034	1035	1038	1029	1028	1023	1020	1018	1000	980	963	935	955	970	982	1001	1022	1041	1018	−265	753	3818
9	1057	1040	1042	1046	1041	1041	1039	1035	1032	1020	1010	1008	1008	1003	980	967	946	898	855	848	865	947	1010	1040	991	−265	726	4041
10	1051	1030	1042	1031	1012	995	977	973	970	956	945	947	950	942	928	922	889	838	822	819	872	917	997	1023	952	−221	731	4000
11	1055	1060	1029	1024	1010	995	978	977	978	970	965	962	960	958	940	918	895	850	814	833	847	880	957	999	952	−207	745	3884
12	1017	1005	997	993	980	981	980	979	980	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	959	940	943	948	940	922	895	870	852	840	844	871	907	924	941	938	−208	730	4008
14	958	963	971	980	980	970	958	949	942	945	950	948	948	940	922	900	865	834	828	857	882	899	950	987	930	−211	719	4099
15	995	989	992	991	982	981	978	968	960	955	953	951	950	930	910	888	858	830	838	867	890	900	931	960	935	−232	703	4231
16	972	985	950	959	960	965	968	972	978	973	970	968	968	945	924	890	862	827	820	860	911	962	985	1009	941	−244	697	4281
17	1021	1025	1042	1038	1025	1014	1001	995	990	974	960	963	968	960	952	935	915	880	874	900	915	968	990	1015	972	−251	721	4083
18	1008	1001	1010	1009	1000	1002	1002	999	998	993	990	985	982	970	940	920	895	890	873	855	900	933	950	964	961	−241	720	4091
19	957	948	962	975	980	990	998	993	990	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	1013	1038	1031	1025	1008	969	947	960	978	982	995	1030	1049	1057	1063	997	−230	767	3702
21	1050	1070	1053	1056	1050	1049	1047	1046	1047	1027	1010	1011	1013	1018	1003	999	962	920	870	882	900	970	1019	1033	1004	−237	767	3702
22	1050	1027	1021	1031	1033	1027	1019	1019	1020	1014	1010	1008	1007	1000	988	978	953	938	920	913	900	947	985	1017	993	−230	763	3735
23	1073	1080	1059	1054	1040	1026	1010	1009	1010	994	980	966	953	940	910	889	875	855	870	882	930	960	991	1022	974	−215	759	3768
24	1097	1055	991	994	988	980	970	958	948	959	972	974	977	960	948	915	930	878	890	900	930	971	990	1030	967	−220	747	3868
25	1067	1075	1077	1064	1042	1045	1047	1034	1022	1005	990	975	962	970	968	943	947	871	780	902	925	915	962	1019	984	−225	759	3768
26	1054	1011	1016	1032	1039	1040	1039	1033	1028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	1015	1005	997	990	985	980	963	932	888	875	922	958	1020	1038	1050	996	−255	741	3917
28	1064	1032	1034	1036	1030	1027	1022	1014	1008	1007	1009	998	988	973	957	943	905	870	853	841	881	910	950	982	972	−252	720	4091
29	1010	1025	1012	1015	1010	1011	1010	1003	997	987	980	975	972	957	948	930	898	785	780	797	810	830	878	942	940	−238	702	4239
30	951	930	932	940	939	945	950	973	998	948	900	901	903	900	890	849	844	832	803	830	840	898	950	970	909	−205	704	4223
31	991	1005	989	999	1001	991	979	974	970	968	968	965	963	966	952	930	890	882	847	830	865	897	972	1025	951	−222	729	4016
Means.....	1037	1031	1028	1031	1026	1022	1016	1012	1009	1001	995	991	988	979	963	945	923	888	874	889	911	947	985	1017	979			
Temp. Corrections.	-274	-269	-263	-258	-255	-251	-247	-244	-241	-237	-233	-230	-228	-222	-217	-216	-220	-226	-233	-241	-251	-258	-265	-271	.....	-244		
Corrected Means..	763	762	765	773	771	771	769	768	768	764	762	761	760	757	746	729	703	662	641	648	660	689	720	746	.....	.....	735	
Mean Hourly Deflections from Monthly Mean. = ·00	-28	-27	-30	-38	-36	-36	-34	-33	-33	-29	-27	-26	-25	-22	-11	6	32	73	94	87	75	46	15	-11				
	-0231	-0223	-0248	-0314	-0298	-0298	-0281	-0273	-0273	-0240	-0223	-0215	-0208	-0182	-0091	0050	0265	0603	0777	0719	0619	0381	0124	-0091	.....	$1+\frac{\Delta X}{X}=$	.....	1·003966

AUGUST 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	897	897	894	893	892	892	892	891	890	889	888	888	888	883	883	882	884	888	889	891	896	898	901	904	8913			
2	905	904	903	901	900	899	899	896	893	891	890	890	890	888	885	885	888	890	894	897	900	902	905	908	8960			
3	908	906	901	899	898	895	892	891	890	888	887	884	881	880	880	880	882	885	889	890	890	895	898	900	8912			
4	899	896	894	892	891	888	886	884	882	881	880	880	880	878	876	878	880	881	882	884	887	890	894	895	8858			
5	895	893	890	890	890	890	890	887	885	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	884	883	882	881	880	874	872	873	878	880	882	886	890	895	897	8853			
7	896	893	891	888	885	884	883	882	882	880	879	877	875	872	871	870	872	873	876	880	882	886	889	891	8815			
8	894	890	889	888	887	885	883	882	882	881	880	880	878	876	875	875	876	880	882	884	886	890	893	8832				
9	892	890	890	889	889	888	888	886	885	882	879	877	875	872	872	873	874	878	880	882	885	887	889	889	8830			
10	885	881	880	878	876	873	871	870	870	869	868	865	862	860	860	860	861	864	866	868	870	872	875	876	8700			
11	877	875	872	871	870	867	864	863	862	861	861	860	860	860	860	860	861	862	865	867	869	870	871	873	8659			
12	876	873	870	870	870	870	870	870	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	865	860	860	860	860	858	858	860	860	862	866	868	870	870	873	8662			
14	875	874	872	871	871	867	863	861	860	860	860	860	860	860	860	860	862	865	867	870	875	878	880	880	8671			
15	880	879	877	874	872	872	872	872	872	871	870	870	870	868	866	868	870	870	872	877	877	878	880	882	8733			
16	882	882	880	879	879	878	878	877	877	876	876	874	873	870	869	870	870	871	873	876	880	882	883	886	8767			
17	888	886	883	881	880	880	880	880	880	879	878	876	874	870	870	869	870	873	878	881	883	885	886	887	8790			
18	888	887	886	883	880	879	878	875	872	871	870	870	870	870	868	868	869	870	873	877	879	880	880	881	8760			
19	881	878	875	873	872	870	868	866	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	867	870	870	870	869	868	868	870	872	875	876	878	880	881	883	8727			
21	883	883	882	881	880	879	878	877	877	876	875	874	873	873	872	870	870	868	865	866	868	870	873	877	8746			
22	878	878	878	878	878	876	875	875	875	874	873	872	872	870	869	869	868	866	865	867	870	871	874	877	8728			
23	878	878	877	874	872	869	867	865	864	863	862	862	862	860	860	860	862	865	869	870	873	876	877	876	8684			
24	877	876	872	872	872	871	870	869	868	866	865	863	862	862	860	862	864	867	870	871	875	878	880	880	8697			
25	880	880	880	878	876	874	872	870	869	869	869	870	872	872	868	864	863	861	861	865	870	872	875	878	8712			
26	880	880	879	879	880	880	880	880	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	879	879	878	877	874	871	872	875	877	881	884	887	889	890	889	8800			
28	888	886	884	883	882	881	880	880	880	879	878	876	875	872	870	870	872	875	878	879	881	881	884	884	8791			
29	884	883	881	880	880	880	880	880	880	879	878	877	876	873	871	870	869	867	867	867	869	870	871	871	8751			
30	871	871	870	869	869	868	868	868	868	865	862	861	861	860	859	856	857	860	861	864	867	869	870	874	8653			
31	876	876	874	872	871	870	870	870	870	869	868	866	865	865	863	863	863	865	869	871	875	879	880	882	8705			
Means.....	8857	8843	8824	8810	8801	8787	8777	8766	8759	8746	8736	8727	8720	8703	8689	8686	8698	8714	8736	8759	8787	8809	8830	8847	8767			

*The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd. Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto to Ther. = −0°·5 $k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$ Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETE.

SEPTEMBER 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				3·9 *		1·4 *		2·6 *		1·3 *		−1·7 *																
1	1040	1022	1026	1026	1019	1001	980	1003	1020	1026	1030	1016	1005	998	982	992	966	950	935	948	960	957	978	1010	995	−246	749	1·003851
2	1072	1040	1029	1032	1028	1035	1040	1028	1010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	1001	990	984	981	970	962	950	932	912	927	910	918	955	974	990	986	−243	743	3900
4	998	987	988	997	998	1004	1008	1002	990	986	979	967	958	937	922	891	860	850	870	893	920	935	937	940	951	−226	725	4049
5	943	957	964	975	978	973	965	969	968	965	960	962	968	952	950	922	871	837	805	820	872	915	965	980	935	−217	718	4108
6	965	943	937	941	938	933	925	930	930	926	920	914	912	912	908	882	860	833	821	830	852	880	915	912	905	−174	731	4000
7	905	896	898	902	899	901	900	898	890	886	880	872	867	867	855	830	794	744	720	732	764	807	833	881	851	−146	705	4214
8	892	880	890	890	883	877	868	868	862	852	840	833	830	849	859	847	792	745	690	755	823	890	902	908	847	−132	715	4132
9	900	880	870	885	893	883	870	869	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	871	878	867	860	840	805	830	767	709	700	750	777	822	850	910	840	−123	717	4116
11	975	990	998	1009	1012	1071	1127	1136	1140	1132	1121	1093	1069	1038	1012	968	934	929	940	957	963	988	995	992	1025	−161	864	2901
12	998	1003	1012	1004	988	990	990	997	998	990	980	965	954	953	960	948	890	849	848	863	880	903	924	958	952	−186	766	3718
13	978	977	973	979	978	989	997	992	982	980	975	956	940	980	1010	965	930	933	906	940	940	952	1000	982	968	−205	763	3735
14	1000	998	998	1002	998	998	995	990	980	987	992	993	998	990	1010	1000	979	937	898	927	935	1002	1047	1105	990	−206	784	3562
15	1060	1040	1038	1029	1013	1009	1002	1002	996	999	1000	981	966	950	950	899	858	822	866	905	933	932	948	965	965	−197	768	3694
16	950	968	986	982	971	969	965	969	968	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	957	943	940	940	940	919	915	895	873	870	900	928	945	960	984	943	−173	770	3677
18	1007	993	999	1005	1003	989	973	977	975	979	981	973	968	959	948	952	918	880	909	924	948	965	995	990	967	−199	768	3694
19	990	985	984	991	990	992	991	993	989	976	960	954	952	942	932	897	854	824	820	830	872	918	945	970	940	−212	728	4025
20	988	995	1017	1020	1015	1000	982	984	980	972	962	961	964	937	950	921	842	780	770	769	803	839	921	980	931	−223	708	4190
21	1010	990	997	1025	1046	1049	1050	1035	1015	1005	992	972	955	950	982	970	952	888	912	910	923	960	1005	1058	985	−236	749	3851
22	1032	1030	1011	1031	1044	1035	1023	1022	1015	999	980	977	978	972	960	946	894	855	846	850	893	900	957	980	968	−230	738	3942
23	975	965	966	976	976	981	984	979	968	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	961	952	945	942	940	930	890	829	805	777	825	885	962	1058	1098	940	−226	714	4140
25	1115	1110	1137	1126	1107	1107	1105	1081	1052	1032	1009	993	980	970	972	942	894	849	840	874	923	978	1012	1017	1009	−239	770	3677
26	1002	990	981	983	977	973	967	966	960	960	958	937	920	932	940	987	982	928	888	885	940	997	1040	1090	966	−243	723	4066
27	1135	1120	1094	1078	1055	1054	1050	1038	1020	1031	1040	1033	1030	1010	1028	992	939	884	850	862	935	1018	1055	1057	1017	−243	774	3644
28	1070	1056	1032	1055	1070	1065	1057	1051	1040	1037	1032	1020	1012	1020	1007	990	929	866	840	882	953	1015	1048	1055	1008	−249	759	3768
29	1050	1032	1022	1019	1009	1013	1015	1005	990	991	990	978	970	965	970	932	880	841	823	845	893	950	1010	1065	969	−241	728	4025
Means.....	1002	994	994	998	996	996	993	991	984	980	974	963	957	951	949	930	890	853	843	863	897	935	971	995	954			
Temp. Corrections	−233	−226	−220	−217	−215	−212	−211	−207	−205	−201	−198	−194	−191	−186	−183	−181	−186	−191	−198	−207	−216	−224	−230	−234	.....	−207		
Corrected Means..	769	768	774	781	781	784	782	784	779	779	776	769	766	765	766	749	704	662	645	656	681	711	741	761	.....	.....	747	
Mean Hourly Variations from Monthly Mean. = ·00	−22	−21	−27	−34	−34	−37	−35	−37	−32	−32	−29	−22	−19	−18	−19	−2	43	85	102	91	66	36	6	−14	.....	$1+\frac{\Delta X}{X}=$	.....	1·003868
	−0182	−0173	−0223	−0281	−0281	−0306	−0289	−0306	−0265	−0265	−0240	−0182	−0157	−0149	−0157	−0017	0356	0702	0843	0752	0546	0298	0050	−0116				

SEPTEMBER 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
1	881	880	878	878	878	878	878	877	876	874	873	872	872	871	871	871	873	875	878	880	883	883	885	887	8772			
2	887	884	884	883	882	881	880	879	879	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	875	871	871	871	870	869	868	869	870	872	873	875	879	880	883	8765			
4	882	882	880	878	877	877	877	876	876	875	874	872	870	865	861	860	860	862	864	867	870	870	870	870	8715			
5	870	870	870	870	870	869	868	868	868	866	865	865	865	864	863	863	866	868	869	870	871	875	879	880	8688			
6	872	868	861	860	860	859	859	858	858	857	857	854	852	850	851	850	850	850	850	852	853	854	857	857	8562			
7	858	857	856	854	852	851	850	849	848	848	848	845	842	842	842	840	840	841	843	845	848	849	850	855	8480			
8	857	854	851	850	850	849	848	846	845	843	842	842	842	840	840	837	837	838	840	840	842	841	841	840	8440			
9	842	841	840	840	840	839	839	838	838	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	839	840	840	840	838	836	837	838	840	841	844	847	850	852	853	8413			
11	854	855	854	853	852	851	851	850	850	850	850	849	848	846	845	846	849	850	850	855	859	860	863	865	8523			
12	867	865	862	861	861	860	860	859	858	857	857	855	854	852	852	852	852	854	858	860	865	870	871	875	8599			
13	875	870	870	869	868	867	867	866	865	864	863	861	860	860	858	858	859	860	861	866	870	871	872	872	8655			
14	870	870	868	867	866	865	865	865	865	863	862	861	860	860	859	860	861	862	865	867	870	872	878	877	8658			
15	877	870	870	869	869	869	870	869	869	865	862	861	860	858	855	854	853	853	857	860	860	860	860	860	8629			
16	860	859	857	854	851	851	851	850	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	852	855	853	852	850	850	850	853	856	859	861	863	868	870	870	8560			
18	870	869	865	864	864	863	863	862	862	861	861	859	858	856	855	855	859	860	862	865	869	872	875	875	8635			
19	875	872	869	869	869	869	870	868	867	865	864	862	860	859	858	858	859	861	865	870	874	878	880	880	8675			
20	879	878	876	875	874	874	874	872	871	868	865	865	866	865	862	862	864	866	868	870	872	874	877	880	8707			
21	880	879	879	879	880	879	878	875	873	872	871	870	869	868	868	865	866	869	870	873	875	880	882	885	8744			
22	883	882	880	878	877	877	877	876	875	872	870	870	870	868	867	864	867	866	867	868	870	872	874	875	8727			
23	875	875	874	872	871	870	870	869	869	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	869	870	868	866	865	864	865	868	870	871	874	878	880	882	883	8716			
25	882	880	878	877	877	876	875	873	872	871	870	870	870	870	868	868	869	870	872	878	881	885	887	888	8753			
26	885	883	880	879	879	878	877	876	876	874	872	871	870	870	870	870	870	872	873	878	880	882	883	883	8763			
27	883	880	880	879	878	876	875	875	875	873	872	871	871	870	870	870	871	873	877	880	882	885	885	885	8765			
28	885	882	880	880	880	879	878	877	877	876	876	875	874	872	871	871	872	874	878	880	883	886	886	888	8783			
29	889	884	883	881	880	880	880	878	876	874	873	871	870	868	866	867	869	870	871	872	877	879	880	880	8758			
Means.....	8735	8716	8698	8688	8682	8675	8672	8660	8655	8641	8633	8621	8613	8599	8588	8584	8598	8612	8632	8659	8687	8710	8728	8738	8659			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75^\circ\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

OCTOBER 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				1·7 *		1·7 *		4·3 *		−1·4 *		−0·9 *																
September 30	1060	1013	1010	1004	995	1000	1001	986	963	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	945	930	925	921	918	970	909	847	788	755	798	843	911	967	980	935	−206	729	1·004016
2	971	960	960	968	972	972	968	968	960	949	940	929	920	925	948	888	850	797	770	797	840	908	977	992	922	−199	723	4066
3	980	960	950	953	952	952	948	953	950	944	940	929	920	910	917	885	830	776	740	774	828	875	910	902	903	−189	714	4140
4	897	890	923	933	939	932	922	915	900	894	890	877	866	875	864	822	764	707	675	704	768	820	887	900	857	−158	699	4264
5	891	872	873	874	872	884	892	890	880	881	885	877	870	867	870	830	775	732	702	730	792	840	881	893	848	−168	680	4421
6	895	900	900	896	889	893	894	901	900	876	855	851	848	815	824	780	723	675	707	702	762	820	871	890	836	−170	666	4537
7	909	895	895	899	899	892	882	900	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	1004	1100	1094	1089	1080	1107	1119	1057	1032	1029	1030	1060	1112	1147	1155	1012	−199	813	3322
9	1169	1120	1106	1104	1098	1095	1088	1087	1078	1061	1047	1038	1030	1035	1030	993	941	888	864	885	930	990	1042	1051	1032	−216	816	3297
10	1062	1030	1028	1037	1042	1042	1038	1023	999	988	980	974	970	950	935	900	860	800	790	810	862	943	980	1003	960	−206	754	3810
11	991	980	985	994	999	1000	998	997	987	981	977	972	968	954	938	925	866	819	802	822	879	928	940	980	945	−209	736	3958
12	1019	990	968	997	1023	1063	1100	1114	1120	1090	1062	1044	1028	1007	985	992	966	898	912	930	992	1047	1085	1057	1020	−205	815	3305
13	1033	1020	1030	1027	1020	1012	1001	992	974	979	987	983	980	970	945	912	855	809	800	830	893	960	1011	1020	960	−196	764	3727
14	1000	981	974	981	984	993	999	990	972	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	958	947	943	940	932	937	922	874	842	807	821	854	902	952	977	937	−196	741	3917
16	964	953	970	973	972	964	953	943	925	916	910	905	902	897	893	868	813	764	729	739	775	817	870	890	888	−155	733	3983
17	884	877	882	874	863	867	867	868	860	855	852	825	800	775	768	730	699	660	654	713	775	815	827	822	809	−105	704	4223
18	820	808	820	846	868	878	885	877	860	846	834	829	825	825	803	793	760	724	756	753	769	798	805	807	816	− 71	745	3884
19	794	798	831	838	842	835	824	825	818	812	808	802	797	790	768	708	641	602	595	641	720	784	808	814	771	− 39	732	3991
20	782	770	782	795	804	801	794	795	788	783	780	779	779	772	749	690	649	600	570	609	680	744	770	770	743	− 23	720	4091
21	752	742	762	772	778	780	778	792	798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	787	778	774	772	770	750	700	639	612	615	632	699	740	765	780	740	− 22	718	4108
23	760	757	759	761	760	763	762	755	740	743	749	744	741	740	679	662	622	610	629	647	642	723	740	830	722	− 34	688	4356
24	915	888	853	890	924	912	897	891	877	868	862	844	828	817	810	768	730	712	737	690	754	822	892	877	836	− 62	774	3644
25	870	854	915	899	880	868	853	836	810	815	822	814	807	857	870	813	778	746	762	744	788	830	880	910	834	− 89	745	3884
26	897	880	861	862	860	873	882	859	828	849	872	862	854	868	850	810	760	710	668	670	720	793	850	880	826	− 97	729	4016
27	895	902	900	892	880	885	886	874	853	855	860	844	830	824	825	780	733	685	640	671	728	773	820	831	819	− 82	737	3950
28	820	817	829	832	832	834	832	830	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	809	800	794	790	787	778	755	710	682	652	650	680	730	747	755	774	− 66	708	4190
30	772	782	803	804	802	808	810	825	832	826	822	814	807	804	768	740	718	710	712	722	748	767	780	792	782	− 76	706	4206
31	822	833	840	836	828	832	832	833	825	820	818	813	810	820	752	707	642	628	604	646	690	740	768	800	772	− 79	693	4314
Means.....	912	899	904	909	910	912	911	908	897	894	893	884	877	873	864	830	782	741	729	747	795	849	888	902	863			
Temp. Corrections	-151	-146	-142	-139	-138	-134	-132	-129	-128	-125	-124	-121	-119	-115	-112	-112	-114	-118	-125	-132	-138	-142	-145	-146	.....	-130		
Corrected Means..	761	753	762	770	772	778	779	779	769	769	769	763	758	758	752	718	668	623	604	615	657	707	743	756	.....	.....	733	
Mean Hourly Variations from Monthly Mean. = ·00	-28	-20	-29	-37	-39	-45	-46	-46	-36	-36	-36	-30	-25	-25	-19	15	65	110	129	118	76	26	-10	-23		$\frac{\Delta X}{X}$ =		
	-0231	-0165	-0240	-0308	-0323	-0372	-0381	-0381	-0298	-0298	-0298	-0248	-0206	-0208	-0157	0124	0537	0909	1066	0875	0628	0215	-0083	-0190	.....	.....		1·003983

OCTOBER 1854. Temperature of Horizontal Force Magnetometer.

				*		*		*		*		*																
September 30	880	877	875	874	874	873	872	871	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	865	861	860	860	858	853	851	852	857	860	862	865	868	870	871	8658			
2	871	870	867	865	864	863	863	862	862	861	860	860	860	860	859	857	856	858	860	863	868	870	871	873	8635			
3	872	870	870	869	869	868	867	866	865	862	860	859	858	855	852	853	851	852	856	859	860	858	855	854	8608			
4	856	855	854	854	854	852	850	849	849	848	847	847	847	843	843	843	848	850	852	857	859	861	860	859	8515			
5	859	858	856	855	854	855	857	855	853	852	852	851	851	850	850	850	850	852	852	854	858	860	862	861	8545			
6	860	860	859	858	857	856	856	855	854	852	850	849	848	848	846	848	849	852	857	859	860	862	864	866	8552			
7	865	862	860	860	860	859	859	859	859	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	861	863	862	861	861	861	861	861	862	868	869	870	872	876	877	8637			
9	876	873	871	870	870	870	870	869	868	866	865	864	863	862	862	862	864	866	869	871	870	873	875	877	8686			
10	876	872	872	872	872	868	864	863	862	861	861	860	859	856	855	858	860	862	865	869	870	873	873	874	8657			
11	873	871	867	867	867	866	866	865	865	865	865	863	861	860	860	860	862	865	868	870	872	873	874	874	8666			
12	873	871	871	870	870	867	864	864	864	863	862	862	862	861	860	861	861	861	863	866	868	869	870	870	8655			
13	870	868	864	863	863	862	862	861	860	860	860	859	858	857	857	858	860	860	862	865	868	868	870	870	8627			
14	870	869	867	866	866	864	863	862	861	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	862	863	862	861	860	859	859	859	859	860	860	862	863	864	866	8628			
16	865	863	862	861	861	859	857	855	853	851	850	850	850	848	848	848	845	846	846	842	840	840	840	840	8508			
17	841	841	841	840	840	838	837	837	837	837	837	836	835	833	832	832	833	832	833	835	836	835	835	834	8361			
18	834	833	833	831	830	829	829	828	827	827	827	827	828	828	827	824	823	820	819	819	819	820	820	820	8259			
19	820	820	821	821	822	821	821	820	819	819	819	816	813	811	810	808	808	810	813	815	817	817	818	818	8165			
20	819	817	816	815	815	813	812	813	814	813	812	811	810	810	810	809	809	809	808	808	810	810	810	811	8118			
21	810	810	810	810	810	810	810	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	810	810	809	809	809	809	809	810	810	812	815	817	819	819	820	8115			
23	819	818	816	815	815	814	813	812	812	811	811	810	810	810	810	810	811	814	817	820	820	822	824	826	8150			
24	826	824	824	823	823	822	821	820	820	820	820	819	819	819	819	819	820	821	825	828	829	830	832	833	8232			
25	833	831	830	830	830	830	830	830	830	829	829	828	827	827	826	826	829	830	832	835	838	838	839	840	8311			
26	840	838	835	835	835	834	833	832	831	830	830	830	830	830	830	830	830	832	833	836	838	839	838	839	8337			
27	840	839	837	836	835	834	833	832	832	831	830	830	830	828	826	821	820	820	820	821	823	825	826	827	8290			
28	827	827	826	825	824	824	824	822	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	823	826	825	824	822	822	822	822	822	822	824	827	828	828	827	8243			
30	827	827	828	826	824	824	824	826	828	826	825	823	822	822	821	822	824	827	830	832	837	837	838	837	8274			
31	836	834	832	831	831	830	829	827	826	826	826	824	823	822	821	822	822	825	828	830	831	832	835	836	8283			
Means	8496	8481	8468	8460	8457	8446	8439	8431	8426	8419	8415	8406	8400	8389	8381	8379	8385	8398	8419	8439	8456	8467	8476	8481	8434			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 sed.

Ditto to Ther. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

NOVEMBER 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										1·1 *		−1·6 *																
1	841	857	882	912	938	944	943	942	950	930	908	899	894	890	870	825	775	741	738	762	790	848	903	910	871	− 89	782	1·003578
2	930	922	912	919	919	920	922	900	878	875	870	865	863	850	832	808	750	730	719	724	772	830	852	873	851	− 96	755	3801
3	892	890	900	889	890	870	880	892	870	865	858	857	860	855	843	820	771	729	697	710	750	792	817	840	835	−100	735	3966
4	857	831	829	841	842	837	830	827	822	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5	—	—	—	—	—	—	—	—	—	797	770	769	772	768	750	710	665	635	605	627	690	748	780	821	768	− 47	721	4083
6	840	833	815	830	829	821	819	812	820	817	812	806	803	800	798	752	730	722	710	740	781	817	840	852	800	− 64	736	3958
7	864	845	840	838	828	819	808	800	800	789	775	776	780	775	762	728	720	708	693	717	768	830	893	935	795	− 76	719	4099
8	990	1008	1039	1014	989	969	961	896	916	904	890	887	887	880	880	806	805	758	750	742	753	780	802	831	881	− 85	796	3463
9	855	860	882	890	877	879	875	870	858	858	856	845	838	830	845	830	807	770	737	725	752	772	788	814	830	− 86	744	3892
10	840	852	840	840	830	829	827	826	812	807	800	793	790	793	767	732	690	648	635	642	678	708	729	751	769	− 75	694	4306
11	768	772	774	774	780	777	772	770	770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
12	—	—	—	—	—	—	—	—	—	762	751	731	714	705	700	690	670	655	629	635	668	702	733	760	728	− 41	687	4364
13	772	824	795	792	791	776	753	760	750	749	745	739	736	732	725	700	657	620	587	593	616	643	680	715	719	− 39	680	4421
14	760	770	776	768	769	770	788	748	760	755	747	742	740	735	715	687	640	627	620	634	645	671	705	725	721	− 44	677	4446
15	740	760	773	775	781	810	822	810	809	801	790	784	782	775	735	698	640	623	621	645	701	770	800	826	753	− 52	701	4248
16	820	807	794	795	797	788	788	780	726	749	770	761	755	750	720	680	642	622	619	630	663	685	708	736	733	− 46	687	4364
17	751	760	753	761	761	758	749	762	750	753	753	736	722	720	700	668	632	611	585	620	650	681	710	728	711	− 27	684	4388
18	734	740	739	750	769	768	750	742	763	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
19	—	—	—	—	—	—	—	—	—	728	720	702	687	680	642	628	605	590	570	585	600	617	650	682	684	− 1	683	4396
20	702	730	713	710	700	698	712	700	670	669	665	656	650	682	640	613	593	580	585	600	628	668	680	708	665	9	674	4471
21	729	733	752	746	753	715	712	721	712	714	713	710	710	702	685	660	615	620	620	602	693	680	725	739	698	5	703	4231
22	742	730	720	730	730	730	742	742	762	754	743	740	740	752	728	690	655	618	620	627	631	688	720	740	711	− 10	701	4248
23	752	740	750	755	764	750	748	740	772	751	727	727	730	722	708	688	640	620	610	618	621	639	667	691	705	− 4	701	4248
24	737	771	777	770	736	736	740	747	757	752	744	744	748	751	740	718	691	664	650	648	650	660	693	710	722	− 7	715	4132
25	730	750	751	760	762	767	768	773	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
26	—	—	—	—	—	—	—	—	—	764	750	744	742	735	722	695	670	652	650	637	654	675	680	700	721	− 24	697	4281
27	723	732	739	749	749	760	765	758	769	746	720	708	700	682	659	637	624	638	636	645	678	685	703	725	705	− 20	685	4380
28	740	789	791	781	791	880	857	809	790	786	780	759	742	754	730	710	690	665	680	693	700	711	759	772	757	− 3	754	3810
29	780	791	803	800	798	788	777	754	760	761	760	759	762	748	724	698	680	683	690	710	730	757	742	750	750	− 18	732	3991
30	763	775	760	748	737	770	815	831	800	796	790	771	755	720	681	648	597	600	620	641	665	718	740	757	729	− 14	715	4132
Means.....	794	803	804	805	804	805	805	797	792	786	777	770	765	761	742	712	679	659	649	660	690	722	750	773	754			
Temp. Corrections	-58	-52	-47	-45	-43	-41	-40	-38	-37	-34	-32	-31	-29	-26	-25	-28	-33	-40	-45	-50	-54	-57	-57		.....	-41		
Corrected Means..	736	751	757	760	761	764	765	759	755	752	745	739	734	732	716	687	651	626	609	615	640	668	693	716	.....	.....	713	
Mean Hourly Variations from Monthly Mean. =·00	-23	-38	-44	-47	-48	-51	-52	-46	-42	-39	-32	-26	-21	-19	-3	26	62	87	104	98	73	45	20	-3		$\frac{\Delta X}{X}$		
	-0190	-0314	-0364	-0389	-0397	-0421	-0430	-0381	-0348	-0323	-0265	-0215	-0173	-0157	-0025	0215	0513	0719	0859	0810	0603	0372	0165	-0025	.....	$1+\frac{\Delta X}{X}=$	.....	1·004148

NOVEMBER 1854. Temperature of Horizontal Force Magnetometer.

										*		*																
1	836	833	832	832	830	830	829	828	828	828	828	828	828	828	827	827	829	830	832	835	836	837	838	840	8312			
2	840	838	837	832	832	832	832	832	832	831	830	829	829	828	828	829	830	832	835	837	838	838	840	840	8334			
3	840	838	837	837	836	836	836	836	836	835	835	834	834	832	832	831	831	832	834	834	834	835	834	832	8346			
4	830	829	829	829	828	825	824	823	823	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	816	810	810	810	810	808	808	810	810	813	816	820	822	825	826	8189			
6	824	822	820	820	820	819	819	819	819	819	819	819	820	820	819	819	821	825	830	832	836	838	838	837	8239			
7	835	832	831	831	830	828	828	825	825	824	823	822	821	821	821	820	822	824	827	830	831	834	834	836	8273			
8	835	833	830	830	829	829	829	828	830	830	830	830	830	830	828	827	826	826	829	830	831	832	833	834	8300			
9	833	832	830	827	827	828	830	830	830	830	830	829	829	829	828	828	829	830	830	830	833	835	836	836	8304			
10	836	833	830	830	830	830	830	830	829	829	829	827	825	824	820	820	820	820	824	826	827	827	827	825	8270			
11	827	822	821	821	820	820	820	818	818	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	814	811	810	810	810	810	810	810	812	817	819	820	823	825	825	8172			
13	823	823	820	820	820	818	817	816	817	817	817	816	815	814	813	811	812	813	812	811	813	818	819	820	8165			
14	820	819	819	818	817	817	816	816	815	815	815	814	814	812	812	813	816	819	820	822	823	825	826	826	8179			
15	826	824	821	821	821	820	820	820	818	818	818	818	818	818	817	818	820	819	818	820	821	822	824	824	8202			
16	824	822	821	821	821	821	820	820	818	818	818	818	817	817	815	814	813	814	816	817	818	820	820	821	820	8186		
17	820	820	818	817	817	815	813	810	810	810	810	810	810	810	808	808	809	810	811	813	815	815	817	817	8130			
18	817	816	814	813	813	812	811	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	806	803	801	800	800	798	795	796	798	799	800	800	803	805	805	8052			
20	805	802	800	800	798	800	800	800	800	800	800	800	800	800	800	800	800	803	805	807	808	810	810	810	8024			
21	809	807	805	804	803	802	801	801	800	800	800	800	800	799	799	800	801	803	805	807	808	810	810	810	8035			
22	810	808	807	807	807	807	807	807	807	807	807	807	807	806	806	808	808	810	810	810	810	810	810	809	8080			
23	807	807	807	806	806	806	807	806	805	803	802	802	802	802	803	805	807	809	810	811	812	811	810	8062				
24	808	805	804	803	803	803	803	803	803	803	803	805	808	809	809	806	806	808	809	810	813	815	815	814	8070			
25	812	812	813	813	813	813	812	812	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	810	810	810	810	810	810	808	810	810	812	814	817	817	817	818	8122			
27	817	816	814	814	813	812	812	811	811	810	810	810	810	809	808	809	809	809	810	811	810	810	810	810	8110			
28	809	809	808	807	807	806	806	805	804	803	802	802	802	802	802	800	802	803	807	809	810	811	813	812	8059			
29	812	811	810	810	810	810	809	808	808	808	808	807	807	807	806	807	809	810	813	814	815	816	817	816	8103			
30	816	813	813	812	812	808	808	808	808	808	808	807	807	805	805	804	804	807	809	810	810	811	812	812	8090			
Means.....	8220	8202	8189	8183	8178	8172	8169	8162	8159	8151	8145	8140	8140	8135	8127	8124	8134	8148	8168	8183	8196	8210	8218	8217	8170			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Correction for 1° Faht. = 3·3963 scd.

Ditto to Ther. = −0·5°

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15' = 0{\cdot}00008264$

Zero. for Magnetometer at Ther. 88°·8 = 1497.

Ditto reduced to standard temperature 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

DECEMBER 1854. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−1·6 *		0·2 *																
1	740	760	789	850	910	887	856	810	840	832	827	819	810	780	752	728	773	729	750	792	805	832	810	818	804	− 5	799	1·003438
2	868	910	879	851	870	770	821	833	843	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	800	760	756	752	747	705	656	618	595	618	640	702	750	762	775	762	− 5	757	3785
4	750	755	770	770	792	780	771	760	737	732	730	725	720	716	690	670	651	650	620	635	660	715	718	752	720	− 2	718	4108
5	774	773	775	750	742	750	743	734	748	727	710	723	736	745	730	706	690	654	635	645	670	707	740	767	724	− 1	723	4066
6	765	753	750	747	746	738	738	731	720	724	732	736	739	734	720	708	673	638	600	585	613	645	698	732	707	3	710	4173
7	755	745	739	732	729	730	729	727	718	712	710	711	712	704	682	650	620	596	577	573	580	605	640	683	682	8	690	4339
8	742	757	742	734	737	716	754	758	730	721	715	712	708	700	700	682	678	659	660	668	690	715	740	723	714	4	718	4108
9	752	765	743	750	740	750	747	743	720	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	732	748	739	730	720	699	671	645	618	608	588	590	615	666	705	699	− 8	691	4331
11	725	728	719	714	713	716	700	681	698	698	702	701	700	690	670	658	638	611	586	570	578	607	643	667	671	0	671	4496
12	682	689	682	679	690	674	669	640	650	657	668	674	680	680	671	660	650	612	580	577	613	647	660	675	657	7	664	4554
13	667	660	643	648	698	660	674	700	720	727	737	708	679	656	650	601	620	577	583	638	625	622	650	672	659	23	682	4404
14	680	705	717	729	741	730	716	684	660	658	660	657	653	646	628	602	600	590	575	578	590	613	630	627	653	50	703	4231
15	640	642	659	650	650	650	649	645	640	636	636	638	640	600	593	570	540	526	507	520	500	483	545	553	596	70	666	4537
16	585	588	587	631	610	610	617	600	583	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	600	620	621	622	629	642	610	610	608	590	575	583	637	692	698	615	67	682	4404
18	670	667	664	677	676	679	681	677	670	660	653	656	659	652	619	592	562	552	550	562	604	650	690	682	642	64	706	4206
19	678	676	684	690	687	679	677	674	650	655	663	657	650	643	638	600	573	540	512	540	572	600	625	637	633	69	702	4239
20	653	660	657	682	707	712	722	701	690	675	664	662	660	653	625	592	562	538	534	549	576	628	612	630	639	68	707	4198
21	657	658	678	672	678	688	672	690	700	688	680	669	657	640	628	592	561	531	520	530	562	600	610	635	633	58	691	4331
22	645	653	636	636	640	632	625	637	625	626	630	636	641	650	652	633	598	545	515	510	550	609	643	675	618	57	675	4462
23	670	672	654	648	648	649	640	635	620	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	618	620	619	618	622	610	594	571	552	533	510	520	550	577	613	607	46	653	4644
25	640	652	655	652	640	643	648	647	648	642	640	638	635	638	642	637	610	577	549	520	505	520	565	597	614	58	672	4487
26	638	645	637	640	645	641	638	637	636	632	632	627	622	620	603	595	607	582	560	528	525	560	595	600	610	53	663	4562
27	625	630	612	598	592	619	627	630	624	620	620	640	659	643	650	643	630	590	544	517	492	535	590	650	608	56	664	4554
28	703	720	750	741	727	730	721	718	695	686	680	674	667	650	652	648	641	600	601	572	590	630	655	670	672	58	730	4008
29	697	700	702	730	726	758	760	765	747	732	720	710	700	692	682	678	638	645	618	610	600	647	662	682	692	58	750	3843
30	690	685	698	720	698	700	722	725	729	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	695	665	654	642	630	620	600	590	590	561	600	613	630	646	667	657	69	726	4041
Means.....	696	702	701	705	709	704	705	699	694	688	685	683	680	672	660	638	621	596	580	582	596	629	656	676	665			
Temp. Corrections	18	22	27	28	30	33	36	38	40	41	41	43	44	46	51	52	52	48	41	34	27	22	20	19	.....	36		
Corrected Means..	714	724	728	733	739	737	741	737	734	729	726	726	724	718	711	690	673	644	621	616	623	651	676	695	.....	.....	701	
Mean Hourly Variations from Monthly Mean. = ·00	-13	-23	-27	-32	-38	-36	-40	-36	-33	-28	-25	-25	-23	-17	-10	11	28	57	80	85	78	50	25	6		$1+\frac{\Delta X}{X}=$		
	-0108	-0190	-0223	-0265	-0314	-0298	-0331	-0298	-0273	-0231	-0206	-0206	-0190	-0141	-0083	0091	0231	0471	0661	0702	0644	0413	0206	0050	.....	.....	.....	1·004248

DECEMBER 1854. Temperature of Horizontal Force Magnetometer.

										*		*																
1	812	810	809	809	809	808	807	808	808	807	806	804	803	803	802	800	800	801	803	807	809	809	811	812	8065			
2	811	811	809	809	807	805	805	805	804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	804	805	804	804	803	801	801	801	803	805	809	810	811	812	812	8063			
4	810	810	809	808	807	805	805	804	803	802	802	802	802	800	800	801	800	802	808	810	813	812	811	811	8057			
5	810	810	808	808	808	806	804	803	803	803	803	802	802	802	801	802	801	800	803	807	809	810	810	810	8052			
6	810	809	808	807	806	804	802	802	801	801	801	800	800	800	800	800	800	801	802	807	809	810	810	811	8042			
7	810	810	806	804	803	803	802	801	800	800	800	800	800	800	798	798	798	799	800	802	807	809	810	810	8029			
8	810	808	807	806	805	803	802	801	800	800	800	800	800	800	799	799	800	801	803	807	809	810	811	812	8039			
9	812	810	808	807	807	807	807	807	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	807	809	808	808	805	802	803	804	804	807	807	809	810	810	809	8072			
11	807	806	806	806	806	806	805	803	803	803	803	802	802	801	800	801	802	803	807	808	809	810	811	811	8050			
12	811	811	808	808	807	803	803	802	802	801	801	800	800	800	799	798	799	800	800	802	803	805	805	806	8031			
13	805	803	802	801	800	800	799	798	798	798	798	797	797	793	792	791	791	793	797	799	800	801	801	802	7982			
14	802	800	800	800	798	795	794	792	792	791	790	789	788	787	782	780	780	781	783	786	790	790	790	790	7904			
15	790	790	789	788	787	786	786	786	784	783	783	781	780	780	780	777	778	779	780	785	787	788	790	791	7845			
16	790	790	788	787	787	784	783	782	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	782	783	782	782	780	780	780	780	781	785	788	790	792	793	794	7852			
18	793	792	791	791	790	789	789	787	786	785	784	783	782	782	780	780	780	780	780	782	788	790	791	792	7861			
19	791	790	782	785	786	786	785	784	783	782	782	781	780	780	780	780	780	782	783	788	789	790	790	792	7846			
20	792	790	787	787	787	786	784	782	782	782	782	784	787	787	783	780	779	779	781	783	785	789	789	790	7849			
21	790	790	790	792	791	790	790	791	791	791	791	790	790	788	787	784	782	782	784	785	786	786	785	785	7880			
22	786	786	786	786	786	787	786	786	786	785	785	785	785	785	785	785	787	788	790	793	796	798	798	798	7883			
23	798	795	791	790	790	790	790	790	789	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	789	790	790	790	789	789	789	790	790	791	792	794	795	795	794	7913			
25	792	790	790	789	787	786	786	786	786	786	786	786	787	787	785	787	787	787	789	790	790	791	792	791	7880			
26	790	790	790	790	790	790	790	789	788	788	788	788	788	787	785	786	787	788	790	790	792	792	795	795	7894			
27	795	793	790	790	790	790	789	789	789	789	790	789	788	786	782	781	781	782	787	789	790	792	793	793	7886			
28	792	791	790	790	790	790	789	789	788	787	786	785	785	786	786	787	786	786	785	785	785	788	790	790	7878			
29	790	787	787	787	787	787	788	789	788	787	787	786	785	782	783	783	785	788	789	790	792	794	794	795	7879			
30	793	792	790	790	790	788	787	786	786	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	784	782	781	780	780	778	777	778	780	781	782	784	786	787	788	7846			
Means.....	7997	7986	7970	7967	7962	7952	7945	7939	7933	7930	7930	7923	7921	7913	7900	7896	7898	7908	7928	7951	7971	7984	7990	7994	7945			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = \overset{\text{scd.}}{1.184}$. $k. = a.\ \text{cotan.}\ \theta.\left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291. \times \text{cotan.}\ 7°\ 38'\ 45'' \times \left(\frac{\overset{s.}{6{\cdot}917}}{5{\cdot}841}\right)^2 = 0{\cdot}00030399.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JANUARY 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4·41	h.m. 6·41	h.m. 6·41	h.m. 7·41	h.m. 8·41	h.m. 9·41	h.m. 10·41	h.m. 11·41	h.m. 12·41	h.m. 13·41	h.m. 14·41	h.m. 15·41	h.m. 16·41	h.m. 17·41	h.m. 18·41	h.m. 19·41	h.m. 20·41	h.m. 21·41	h.m. 22·41	h.m. 23·41	h.m. 0·41	h.m. 1·41	h.m. 2·41	h.m. 3·41				
				−4·3 *		−7·7 *		−9·9 *		−2·4 *		12·0 *																
1853 Decr. 31	4799	4772	4777	4773	4777	4771	4780	4747	4733	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	4749	4769	4772	4752	4752	4759	4784	4902	4902	4975	4894	4794	4715	4680	4787	4788	18	4806	
2	4885	4964	4885	4828	4778	4795	4827	4831	4854	4798	4747	4749	4727	4799	4799	4838	4920	4942	4917	4858	4795	4740	4701	4755	4822	22	4844	
3	4794	4784	4766	4746	4734	4693	4667	4648	4649	4647	4649	4648	4623	4748	4731	4761	4853	4973	5045	4970	4846	4710	4685	4772	4756	28	4784	
4	4806	4806	4789	4787	4793	4785	4793	4758	4743	4778	4817	4800	4759	4759	4763	4806	4899	4987	5075	5075	4980	4910	4859	4831	4840	33	4873	
5	4831	4818	4810	4806	4810	4802	4810	4791	4792	4790	4792	4796	4776	4760	4760	4816	4935	5038	4999	4934	4862	4862	4790	4823	4833	32	4865	
6	4823	4816	4818	4818	4826	4818	4826	4806	4805	4789	4777	4789	4777	4752	4752	4806	4917	5045	5085	5085	5064	4970	4848	4803	4859	29	4888	
7	4821	4821	4817	4813	4817	4809	4817	4804	4811	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	4792	4777	4789	4777	4793	4755	4755	4807	4905	4978	4978	4995	4995	4906	4852	4841	16	4857	
9	4852	4814	4792	4788	4792	4763	4750	4748	4765	4763	4765	4759	4729	4729	4745	4815	4957	5124	4952	4905	4822	4696	4563	4530	4788	4	4792	
10	4591	4598	4572	4568	4572	4567	4577	4560	4562	4555	4552	4564	4552	4545	4515	4432	4521	4705	4860	4842	4804	4770	4726	4661	4615	0	4615	
11	4661	4632	4647	4643	4647	4618	4604	4598	4611	4609	4611	4596	4557	4557	4601	4640	4684	4781	4813	4952	4886	4782	4753	4753	4677	5	4682	
12	4719	4719	4670	4656	4650	4642	4650	4650	4669	4667	4669	4657	4621	4595	4617	4658	4707	4740	4787	4802	4815	4815	4737	4687	4692	11	4703	
13	4687	4687	4687	4677	4676	4668	4676	4650	4644	4642	4644	4646	4624	4632	4639	4655	4718	4775	4845	4896	4872	4820	4730	4703	4704	13	4717	
14	4703	4746	4691	4687	4691	4700	4724	4680	4656	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4645	4639	4641	4620	4628	4649	4704	4806	4869	4909	4875	4785	4682	4682	4698	4713	14	4727	
16	4711	4694	4692	4667	4652	4642	4650	4649	4667	4665	4667	4691	4692	4685	4649	4618	4723	4767	4826	4845	4804	4696	4585	4554	4687	9	4696	
17	4680	4757	4757	4691	4634	4626	4634	4645	4675	4663	4655	4650	4622	4590	4633	4666	4773	4805	4854	4883	4840	4707	4606	4658	4696	7	4703	
18	4657	4678	4678	4657	4644	4636	4644	4615	4606	4628	4655	4650	4621	4606	4632	4699	4730	4819	4907	4935	4899	4840	4704	4649	4700	7	4707	
19	4691	4713	4697	4676	4664	4683	4718	4674	4649	4639	4633	4636	4615	4647	4568	4659	4625	4740	4768	4755	4730	4727	4790	4765	4686	9	4695	
20	4739	4691	4674	4670	4674	4675	4691	4665	4659	4657	4659	4641	4599	4652	4643	4638	4638	4679	4750	4760	4760	4746	4746	4710	4684	11	4695	
21	4725	4703	4695	4691	4695	4691	4703	4674	4664	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	4665	4670	4682	4670	4711	4659	4664	4699	4742	4805	4813	4813	4825	4775	4740	4716	9	4725	
23	4740	4729	4729	4718	4715	4704	4708	4693	4698	4703	4712	4713	4690	4687	4668	4655	4604	4694	4674	4688	4671	4671	4635	4659	4690	7	4697	
24	4684	4704	4700	4696	4700	4684	4684	4668	4671	4669	4671	4692	4690	4690	4668	4668	4697	4664	4754	4793	4725	4759	4759	4748	4702	12	4714	
25	4725	4725	4719	4700	4690	4682	4690	4682	4693	4694	4700	4712	4700	4614	4669	4669	4636	4685	4685	4702	4723	4716	4704	4736	4694	17	4711	
26	4736	4746	4734	4730	4734	4708	4697	4670	4662	4666	4675	4687	4675	4693	4666	4676	4686	4720	4673	4674	4659	4673	4673	4707	4693	19	4712	
27	4721	4709	4713	4709	4713	4694	4690	4681	4691	4673	4660	4672	4660	4684	4672	4672	3984	3950	4030	4011	4001	3976	3947	3939	—	—	—	
28	3955	3932	3932	3928	3932	3899	3881	3877	3893	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	3897	3905	3917	3905	3872	3886	3889	3912	3958	—	5016	4930	4954	4568	4595	—	—	—	
30	4534	4520	4999	4995	4999	4978	4973	4994	5034	5003	4977	4984	4967	4967	4941	4965	4900	4950	5005	4999	5010	4966	4956	4967	4941	23	4964	
31	5006	4985	4999	4978	4966	4965	4979	4965	4971	4973	4979	4980	4958	4936	4900	4974	5047	5161	5226	5280	5280	5213	5085	5047	5036	24	5060	
Means	4744	4745	4752	4738	4733	4724	4731	4715	4718	4714	4714	4717	4694	4701	4695	4721	4775	4848	4887	4888	4849	4800	4747	4744	4754			
Temp. Corrections	2	7	13	14	15	17	18	19	20	22	22	24	25	28	31	29	23	16	10	6	2	1	0	0	.....	15		
Corrected Means..	4746	4752	4765	4752	4748	4741	4749	4734	4738	4736	4736	4741	4719	4729	4726	4750	4798	4864	4897	4894	4851	4801	4747	4744	.....	.....	4769	
Mean Hourly Variations from Monthly Mean. = ·00	23	17	4	17	21	28	20	35	31	33	33	28	50	40	43	19	−29	−95	−128	−125	−82	−32	22	25		$\frac{\Delta Y}{Y}$ =		
	0699	0517	0122	0517	0638	0851	0608	1064	0942	1003	1003	0851	1520	1216	1307	0578	−0882	−2888	−3891	−3800	−2493	−0973	0669	0760	.....	.....	·003891	

JANUARY 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1853 Decr. 31	800	795	790	788	787	785	783	781	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	777	775	774	774	773	770	772	780	786	790	793	795	795	796	795	7848			
2	793	790	785	783	782	780	778	777	776	776	776	775	775	773	766	765	776	784	786	788	790	790	790	790	7810			
3	787	785	783	781	779	778	777	774	771	770	770	768	766	763	759	762	767	773	780	783	785	787	787	788	7760			
4	786	785	776	774	772	771	770	769	768	767	766	766	766	760	757	756	760	767	774	779	784	786	783	785	7720			
5	785	782	777	775	773	771	770	769	768	766	765	763	762	759	757	760	767	771	776	782	786	788	790	790	7730			
6	787	782	776	775	775	773	772	771	771	770	770	768	767	765	763	764	767	770	774	784	788	790	794	794	7754			
7	790	786	781	779	777	777	777	775	774	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	780	787	785	783	780	778	780	783	795	800	798	803	804	803	800	7865			
9	798	794	787	790	793	792	792	791	791	790	790	790	790	788	788	791	795	800	807	812	815	813	810	808	7965			
10	806	804	802	801	800	798	797	797	797	796	795	794	793	791	790	793	797	803	806	807	810	810	810	809	8003			
11	805	800	798	797	796	795	794	794	794	792	790	788	787	784	782	783	785	800	805	808	808	805	804	805	7958			
12	800	798	793	791	790	788	787	786	785	785	785	784	783	781	780	783	787	791	794	797	800	802	805	804	7908			
13	800	796	793	791	789	788	788	787	786	785	785	783	782	778	775	777	786	790	794	796	797	798	799	799	7893			
14	799	793	788	787	786	785	785	784	784	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	782	781	779	778	776	776	780	783	788	793	796	801	805	805	805	7883			
16	805	800	792	791	791	789	788	786	785	785	785	784	783	782	781	782	787	792	797	802	804	806	806	807	7921			
17	805	800	797	796	795	794	794	792	790	788	787	786	786	785	783	783	787	792	797	803	805	806	808	807	7944			
18	806	801	796	795	795	795	795	790	785	785	785	784	784	782	778	782	789	793	801	801	804	806	807	809	7937			
19	806	805	798	797	796	795	795	795	795	792	789	784	780	776	774	778	783	793	795	798	800	800	802	802	7928			
20	800	796	795	792	789	787	786	785	785	785	785	784	784	781	781	782	782	789	794	801	803	805	803	802	7907			
21	800	794	789	788	787	787	787	787	787	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	788	790	789	789	785	783	784	788	793	798	803	805	806	807	808	7926			
23	805	800	796	794	793	793	793	792	792	791	790	788	787	785	783	785	789	794	799	800	802	804	806	805	7944			
24	805	800	795	793	791	790	790	790	790	788	787	784	782	779	775	775	780	785	790	794	799	800	801	802	7902			
25	800	796	791	789	787	786	786	785	785	783	781	779	777	773	768	770	774	780	785	790	796	799	800	800	7858			
26	800	793	788	788	788	786	785	782	780	778	777	775	774	771	768	768	773	780	785	788	792	795	797	797	7837			
27	795	790	785	785	785	783	782	780	778	776	774	772	770	764	764	763	768	775	782	786	788	792	795	795	—			
28	795	787	783	781	780	780	780	779	778	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	775	772	771	770	768	764	766	772	779	—	791	794	795	796	796	—			
30	795	790	784	784	784	782	780	778	777	774	772	770	768	766	763	766	772	778	783	789	793	795	796	796	7806			
31	795	791	785	784	784	782	780	777	775	772	769	767	765	763	760	766	771	779	785	788	790	793	795	797	7797			
Means	7983	7942	7894	7881	7872	7859	7852	7838	7828	7818	7813	7796	7786	7760	7735	7755	7803	7866	7915	7952	7982	7995	8002	8002	7872			

N. B.—Decreasing numbers denote an increase in the Vertical Force. In the upper table the numbers are tenths of scale divisions; in the lower table, tenths of Fahrenheit degrees; and in the Means, hundredths of degrees.

* The numbers in these Columns are not observed but Interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

January 27th 16h. Gottingen Mean Time. The needle vibrated vertically.
29th 18h. do do do. The axis of the needle cleaned.
The observations on the 27th, 28th and 29th January rejected in taking the daily and hourly Means.

Corr. for 1° Faht. $= \frac{q}{k} =$ scd. 1·176 $\quad k = a.\ \text{cotan.}\ \theta.\ \left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 39'\ 21'' \times \left(\frac{s.\ 6{\cdot}917}{5{\cdot}817}\right)^2 = 0{\cdot}00030611$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

FEBRUARY 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				4·5 *		−1·5 *		5·1 *		14·9 *		7·7 *																
1	4999	4975	4977	4981	4977	4970	4966	4971	4966	4968	4941	4949	4941	4936	4935	4940	4982	5052	5100	5135	5103	5130	5061	5011	4999	18	5017	
2	4969	4969	4958	4944	4921	4919	4919	4933	4936	4958	4950	4958	4950	4896	4883	4898	4914	4952	5011	5036	5116	5064	5013	4975	4960	3	4963	
3	4946	4913	4910	4906	4894	4893	4895	4898	4891	4886	4852	4879	4890	4866	4866	4806	4837	4891	4960	4916	4965	5058	5058	5019	4912	− 5	4907	
4	4970	4929	4973	4926	4871	4880	4891	4896	4891	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	4885	4850	4856	4847	4792	4838	4850	4881	4915	4932	4866	4895	4920	4920	4911	4891	−10	4881	
6	4887	4839	4833	4822	4802	4816	4832	4837	4832	4856	4851	4851	4836	4772	4813	4843	4919	5007	5056	5054	4957	5014	4992	4945	4886	− 7	4879	
7	4921	4852	4852	4849	4838	4841	4847	4852	4846	4843	4811	4819	4811	4829	4810	4832	4870	4904	4934	4945	4927	4945	4894	4894	4865	−12	4853	
8	4938	4938	4850	4854	4850	4838	4828	4833	4828	4843	4828	4816	4789	4796	4820	4820	4846	4860	4942	4979	4979	4945	4998	4920	4872	−12	4860	
9	4896	4858	4840	4828	4808	4801	4797	4800	4792	4807	4792	4800	4793	4807	4759	4748	4777	4755	4784	4810	4836	4880	4958	4921	4819	−14	4805	
10	4838	4793	4771	4800	4821	4807	4796	4795	4783	4805	4797	4801	4790	4790	4754	4779	4828	4860	4885	4875	4898	4970	4970	4879	4829	−12	4817	
11	4845	4845	4783	4787	4783	4780	4779	4784	4779	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	4769	4729	4761	4777	4742	4742	4766	4791	4825	4853	4847	4884	4909	4863	4815	4802	−14	4788	
13	4793	4793	4776	4793	4801	4788	4778	4780	4771	4780	4760	4768	4760	4777	4743	4730	4754	4754	4789	4798	4841	4879	4905	4810	4788	−23	4765	
14	4770	4770	4792	4796	4792	4778	4767	4782	4686	4744	4772	4789	4790	4698	4731	4755	4728	4746	4690	4707	4730	4787	4841	4781	4757	−28	4729	
15	4781	4810	4746	4764	4774	4770	4769	4770	4761	4767	4743	4750	4741	4723	4693	4718	4755	4776	4725	4748	4800	4772	4813	4843	4763	−27	4736	
16	4854	4779	4745	4756	4759	4763	4769	4770	4761	4751	4711	4732	4737	4749	4728	4657	4706	4744	4766	4729	4765	4765	4818	4800	4755	−30	4725	
17	4752	4752	4741	4745	4741	4737	4736	4756	4766	4758	4720	4719	4702	4717	4707	4715	4737	4713	4724	4756	4808	4859	4829	4829	4751	−24	4727	
18	4768	4923	4855	4859	4855	4837	4822	4827	4822	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	4814	4776	4792	4792	4792	4786	4819	4811	4852	4815	4849	4830	4854	4854	4813	4826	−17	4809	
20	4790	4790	4780	4786	4784	4800	4818	4807	4785	4782	4749	4757	4749	4761	4763	4762	4762	4751	4725	4758	4733	4763	4763	4784	4771	−14	4757	
21	4784	4762	4762	4766	4762	4768	4777	4777	4766	4765	4734	4773	4796	4706	4758	4780	4742	4776	4724	4775	4746	4714	4746	4746	4759	−14	4745	
22	4760	4772	4770	4768	4757	4755	4756	4768	4769	4771	4744	4736	4713	4749	4755	4747	4793	4793	4820	4756	4709	4749	4760	4760	4760	−10	4750	
23	4776	4750	4750	4749	4740	4732	4727	4733	4728	4765	4773	4762	4735	4747	4722	4721	4777	4806	4775	4797	4815	4815	4771	4829	4762	−12	4750	
24	4802	4802	4779	4773	4758	4800	4845	4841	4826	4776	4696	4750	4788	4716	4765	4759	4773	4782	4786	4757	4780	4776	4751	4798	4778	−13	4765	
25	4788	4738	4708	4733	4749	4734	4722	4722	4711	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	4746	4751	4732	4698	4754	4659	4669	4686	4728	4754	4712	4712	4684	4701	4679	4720	−16	4704	
27	4725	4725	4700	4715	4722	4710	4700	4705	4700	4716	4702	4710	4702	4644	4707	4690	4735	4758	4820	4865	4857	4827	4827	4811	4741	−18	4723	
28	4775	4743	4724	4728	4724	4723	4724	4713	4691	4704	4687	4695	4687	4644	4706	4674	4722	4789	4836	4836	4808	4888	4876	4847	4748	−19	4729	
Means.....	4839	4826	4807	4810	4803	4802	4803	4804	4795	4802	4780	4790	4784	4767	4768	4770	4797	4825	4842	4846	4854	4874	4874	4851	4813			
Temp. Corrections.	-26	-22	-17	-15	-14	-12	-11	-10	-8	-7	-6	-4	-3	-1	2	-2	-7	-13	-18	-22	-25	-28	-29	-30	.....	-14		
Corrected Means..	4813	4804	4790	4795	4789	4790	4792	4794	4787	4795	4774	4786	4781	4766	4770	4768	4790	4812	4824	4824	4829	4846	4845	4821	.....	.....	4799	
Mean Hourly Variations from Monthly Mean. = ·00	-14 -0428	-5 -0153	9 0275	4 0122	10 0306	9 0275	7 0214	5 0153	12 0367	4 0122	25 0765	13 0398	18 0551	33 1010	29 0888	21 0643	9 0275	-13 -0398	-25 -0765	-25 -0765	-30 0918	-47 -1438	-46 -1408	-22 -0673	.....	$\frac{\Delta Y}{Y} =$	.....	·001438

FEBRUARY 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	795	790	786	785	785	784	784	782	780	778	777	775	774	770	767	770	778	783	789	794	799	803	806	806	7850			
2	804	802	796	795	795	794	794	793	793	791	790	787	785	782	782	788	795	800	805	808	812	816	817	818	7976			
3	816	811	806	805	805	804	804	802	800	796	792	791	790	787	786	798	804	807	812	816	818	818	819	820	8045			
4	820	817	811	809	808	807	806	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	802	800	800	800	798	795	798	803	807	812	816	818	820	820	822	8083			
6	821	817	811	809	807	802	797	796	796	795	795	794	793	793	793	798	802	808	812	817	818	819	820	821	8056			
7	822	819	811	810	809	808	808	808	808	807	806	804	803	799	796	800	804	809	815	817	820	821	821	823	8103			
8	821	817	812	811	810	809	808	807	806	804	803	802	802	800	797	800	804	810	815	817	819	822	822	823	8100			
9	822	820	814	812	811	810	810	809	808	808	808	806	805	801	800	804	807	812	817	820	822	823	823	823	8123			
10	822	820	816	814	812	811	810	808	807	804	802	801	800	797	792	799	802	809	815	818	819	821	822	822	8101			
11	821	819	815	813	812	811	810	809	808	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	806	805	804	804	801	799	800	805	812	817	820	822	827	827	825	8122			
13	824	821	817	816	815	815	815	815	815	812	809	808	808	808	807	814	819	822	828	832	835	837	837	837	8194			
14	832	829	825	824	824	823	822	821	820	820	820	820	820	817	813	816	821	825	826	827	830	832	833	835	8240			
15	833	829	824	823	823	821	820	820	820	820	820	818	816	812	809	812	816	821	826	829	832	837	837	837	8231			
16	835	831	824	823	822	822	822	821	820	820	820	819	818	815	812	820	824	826	830	834	836	838	838	838	8253			
17	836	831	824	822	820	819	818	816	815	814	814	814	814	814	810	812	815	819	824	825	827	828	827	826	8202			
18	825	822	819	818	817	815	813	811	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	809	808	807	806	805	803	804	805	810	815	822	824	824	824	825	8142			
20	824	820	813	812	811	810	810	810	810	809	808	807	807	805	801	802	805	809	815	817	819	820	821	822	8120			
21	821	818	814	812	811	810	810	810	810	808	807	805	803	802	800	803	805	810	814	817	819	822	822	822	8115			
22	820	817	814	812	811	809	808	806	805	803	801	800	799	798	796	800	801	804	809	815	816	820	820	820	8085			
23	819	818	812	811	810	808	807	806	805	805	805	804	803	799	797	801	805	810	815	818	820	820	821	821	8100			
24	822	820	815	813	812	811	810	807	805	805	805	803	802	800	796	800	803	810	814	816	820	821	822	824	8107			
25	822	819	818	816	815	813	812	809	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	808	810	808	806	805	800	800	805	810	815	819	823	825	828	828	8133			
27	827	825	821	818	816	814	812	810	808	806	805	804	804	803	801	804	810	815	820	824	830	835	832	832	8157			
28	828	825	823	822	821	820	820	816	812	811	810	808	806	805	803	802	805	810	815	818	821	826	831	832	8163			
Means.....	8222	8190	8142	8127	8118	8104	8096	8082	8072	8059	8050	8037	8028	8007	7981	8019	8060	8108	8156	8190	8216	8240	8246	8251	8117			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ scd. 1·229 $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 40'\ 5'' \times \left(\frac{\text{s.}\ 6{\cdot}917}{5{\cdot}942}\right)^2 = 0{\cdot}00029289$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

MARCH 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				6·4 *		0·3 *		1·7 *		13·2 *		24·2 *																
1	4813	4774	4774	4780	4774	4762	4749	4735	4718	4731	4718	4776	4785	4731	4709	4690	4711	4738	4786	4805	4814	4814	4774	4777	4760	−22	4738	
2	4777	4754	4756	4762	4756	4738	4719	4724	4726	4739	4726	4743	4712	4706	4722	4704	4742	4771	4757	4788	4833	4843	4817	4818	4756	−28	4728	
3	4795	4776	4776	4782	4776	4757	4737	4739	4737	4734	4704	4728	4704	4735	4698	4705	4711	4743	4781	4809	4851	4876	4876	4817	4764	−28	4736	
4	4805	4775	4775	4763	4738	4732	4726	4728	4726	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5	—	—	—	—	—	—	—	—	—	4730	4708	4749	4741	4695	4687	4689	4712	4741	4824	4845	4903	4846	4846	4811	4762	−37	4725	
6	4842	4773	4759	4765	4759	4740	4721	4723	4721	4732	4716	4747	4730	4730	4690	4669	4643	4703	4753	4779	4743	4723	4752	4800	4738	−42	4696	
7	4759	4729	4729	4735	4729	4718	4706	4700	4691	4704	4691	4722	4704	4701	4725	4724	4724	4757	4864	4879	4816	4798	4816	4774	4746	−49	4697	
8	4774	4741	4740	4746	4740	4728	4715	4714	4710	4714	4691	4725	4711	4702	4698	4693	4739	4780	4811	4811	4884	4850	4873	4789	4753	−59	4694	
9	4745	4745	4745	4722	4687	4676	4665	4682	4695	4708	4695	4709	4674	4696	4698	4718	4789	4852	4889	4953	4936	4923	4861	4799	4761	−63	4698	
10	4799	4747	4731	4729	4715	4715	4715	4715	4712	4725	4712	4733	4705	4696	4699	4709	4758	4850	4995	5057	5012	4972	4908	4857	4790	−58	4732	
11	4827	4827	4755	4760	4753	4732	4711	4713	4711	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
12	—	—	—	—	—	—	—	—	—	4714	4690	4714	4690	4706	4686	4694	4711	4841	4881	4918	4948	4948	4925	4894	4781	−51	4730	
13	4854	4856	4856	4835	4802	4792	4782	4784	4782	4807	4806	4830	4806	4772	4747	4769	4801	4844	4917	4944	4881	4859	4859	4757	4823	−46	4777	
14	4775	4811	4811	4817	4811	4772	4733	4754	4771	4784	4771	4789	4759	4773	4769	4757	4821	4904	4977	5022	4977	4941	4889	4833	4826	−46	4780	
15	4800	4800	4800	4800	4788	4788	4788	4778	4765	4778	4765	4804	4795	4706	4830	4796	4872	4928	5050	5080	5041	4984	4904	4809	4844	−39	4805	
16	4809	4847	4825	4809	4781	4769	4757	4756	4751	4787	4796	4824	4803	4803	4773	4771	4854	4889	4936	4936	4917	4835	4805	4835	4820	−36	4784	
17	4835	4793	4793	4799	4793	4777	4760	4762	4760	4760	4734	4774	4765	4788	4760	4760	4790	4837	4888	4895	4895	4899	4866	4869	4806	−35	4771	
18	4839	4839	4823	4811	4787	4765	4742	4761	4777	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
19	—	—	—	—	—	—	—	—	—	4783	4762	4792	4774	4774	4749	4776	4802	4846	4881	4840	4811	4811	4816	4810	4799	−32	4767	
20	4886	4805	4805	4811	4805	4791	4776	4779	4779	4792	4779	4799	4771	4779	4764	4797	4829	4852	4872	4872	4905	4869	4857	4843	4817	−26	4791	
21	4821	4795	4790	4796	4790	4790	4790	4769	4744	4757	4744	4773	4754	4732	4755	4755	4805	4862	4899	4930	4909	4909	4846	4826	4806	−42	4764	
22	4826	4820	4805	4811	4805	4796	4786	4777	4765	4789	4787	4765	4695	4668	4693	4722	4751	4805	4816	4793	4766	4739	4739	4740	4769	−49	4720	
23	4721	4721	4715	4728	4718	4702	4685	4679	4669	4677	4658	4689	4672	4660	4674	4681	4713	4713	4736	4767	4800	4748	4732	4714	4707	−57	4650	
24	4714	4704	4704	4710	4704	4681	4657	4674	4688	4682	4650	4674	4650	4681	4662	4696	4737	4795	4851	4819	4785	4732	4650	4650	4706	−58	4648	
25	4699	4732	4704	4710	4704	4695	4685	4664	4640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
26	—	—	—	—	—	—	—	—	—	4675	4683	4698	4665	4694	4715	4773	4840	4625	5425	5436	5386	5328	5275	5220	4861	−58	4803	
27	5157	5157	5157	5155	5140	5125	5110	5125	5136	5149	5136	5184	5184	5124	5176	5195	5236	5235	5306	5282	5346	5325	5292	5258	5195	−53	5142	
28	5152	5203	5106	5112	5105	5081	5057	5067	5073	5030	4961	5030	5050	5074	5081	5126	5165	5178	5178	5215	5135	5114	5082	5110	5104	−59	5045	
29	5136	5136	5124	5130	5124	5115	5105	5084	5060	5073	5060	5084	5060	5079	5076	5076	5116	5193	5271	5271	5210	5157	5113	5085	5122	−63	5059	
30	5124	5142	5102	5108	5102	5082	5062	5064	5062	5099	5110	5121	5084	5033	5026	5006	5070	5249	5253	5221	5221	5293	5211	5173	5126	−63	5063	
31	5124	5124	5124	5116	5095	5081	5066	5063	5057	5070	5057	5081	5057	5055	5049	5065	5105	5191	5256	5282	5194	5141	5116	5092	5111	−64	5047	
Means.....	4860	4849	4836	4837	4825	4811	4796	4797	4794	4805	4789	4817	4796	4789	4789	4797	4835	4879	4958	4972	4960	4936	4907	4880	4846			
Temp. Corrections	-60	-56	-52	-50	-48	-46	-45	-42	-41	-39	-37	-35	-33	-31	-29	-34	-40	-47	-52	-56	-60	-62	-63	-64	.....	−47		
Corrected Means.	4800	4793	4784	4787	4777	4765	4751	4755	4753	4766	4752	4782	4763	4758	4760	4763	4795	4832	4906	4916	4900	4874	4844	4816	.....	.....	4799	
Mean Hourly Variations from Monthly Mean. = ·00	-1 -0029	6 0176	15 0439	12 0351	22 0644	34 0996	48 1406	44 1289	46 1347	33 0967	47 1377	17 0498	36 1054	41 1201	39 1142	36 1054	4 0117	-33 -0967	-107 -3134	-117 -3427	-101 -2968	-75 -2197	-45 -1318	-17 -0498	.....	$\frac{\Delta Y}{Y} =$	.....	·003427

MARCH 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	829	828	825	824	824	822	821	818	816	812	808	806	804	801	800	802	807	814	819	822	830	834	836	835	8182			
2	835	830	826	823	821	821	821	820	819	818	817	814	812	810	808	810	816	822	825	830	833	836	836	836	8225			
3	837	834	830	828	826	824	822	821	820	818	817	813	810	810	805	807	814	819	825	828	832	834	834	835	8226			
4	833	829	824	822	820	820	821	819	818	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	824	830	827	825	823	820	827	830	835	840	843	845	848	849	850	8301			
6	848	842	836	835	835	834	833	831	829	827	826	825	825	820	817	823	828	834	839	842	845	847	850	851	8343			
7	850	846	842	841	840	837	835	834	834	832	831	828	825	824	822	829	835	840	845	850	854	859	860	860	8397			
8	860	856	852	849	847	846	845	842	840	839	839	837	835	832	834	837	844	849	855	860	865	866	865	865	8483			
9	864	860	855	853	852	850	849	847	845	844	844	842	840	838	840	842	849	856	856	857	860	861	862	862	8512			
10	860	857	852	851	851	850	849	847	846	843	840	836	832	834	835	839	841	845	850	851	853	855	855	855	8470			
11	854	851	846	845	844	843	842	841	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	837	834	833	832	826	825	829	835	842	844	845	851	853	853	855	8417			
13	851	847	845	843	841	838	836	834	832	829	826	825	825	822	819	825	830	836	842	845	848	852	853	854	8374			
14	852	849	845	843	842	839	837	834	832	830	828	826	825	823	820	822	830	837	839	845	846	849	850	850	8372			
15	849	845	840	839	839	836	834	831	829	826	824	822	820	820	815	815	820	825	832	835	840	844	845	845	8321			
16	842	840	835	833	831	829	827	825	824	823	822	821	820	816	814	817	823	829	832	835	840	840	842	844	8293			
17	844	840	840	837	834	832	830	828	826	825	824	821	818	811	806	809	818	824	829	832	835	839	840	840	8284			
18	838	835	830	828	826	824	823	821	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	820	820	819	818	815	812	816	822	828	831	832	835	835	836	836	8258			
20	835	831	830	828	827	823	820	816	813	811	809	809	809	806	802	806	813	820	826	830	832	834	836	837	8210			
21	837	834	832	831	831	830	830	829	828	826	825	825	825	829	830	835	840	845	845	847	848	850	849	8344				
22	847	845	843	841	840	839	839	837	836	835	835	833	831	830	827	832	835	838	844	847	850	852	854	854	8402			
23	852	849	845	845	845	845	845	843	842	841	840	838	836	835	835	838	842	849	852	855	857	859	859	859	8461			
24	856	853	851	849	847	846	846	844	842	841	840	838	836	835	835	837	844	848	852	855	856	859	860	860	8471			
25	858	856	852	851	850	848	846	844	843	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	840	838	837	836	835	836	839	844	845	848	854	856	857	857	856	8469			
27	855	852	850	848	846	843	841	838	835	834	833	832	832	830	828	834	840	845	848	852	855	857	858	858	8435			
28	856	855	850	849	849	847	845	844	843	842	841	840	839	836	835	840	845	852	854	856	860	861	861	860	8483			
29	858	855	852	850	849	848	847	844	842	841	840	840	840	840	842	845	849	854	858	863	870	871	871	870	8516			
30	866	861	860	858	856	854	853	851	850	847	844	842	840	838	838	840	845	849	852	855	856	857	857	859	8512			
31	859	856	852	851	850	849	849	849	849	847	846	845	845	842	841	846	850	855	857	858	860	863	863	863	8519			
Means.....	8491	8458	8422	8406	8394	8377	8365	8345	8331	8316	8304	8287	8272	8251	8237	8273	8327	8381	8422	8453	8486	8507	8516	8518	8381			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·185 scd. $\quad k = a.\ \text{cotan.}\ \theta.\ \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 37'\ 35'' \times \left(\frac{6{\cdot}918}{5{\cdot}851}\right)^2 = 0{\cdot}00030382$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

APRIL 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				−6·1 *		−5·5 *		−11·8 *		7·7 *		3·9 *																
1	5118	5118	5118	5082	5059	5062	5076	5067	5082	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	5066	5035	5046	5049	5049	5039	5019	5060	5119	5195	5273	5324	5309	5164	5142	5111	− 69	5042	
3	5121	5121	5121	5087	5065	5040	5025	5022	5042	5050	5042	5057	5064	5047	5052	5095	5142	5150	5182	5186	5161	5161	5111	5089	5093	− 72	5021	
4	5111	5111	5061	5055	5061	5070	5089	5077	5089	5094	5083	5063	5035	5035	5084	5105	5169	5250	5311	5311	5233	5170	5126	5090	5120	− 72	5048	
5	5108	5108	5108	5077	5058	5033	5018	5031	5067	5075	5067	5047	5020	5020	5051	5068	5135	5176	5212	5212	5219	5219	5149	5107	5099	− 75	5024	
6	5089	5089	5089	5083	5089	5077	5076	5038	5024	5045	5050	5038	5018	5035	5084	5084	5155	5210	5275	5291	5291	5144	5112	5095	5108	− 82	5026	
7	5081	5062	5033	5027	5033	5008	4994	5005	5039	5024	4994	5002	5003	5003	5027	5074	5134	5249	5298	5304	5267	5193	5161	5111	5089	− 88	5001	
8	5049	5049	5019	5013	5019	5007	5005	4968	4955	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	4988	5005	4992	4972	4988	5012	5003	5072	5158	5199	5179	5157	5157	5097	5064	5047	− 94	4953	
10	5089	5089	5038	5032	5038	5021	5014	4989	4988	4996	4988	4955	4914	4914	4889	4989	5149	5277	5082	5000	4903	5049	5154	5298	5036	− 94	4942	
11	5148	4934	4911	4905	4911	4906	4911	4901	4914	4922	4914	4918	4914	4915	4942	4866	4891	4952	5020	5041	5041	5066	5066	5066	4957	−102	4855	
12	5009	5009	4998	4992	4998	4987	4986	4950	4938	4935	4916	4920	4916	4964	4932	5019	5035	5144	5228	5259	5214	5116	5009	4895	5015	−104	4911	
13	4880	4932	4923	4917	4923	4909	4905	4903	4924	4906	4873	4885	4890	4845	4905	5000	5080	5170	5301	5333	5262	5128	5032	4947	4991	−102	4889	
14	4947	4931	4931	4934	4950	4945	4950	4945	4964	4972	4964	4934	4896	4899	4967	5029	5125	5211	5257	5238	5191	5128	5047	5047	5017	−101	4916	
15	4997	4997	4977	4970	4975	4928	4891	4879	4891	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	4937	4967	4940	4905	4842	4902	4949	5034	5137	5270	5298	5220	5140	5029	4979	5002	−104	4898	
17	4917	4962	4991	4964	4949	4933	4927	4920	4936	4944	4936	4928	4913	4873	4898	4923	4982	5045	5087	5159	5187	5140	5059	4991	4982	−102	4880	
18	4991	4967	4967	4926	4898	4917	4947	4947	4970	4955	4925	4929	4925	4871	4974	4893	4961	5014	5087	5155	5079	5011	4957	4957	4968	−106	4862	
19	4979	4939	4917	4914	4924	4912	4911	4927	4966	4987	4992	4967	4935	4926	4895	4990	5004	5045	5041	5040	5015	4981	4981	4956	4964	−104	4860	
20	4974	4956	4928	4917	4918	4911	4914	4871	4852	4891	4914	4918	4914	4920	4918	4995	5031	5031	5121	5170	5137	5096	5018	5008	4972	−101	4871	
21	4990	4990	4931	4916	4913	4916	4930	4927	4948	4986	5009	4947	4878	4905	4930	4973	5014	5025	5085	5106	5106	5134	5067	5036	4986	−107	4879	
22	5019	5060	5002	4985	4981	4976	4981	4981	5005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	4997	4974	4978	4974	4987	5014	5046	5096	5153	5192	5220	5150	5150	5056	5055	5043	−126	4917	
24	5086	5043	5030	5021	5024	5006	4999	4968	4960	4932	4888	4947	4999	4936	5043	5043	5087	5126	5146	5111	5018	4968	4968	4950	5012	−130	4882	
25	4985	4985	4985	4958	4943	4938	4943	4943	4966	4974	4966	4953	4933	4933	5006	5049	5125	5169	5169	5161	5140	5093	5061	5033	5017	−122	4895	
26	5030	5030	4985	4979	4986	4988	5000	4986	4995	5003	4995	4981	4960	4984	4977	4999	5041	5067	5090	5051	5064	5064	4956	4956	5007	−109	4898	
27	4975	5005	4952	4961	4983	4959	4946	4943	4964	4974	4968	4990	5004	4986	5009	5006	5055	5096	5118	5065	5080	5040	4985	4957	5001	− 85	4916	
28	4996	4996	4979	4976	4985	4970	4965	4956	4971	4980	4974	4958	4935	4957	4971	4945	5011	5057	5129	5096	5065	4988	4968	4950	4991	− 83	4908	
29	4950	4986	4960	4960	4973	4956	4950	4952	4978	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	4969	4945	4952	4951	4908	4942	4972	5040	5076	5045	5087	5046	5040	4989	4971	4983	− 85	4898	
Means	5026	5019	4998	4986	4986	4975	4974	4964	4977	4984	4975	4970	4957	4950	4979	5005	5065	5124	5166	5174	5143	5107	5053	5030	5025			
Temp. Corrections	-114	-107	-100	-97	-94	-91	-89	-88	-86	-85	-83	-81	-80	-77	-78	-84	-92	-100	-106	-113	-117	-119	-120	-119	.....	-97		
Corrected Means	4912	4912	4898	4889	4892	4884	4885	4876	4891	4899	4892	4889	4877	4873	4901	4921	4973	5024	5060	5061	5026	4988	4933	4911	.....	.....	4928	
Mean Hourly Variations from Monthly Mean. = ·00	16	16	30	39	36	44	43	52	37	29	36	39	51	55	27	7	-45	-96	-132	-133	-98	-60	-5	17	.....	$\frac{\Delta Y}{Y} =$	.....	·004041
	0486	0488	0911	1185	1094	1337	1306	1580	1124	0881	1094	1185	1549	1671	0820	0213	-1367	-2917	-4010	-4041	-2977	-1823	-0152	0516	.....			

APRIL 1853. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	862	860	857	856	855	855	855	853	852	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	852	853	852	852	850	851	853	858	858	862	866	870	872	872	872	8583			
3	870	868	863	861	860	859	858	857	856	855	854	853	852	850	847	852	855	859	863	869	872	872	875	875	8606			
4	872	867	865	864	863	860	858	856	854	854	854	852	850	849	847	851	856	861	863	869	872	874	875	875	8609			
5	875	870	864	863	863	862	862	858	855	854	854	853	852	850	850	854	860	864	868	871	880	880	882	880	8635			
6	880	878	872	868	865	865	865	864	864	862	861	860	860	860	858	859	864	869	873	878	885	886	886	887	8695			
7	885	883	877	876	875	873	871	870	870	868	866	864	863	860	857	861	865	871	876	884	886	890	892	892	8740			
8	890	886	881	879	877	875	873	871	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	868	867	866	865	863	866	871	878	884	886	893	896	900	898	898	8792			
10	898	895	889	887	885	877	869	866	863	863	863	861	860	857	862	869	876	885	888	895	898	900	900	900	8794			
11	898	894	890	885	880	878	877	877	877	876	876	876	876	877	880	882	882	887	892	896	899	900	904	900	8858			
12	898	894	890	888	886	884	883	881	880	880	880	879	879	877	877	880	885	887	892	896	897	902	904	902	8875			
13	900	893	889	887	885	882	880	878	877	877	877	877	877	873	876	880	885	888	892	895	896	898	898	897	8857			
14	895	893	885	882	880	880	880	879	878	878	878	877	876	875	877	879	884	890	892	898	898	899	899	900	8855			
15	898	892	888	886	885	884	883	881	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	880	881	880	880	880	880	881	885	889	894	895	897	898	899	899	8873			
17	896	892	887	885	884	883	883	882	882	880	879	877	875	870	866	875	881	887	892	899	900	904	905	902	8861			
18	900	895	892	891	890	888	887	886	885	883	882	881	880	880	879	882	887	891	895	897	900	900	901	900	8897			
19	896	896	889	887	885	884	884	883	882	881	880	879	879	879	880	883	886	888	893	895	900	900	900	898	8878			
20	897	895	892	890	889	886	884	882	880	877	875	872	870	868	871	874	879	883	887	890	895	900	900	900	8848			
21	895	890	886	885	885	883	882	881	880	880	880	879	878	878	879	880	884	890	896	904	907	912	922	925	8900			
22	925	920	909	907	906	903	901	900	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	896	893	891	889	889	889	890	897	905	909	915	917	929	935	932	9061			
24	930	925	916	914	912	909	906	905	905	903	901	899	897	893	892	893	900	905	908	915	922	924	925	925	9093			
25	920	916	911	908	906	903	900	899	898	896	895	894	893	889	886	889	896	900	906	912	915	915	915	915	9032			
26	910	903	895	893	892	889	886	886	886	885	884	883	882	877	875	880	887	890	897	900	905	905	907	906	8918			
27	905	900	895	880	865	862	859	859	860	853	847	841	836	827	830	847	865	887	895	899	904	906	906	902	8721			
28	892	872	860	856	853	851	849	846	843	836	830	828	827	823	825	840	868	895	920	943	935	927	930	925	8698			
29	907	885	865	859	854	852	850	847	845	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	847	849	843	837	837	844	857	877	902	902	906	913	915	913	908	8714			
Means	8958	8905	8843	8815	8792	8771	8754	8739	8729	8714	8704	8687	8674	8652	8658	8705	8776	8846	8896	8952	8984	9003	9017	9006	8816			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figure[8] heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·397 scd. $\quad k = a.\ \text{cotan.}\ \theta.\ \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 35'' \times \left(\frac{6{\cdot}918}{6{\cdot}345}\right)^2 = 0{\cdot}00025780$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

MAY 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 6 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 16 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				−13·1 *		−17·1 *		6·2 *		−0·9 *		10·6 *																
1	4947	4947	4954	4935	4942	4918	4929	4899	4857	4880	4904	4904	4882	4930	4928	4952	5016	5072	5102	5075	5062	5030	4983	4944	4958	−94	4864	
2	4931	4931	4950	4929	4934	4907	4914	4917	4907	4901	4896	4901	4884	4872	4900	4926	5000	5070	5099	5049	5022	4992	4961	4958	4948	−88	4860	
3	4958	4959	4939	4919	4926	4911	4931	4941	4938	4923	4909	4914	4898	4903	4919	4928	4977	4989	4989	4969	4982	4954	4963	4943	4941	−96	4845	
4	4942	4942	4935	4914	4919	4890	4896	4899	4890	4896	4903	4902	4880	4858	4388	4565	4616	4555	4607	4651	4692	4631	4576	4576	4772	−105	4667	
5	4544	4515	4551	4489	4454	4437	4454	4458	4449	4439	4430	4429	4407	4394	4459	4485	4564	4596	4597	4486	4452	4443	4426	4426	4474	−109	4365	
6	4457	4451	4443	4415	4413	4386	4393	4396	4386	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	4389	4393	4392	4370	4370	4376	4399	4482	4562	4620	4649	4575	4504	4440	4411	4445	−116	4329	
8	4448	4448	4436	4401	4393	4376	4393	4426	4447	4442	4439	4440	4419	4419	4468	4543	4612	4658	4724	4669	4590	4540	4495	4530	4490	−119	4371	
9	4499	4469	4469	4446	4450	4388	4360	4371	4370	4389	4410	4390	4349	4433	4481	4547	4628	4628	4577	4584	4553	4520	4520	4543	4474	−123	4351	
10	4478	4457	4410	4397	4410	4393	4410	4393	4364	4379	4396	4375	4332	4400	4450	4543	4572	4662	4599	4593	4522	4572	4587	4505	4467	−123	4344	
11	4505	4465	4431	4409	4414	4397	4414	4418	4410	4399	4389	4414	4418	4395	4376	4437	4528	4620	4620	4581	4577	4512	4533	4478	4464	−122	4342	
12	4445	4421	4435	4420	4431	4409	4421	4427	4421	4407	4394	4385	4354	4315	4378	4442	4556	4628	4725	4661	4661	4610	4553	4445	4473	−115	4358	
13	4392	4456	4456	4426	4422	4405	4422	4398	4362	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
14	—	—	—	—	—	—	—	—	—	4372	4384	4419	4432	4432	4490	4509	4556	4609	4686	4720	4585	4515	4515	4536	4479	−121	4358	
15	4534	4458	4581	4529	4503	4486	4503	4488	4461	4503	4546	4517	4467	4467	4460	4540	4636	4704	4669	4704	4640	4600	4556	4503	4544	−124	4420	
16	4503	4463	4467	4454	4467	4545	4658	4565	4460	4457	4455	4460	4444	4401	4508	4605	4575	4607	4667	4690	4648	4667	4635	4537	4539	−123	4416	
17	4491	4433	4466	4422	4405	4395	4419	4425	4418	4417	4418	4447	4455	4406	4478	4544	4644	4644	4528	4567	4624	4579	4541	4483	4485	−121	4364	
18	4525	4436	4436	4411	4413	4405	4432	4438	4432	4432	4434	4448	4441	4456	4456	4466	4529	4589	4589	4562	4500	4516	4572	4572	4479	−124	4355	
19	4507	4463	4477	4455	4459	4440	4456	4463	4457	4441	4427	4446	4444	4441	4375	4447	4518	4518	4603	4593	4593	4624	4586	4503	4489	−126	4363	
20	4462	4440	4422	4421	4446	4411	4410	4416	4410	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	4396	4384	4427	4449	4400	4477	4546	4641	4696	4696	4665	4627	4587	4543	4517	4495	−131	4364	
22	4532	4532	4532	4498	4490	4473	4490	4499	4496	4478	4461	4439	4396	4441	4453	4498	4556	4589	4625	4625	4563	4532	4570	4515	4512	−137	4375	
23	4478	4450	4450	4437	4450	4431	4446	4452	4446	4425	4406	4405	4382	4421	4454	4498	4566	4615	4635	4537	4484	4484	4438	4395	4466	−147	4319	
24	4395	4435	4448	4435	4448	4421	4428	4438	4436	4412	4390	4419	4427	4428	4424	4432	4493	4540	4560	4617	4599	4520	4450	4551	4464	−153	4311	
25	4451	4532	4557	4466	4402	4378	4388	4430	4460	4459	4460	4441	4401	4401	4462	4499	4500	4508	4576	4750	4717	4622	4569	4513	4498	−161	4337	
26	4475	4475	4475	4446	4443	4426	4443	4455	4455	4452	4450	4435	4398	4419	4384	4363	4450	4537	4505	4534	4548	4535	4593	4540	4468	−174	4294	
27	4430	4474	4450	4436	4448	4422	4430	4444	4445	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
28	—	—	—	—	—	—	—	—	—	4432	4420	4426	4410	4417	4350	4350	4421	4517	4600	4682	4682	4589	4589	4523	4474	−187	4287	
29	4465	4465	4498	4495	4519	4475	4465	4478	4479	4478	4479	4461	4421	4382	4399	4373	4428	4473	4533	4533	4533	4557	4475	4417	4470	−184	4286	
30	4447	4483	4463	4433	4429	4412	4429	4422	4402	4411	4421	4422	4402	4426	4416	4440	4440	4510	4559	4544	4575	4575	4507	4428	4458	−182	4276	
31	4428	4451	4448	4435	4448	4433	4453	4453	4440	4432	4426	4437	4426	4471	4444	4522	4537	4618	4670	4670	4710	4627	4526	4441	4498	−190	4308	
Means	4543	4535	4540	4514	4514	4495	4511	4511	4500	4498	4497	4500	4481	4485	4487	4533	4594	4641	4665	4665	4641	4609	4582	4546	4545			
Temp. Corrections	-152	-146	-137	-134	-131	-127	-124	-122	-121	-119	-118	-116	-114	-110	-116	-121	-127	-134	-142	-149	-155	-159	-160	-160	.....	−133		
Corrected Means.	4391	4389	4403	4380	4383	4368	4387	4389	4379	4379	4379	4384	4367	4375	4371	4412	4467	4507	4523	4516	4486	4450	4422	4386	.....	.....	4412	
Mean Hourly Variations from Monthly Mean. = ·00	21	23	9	32	29	44	25	23	33	33	33	28	45	37	41	0	-55	-95	-111	-104	-74	-38	-10	26	.....	$\frac{\Delta Y}{Y} =$	.....	·002862
	0541	0593	0232	0825	0748	1134	0645	0593	0851	0851	0851	0722	1160	0954	1057	0	-1418	-2449	-2862	-2681	-1908	-0980	-0258	0670				

MAY 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	896	880	867	862	857	856	855	853	852	847	842	841	840	828	834	850	864	878	890	900	909	909	905	898	8672			
2	891	869	865	860	856	853	851	849	847	843	840	838	836	835	844	852	864	875	882	890	892	895	894	890	8630			
3	880	876	871	869	867	867	867	866	865	863	862	861	861	858	858	864	865	869	871	877	880	880	880	880	8690			
4	880	878	874	869	864	867	870	871	872	871	870	869	868	865	870	872	877	879	880	885	889	890	890	893	8755			
5	890	887	881	879	877	873	870	870	870	869	868	867	867	867	870	875	880	881	883	886	889	891	890	890	8779			
6	889	885	881	880	880	878	876	875	874	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	875	877	875	874	870	876	878	880	885	890	894	897	899	900	898	8828			
8	897	894	886	884	883	880	877	877	877	876	875	875	875	872	875	876	880	885	893	896	900	900	902	902	8849			
9	902	900	894	896	899	890	882	881	880	877	875	874	873	872	879	880	881	886	892	897	901	902	903	904	8883			
10	901	899	892	890	888	885	883	881	880	877	875	872	870	870	879	880	885	890	895	899	902	903	905	905	8878			
11	903	896	892	891	891	889	887	882	877	877	877	876	876	872	877	880	881	886	890	895	899	901	903	900	8874			
12	898	897	888	882	876	876	876	875	875	875	875	872	870	867	870	878	879	881	886	890	893	895	897	898	8820			
13	897	893	886	884	882	881	880	878	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	878	880	877	875	875	879	880	885	890	895	899	901	903	903	903	8867			
15	900	897	891	889	888	884	880	880	880	880	880	878	876	875	880	881	885	890	895	900	903	902	904	905	8885			
16	903	899	892	890	888	885	883	881	880	880	880	878	876	875	878	880	885	888	892	897	899	902	902	904	8882			
17	903	900	891	889	887	883	880	880	880	880	880	878	877	870	875	880	881	886	892	895	898	899	900	902	8869			
18	898	897	894	892	890	886	883	882	882	881	880	878	876	872	879	880	884	887	895	898	902	903	903	904	8886			
19	902	900	894	891	888	886	885	884	883	881	880	880	880	877	879	882	885	889	895	901	905	907	907	907	8903			
20	905	901	896	895	895	892	890	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	885	880	879	878	875	883	888	893	898	902	906	909	910	911	908	8941			
22	907	903	900	897	894	892	891	890	890	889	888	886	885	885	888	890	896	898	905	914	917	918	919	917	8983			
23	913	912	908	905	903	901	900	897	895	895	895	893	892	890	892	895	900	905	910	915	923	925	926	927	9049			
24	923	919	913	913	913	910	907	903	900	899	898	897	896	894	895	898	903	908	913	920	922	924	927	928	9093			
25	926	922	918	916	914	912	910	907	905	903	902	901	900	898	898	901	905	911	918	925	933	943	947	948	9151			
26	942	937	930	929	929	927	925	922	920	918	916	913	911	908	905	908	913	916	921	928	935	940	945	848	9244			
27	949	947	942	938	934	930	927	923	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	922	925	923	922	920	920	921	926	933	939	943	948	951	955	956	9339			
29	951	944	937	933	930	925	921	920	920	918	917	916	915	914	920	921	926	930	939	945	950	954	955	953	9314			
30	940	939	933	929	925	923	922	920	918	917	917	914	912	910	915	920	926	932	940	945	950	960	960	957	9304			
31	953	945	940	938	936	932	929	927	925	924	924	922	920	920	920	925	930	935	940	946	953	960	964	958	9361			
Means	9091	9043	8984	8959	8939	8912	8891	8876	8864	8852	8844	8827	8815	8790	8829	8865	8911	8960	9016	9069	9111	9136	9147	9142	8953			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = \frac{\text{scd.}}{1{\cdot}397}$ $k = a.\ \text{cotan.}\ \theta.\ \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 39'\ 35'' \times \left(\frac{6{\cdot}918^{s.}}{6{\cdot}338}\right)^2 = 0{\cdot}00025779$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JUNE 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
				−2·3 *		4·1 *		−11·7 *		13·7 *		8·4 *															
1	4446	4477	4480	4448	4420	4444	4459	4447	4459	4442	4397	4451	4488	4466	4457	4444	4524	4597	4592	4663	4675	4553	4553	4480	4494	−186	4308
2	4480	4507	4480	4470	4465	4469	4464	4437	4433	4456	4451	4467	4467	4467	4460	4514	4514	4593	4628	4628	4614	4614	4572	4572	4509	−188	4321
3	4522	4522	4464	4439	4419	4423	4419	4392	4389	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	4438	4460	4457	4438	4386	4478	4518	4564	4571	4617	4563	4563	4563	4563	4514	4487	−190	4297
5	4473	4473	4473	4471	4473	4466	4451	4465	4503	4494	4458	4473	4472	4472	4507	4517	4592	4676	4632	4597	4533	4533	4496	4446	4506	−183	4323
6	4495	4495	4482	4484	4491	4482	4465	4453	4465	4464	4435	4453	4454	4501	4509	4509	4579	4660	4712	4686	4587	4587	4552	4523	4522	−173	4349
7	4523	4565	4565	4513	4465	4490	4506	4480	4478	4474	4442	4460	4462	4462	4498	4565	4629	4645	4645	4662	4621	4559	4503	4463	4528	−174	4354
8	4425	4474	4474	4472	4475	4467	4450	4438	4450	4469	4461	4451	4425	4425	4468	4534	4534	4621	4621	4604	4578	4539	4551	4551	4498	−161	4337
9	4512	4490	4486	4479	4476	4480	4476	4464	4476	4481	4459	4444	4413	4461	4486	4538	4602	4600	4600	4584	4553	4499	4495	4415	4499	−139	4360
10	4478	4478	4471	4469	4471	4475	4471	4459	4471	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	4489	4479	4499	4502	4471	4528	4528	4590	4507	4448	4470	4499	4458	4507	4549	4490	−142	4348
12	4610	4610	4580	4540	4504	4519	4525	4483	4464	4491	4490	4497	4487	4474	4506	4428	4543	4543	4668	4727	4700	4670	4561	4561	4549	−141	4408
13	4586	4479	4489	4478	4472	4501	4521	4530	4562	4555	4521	4529	4521	4482	4438	4407	4497	4546	4589	4633	4698	4749	4722	4670	4549	−165	4384
14	4585	4523	4523	4521	4523	4500	4468	4471	4498	4512	4498	4497	4479	4494	4462	4349	4261	4385	4434	4902	4612	4693	4632	4555	4516	−163	4353
15	4497	4497	4499	4478	4462	4477	4484	4486	4511	4524	4510	4496	4465	4424	4483	4485	4524	4624	4726	4700	4669	4627	4627	4554	4535	−164	4371
16	4515	4539	4519	4517	4519	4499	4470	4441	4436	4450	4436	4457	4462	4462	4495	4453	4480	4495	4513	4615	4615	4557	4602	4575	4505	−164	4341
17	4500	4493	4493	4474	4460	4477	4486	4474	4486	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	4496	4478	4486	4478	4461	4460	4459	4492	4545	4596	4638	4611	4568	4518	4487	4505	−154	4351
19	4487	4458	4458	4467	4481	4485	4481	4450	4443	4457	4443	4452	4445	4452	4485	4542	4579	4630	4675	4710	4710	4654	4580	4580	4525	−148	4377
20	4548	4574	4492	4490	4492	4496	4492	4463	4458	4484	4483	4493	4486	4486	4473	4473	4504	4561	4590	4555	4632	4685	4685	4636	4530	−150	4380
21	4540	4497	4491	4489	4491	4495	4491	4469	4471	4498	4498	4500	4486	4463	4520	4547	4593	4638	4622	4678	4691	4630	4588	4511	4537	−159	4378
22	4530	4531	4530	4505	4484	4489	4485	4462	4463	4465	4439	4455	4454	4512	4482	4514	4514	4522	4542	4473	4398	4452	4425	4425	4481	−163	4318
23	4513	4593	4553	4578	4608	4587	4558	4546	4558	4572	4558	4565	4556	4591	4618	4618	4681	4716	4775	4840	4769	4666	4638	4596	4619	−157	4462
24	4568	4615	4592	4584	4581	4585	4581	4583	4609	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	4605	4573	4581	4573	4548	4569	4536	4584	4614	4586	4560	4564	4564	4564	4559	4578	−131	4447
26	4582	4615	4615	4612	4614	4618	4614	4580	4570	4584	4570	4579	4571	4572	4572	4566	4648	4710	4735	4683	4633	4582	4582	4502	4605	−115	4490
27	4582	4644	4643	4681	4723	4662	4592	4554	4540	4554	4540	4566	4575	4574	4612	4590	4670	4670	4693	4678	4678	4627	4562	4554	4615	−119	4496
28	4585	4630	4612	4613	4619	4609	4591	4579	4591	4616	4614	4622	4614	4573	4553	4550	4584	4584	4720	4707	4675	4675	4642	4639	4617	−124	4493
29	4636	4602	4624	4618	4616	4620	4616	4572	4552	4566	4552	4566	4564	4567	4552	4531	4531	4607	4644	4644	4704	4750	4704	4656	4608	−128	4480
30	4612	4606	4595	4597	4603	5573	4534	4510	4510	4562	4586	4594	4586	4546	4546	4580	4637	4637	4657	4583	4583	4556	4519	4559	4578	−110	4468
Means.....	4532	4538	4526	4519	4516	4515	4506	4488	4494	4508	4494	4503	4497	4492	4508	4511	4556	4596	4625	4646	4622	4600	4575	4544	4538		
Temp. Corrections	-174	-167	-161	-158	-156	-152	-149	-146	-144	-142	-140	-138	-137	-135	-137	-141	-146	-152	-157	-163	-168	-173	-176	-174	.....	−153	
Corrected Means..	4358	4371	4365	4361	4360	4363	4357	4342	4350	4366	4354	4365	4360	4357	4371	4370	4410	4444	4468	4483	4454	4427	4399	4370	.....	.....	4385
Mean Hourly Variations from Monthly Mean. = ·00	27	14	20	24	25	22	28	43	35	19	31	20	25	28	14	15	-25	-59	-83	-98	-69	-42	-14	15	.....	$\frac{\Delta Y}{Y} =$	..... ·002526
	0696	0361	0516	0619	0645	0567	0722	1109	0902	0490	0799	0516	0645	0722	0361	0387	-0645	-1521	-2140	-2526	-1779	-1083	-0361	0387			

JUNE 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*															
1	950	941	935	934	934	932	931	929	927	924	922	921	920	915	915	918	925	930	935	943	947	952	957	953	9329		
2	949	945	942	939	937	933	930	927	925	924	924	922	921	920	918	920	929	935	940	945	950	952	953	951	9346		
3	947	941	936	935	934	933	932	930	929	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	929	930	925	920	920	923	929	933	940	944	947	952	955	952	944	9358		
5	940	937	935	935	935	932	930	927	925	924	923	921	920	916	916	920	925	930	932	936	940	944	950	948	9309		
6	941	937	931	928	926	923	921	919	917	916	915	913	912	910	910	915	916	921	926	933	936	937	938	940	9242		
7	942	937	935	930	925	921	918	916	915	913	911	910	910	909	908	915	920	924	930	932	939	941	945	938	9243		
8	931	923	923	921	920	918	916	913	910	907	905	904	903	900	904	905	909	910	915	918	925	927	926	924	9149		
9	920	915	910	907	905	901	898	898	898	896	894	892	890	885	890	886	885	890	895	898	902	906	911	913	8994		
10	914	909	902	901	900	897	894	893	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	894	896	893	890	888	894	896	898	902	905	912	917	918	918	918	9017		
12	921	917	912	910	909	901	894	893	892	891	890	887	885	881	880	887	892	897	900	906	908	915	921	930	9008		
13	933	929	937	930	923	919	916	913	910	908	907	905	903	902	903	906	910	912	916	920	925	930	936	940	9180		
14	941	937	922	918	915	912	910	908	907	906	905	903	902	901	902	906	910	915	916	921	927	935	938	937	9164		
15	933	928	917	917	918	915	912	911	910	907	905	905	905	905	905	906	910	915	920	924	930	934	942	947	9175		
16	936	928	919	918	917	916	915	913	912	911	910	907	905	904	905	906	911	916	918	925	926	933	935	930	9173		
17	930	924	917	916	916	911	906	905	905	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	902	900	900	900	897	900	902	905	905	910	915	918	922	920	918	9102		
19	915	911	907	906	906	903	900	898	897	896	895	895	895	895	894	899	905	906	910	913	918	921	928	921	9056		
20	918	915	910	910	910	907	904	899	895	894	893	894	896	895	899	902	905	910	913	915	920	924	929	926	9076		
21	921	918	915	914	913	913	914	911	909	907	905	904	904	902	902	905	908	913	917	920	926	929	932	930	9138		
22	927	919	915	915	915	913	912	910	908	907	907	906	905	905	908	910	912	920	922	929	935	940	935	930	9169		
23	925	920	920	918	916	914	912	910	908	906	905	905	905	904	903	906	910	915	916	916	915	915	916	915	9123		
24	914	910	909	908	907	904	902	899	897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	889	882	881	880	876	877	880	882	885	890	893	895	895	894	894	8935		
26	890	888	890	886	882	881	880	877	874	872	870	870	870	870	870	876	880	884	886	892	895	897	900	900	8825		
27	900	897	890	887	885	881	878	876	875	875	875	875	875	874	876	878	880	885	890	893	898	899	898	898	8849		
28	899	895	892	889	886	885	884	883	882	881	880	880	880	877	880	884	886	890	895	896	901	903	905	905	8891		
29	904	900	895	894	894	893	893	890	888	887	886	885	885	885	882	885	885	887	890	895	898	899	899	897	8915		
30	893	888	872	872	872	871	870	869	868	868	868	868	868	870	875	875	878	885	888	890	893	895	895	895	8786		
Means	9244	9196	9149	9130	9115	9088	9066	9045	9029	9013	9001	8989	8980	8964	8977	9007	9042	9085	9123	9164	9206	9238	9259	9247	9098		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ scd. 1·400 $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 3'' \times \left(\frac{\text{s. } 6{\cdot}918}{6{\cdot}356}\right)^2 = 0{\cdot}00025720$ Adopted Temperature 80°·

VERTICAL FORCE MAGNETOMETER.

JULY 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				2·9 *		−2·04 *		−8·1 *		7·2 *		17 5 *																
1	4559	4568	4541	4541	4535	4533	4535	4547	4576	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	4591	4591	4596	4566	4566	4569	4592	4634	4660	4699	4738	4745	4726	4685	4626	4605	−118	4487	
3	4602	4602	4527	4539	4545	4552	4563	4549	4551	4545	4524	4552	4545	4521	4551	4595	4641	4558	4558	4499	4429	4489	4518	4518	4545	−108	4437	
4	4481	4507	4531	4534	4531	4529	4531	4546	4578	4581	4570	4587	4570	4504	4569	4555	4600	4670	4670	4688	4650	4650	4605	4642	4578	−106	4472	
5	4602	4550	4536	4545	4548	4529	4514	4531	4565	4572	4565	4590	4580	4520	4579	4603	4629	4681	4681	4698	4676	4676	4640	4635	4594	−117	4477	
6	4610	4579	4550	4534	4513	4511	4513	4504	4512	4519	4512	4531	4516	4513	4532	4532	4576	4576	4676	4707	4588	4535	4552	4552	4552	−121	4431	
7	4673	4568	4595	4576	4552	4550	4552	4550	4564	4571	4564	4567	4535	4531	4555	4591	4591	4607	4607	4724	4655	4711	4758	4720	4603	−120	4483	
8	4598	4542	4515	4511	4502	4500	4502	4474	4463	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	4496	4514	4531	4514	4528	4556	4610	4610	4565	4457	4465	4520	4585	4521	4468	4523	−102	4421	
10	4496	4551	4586	4526	4460	4630	4804	4691	4594	4612	4616	4593	4536	4516	4575	4575	4661	4661	4704	4731	4731	4671	4592	4563	4611	− 90	4521	
11	4526	4505	4505	4502	4493	4475	4461	4483	4522	4529	4522	4536	4516	4489	4538	4585	4664	4746	4771	4747	4748	4715	4690	4620	4579	− 93	4486	
12	4581	4553	4573	4576	4573	4549	4529	4516	4519	4526	4519	4541	4528	4519	4565	4599	4636	4694	4717	4753	4753	4767	4666	4632	4599	−113	4486	
13	4589	4553	4553	4525	4492	4495	4503	4502	4518	4525	4518	4507	4462	4499	4537	4536	4559	4559	4523	4446	4470	4535	4607	4577	4525	−104	4421	
14	4518	4518	4518	4509	4494	4492	4494	4495	4512	4519	4512	4519	4492	4489	4544	4584	4609	4650	4625	4614	4614	4570	4591	4524	4542	− 96	4446	
15	4595	4542	4542	4545	4542	4521	4504	4496	4504	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	4517	4515	4532	4515	4524	4546	4576	4607	4624	4624	4581	4515	4524	4495	4495	4541	− 74	4467	
17	4471	4505	4535	4535	4530	4536	4547	4525	4519	4526	4519	4531	4508	4507	4537	4537	4570	4567	4605	4710	4710	4755	4768	4647	4571	− 84	4487	
18	4563	4514	4514	4517	4514	4489	4468	4489	4526	4533	4526	4540	4520	4517	4584	4582	4667	4704	4730	4698	4674	4726	4726	4678	4583	− 99	4484	
19	4646	4588	4550	4543	4531	4549	4571	4572	4590	4592	4580	4559	4504	4495	4534	4534	4571	4603	4620	4595	4575	4544	4506	4522	4561	−112	4449	
20	4530	4530	4522	4510	4492	4490	4493	4488	4500	4491	4468	4500	4498	4523	4500	4498	4539	4539	4557	4579	4641	4610	4627	4627	4531	−132	4399	
21	4604	4546	4523	4516	4504	4494	4488	4480	4488	4503	4504	4521	4504	4484	4504	4550	4571	4640	4640	4763	4738	4702	4595	4505	4557	−126	4431	
22	4529	4529	4561	4547	4527	4525	4527	4524	4537	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	4518	4484	4501	4484	4459	4501	4526	4558	4558	4623	4603	4568	4568	4580	4580	4538	−123	4415	
24	4663	4633	4552	4510	4463	4451	4443	4459	4492	4499	4492	4500	4473	4495	4530	4485	4467	4467	4449	4489	4489	4542	4516	4532	4504	−115	4389	
25	4573	4596	4501	4504	4501	4474	4451	4420	4406	4413	4406	4478	4515	4485	4544	4610	4622	4659	4714	4690	4710	4677	4635	4581	4549	−127	4422	
26	4555	4555	4527	4508	4484	4482	4484	4452	4436	4463	4475	4509	4509	4498	4550	4525	4539	4581	4623	4659	4689	4703	4657	4635	4546	−138	4408	
27	4554	4554	4558	4540	4516	4491	4471	4490	4525	4544	4549	4530	4476	4472	4503	4559	4621	4600	4597	4564	4482	4424	4347	4325	4512	−137	4375	
28	4403	4461	4503	4507	4505	4503	4505	4477	4465	4472	4465	4497	4495	4471	4514	4553	4607	4649	4633	4594	4617	4642	4615	4555	4530	−137	4393	
29	4530	4554	4554	4557	4554	4518	4487	4465	4459	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	4464	4455	4480	4471	4466	4546	4567	4550	4551	4562	4609	4580	4556	4588	4625	4531	−139	4392	
31	4590	4547	4515	4508	4495	4490	4490	4488	4502	4522	4527	4550	4538	4489	4531	4578	4640	4681	4673	4634	4703	4755	4735	4705	4579	−129	4450	
Means.....	4563	4548	4538	4529	4515	4514	4517	4508	4516	4525	4519	4534	4514	4503	4542	4563	4598	4617	4628	4638	4626	4629	4608	4580	4557			
Temp. Corrections	−128	−125	−120	−118	−116	−114	−113	−111	−109	−107	−105	−103	−102	−100	−98	−100	−105	−110	−115	−120	−124	−128	−130	−130	.....	−114		
Corrected Means..	4435	4423	4418	4411	4399	4400	4404	4397	4407	4418	4414	4431	4412	4403	4444	4463	4493	4507	4513	4518	4502	4501	4478	4450	.....	.....	4443	
Mean Hourly Variations from Monthly Mean. =·00	8 0206	20 0514	25 0643	32 0823	44 1132	43 1106	39 1003	46 1183	36 0926	25 0642	29 0746	12 0309	31 0797	40 1029	−1 −0028	−20 −0514	−50 −1286	−64 −1646	−70 −1800	−75 −1929	−59 −1517	−58 −1492	−35 −0900	−7 −0180	.....	$\frac{\Delta Y}{Y}$ =	.....	·001929

JULY 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	894	890	886	885	885	884	884	883	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	883	884	883	882	882	880	882	885	882	883	883	884	886	888	890	8846			
3	888	887	885	883	882	881	880	878	876	873	870	868	866	865	864	869	870	873	876	880	883	884	883	882	8769			
4	882	878	870	870	870	875	880	880	880	880	880	877	874	867	852	860	865	871	875	878	881	887	890	892	8756			
5	892	891	886	885	884	883	882	879	877	874	872	871	871	871	872	877	880	885	886	891	897	899	902	904	8838			
6	900	895	893	891	890	888	886	883	880	877	875	872	870	870	873	880	882	885	890	893	897	902	903	903	8866			
7	900	898	890	890	890	888	886	881	876	875	874	872	870	870	872	880	885	887	890	894	895	897	898	898	8857			
8	897	896	891	889	887	885	884	882	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	880	880	878	877	874	856	850	846	848	850	855	858	863	867	869	8726			
10	868	867	865	864	864	863	862	863	864	862	860	859	858	855	852	852	856	864	868	874	881	882	878	870	8646			
11	868	865	864	862	861	860	860	859	858	859	860	857	855	855	855	857	862	868	870	878	882	890	892	894	8663			
12	897	895	890	887	885	884	883	881	880	876	873	871	870	867	866	866	868	873	880	885	888	890	887	887	8804			
13	884	882	880	878	876	876	876	874	872	870	868	866	865	865	867	865	869	870	875	880	882	884	884	883	8746			
14	883	882	881	879	877	875	874	872	870	869	868	866	865	860	860	860	863	864	865	863	863	862	862	862	8685			
15	861	859	859	859	859	857	855	852	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	847	845	842	840	840	840	840	845	849	855	858	862	865	868	870	8532			
17	869	865	861	859	857	856	855	855	855	854	854	853	852	850	850	853	854	858	863	867	869	872	875	876	8597			
18	877	873	871	870	870	868	867	866	865	865	865	865	865	862	862	865	865	868	874	877	882	883	883	885	8705			
19	884	884	881	880	879	877	876	875	875	873	872	872	872	870	870	870	870	878	880	887	890	895	900	903	8797			
20	900	899	897	896	895	894	893	893	894	892	890	887	885	882	881	885	890	894	897	900	902	907	908	907	8945			
21	905	902	895	893	892	891	890	888	887	886	885	883	882	880	878	876	882	890	894	897	897	898	898	898	8903			
22	898	898	895	893	892	891	890	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	884	879	878	878	877	876	880	880	884	890	892	893	896	896	890	8879			
24	887	887	886	883	880	879	878	878	878	877	876	875	875	875	875	875	879	882	885	887	888	891	893	895	8818			
25	897	897	894	892	890	890	890	889	888	887	886	885	885	882	882	882	885	889	894	898	899	900	902	901	8910			
26	900	899	897	896	896	895	895	894	893	892	891	890	890	888	890	890	895	900	905	906	914	917	918	921	8988			
27	918	912	903	901	899	895	891	890	890	888	887	886	885	882	882	886	890	895	902	906	912	915	917	914	8978			
28	910	907	901	899	897	896	895	893	892	890	889	887	885	885	885	890	895	897	900	906	908	912	914	911	8977			
29	908	906	902	901	900	897	895	893	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	891	890	893	896	895	892	890	896	900	902	903	906	907	910	913	8991			
31	912	912	907	900	894	893	892	888	885	885	885	883	882	882	880	881	885	886	889	892	896	898	898	901	8919			
Means.....	8915	8895	8858	8840	8827	8816	8807	8792	8780	8765	8753	8738	8729	8712	8697	8716	8747	8785	8822	8858	8888	8916	8928	8930	8813			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = \frac{\text{scd.}}{1{\cdot}430}$ $k = a.\ \text{cotan.}\ \theta.\left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 5'' \times \left(\frac{\text{s.}\ 6{\cdot}918}{6{\cdot}425}\right)^2 = 0{\cdot}00025169$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

AUGUST 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				−14·2 *		5·3 *		−24·7 *		−0·1 *		2·5 *																
1	4634	4560	4515	4485	4484	4489	4483	4460	4487	4491	4496	4498	4496	4467	4521	4537	4578	4601	4534	4457	4435	4485	4557	4590	4514	−131	4383	
2	4603	4550	4519	4497	4503	4507	4501	4476	4500	4506	4512	4514	4512	4483	4537	4598	4572	4543	4502	4480	4464	4443	4528	4587	4518	−138	4380	
3	4626	4561	4535	4509	4511	4501	4481	4456	4481	4486	4492	4511	4525	4447	4536	4449	4512	4506	4493	4508	4480	4525	4557	4586	4511	−131	4380	
4	4547	4510	4487	4461	4464	4468	4462	4437	4462	4470	4479	4481	4479	4494	4459	4492	4481	4513	4550	4524	4550	4623	4601	4558	4502	−125	4377	
5	4534	4474	4470	4456	4470	4475	4470	4446	4471	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	4496	4522	4528	4530	4494	4525	4501	4536	4580	4545	4624	4558	4558	4588	4560	4517	−121	4396	
7	4593	4550	4514	4481	4477	4493	4498	4455	4461	4487	4514	4523	4528	4468	4530	4591	4647	4712	4647	4641	4610	4590	4570	4562	4548	−117	4431	
8	4532	4532	4532	4518	4532	4522	4501	4478	4505	4514	4523	4525	4523	4483	4522	4508	4534	4533	4477	4370	4389	4471	4471	4525	4501	−120	4381	
9	4557	4530	4525	4512	4528	4532	4525	4485	4495	4508	4521	4499	4473	4509	4463	4502	4533	4573	4652	4729	4635	4572	4531	4481	4536	−119	4417	
10	4500	4500	4500	4476	4480	4506	4521	4497	4523	4501	4479	4488	4492	4510	4556	4671	4769	4793	4819	4773	4742	4742	4660	4544	4585	−100	4485	
11	4516	4550	4522	4498	4502	4506	4499	4465	4480	4486	4492	4494	4492	4456	4475	4526	4588	4656	4695	4769	4790	4774	4752	4616	4567	− 95	4472	
12	4530	4530	4489	4477	4493	4498	4493	4465	4487	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	4480	4473	4475	4472	4472	4501	4539	4594	4647	4610	4568	4550	4586	4559	4507	4521	− 91	4430	
14	4475	4497	4510	4491	4500	4515	4519	4493	4516	4503	4490	4512	4529	4475	4509	4544	4582	4649	4614	4646	4600	4600	4516	4492	4532	− 97	4435	
15	4538	4555	4519	4505	4519	4524	4519	4493	4517	4496	4475	4485	4490	4437	4520	4579	4667	4701	4738	4740	4709	4709	4686	4587	4571	−106	4465	
16	4578	4563	4563	4496	4458	4474	4480	4456	4481	4481	4481	4496	4507	4471	4514	4562	4628	4689	4726	4687	4651	4587	4549	4526	4546	−111	4435	
17	4550	4550	4500	4486	4500	4507	4504	4485	4515	4515	4515	4526	4533	4478	4495	4534	4627	4671	4707	4732	4704	4704	4666	4596	4567	−116	4451	
18	4552	4515	4515	4491	4495	4499	4492	4467	4492	4492	4492	4509	4522	4485	4526	4554	4614	4636	4632	4655	4597	4511	4551	4528	4534	−108	4426	
19	4570	4570	4530	4516	4530	4530	4520	4495	4520	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	4497	4474	4484	4489	4478	4479	4550	4587	4609	4567	4605	4493	4469	4499	4520	4524	−105	4419	
21	4553	4553	4482	4467	4480	4485	4480	4456	4482	4482	4482	4494	4501	4457	4540	4579	4661	4702	4680	4740	4608	4608	4498	4478	4540	−106	4434	
22	4529	4506	4495	4481	4495	4489	4472	4448	4473	4478	4484	4494	4500	4497	4521	4521	4604	4660	4635	4669	4603	4603	4540	4512	4530	−105	4425	
23	4546	4567	4511	4484	4486	4482	4467	4442	4467	4468	4470	4484	4493	4468	4495	4551	4606	4581	4550	4575	4575	4561	4526	4472	4514	− 98	4416	
24	4434	4498	4504	4479	4483	4470	4446	4421	4446	4472	4498	4508	4514	4439	4480	4566	4643	4652	4640	4606	4522	4471	4471	4447	4505	−100	4405	
25	4528	4506	4529	4496	4491	4487	4472	4447	4472	4460	4448	4435	4418	4481	4420	4505	4550	4504	4615	4690	4485	4470	4457	4440	4492	−101	4391	
26	4475	4501	4461	4468	4503	4487	4460	4435	4460	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	4458	4457	4468	4475	4448	4486	4610	4702	4816	4785	4766	4708	4630	4569	4499	4547	−114	4433	
28	4503	4503	4478	4456	4462	4481	4490	4465	4490	4490	4490	4499	4504	4448	4520	4585	4664	4695	4730	4698	4654	4605	4589	4529	4543	−115	4428	
29	4494	4515	4495	4470	4474	4479	4474	4456	4488	4486	4485	4476	4463	4451	4506	4552	4647	4729	4785	4755	4683	4598	4546	4546	4544	−104	4440	
30	4505	4505	4505	4469	4462	4467	4462	4437	4462	4473	4485	4503	4516	4461	4495	4554	4632	4557	4565	4596	4610	4610	4510	4475	4513	− 91	4422	
31	4511	4538	4506	4476	4475	4480	4475	4452	4478	4477	4476	4486	4491	4495	4475	4532	4615	4647	4698	4742	4686	4641	4619	4565	4543	−104	4439	
Means.....	4538	4529	4508	4485	4491	4495	4488	4462	4486	4487	4489	4496	4499	4472	4504	4548	4606	4635	4637	4642	4596	4583	4562	4531	4532			
Temp. Corrections	-126	-122	-117	-114	-112	-109	-107	-106	-104	-103	-102	-100	-99	-96	-94	-98	-101	-105	-110	-115	-120	-124	-126	-127	.....	-110		
Corrected Means..	4412	4407	4391	4371	4379	4386	4381	4356	4382	4384	4387	4396	4400	4376	4410	4450	4505	4530	4527	4527	4476	4459	4436	4404	.....	.....	4422	
Mean Hourly Variations from Monthly Mean. = ·00	10	15	31	51	43	36	41	66	40	38	35	26	22	46	12	-28	-83	-100	-105	-105	-54	-37	-14	18	.....	$\frac{\Delta Y}{Y} =$	.....	·002718
	0252	0378	0780	1284	1082	0906	1032	1661	1007	0956	0881	0654	0554	1158	0302	-0705	-2089	-2718	-2643	-2643	-1359	-0931	-0352	0453				

AUGUST 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
1	899	898	895	893	891	890	890	888	887	886	885	883	882	880	881	885	886	890	894	900	902	902	906	907	8917			
2	908	906	904	901	898	897	896	894	892	890	888	886	885	882	885	885	890	894	899	903	905	908	911	916	8968			
3	913	908	907	901	896	892	888	886	885	883	882	881	880	875	876	882	885	888	891	896	897	902	903	904	8917			
4	901	897	895	893	891	889	888	886	885	882	880	878	876	872	871	879	880	883	885	890	894	898	898	899	8871			
5	898	897	890	886	883	881	880	878	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	882	888	885	882	878	870	870	874	881	885	887	891	896	899	900	8849			
7	898	895	888	886	885	882	880	880	880	878	876	875	875	872	868	870	871	875	879	885	888	892	895	897	8821			
8	896	894	890	889	889	886	884	882	880	879	878	876	875	874	872	875	875	876	880	886	890	896	898	900	8842			
9	897	893	887	886	886	885	885	884	884	878	872	871	871	868	867	870	873	880	885	889	891	895	896	897	8829			
10	892	884	882	879	876	873	870	867	865	863	862	861	860	855	855	855	860	865	866	869	874	877	880	882	8697			
11	878	872	871	870	870	866	862	861	860	860	860	860	860	868	860	857	859	863	868	870	872	875	878	879	8666			
12	879	873	866	865	865	865	865	864	864	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	859	855	855	855	855	855	855	860	861	865	867	868	868	869	874	8636			
14	872	872	871	869	867	864	862	861	860	860	860	859	858	856	857	865	866	868	871	876	880	884	887	883	8678			
15	882	879	876	874	872	871	870	870	870	868	867	866	865	865	865	870	871	875	878	882	883	884	886	887	8740			
16	887	884	880	878	877	876	875	875	875	875	875	873	872	867	865	870	874	875	880	881	886	888	889	891	8778			
17	892	886	884	883	882	882	882	880	878	877	876	874	872	867	865	870	875	879	882	887	888	891	893	894	8808			
18	892	889	887	884	881	877	874	871	868	866	865	863	862	860	860	865	869	872	880	882	886	888	889	888	8758			
19	882	876	873	869	866	864	862	861	860	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	—	870	870	870	866	865	870	873	876	880	883	887	890	891	891	8733			
21	889	887	882	880	879	877	876	875	875	875	875	872	870	870	870	870	868	865	863	865	868	871	876	878	8740			
22	882	883	878	878	878	876	875	875	875	873	872	871	870	867	866	867	866	865	865	868	872	875	878	881	8732			
23	882	879	875	871	868	866	864	863	862	861	860	860	860	857	855	860	865	870	875	877	882	880	881	879	8688			
24	877	876	872	869	867	867	867	866	865	863	862	861	861	860	860	865	866	870	875	878	881	885	885	883	8700			
25	882	880	878	876	874	872	870	870	870	867	865	865	865	866	864	863	860	859	863	865	872	878	881	883	8703			
26	885	882	879	877	876	872	868	867	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	870	875	874	874	872	872	875	880	882	885	890	896	898	897	894	8794			
28	892	887	885	883	882	881	880	880	880	878	877	873	870	870	867	872	875	880	881	883	887	888	888	886	8802			
29	884	883	880	878	876	876	876	875	875	875	875	874	874	871	866	865	864	864	865	867	869	868	869	870	8725			
30	868	867	865	865	865	865	864	864	862	860	857	855	855	855	855	856	862	865	868	870	871	873	876		8637			
31	880	879	876	874	873	873	873	871	870	868	867	864	862	860	862	861	866	868	872	880	882	885	886	886	8724			
Means.....	8884	8854	8821	8799	87838765		8751	8739	8730	8720	8714	8699	8689	8670	8657	8684	8706	8736	8769	8805	8837	8864	8882	8891	8769			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ scd. 1·425 $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{t}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 31'' \times \left(\frac{s.\ 6{\cdot}918}{6{\cdot}410}\right)^2 = 0{\cdot}00025262$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

SEPTEMBER 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
				0·7 *		−0·1 *		−13·2 *		11·9 *		3·8 *															
1	4526	4554	4463	4454	4444	4431	4418	4440	4488	4481	4451	4454	4450	4496	4528	4618	4649	4615	4744	4762	4756	4700	4625	4561	4546	−113	4433
2	4594	4514	4485	4476	4465	4465	4465	4441	4443	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	4474	4482	4486	4482	4452	4511	4551	4625	4671	4729	4696	4644	4571	4501	4459	4528	−110	4418
4	4478	4538	4528	4507	4484	4484	4484	4483	4508	4504	4476	4479	4475	4454	4517	4555	4544	4603	4603	4555	4511	4511	4530	4563	4516	−102	4414
5	4582	4542	4542	4529	4515	4496	4477	4464	4477	4484	4467	4471	4467	4444	4471	4506	4562	4625	4614	4650	4624	4533	4445	4408	4516	− 98	4418
6	4442	4495	4495	4495	4494	4484	4474	4444	4440	4452	4440	4449	4450	4430	4514	4560	4583	4597	4550	4521	4573	4582	4474	4448	4495	− 76	4419
7	4506	4528	4528	4517	4504	4487	4471	4441	4437	4451	4442	4444	4438	4439	4463	4529	4583	4645	4677	4707	4646	4608	4560	4540	4525	− 68	4457
8	4524	4501	4483	4484	4483	4496	4510	4472	4460	4472	4460	4449	4431	4454	4528	4643	4717	4770	4862	4842	4655	4555	4522	4479	4552	− 62	4490
9	4514	4538	4538	4523	4506	4482	4459	4446	4459	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	—	—	4489	4495	4488	4473	4457	4446	4578	4614	4673	4840	4757	4661	4553	4517	4610	4547	− 61	4486
11	4652	4567	4547	4541	4533	4494	4456	4442	4455	4492	4505	4493	4474	4459	4500	4527	4540	4540	4540	4498	4531	4550	4514	4552	4517	− 77	4440
12	4533	4506	4486	4487	4486	4482	4478	4458	4464	4483	4478	4463	4441	4424	4518	4606	4640	4608	4581	4602	4561	4596	4625	4599	4525	− 89	4436
13	4554	4521	4500	4501	4500	4500	4500	4466	4459	4471	4459	4463	4460	4482	4541	4516	4599	4621	4642	4552	4576	4672	4644	4608	4534	− 94	4440
14	4571	4496	4496	4487	4476	4474	4472	4447	4449	4484	4496	4484	4465	4479	4488	4517	4619	4725	4789	4726	4684	4649	4553	4625	4548	− 95	4453
15	4539	4517	4488	4489	4488	4478	4469	4456	4469	4481	4470	4480	4483	4455	4496	4574	4625	4672	4678	4628	4573	4508	4459	4532	4521	− 88	4433
16	4501	4531	4520	4521	4520	4501	4482	4469	4482	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
17	—	—	—	—	—	—	—	—	—	4481	4457	4466	4467	4487	4472	4584	4626	4639	4611	4571	4468	4421	4517	4575	4515	− 80	4435
18	4575	4537	4494	4499	4502	4483	4465	4452	4465	4492	4495	4497	4492	4465	4512	4640	4701	4699	4668	4570	4473	4438	4523	4485	4526	− 92	4434
19	4527	4527	4506	4500	4492	4492	4492	4460	4454	4456	4435	4460	4477	4471	4550	4604	4682	4702	4677	4609	4577	4522	4553	4580	4534	− 98	4436
20	4550	4583	4520	4511	4500	4500	4500	4471	4469	4489	4485	4524	4555	4435	4535	4595	4651	4642	4597	4503	4533	4533	4587	4545	4534	−102	4432
21	4569	4531	4526	4524	4521	4521	4521	4497	4499	4500	4478	4479	4473	4470	4565	4667	4692	4775	4830	4777	4735	4760	4629	4602	4589	−103	4486
22	4543	4571	4515	4518	4520	4508	4496	4473	4476	4488	4477	4493	4502	4495	4560	4670	4764	4824	4814	4774	4700	4622	4604	4558	4582	−104	4478
23	4525	4530	4515	4506	4496	4476	4457	4456	4482	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
24	—	—	—	—	—	—	—	—	—	4495	4485	4487	4482	4471	4568	4684	4817	4826	4799	4732	4661	4630	4598	4556	4572	−104	4468
25	4586	4654	4575	4533	4489	4472	4456	4423	4417	4436	4432	4457	4474	4487	4564	4635	4741	4812	4814	4768	4625	4546	4490	4478	4557	−107	4450
26	4530	4530	4438	4445	4451	4442	4434	4442	4477	4489	4477	4491	4497	4497	4530	4627	4723	4772	4732	4705	4639	4539	4467	4556	4539	−108	4431
27	4604	4546	4519	4511	4502	4502	4502	4516	4557	4581	4581	4588	4587	4538	4609	4710	4795	4869	4875	4828	4847	4801	4674	4621	4636	−107	4529
28	4643	4601	4568	4580	4590	4600	4610	4566	4549	4562	4551	4554	4549	4530	4621	4727	4832	4863	4818	4773	4721	4618	4580	4580	4633	−113	4520
29	4621	4572	4576	4577	4576	4589	4602	4567	4558	4570	4559	4559	4552	4549	4648	4745	4793	4819	4767	4716	4695	4632	4604	4604	4627	−109	4518
Means		4552	4541	4514	4509	4501	4494	4486	4468	4476	4490	4481	4486	4484	4473	4530	4607	4669	4704	4714	4673	4627	4586	4552	4549	4549	
Temp. Corrections		-107	-102	-98	-96	-95	-93	-92	-90	-88	-87	-86	-84	-83	-80	-81	-84	-90	-95	-99	-102	-106	-108	-110	-109	.....	−94	
Corrected Means..		4445	4439	4416	4413	4406	4401	4394	4378	4388	4403	4395	4402	4401	4393	4449	4523	4579	4609	4615	4571	4521	4478	4442	4440	.....	.....	4455
Mean Hourly Variations from Monthly Mean } = ·00		10	16	39	42	49	54	61	77	67	52	60	53	54	62	6	-68	-124	-154	-160	-116	-66	-23	13	15	.....	$\frac{\Delta Y}{Y} =$	.....	·004042
		0253	0404	0985	1061	1238	1364	1541	1945	1692	1314	1516	1339	1364	1566	0152	-1718	-3132	-3890	-4042	-2930	-1667	-0581	0328	0379			

SEPTEMBER 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*															
1	884	880	880	880	880	878	876	876	877	876	875	873	872	869	868	874	879	882	884	886	890	889	890	890	8795		
2	888	885	882	882	882	881	881	880	879	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	873	867	867	867	865	866	870	872	875	876	880	881	881	885	886	8771		
4	885	880	880	879	879	877	876	875	875	874	873	869	866	860	858	856	860	865	869	871	871	873	873	872	8715		
5	870	870	870	868	866	865	865	865	865	865	865	863	862	860	863	865	868	870	875	875	878	881	884	880	8691		
6	867	862	857	856	856	854	853	852	851	851	851	850	850	848	845	848	850	852	852	852	855	855	856	856	8533		
7	856	855	855	852	850	848	846	845	844	844	845	843	842	840	840	838	840	845	848	852	852	852	855	857	8477		
8	855	855	853	851	850	847	845	843	842	841	840	840	840	840	840	837	835	840	840	842	843	842	841	842	8435		
9	842	840	840	840	840	839	838	837	837	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
10	—	—	—	—	—	—	—	—	—	838	840	838	837	835	838	838	840	845	846	850	854	856	857	856	8425		
11	857	856	855	853	852	851	850	849	848	848	848	846	845	845	845	850	853	855	860	861	865	866	869	870	8540		
12	870	866	864	862	860	860	860	859	858	857	856	854	852	852	853	856	860	862	865	867	872	875	878	880	8624		
13	878	872	866	865	865	864	863	862	861	860	859	859	859	856	855	860	864	866	870	872	875	877	879	876	8660		
14	872	868	866	865	865	864	864	863	863	861	859	858	858	856	858	860	866	870	870	872	876	880	883	880	8665		
15	878	875	872	869	866	866	867	866	866	863	860	860	860	855	852	850	852	853	860	860	860	860	860	860	8621		
16	860	855	852	849	846	846	846	845	845	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
17	—	—	—	—	—	—	—	—	—	850	855	852	850	850	852	855	860	862	866	866	870	871	875	870	8562		
18	870	866	866	865	864	863	862	861	861	860	859	857	855	852	853	858	864	866	870	871	875	880	880	880	8649		
19	879	875	870	870	870	868	866	865	864	862	860	860	860	856	856	858	865	870	874	878	881	885	883	884	8691		
20	882	878	876	873	871	870	870	868	867	865	864	863	862	860	860	863	868	868	875	878	880	883	884	883	8713		
21	883	878	875	875	875	872	870	868	866	865	865	862	860	860	864	863	869	874	878	880	881	885	885	886	8725		
22	885	882	880	878	877	875	874	873	872	871	870	867	865	864	865	866	868	870	872	872	873	875	876	878	8728		
23	878	876	872	870	869	868	867	866	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
24	—	—	—	—	—	—	—	—	—	867	870	868	866	865	865	870	875	878	880	881	883	885	886	886	8732		
25	884	878	874	874	874	873	872	870	869	867	866	866	866	865	866	868	874	877	882	883	886	890	890	890	8752		
26	885	882	878	877	876	874	872	870	869	867	866	865	865	865	869	870	877	880	882	884	886	887	888	886	8758		
27	884	881	879	875	872	871	870	867	865	863	862	862	862	862	865	868	874	880	885	885	890	891	891	890	8748		
28	887	882	879	878	878	877	876	874	872	872	872	871	870	870	870	875	880	882	886	887	890	892	892	893	8794		
29	890	886	883	881	880	879	878	875	872	869	866	865	865	862	860	867	874	877	878	884	885	886	886	883	8763		
Means.....		8748	8713	8690	8675	8665	8652	8643	8630	8621	8612	8605	8591	8582	8565	8570	8593	8635	8666	8697	8716	8741	8759	8770	8766	8663	

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the Corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ scd. 1·423 $\quad k = a.\ \text{cotan.}\ \theta.\ \left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 40'\ 16'' \times \left(\frac{s.\ 6{\cdot}918}{6{\cdot}393}\right)^2 = 0{\cdot}00025299$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

OCTOBER 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
				−11·3 *		0·8 *		18·5 *		−3·6 *		7·2 *																
September 30	4630	4585	4567	4553	4561	4563	4564	4582	4564	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	4541	4525	4541	4543	4553	4640	4673	4728	4763	4767	4735	4653	4555	4543	4583	4605	− 94	4511	
2	4623	4623	4597	4577	4580	4576	4570	4581	4555	4551	4555	4574	4578	4520	4640	4687	4785	4850	4866	4781	4744	4680	4615	4589	4637	− 93	4544	
3	4631	4631	4591	4600	4631	4602	4572	4590	4572	4578	4591	4564	4522	4553	4594	4710	4777	4836	4857	4811	4709	4599	4634	4589	4639	− 86	4553	
4	4626	4626	4611	4593	4597	4577	4555	4573	4555	4541	4535	4545	4541	4540	4550	4676	4781	4846	4878	4860	4751	4670	4571	4544	4631	− 74	4557	
5	4544	4587	4572	4561	4572	4569	4564	4576	4552	4543	4541	4540	4525	4490	4581	4648	4743	4853	4940	4893	4791	4701	4642	4615	4631	− 80	4551	
6	4645	4613	4592	4561	4552	4553	4552	4535	4482	4491	4507	4514	4507	4513	4573	4643	4735	4840	4806	4793	4729	4611	4567	4567	4603	− 82	4521	
7	4617	4593	4593	4572	4573	4561	4547	4588	4593	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	4560	4534	4541	4534	4555	4621	4674	4645	4743	4767	4740	4713	4665	4565	4565	4611	− 95	4516	
9	4595	4569	4538	4527	4538	4544	4548	4565	4545	4544	4550	4557	4550	4520	4566	4584	4684	4746	4800	4826	4733	4675	4570	4580	4602	−103	4499	
10	4593	4560	4560	4549	4560	4561	4560	4583	4570	4554	4546	4534	4508	4495	4495	4562	4623	4710	4738	4709	4679	4627	4596	4556	4585	− 99	4486	
11	4586	4586	4564	4553	4564	4553	4540	4570	4563	4530	4505	4512	4505	4535	4488	4532	4611	4730	4735	4670	4657	4631	4623	4623	4582	− 98	4484	
12	4655	4567	4551	4579	4630	4641	4650	4616	4546	4514	4489	4520	4537	4519	4529	4571	4615	4666	4714	4727	4669	4632	4564	4564	4594	− 96	4498	
13	4590	4554	4549	4538	4549	4550	4549	4589	4592	4522	4460	4507	4539	4501	4567	4622	4735	4854	4894	4859	4771	4690	4627	4566	4616	− 92	4524	
14	4536	4550	4550	4525	4522	4523	4522	4540	4521	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4501	4489	4482	4461	4512	4538	4577	4659	4709	4775	4792	4763	4717	4672	4557	4583	− 90	4493	
16	4581	4551	4554	4542	4552	4513	4472	4515	4522	4508	4501	4508	4501	4497	4503	4562	4614	4712	4814	4732	4620	4631	4583	4558	4569	− 71	4498	
17	4558	4524	4532	4512	4514	4515	4514	4530	4510	4512	4521	4512	4489	4465	4537	4582	4607	4648	4666	4666	4628	4561	4510	4547	4548	− 52	4496	
18	4557	4532	4516	4541	4589	4554	4517	4559	4565	4518	4478	4511	4530	4503	4524	4580	4537	4550	4490	4425	4418	4460	4474	4474	4517	− 33	4484	
19	4523	4506	4521	4502	4505	4527	4547	4557	4530	4512	4502	4514	4512	4507	4532	4621	4709	4802	4802	4774	4691	4620	4545	4545	4579	− 20	4559	
20	4559	4519	4497	4499	4523	4526	4528	4541	4517	4514	4518	4519	4505	4481	4515	4611	4675	4758	4829	4799	4749	4625	4545	4488	4577	− 16	4561	
21	4553	4540	4540	4534	4550	4544	4536	4562	4552	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	4525	4506	4493	4466	4466	4496	4531	4604	4685	4712	4560	4521	4500	4500	4485	4540	− 15	4525	
23	4520	4520	4510	4499	4511	4629	4745	4668	4555	4531	4515	4508	4487	4569	4472	4539	4692	4531	4568	4546	4592	4694	4632	4673	4571	− 25	4546	
24	4637	4522	4522	4525	4551	4540	4527	4547	4531	4532	4541	4518	4480	4508	4538	4585	4618	4674	4639	4616	4625	4593	4536	4473	4557	− 38	4519	
25	4509	4509	4561	4502	4466	4467	4466	4479	4456	4444	4440	4503	4551	4501	4561	4545	4598	4689	4769	4718	4726	4632	4585	4536	4551	− 50	4501	
26	4508	4529	4495	4498	4523	4534	4544	4531	4481	4519	4564	4559	4539	4505	4465	4514	4560	4637	4757	4767	4815	4750	4649	4571	4576	− 51	4525	
27	4571	4548	4548	4537	4548	4541	4532	4557	4545	4528	4519	4512	4490	4498	4549	4518	4620	4745	4816	4826	4799	4714	4619	4573	4594	− 42	4552	
28	4594	4540	4540	4529	4540	4542	4542	4557	4535	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	4516	4504	4503	4488	4465	4521	4537	4540	4549	4520	4585	4630	4644	4630	4605	4548	− 34	4514	
30	4610	4525	4568	4557	4568	4569	4568	4566	4527	4478	4437	4451	4451	4484	4515	4543	4553	4565	4505	4485	4471	4549	4549	4568	4528	− 42	4486	
31	4551	4553	4553	4536	4541	4550	4558	4557	4520	4504	4495	4485	4461	4456	4548	4581	4601	4660	4645	4617	4649	4615	4549	4549	4556	− 43	4513	
Means	4582	4558	4552	4541	4552	4553	4551	4563	4539	4523	4514	4520	4511	4508	4543	4593	4654	4717	4743	4715	4678	4631	4581	4561	4583			
Temp. Corrections.	-75	-71	-66	-65	-64	-62	-61	-59	-58	-56	-56	-54	-54	-51	-50	-54	-59	-64	-68	-72	-74	-76	-77	-76	.....	−63		
Corrected Means.	4507	4487	4486	4476	4488	4491	4490	4504	4481	4467	4458	4466	4457	4457	4493	4539	4595	4653	4675	4643	4604	4555	4504	4485	.....	.....	4520	
Mean Hourly Variations from Monthly Mean. = ·00	13	33	34	44	32	29	30	16	39	53	62	54	63	63	27	-19	-75	-133	-155	-123	-84	-35	16	35				
	0329	0835	0860	1113	0810	0734	0759	0405	0987	1341	1569	1366	1594	1594	0683	-0481	-1897	-3365	-3921	3112	-2125	-0885	0405	0885	.....	$\frac{\Delta Y}{Y} =$	.....	·003921

OCTOBER 1854. Temperature of Vertical Force Magnetometer.

				*		*		*		*		*																
September 30	880	875	870	869	869	869	869	867	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	863	860	859	858	854	847	849	855	862	866	870	875	877	877	878	8660			
2	876	870	867	866	866	865	864	862	861	860	860	859	858	857	855	855	856	865	866	870	876	877	879	880	8654			
3	876	870	869	868	868	866	864	864	864	862	860	857	855	851	850	850	853	855	862	865	860	858	854	854	8606			
4	857	854	852	851	851	848	846	846	846	844	843	842	841	840	840	847	853	856	862	865	865	868	865	863	8519			
5	863	859	856	854	853	852	852	851	851	850	850	849	848	847	847	852	855	856	860	863	866	870	870	868	8559			
6	864	862	861	859	857	856	856	854	852	851	850	849	848	844	844	850	855	860	865	870	870	870	870	870	8578			
7	868	866	863	862	861	860	859	858	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	860	862	861	860	860	858	864	869	874	875	880	880	882	883	883	8669			
9	883	880	875	872	870	870	870	869	868	866	865	864	864	862	860	866	868	875	880	880	878	882	883	883	8722			
10	881	878	876	875	875	871	868	865	862	861	860	859	858	852	851	859	864	868	874	879	880	882	882	883	8693			
11	881	877	867	867	867	865	863	862	861	861	861	860	860	858	857	860	868	874	876	877	882	884	883	880	8688			
12	877	868	868	868	868	866	864	864	864	862	860	860	860	860	858	865	864	866	870	874	875	876	879	878	8673			
13	874	869	862	862	862	862	862	861	860	858	857	857	857	855	852	860	862	866	870	874	875	878	879	879	8647			
14	876	871	867	866	866	865	864	862	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	859	858	857	856	856	855	860	860	860	866	866	868	868	870	870	8636			
16	868	867	859	858	858	857	856	853	850	849	848	847	847	845	844	845	849	850	847	844	841	840	839	841	8501			
17	842	840	838	838	838	838	838	837	836	835	835	834	833	833	831	832	834	836	836	839	840	839	838	838	8366			
18	837	834	831	830	830	828	826	825	825	825	825	822	820	820	820	820	818	815	814	815	816	819	820	819	8231			
19	817	816	816	816	817	817	817	815	814	812	811	810	810	808	805	804	810	813	815	818	820	819	820	820	8142			
20	818	816	816	815	814	813	813	811	810	810	810	810	810	807	805	806	806	807	807	808	815	813	813	810	8110			
21	810	809	809	809	809	807	805	803	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	804	807	806	805	805	807	808	811	814	817	819	820	822	823	823	8106			
23	821	820	816	815	815	813	812	811	810	809	808	807	806	806	806	810	816	822	825	830	832	834	835	835	8173			
24	832	829	828	826	824	823	823	821	820	819	819	818	817	816	818	820	825	830	835	835	835	837	841	842	8264			
25	839	837	835	832	830	829	829	828	828	828	828	828	828	825	825	830	838	843	845	845	845	849	848	847	8350			
26	844	840	835	833	832	832	832	832	832	831	830	830	830	829	830	830	837	840	840	842	846	845	845	847	8360			
27	847	842	839	837	835	834	834	832	830	829	829	828	828	827	822	816	819	819	820	825	830	830	831	832	8298			
28	828	827	825	823	822	821	820	820	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	821	822	821	820	819	819	822	822	822	825	828	830	830	832	830	8237			
30	830	828	825	824	824	823	823	823	823	822	822	821	820	820	820	824	832	836	840	844	845	847	848	846	8296			
31	843	840	832	831	831	828	825	822	820	820	820	820	820	820	820	821	828	834	835	840	844	844	845	846	8304			
Means	8530	8498	8466	8454	8449	8436	8427	8414	8405	8397	8393	8383	8377	8361	8350	8380	8417	8451	8479	8506	8522	8533	8538	8535	8446			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of Interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·401 scd. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{t'}{t}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 38'\ 38'' \times \left(\frac{6{\cdot}918}{6{\cdot}354}\right)^2 = 0{\cdot}00025703$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

NOVEMBER 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−7·8 *		19·1 *																
1	4588	4592	4612	4592	4592	4537	4537	4537	4546	4536	4541	4547	4514	4531	4529	4494	4531	4568	4611	4648	4650	4625	4605	4558	4568	−44	4524	
2	4580	4542	4542	4538	4538	4538	4538	4538	4490	4501	4527	4530	4495	4465	4497	4505	4531	4600	4672	4722	4773	4727	4645	4592	4568	−49	4519	
3	4592	4541	4541	4521	4521	4511	4537	4565	4519	4506	4509	4519	4491	4524	4522	4530	4544	4568	4619	4659	4688	4725	4725	4632	4567	−53	4514	
4	4585	4559	4559	4564	4536	4545	4545	4550	4550	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	4513	4491	4514	4498	4501	4495	4461	4524	4559	4604	4632	4702	4724	4685	4655	4565	−29	4536	
6	4613	4541	4538	4539	4531	4785	4528	4539	4529	4516	4519	4539	4520	4447	4509	4481	4448	4501	4510	4527	4593	4612	4586	4538	4541	−39	4502	
7	4538	4505	4505	4505	4505	4505	4526	4526	4505	4474	4459	4487	4477	4496	4512	4514	4581	4625	4594	4574	4630	4684	4684	4642	4544	−44	4500	
8	4613	4576	4558	4522	4522	4511	4491	4491	4491	4481	4486	4510	4495	4496	4488	4403	4437	4495	4471	4508	4508	4605	4605	4635	4517	−46	4471	
9	4575	4524	4494	4494	4524	4524	4497	4496	4522	4529	4552	4563	4535	4521	4492	4515	4565	4607	4656	4596	4595	4585	4610	4579	4548	−49	4499	
10	4593	4532	4527	4510	4510	4511	4511	4491	4504	4500	4511	4533	4516	4506	4499	4522	4492	4500	4557	4567	4603	4598	4648	4555	4533	−41	4492	
11	4559	4508	4508	4508	4507	4507	4509	4509	4509	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	4487	4481	4498	4476	4478	4515	4508	4474	4418	4389	4391	4445	4497	4583	4558	4493	−27	4466	
13	4535	4535	4514	4502	4502	4474	4474	4474	4461	4459	4472	4500	4490	4480	4527	4469	4511	4483	4455	4501	4585	4623	4640	4616	4512	−24	4488	
14	4574	4518	4506	4506	4487	4487	4487	4487	4525	4543	4577	4555	4495	4484	4496	4536	4558	4606	4563	4579	4637	4670	4752	4640	4553	−30	4523	
15	4559	4559	4545	4545	4523	4502	4524	4524	4504	4479	4470	4489	4470	4519	4458	4489	4537	4591	4567	4602	4602	4555	4586	4532	4530	−32	4498	
16	4510	4494	4473	4504	4504	4504	4504	4504	4479	4482	4500	4519	4499	4487	4492	4521	4561	4625	4631	4592	4633	4684	4684	4634	4543	−31	4512	
17	4568	4568	4530	4530	4532	4520	4520	4520	4500	4503	4521	4520	4481	4515	4491	4526	4560	4616	4643	4607	4634	4727	4727	4570	4560	−24	4536	
18	4546	4546	4523	4523	4500	4500	4500	4535	4535	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	4500	4481	4503	4486	4456	4504	4525	4575	4611	4648	4750	4790	4745	4642	4564	4562	−10	4552	
20	4529	4529	4520	4520	4520	4519	4519	4525	4525	4516	4523	4527	4493	4535	4502	4569	4614	4645	4597	4630	4605	4631	4631	4582	4554	− 7	4547	
21	4550	4520	4520	4520	4498	4523	4524	4513	4504	4502	4515	4552	4551	4514	4529	4504	4544	4544	4595	4613	4586	4611	4661	4586	4545	− 9	4536	
22	4536	4493	4493	4463	4511	4511	4515	4515	4494	4510	4542	4563	4546	4490	4496	4555	4622	4665	4707	4707	4654	4689	4595	4574	4560	−10	4550	
23	4527	4501	4531	4531	4531	4509	4530	4530	4538	4507	4491	4502	4475	4475	4495	4507	4552	4579	4586	4620	4646	4665	4665	4566	4544	− 7	4537	
24	4530	4505	4524	4524	4490	4494	4494	4495	4493	4501	4524	4511	4459	4503	4459	4452	4488	4575	4622	4660	4677	4710	4669	4620	4541	− 8	4533	
25	4544	4503	4475	4485	4485	4463	4463	4468	4468	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	4468	4484	4506	4490	4432	4486	4480	4481	4470	4473	4443	4562	4650	4650	4575	4500	−18	4482	
27	4557	4528	4539	4524	4524	4498	4537	4537	4544	4517	4505	4505	4467	4474	4481	4506	4475	4478	4486	4463	4463	4554	4554	4522	4510	−16	4494	
28	4474	4509	4468	4468	4468	4366	4367	4355	4355	4386	4433	4480	4488	4548	4585	4574	4595	4606	4569	4568	4619	4674	4696	4660	4513	−11	4502	
29	4660	4641	4672	4672	4700	4700	4700	4700	4738	4741	4759	4792	4786	4791	4789	4790	4773	4782	4772	4772	4760	4789	4817	4791	4745	−18	4727	
30	4822	4832	4832	4802	4802	4848	4853	4853	4878	4875	4887	4914	4902	4902	4900	4913	4939	4911	4955	4920	4936	4949	4941	4971	4889	−15	4874	
Means.....	4571	4546	4540	4535	4533	4534	4528	4530	4527	4520	4529	4545	4523	4522	4529	4533	4558	4586	4598	4610	4638	4666	4665	4613	4562			
Temp. Corrections	-37	-32	-27	-26	-25	-23	-22	-20	-20	-19	-18	-17	-16	-15	-14	-18	-24	-29	-33	-37	-40	-42	-42	-39	.....	−26		
Corrected Means.	4534	4514	4513	4509	4508	4511	4506	4510	4507	4501	4511	4528	4507	4507	4515	4515	4534	4557	4565	4573	4598	4624	4623	4574	.....	.....	4536	
	2	22	23	27	28	25	30	26	29	35	25	8	29	29	21	21	2	-21	-29	-37	-62	-88	-87	-38				
Mean Hourly Variations from Monthly Mean. = ·00	0051	0565	0591	0694	0720	0643	0771	0668	0745	0900	0643	0206	0745	0745	0540	0540	0051	-0540	-0745	-0951	-1594	-2262	-2236	-0977	.....	$\frac{\Delta Y}{Y} =$	.....	·002262

NOVEMBER 1854. Temperature of Vertical Force Magnetometer.

										*		*																
1	843	839	834	834	832	822	820	819	819	819	819	819	819	819	818	828	837	842	842	845	845	847	848	850	8316			
2	848	843	831	829	829	829	828	826	826	826	826	825	824	824	824	831	840	845	845	847	848	849	851	849	8351			
3	847	843	840	840	839	840	839	837	837	836	835	835	835	833	831	833	835	840	840	839	840	842	840	835	8380			
4	831	827	827	826	825	822	820	820	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	815	810	808	807	805	803	808	812	819	821	823	830	835	838	838	8204			
6	834	828	822	820	820	820	820	817	820	819	818	818	818	816	816	824	829	835	840	843	848	849	849	845	8278			
7	840	836	835	835	833	829	828	824	825	825	825	822	820	816	818	822	828	830	835	841	846	847	845	845	8313			
8	843	838	832	830	832	830	830	830	830	830	830	829	828	826	828	825	824	831	835	840	843	843	844	844	8331			
9	840	836	832	830	830	830	830	830	830	830	830	828	827	827	826	833	835	839	840	846	847	847	845	845	8347			
10	843	838	835	834	831	831	830	827	827	826	825	825	825	822	818	820	825	829	831	834	834	832	830	828	8292			
11	825	820	820	820	820	818	818	818	817	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	813	810	809	809	807	806	812	811	815	824	829	830	834	837	833	8190			
13	828	824	821	818	818	817	816	815	815	814	814	814	814	812	810	810	814	815	815	816	821	827	825	825	8174			
14	825	822	818	816	816	816	815	815	815	815	815	814	814	812	814	815	822	823	830	835	837	838	838	837	8215			
15	833	828	822	822	822	820	820	818	817	817	817	817	817	817	816	821	825	820	820	824	829	834	836	835	8228			
16	833	828	825	823	821	821	820	820	820	820	820	815	810	810	810	815	819	821	822	827	831	831	833	830	8219			
17	828	827	817	817	815	815	815	815	815	813	812	811	810	808	805	809	813	815	820	823	824	828	829	826	8171			
18	823	818	817	816	815	814	812	810	808	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	805	802	801	800	798	793	790	795	802	800	805	810	812	809	807	8068			
20	806	804	800	800	799	799	799	800	800	800	800	800	800	798	797	802	806	810	815	817	818	818	818	817	8051			
21	814	809	806	806	804	801	800	800	800	800	800	798	797	795	798	801	805	809	812	816	818	819	820	820	8062			
22	818	811	807	807	808	806	805	805	804	804	804	804	804	804	804	806	806	810	811	812	810	810	809	807	8073			
23	804	804	804	804	804	804	804	804	804	802	800	800	800	800	800	804	805	807	809	812	813	813	810	808	8050			
24	806	802	802	796	796	796	796	796	800	800	800	800	801	801	802	805	807	811	815	820	823	825	820	818	8058			
25	815	812	810	810	810	809	808	807	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	808	810	810	810	807	806	805	810	818	822	823	825	823	821	820	8128			
27	818	818	815	815	814	810	810	810	810	808	806	805	805	805	805	804	810	812	816	815	817	815	814	810	8111			
28	810	808	807	804	804	804	802	802	802	801	800	799	798	800	798	804	810	812	814	819	820	821	821	820	8075			
29	818	815	810	809	809	808	807	806	805	805	805	805	805	805	805	808	813	820	821	823	824	825	825	823	8125			
30	820	817	816	814	813	808	808	805	805	805	805	805	805	804	805	805	806	814	818	820	818	816	816	815	8110			
Means.....	8267	8229	8194	8183	8177	8161	8154	8145	8145	8137	8130	8122	8116	8104	8098	8131	8170	8209	8236	8267	8288	8300	8297	8281	8189			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the dail Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}352$ sed. $\quad k = a.\ \text{cotan.}\ \theta.\ \left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 39'\ 15'' \times \left(\frac{6{\cdot}918}{6{\cdot}238}\right)^2 = 0{\cdot}00026632$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

DECEMBER 1854. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−2·2		7·6																
1	4981	4909	4943	4969	5047	5047	5047	4995	4995	4993	4995	5013	5015	5003	5006	5008	5020	5011	5028	5011	5013	5008	5043	5066	5007	−10	4997	
2	5043	5037	5019	5002	5002	5002	5002	5002	5002	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
3	—	—	—	—	—	—	—	—	—	4987	4977	4991	4989	4989	4999	4985	5015	4952	5008	5008	4988	5041	4997	5005	5002	−10	4992	
4	4997	4965	4965	4965	4988	4999	4999	4964	5004	5007	5014	5015	5001	5014	5001	5025	5046	5046	5034	5029	5039	5039	5035	5074	5011	− 9	5002	
5	5031	5046	5046	5046	5010	4986	5037	5037	5011	5005	5004	5022	5024	5015	5018	5034	5040	5036	5054	5021	5059	5029	5029	4977	5026	− 9	5017	
6	5035	4988	4988	4988	4988	5010	5008	5008	4978	4980	4986	4998	4995	4995	4977	4977	4988	4997	4997	5014	5001	5027	4999	5001	4997	−10	4987	
7	5002	4962	4962	4964	4964	4944	4906	4906	4874	4927	4985	4993	4985	4969	4950	4985	4990	4990	4974	5010	4985	5028	4975	5002	4968	− 8	4960	
8	5002	4965	4965	4965	4965	4992	4992	5040	4975	4973	4975	4981	4971	4979	4989	4964	4974	4974	4986	4986	5036	5007	5051	4991	4987	− 9	4978	
9	5027	4965	4965	4965	4974	4974	4945	4945	4945	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	4962	4984	4995	4990	4990	4977	5006	4995	4994	5081	5032	5031	4992	4945	4944	4984	−11	4973	
11	4894	4894	4878	4878	4925	4897	4837	4837	4925	4900	4880	4871	4846	4870	4851	4851	4851	4888	4904	4930	4902	4902	4865	4894	4882	−10	4872	
12	4871	4871	4831	4811	4811	4856	4837	4816	4883	4881	4883	4877	4856	4868	4842	4879	4870	4870	4899	4897	4843	4902	4883	4910	4864	−10	4854	
13	4880	4860	4853	4853	4860	4860	4860	4860	4834	4878	4927	4927	4911	4956	4981	5088	5107	5129	5185	5185	5232	5355	5177	5125	4995	0	4995	
14	5056	5016	5056	5032	5032	5033	5033	5033	5060	5047	5039	5035	5015	5029	5106	5224	5273	5260	5260	5234	5276	5311	5279	5263	5125	9	5116	
15	5290	5241	5240	5227	5227	5227	5227	5188	5154	5161	5173	5208	5228	5119	5195	5230	5285	5285	5331	5329	5407	5438	5385	5307	5254	19	5235	
16	5248	5284	5284	5244	5255	5228	5228	5205	5250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	5217	5189	5202	5200	5213	5228	5228	5270	5291	5327	5355	5331	5361	5329	5250	5259	14	5245	
18	5250	5291	5291	5291	5239	5239	5236	5236	5194	5192	5194	5212	5215	5220	5210	5233	5248	5260	5260	5245	5248	5218	5276	5227	5239	15	5224	
19	5251	5214	5204	5204	5204	5222	5212	5212	5244	5234	5229	5237	5230	5205	5197	5213	5235	5283	5304	5340	5311	5293	5302	5264	5244	17	5227	
20	5331	5233	5233	5233	5233	5233	5257	5241	5229	5240	5255	5250	5230	5190	5212	5219	5261	5273	5293	5254	5244	5235	5215	5262	5244	18	5226	
21	5290	5226	5227	5227	5236	5236	5218	5247	5260	5234	5212	5209	5191	5191	5222	5241	5254	5277	5277	5245	5278	5278	5265	5216	5240	19	5221	
22	5245	5208	5208	5208	5206	5206	5196	5196	5133	5163	5197	5207	5201	5201	5190	5194	5205	5251	5320	5129	5165	5090	5290	5250	5202	16	5186	
23	5227	5195	5207	5209	5209	5180	5180	5245	5245	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	5213	5185	5198	5195	5195	5188	5188	5227	5273	5261	5302	5338	5338	5291	5261	5231	10	5221	
25	5202	5167	5161	5161	5161	5181	5192	5192	5192	5197	5206	5230	5238	5238	5193	5204	5187	5223	5223	5252	5307	5327	5299	5303	5218	17	5201	
26	5273	5245	5243	5243	5259	5259	5259	5239	5239	5244	5254	5271	5272	5267	5233	5277	5276	5325	5325	5339	5387	5407	5407	5367	5288	11	5277	
27	5356	5307	5278	5278	5287	5287	5300	5300	5286	5284	5287	5291	5280	5275	5268	5269	5269	5310	5341	5341	5435	5399	5399	5358	5312	10	5302	
28	5358	5308	5330	5302	5315	5315	5340	5340	5316	5314	5316	5268	5204	5275	5322	5318	5334	5357	5386	5417	5417	5450	5395	5360	5336	17	5319	
29	5360	5316	5335	5335	5313	5329	5329	5366	5330	5304	5283	5312	5326	5350	5329	5319	5351	5349	—	—	4649	4675	4719	4603				
30	4567	4543	4553	4590	4552	4552	4579	4579	4579	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	4590	4605	4633	4646	4545	4650	4595	4595	4561	4555	4555	4586	4615	4586	4586	4583	21	4562	
Means.....	5108	5078	5077	5074	5078	5079	5077	5075	5072	5073	5078	5085	5077	5072	5080	5097	5113	5125	5145	5138	5154	5164	5149	5131	5100			
Temp. Corrections	-6	0	4	5	6	8	9	10	11	11	11	12	13	15	16	13	8	4	-1	-4	-7	-9	-9	-7	.....	5		
Corrected Means..	5102	5078	5073	5069	5072	5071	5068	5065	5061	5062	5067	5073	5064	5057	5064	5084	5105	5121	5144	5134	5147	5155	5140	5124	.....	.....	5095	
Mean Hourly Variations from Monthly Mean. = ·00	-7 -0186	17 0453	22 0586	26 0692	23 0613	24 0639	27 0719	30 0799	34 0905	33 0879	28 0746	22 0586	31 0826	38 1012	31 0826	11 0293	-10 -0266	-26 -0692	-49 -1305	-39 -1039	-52 -1285	-60 -1598	-45 -1198	-29 -0772	.....	$\frac{\Delta Y}{Y} =$	.....	·001598

DECEMBER 1854. Temperature of Vertical Force Magnetometer.

										*		*																
1	815	812	808	806	806	805	804	804	804	803	803	801	800	800	800	805	806	810	813	815	815	816	819	816	8077			
2	815	812	809	808	806	805	805	805	804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	804	805	804	804	802	800	802	800	804	810	815	816	820	818	813	8077			
4	810	808	807	807	804	804	802	800	800	800	800	800	800	800	800	803	805	808	815	820	822	818	815	814	8067			
5	811	806	806	806	805	805	805	803	803	803	803	802	802	800	800	802	802	802	807	815	816	818	815	814	8063			
6	810	808	807	806	806	805	805	804	803	803	803	802	802	798	800	803	805	807	813	815	816	820	820	820	8075			
7	816	810	807	806	805	803	802	801	800	800	800	798	797	796	795	799	803	808	810	810	815	820	819	819	8062			
8	815	809	809	808	807	803	802	800	799	799	799	798	798	796	798	800	804	809	815	816	816	818	821	822	8067			
9	818	812	810	809	809	807	806	805	804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	804	805	804	804	802	800	803	802	809	812	813	815	820	816	813	8084			
11	810	805	805	805	804	804	802	801	803	803	803	802	802	800	800	803	809	812	816	816	820	820	820	820	8077			
12	816	813	809	808	807	805	805	804	803	802	802	802	802	800	798	800	805	809	812	815	816	817	815	813	8074			
13	812	807	803	803	800	800	799	798	797	796	796	795	795	790	790	792	799	803	806	808	811	810	806		8002			
14	806	802	802	800	799	795	795	792	790	790	790	789	788	785	780	784	786	790	795	796	798	796	794	794	7932			
15	793	790	786	786	784	784	783	781	781	780	780	778	776	775	777	779	784	790	792	795	796	796	796	796	7857			
16	794	790	785	787	787	785	784	782	780	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	783	786	785	784	782	780	784	787	794	798	800	802	805	805	804	7897			
18	802	798	798	797	792	788	784	784	782	781	780	780	780	780	780	780	785	788	790	795	796	798	798	797	7889			
19	795	792	790	787	786	786	785	782	780	779	779	779	780	777	780	782	788	790	792	797	798	800	802	800	7877			
20	796	790	784	784	784	784	784	784	782	782	783	781	780	778	775	777	785	786	790	794	794	799	798	800	7864			
21	798	794	791	790	788	788	787	786	784	783	782	782	782	784	784	780	784	785	785	786	785	785	785	785	7860			
22	785	785	784	783	783	783	782	782	782	782	782	782	782	780	780	784	790	790	795	800	801	805	805	803	7879			
23	799	795	791	790	791	789	789	788	787	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	788	790	789	788	787	787	790	794	796	798	795	800	800	798	796	7923			
25	792	788	786	786	786	785	784	784	784	784	784	783	783	783	783	785	787	788	791	792	794	799	794	793	7875			
26	792	790	790	790	788	788	787	787	787	787	787	787	787	785	783	785	792	796	798	801	805	804	805	805	7919			
27	802	800	795	791	791	791	790	790	790	789	788	787	786	785	784	785	789	790	795	797	799	800	802	802	7924			
28	800	795	793	792	790	788	787	786	786	785	785	784	784	783	784	785	786	788	785	785	788	788	791	789	7878			
29	787	784	785	786	786	786	786	788	785	783	782	780	779	779	781	788	790	797	—	—	805	805	805	806				
30	802	795	780	779	778	777	777	775	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
31	—	—	—	—	—	—	—	—	—	777	780	779	778	775	775	775	779	785	792	793	796	798	801	801	7842			
Means.....	8042	8002	7974	7966	7954	7943	7934	7923	7916	7915	7918	7909	7906	7889	7885	7906	7940	7973	8009	8033	8051	8068	8065	8054	7966			

December 29, 18h and 19h, Gottingen Mean Time. The needle removed and vibrated horizontally. The observations made on this day have been rejected in taking the hourly and daily Means.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 18th JANUARY 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 18th January, 1854. P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Thursday, 19th January, 1854. Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1672	1670	1670	1668	1664	1658	1663	1664	1658	1640	1648	1665	1667	1673	1686	1680	1672	1672	1670	1680	1675	1670	1672	1670
5	0	72	70	72	67	64	58	65	64	55	40	50	65	68	75	86	79	72	72	70	80	77	73	72	73
10	0	72	70	72	66	64	58	65	60	52	40	51	66	70	77	86	76	74	72	70	80	78	73	72	74
15	0	72	70	73	66	63	58	65	63	50	40	53	66	70	78	87	72	74	72	70	79	80	75	70	74
20	0	72	70	71	66	61	58	65	63	50	40	56	67	70	79	87	70	73	72	70	79	80	77	70	74
25	0	72	70	70	65	60	58	64	62	49	40	57	67	70	80	88	68	73	72	70	78	80	77	72	72
30	0	71	70	69	66	60	58	64	63	45	40	58	66	70	81	89	66	73	72	70	77	78	75	72	70
35	0	71	70	70	66	59	58	63	62	43	41	60	65	70	83	89	65	73	72	71	76	78	75	72	70
40	0	71	70	70	65	59	58	63	61	41	41	61	65	70	83	88	67	73	73	73	74	74	73	72	70
45	0	71	70	71	65	58	61	63	63	40	42	63	65	70	83	87	68	72	71	77	70	74	73	70	70
50	0	71	70	70	65	58	62	63	61	40	43	65	65	71	85	84	69	72	72	78	72	72	73	70	70
55	0	70	70	70	64	58	62	63	60	40	44	66	66	72	86	82	70	72	71	78	73	72	72	70	70

HORIZONTAL FORCE.

m.	*s.*																								
2	0	800	794	797	790	774	732	682	660	617	610	635	706	754	779	811	831	820	793	782	915	920	930	892	858
7	0	800	794	797	789	772	732	682	660	614	616	640	713	758	779	814	836	814	790	789	916	925	920	886	858
12	0	800	792	795	787	772	732	680	660	609	617	648	718	761	780	819	839	809	787	792	910	933	910	880	855
17	0	797	792	793	785	770	732	680	651	610	618	655	723	765	780	828	840	805	784	800	898	940	897	880	850
22	0	800	790	797	783	764	732	677	640	610	620	661	724	769	782	837	840	800	782	805	880	955	893	880	850
27	0	800	790	799	782	761	730	675	635	615	622	665	730	769	785	838	840	792	784	829	869	966	898	873	846
32	0	800	790	801	780	757	719	670	629	616	625	670	734	770	787	839	840	790	780	845	860	960	907	870	840
37	0	800	790	798	784	755	715	666	624	617	626	675	737	770	790	835	840	790	770	850	862	955	910	866	840
42	0	800	790	797	782	754	711	660	620	618	627	681	740	772	793	830	840	790	765	855	875	955	903	866	836
47	0	800	796	795	781	749	695	660	621	611	630	687	747	775	797	829	838	791	770	862	881	940	897	863	836
52	0	800	796	792	780	736	690	660	620	612	632	695	751	777	802	830	832	793	772	890	890	940	897	860	832
57	0	797	796	792	779	733	688	660	619	610	635	698	755	778	807	830	827	795	779	899	909	930	895	860	832
Faht...																									
Attached Thermometer...		78·8	78·8	79·0	78·9	78·8	78·5	78·3	78·5	79·0	79·1	79·3	79·5	79·6	79·8	79·9	79·8	79·8	79·8	79·8	79·8	79·8	79·9	79·9	79·9

VERTICAL FORCE.

m.	*s.*																								
3	0	4655	4636	4621	4606	4632	4699	4730	4819	4907	4935	4899	4840	4704	4649	4691	4713	4697	4664	4664	4750	4718	4682	4649	4656
8	0	55	36	21	06	32	99	30	19	07	35	99	27	04	49	91	13	97	64	64	50	18	82	49	86
13	0	55	36	21	06	32	99	30	19	07	05	99	10	4685	49	91	13	97	64	64	50	18	82	49	86
18	0	40	36	21	06	45	99	30	19	42	05	4910	4793	85	52	91	13	97	64	64	40	18	82	49	86
23	0	40	36	15	06	45	99	30	52	42	05	10	93	85	52	91	13	97	64	64	32	18	82	49	86
28	0	40	30	15	07	45	99	51	52	42	15	00	67	85	52	91	13	97	64	90	25	18	65	49	86
33	0	40	30	15	07	45	99	51	65	42	15	4875	67	85	52	91	05	64	64	4700	20	18	65	49	86
38	0	32	30	15	07	45	99	51	65	42	15	75	52	85	52	4713	05	64	40	00	10	18	65	49	86
43	0	32	30	07	4566	45	99	79	65	42	05	75	37	64	52	13	05	64	40	06	10	18	65	49	40
48	0	32	30	07	66	45	4725	79	81	42	05	76	24	64	52	13	05	64	50	10	10	00	50	49	40
53	0	32	30	07	66	67	25	79	81	42	05	76	24	64	91	13	05	64	55	25	10	00	50	49	40
58	0	32	30	07	66	67	30	79	81	42	00	70	10	64	91	13	05	64	64	25	16	00	50	49	40
Faht...																									
Attached Thermometer...		78·5	78·5	78·4	78·2	77·8	78·2	78·9	79·3	80·1	80·1	80·4	80·6	80·7	80·9	80·6	80·5	79·8	79·6	79·6	79·6	79·5	79·5	79·5	79·3

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	1780	1781	1780	1778	1773	1769	1772	1773	1770	1752	1763	1778	1781	1787	1798	1790	1782	1783	1783	1790	1785	1780	1782	1783
5	20	80	81	81	77	72	69	72	73	67	54	64	79	82	88	98	86	84	83	83	91	86	82	82	82
10	20	80	81	81	76	72	69	73	73	65	53	65	80	83	89	98	81	86	83	82	90	88	85	82	82
15	20	80	81	82	76	71	69	73	74	63	53	67	79	83	90	98	77	88	82	82	89	90	86	82	82
20	20	82	81	80	75	70	69	73	73	61	54	70	79	85	91	98	77	88	82	81	89	90	86	80	82
25	20	82	81	80	74	70	69	73	73	60	55	71	80	83	92	99	78	88	82	81	89	90	88	82	80
30	20	82	81	80	74	70	69	72	73	60	56	73	80	83	94	99	78	88	83	80	87	87	88	82	80
35	20	82	81	81	74	69	69	72	73	58	56	74	80	83	96	97	79	88	83	81	86	87	88	82	80
40	20	82	81	81	74	69	69	72	73	57	57	75	80	84	97	96	80	86	83	82	83	84	85	82	80
45	20	82	81	82	73	69	72	72	72	55	58	76	80	86	98	95	80	84	83	85	80	84	85	82	80
50	20	82	81	81	73	69	71	72	71	55	59	77	80	86	98	93	80	83	83	87	81	82	85	82	80
55	20	82	81	81	73	69	71	72	70	55	61	78	81	87	98	91	81	82	82	88	82	82	83	82	80
Faht...																									
Attached Thermometer...		77·0	77·1	77·0	77·0	76·5	76·9	77·7	78·1	79·1	79·2	79·5	79·7	79·7	80·0	79·8	79·3	79·0	79·0	78·9	78·9	78·8	78·9	78·8	78·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..		In. 1·072	In. 1·069	In. 1·080	In. 1·092	In. 1·114	In. 1·138	In. 1·166	In. 1·172	In. 1·166	In. 1·142	In. 1·112	In. 1·082	In. 1·066	In. 1·062	In. 1·068	In. 1·080	In. 1·094	In. 1·116	In. 1·130	In. 1·134	In. 1·130	In. 1·120	In. 1·100	In. 1·084
Attached Thermometer.....		72·5	71·5	71·0	71·0	71·0	72·0	74·0	76·0	77·5	78·0	79·5	80·0	80·0	80·5	80·0	79·0	78·0	78·0	78·0	78·0	78·0	78·0	77·0	74·0
Dry Thermometer (standard)....		70·8	71·4	70·9	70·0	70·1	72·6	76·2	78·8	81·6	82·2	83·2	83·0	82·5	82·0	81·1	78·9	78·2	77·7	77·3	76·9	76·5	75·9	74·7	72·5
Wet Do.		68·2	69·0	68·2	67·2	68·0	69·8	71·5	71·9	72·3	71·1	71·8	71·3	71·5	71·0	71·4	71·5	71·0	70·6	70·6	70·0	69·3	68·8	68·9	67·2
Cloudy sky in 8ths.....		2	4	2	3	3	0	1	3	3	2	1	1	0	3	3	3	3	3	3	2	4	1	2	0
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·00	·10	·22	·20	·08	·07	·20	·03	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction ○		34	34	34	34	45	349	337	22	22	45	45	45	45	34	34	34	45	45	45	45	45	45	45	45
REMARKS ON THE WEATHER		cu, hz.....	do.....	cu, cr-hz, D.....	do.....	do.....	ny-clear.....	cu, cr-hz.....	fy-cu, hz.....	do.....	do.....	cu.....	do.....	ny-clear.....	cu, cu-st, hz.....	sc-cu, cu-st, hz.....	do	do.....	do.....	do.....	do.....	cu, cu-st, hz.....	sc-cu.....	do.....	ny-clear.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH FEBRUARY 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Friday, 24th February, 1854.														Saturday, 25th February, 1854.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 0	1671	1667	1661	1660	1660	1655	1658	1664	1671	1660	1655	1655	1660	1677	1690	1680	1672	1674	1686	1681	1683	1680	1673	1670
	5 0	71	65	61	60	61	53	59	65	70	60	55	55	62	77	90	80	72	76	85	81	83	80	73	70
	10 0	72	62	60	60	60	53	60	66	70	60	54	56	62	78	90	79	72	79	85	80	83	80	72	70
	15 0	72	64	60	58	60	53	61	68	69	60	54	57	63	78	90	78	72	81	85	80	82	80	71	70
	20 0	68	67	62	57	59	53	61	69	67	60	56	57	66	78	90	80	71	84	84	80	82	80	70	70
	25 0	65	69	63	57	58	52	62	69	65	59	56	58	69	78	90	80	70	88	84	80	82	80	70	70
	30 0	66	69	63	58	59	52	62	70	65	59	56	58	70	80	90	80	72	90	83	80	83	80	70	70
	35 0	68	66	66	59	60	52	62	70	63	58	55	59	70	83	90	80	73	92	82	80	83	78	70	70
	40 0	68	63	68	60	60	53	62	71	63	59	55	59	70	85	90	80	73	91	82	80	84	77	70	70
	45 0	69	61	69	61	59	54	63	71	63	59	55	60	71	88	90	78	73	89	81	83	85	75	70	71
	50 0	70	62	64	60	58	56	63	71	62	55	55	60	71	89	88	74	73	88	80	84	83	74	70	71
	55 0	70	61	62	60	57	57	64	71	62	55	55	60	74	90	83	72	73	87	80	85	82	73	70	71
HORIZONTAL FORCE.	m. s.																								
	2 0	916	930	940	908	892	821	840	851	860	827	820	854	890	1001	1082	1024	922	1007	1000	1040	1058	986	930	928
	7 0	922	930	935	905	890	820	850	845	854	823	820	852	890	02	82	23	924	15	14	40	51	980	928	929
	12 0	920	926	930	895	885	820	862	838	850	820	822	855	892	03	83	21	928	39	18	42	38	977	926	929
	17 0	920	929	925	880	885	820	875	829	847	820	822	858	895	04	83	20	930	67	30	39	35	974	923	930
	22 0	931	932	920	870	884	813	875	822	845	825	825	858	895	04	84	20	941	40	42	37	31	970	920	930
	27 0	936	936	920	865	870	802	869	830	850	822	827	862	895	05	86	20	955	999	57	50	29	967	918	932
	32 0	930	939	917	867	862	791	860	845	853	817	830	868	900	29	86	01	960	970	62	58	20	964	919	934
	37 0	925	942	919	869	855	785	851	848	857	815	835	870	915	47	89	986	977	954	65	60	17	960	920	934
	42 0	925	942	919	870	850	789	850	853	852	820	842	870	926	69	80	969	985	965	59	60	10	957	920	935
	47 0	927	945	915	878	845	798	849	854	850	828	847	870	940	74	61	966	999	970	52	62	08	950	920	935
	52 0	930	949	909	884	830	812	847	855	840	825	850	875	962	76	42	923	995	974	48	65	01	946	924	935
	57 0	930	949	905	886	820	825	850	850	833	825	850	882	969	81	37	901	998	981	42	67	992	940	926	936
	Faht...																								
	Attached Thermometer...	80°7	80°7	80°7	80°5	80°2	80°0	80°1	80°2	80°5	80°8	81°0	81°1	81°3	81°3	81°5	81°6	81°5	81°7	81°6	81°5	81°3	81°0	81°0	80°9
VERTICAL FORCE.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	3 0	4696	4740	4788	4716	4765	4759	4773	4782	4786	4757	4780	4776	4751	4798	4788	4738	4708	4757	4749	4749	4722	4722	4711	4711
	8 0	96	40	88	16	65	59	73	82	86	57	80	76	51	98	88	38	08	57	49	49	22	21	11	11
	13 0	96	40	88	16	65	66	73	82	86	57	80	76	51	98	88	38	08	57	49	49	22	21	11	11
	18 0	96	72	88	10	97	66	73	82	86	57	80	76	51	98	88	38	08	57	49	49	22	21	11	11
	23 0	4714	72	50	10	97	66	73	82	86	57	80	76	51	98	88	38	21	92	49	49	22	21	11	11
	28 0	14	72	50	10	97	67	73	82	86	57	54	76	51	98	88	38	21	92	49	49	22	21	11	11
	33 0	14	81	50	4697	90	67	73	83	86	57	54	76	51	98	88	38	21	53	49	49	22	21	11	11
	38 0	69	81	42	97	85	79	73	83	86	57	54	60	51	98	41	38	21	53	49	49	22	21	11	11
	43 0	69	74	42	97	80	80	73	83	86	57	54	60	51	98	41	38	21	31	49	49	22	21	11	11
	48 0	69	74	42	80	80	82	73	83	86	57	54	60	51	98	41	38	21	31	49	49	22	11	11	11
	53 0	69	74	29	80	80	82	73	83	86	70	54	60	51	98	41	38	21	31	49	49	22	11	11	11
	58 0	69	74	29	80	80	82	73	83	86	70	54	60	51	98	41	38	21	31	49	49	22	11	11	11
	Faht...																								
	Attached Thermometer...	80°5	80°5	80°2	80°0	79°6	80°0	80°3	81°0	81°4	81°6	82°0	82°1	82°2	82°4	82°2	81°9	81°8	81°6	81°5	81°3	81°2	80°9	80°6	80°3
INDUCTION INCLINO-METER.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 20	1802	1798	1792	1787	1785	1781	1790	1796	1799	1790	1785	1784	1790	1800	1810	1799	1793	1792	1800	1799	1799	1793	1778	1770
	5 20	02	96	92	87	85	82	91	96	1800	90	85	85	90	00	10	98	93	94	00	99	98	93	76	70
	10 20	02	93	91	85	85	83	92	96	00	90	85	88	91	00	10	97	93	96	00	98	97	92	75	70
	15 20	02	96	91	82	84	83	93	97	1798	90	85	90	92	00	10	96	93	98	00	98	97	92	73	70
	20 20	00	97	92	82	83	83	93	98	98	90	85	90	92	01	10	99	92	1800	01	98	97	91	73	70
	25 20	1797	98	92	82	83	83	94	98	95	88	85	88	95	01	10	99	92	01	01	98	97	91	72	70
	30 20	97	99	92	83	83	83	94	99	93	88	85	88	98	02	10	99	91	04	00	98	98	91	72	70
	35 20	98	96	95	84	84	84	93	99	93	86	86	89	1800	03	10	1800	91	05	1799	98	98	90	72	70
	40 20	98	94	97	85	83	85	93	99	92	88	86	90	00	05	08	00	91	05	98	98	99	88	72	70
	45 20	99	92	97	85	83	86	93	99	92	89	86	90	1798	07	07	1797	91	04	98	99	99	84	71	70
	50 20	99	93	93	84	80	87	94	99	92	87	86	90	96	08	07	93	91	03	98	1800	97	81	71	70
	55 20	99	92	91	84	80	88	94	99	90	86	85	90	99	09	02	92	91	02	98	00	94	79	70	70
	Faht...																								
	Attached Thermometer...	79°5	79°4	79°4	78°6	78°3	78°6	79°2	79°8	80°4	81°0	81°1	81°3	81°6	81°8	81°6	81°4	81°0	80°7	80°6	80°5	80°4	79°9	79°5	79°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+.		In. 1·030	In. 1·025	In. 1·029	In. 1·040	In. 1·054	In. 1·082	In. 1·112	In. 1·121	In. 1·116	In. 1·082	In. 1·054	In. 1·024	In. 1·008	In. 1·005	In. 1·003	In. 1·009	In. 1·022	In. 1·039	In. 1·064	In. 1·075	In. 1·074	In. 1·068	In. 1·048	In. 1·040
Attached Thermometer.....		75°0	74°5	74°0	73°5	72°5	73°0	76°0	77°0	79°0	80°0	80°5	81°0	81°0	82°0	81°5	81°0	80°0	79°0	78°5	78°0	77°0	75°5	74°5	74°0
Dry Thermometer (standard)....		72·6	71·4	70·9	70·8	71·1	73·8	78·3	81·0	82·6	83·7	84·2	84·5	84·3	83·8	82·8	81·6	80·2	79·3	78·4	77·8	76·2	74·6	73·4	72·7
Wet Do.		69·0	68·1	68·3	68·4	68·3	70·9	73·1	74·0	74·0	74·1	74·9	74·8	75·5	75·3	74·0	73·4	73·0	72·3	71·9	71·7	71·0	70·0	69·2	69·0
Cloudy sky in 8ths.....		0	0	0	0	1	1	1	1	4	1	1	0	1	2	2	1	1	0	0	0	0	0	0	0
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·08	·00	·05	·03	·00	·15	·20	·05	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		00	00	00	349	337	326	00	00	00	34	45	45	45	34	45	45	34	34	34	34	34	34	34	34
REMARKS ON THE WEATHER		clear.....	do.....	ny-clear.....	do.....	cr, cr-st.....	do	do.....	do	fy-sc-cu, cr.....	fy-cu	sc-cu	ny-clear.....	sc-cu.....	fy-cu, hz.....	do.	sc-cu.	lt-cu, cr-st, hz.....	ny-clear	clear.....	do.....	do.	do.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 22ND MARCH 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 22nd March, 1854.														Thursday, 23rd March, 1854.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.																								
	0 0	scd. 1681	scd. 1680	scd. 1678	scd. 1680	scd. 1698	scd. 1692	scd. 1686	scd. 1679	scd. 1679	scd. 1672	scd. 1671	scd. 1680	scd. 1680	scd. 1683	scd. 1681	scd. 1682	scd. 1675	scd. 1676	scd. 1680	scd. 1677	scd. 1676	scd. 1679	scd. 1679	scd. 1681
	5 0	81	80	78	80	1700	92	86	79	78	70	72	81	80	83	81	82	75	77	80	77	76	79	79	81
	10 0	81	79	78	81	01	93	86	79	78	70	72	81	80	83	82	82	75	77	80	77	76	78	78	82
	15 0	82	79	77	81	02	92	87	79	78	70	73	81	80	82	82	82	75	77	80	77	76	80	78	82
	20 0	82	79	79	82	01	90	87	78	78	70	74	81	80	82	82	82	75	77	80	77	76	80	78	82
	25 0	82	80	79	85	1699	90	87	79	77	70	74	81	80	83	81	80	75	77	80	76	76	80	79	83
	30 0	82	80	78	86	93	88	84	79	77	70	75	80	80	83	80	80	75	77	80	76	76	80	79	83
	35 0	81	80	78	89	94	88	84	78	76	70	76	80	80	84	80	77	74	77	78	76	77	80	79	82
	40 0	81	78	78	91	93	88	81	79	75	70	76	80	80	82	80	77	74	77	77	76	78	80	80	82
	45 0	80	79	79	95	93	86	81	79	74	70	76	80	80	82	82	76	74	77	77	76	78	80	80	81
	50 0	80	78	79	97	94	86	80	79	73	70	78	80	82	82	82	76	74	77	77	76	78	80	80	80
	55 0	79	78	80	97	92	86	80	79	73	70	80	80	82	82	82	76	74	78	77	76	79	80	80	80
HORIZONTAL FORCE.	m. s.																								
	2 0	892	910	918	906	890	855	785	736	717	760	805	850	870	892	900	910	930	950	975	976	967	959	942	955
	7 0	892	910	915	909	887	855	778	730	715	767	813	854	872	892	903	910	930	950	975	976	967	956	942	957
	12 0	887	914	915	911	887	845	764	726	718	770	820	857	875	894	906	917	930	950	975	976	967	954	941	954
	17 0	887	916	912	907	885	844	755	728	720	772	824	855	878	894	906	922	933	950	975	976	967	952	940	954
	22 0	885	912	916	902	881	835	750	731	720	777	830	851	880	894	906	927	933	952	975	976	967	950	940	951
	27 0	889	914	919	900	880	829	750	732	720	777	835	853	882	894	909	925	940	954	975	976	967	950	945	950
	32 0	889	915	914	900	879	820	740	730	722	774	839	860	884	896	910	925	945	954	975	974	967	949	949	950
	37 0	889	917	910	898	875	818	740	723	720	771	841	862	885	896	914	927	946	960	978	970	966	948	950	952
	42 0	902	919	910	897	877	808	740	723	719	777	844	865	887	895	915	929	947	964	978	968	965	942	950	952
	47 0	902	919	910	892	865	800	742	725	727	779	842	867	888	895	915	926	947	967	976	967	965	940	950	952
	52 0	902	917	914	892	867	793	742	721	740	785	840	868	890	898	912	928	949	967	974	967	964	937	954	950
	57 0	905	917	910	892	859	785	742	719	752	790	847	864	890	898	912	928	952	972	974	967	962	930	959	950
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer...	83·6	83·7	83·6	83·4	83·1	83·0	83·3	83·4	85·6	83·8	84·1	84·3	84·6	84·9	85·0	85·0	85·0	85·0	85·0	85·0	85·0	85·0	85·0	84·9
VERTICAL FORCE.	m. s.																								
	3 0	scd. 4787	scd. 4735	scd. 4695	scd. 4668	scd. 4693	scd. 4722	scd. 4751	scd. 4805	scd. 4816	scd. 4793	scd. 4766	scd. 4739	scd. 4739	scd. 4740	scd. 4721	scd. 4721	scd. 4715	scd. 4720	scd. 4718	scd. 4696	scd. 4685	scd. 4680	scd. 4669	scd. 4669
	8 0	87	35	95	68	93	20	52	05	16	93	66	39	39	40	21	21	15	20	18	96	85	80	69	69
	13 0	87	35	80	68	93	20	52	05	05	93	66	39	39	40	21	21	15	20	18	96	85	80	69	69
	18 0	75	11	80	76	99	20	52	05	05	93	66	39	39	40	21	21	15	20	18	96	85	80	69	69
	23 0	75	11	80	76	99	44	52	05	05	93	45	39	39	40	21	21	15	20	18	96	85	80	69	69
	28 0	75	29	72	76	99	44	52	05	05	93	45	39	39	40	21	21	15	20	18	96	85	80	69	69
	33 0	60	29	72	76	99	46	52	05	05	81	45	39	39	40	21	21	35	20	18	96	85	51	69	69
	38 0	60	29	72	89	99	46	52	05	4787	81	45	39	39	40	21	21	00	20	18	96	86	51	69	69
	43 0	60	29	72	89	4718	46	52	05	87	81	45	39	39	40	21	21	00	20	18	96	86	51	69	69
	48 0	60	37	40	95	20	46	52	19	87	81	45	39	39	40	21	21	00	20	18	96	86	51	69	69
	53 0	60	37	40	95	20	46	76	19	87	81	45	39	39	40	21	21	00	20	18	96	86	51	69	69
	58 0	60	37	40	95	20	52	76	19	87	81	45	39	39	40	21	21	00	20	18	96	86	51	69	69
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer...	83·5	83·4	83·1	83·0	82·7	83·2	83·5	83·8	84·4	84·7	85·0	85·2	85·4	85·4	85·2	84·9	84·5	84·5	84·5	84·5	84 5	84·4	84·2	84·1
INDUCTION INCLINO-METER.	m. s.																								
	0 20	scd. 1790	scd. 1789	scd. 1783	scd. 1784	scd. 1798	scd. 1799	scd. 1783	scd. 1778	scd. 1778	scd. 1774	scd. 1774	scd. 1782	scd. 1782	scd. 1786	scd. 1786	scd. 1789	scd. 1780	scd. 1782	scd. 1784	scd. 1783	scd. 1782	scd. 1782	scd. 1781	scd. 1782
	5 20	90	89	83	84	99	1800	83	78	78	73	74	82	82	86	88	89	80	83	84	83	82	82	81	82
	10 20	90	89	82	85	1800	00	83	78	78	72	75	82	82	87	88	89	80	83	84	83	82	81	81	83
	15 20	90	88	82	87	01	00	85	78	78	72	75	82	83	87	88	89	80	83	84	83	82	82	81	83
	20 20	90	88	82	87	00	1790	86	77	78	72	76	82	85	87	90	89	80	83	84	83	82	81	81	84
	25 20	91	88	82	90	1799	90	87	77	78	72	76	82	86	88	90	86	80	83	84	83	82	81	81	84
	30 20	91	88	82	91	99	89	85	77	77	72	78	82	86	89	90	84	80	83	84	83	82	81	81	84
	35 20	90	88	82	93	1800	89	86	78	76	72	78	82	86	90	90	82	79	83	84	83	83	81	81	84
	40 20	90	87	81	93	1799	89	79	79	75	72	79	82	85	90	90	82	79	83	84	83	83	81	81	84
	45 20	89	88	81	94	1800	87	79	79	75	72	80	82	85	90	90	80	79	83	83	82	84	81	81	84
	50 20	89	86	81	96	00	83	79	79	76	72	80	82	85	88	88	80	79	83	83	82	85	81	81	84
	55 20	89	85	81	96	00	83	79	78	76	72	80	82	85	88	88	80	79	83	83	82	83	81	81	84
	Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
	Attached Thermometer	82·9	82·4	82·0	81·8	81·5	82·1	83·0	83·3	83·9	84·2	84·7	84·9	85·2	85·3	85·2	84·8	84·3	84·2	84·2	84·1	84·0	83·9	83·8	83·5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29 0+..		In. 1·142	In. 1·120	In. 1·125	In. 1·145	In. 1·162	In. 1·192	In. 1·206	In. 1·210	In. 1·210	In. 1·180	In. 1·144	In. 1·112	In. 1·092	In. 1·074	In. 1·078	In. 1·084	In. 1·100	In. 1·131	In. 1·153	In. 1·174	In. 1·173	In. 1·158	In. 1·134	In. 1·108
Attached Thermometer.....		80·0	79·0	78·0	77·0	76·5	78·0	79·5	81·0	83·0	84·0	84·0	84·5	85·0	85·5	85·0	84·0	83·0	83·0	83·0	82·0	82·0	81·0	81·5	80·0
Dry Thermometer (standard)....		78·6	77·4	76·4	76·1	76·4	80·3	83·2	85·8	87·6	89·0	89·5	90·0	90·3	89·5	88·6	86·4	84·2	83·4	82·6	82·4	82·4	81·6	80·5	79·5
Wet Do.		75·0	74·0	73·0	73·3	73·4	76·0	77·7	78·0	78·3	78·8	79·0	78·5	79·0	78 5	78·5	78·3	78·0	77·4	77·6	77·8	77·6	77·0	76·7	76·0
Cloudy sky in 8ths.....		2	2	2	0	0	2	4	4	2	1	2	1	1	1	1	1	0	0	0	0	3	2	2	1
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	—	—	·00	·00	·00	·00	—	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		90	90	90	90	90	349	349	—	—	90	90	101	101	—	101	90	90	90	101	101	101	101	101	101
REMARKS ON THE WEATHER		fy-cu.....	do.....	do.....	ny-clear.....	do.....	cu, lt-hz.....	fy-cu, hz.....	do.....	do.....	cu, hz-hor.....	do.....	cr, cr-st, hz.....	do	do.....	do	do.....	ny-clear.....	clear	do.....	do.....	fy-cu, hz	do.....	fy-cu.....	do.....

The Anemometer board stopped on March 22, at 17h, 18h and 23h, Gottingen Mean Time.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH APRIL 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 19th April, 1854.														Thursday, 20th April, 1854.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1695	1697	1690	1700	1711	1715	1700	1686	1673	1653	1642	1655	1667	1674	1675	1680	1684	1680	1682	1686	1687	1685	1685	1689
5 0	95	97	90	01	12	12	1695	86	73	52	42	56	68	75	76	80	84	80	83	86	87	85	85	92
10 0	95	97	90	01	13	12	95	86	73	51	41	57	69	75	77	81	83	80	83	86	87	85	84	92
15 0	97	97	90	00	13	12	94	82	73	50	40	58	70	74	75	81	82	80	84	86	87	85	84	94
20 0	96	96	92	00	15	10	94	81	70	50	42	59	70	76	74	81	82	80	84	86	87	85	84	94
25 0	98	96	94	02	16	10	91	80	68	50	44	60	71	77	76	82	81	80	84	86	87	85	86	95
30 0	99	95	96	02	16	06	90	80	66	50	46	60	71	78	77	82	81	80	84	86	87	85	88	95
35 0	1700	95	94	05	18	06	90	80	65	49	48	61	73	77	77	83	80	80	84	87	87	85	88	95
40 0	00	93	93	07	19	05	90	80	62	48	49	61	73	76	78	83	80	81	84	87	87	85	86	95
45 0	00	93	95	09	18	03	88	79	61	46	50	62	73	75	78	82	80	81	84	87	87	85	86	95
50 0	1698	92	96	10	19	02	88	76	59	44	50	65	73	74	79	82	80	81	84	87	87	85	86	95
55 0	98	92	98	10	15	00	88	76	56	42	53	66	74	74	80	83	80	81	84	87	87	85	86	95

HORIZONTAL FORCE.

m. s.																								
2 0	1120	1110	1110	1118	1104	1092	1051	1060	1055	1088	1082	1117	1110	1102	1108	1128	1117	1130	1132	1134	1124	1085	1085	1089
7 0	26	10	10	18	04	90	54	60	55	88	85	17	11	02	09	28	17	30	32	34	24	85	85	94
12 0	26	10	10	15	02	90	53	60	59	88	89	18	12	05	14	26	19	30	32	34	24	88	86	98
17 0	22	14	07	15	02	94	54	49	60	87	93	19	13	08	11	25	20	30	32	34	23	88	86	98
22 0	20	11	10	17	07	95	50	40	60	86	99	19	10	10	17	22	20	30	32	34	23	88	85	98
27 0	17	11	14	12	09	90	46	46	62	86	1103	19	10	12	20	20	21	30	32	34	23	86	88	1105
32 0	17	12	17	14	09	86	40	50	67	85	09	19	10	14	24	20	21	30	32	34	20	86	88	05
37 0	14	12	17	09	10	75	40	48	70	87	10	20	10	08	26	20	25	32	32	32	16	86	90	08
42 0	14	12	19	11	09	63	40	48	77	89	10	18	08	10	28	20	30	32	33	30	13	86	90	08
47 0	14	12	21	04	08	58	60	45	78	90	09	16	03	10	30	20	30	32	33	27	10	88	90	02
52 0	10	12	21	02	04	54	60	50	79	89	09	14	03	07	30	20	30	32	33	25	03	88	88	02
57 0	10	11	20	02	10	54	60	52	82	86	13	12	00	05	29	18	30	32	34	25	1091	86	87	02
Faht...																								
Attached Thermometer...	88·2	88·4	88·5	88·5	88·3	88·2	88·3	88·4	88·6	88·9	89·0	89·1	89·2	89·3	89·4	89·2	89·1	89·2	89·3	89·3	89·2	89·1	88·9	88·6

VERTICAL FORCE.

m. s.																								
3 0	4992	4894	4935	4926	4895	4990	5004	5045	5041	5040	5015	4981	4981	4956	4974	4956	4928	4918	4918	4918	4914	4852	4852	4882
8 0	92	94	35	26	95	90	04	45	41	40	15	81	81	56	74	56	28	18	18	18	14	52	52	82
13 0	92	94	35	26	95	90	04	45	41	40	15	81	81	56	74	56	28	18	18	18	14	52	52	82
18 0	92	94	35	26	90	96	04	45	63	40	15	81	81	56	74	56	28	18	18	18	14	52	52	4920
23 0	75	94	14	26	90	98	04	45	63	13	15	81	81	56	74	56	28	18	18	18	14	52	52	20
28 0	75	82	14	20	90	99	10	45	63	13	15	81	81	56	74	56	28	18	18	18	14	52	52	20
33 0	75	82	14	20	90	5010	10	45	51	13	4972	81	81	56	74	56	28	18	18	18	14	52	52	20
38 0	75	82	27	20	4949	10	14	56	51	13	72	81	81	56	74	56	23	18	18	18	14	52	52	20
43 0	70	82	27	20	49	10	45	56	51	13	72	81	81	48	74	56	23	18	18	18	4879	52	52	20
48 0	70	99	27	05	49	10	45	56	51	13	72	81	81	48	74	56	23	18	18	14	79	52	52	20
53 0	32	99	27	05	49	4997	40	56	51	13	72	81	81	48	74	56	23	18	18	14	79	52	52	20
58 0	32	99	27	05	5001	97	40	30	51	13	72	81	81	48	74	56	23	18	18	14	79	52	52	20
Faht...																								
Attached Thermometer...	88·0	88·0	87·9	87·9	88·0	88·3	88·6	88·8	89·3	89·5	90·0	90·0	90·0	89·8	89·7	89·5	89·2	89·1	88·9	88·7	88·4	88·1	88·0	87·9

INDUCTION INCLINOMETER.

m. s.																								
0 20	1792	1794	1790	1797	1810	1809	1795	1785	1775	1760	1750	1762	1770	1776	1779	1780	1782	1782	1783	1786	1789	1787	1787	1789
5 20	92	94	90	97	12	07	92	85	75	59	50	62	71	76	79	80	83	82	83	86	89	87	87	90
10 20	92	94	90	97	12	06	91	85	73	58	50	62	71	75	80	80	83	82	83	86	89	87	87	90
15 20	93	94	90	98	12	04	90	81	72	58	50	62	72	75	80	80	82	82	83	86	89	87	87	91
20 20	93	94	91	98	14	03	90	80	70	57	50	63	72	75	78	80	82	82	84	86	89	87	87	92
25 20	95	94	91	1800	15	02	89	80	70	56	52	65	72	76	79	80	83	82	84	86	89	87	87	92
30 20	95	92	92	00	15	01	88	80	69	55	54	66	73	77	80	80	83	82	84	87	89	87	87	92
35 20	96	92	90	04	15	00	88	80	69	54	56	68	74	78	80	80	82	82	84	87	89	87	87	92
40 20	96	92	90	06	14	00	86	80	63	53	57	68	74	79	80	80	82	82	84	87	88	87	87	92
45 20	96	92	91	08	13	00	88	80	63	52	58	68	74	80	80	80	82	82	84	88	88	87	87	92
50 20	94	91	92	10	12	1798	88	76	62	51	58	69	74	80	80	80	82	82	84	88	88	87	87	92
55 20	94	91	94	10	10	96	88	75	61	50	59	70	75	78	80	81	82	82	84	88	88	87	87	92
Faht...																								
Attached Thermometer...	87·2	87·2	87·1	87·0	87·2	87·8	88·4	88·5	89·1	89·5	89·8	89·9	90·0	89·9	89·7	89·5	88·9	88·8	88·6	88·3	88·0	87·6	87·2	87·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 0·944	In. 0·948	In. 0·956	In. 0·956	In. 0·970	In. 0·990	In. 1·004	In. 0·998	In. 0·993	In. 0·978	In. 0·954	In. 0·918	In. 0·890	In. 0·887	In. 0·870	In. 0·883	In. 0·908	In. 0·923	In. 0·940	In. 0·960	In. 0·946	In. 0·938	In. 0·924	In. 0·916
Attached Thermometer.....	83·0	82·5	82·5	83·0	83·0	84·0	85·0	86·5	88·0	89·0	89·5	90·0	90·0	89·5	89·0	88·0	86·0	86·0	86·0	85·5	85·0	84·0	83·5	83·0
Dry Thermometer (standard)....	83·3	83·0	82·6	82·2	84·0	87·4	90·5	92·6	94·7	94·8	95·7	95·4	95·5	94·3	93 3	90·0	88·0	87·1	86·3	85·9	85·4	84·2	83·5	82·6
Wet Do.	80·0	80·0	79·5	79·7	80·2	80·3	80·5	79·2	81·5	81·4	81·9	81·7	82·0	81·3	82·0	81·2	81·0	81·1	80·7	80·9	80·7	80·0	79·8	79·2
Cloudy sky in 8ths.....	4	3	3	1	2	3	3	4	4	4	4	3	3	3	3	6	5	4	4	3	3	1	3	4
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·02	·10	·35	·33	·20	·10	·12	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °	135	135	135	259	191	225	225	225	135	135	135	135	135	135	135	135	135	124	124	124	124	124	124	124
REMARKS ON THE WEATHER	cu, cr-hz.....	do.....	do.....	cr, cr-hz.....	do.....	cu, cr-st, cr-hz.....	do.....	do.....	do.....	do.	cu, cu-st, th-cr-hz.....	do.....	cr-st, cr-hz, cu	do.....	cr-hz, cr-st.....	do.....	do.....	lt-cu, cr-st, hz.....	do.....	do.....	cr-st, hz.....	cr, cr-hz.....	do.....	cr, cr-hz, cr-st.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 26TH MAY 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 26th May, 1854.														Saturday, 27th May, 1854.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1700	1692	1702	1710	1721	1720	1710	1698	1670	1650	1640	1643	1654	1666	1670	1678	1685	1673	1667	1670	1673	1680	1688	1690
5 0	00	96	02	10	21	20	10	98	68	50	40	45	54	65	71	79	83	73	67	70	73	80	88	90
10 0	00	96	02	10	21	20	09	93	66	50	40	45	55	64	71	80	82	72	67	70	73	80	88	90
15 0	00	96	02	10	21	20	09	90	64	50	42	46	55	62	72	80	80	71	67	70	72	80	88	90
20 0	00	98	02	10	22	20	08	88	62	50	42	47	57	61	72	82	77	71	67	70	72	80	89	90
25 0	00	99	02	13	20	19	08	82	60	47	42	48	60	60	72	84	75	70	67	70	74	80	89	90
30 0	00	99	02	18	20	19	07	80	59	45	42	48	61	62	73	87	73	70	67	70	76	80	89	90
35 0	1698	1700	04	20	20	19	06	79	57	45	42	50	63	63	73	88	73	70	67	70	78	81	89	90
40 0	98	00	04	20	20	18	02	75	56	43	42	51	67	65	73	89	73	69	67	70	79	83	89	90
45 0	98	00	06	20	20	14	02	73	56	41	41	52	69	66	73	88	72	68	67	72	79	84	90	90
50 0	95	00	08	20	20	14	02	72	54	41	41	52	70	67	74	88	75	67	67	72	79	86	90	90
55 0	92	00	09	20	20	11	01	71	52	40	41	52	68	68	76	86	75	67	67	72	79	87	90	90

HORIZONTAL FORCE.

m. s.																								
2 0	1210	1193	1192	1185	1158	1124	1060	1080	1003	988	1030	1098	1182	1230	1250	1278	1277	1276	1268	1274	1262	1240	1239	1236
7 0	10	93	92	83	58	20	68	80	02	988	35	99	87	27	52	80	73	76	68	74	62	40	39	35
12 0	08	92	92	83	56	19	70	70	01	985	40	1100	97	20	54	80	70	76	68	74	62	40	39	35
17 0	08	92	94	82	56	13	75	65	00	985	52	05	1208	25	57	80	70	76	68	74	62	40	39	35
22 0	05	90	94	82	52	12	86	60	00	982	69	1097	20	27	60	82	69	76	68	74	62	40	39	36
27 0	00	90	94	80	50	10	84	40	997	990	75	90	26	30	67	85	70	76	68	74	62	40	39	36
32 0	1198	90	97	80	45	1083	75	37	994	995	82	84	32	37	70	89	70	75	68	74	59	41	39	36
37 0	98	90	95	80	34	79	83	30	990	1000	89	1109	37	39	70	90	70	72	69	74	51	42	39	37
42 0	97	90	92	74	39	70	1100	20	984	17	95	28	40	41	70	91	70	70	70	74	42	41	39	38
47 0	97	90	90	70	35	55	00	18	989	26	99	35	45	45	72	87	69	70	72	70	39	41	36	39
52 0	95	92	88	62	30	50	1098	15	994	26	97	42	49	47	72	85	68	68	72	64	36	40	35	39
57 0	95	92	88	60	30	44	95	10	999	29	94	51	41	43	75	80	68	68	72	64	38	39	36	40
Faht...																								
Attached Thermometer...	91°7	91°7	91°7	91°5	91°0	90°9	91°0	91°3	91°6	92°0	92°5	93°0	93°5	94°0	94°2	94°0	93°9	93°8	93°6	93°4	93°2	93°0	92°9	92°6

VERTICAL FORCE.

m. s.																								
3 0	4450	4417	4398	4449	4384	4363	4450	4537	4505	4534	4548	4535	4593	4540	4430	4474	4450	4459	4448	4448	4430	4445	4445	4440
8 0	50	17	98	49	84	63	50	37	05	34	48	35	93	40	30	74	50	59	48	48	30	45	45	40
13 0	50	17	98	49	84	63	50	37	05	34	48	35	93	40	30	74	50	59	48	48	30	45	45	40
18 0	50	17	4450	49	84	63	50	37	05	34	24	35	93	07	30	74	27	59	48	48	30	45	45	40
23 0	50	17	50	49	84	63	50	37	09	39	24	47	99	4446	30	74	27	59	48	48	30	45	45	40
28 0	50	17	50	49	84	63	50	37	29	67	24	47	99	46	30	74	27	59	48	48	30	45	45	40
33 0	50	17	50	63	58	95	50	00	29	67	59	47	99	46	65	74	27	59	48	48	30	45	45	40
38 0	50	17	32	63	58	95	4527	00	61	88	59	59	87	46	65	74	27	59	48	48	30	45	45	40
43 0	50	17	32	63	58	95	27	00	61	88	59	59	87	46	65	74	27	59	48	48	30	45	45	40
48 0	50	17	32	20	58	95	27	4495	61	88	76	59	87	46	65	74	27	59	48	48	30	45	45	40
53 0	50	17	32	20	58	95	27	70	61	99	76	59	87	46	65	74	57	59	48	48	30	45	45	40
58 0	50	17	32	20	58	4408	27	90	61	99	76	59	87	46	65	74	57	59	48	48	30	45	45	40
Faht...																								
Attached Thermometer...	91°6	91°3	91°1	90°8	90°5	90°8	91°3	91°6	92°1	92°8	93°5	94°0	94°5	94°8	94°9	94°7	94°2	93°8	93°4	93°0	92°7	92°2	92°0	92°0

INDUCTION INCLINO-METER.

m. s.																								
0 20	1780	1778	1779	1782	1793	1799	1802	1780	1765	1750	1740	1748	1760	1772	1772	1774	1775	1770	1766	1769	1773	1778	1772	1774
5 20	80	78	76	83	92	99	02	80	64	51	40	48	60	72	72	74	73	70	66	69	73	78	72	75
10 20	80	78	76	83	92	99	1798	80	63	51	42	48	62	71	72	75	73	70	66	69	73	77	72	76
15 20	80	75	78	83	96	1800	98	80	62	50	45	48	62	70	72	75	73	69	66	69	73	77	72	76
20 20	80	75	78	83	96	00	98	79	61	50	45	50	63	70	72	76	72	69	66	69	73	77	72	76
25 20	80	75	78	86	96	01	98	76	61	48	46	51	65	69	72	77	72	69	66	69	74	75	72	76
30 20	80	75	78	88	96	01	96	74	58	45	46	51	67	70	71	78	71	69	66	69	76	75	73	76
35 20	80	75	77	90	96	01	96	73	58	44	46	54	69	70	71	78	71	69	66	70	77	74	73	75
40 20	79	75	79	90	97	01	93	70	57	42	46	55	72	70	71	79	71	68	66	71	78	74	73	75
45 20	79	78	80	90	97	02	93	69	54	40	45	58	74	71	71	79	70	67	66	72	78	73	74	75
50 20	79	78	80	90	98	02	93	68	52	40	45	58	75	72	72	79	71	65	66	72	79	73	74	74
55 20	79	78	80	90	98	02	90	67	52	40	45	58	73	72	72	77	72	65	66	72	78	73	74	74
Faht...																								
Attached Thermometer...	91°0	91°0	90°8	90°5	90°0	90°4	91°1	91°7	92°4	93°5	94°3	95°1	96°0	96°7	96°2	95°0	94°4	94°0	93°6	92°9	92°4	92°2	92°0	91°7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+.	In. 0·722	In. 0·720	In. 0·720	In. 0·740	In. 0·764	In. 0·776	In. 0·796	In. 0·800	In. 0·794	In. 0·779	In. 0·765	In. 0·738	In. 0·712	In. 0·696	In. 0·687	In. 0·685	In. 0·702	In. 0·727	In. 0·730	In. 0·743	In. 0·742	In. 0·746	In. 0·750	In. 0·747
Attached Thermometer.....	89°0	87°5	87°0	87°0	86°0	87°5	89°0	90°5	92°0	93°5	95°5	96°5	96°0	97°0	96°5	93°0	91°5	90°0	90°0	90°0	90°0	89°0	89°0	89°0
Dry Thermometer (standard).....	86°0	85·4	84·5	84·2	87·3	91·2	94·9	97·2	99·9	102·8	105·7	107·0	106·8	106·8	100·8	96·6	92·7	90·3	90·0	89·6	88·8	88·7	88·6	88·2
Wet Do.	76·2	74·4	73·5	73·5	76·0	75·3	75·5	76·4	77·9	78·7	77·5	78·8	79·3	80 2	84·5	83·8	82·2	81·5	80·8	80·5	80·2	80·0	80·0	80·0
Cloudy sky In 8ths.....	1	0	3	4	4	4	2	4	4	0	0	5	3	2	3	4	4	4	4	4	4	3	2	2
Wind. Force lbs.....	·00	·05	·00	·00	·00	·03	·63	1·25	1·30	1·00	1·90	·85	·35	·00	·48	·50	·80	1·45	1·20	1·85	1·45	·35	·32	·52
Wind. Direction °	326	326	315	292	281	304	315	315	337	337	337	337	315	270	225	225	225	225	236	236	247	247	247	247
REMARKS ON THE WEATHER.	cr, cr-st, cr-hz..	ny-clear	cr, cr-hz.	do.....	do.....	do.....	cr-hz, cr-st.....	cu, hz.....	cr-st, cr-hz, cu.....	ny-clear.....	do.....	cr-cu, cr, cr-st.....	do.....	do.....	cr-cu, cr-hz, cr-st....	do.....	cr-hz, cr-st.....	cu, cr-st, hz, lg-W...	do	do	do	do	cu, cr-st, hz.....	do, ...	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21ST JUNE 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.		Wednesday, 21st June, 1854.														Thursday, 22nd June, 1854.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m.	*s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0	0	1735	1732	1728	1735	1750	1747	1734	1720	1706	1700	1690	1685	1692	1695	1700	1705	1698	1697	1699	1700	1702	1708	1708	1710
5	0	32	32	28	37	51	47	34	20	06	00	90	85	92	95	00	05	98	97	99	00	02	08	08	10
10	0	32	32	29	38	51	45	32	19	05	1699	88	86	90	94	02	06	96	97	99	00	02	08	09	10
15	0	34	32	29	40	50	45	31	17	05	98	86	87	90	92	04	04	93	98	99	00	02	09	10	10
20	0	34	32	29	40	50	43	30	16	05	96	85	88	90	90	08	04	93	98	99	00	02	09	10	10
25	0	32	32	30	42	50	41	30	14	05	95	84	88	91	90	08	02	95	98	99	00	02	09	10	11
30	0	32	30	31	42	50	40	30	12	03	93	83	89	91	90	10	03	96	98	99	00	03	07	11	11
35	0	32	29	30	42	50	40	28	10	00	92	82	90	92	93	10	05	96	98	99	00	03	07	12	10
40	0	30	27	30	45	50	40	27	10	00	91	82	90	94	93	10	04	96	98	99	01	05	06	12	10
45	0	30	27	32	47	50	39	26	10	00	90	84	90	95	96	10	02	96	98	99	01	05	06	12	10
50	0	30	27	32	49	50	39	24	09	00	90	85	90	95	98	08	00	96	98	99	01	05	07	11	10
55	0	32	28	32	50	47	37	21	09	00	90	85	91	95	1700	07	1699	96	98	99	01	06	07	10	10

HORIZONTAL FORCE.

m.	*s.*																								
2	0	1078	1140	1140	1130	1095	1075	1055	1013	979	980	1012	1070	1112	1150	1172	1158	1160	1160	1169	1170	1164	1153	1143	1116
7	0	72	40	32	27	90	75	54	12	978	980	18	71	18	52	72	58	60	60	69	70	64	53	43	14
12	0	76	40	30	27	84	73	40	12	975	983	19	72	22	54	74	56	60	60	69	70	64	51	43	14
17	0	82	32	30	26	89	73	39	10	974	985	23	74	27	59	74	56	60	60	69	70	63	51	43	12
22	0	82	32	30	20	87	73	28	10	973	986	29	76	29	61	72	56	60	60	68	70	62	50	43	10
27	0	1100	37	35	16	86	71	24	00	970	987	33	77	33	66	72	57	60	63	68	70	62	50	43	10
32	0	18	40	37	10	84	70	20	993	974	988	37	79	35	65	70	57	59	64	68	70	60	50	40	13
37	0	18	40	37	10	84	70	18	991	973	988	42	86	37	65	68	55	59	69	68	70	60	49	37	11
42	0	25	40	37	02	82	70	18	990	973	991	49	92	39	68	68	57	59	70	68	68	57	49	34	11
47	0	25	40	32	00	81	63	17	990	972	996	53	98	41	70	65	59	59	70	69	68	57	47	30	10
52	0	35	40	32	00	81	62	15	985	972	999	59	1102	48	70	60	59	59	70	70	67	57	45	27	10
57	0	35	42	32	00	78	60	13	983	972	1004	64	08	50	72	60	59	59	70	70	66	55	45	20	10
Faht..																									
Attached Thermometer...		90·9	91·1	91·2	91·0	90·7	90·6	90·7	91·0	91·3	91·5	92·0	92·1	92·2	92·4	92·4	92·0	92·0	92·2	92·3	92·2	92·0	92·0	91·8	91·5

VERTICAL FORCE.

m.	*s.*																								
3	0	scd. 4498	scd. 4513	scd. 4480	scd. 4463	scd. 4520	scd. 4546	scd. 4593	scd. 4638	scd. 4622	scd. 4678	scd. 4691	scd. 4630	scd. 4588	scd. 4511	scd. 4530	scd. 4531	scd. 4530	scd. 4503	scd. 4484	scd. 4484	scd. 4485	scd. 4485	scd 4463	scd. 4463
8	0	98	13	80	63	20	46	93	38	22	78	91	30	88	11	30	31	30	03	84	84	85	85	63	63
13	0	98	13	80	63	20	46	93	38	22	10	91	30	88	11	30	31	30	03	84	84	85	85	63	63
18	0	4507	13	72	63	23	46	93	38	22	10	91	30	88	11	30	31	30	03	84	84	85	85	63	63
23	0	07	13	72	74	23	46	93	38	22	49	91	30	88	11	30	02	30	03	84	84	85	85	63	63
28	0	07	25	72	74	30	46	93	38	22	49	91	30	88	11	30	02	26	03	84	84	85	85	63	63
33	0	07	25	72	74	30	46	4618	38	62	49	91	30	88	11	30	08	26	03	84	84	85	85	63	63
38	0	07	25	84	74	30	46	18	38	62	97	91	30	88	11	30	08	26	03	84	84	85	85	63	63
43	0	32	25	84	74	30	77	18	38	62	97	30	4588	88	11	30	08	26	03	84	84	85	85	63	63
48	0	32	34	84	95	47	77	18	38	62	97	30	88	88	11	30	15	15	03	84	84	85	85	63	63
53	0	32	34	84	95	47	77	18	38	62	97	30	88	11	11	30	15	15	03	84	84	85	85	63	63
58	0	32	34	84	95	47	77	18	38	62	97	30	88	11	11	30	15	15	03	84	84	85	85	63	63
Faht...																									
Attached Thermometer...		90·5	90·5	90·4	90·2	90·2	90·5	90·8	91·3	91·7	92·0	92·6	92·9	93·2	93·0	92·7	91·9	91·5	91·5	91·5	91·4	91·2	90·9	90·8	90·7

INDUCTION INCLINOMETER.

m.	*s.*																								
0	20	scd. 1780	scd. 1780	scd. 1782	scd. 1792	scd. 1811	scd. 1809	scd. 1802	scd. 1790	scd. 1776	scd. 1769	scd. 1760	scd. 1756	scd. 1762	scd. 1766	scd. 1776	scd. 1774	scd. 1770	scd. 1769	scd. 1770	scd. 1772	scd. 1773	scd. 1776	scd. 1779	scd. 1780
5	20	78	80	82	93	12	09	02	90	75	68	60	56	62	66	76	74	70	69	70	72	73	76	79	80
10	20	78	80	82	94	13	08	00	88	75	67	59	57	62	66	76	74	70	69	70	72	73	77	79	80
15	20	79	80	83	95	12	08	00	86	75	66	58	57	62	65	76	73	70	69	70	72	73	78	79	81
20	20	80	81	83	97	12	08	1799	86	75	66	57	57	62	65	76	73	70	69	70	72	73	78	80	81
25	20	78	82	84	1800	12	07	99	83	75	65	57	58	63	65	77	72	70	69	70	72	73	78	80	81
30	20	78	81	86	00	12	07	96	81	73	65	57	59	63	68	77	72	70	70	70	72	74	78	80	81
35	20	78	81	86	00	12	07	96	80	71	65	56	60	64	70	77	72	69	70	70	72	74	77	80	81
40	20	77	81	86	04	11	06	96	79	71	64	56	61	65	70	77	72	69	70	70	72	74	77	80	81
45	20	77	80	89	07	11	06	95	79	71	63	55	61	65	74	76	70	69	70	70	72	75	77	80	81
50	20	77	80	89	10	11	06	93	78	70	62	55	62	65	76	75	70	69	70	71	72	75	78	80	81
55	20	80	80	91	11	09	05	92	78	70	61	55	62	65	76	75	70	69	70	71	72	75	78	80	81
Faht...																									
Attached Thermometer...		90·0	90·0	89·9	89·7	89·7	90·2	90·8	91·5	92·0	92·5	93·1	93·7	93·5	93·2	92·4	91·5	91·0	91·3	91·3	91·2	90·9	90·8	90·9	90·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+.		In. 0·888	In. 0·880	In. 0·882	In. 0·898	In. 0·910	In. 0·922	In. 0·928	In. 0·928	In. 0·920	In. 0·900	In. 0·878	In. 0·854	In. 0·829	In. 0·828	In. 0·824	In. 0·836	In. 0·848	In. 0·880	In. 0·910	In. 0·925	In. 0·928	In. 0·916	In. 0·903	In. 0·897
Attached Thermometer		86·0	86·0	86·0	86·0	86·5	87·5	89·0	91·0	92·5	93·5	95·0	94·5	94·0	93·0	91·5	90·0	89·0	89·0	89·0	88·5	88·0	88·0	88·0	87·5
Dry Thermometer (standard)....		86·6	86·3	86·0	85·8	89·1	92·3	94·3	96·3	98·0	99·7	101·7	98·6	98·2	98·0	96·1	93·1	90·5	89·7	89·3	88·4	88·2	88·0	88·0	87·3
Wet Do.		79·0	78·0	77·2	76·8	77·0	77·1	75·3	76·1	76·6	80·3	79·0	79·5	80·0	81·0	81·2	80·5	81·0	81·5	81·2	79·0	78·8	78·0	79·0	79·5
Cloudy sky in 8ths.		8	8	3	6	5	3	3	2	2	3	3	3	3	3	6	6	6	6	6	7	7	8	8	4
Wind. Force lbs.....		·00	·00	·00	·00	·00	·00	·30	·20	·17	·15	·10	·00	·00	·03	·15	·02	·00	·00	·00	·20	·00	·00	·07	·03
Wind. Direction °		191	191	191	191	202	270	281	270	304	292	270	90	90	124	124	135	135	135	157	180	180	180	180	191
REMARKS ON THE WEATHER.		overcast.....	do	cu, cr-hz.....	cr-cu, cr-hz....	cr-cu, hz	cr-cu, cr-hz.....	do.....	cu, cr-hz....	cu-st, hz.....	cu, cr-st, hz.....	do.....	do	cu, cu-st, cr-hz.....	do nim...	fl-cu, cu-st, cr-hz....	cu, cr-cu, cr-hz.....	do.....	cu, cr-st, hz.....	do.....	cu, hz.....	ny-overcast.....	overcast, sh-lg-N...	do do. SW	cu, cr-hz.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH JULY 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 19th July, 1854.														Thursday, 20th July, 1854.									
m. s.	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1715	1715	1720	1720	1728	1720	1707	1700	1695	1696	1702	1698	1692	1702	1698	1699	1697	1694	1697	1698	1702	1706	1710	1710
5 0	15	15	20	20	28	20	07	00	94	96	02	97	92	00	97	98	97	94	97	98	02	06	10	10
10 0	15	16	20	20	28	20	05	00	94	97	02	95	93.	00	95	98	97	94	97	98	02	06	10	10
15 0	15	16	20	20	28	20	04	00	93	98	03	95	94	00	96	99	96	94	97	98	02	06	10	10
20 0	14	17	20	20	28	16	02	00	93	99	03	94	96	00	97	99	94	94	97	98	02	07	10	10
25 0	14	17	20	21	28	16	01	00	93	1700	01	92	98	00	96	98	93	94	97	98	02	07	10	10
30 0	14	18	21	22	27	15	00	1699	92	00	00	91	99	00	96	98	92	94	97	98	02	08	10	10
35 0	14	19	21	23	25	12	00	99	92	00	00	90	99	01	97	98	92	94	97	99	03	08	10	11
40 0	15	20	21	24	24	10	00	98	92	00	00	90	1700	02	97	99	92	94	98	1700	03	09	10	11
45 0	15	20	20	26	23	08	00	97	92	00	00	90	00	01	98	98	93	96	98	00	05	09	10	11
50 0	15	20	20	28	23	08	00	96	93	01	00	90	01	01	99	98	93	97	98	01	05	09	10	11
55 0	15	20	20	28	21	08	00	95	94	01	00	91	01	00	1700	98	93	97	98	02	05	09	10	11

HORIZONTAL FORCE.

m. s.																								
2 0	1029	999	1000	995	978	968	940	920	917	920	928	974	1000	1030	1036	1067	1061	1070	1072	1068	1066	1055	1042	1030
7 0	20	999	00	992	980	967	938	918	915	918	932	974	05	34	39	63	61	70	72	68	65	55	42	30
12 0	10	999	00	992	980	965	937	917	914	916	940	978	07	37	45	62	61	70	72	68	65	57	42	30
17 0	02	999	00	993	979	962	935	915	913	914	945	979	10	41	48	60	62	70	72	68	65	59	37	29
22 0	999	999	00	993	978	960	935	912	914	915	950	979	13	39	50	60	63	70	72	68	64	60	35	29
27 0	997	998	02	992	976	959	934	911	915	916	956	984	18	37	54	60	63	70	72	68	63	64	34	29
32 0	997	998	04	990	975	957	930	910	916	917	958	990	19	36	57	59	63	70	72	68	60	60	32	25
37 0	997	999	06	990	975	955	930	910	916	919	962	990	21	33	58	57	63	71	72	69	54	60	30	25
42 0	997	1000	09	990	974	952	929	911	916	920	965	994	21	33	60	59	63	72	71	69	54	56	30	24
47 0	998	00	07	988	972	947	927	911	916	920	967	997	24	32	62	61	64	72	70	69	52	53	27	24
52 0	998	00	01	987	966	943	925	910	917	921	970	999	26	31	65	61	64	74	69	68	52	51	25	22
57 0	998	00	998	980	967	941	922	910	919	923	972	999	28	30	70	61	64	74	69	68	50	50	24	20
Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...	87·4	87·5	87·5	87·4	87·2	87 0	87·1	87·3	87·6	87·9	88·2	88·9	89·6	89·8	89·8	89·8	89·9	90·0	90·0	90·0	90·0	90·0	90·1	89·9

VERTICAL FORCE.

m. s.																								
3 0	4580	4516	4504	4495	4534	4534	4571	4603	4620	4595	4575	4544	4506	4522	4530	4530	4522	4501	4492	4471	4493	4482	4500	4510
8 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	22	01	92	71	93	82	00	10
13 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	22	01	92	71	93	82	00	10
18 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	22	01	92	71	93	82	00	4498
23 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	22	01	92	71	93	82	20	98
28 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	22	01	92	71	93	82	20	98
33 0	80	16	04	95	34	34	71	03	20	95	75	44	06	22	30	30	20	01	92	71	99	70	20	98
38 0	80	16	04	95	34	34	90	03	20	95	75	44	06	22	30	30	20	01	92	71	99	70	20	98
43 0	80	16	04	95	34	34	90	03	20	95	75	44	06	22	30	30	20	01	92	74	99	70	20	86
48 0	61	16	04	4527	34	65	90	03	20	95	75	44	06	22	30	30	20	01	92	74	99	70	32	86
53 0	61	16	04	27	34	65	90	03	20	95	75	44	06	22	30	30	20	01	92	74	99	70	32	86
58 0	61	16	04	27	34	71	90	03	20	95	75	44	06	22	30	30	20	01	92	74	99	70	32	86
Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...	87·2	87·2	87·2	87·0	87·0	87·0	87·0	87·8	88·0	88·7	89 0	89·5	90·0	90·3	90·0	89·9	89·7	89·6	89·5	89·4	89·3	89·3	89·4	89·1

INDUCTION INCLINOMETER.

m. s.																								
0 20	1783	1782	1782	1788	1792	1788	1779	1775	1772	1776	1783	1784	1780	1783	1780	1778	1778	1771	1772	1775	1777	1779	1801	1802
5 20	83	82	82	89	92	88	78	75	72	76	83	83	80	83	79	77	78	71	72	74	77	79	01	02
10 20	83	82	82	88	92	88	78	75	71	77	83	83	80	83	78	77	78	71	72	74	77	79	01	02
15 20	83	82	82	88	92	88	77	75	71	78	83	82	80	83	78	77	77	71	72	74	77	79	01	02
20 20	83	82	82	88	91	84	76	75	71	79	83	81	81	83	78	78	75	71	72	74	77	79	01	03
25 20	82	82	82	89	90	84	76	75	71	80	84	80	82	83	78	78	74	72	72	74	77	79	01	03
30 20	82	82	82	90	90	83	75	74	71	80	85	80	82	83	78	78	72	73	72	74	78	1800	01	03
35 20	82	82	83	90	90	82	75	74	71	80	85	80	82	83	78	78	71	74	72	75	78	00	01	03
40 20	82	82	83	90	90	81	75	73	71	80	84	79	82	83	78	77	71	74	73	76	78	00	01	03
45 20	82	82	83	91	90	80	75	72	72	80	84	79	83	82	78	78	72	74	73	76	78	00	01	03
50 20	82	82	84	92	90	80	75	72	73	81	84	79	83	81	78	78	72	74	74	76	79	01	01	03
55 20	82	82	86	92	89	79	75	72	74	82	84	79	83	81	79	78	72	72	75	76	79	01	01	03
Faht...	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Attached Thermometer...	86·8	86·8	66·7	86·3	86·2	86·2	86·7	87·2	88·0	88·6	89·3	90·9	91·1	91·3	90·9	90·8	90·1	89·7	89·4	89·1	88·9	88·9	88·9	88·7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+.	In. 0·828	In. 0·822	In. 0·832	In. 0·839	In. 0·860	In. 0·872	In. 0·890	In. 0·884	In. 0·876	In. 0·856	In. 0·826	In. 0·799	In. 0·783	In. 0·779	In. 0·778	In. 0·790	In. 0·806	In. 0·836	In. 0·857	In. 0·871	In. 0·882	In. 0·876	In. 0·866	In. 0·856
Attached Thermometer.....	° 84·0	° 84·0	° 84·0	° 83·0	° 84·0	° 84·0	° 85·0	° 86·0	° 87·0	° 88·5	° 90·5	° 92·0	° 93·0	° 94·0	° 93·5	° 93·0	° 90·5	° 89·0	° 88·5	° 88·0	° 87·5	° 86·5	° 86·0	° 86·0
Dry Thermometer (standard)....	84·3	84·0	83·2	83·1	83·4	85·3	88·6	90 7	93·2	95·3	97·3	99·8	99·7	100·0	98·4	96·3	92·1	90·3	89·4	88·1	87·6	87·4	87·2	87·2
Wet Do.	77·2	78·0	78·0	77·0	78·0	78·0	78·4	78·6	80·6	82·4	81·7	81·5	81·5	81·0	79·8	81·5	82·0	82·4	81·8	81·6	80·8	81·0	79·0	78·0
Cloudy sky in 8ths.....	4	4	7	7	7	7	7	7	6	6	5	4	6	6	7	6	7	7	3	6	7	2	0	0
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·10	·30	·60	·58	·52	·53	·28	·30	·10	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction o	259	236	225	225	225	225	225	225	236	247	259	259	281	281	270	00	79	79	90	90	90	90	259	270
REMARKS ON THE WEATHER.	cu, cr-cu, cr-hz... ...	do.....	ny-overcast.	do.....	do.....	do.....	do.....	do.....	do.....	cu, cr-cu, cr-st, cr-hz.	fy-cu, cr-cu, cr-st, cr-hz	fy-cu, hz.....	cu, hz.....	dó	do.....	do nim	cu, cr-cu, cr-hz.....	hy-cu, cu-st, cr-st, hz	ny-overcast....	fy-cu, hz.....	dc.....	do.....	cu, hz.....	ny-clear.....	do..... .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 25TH AUGUST 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Friday, 25th August, 1854.														Saturday, 26th August, 1854.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 0	1682	1687	1680	1685	1712	1716	1698	1677	1663	1655	1645	1657	1667	1677	1688	1683	1676	1674	1676	1678	1681	1685	1690	1690
	5 0	82	87	80	87	12	16	96	76	62	53	48	59	67	78	88	83	75	74	76	78	81	84	90	90
	10 0	82	87	79	90	14	15	94	75	63	52	50	60	69	78	89	82	75	74	76	78	82	84	90	90
	15 0	81	85	79	92	15	13	92	73	62	50	50	60	69	78	87	80	75	74	76	78	82	85	90	90
	20 0	81	85	78	92	17	11	89	72	62	50	50	60	68	79	86	80	74	74	76	78	82	85	90	90
	25 0	81	82	79	95	19	10	87	71	60	50	52	62	68	79	85	80	74	74	76	78	82	85	90	90
	30 0	81	82	79	97	20	10	85	70	57	50	52	62	68	79	84	80	74	74	76	78	83	86	90	90
	35 0	83	82	79	97	20	10	83	68	56	47	54	62	69	80	83	80	75	74	76	78	83	86	90	90
	40 0	83	81	80	1701	18	08	81	68	54	46	55	62	71	81	83	80	76	74	76	79	83	87	90	90
	45 0	85	81	80	04	20	05	80	66	52	45	55	64	72	82	82	80	76	74	76	79	84	88	91	90
	50 0	85	81	80	06	18	01	80	65	56	45	56	66	73	85	82	80	75	74	76	79	84	88	92	90
	55 0	85	81	80	09	18	00	80	64	55	45	57	66	75	87	82	77	75	74	76	79	84	89	92	90
HORIZONTAL FORCE.	m. s.																								
	2 0	990	1014	962	970	968	943	947	871	780	902	925	915	962	1019	1054	1011	1016	1020	1039	1039	1039	1029	1028	1030
	7 0	990	07	960	970	964	940	934	867	788	910	922	918	966	22	57	11	17	20	39	39	39	26	28	30
	12 0	992	00	957	971	962	937	927	863	800	918	919	922	969	27	61	07	15	20	39	39	39	27	28	31
	17 0	992	997	955	974	966	936	920	860	824	927	914	926	974	30	55	05	13	20	39	39	39	24	28	31
	22 0	997	990	952	977	967	938	913	855	820	930	915	930	980	31	52	01	10	20	39	39	39	22	29	33
	27 0	999	985	957	975	967	930	902	852	826	936	915	935	987	34	48	07	09	20	39	39	38	20	30	33
	32 0	1004	980	959	975	969	920	898	855	832	940	912	940	995	39	42	10	07	22	39	39	36	22	30	31
	37 0	06	977	961	979	954	930	896	848	850	937	910	940	999	37	35	12	14	23	39	39	32	24	30	32
	42 0	09	974	962	976	950	942	895	841	868	935	910	943	1003	37	30	14	18	24	39	39	30	25	32	32
	47 0	09	970	964	972	952	958	892	834	885	930	910	949	08	35	27	10	20	34	39	39	29	26	32	32
	52 0	10	970	966	972	950	960	889	827	890	930	913	956	10	42	23	09	20	34	39	39	28	26	32	32
	57 0	12	970	969	974	947	962	886	800	899	928	915	959	13	50	18	11	20	34	39	39	28	27	30	31
	Faht...																								
	Attached Thermometer...	86°9	87°2	87°2	87°2	86°8	86°4	86°3	86°1	86°1	86°5	87°0	87°2	87°5	87°8	88°0	88°0	87°9	88°0	88°0	88°0	88°0	87°9	87°8	87°6
VERTICAL FORCE.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	3 0	4448	4460	4418	4481	4420	4505	4550	4504	4615	4690	4485	4470	4457	4440	4475	4501	4461	4485	4503	4478	4460	4485	4460	4450
	8 0	48	60	18	81	20	05	50	04	15	90	85	70	57	40	75	01	61	85	03	78	60	85	60	50
	13 0	48	60	18	81	20	05	50	04	15	90	85	70	57	40	75	01	61	85	03	78	60	85	60	50
	18 0	48	60	18	81	12	05	50	04	15	90	85	70	57	40	75	01	61	85	03	78	60	85	60	50
	23 0	67	79	18	97	12	05	50	04	15	4585	50	25	57	40	87	01	61	85	03	78	60	85	60	50
	28 0	67	79	02	97	12	05	50	04	30	85	50	25	57	40	87	01	97	85	03	78	60	85	60	50
	33 0	67	79	02	97	12	42	50	30	30	85	50	25	57	40	87	01	97	85	03	78	60	85	60	50
	38 0	78	79	02	70	74	42	50	30	30	12	50	25	35	61	87	01	97	85	03	78	60	85	60	50
	43 0	78	85	02	70	74	42	50	30	30	12	50	25	35	61	87	01	97	85	03	78	60	85	60	50
	48 0	78	85	29	53	74	42	4497	30	30	12	50	25	35	61	87	4485	97	85	03	78	60	85	60	50
	53 0	78	85	29	53	74	42	97	30	30	12	50	25	35	61	87	85	97	85	03	78	60	85	60	50
	58 0	78	85	29	53	74	42	97	30	30	12	50	25	35	61	87	85	97	85	03	78	60	85	60	50
	Faht...																								
	Attached Thermometer...	86°5	86°5	86°5	86°6	86°4	86°3	86°0	85°9	86°3	86°5	87°2	87°8	88°1	88°3	88°5	88°2	87°9	87°6	87°6	87°2	86°8	86°8	86°6	86°5
INDUCTION INCLINO-METER.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 20	1782	1788	1780	1787	1809	1809	1792	1779	1765	1760	1755	1765	1774	1781	1790	1784	1780	1778	1780	1780	1782	1785	1786	1790
	5 20	82	88	80	89	09	08	91	78	67	60	57	65	74	82	90	84	80	78	80	81	83	85	86	90
	10 20	82	88	80	92	11	07	90	77	67	60	57	65	74	82	90	84	79	78	80	81	83	85	86	90
	15 20	82	86	78	94	12	06	89	76	64	60	58	68	74	82	90	84	79	78	80	81	83	85	86	90
	20 20	82	86	78	94	13	05	88	74	62	60	58	68	74	82	89	83	79	78	80	81	83	85	87	90
	25 20	82	83	79	97	13	03	86	72	60	60	58	68	74	83	89	83	79	78	80	81	83	85	87	90
	30 20	82	83	79	99	13	02	85	71	59	60	60	70	75	83	88	83	79	80	80	81	83	85	87	90
	35 20	82	83	80	99	13	01	83	70	59	57	60	70	77	83	86	83	78	80	80	81	83	84	88	90
	40 20	85	81	80	1802	09	00	82	70	59	56	60	70	78	85	85	83	78	80	80	81	84	84	88	90
	45 20	85	81	80	04	10	1798	81	69	58	56	60	70	78	86	85	82	78	80	80	81	84	84	88	90
	50 20	86	81	80	06	10	97	80	67	59	56	63	72	79	88	85	81	78	80	80	81	84	85	89	90
	55 20	86	81	80	07	10	95	80	66	59	55	64	72	80	89	84	80	78	80	80	81	84	85	89	90
	Faht...																								
	Attached Thermometer...	86°0	85°8	86°0	86°0	86°4	85°3	85°1	85°0	85°6	86°8	87°3	87°9	88°2	88°5	88°4	88°1	87°8	87°6	87°4	87°2	87°0	87°0	87°0	87°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+.		In. 0·902	In. 0·896	In. 0·922	In. 0·944	In. 0·952	In. 0·959	In. 0·977	In. 0·973	In. 0·970	In. 0·950	In. 0·928	In. 0·966	In. 0·988	In. 0·875	In. 0·871	In. 0·880	In. 0·904	In. 0·926	In. 0·943	In. 0·960	In. 0·958	In. 0·952	In. 0·942	In. 0·934
Attached Thermometer		81°5	81°5	82°0	81°5	81°5	81°5	81°5	82°0	83°0	84°5	86°0	87°0	87°0	88°5	88°5	87°5	86°0	86°0	85°0	85°0	84°5	84°0	83°0	83°0
Dry Thermometer (standard)		81·7	81·2	81·7	81·2	81·1	82·4	81·7	83·2	86·3	90·8	92·8	92·3	93·2	93·5	93·0	90·7	87·7	86·6	85·8	85·2	84·7	83·6	84·0	83·5
Wet Do.		77·0	77·5	78·0	77·2	75·7	76·1	75·3	75·7	77·6	79·2	80·4	81·0	82·2	82·5	82·8	81·0	81·0	80·4	80 6	80·4	80·5	80·0	80 0	79·8
Cloudy sky in 8ths		2	2	5	4	4	5	7	7	5	4	4	2	2	1	3	2	1	1	0	0	1	2	2	2
Wind. Force lbs.		·00	·00	·00	·00	·30	·32	·00	·00	·00	·00	·00	·00	·00	·00	—	—	—	—	—	—	—	—	—	—
Wind. Direction °		157	169	191	214	225	225	225	225	236	202	112	135	146	146	—	—	—	—	—	—	—	—	—	—
REMARKS ON THE WEATHER.		cu-hz.....	do	fy-cu, cr-hz, nim, sh-lg-NW.....	cu, cu-st, cr-hz.....	do	do	ny-overcast	do	cu, d-cr-hz.....	cr-st, hz.....	cu, cu-st, cr-hz.....	cu, cu-st.....	cu-hor.....	do	cu, cr-hz, cr-st.....	do	cu-hor	cu-W-hor, lg-SW...	ny-clear, lg-SW.....	clear, lg-S.....	cu-E, hor, lg-E... ...	do	do	cu, cr-st, hz.....

August 26.—The Anemometer board stopped.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH SEPTEMBER 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 20th September, 1854.														Thursday, 21st September, 1854.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1685	1682	1680	1681	1703	1702	1692	1676	1652	1641	1640	1650	1676	1678	1680	1674	1670	1678	1679	1685	1685	1690	1690	1692
5 0	85	82	80	81	03	01	92	75	52	41	40	50	76	78	88	74	70	78	79	85	85	90	90	92
10 0	85	82	80	82	04	00	91	74	51	41	40	50	74	77	83	72	72	77	80	85	86	90	90	92
15 0	85	82	80	82	05	00	90	72	51	41	40	50	70	77	80	72	72	76	81	85	87	90	90	92
20 0	86	82	80	86	05	00	88	71	50	40	40	51	69	79	75	70	74	76	82	85	88	90	90	92
25 0	86	82	80	89	07	1698	85	69	47	40	40	51	70	79	72	70	75	77	84	85	88	90	91	92
30 0	86	80	80	92	07	97	82	67	47	40	40	54	70	80	72	70	75	79	84	85	89	90	91	91
35 0	86	80	81	92	06	96	81	65	47	40	40	59	70	80	72	70	75	79	84	86	90	90	92	91
40 0	82	80	80	97	06	94	80	62	47	40	41	63	72	80	72	70	75	79	84	86	90	90	92	90
45 0	82	81	80	99	06	93	79	61	47	40	42	65	72	80	73	70	75	79	84	86	90	90	92	90
50 0	82	81	80	1700	05	93	78	60	45	40	44	70	74	80	73	70	76	79	84	85	90	90	92	89
55 0	81	81	80	02	04	93	77	57	44	40	46	74	76	80	73	70	77	79	85	85	90	90	92	89

HORIZONTAL FORCE.

m. s.																								
2 0	962	972	964	937	950	921	842	780	770	769	803	839	921	980	1010	990	997	1007	1046	1050	1050	1030	1015	1009
7 0	960	972	956	937	947	917	838	779	769	769	803	859	922	983	10	990	997	08	42	50	50	30	12	09
12 0	954	972	955	930	946	913	834	778	767	769	803	859	924	986	998	990	998	12	39	50	47	30	10	09
17 0	952	972	955	932	942	907	830	777	766	769	803	859	930	990	998	990	998	19	38	50	44	30	07	09
22 0	957	967	952	937	942	890	823	777	765	769	803	859	931	994	998	990	998	22	36	50	42	30	04	09
27 0	961	967	950	940	940	880	816	777	762	770	803	869	936	998	998	990	999	30	34	50	40	28	02	07
32 0	963	969	952	942	940	875	810	776	762	770	803	874	939	1007	996	990	999	37	33	50	37	25	02	05
37 0	966	969	952	945	930	870	801	776	762	770	803	880	947	09	996	990	1000	42	35	54	35	25	05	02
42 0	967	970	950	950	928	865	792	775	763	771	806	888	952	07	996	990	00	48	39	57	34	24	08	00
47 0	967	971	950	951	925	859	788	774	764	773	809	894	959	07	999	993	01	47	44	56	34	22	10	00
52 0	969	971	937	952	923	853	784	773	765	776	809	901	965	09	994	995	02	47	46	55	33	21	10	998
57 0	970	974	932	952	924	850	780	770	766	779	810	906	973	10	992	995	04	46	48	53	33	20	10	997
Faht...																								
Attached Thermometer...	86·5	86·6	86·6	86·5	86·2	86·2	86·4	86·6	86·8	87·0	87·2	87·4	87·7	88·0	88·0	87·9	87·9	88·0	88·0	88·0	87·8	87·6	87·3	87·2

VERTICAL FORCE.

m. s.																								
3 0	4485	4456	4555	4435	4535	4595	4651	4642	4597	4503	4533	4533	4587	4545	4569	4531	4526	4504	4521	4525	4521	4516	4499	4460
8 0	85	56	55	35	35	95	51	42	97	03	33	33	87	45	69	31	26	04	21	25	21	16	99	60
13 0	85	56	55	35	35	95	51	42	97	03	33	33	87	45	69	31	26	04	21	25	21	16	99	60
18 0	67	56	55	35	49	95	51	42	97	03	33	33	87	45	69	31	26	04	21	25	21	16	99	60
23 0	67	34	27	57	49	95	51	42	97	03	33	33	87	45	69	31	26	04	21	25	21	16	99	60
28 0	82	34	27	57	49	4625	51	42	50	03	33	33	87	45	40	31	26	04	21	25	21	16	87	75
33 0	82	34	27	57	49	25	51	42	50	03	33	33	87	45	40	31	26	04	21	25	16	16	87	75
38 0	82	62	27	57	90	25	51	42	50	03	33	33	87	45	40	31	26	04	21	25	16	16	87	75
43 0	70	62	27	82	90	25	51	42	50	03	33	33	87	45	40	31	04	04	21	25	16	16	87	75
48 0	70	62	4492	82	90	25	51	42	50	03	33	33	87	45	40	31	04	04	25	21	16	16	87	75
53 0	70	62	92	97	90	25	51	42	50	03	33	60	87	45	40	31	04	04	25	21	16	16	87	75
58 0	70	62	92	97	90	25	51	42	50	03	33	60	87	45	40	31	04	04	25	21	16	16	87	75
Faht...																								
Attached Thermometer...	86·4	86·2	86·2	86·0	86·0	86·3	86·8	86·8	87·5	87·8	88·0	88·3	88·4	88·3	88·3	87·8	87·5	87·5	87·5	87·5	87·0	86·7	86·6	86·6

INDUCTION INCLINOMETER.

m. s.																								
0 20	1798	1793	1792	1791	1811	1808	1800	1787	1769	1757	1757	1768	1782	1785	1790	1787	1784	1790	1790	1790	1791	1797	1799	1800
5 20	98	93	91	91	11	07	1798	85	67	57	57	68	82	85	88	87	84	90	90	90	91	97	99	00
10 20	98	93	91	91	11	06	97	84	65	57	57	68	82	86	88	86	85	90	90	90	91	97	99	00
15 20	98	93	91	92	12	05	96	82	64	57	57	68	80	86	87	85	85	90	91	90	92	97	99	00
20 20	98	93	91	96	12	04	94	81	64	57	57	68	80	88	87	85	85	90	91	90	92	98	1800	00
25 20	98	93	91	99	13	03	93	79	61	56	57	68	81	89	87	85	86	90	91	90	94	98	00	00
30 20	98	92	91	1802	13	02	92	78	61	56	57	68	81	90	84	85	87	90	92	90	94	98	00	01
35 20	98	92	92	02	11	01	91	77	61	56	57	68	81	90	84	84	87	90	92	91	95	98	00	01
40 20	94	92	92	06	11	00	90	75	61	56	57	74	83	90	84	84	88	89	92	92	96	98	00	01
45 20	94	92	92	07	11	00	90	74	60	56	59	78	83	90	84	84	88	90	91	92	97	98	00	01
50 20	92	92	92	09	10	00	89	72	59	56	61	80	84	90	84	84	88	90	90	92	97	98	00	00
55 20	92	92	90	09	09	00	88	70	58	56	64	82	84	90	86	84	89	90	90	91	97	98	00	00
Faht...																								
Attached Thermometer...	85·6	85·5	85·3	85·1	85·0	85·5	86·2	86·6	87·2	87·8	88·0	88·5	88·6	88·6	88·3	87·3	87·2	87·0	87·0	86·8	86·0	86·0	86·0	85·8

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 0·950	In. 0·954	In. 0·962	In. 0·980	In. 0·999	In. 1·018	In. 1·022	In. 1·024	In. 1·017	In. 0·987	In. 0·949	In. 0·929	In. 0·903	In. 0·888	In. 0·900	In. 0·908	In. 0·934	In. 0·949	In. 0·978	In. 0·982	In. 0·982	In. 0·979	In. 0·968	In. 0·956
Attached Thermometer.....	82·0	82·0	81·5	81·0	81·5	82·0	83·0	84·5	86·5	88·0	89·0	90·5	90·0	88·5	88·0	86·5	85·0	84·0	84·0	83·5	83·0	82·0	82·0	82·0
Dry Thermometer (standard)....	81·6	81·5	80·9	80·5	81·0	83·5	86·5	88·7	90·5	92·0	93·9	95·4	94·0	92·8	91·5	88·3	86·5	85·8	84·8	82·8	81·7	81·5	81·6	81·4
Wet Do.	77·0	76·5	76·0	76·0	76·2	78·6	79·8	80·1	78·5	78·6	79·1	79·9	80·4	81·3	81·0	81·0	80·1	80·0	77·7	76·0	75·5	75·7	75·8	76·0
Cloudy sky in 9ths.....	6	6	3	2	4	5	2	2	4	6	6	4	3	4	3	3	0	1	2	2	6	8	8	8
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·01	·00	·08	·00	·00	·00	·00	·03	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction o	214	225	225	225	247	247	259	315	337	349	90	124	124	124	157	157	157	191	191	191	191	214	225	225
REMARKS ON THE WEATHER.	cu, cr, cr-st.....	do.....	cu, cu-st, cr-hz.....	cr, cr-st, hz.....	do.....	do.....	cr-st, hz.....	cu, hz.....	fy-cu, hz	fy-cu, cu-st, hz.....	do	cu, cr-st, hz.....	do.....	fy-cu, cu-st.....	cu, cr, cr-hz.....	do	ny-clear.....	cr-st, cr-hz.....	do.....	do.....	cu, cr-st, cr-hz.....	overcast.....	do.....	do R.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 18TH OCTOBER 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Wednesday, 18th October, 1854.														Thursday, 19th October, 1854.									
		P. M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.																								
	0 0	scd. 1680	scd. 1678	scd. 1674	scd. 1680	scd. 1681	scd. 1680	scd. 1675	scd. 1668	scd. 1650	scd. 1647	scd. 1651	scd. 1660	scd. 1680	scd. 1682	scd. 1680	scd. 1679	scd. 1673	scd. 1673	scd. 1675	scd. 1678	scd. 1677	scd. 1685	scd. 1683	scd. 1683
	5 0	80	78	74	80	82	80	74	67	48	47	52	62	80	82	80	79	73	74	75	78	77	85	84	83
	10 0	80	78	73	81	81	80	72	66	46	46	53	65	80	82	80	79	73	74	76	78	78	85	84	83
	15 0	80	77	73	77	81	80	70	64	43	45	55	67	80	82	80	77	73	75	76	78	79	85	85	82
	20 0	80	76	74	74	80	80	70	60	41	45	57	69	81	82	80	76	73	75	76	78	80	85	85	82
	25 0	79	76	74	73	81	80	70	58	41	45	58	70	81	82	80	74	73	76	77	78	80	84	85	82
	30 0	79	76	75	75	81	80	70	56	41	45	59	70	82	82	80	72	73	76	77	77	80	84	85	82
	35 0	80	75	74	77	80	80	70	54	41	47	60	72	82	82	80	72	73	76	77	77	81	83	85	82
	40 0	80	75	73	79	80	79	70	52	42	48	60	74	82	82	80	72	73	75	77	76	81	83	84	82
	45 0	80	75	75	79	80	79	70	52	43	49	60	77	82	82	80	72	73	75	78	75	82	83	84	82
	50 0	80	75	78	79	81	78	69	50	44	50	60	78	81	80	80	72	73	75	78	75	84	83	84	82
	55 0	80	75	79	79	81	77	69	50	45	50	60	79	81	80	80	72	73	74	78	75	84	83	84	82
HORIZONTAL FORCE.	m. s.																								
	2 0	834	831	825	825	803	793	760	724	756	753	769	798	805	807	794	798	831	837	842	838	824	825	818	810
	7 0	834	831	825	825	801	795	766	730	757	752	770	799	806	807	794	799	831	840	842	836	822	822	818	810
	12 0	831	830	822	821	801	797	772	739	758	750	770	804	807	807	794	800	831	847	842	835	820	820	820	810
	17 0	831	830	822	820	801	804	773	746	759	748	772	808	804	807	793	801	831	845	845	832	820	815	820	810
	22 0	830	830	824	820	800	807	775	756	760	750	774	810	805	807	793	802	832	849	847	831	820	810	820	810
	27 0	832	830	824	820	800	801	740	740	760	754	776	810	805	806	792	803	833	850	848	830	820	810	818	810
	32 0	831	831	825	822	800	800	731	735	760	760	779	810	806	806	790	804	834	850	846	830	820	810	818	810
	37 0	831	831	825	824	800	798	720	730	760	760	780	807	807	806	790	820	834	849	846	830	823	808	817	810
	42 0	830	831	827	815	800	797	715	726	758	760	786	805	808	805	790	823	834	849	846	830	824	808	815	809
	47 0	830	831	824	810	801	795	712	736	755	760	789	806	808	801	792	828	836	849	844	828	824	810	814	809
	52 0	831	831	820	810	801	795	716	742	750	763	789	807	808	799	792	828	838	847	841	827	825	813	814	809
	57 0	831	829	826	808	802	790	720	746	752	766	790	806	809	798	794	830	839	845	840	825	825	815	812	809
	Faht...																								
	Attached Thermometer...	82°·7	82°·8	82°·8	82°·8	82°·7	82°·4	82°·3	82°·0	81°·9	81°·9	81°·9	82°·0	82°·0	82°·0	82°·0	82°·0	82°·1	82°·1	82°·2	82°·2	82°·1	82°·0	81°·9	81°·9
VERTICAL FORCE.	m. s.																								
	3 0	scd. 4478	scd. 4472	scd. 4530	scd. 4503	scd. 4524	scd. 4580	scd. 4537	scd. 4550	scd. 4490	scd. 4425	scd. 4418	scd. 4460	scd. 4474	scd. 4474	scd. 4523	scd. 4506	scd. 4521	scd. 4525	scd. 4505	scd. 4510	scd. 4547	scd. 4551	scd. 4530	scd. 4517
	8 0	78	72	30	03	24	80	37	50	90	25	18	60	74	74	23	06	21	25	05	10	47	51	30	17
	13 0	78	72	30	03	24	80	37	50	90	25	18	60	74	74	23	06	21	25	05	10	47	51	30	17
	18 0	78	85	30	4490	24	80	37	50	90	25	18	60	74	74	23	06	21	36	4485	10	47	51	30	17
	23 0	62	85	17	90	20	80	37	50	50	25	18	60	74	74	23	06	21	36	85	10	47	51	30	17
	28 0	62	85	17	90	20	80	37	50	50	25	18	60	74	74	23	06	21	36	85	10	47	51	30	17
	33 0	62	99	17	82	20	80	37	50	50	25	18	60	74	74	23	06	21	36	85	35	47	51	30	17
	38 0	62	99	02	82	20	80	59	50	50	25	18	60	74	74	23	06	21	36	85	35	47	51	30	17
	43 0	62	4515	02	82	20	80	59	50	50	25	18	60	74	4523	23	06	21	36	85	35	47	51	30	17
	48 0	54	15	02	97	20	80	59	50	50	25	60	60	74	23	23	06	21	36	85	35	47	51	30	17
	53 0	54	15	02	97	20	80	59	50	50	25	60	60	74	23	23	06	21	36	85	35	47	51	30	17
	58 0	54	15	02	97	20	80	59	50	50	18	60	74	74	23	23	06	21	36	85	35	47	51	30	17
	Faht...																								
	Attached Thermometer...	82°·5	82°·3	82°·0	82°·0	82°·0	82°·0	81°·8	81°·5	81°·4	81°·5	81°·6	81°·9	82°·0	81°·9	81°·7	81°·6	81°·6	81°·6	81°·7	81°·7	81°·7	81°·5	81°·4	81°·1
INDUCTION INCLINO-METER.	m. s.																								
	0 20	scd. 1800	scd. 1798	scd. 1794	scd. 1799	scd. 1800	scd. 1801	scd. 1793	scd. 1788	scd. 1773	scd. 1770	scd. 1777	scd. 1781	scd. 1799	scd. 1800	scd. 1799	scd. 1796	scd. 1793	scd. 1793	scd. 1794	scd. 1796	scd. 1796	scd. 1800	scd. 1800	scd. 1800
	5 20	00	98	94	1800	01	01	92	87	71	70	77	82	1800	00	99	96	93	94	94	96	96	00	00	00
	10 20	00	98	93	00	00	01	92	87	70	70	78	84	00	00	99	95	93	94	95	96	96	00	02	00
	15 20	00	97	93	1798	01	01	91	86	69	70	79	86	00	00	99	94	93	95	95	96	96	00	02	00
	20 20	00	97	93	96	00	01	90	83	69	70	80	88	00	00	99	93	93	95	96	95	97	00	02	00
	25 20	00	97	93	95	01	01	90	80	69	70	80	89	00	00	99	93	93	95	96	95	97	00	02	00
	30 20	1799	97	94	95	01	00	90	79	69	70	80	91	00	00	99	92	93	96	96	95	97	00	02	00
	35 20	99	96	93	95	01	1799	90	78	69	70	81	92	00	00	99	92	93	97	95	95	97	00	02	00
	40 20	98	96	92	97	01	99	89	77	69	71	81	94	00	00	99	91	93	96	95	95	98	00	02	1799
	45 20	98	95	95	97	01	98	89	77	70	72	82	96	00	00	99	91	93	95	95	95	99	00	02	99
	50 20	99	94	98	98	02	97	89	76	70	74	82	97	00	00	99	92	93	94	96	94	99	00	02	99
	55 20	99	94	99	98	02	96	89	74	70	75	82	98	1799	1799	99	92	93	94	96	94	99	00	02	99
	Faht...																								
	Attached Thermometer...	81°·8	81°·2	81°·0	81°·2	81°·1	81°·1	81°·0	80°·3	80°·3	80°·5	81°·0	81°·2	81°·2	81°·3	81°·2	81°·1	81°·2	81°·1	81°·2	81°·1	81°·0	81°·0	80°·8	80°·2

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.		In. 0·955	In. 0·950	In. 0·953	In. 0·980	In. 1·004	In. 1·016	In. 1·034	In. 1·038	In. 1·038	In. 1·008	In. 0·980	In. 0·946	In. 0·930	In. 0·916	In. 0·906	In. 0·920	In. 0·947	In. 0·976	In. 0·995	In. 0·999	In. 0·984	In. 0·968	In. 0·950	In. 0·938
Attached Thermometer.....		76°·0	76°·0	75°·5	75°·5	76°·0	76°·0	76°·0	76°·0	76°·5	77°·0	77°·0	77°·0	78°·0	78°·5	78°·0	78°·0	78°·0	78°·0	77°·5	77°·0	76°·5	76°·5	75°·5	75°·5
Dry Thermometer (standard)...		76·3	75·9	75·6	75·9	76·0	76·4	76·7	76·7	77·7	78·0	78·5	79·6	81·3	80·6	80·4	79·4	78·6	78·3	78·0	77·7	77·2	76·8	76·0	75·6
Wet Do.		74·0	74·0	73·6	74·0	74·0	74·8	74·6	74·8	76·1	76·0	76·0	76·5	77·0	77·0	77·0	76·5	75·4	75·0	74·8	74·0	73·8	73·6	73·9	73·5
Cloudy sky In 8ths,.....		7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	6	4	3	2	5	0	0	0
WIND. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
WIND. Direction °		67	45	45	45	45	00	00	00	00	00	00	349	349	11	00	00	11	11	00	00	00	349	349	00
REMARKS ON THE WEATHER.		ny-overcast.....	overcast, sh-lg. NE.	do., lt-R.....	do., R.....	do., R.....	do., lt-R.....	do.....	do., lt-R.....	do., lt-R.....	do., lt-R.....	do., lt-R.....	do	do	do	do	do	fy-cu, hz.....	cu, cr-st, hz, lg. S....	cu, cr-hz, lg. S.....	cu-hor.....	cu, cu-st, hz, sh-lg.N.	ny-clear.....	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH NOVEMBER 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 24th November, 1854.														Saturday, 25th November, 1854.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1690	1690	1691	1689	1676	1679	1688	1690	1689	1690	1706	1716	1710	1705	1699	1693	1690	1689	1688	1687	1686	1690	1690	1688
5 0	90	90	91	90	75	79	89	90	89	92	08	16	10	05	99	93	90	89	88	87	86	90	90	88
10 0	90	90	91	90	75	80	90	90	88	94	08	16	10	04	99	92	90	89	88	87	86	90	90	88
15 0	89	90	91	89	75	80	90	90	88	96	10	16	10	03	1700	92	90	89	88	87	86	90	90	88
20 0	89	90	92	89	72	81	90	90	88	96	10	16	10	03	00	92	90	89	88	87	86	90	90	88
25 0	89	90	92	87	71	82	90	90	88	98	10	14	10	01	00	92	90	89	87	87	87	90	90	88
30 0	90	88	91	85	72	83	90	90	88	98	12	14	10	01	00	91	90	89	87	87	88	90	90	88
35 0	90	88	90	82	72	84	90	90	88	1700	14	14	09	00	1698	91	89	89	87	87	89	90	90	87
40 0	91	88	90	80	74	85	90	90	88	00	14	14	09	1699	98	91	89	89	87	87	89	90	90	87
45 0	91	89	90	79	75	86	90	90	88	02	14	12	08	98	97	91	89	89	87	87	89	90	90	87
50 0	91	90	90	79	77	87	90	90	90	02	14	12	08	99	95	91	89	89	87	87	90	90	90	87
55 0	91	90	90	79	78	88	90	90	90	04	14	12	07	99	95	90	89	89	87	87	90	90	90	87

HORIZONTAL FORCE.

m. s.																								
2 0	744	750	748	751	740	718	690	664	650	648	650	660	693	710	730	750	751	760	762	767	768	773	775	780
7 0	744	750	747	751	737	717	688	664	648	648	653	660	695	710	730	750	751	760	762	768	768	773	775	780
12 0	742	750	747	749	736	715	684	663	647	648	653	660	695	710	730	752	751	760	762	768	768	774	775	780
17 0	745	754	749	751	732	713	681	662	647	650	655	660	697	712	734	750	751	760	762	768	768	774	776	780
22 0	747	754	752	751	730	711	679	659	648	650	655	665	700	712	738	750	751	760	761	768	768	775	776	781
27 0	749	752	750	750	730	709	876	657	648	650	655	665	700	715	740	750	752	760	761	768	769	775	776	781
32 0	746	749	750	750	730	706	674	655	648	650	655	668	700	716	740	751	755	761	761	768	770	774	777	781
37 0	746	745	750	748	727	704	673	651	648	650	657	670	700	718	742	752	756	762	761	768	771	774	777	780
42 0	742	745	750	748	727	701	671	650	650	650	657	678	700	720	742	752	756	762	761	768	772	775	778	780
47 0	745	742	750	747	724	701	670	650	650	650	658	680	704	720	747	752	756	762	763	768	772	776	778	781
52 0	750	742	747	747	722	700	668	650	649	650	658	686	705	725	747	751	758	762	764	768	771	776	779	781
57 0	750	742	747	749	720	700	665	651	649	650	658	690	707	728	750	751	757	772	764	768	772	776	779	782
Faht...																								
Attached Thermometer...	80°3	80°6	80°8	80°9	80°9	80°6	80°6	80°8	80°9	81°0	81°3	81°5	81°5	81°4	81°2	81°2	81°3	81°3	81°3	81°3	81°2	81°2	81°0	81°0

VERTICAL FORCE.

m. s.																								
3 0	4524	4506	4459	4503	4459	4452	4488	4575	4622	4660	4677	4710	4669	4620	4544	4503	4475	4485	4485	4463	4463	4468	4468	4471
8 0	24	06	59	03	59	52	88	75	22	60	77	10	69	20	44	03	75	85	85	63	63	68	68	71
13 0	24	06	59	03	59	52	88	75	22	60	77	10	69	20	44	03	75	85	85	65	63	68	68	71
18 0	17	06	59	4487	59	52	88	75	22	60	77	10	50	20	44	03	75	85	85	63	63	68	68	71
23 0	17	4627	72	87	32	52	88	75	22	75	77	10	50	20	44	03	75	85	85	63	63	68	68	71
28 0	17	27	72	87	32	52	88	75	22	75	77	10	50	20	44	03	75	85	60	63	63	68	68	71
33 0	17	27	72	87	32	52	88	75	22	75	77	26	50	20	44	03	75	85	60	63	63	68	68	71
38 0	17	27	72	70	32	52	88	75	22	75	77	26	50	20	44	03	75	85	60	63	63	68	68	71
43 0	17	00	72	70	36	52	4525	4625	22	75	77	26	50	07	44	03	75	85	60	63	68	68	68	71
48 0	17	00	72	70	36	52	25	25	22	75	77	80	50	07	44	03	75	85	60	63	68	68	68	71
53 0	17	4506	85	70	36	52	25	25	40	75	77	80	50	07	44	03	75	85	60	63	68	68	68	71
58 0	17	00	85	70	36	52	25	25	40	75	77	80	50	07	44	03	75	85	60	63	68	68	68	71
Faht...																								
Attached Thermometer...	80°0	80°0	80°1	80°1	80°2	80°5	80°7	81°1	81°5	82°0	82°3	82°5	82°0	81°8	81°5	81°2	81°0	81°0	81°0	80°9	80°8	80°7	80°7	80°7

INDUCTION INCLINOMETER.

m. s.																								
0 20	1810	1810	1810	1807	1797	1799	1807	1809	1808	1807	1820	1828	1823	1818	1816	1813	1809	1809	1808	1807	1807	1809	1809	1808
5 20	10	10	10	09	97	1800	08	09	07	09	22	28	22	18	16	12	09	09	08	07	07	09	09	08
10 20	10	10	10	09	96	00	08	09	06	10	22	28	22	18	16	12	09	09	08	07	07	09	09	08
15 20	10	10	10	07	96	00	08	09	06	14	25	28	22	17	16	12	09	09	08	07	07	09	09	08
20 20	10	10	11	07	93	01	08	09	05	15	25	28	22	17	16	11	09	09	07	07	07	08	08	08
25 20	10	10	11	04	92	01	09	09	04	18	25	27	22	17	16	11	09	09	07	07	08	08	08	08
30 20	10	09	11	02	92	02	09	09	04	18	25	27	22	17	16	11	09	09	07	07	10	09	08	08
35 20	10	09	11	00	92	03	09	09	04	18	28	27	22	17	15	10	09	09	07	07	10	10	07	08
40 20	10	10	10	00	95	04	09	09	02	18	28	25	22	17	15	10	09	09	07	07	11	10	07	08
45 20	10	10	10	00	97	05	09	09	02	20	28	25	21	17	14	10	09	09	07	07	10	10	07	08
50 20	11	11	10	00	98	06	09	09	03	20	28	25	20	17	14	10	09	09	07	07	09	09	08	08
55 20	11	11	10	00	99	07	09	08	06	20	28	25	19	16	14	10	09	09	07	07	09	09	08	08
Faht...																								
Attached Thermometer...	79°6	79°7	79°5	79°7	79°7	79°6	80°0	80°2	80°7	81°1	81°3	81°6	81°0	80°7	80°6	80°5	80°5	80°5	80°3	80°2	80°2	80°0	80°0	80°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0 +	In. 1·060	In. 1·057	In. 1·072	In. 1·084	In. 1·123	In. 1·140	In. 1·168	In. 1·160	In. 1·180	In. 1·128	In. 1·186	In. 1·070	In. 1·056	In. 1·064	In. 1·074	In. 1·087	In. 1·106	In. 1·132	In. 1·140	In. 1·147	In. 1·139	In. 1·126	In. 1·098	In. 1·088
Attached Thermometer	77·0	77°5	77°0	77°0	77°5	78°0	78°5	79°0	79°0	79°5	80°0	80°0	79°0	79°0	79°0	78°5	78°0	78°0	78°0	78°0	78°0	78°0	78°0	78°0
Dry Thermometer (standard)	76·5	76·6	77·0	76·7	77·3	79·5	81·3	82·7	83·2	83·7	84·2	83·9	81·6	81·7	80·1	79·3	79·0	78·6	78·7	78·5	78·4	78·6	78·1	77·9
Wet Do.	74·7	74·0	74 5	74·5	75·0	76·6	77·2	77·5	78·1	77·8	78·5	78·4	76·2	77·2	76·4	76·0	76·0	76·0	76·4	76·4	76·2	76·0	76·0	76·0
Cloudy sky in 8ths	8	0	6	7	7	7	7	6	6	6	6	4	6	6	7	7	3	3	4	5	5	5	7	7
Wind. Force lbs	·01	·22	·00	·00	·00	·00	·00	·02	·02	·00	·00	·20	·01	·00	·00	·00	·00	·00	·00	·00	·00	·01	·00	·03
Wind. Direction °	90	101	112	112	90	90	101	79	90	90	79	101	56	79	79	56	56	56	56	56	56	56	79	112
REMARKS ON THE WEATHER.	overcast	ny-clear	cu, cr-hz, nim	ny-overcast	do	do	do	cr-hz, fy-cu, st.	do	fy-cu, cu-st, nim	do	cu, cr, cr-hz	fy-cu, cu-st, nim, lt-R	do r-b-E	cu, cr-hz, nim	do	cu, cr-hz	cu, cr-cu, cr-st, hz	hy-cu, cr, hz	cu-st, cr-st, hz	cu, cr-st, d-hz	do, R	ny-overcast, R	ny-overcast

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH DECEMBER 1854, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		WEDNESDAY, 20TH DECEMBER, 1854.													THURSDAY, 21ST DECEMBER, 1854.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 0	1670	1665	1662	1665	1661	1662	1667	1669	1658	1648	1656	1668	1677	1682	1680	1670	1675	1670	1668	1668	1667	1670	1680	1674
	5 0	70	66	63	67	60	62	67	67	56	48	56	68	77	82	78	70	75	70	68	68	67	70	80	72
	10 0	70	66	63	67	60	62	68	66	54	48	56	68	78	82	78	70	73	69	68	68	67	70	81	71
	15 0	69	66	63	68	60	62	68	65	52	48	58	68	78	84	76	70	73	68	68	68	68	71	81	70
	20 0	68	66	61	69	61	62	68	64	50	48	59	69	78	84	73	69	70	68	68	69	68	71	82	69
	25 0	68	65	60	69	59	63	68	62	50	49	59	71	78	85	73	69	70	68	68	69	68	72	84	69
	30 0	67	63	60	67	56	63	68	62	49	49	60	72	79	85	72	69	70	68	68	69	68	73	85	68
	35 0	67	63	62	67	56	62	68	62	48	50	61	73	79	85	72	70	70	68	68	69	67	74	82	68
	40 0	66	63	63	64	59	63	68	61	47	50	62	73	79	83	72	72	70	68	68	68	67	76	80	68
	45 0	66	62	61	62	60	62	69	60	46	51	64	73	80	83	70	72	70	68	68	66	67	77	79	68
	50 0	65	62	60	63	60	62	69	60	46	52	66	74	80	82	70	72	70	68	68	67	67	78	77	67
	55 0	65	62	60	62	60	62	69	60	46	54	67	75	81	82	70	73	70	68	68	67	67	78	76	67
HORIZONTAL FORCE.	m. s.																								
	2 0	664	662	660	653	625	572	562	538	534	549	576	628	612	630	657	658	678	672	677	688	672	690	700	688
	7 0	662	660	662	653	620	572	562	537	534	550	576	628	612	630	658	658	676	672	678	689	673	694	700	687
	12 0	662	663	665	650	615	572	558	536	534	552	576	628	612	632	660	658	676	674	679	686	675	694	700	685
	17 0	665	667	667	650	612	570	550	534	534	553	581	628	612	633	660	658	674	676	679	682	676	697	700	685
	22 0	665	667	663	656	610	570	546	532	536	555	584	628	613	639	663	660	674	675	680	679	677	699	700	683
	27 0	663	665	662	652	588	569	542	530	539	556	588	628	615	640	663	660	674	676	680	676	677	700	700	683
	32 0	663	664	660	650	588	569	550	530	547	558	589	623	615	646	663	666	672	674	682	673	678	700	699	683
	37 0	660	662	662	650	587	567	547	530	546	560	590	620	618	653	663	668	670	672	685	670	678	703	697	683
	42 0	660	662	665	647	586	567	545	531	545	562	592	616	618	660	663	675	672	670	688	672	679	703	696	680
	47 0	662	660	660	647	581	568	542	531	543	566	594	610	620	678	660	678	672	671	688	673	679	702	693	680
	52 0	662	657	657	643	580	569	540	531	544	571	610	611	623	668	660	678	671	672	688	672	684	702	690	680
	57 0	662	657	657	640	577	569	539	532	544	576	628	612	628	660	660	678	671	674	688	672	687	700	690	680
	Faht...																								
	Attached Thermometer...	78°2	78°5	78°7	78°7	78°3	78°0	77°9	77°9	78°1	78°3	78°5	78°9	78°9	79°0	79°0	79°0	79°0	79°2	79°1	79°0	79°0	79°1	79°1	79°1
VERTICAL FORCE.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	3 0	5255	5205	5230	5190	5212	5219	5261	5273	5293	5254	5249	5235	5215	5262	5290	5226	5227	5227	5236	5236	5218	5247	5260	5232
	8 0	55	05	30	90	12	19	61	70	93	54	49	35	15	62	90	26	27	27	36	36	18	47	60	32
	13 0	55	05	30	90	12	19	61	70	93	54	49	35	15	62	90	26	27	27	36	36	18	47	60	32
	18 0	55	05	30	90	12	38	61	70	93	54	49	35	15	62	67	26	27	27	36	36	18	47	60	32
	23 0	55	5172	67	52	00	38	61	70	93	54	49	35	15	62	67	26	27	27	36	36	18	47	60	32
	28 0	55	72	67	52	5198	46	61	70	93	54	49	35	26	62	67	26	27	27	36	36	18	47	60	32
	33 0	72	72	67	52	96	46	70	70	77	54	49	35	26	62	67	26	27	27	36	36	18	47	60	32
	38 0	72	72	67	52	96	53	70	70	77	54	49	35	42	62	67	26	27	27	36	36	18	47	60	32
	43 0	72	72	67	30	5208	53	70	70	77	54	49	35	42	62	67	54	27	27	36	36	18	47	60	32
	48 0	72	72	40	30	08	57	79	70	77	54	49	35	42	62	50	54	27	36	36	36	18	47	60	32
	53 0	72	72	40	30	08	57	79	70	77	54	49	35	42	90	50	54	27	36	36	18	18	47	60	32
	58 0	72	72	40	30	19	57	79	70	77	54	49	35	42	90	50	54	27	36	36	18	18	47	60	32
	Faht...																								
	Attached Thermometer...	78°3	78°0	78°0	77°8	77°5	77°7	78°5	78°6	79°0	79°4	79°4	79°9	79°8	80°0	79°8	79°4	79°1	79°0	78°8	78°8	78°7	78°6	78°4	78°2
INDUCTION INCLINO-METER.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 20	1790	1787	1786	1790	1787	1783	1790	1792	1788	1779	1787	1799	1807	1815	1810	1800	1802	1799	1799	1797	1796	1798	1800	1798
	5 20	90	89	88	91	87	87	91	92	87	79	87	99	07	15	08	00	02	99	99	97	96	98	00	98
	10 20	90	89	89	91	87	87	90	92	86	79	87	99	08	15	06	00	01	98	99	97	96	99	00	97
	15 20	88	89	90	91	88	87	90	92	85	79	87	99	08	15	06	00	01	98	99	97	96	99	00	97
	20 20	88	89	87	91	88	87	90	92	84	79	87	1800	08	13	05	1799	00	98	99	96	97	98	00	96
	25 20	88	89	86	91	90	88	90	92	83	80	88	01	10	13	05	99	00	98	99	96	97	98	01	95
	30 20	88	87	85	90	90	88	90	92	81	80	89	02	10	14	03	99	00	98	99	96	97	98	01	95
	35 20	87	85	87	89	90	88	90	91	80	81	90	02	13	14	02	1800	00	98	99	96	97	98	00	95
	40 20	87	85	89	87	91	89	90	91	79	82	92	03	13	12	02	02	00	98	99	96	97	98	00	95
	45 20	87	85	87	87	90	89	90	90	78	83	94	03	13	12	02	02	00	98	98	95	97	98	00	95
	50 20	85	83	87	87	83	89	91	90	78	85	96	04	13	10	01	02	00	98	98	95	98	98	1799	95
	55 20	85	83	86	86	83	89	91	90	78	87	98	05	13	10	01	02	00	99	97	96	98	99	99	95
	Faht...																								
	Attached Thermometer...	77°5	77°2	77°2	77°0	76°1	76°3	76°8	77°1	77°9	78°3	78°4	79°0	78°8	79°0	79°0	78°0	78°0	78°0	78°0	78°0	78°0	77°7	77°5	77°2

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+		In. 1·072	In. 1·070	In. 1·070	In. 1·075	In. 1·090	In. 1·108	In. 1·128	In. 1·138	In. 1·132	In. 1·120	In. 1·086	In. 1·065	In. 1·050	In. 1·046	In. 1·058	In. 1·064	In. 1·080	In. 1·104	In. 1·116	In. 1·118	In. 1·110	In. 1·091	In. 1·083	In. 1·070
Attached Thermometer.....		74°5	74°0	74°0	73°0	71°5	71°5	73°0	74°5	76°0	77°0	77°0	77°5	78°0	78°0	78°0	77°0	77°0	76°0	76°0	76°0	76°0	75°0	75°0	75°0
Dry Thermometer (standard)....		70·6	70·2	69·6	69·3	69·3	71·2	74·9	77·6	79·1	79·9	80·4	80·5	79·7	80·0	79·1	77·0	76·0	76·4	77·0	77·0	76·8	76·2	75·5	74·9
Wet Do.		67·0	66·5	66·2	66·0	66·4	68·2	70·3	69·9	70·1	70·3	70·0	70·0	69·8	70·2	71·0	69·8	68·8	69·8	69·8	69·6	69·5	68·7	69·2	69·7
Cloudy sky in 8ths.....		0	0	0	2	2	2	3	3	3	4	4	4	3	3	2	2	1	4	6	7	8	8	2	5
WIND. Force lbs.....		·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	00	·00	·00	·00	·00	·00	·00	·00	·00	·01	·00	·00	·00	·00
WIND. Direction •		56	22	11	11	00	00	00	56	56	56	45	56	56	56	56	56	56	56	56	56	45	45	45	45
REMARKS ON THE WEATHER.		clear. ..... •	do	do., D.....	fy-cu, D.....	do	do ..... •	cu, cu-st, cr-st.....	sc-cu, cr-hz.....	do	do., cu-st...	fy-cu, hz.	fy-cu, cu-st, hz.....	cu-st, cr-st, hz.....	do	sc-cu.....	do	cu-hor.....	cu, cu-st, cr-hz.....	do	cu, cr-cu, d-hz.....	overcast.....	do	cu, cr-hz...	do .....

LIBRARY OF THE UNIVERSITY OF CALIFORNIA.

MADRAS, 1855.

MAGNETICAL OBSERVATIONS.

$a\left(1+\frac{H}{F}\right) = 4''.030 \times 1.00060 = 4''.0324$ $\rho = 4' 8''.2 + 7' 6''.0 = 0° 48' 14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JANUARY 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		Arc.
										0·4 *		0·6 *														
1	1683	1680	1678	1678	1677	1673	1673	1670	1668	1667	1665	1667	1668	1660	1660	1664	1665	1672	1680	1685	1687	1687	1680	1675	1673	1° 0′ 4″
2	679	682	680	680	680	684	680	679	678	674	670	667	662	660	658	652	660	677	676	670	670	681	686	690	674	0 8
3	690	684	679	680	675	680	680	675	670	669	667	667	665	660	666	664	670	674	671	670	660	663	662	678	672	0 0
4	690	680	678	678	677	675	674	677	675	673	670	671	670	673	670	662	670	682	684	682	694	668	662	672	675	0 12
5	684	686	684	690	680	680	680	680	678	675	672	671	668	669	662	660	672	678	679	676	686	694	692	700	679	0 28
6	700	697	690	686	683	684	682	681	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
7	—	—	—	—	—	—	—	—	—	679	677	676	674	672	668	660	672	678	686	678	668	681	679	685	680	0 32
8	690	690	687	687	686	682	680	680	680	678	675	673	670	670	670	673	682	688	695	690	682	670	675	688	681	0 36
9	698	692	696	697	692	680	680	680	680	678	676	674	670	667	660	664	679	693	698	679	670	686	687	690	682	0 40
10	690	684	682	682	682	680	680	680	680	678	676	674	670	667	660	660	670	679	676	659	660	659	663	670	673	0 4
11	675	680	682	684	683	682	682	679	678	674	670	667	662	669	663	664	676	704	711	700	699	702	690	690	682	0 40
12	697	698	698	695	691	682	680	680	682	681	680	677	672	667	662	667	671	680	671	673	668	668	660	656	677	0 20
13	680	679	681	682	680	680	683	684	684	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
14	—	—	—	—	—	—	—	—	—	680	675	674	672	668	667	666	681	691	679	672	660	651	660	670	675	0 12
15	678	677	681	680	679	681	681	681	679	677	675	673	670	660	660	664	678	692	698	690	680	680	679	677	678	0 24
16	670	678	676	679	680	677	675	674	675	673	670	667	663	661	655	658	670	680	682	682	675	657	649	658	670	0 59 52
17	668	670	673	675	675	679	679	677	672	673	674	671	667	669	650	650	660	672	679	688	692	690	682	681	674	1 0 8
18	683	681	680	688	678	680	683	687	678	679	679	680	680	674	660	658	664	682	682	690	697	680	672	676	679	0 28
19	676	680	680	680	680	680	682	682	682	680	678	675	670	665	655	660	670	688	694	680	672	678	674	670	676	0 16
20	677	686	689	683	682	680	680	682	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	—	—	—	—	—	—	—	—	—	678	675	673	670	663	657	652	668	689	699	692	682	688	692	690	679	0 28
22	695	692	691	692	691	690	688	683	682	677	672	668	662	660	658	650	660	670	672	672	670	670	672	679	676	0 16
23	680	680	684	682	681	678	676	674	670	672	673	672	670	663	665	668	672	672	666	653	650	656	661	667	670	0 59 52
24	674	675	678	679	678	677	676	677	670	669	668	666	663	661	662	660	671	699	700	692	696	693	674	674	676	1 0 16
25	680	684	682	688	689	682	680	680	675	673	670	669	666	660	650	652	662	672	672	660	660	663	664	670	671	0 59 56
26	675	680	681	679	677	674	677	674	670	670	670	667	662	660	662	660	665	670	665	659	669	680	672	668	670	59 52
27	670	671	682	678	680	676	680	679	673	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
28	—	—	—	—	—	—	—	—	—	669	665	667	667	655	650	650	664	682	689	686	686	698	678	667	673	1 0 4
29	670	680	676	676	670	671	670	670	670	668	665	663	660	660	652	653	665	680	680	678	680	670	660	654	669	0 59 48
30	660	663	670	666	662	660	660	662	660	659	658	657	655	650	640	643	659	670	680	672	670	667	663	664	661	59 16
31	660	660	673	678	671	672	676	675	670	665	660	656	650	648	650	650	659	670	660	650	650	654	658	657	661	59 16
Monthly Means..	1680	1681	1682	1682	1680	1678	1678	1678	1676	1674	1671	1670	1667	1663	1659	1659	1669	1681	1682	1677	1675	1675	1672	1675	1674	
Declination.....	60° 32″	60° 36″	60° 40″	60° 40″	60° 32″	60° 24″	60° 24″	60° 24″	60° 16″	60° 8″	59° 56″	59° 52″	59° 40″	59° 24″	59° 7″	59° 7″	59° 48″	60° 36″	60° 40″	60° 20″	60° 12″	60° 12″	60° 0″	60° 12″	.....	1° 0′ 8″
Mean Hourly Variations from Monthly Mean.	24″	28″	32″	32″	24″	16″	16″	16″	8″	0″	−12″	−16″	−28″	−44″	−61″	−61″	−20″	28″	32″	12″	4″	4″	−8″	4″		

FEBRUARY 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		Arc.
										0·0 *		−0·1 *														
1	1660	1664	1666	1669	1664	1670	1670	1672	1662	1658	1655	1652	1650	1647	1640	1648	1663	1680	1672	1670	1660	1660	1663	1667	1662	0° 59′ 20″
2	665	670	664	665	662	664	662	661	659	659	659	654	650	652	652	642	657	670	670	655	659	667	662	654	660	59 12
3	661	662	660	658	658	664	664	664	659	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	662	665	662	660	660	663	650	653	659	655	660	671	679	680	672	663	59 24
5	667	670	673	672	670	663	665	665	668	665	662	661	660	663	653	650	660	672	674	672	680	680	671	670	667	59 40
6	670	676	680	672	670	669	667	667	668	669	670	669	668	662	660	660	662	672	680	673	676	676	673	680	670	59 52
7	680	677	673	671	670	679	668	670	669	668	667	666	665	660	660	652	660	680	692	675	650	653	660	665	668	59 44
8	665	667	664	661	660	661	662	670	678	679	680	677	675	670	662	663	665	674	672	670	670	679	666	660	669	59 48
9	663	668	663	670	670	672	670	668	660	661	662	658	654	650	659	660	670	675	673	657	650	650	645	650	662	59 20
10	660	655	648	652	652	652	654	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	649	648	646	645	644	640	640	642	650	652	650	645	652	647	638	648	58 23
12	637	638	638	640	643	640	641	643	642	644	645	643	642	650	628	639	659	679	660	650	653	655	650	650	646	58 15
13	650	647	642	643	643	641	640	640	640	640	640	635	630	632	626	630	643	657	650	640	623	616	622	628	637	57 39
14	635	632	637	640	642	644	644	645	642	639	636	635	635	630	630	632	640	650	642	623	627	633	629	630	636	57 35
15	630	633	640	641	644	642	642	642	648	649	650	648	646	640	630	642	660	677	668	647	648	640	638	640	645	58 11
16	640	641	640	643	643	645	646	645	643	644	645	642	640	640	628	630	642	657	660	640	637	641	638	633	642	57 59
17	638	638	644	649	647	648	647	650	659	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	659	660	657	654	650	642	640	650	652	658	662	670	681	674	670	654	58 47
19	674	676	671	670	671	670	668	665	662	666	670	666	662	660	660	660	670	675	678	670	660	654	658	669	667	59 40
20	680	674	668	670	670	666	667	665	672	666	660	660	660	660	663	673	680	685	677	664	661	667	669	677	669	59 48
21	680	672	669	664	664	670	662	662	664	654	643	651	660	652	659	661	670	678	678	680	670	655	650	661	664	59 28
22	662	663	665	664	664	664	666	666	668	665	662	661	660	658	654	659	662	668	672	670	666	655	650	652	662	59 20
23	662	670	672	672	671	670	663	665	668	664	660	660	660	655	659	665	674	680	678	670	660	652	661	668	666	59 36
24	679	674	672	675	677	675	674	670	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	670	670	666	662	665	670	680	680	689	680	670	665	666	670	672	673	1 0 4
26	675	673	671	670	673	670	672	672	674	672	670	668	667	664	667	679	690	690	686	678	668	661	663	670	673	0 4
27	670	663	679	672	672	672	670	672	673	670	669	668	664	660	657	657	665	682	690	690	680	682	680	680	673	0 4
28	673	676	673	680	683	680	670	671	665	663	660	657	655	660	659	662	669	670	663	660	653	660	660	677	667	0 59 40
Monthly Means...	1662	1662	1661	1662	1662	1662	1661	1661	1661	1660	1659	1657	1655	1653	1651	1653	1663	1672	1670	1662	1659	1659	1657	1660	1660	
Declination.....	59° 20″	59° 20″	59° 16″	59° 20″	59° 20″	59° 20″	59° 16″	59° 16″	59° 16″	59° 12″	59° 7″	58° 59″	58° 51″	58° 43″	58° 35″	58° 43″	59° 24″	60° 0″	59° 52″	59° 20″	59° 7″	59° 7″	58° 59″	59° 12″	.....	0° 59′ 12″
Mean Hourly Variations from Monthly Mean.	8″	8″	4″	8″	8″	8″	4″	4″	4″	0″	−5″	−13″	−21″	−29″	−37″	−29″	12″	48″	40″	8″	−5″	−5″	−13″	0″		

N. B.—The numbers in the Table are tenths of scale divisions, and increasing numbers denote a movement of the North end of the Magnet towards the East.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4'.030 \times 1.00060 = 4'.0324$ $\rho = 41' 8''.2 + 7' 6''.0 = 0° 48' 14''.2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

MARCH 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
										0·8 *		0·0 *														*Arc.*
1	1670	1669	1672	1670	1670	1672	1667	1665	1662	1662	1660	1655	1650	1650	1649	1654	1668	1670	1670	1673	1670	1660	1660	1658	1664	0° 59′ 28″
2	660	660	660	661	661	662	662	662	660	661	660	658	657	655	650	654	662	669	665	670	668	661	672	679	662	59 20
3	677	672	669	662	662	668	667	666	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	668	675	675	675	660	676	682	690	697	692	694	684	682	682	680	676	1 0 16
5	671	667	669	665	664	665	665	664	667	669	670	670	669	670	670	679	682	678	662	654	655	656	662	669	667	0 59 40
6	671	672	671	671	671	668	670	670	671	674	675	671	668	668	660	672	679	673	673	670	660	652	648	657	668	59 44
7	660	660	660	661	663	659	660	661	662	664	665	663	660	660	665	658	660	658	660	650	650	654	670	671	661	59 16
8	669	663	661	661	661	661	661	662	665	668	670	665	661	660	660	661	667	666	650	640	630	630	638	650	658	59 3
9	650	650	644	648	651	660	660	656	660	665	668	669	669	670	666	667	660	660	652	650	650	650	650	660	658	59 3
10	658	659	658	658	660	660	660	662	663	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	665	666	665	665	665	660	668	670	672	663	661	653	650	663	669	662	59 20
12	659	652	653	665	667	671	670	678	680	681	680	678	675	687	664	675	672	678	665	662	657	652	658	667	669	59 48
13	670	670	670	670	669	668	668	670	670	669	667	667	668	670	679	674	679	675	665	655	640	640	658	667	667	59 40
14	666	667	666	661	661	663	661	662	662	664	665	667	668	670	679	680	670	659	640	630	625	630	642	660	659	59 7
15	669	663	662	662	668	663	660	660	660	662	662	660	659	662	670	676	675	670	650	636	634	647	651	668	660	59 12
16	669	658	653	650	650	651	652	652	655	653	650	653	655	659	668	680	685	683	660	642	642	639	645	660	657	58 59
17	662	658	653	652	650	649	653	652	651	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	655	658	654	650	650	652	660	660	660	670	669	665	662	666	661	657	58 59
19	660	660	662	665	662	655	661	665	660	656	650	650	650	642	650	658	672	670	660	654	650	661	668	671	659	59 7
20	665	660	657	653	656	665	667	669	656	656	654	654	654	655	660	664	670	665	657	642	651	659	669	660	659	59 7
21	654	655	656	658	659	660	660	661	663	665	666	664	663	658	673	673	670	678	677	656	644	640	657	662	661	59 16
22	661	660	657	659	658	658	659	662	661	662	662	661	660	659	670	670	671	660	650	640	638	640	650	661	658	59 3
23	664	658	658	658	659	660	661	662	660	661	660	659	658	660	662	668	670	673	660	656	655	658	657	650	660	59 12
24	650	657	655	657	660	660	660	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	661	661	658	655	658	663	670	671	668	644	630	620	629	654	660	655	58 51
26	664	665	663	669	668	668	671	670	670	671	670	669	668	670	672	677	671	670	660	650	641	643	647	656	664	59 28
27	658	660	667	664	662	667	669	668	670	671	670	667	664	664	675	680	688	680	665	650	644	657	663	668	666	59 36
28	668	669	670	668	669	669	677	676	678	677	675	673	670	672	680	690	688	682	668	652	647	645	652	660	670	59 52
29	664	669	670	670	670	669	668	670	672	672	670	670	670	668	679	685	690	690	684	659	650	648	664	675	671	59 56
30	678	677	670	672	679	672	677	678	675	674	672	671	670	670	680	688	688	680	670	657	648	649	658	667	672	1 0 0
Monthly Means..	1664	1663	1662	1662	1663	1663	1664	1665	1664	1666	1665	1664	1663	1663	1667	1672	1674	1672	1663	1654	1649	1650	1658	1664	1663	
Declination.....	59′ 28″	59′ 24″	59′ 20″	59′ 20″	59′ 24″	59′ 24″	59′ 28″	59′ 32″	59′ 28″	59′ 36″	59′ 32″	59′ 28″	59′ 24″	59′ 24″	59′ 40″	60′ 0″	60′ 8″	60′ 0″	59′ 24″	58′ 47″	58′ 27″	58′ 31″	59′ 3″	59′ 28″	.....	0° 59′ 24″
Mean Hourly Variations from Monthly Mean.	4″	0″	−4″	−4″	0″	0″	4″	8″	4″	12″	8″	4″	0″	0″	16″	36″	44″	36″	0″	−37″	−57″	−53″	−21″	4″		

APRIL 1855. Declination Magnetometer.

March 31	1675	1675	1669	1663	1669	1669	1671	1673	1672	1·1 *		−0·1 *														
1	—	—	—	—	—	—	—	—	—	1673	1672	1671	1670	1670	1682	1700	1718	1710	1689	1665	1650	1653	1677	1690	1676	1° 0′ 16″
2	697	685	678	674	676	680	675	680	677	679	673	676	674	680	690	698	688	673	659	640	640	648	662	672	674	0 8
3	676	684	680	674	672	675	677	679	677	680	681	680	680	680	690	709	718	700	680	652	647	640	663	673	678	0 24
4	680	677	672	672	673	682	687	690	687	689	689	688	688	692	708	708	683	670	652	650	650	652	678	690	679	0 28
5	690	690	685	682	681	682	680	683	688	689	687	685	684	685	700	706	705	698	675	648	640	655	670	677	682	0 40
6	680	678	674	678	673	681	681	686	690	691	690	685	680	680	685	688	680	680	668	658	650	642	650	662	675	0 12
7	672	678	670	667	667	667	668	685	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	684	685	681	678	680	683	690	680	672	660	651	649	648	652	665	671	0 59 56
9	670	679	673	668	668	672	672	675	680	685	687	684	682	680	695	690	685	676	666	658	665	670	674	685	677	1 0 20
10	692	688	680	674	680	679	679	681	685	687	687	685	683	682	693	694	689	680	660	656	658	660	671	678	679	0 28
11	681	678	672	669	667	667	669	670	672	674	673	671	670	674	692	700	690	670	658	649	645	653	656	660	670	0 59 52
12	669	667	662	660	662	663	663	665	668	670	670	665	661	657	679	697	700	682	670	663	663	670	670	676	670	59 52
13	680	672	672	669	667	672	672	673	682	682	680	677	675	680	700	703	704	690	672	660	658	661	661	678	677	1 0 20
14	670	672	670	670	672	674	674	678	678	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	682	684	678	672	680	682	692	690	682	662	652	650	650	652	677	673	0 4
16	681	670	668	671	670	672	673	673	680	683	683	680	678	678	690	695	698	680	662	648	640	640	645	658	672	0 0
17	660	664	668	667	671	681	680	682	680	683	684	682	680	681	699	710	708	698	672	652	643	645	657	662	675	0 12
18	670	678	679	671	676	680	675	676	680	682	682	679	677	681	696	706	706	692	674	655	639	630	645	659	675	0 12
19	670	681	680	678	683	680	685	682	682	682	680	679	679	672	695	700	698	690	679	659	657	657	660	668	678	0 24
20	682	682	668	672	679	680	680	680	685	685	682	680	679	672	680	690	700	697	672	650	640	648	654	661	675	0 12
21	668	671	665	664	663	670	670	672	672	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	677	680	676	672	678	690	700	690	680	662	645	636	643	656	670	670	0 59 52
23	677	680	664	666	665	669	671	671	678	677	674	673	672	672	689	692	696	680	670	651	636	638	640	667	670	59 52
24	683	680	672	670	666	668	667	667	672	676	678	679	680	672	689	690	682	680	670	656	650	648	660	662	672	1 0 0
25	671	677	673	666	666	671	673	673	675	674	670	669	669	670	688	690	689	688	673	650	648	648	657	667	671	0 59 56
26	672	677	670	669	669	668	669	670	672	675	675	672	670	677	690	698	679	660	640	622	627	630	640	651	664	59 28
27	664	671	670	669	669	671	673	673	677	676	672	670	669	677	694	698	697	682	672	660	654	659	665	668	673	1 0 4
28	672	670	665	662	665	668	670	669	667	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	676	682	681	680	689	700	712	697	670	643	632	630	633	657	664	669	0 59 48
30	670	666	668	662	669	670	670	676	678	675	670	675	680	694	710	700	680	668	632	613	612	620	647	665	665	59 32
Monthly Means..	1676	1677	1672	1670	1671	1674	1674	1676	1678	1680	1680	1678	1676	1678	1692	1698	1694	1683	1665	1650	1645	1648	1658	1669	1673	
Declination.....	60′ 16″	60′ 20″	60′ 0″	59′ 52″	59′ 56″	60′ 6″	60′ 8″	60′ 16″	60′ 24″	60′ 32″	60′ 32″	60′ 24″	60′ 16″	60′ 24″	61′ 21″	61′ 45″	61′ 29″	60′ 44″	59′ 32″	58′ 31″	58′ 11″	58′ 23″	59′ 3″	59′ 48″	.....	1° 0′ 4″
Mean Hourly Variations from Monthly Mean..	12″	16″	−4″	−12″	−8″	4″	4″	12″	20″	28″	28″	20″	12″	20″	77″	101″	85″	40″	−32″	−93″	−113″	−101″	−61″	−16″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4'030 \times 1{\cdot}00060 = 4'0324$ $\quad \rho = 41^\circ\ 8'2 + 7'\ 6'0 = 0^\circ\ 48'\ 14'2$ East of North. $\quad$ Zero 1497.

DECLINATION MAGNETOMETER.

MAY 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		Arc.
										0·4 *		−0·4 *													
1	1677	1680	1678	1670	1670	1670	1674	1675	1673	1677	1680	1680	1680	1690	1712	1720	1697	1660	1645	1640	1647	1654	1665	1672	1674	1° 0′ 8″
2	674	670	669	669	672	671	679	686	682	685	688	686	685	688	708	705	694	672	655	644	643	651	654	668	675	0 12
3	673	668	664	669	669	670	678	677	680	681	682	681	680	680	692	698	690	675	663	660	662	669	678	680	676	0 16
4	689	678	670	669	669	672	676	680	687	686	685	682	680	685	694	700	684	669	653	630	630	634	636	649	670	0 59 52
5	662	669	666	663	665	670	672	675	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	679	688	684	680	682	709	702	690	670	651	647	640	642	650	658	670	59 52
7	663	671	668	669	667	668	670	668	672	675	678	679	680	681	692	710	708	680	660	660	650	644	650	650	671	59 56
8	666	670	670	670	670	679	683	683	690	689	688	686	685	700	710	719	700	680	672	654	648	642	639	654	677	1 0 20
9	670	674	676	674	676	678	680	677	680	681	682	683	685	692	700	702	700	688	668	650	640	644	652	658	675	0 12
10	655	657	665	663	660	668	671	678	683	682	680	681	682	691	700	704	700	672	650	657	650	650	648	653	671	0 59 56
11	660	668	665	667	668	672	674	675	680	681	682	681	680	692	702	705	700	680	661	642	639	650	657	671	673	1 0 4
12	670	674	665	663	662	668	669	676	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	—	—	—	—	680	680	680	680	692	700	702	695	670	655	650	655	660	668	679	674	0 8
14	683	679	672	670	667	669	667	668	672	676	680	677	675	680	692	700	690	675	657	642	640	638	656	672	671	0 59 56
15	675	670	661	663	665	670	670	670	670	671	672	671	670	680	690	700	689	680	676	668	660	658	655	663	672	1 0 0
16	668	667	663	663	662	663	668	668	660	665	670	670	670	677	688	690	690	679	659	650	654	655	666	667	668	0 59 44
17	670	671	672	669	668	670	670	672	672	675	678	675	672	675	690	705	692	670	659	653	654	654	657	661	671	59 56
18	664	668	662	662	661	663	665	666	672	672	672	671	670	680	690	695	691	678	665	660	655	658	666	674	670	59 52
19	675	670	669	667	664	665	669	669	671	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	671	670	672	675	680	690	690	692	680	670	662	662	660	660	665	672	1 0 0
21	672	672	669	663	662	662	663	663	668	669	670	671	672	679	688	690	688	678	673	669	665	670	670	675	672	0 0 0
22	673	669	664	664	664	665	665	668	668	669	670	670	670	670	678	689	688	680	662	656	658	662	680	679	670	0 59 52
23	672	670	668	668	666	667	667	667	670	669	668	669	670	674	680	687	688	678	670	662	660	660	663	667	670	59 52
24	665	666	655	657	660	659	663	662	664	665	666	664	662	672	684	691	687	680	676	667	668	663	670	664	668	59 44
25	665	666	658	657	657	658	659	658	660	661	662	665	668	676	676	674	675	669	660	655	651	655	660	662	663	59 24
26	663	652	652	650	649	649	649	650	656	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	658	660	661	663	664	680	680	685	678	670	660	652	655	657	660	661	59 16
28	658	657	651	650	649	649	650	651	653	653	652	654	657	660	668	662	658	656	649	640	644	650	655	654	653	58 43
29	650	640	644	640	639	641	640	641	644	643	642	643	644	648	650	650	646	642	640	640	650	645	640	640	643	58 3
30	635	632	633	633	635	642	642	641	642	645	648	644	640	640	650	650	646	642	642	635	630	635	631	639	640	57 51
31	640	640	650	646	644	640	641	640	638	640	642	640	638	640	660	660	650	640	634	629	625	628	630	639	641	57 55
Monthly Means..	1666	1665	1663	1662	1661	1664	1666	1667	1669	1670	1672	1671	1671	1677	1688	1692	1686	1671	1659	1651	1649	1651	1656	1662	1667	
Declination.....	59′ 36″	59′ 32″	59′ 24″	59′ 20″	59′ 18″	59′ 28″	59′ 38″	59′ 40″	59′ 48″	59′ 52″	60′ 0″	59′ 56″	59′ 56″	60′ 20″	61′ 4″	61′ 21″	60′ 56″	59′ 56″	59′ 7″	58′ 35″	58′ 27″	58′ 35″	58′ 55″	59′ 20″	.....	0° 59′ 40″
Mean Hourly Variations from Monthly Mean.	−4″	−8″	−16″	−20″	−24″	−12″	−4″	0″	8″	12″	20″	16″	16″	40″	84″	101″	76″	16″	−33″	−65″	−73″	−65″	−45″	−20″		

JUNE 1855. Declination Magnetometer.

										0·4 *		−1·0 *														
1	1640	1640	1630	1625	1627	1628	1632	1635	1638	1637	1636	1635	1635	1642	1660	1659	1650	1650	1640	1631	1630	1630	1637	1628	1637	0° 57′ 39″
2	637	634	630	633	630	631	630	640	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	—	—	—	—	—	—	—	—	—	636	632	633	635	640	645	648	640	635	630	630	623	628	624	632	634	57 27
4	637	632	630	628	626	624	628	630	632	636	639	635	632	640	655	658	650	640	630	622	620	615	620	622	633	57 23
5	620	620	620	625	619	618	616	620	625	628	630	629	630	630	648	650	647	640	623	620	618	620	618	615	626	56 54
6	623	625	618	611	611	623	635	635	634	635	635	632	630	625	650	668	660	640	626	620	615	613	610	621	629	57 7
7	625	632	641	641	637	634	642	644	640	644	648	648	649	656	672	670	650	630	617	610	618	615	625	650	639	57 47
8	668	675	668	650	649	650	650	657	657	651	645	646	649	658	668	668	652	640	626	620	616	620	620	638	648	58 23
9	640	645	651	650	644	644	644	646	648	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	649	650	647	646	668	670	672	645	620	610	611	624	633	630	642	643	58 3
11	650	663	666	660	656	651	650	656	658	654	650	655	662	672	688	693	688	670	650	650	653	656	660	665	662	59 20
12	666	652	647	649	648	658	660	663	667	664	660	659	660	672	681	683	672	658	633	622	622	633	650	652	655	58 51
13	660	656	643	660	666	667	672	670	668	671	673	671	670	677	680	680	670	660	656	650	650	640	650	668	664	59 28
14	680	672	667	666	670	672	673	671	670	668	666	667	669	672	697	702	690	661	640	622	623	631	640	650	664	59 28
15	658	659	657	652	657	662	665	666	670	669	668	667	668	664	678	690	690	679	650	632	634	635	636	640	660	59 12
16	652	666	662	660	662	664	664	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	—	—	—	—	—	—	—	—	—	663	666	665	665	670	685	700	700	692	685	640	620	618	620	622	661	59 16
18	630	655	651	649	649	650	658	660	662	663	663	663	665	672	680	690	682	668	650	632	630	630	635	636	655	58 51
19	650	654	647	645	648	649	650	650	653	657	660	659	660	669	688	694	695	680	660	638	628	627	630	630	655	58 51
20	650	642	639	637	640	648	650	652	654	657	659	659	660	663	676	685	690	682	670	660	643	638	632	637	655	58 51
21	641	649	645	640	640	642	649	650	645	651	657	654	652	658	677	682	672	655	640	631	624	629	630	635	648	58 23
22	640	641	639	637	640	635	639	643	645	662	678	673	670	672	690	705	690	682	670	639	630	630	630	643	655	58 51
23	642	640	645	641	640	650	654	655	655	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
24	—	—	—	—	—	—	—	—	—	664	672	670	670	680	692	692	683	663	650	640	635	642	643	641	657	58 59
25	649	654	660	660	661	667	669	668	664	667	670	669	670	674	690	687	683	677	662	642	638	639	642	650	663	59 24
26	655	658	652	653	658	652	652	652	658	658	658	657	658	662	680	672	667	652	642	639	635	645	642	642	654	58 47
27	650	650	648	640	640	644	647	650	652	651	650	649	650	667	688	685	680	664	640	628	632	640	642	651	652	58 39
28	653	652	642	641	641	640	648	645	649	654	658	654	652	662	672	678	662	645	642	620	618	616	620	622	645	58 11
29	623	622	624	631	635	636	639	641	640	645	650	657	665	668	675	690	685	660	640	622	612	610	619	620	642	57 59
Monthly Means..	1646	1648	1645	1643	1644	1646	1649	1650	1651	1653	1655	1654	1655	1661	1675	1680	1672	1658	1643	1631	1628	1629	1632	1638	1649	
Declination.....	58′ 15″	58′ 23″	58′ 11″	58′ 3″	58′ 7″	58′ 15″	58′ 27″	58′ 31″	58′ 35″	58′ 43″	58′ 51″	58′ 47″	58′ 51″	59′ 15″	60′ 12″	60′ 32″	60′ 0″	59′ 3″	58′ 3″	57′ 15″	57′ 2″	57′ 7″	57′ 19″	57′ 43″	.....	0° 58′ 27″
Mean Hourly Variations from Monthly Mean.	−12″	−4″	−16″	−24″	−20″	−12″	0″	4″	8″	16″	24″	20″	24″	49″	105″	125″	93″	36″	−24″	−72″	−85″	−80″	−68″	−44″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right)=4'030\times1{\cdot}00060=4'0324$ $\rho=41'\ 8{\cdot}2\times7'\ 6{\cdot}0=0^{\circ}\ 48'\ 14{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

JULY 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
										0·9 *		−0·6 *														Arc.
June 30	1630	1632	1622	1632	1629	1628	1631	1635	1637	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
1	—	—	—	—	—	—	—	—	—	1640	1642	1637	1633	1640	1650	1652	1650	1635	1622	1615	1610	1608	1586	1593	1629	0° 57′ 7″
2	604	611	624	626	628	641	641	644	642	642	640	639	640	650	662	670	678	670	653	622	622	614	611	614	637	57 39
3	630	638	631	632	632	643	640	644	645	648	650	645	642	640	660	670	668	660	644	630	620	618	610	620	640	57 51
4	630	637	638	635	630	637	634	639	640	646	650	649	650	643	655	668	660	640	612	600	585	599	612	622	634	57 27
5	630	634	640	650	644	642	643	640	640	643	645	646	648	650	669	672	672	660	640	620	618	612	615	627	642	57 59
6	635	640	642	650	640	645	644	652	650	651	650	649	650	653	670	680	682	683	662	647	640	630	629	632	650	58 31
7	650	650	650	650	649	651	650	652	654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
8	—	—	—	—	—	—	—	—	—	659	662	663	665	670	680	690	680	670	658	640	632	633	635	640	656	58 55
9	647	647	645	645	642	641	646	657	655	654	652	654	657	660	670	673	667	651	638	615	618	626	629	634	647	58 19
10	640	647	629	628	625	630	635	645	640	642	643	644	646	655	676	670	658	650	640	640	630	630	627	637	642	57 59
11	640	645	648	646	643	650	650	648	650	653	655	652	650	650	660	662	660	659	640	630	620	619	622	633	645	58 11
12	635	640	641	640	642	640	640	640	648	652	654	651	650	643	647	650	665	670	660	640	625	633	630	630	644	58 7
13	628	626	632	631	633	640	640	645	643	647	650	650	652	653	660	662	659	652	650	640	628	618	622	630	641	57 55
14	636	642	640	642	640	638	640	640	643	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
15	—	—	—	—	—	—	—	—	—	644	643	646	650	655	672	680	682	680	660	630	620	626	622	620	645	58 11
16	622	625	630	630	630	632	638	641	642	646	648	647	648	657	669	670	660	650	635	620	599	607	615	620	637	57 39
17	630	640	641	639	638	640	640	643	643	646	648	648	650	652	670	679	676	660	634	622	602	602	618	630	641	57 55
18	630	630	636	638	640	640	643	650	650	648	645	647	651	664	678	679	669	650	635	628	618	608	620	631	643	58 3
19	643	631	624	627	628	633	642	650	650	656	660	665	672	670	698	700	680	660	640	622	619	628	637	637	649	58 27
20	639	645	653	651	651	650	655	660	660	661	661	661	663	674	690	677	672	662	648	632	624	623	630	644	654	58 47
21	653	653	650	644	650	650	650	658	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
22	—	—	—	—	—	—	—	—	—	667	672	675	680	685	692	695	688	680	665	659	660	657	658	675	666	59 36
23	680	673	670	666	666	670	660	662	669	669	668	670	673	678	700	700	690	672	659	650	643	643	650	648	668	59 44
24	650	659	664	660	662	663	668	670	670	670	668	671	675	680	692	690	678	660	640	620	620	641	650	650	661	59 16
25	660	660	659	658	658	664	670	669	668	670	670	671	673	675	682	683	680	668	652	642	638	648	650	646	663	59 24
26	650	659	651	649	650	660	660	665	666	670	672	669	667	679	690	691	671	660	645	632	630	628	638	648	658	59 3
27	662	668	654	652	650	656	652	660	660	663	664	664	666	680	700	700	688	665	645	627	627	620	625	640	658	59 3
28	650	658	650	649	646	652	657	660	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
29	—	—	—	—	—	—	—	—	—	664	666	667	670	681	707	707	695	670	642	622	620	632	642	650	659	59 7
30	655	660	651	652	658	660	666	664	660	664	667	668	670	669	690	700	682	664	640	630	618	612	621	630	656	58 55
31	650	657	652	655	652	652	660	668	667	669	670	669	670	676	682	680	660	635	618	610	620	627	640	647	654	58 47
Monthly Means..	1641	1645	1643	1644	1643	1646	1648	1652	1652	1655	1656	1656	1658	1662	1677	1680	1673	1661	1644	1629	1622	1624	1628	1634	1649	
Declination	57′ 55″	58′ 11″	58′ 3″	58′ 7″	58′ 3″	58′ 15″	58′ 23″	58′ 39″	58′ 39″	58′ 51″	58′ 55″	58′ 55″	59′ 3″	59′ 20″	60′ 20″	60′ 32″	60′ 4″	59′ 16″	58′ 7″	57′ 7″	56′ 38″	56′ 46″	67′ 2″	57′ 27″	.....	0° 58′ 27″
Mean Hourly Variations from Monthly Mean.	−32″	−16″	−24″	−20″	−24″	−12″	−4″	12″	12″	24″	28″	28″	36″	53″	113″	125″	97″	49″	−20″	−80″	−109″	−101″	−85″	−60″		

AUGUST 1855. Declination Magnetometer.

										0·2 *		−0·2 *														
1	1653	1652	1649	1649	1650	1650	1660	1666	1670	1671	672	1671	1670	1676	1690	1704	1709	1690	1672	1653	1642	1632	1635	1630	1663	0° 59′ 24″
2	656	663	655	659	661	667	662	670	670	670	670	671	672	680	686	690	690	668	642	617	610	617	630	631	659	59 7
3	650	659	661	662	660	662	662	663	670	675	680	675	670	670	682	680	680	671	655	631	634	628	633	640	661	59 16
4	650	657	658	655	658	660	660	665	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	670	670	670	670	670	678	670	652	630	616	613	620	630	638	647	653	58 43
6	657	660	658	659	658	658	660	660	662	666	670	669	668	672	680	684	679	668	650	637	640	658	660	657	662	59 20
7	659	659	659	653	651	652	654	657	660	660	660	661	662	662	670	668	655	633	630	629	638	652	650	645	653	58 43
8	650	650	650	650	650	651	652	652	658	659	660	660	660	662	676	672	665	655	640	634	622	630	639	645	652	58 39
9	657	650	642	646	646	643	650	650	650	655	660	661	662	670	686	680	667	649	640	629	620	620	627	630	650	58 31
10	637	640	640	642	643	648	650	650	650	651	652	654	657	660	670	669	655	638	620	613	611	620	640	657	644	58 7
11	662	660	654	656	656	661	662	664	661	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	666	670	668	667	672	684	685	675	648	630	635	642	648	657	663	660	59 12
13	660	657	657	658	661	660	662	660	660	664	668	667	666	668	680	686	680	678	650	635	630	623	636	640	659	59 7
14	647	650	651	651	652	653	654	660	666	668	670	670	670	680	690	702	682	661	644	633	622	620	630	650	657	58 59
15	661	662	649	649	648	661	665	667	670	672	674	675	676	678	698	700	699	682	667	658	641	647	660	667	668	59 44
16	661	662	668	668	674	672	671	676	684	687	690	690	690	690	710	710	699	680	668	654	651	653	663	670	677	1 0 20
17	674	680	683	672	683	680	680	680	680	682	684	683	682	692	702	710	701	688	672	658	649	654	668	680	680	0 32
18	685	680	673	679	682	678	680	680	683	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	686	688	687	687	690	710	722	712	680	654	638	626	633	637	653	676	0 16
20	663	672	673	672	674	680	672	677	680	681	682	685	689	695	710	712	705	690	675	665	660	659	653	660	679	0 28
21	668	663	664	665	663	670	670	670	670	674	678	678	678	680	690	692	684	673	655	642	641	643	650	660	668	0 59 44
22	663	662	661	661	665	660	664	666	666	667	668	669	670	680	690	700	680	655	636	630	626	630	642	653	661	59 16
23	657	657	657	660	660	660	662	666	665	664	662	665	668	675	688	690	687	668	657	649	642	649	652	666	664	59 28
24	673	666	658	662	664	670	670	670	672	673	673	672	672	678	690	690	675	650	641	633	634	651	660	667	665	59 32
25	677	669	661	661	660	663	660	660	658	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	660	662	666	670	677	695	684	661	640	611	596	601	620	640	655	654	58 47
27	660	650	646	649	656	660	660	660	660	661	662	664	667	680	698	698	676	639	621	602	590	600	612	628	650	58 31
28	640	642	645	643	645	650	650	655	658	658	657	656	655	663	686	690	674	652	635	620	620	622	633	634	649	58 27
29	641	631	642	642	645	646	651	657	660	660	660	659	658	662	690	700	682	660	634	621	611	611	630	642	650	58 31
30	649	650	651	652	651	650	658	659	660	660	660	656	653	663	677	680	629	659	632	619	614	609	627	640	648	58 23
31	654	667	668	668	672	664	663	662	660	660	660	663	667	677	691	692	682	669	654	632	616	623	630	645	660	59 12
Monthly Means..	1658	1658	1657	1657	1659	1660	1662	1664	1666	1667	1669	1669	1669	1675	1689	1691	1679	1662	1644	1632	1628	1633	1642	1650	1660	
Declination	59′ 3″	59′ 3″	58′ 59″	58′ 59″	59′ 7″	59′ 12″	59′ 20″	59′ 28″	59′ 36″	59′ 40″	59′ 48″	59′ 48″	59′ 48″	60′ 12″	61′ 8″	61′ 17″	60′ 28″	59′ 20″	58′ 7″	57′ 19″	57′ 2″	57′ 23″	57′ 59″	58′ 31″	.....	0° 59′ 12″
Mean Hourly Variations from Monthly Mean.	−9″	−9″	−13″	−13″	−5″	0″	8″	16″	24″	28″	36″	36″	36″	60″	116″	125″	76″	8″	−65″	−113″	−130″	−109″	−73″	−41″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4'030 \times 1{\cdot}00060 = 4'0324$ $\rho = 41'\ 8{\cdot}2 + 7'\ 6{\cdot}0 = 0°\ 48'\ 14{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

SEPTEMBER 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
										0·4 *		0·0 *														*Arc.*
1	1660	1660	1654	1652	1651	1650	1650	1658	1660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	—	—	—	—	—	—	—	—	—	1660	1660	1660	1660	1667	1682	1687	1678	1656	1634	1619	1610	1618	1624	1646	1652	0° 58′ 39″
3	661	653	652	651	653	664	660	660	660	661	662	662	662	670	690	690	684	670	659	640	628	632	650	670	660	59 12
4	681	670	660	654	659	662	666	668	670	671	672	671	670	670	680	678	670	660	639	628	629	629	638	660	661	59 16
5	678	670	662	662	659	660	663	665	670	671	672	671	670	675	700	708	699	679	665	650	642	650	662	675	670	59 52
6	676	660	655	651	652	660	663	665	670	670	670	669	668	674	700	716	703	670	638	621	618	630	640	659	662	59 20
7	670	660	654	656	660	664	664	670	661	661	660	664	669	674	690	692	679	652	630	613	608	621	637	659	657	58 59
8	665	660	648	651	658	661	662	668	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	672	673	677	680	688	715	707	667	642	625	620	618	648	667	688	664	59 28
10	690	678	671	670	672	672	673	674	680	681	682	681	680	690	720	720	703	662	635	621	615	622	645	670	671	59 56
11	680	673	664	679	682	680	681	680	683	685	687	689	692	702	720	715	690	659	630	608	612	637	656	672	673	1 0 4
12	680	677	671	671	674	685	683	678	682	685	687	687	687	695	715	720	709	686	643	630	636	647	670	683	678	0 24
13	690	685	677	676	675	677	680	683	683	683	682	684	685	694	713	720	700	679	636	610	612	614	638	658	672	0 0
14	670	674	670	670	672	673	675	679	682	681	680	681	682	690	710	720	718	700	672	650	641	658	678	692	680	0 32
15	698	685	671	669	668	670	672	676	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	680	678	679	680	687	710	714	703	684	666	650	640	645	670	690	678	0 24
17	692	680	674	675	672	670	670	672	675	677	678	678	678	687	710	710	690	670	644	620	625	632	646	662	670	0 59 52
18	672	678	673	672	672	676	681	682	685	688	690	690	690	700	720	730	715	690	662	632	630	640	652	670	679	1 0 28
19	680	680	672	670	673	674	674	677	680	683	685	690	695	698	720	721	703	681	665	649	650	658	672	683	681	0 36
20	688	676	675	670	671	673	674	679	680	680	680	680	680	688	705	714	699	675	658	652	653	660	670	683	678	0 24
21	690	682	684	685	690	685	683	681	681	682	682	686	690	700	718	710	688	660	642	635	640	646	670	680	679	0 28
22	682	680	673	673	675	680	680	682	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	682	682	681	680	688	708	720	710	698	674	652	642	660	680	691	681	0 36
24	688	675	677	680	682	685	684	687	687	687	687	686	686	685	722	730	722	704	685	670	660	668	680	699	688	1 4
25	695	678	679	680	685	687	686	685	683	683	682	683	684	690	710	713	710	698	660	654	659	661	683	690	684	0 48
26	688	677	676	680	680	682	683	687	690	691	692	691	690	695	712	730	719	687	670	651	650	658	673	680	685	0 52
27	687	684	680	681	680	680	675	675	682	681	680	681	682	682	708	711	710	700	689	680	672	682	690	705	687	1 0
28	710	702	695	691	689	682	682	682	685	684	682	681	680	685	702	710	695	678	672	660	660	670	692	707	687	1 0
29	702	690	687	690	684	683	685	682	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	684	688	689	690	697	710	720	719	702	690	670	660	670	681	684	689	1 8
Monthly Means..	1683	1675	1670	1670	1672	1673	1674	1676	1678	1679	1679	1680	1680	1687	1708	1712	1699	1678	1655	1639	1636	1646	1663	1678	1675	
Declination.....	60′ 44″	60′ 12″	59′ 52″	59′ 52″	60′ 0″	60′ 4″	60′ 8″	60′ 16″	60′ 24″	60′ 28″	60′ 28″	60′ 32″	60′ 32″	61′ 0″	62′ 25″	62′ 41″	61′ 49″	60′ 24″	58′ 51″	57′ 47″	67′ 35″	58′ 15″	59′ 24″	60′ 24″	.....	1° 0′ 12″
Mean Hourly Variations from Monthly Mean.	32″	0″	−20″	−20″	−12″	−8″	−4″	4″	12″	16″	16″	20″	20″	48″	133″	149″	97″	12″	−81″	−145″	−157″	−117″	−48″	12″		

OCTOBER 1855. Declination Magnetometer.

										0·1 *		−0·2 *														
1	1692	1690	1688	1687	1686	1685	1684	1690	1685	1687	1688	1689	1690	1693	1700	1700	1695	1692	1675	1660	1659	1660	1679	1687	1685	1° 0′ 52″
2	684	679	677	679	675	678	680	678	680	680	680	680	680	680	694	700	688	679	672	660	662	675	683	692	680	0 32
3	690	682	688	689	690	698	700	704	698	700	702	701	700	702	710	710	692	682	678	660	653	664	677	686	690	1 13
4	680	680	680	680	680	682	685	688	689	688	686	682	679	680	690	710	702	700	680	670	670	658	673	673	683	0 44
5	677	679	681	680	688	689	690	690	690	690	690	685	680	682	692	695	697	700	690	674	660	658	667	670	683	0 44
6	672	677	682	687	684	688	690	690	693	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	—	—	—	—	—	—	—	—	—	689	684	682	680	680	688	700	698	675	658	645	650	662	680	687	680	0 32
8	688	680	679	676	680	680	682	683	683	683	683	683	683	686	693	700	697	690	672	656	650	667	680	690	681	0 36
9	684	680	681	679	680	678	680	680	685	683	680	677	674	670	690	697	692	692	688	674	673	682	692	695	683	0 44
10	690	683	680	680	678	680	675	668	685	687	688	684	680	675	685	690	700	700	685	680	668	680	695	707	684	0 48
11	708	695	686	691	682	681	680	679	682	683	683	684	685	680	687	695	692	694	680	640	648	670	683	692	683	0 44
12	691	687	682	681	681	680	680	684	682	685	688	687	687	682	694	705	700	690	672	662	660	674	680	690	684	0 48
13	693	690	687	684	684	683	685	684	688	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
14	—	—	—	—	—	—	—	—	—	684	680	681	682	682	690	697	698	690	680	665	680	682	690	697	686	0 56
15	700	693	687	685	686	689	688	689	690	690	690	691	692	690	700	708	710	700	672	653	660	669	672	698	688	1 4
16	693	687	686	685	688	688	688	691	692	691	690	689	688	690	695	710	720	708	685	658	670	680	690	690	690	1 13
17	692	690	688	690	688	690	690	688	688	688	688	689	691	682	689	695	698	689	665	650	650	662	684	697	684	0 48
18	698	690	691	690	690	700	702	682	702	701	700	696	692	687	690	698	700	688	680	680	689	687	692	698	693	1 25
19	700	693	690	690	690	690	692	695	688	687	686	684	682	683	700	714	713	702	685	684	688	692	703	702	693	1 25
20	700	695	700	690	690	692	697	690	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	—	—	—	691	690	686	683	680	688	695	703	692	672	660	672	694	692	700	689	1 8
22	698	687	691	691	689	688	690	685	690	689	688	687	687	690	680	689	690	690	672	659	673	685	689	683	686	0 56
23	690	690	687	683	685	686	685	690	687	681	675	673	672	670	678	695	700	700	690	682	698	700	701	698	687	1 0
24	690	683	682	682	690	690	690	692	690	690	690	687	685	683	687	694	711	712	679	672	678	689	697	700	689	1 8
25	695	690	689	690	690	690	690	690	692	691	690	685	680	680	690	695	700	690	678	673	680	680	690	693	688	1 4
26	693	692	690	691	690	688	690	690	690	687	684	683	683	686	692	705	708	689	670	660	670	682	688	698	687	1 0
27	700	690	689	688	690	695	698	698	700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
28	—	—	—	—	—	—	—	—	—	697	694	692	690	683	684	688	680	680	668	670	683	699	700	694	690	1 13
29	692	691	690	690	692	693	691	691	700	694	688	685	682	701	680	690	680	672	662	667	680	694	692	690	687	1 0
30	683	680	692	700	705	703	702	702	708	707	706	704	703	702	694	698	700	702	706	712	718	720	718	716	703	2 5
31	712	707	710	705	706	706	705	708	709	707	705	703	702	705	708	708	704	703	698	698	702	700	720	718	706	2 17
Monthly Means..	1692	1687	1687	1687	1687	1689	1689	1689	1691	1690	1689	1687	1686	1685	1691	1699	1699	1693	1678	1668	1672	1680	1689	1694	1687	
Declination... ...	61′ 21″	61′ 0″	61′ 0″	61′ 0″	61′ 0″	61′ 8″	61′ 8″	61′ 8″	61′ 17″	61′ 13″	61′ 8″	61′ 0″	60′ 56″	60′ 52″	61′ 17″	61′ 49″	61′ 49″	61′ 25″	60′ 24″	69′ 44″	60′ 0″	60′ 32″	61′ 8″	61′ 29″	.....	1° 1′ 0″
Mean Hourly Variations from Monthly Mean.	21″	0″	0″	0″	0″	8″	8″	8″	17″	13″	8″	0″	−4″	−8″	17″	49″	49″	25″	−36″	−76″	−60″	−28″	8″	29″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

$a\left(1+\frac{H}{F}\right) = 4'030 \times 1{\cdot}00060 = 4'0324$ $\rho = 4^{\circ}\,1'\,8''{\cdot}2 + 7'\,6''{\cdot}0 = 0^{\circ}\,48'\,14''{\cdot}2$ East of North. Zero 1497.

DECLINATION MAGNETOMETER.

NOVEMBER 1855. Declination Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Daily Means.	Absolute Declination East of North.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41		
											0·4 *		−0·4 *													*Arc.*
1	1712	1710	1715	1710	1718	1720	1715	1726	1725	1720	1715	1713	1712	1711	1713	1720	1720	1718	1712	1710	1713	1725	1720	1721	1716	1′ 2′ 57″
2	720	720	720	720	722	722	722	726	718	717	715	708	702	702	707	714	719	724	719	714	722	730	728	721	718	3 5
3	715	712	711	714	712	712	714	710	712	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
4	—	—	—	—	—	—	—	—	—	710	708	709	710	705	704	710	718	710	705	700	707	715	720	727	711	2 37
5	720	717	720	721	717	718	717	716	722	722	722	719	716	712	712	730	736	723	708	700	704	715	720	720	718	3 5
6	717	717	716	720	720	718	719	718	720	719	718	715	713	710	710	710	705	700	700	701	708	713	716	714	713	2 45
7	720	717	715	715	713	717	715	713	715	712	709	704	700	698	697	697	700	695	690	692	698	700	710	708	706	2 17
8	703	702	700	706	703	702	702	701	707	706	704	702	700	704	695	698	702	695	689	690	700	708	710	708	702	2 1
9	708	704	700	702	700	700	700	700	700	700	700	699	698	692	695	698	702	697	690	690	695	705	715	712	700	1 53
10	710	702	700	695	700	701	701	700	699	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
11	—	—	—	—	—	—	—	—	—	701	702	701	700	701	700	708	710	701	672	679	692	700	708	713	700	1 53
12	713	710	709	704	703	708	708	707	703	706	708	705	702	708	700	710	715	706	690	680	685	699	708	710	704	2 9
13	708	704	706	709	708	709	709	707	705	706	706	703	700	702	702	712	720	703	690	693	700	708	710	710	705	2 13
14	710	709	708	706	709	709	705	702	702	701	700	701	703	698	698	702	708	700	694	683	690	700	708	717	703	2 5
15	710	708	709	707	705	704	707	704	703	702	700	698	696	695	692	704	712	718	720	717	712	710	687	675	704	2 9
16	670	666	659	658	663	663	664	665	668	664	660	655	650	652	640	642	648	655	640	638	643	650	653	653	655	0 58 51
17	662	662	658	659	659	655	654	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
18	—	—	—	—	—	—	—	—	—	650	650	648	646	645	648	650	659	657	650	648	650	653	662	663	654	58 47
19	655	660	660	660	657	654	653	653	652	651	650	648	647	650	640	660	672	660	650	646	655	663	665	660	655	58 51
20	650	647	650	650	652	652	650	650	648	645	642	636	630	626	632	638	640	635	631	635	640	644	648	641	642	57 59
21	647	648	655	650	650	651	652	651	658	654	650	645	640	635	638	640	646	660	660	654	660	650	652	657	650	58 31
22	655	650	652	650	650	650	649	645	642	642	641	640	640	640	640	642	640	630	617	614	627	643	650	650	642	57 59
23	654	648	653	652	652	648	648	644	644	644	643	638	634	630	637	635	640	650	638	638	650	662	666	665	646	58 15
24	660	655	655	653	650	650	650	650	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
25	—	—	—	—	—	—	—	—	—	645	640	641	642	643	640	650	646	642	643	645	650	653	657	657	649	58 27
26	650	650	650	645	648	643	648	645	643	642	640	640	640	638	635	630	632	626	620	623	630	630	636	640	639	57 47
27	640	645	641	643	642	640	644	642	642	644	646	643	640	640	635	632	634	630	632	639	650	658	668	670	643	58 3
28	664	658	659	659	657	652	650	650	650	650	650	646	643	640	638	637	632	635	630	635	652	660	671	668	649	58 27
29	660	660	660	661	652	655	655	653	662	661	660	652	645	642	638	640	640	645	650	643	642	653	660	660	652	58 39
30	663	659	662	668	660	660	660	660	660	660	659	660	662	661	668	671	675	675	672	672	682	680	680	683	667	59 40
Monthly Means ..	1684	1682	1682	1682	1682	1681	1681	1680	1681	1680	1678	1676	1674	1672	1671	1676	1680	1677	1670	1668	1675	1682	1686	1686	1679	
Declination.....	60′ 48″	60′ 40″	60′ 40″	60′ 40″	60′ 40″	60′ 36″	60′ 36″	60′ 32″	60′ 36″	60′ 32″	60′ 24″	60′ 16″	60′ 8″	60′ 0″	59′ 56″	60′ 16″	60′ 32″	60′ 20″	59′ 52″	59′ 44″	60′ 12″	60′ 40″	60′ 56″	60′ 56″	.....	1′ 0′ 28″
Mean Hourly Variations from Monthly Mean.	20″	12″	12″	12″	12″	8″	8″	4″	8″	4″	−4″	−12″	−20″	−28″	−32″	−12″	4″	−8″	−36″	−44″	−16″	12″	28″	28″		

DECEMBER 1855. Declination Magnetometer.

											0·2 *		0·4 *													
1	1688	1687	1689	1684	1685	1681	1680	1680	1680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
2	—	—	—	—	—	—	—	—	—	1679	1678	1678	1677	1675	1672	1668	1665	1667	1662	1670	1680	1693	1693	1690	1679	1′ 0′ 28″
3	683	685	683	682	680	680	680	678	682	682	682	676	670	670	670	662	672	670	670	680	692	694	697	691	680	0 32
4	687	690	683	691	689	683	686	685	682	681	680	678	675	670	672	678	690	698	698	682	692	701	700	701	686	0 56
5	697	692	691	691	690	688	690	690	684	682	680	680	680	682	680	680	680	680	678	676	695	700	690	689	686	0 56
6	682	693	687	689	685	690	691	690	684	682	680	680	680	680	680	682	682	680	672	677	692	705	700	690	686	0 56
7	686	686	690	689	686	684	683	684	690	688	685	683	680	680	675	670	668	662	650	650	678	690	695	690	680	0 32
8	690	692	695	691	690	691	691	693	692	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
9	—	—	—	—	—	—	—	—	—	691	690	689	688	680	680	682	690	680	662	668	680	697	700	693	687	1 0
10	690	688	685	684	693	691	690	690	690	691	692	687	682	680	680	698	700	686	673	674	686	698	700	706	689	1 8
11	693	692	692	691	690	689	688	680	687	684	680	680	680	675	687	685	680	680	678	680	682	690	688	702	686	0 56
12	704	695	695	692	692	689	690	685	685	684	683	682	680	675	680	698	690	680	670	664	672	690	692	700	686	0 56
13	701	692	692	692	690	686	688	686	681	681	680	680	680	670	688	690	685	680	662	669	662	667	680	692	682	0 40
14	693	692	691	690	690	687	687	687	682	684	685	683	680	682	690	708	702	672	660	656	658	673	687	693	684	0 48
15	695	690	692	690	683	684	684	683	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
16	—	—	—	—	—	—	—	—	—	675	670	666	662	668	680	698	700	670	650	642	640	650	663	683	675	0 12
17	680	682	687	687	699	690	683	680	678	674	670	665	660	658	660	679	695	685	662	660	663	670	675	680	676	0 16
18	687	680	691	690	680	683	683	674	672	671	670	668	665	662	670	698	703	688	660	655	659	666	666	672	676	0 16
19	680	682	681	680	679	680	679	677	670	669	667	668	668	669	675	683	690	675	654	650	658	655	658	670	672	0 0
20	678	670	678	680	683	680	679	680	675	674	672	670	668	668	670	675	692	694	677	673	680	675	667	662	676	0 16
21	666	660	663	667	663	663	665	665	663	662	661	659	657	652	650	653	670	683	675	670	672	680	672	670	665	0 59 32
22	666	665	669	668	666	665	663	665	665	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
23	—	—	—	—	—	—	—	—	—	670	675	670	665	663	659	659	670	689	695	690	698	700	699	700	675	1 0 12
24	692	680	675	676	674	673	673	670	667	669	670	668	665	660	659	657	661	662	660	665	664	674	672	680	669	0 59 48
25	677	671	670	670	673	673	670	673	673	672	670	670	670	667	660	660	677	675	654	650	665	672	682	682	670	59 52
26	682	672	672	671	670	668	668	670	670	670	670	667	664	660	662	670	673	662	657	654	649	654	670	681	667	59 40
27	683	680	683	685	675	672	674	673	668	666	664	662	660	668	670	680	693	672	663	665	672	675	680	688	674	1 0 8
28	682	670	674	674	674	670	670	670	665	668	670	665	660	660	662	668	678	664	642	633	640	660	674	685	666	0 59 36
29	682	674	680	680	680	674	673	671	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
30	—	—	—	—	—	—	—	—	—	680	690	690	690	688	685	682	700	705	692	683	679	680	682	692	683	1 0 44
31	698	694	698	695	694	693	690	690	690	689	688	688	687	683	690	705	722	702	690	680	682	682	682	690	692	1 21
Monthly Means..	1686	1683	1684	1684	1683	1681	1681	1680	1678	1678	1677	1675	1673	1671	1673	1680	1686	1679	1668	1666	1673	1680	1683	1687	1679	
Declination.....	60′ 56″	60′ 44″	60′ 48″	60′ 48″	60′ 44″	60′ 36″	60′ 36″	60′ 32″	60′ 24″	60′ 24″	60′ 20″	60′ 12″	60′ 4″	59′ 56″	60′ 4″	60′ 32″	60′ 56″	60′ 28″	59′ 44″	59′ 36″	60′ 4″	60′ 32″	60′ 44″	61′ 0″	.....	1′ 0′ 28″
Mean Hourly Variations from Monthly Mean.	28″	16″	20″	20″	16″	8″	8″	4″	−4″	−4″	−8″	−16″	−24″	−32″	−24″	4″	28″	0″	−44″	−52″	−24″	4″	16″	32″		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd. Zero at Temperature 88°·8 = 1497.

Ditto to Therm. = −0°·5 $k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$ Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JANUARY 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta Y}{Y}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−0·2 *		−0·2 *																
1	678	670	665	665	665	666	667	650	645	642	640	637	635	624	610	610	600	570	547	532	530	609	650	669	628	75	703	1·004231
2	687	714	698	687	695	688	708	714	710	700	690	678	667	655	644	630	602	582	560	550	545	562	588	627	649	54	703	4231
3	640	632	638	625	650	655	663	680	685	681	677	673	670	660	650	650	635	595	554	573	597	648	698	702	647	46	693	4314
4	704	698	697	692	697	698	698	697	695	688	682	676	670	674	672	665	650	612	575	540	562	610	650	693	662	29	691	4331
5	678	679	690	720	730	740	748	709	688	698	708	690	673	659	650	640	633	638	622	587	550	577	625	692	668	.24	692	4322
6	701	680	690	710	720	769	766	740	710	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	715	720	716	712	700	697	673	647	620	598	600	618	650	690	742	691	9	700	4256
8	750	755	748	742	740	740	734	734	733	744	755	742	730	710	715	719	700	679	650	600	566	580	645	697	704	−20	684	4388
9	740	750	751	737	719	718	730	730	720	716	713	706	700	690	678	662	629	592	562	559	609	630	682	710	685	−25	660	4587
10	721	727	721	730	741	750	745	720	738	727	717	718	720	713	720	718	700	651	640	615	626	655	680	718	705	−22	683	4396
11	738	750	758	760	751	743	750	695	680	691	703	692	682	693	700	682	674	671	692	697	661	675	707	722	707	−22	685	4380
12	740	785	770	761	763	759	760	785	765	751	738	719	700	669	685	700	672	650	645	630	640	665	690	723	715	−25	690	4339
13	770	774	739	780	763	754	753	754	756	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
14	—	—	—	—	—	—	—	—	—	745	735	727	720	715	710	684	658	660	630	628	620	648	661	686	711	−17	694	4306
15	702	722	740	729	732	737	738	726	715	707	700	684	668	670	645	608	582	572	554	560	590	626	653	686	669	27	696	4289
16	692	680	680	670	673	671	681	680	680	676	673	676	680	660	635	610	589	580	582	597	600	650	681	697	654	37	691	4331
17	688	677	681	688	689	711	711	700	690	691	692	686	681	678	640	615	600	580	563	570	578	600	630	660	654	16	670	4504
18	697	700	715	720	700	713	707	780	704	697	690	684	679	670	665	660	660	652	632	634	649	650	647	660	682	7	689	4347
19	681	690	690	694	700	702	710	717	712	711	710	706	702	690	672	643	627	618	620	608	609	630	628	650	672	−7	665	4546
20	666	681	680	704	713	711	712	724	718	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
21	—	—	—	—	—	—	—	—	—	707	697	698	700	688	678	677	632	630	590	592	640	713	779	830	690	−13	677	4446
22	811	804	792	806	840	810	796	795	748	739	730	710	690	678	663	640	605	584	559	534	530	553	592	665	695	−1	694	4306
23	680	685	694	700	704	700	698	700	692	683	675	667	660	650	645	640	622	598	560	530	540	557	592	633	646	22	668	4521
24	670	675	680	681	672	660	663	665	658	654	650	647	645	640	640	680	694	660	700	665	623	653	668	704	665	38	703	4231
25	713	714	713	724	725	708	737	710	695	689	684	677	670	653	630	602	595	590	582	570	594	610	620	643	660	48	708	4190
26	672	700	703	701	681	669	655	652	672	664	657	644	632	620	607	590	560	558	559	556	570	640	652	686	637	77	714	4140
27	735	721	691	681	674	690	690	698	640	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
28	—	—	—	—	—	—	—	—	—	631	622	616	610	608	600	572	542	540	562	580	595	588	608	670	632	63	695	4298
29	786	760	728	731	672	697	710	718	660	671	683	681	679	675	652	655	645	630	618	609	623	682	713	630	682	38	720	4091
30	745	750	746	730	714	699	700	703	698	694	690	685	680	677	670	660	662	640	602	608	627	690	667	657	683	15	698	4273
31	670	720	770	828	854	810	802	761	730	733	737	723	710	702	680	663	626	660	665	659	668	689	691	700	719	21	740	3925
Monthly Means..	708	715	714	718	718	717	720	716	701	698	695	687	680	671	661	650	631	615	601	592	599	631	659	691	675			
Temp. Corrections	0	3	10	13	15	18	20	22	23	24	24	25	26	29	32	36	35	31	24	17	11	6	0	−2	.....	18		
Corrected Means.	708	718	724	731	733	735	740	738	724	722	719	712	706	700	693	686	666	646	625	609	610	637	659	689	.....	.....	693	
Mean Hourly Variations from Monthly Mean. = ·00	-15	-25	-31	-38	-40	-42	-47	-45	-31	-29	-26	-19	-13	-7	0	7	27	47	68	84	83	56	34	4				
	-0124	-0206	-0256	-0314	-0331	-0248	-0389	-0372	-0256	-0239	-0215	-0157	-0108	-0058	0000	0058	0223	0389	0562	0694	0686	0463	0281	0033	.....	.....	.....	1·004314

JANUARY 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	788	787	785	785	785	782	782	782	781	780	780	780	780	780	780	779	780	781	781	783	784	785	788	790	7828			
2	790	789	788	788	788	787	787	787	787	787	787	787	787	788	788	789	788	788	788	790	793	796	796	795	7891			
3	793	793	790	790	790	792	791	791	791	790	790	790	790	789	788	787	788	790	792	795	798	799	799	799	7915			
4	800	799	798	796	796	796	796	796	795	794	794	793	793	793	792	792	794	795	798	800	801	802	802	803	7966			
5	803	802	801	801	799	799	799	799	799	798	798	798	798	797	793	793	793	797	798	798	795	796	798	800	7980			
6	800	800	798	797	797	797	797	797	797	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	799	802	802	802	801	801	800	801	802	806	809	810	812	814	814	8023			
8	815	814	812	812	811	810	809	809	809	809	809	809	809	808	808	809	809	810	810	811	812	815	817	817	8110			
9	818	817	815	814	814	812	810	810	810	810	810	810	810	810	809	809	809	810	810	812	814	816	817	818	8122			
10	819	818	813	812	812	810	810	809	809	809	809	808	808	808	808	807	808	810	812	815	817	817	819		8115			
11	819	816	813	813	811	810	810	810	810	810	810	809	809	807	807	807	806	808	810	812	815	817	818	818	8115			
12	818	817	814	814	813	812	811	811	810	810	810	810	810	810	809	808	809	810	812	813	815	814	816	816	8122			
13	816	816	814	814	815	815	813	813	812	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	811	810	809	809	807	806	804	802	802	805	807	809	810	810	810	8100			
15	810	809	807	807	806	802	800	799	798	797	797	795	794	792	790	787	788	790	790	791	793	795	798	798	7972			
16	799	799	798	795	795	793	793	792	792	791	790	790	790	790	790	788	789	790	792	797	799	801	804	805	7942			
17	805	804	802	800	800	800	800	800	800	800	800	800	800	800	798	797	796	794	798	798	800	802	806	807	8003			
18	806	804	802	802	802	802	802	800	800	800	800	800	800	800	802	802	802	802	805	808	809	808	808	808	8031			
19	808	808	808	807	807	806	806	806	805	805	805	804	804	804	803	802	805	808	809	810	811	811	812	812	8069			
20	812	810	809	808	808	808	807	807	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	808	809	809	809	807	806	805	806	808	809	810	811	812	813	814	8088			
22	815	812	811	810	810	807	806	805	805	804	804	803	802	801	800	799	799	800	802	803	807	808	808	808	8054			
23	808	808	803	802	802	802	799	799	799	799	799	798	797	793	791	790	790	790	792	797	799	800	802	802	7984			
24	801	801	800	799	799	796	795	794	794	792	791	791	791	791	790	786	787	788	790	791	793	795	796	799	7937			
25	799	799	799	798	797	797	797	795	790	790	790	789	788	787	783	780	780	782	785	789	790	791	792	794	7909			
26	795	793	791	790	780	780	780	780	780	779	779	779	779	779	775	772	772	777	780	782	785	788	790	790	7823			
27	790	791	790	789	788	788	782	782	782	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	784	787	785	784	782	780	779	780	782	787	790	790	792	796	798	7866			
29	798	798	792	791	790	791	791	791	791	790	790	790	790	790	790	790	791	791	797	799	800	801	804	804	7937			
30	805	802	800	800	800	799	799	799	799	799	799	798	798	798	798	798	798	799	800	800	802	806	808	808	8005			
31	808	807	803	800	800	800	800	800	799	799	799	798	798	795	793	790	791	792	793	797	800	801	803	802	7987			
Monthly Means...	8051	8042	8021	8013	8006	7997	7990	7986	7982	7979	7981	7976	7974	7966	7955	7945	7948	7960	7980	8000	8017	8033	8049	8055	7996			

N. B.—Decreasing numbers denote an increase in the Horizontal Force. In the upper table the numbers are tenths of scale divisions; in the lower table tenths of Fahrenheit degrees, and in the Means hundredths of Degrees.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3″·396 | $k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$ | Zero at Temperature 88°·8 = 1497.

Ditto to Therm. = −0°·5 | HORIZONTAL FORCE MAGNETOMETER. | Ditto reduced to 80° = 1215.

FEBRUARY 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										1·7		−1·9																
1	708	711	720	690	717	694	696	695	700	689	675	664	656	640	610	588	578	539	520	538	580	620	647	686	648	38	686	1·004371
2	690	695	689	693	689	694	692	690	685	674	660	649	641	639	632	590	590	570	549	539	558	592	630	652	641	47	688	4355
3	667	670	670	670	680	686	687	687	680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	690	697	675	657	663	657	643	618	587	580	568	545	570	616	643	646	36	682	4404
5	682	686	687	674	687	690	680	680	672	672	669	663	660	667	660	652	625	610	612	577	590	630	653	660	656	14	670	4504
6	670	690	700	702	701	710	710	706	700	699	695	691	690	688	679	660	622	570	555	550	570	621	660	670	663	−6	657	4611
7	683	681	680	680	672	680	690	676	670	667	660	656	656	650	640	635	598	557	520	530	562	603	637	585	636	4	640	4752
8	607	630	638	671	691	689	795	865	890	878	862	834	810	758	729	713	680	667	652	702	738	760	790	799	744	17	761	3752
9	788	768	761	760	771	780	789	788	757	751	742	738	737	729	715	690	662	640	617	600	643	700	721	732	724	26	750	3843
10	740	728	721	730	730	730	740	738	722	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	718	710	701	695	680	662	630	625	618	613	624	600	611	642	667	682	23	705	4215
12	682	742	750	802	732	738	734	704	736	716	693	681	672	670	650	663	650	638	632	645	685	677	688	710	695	33	728	4025
13	720	731	747	769	769	739	728	719	713	713	710	698	690	673	656	636	590	542	490	480	530	610	669	685	667	30	697	4281
14	700	717	707	710	730	721	749	732	710	709	705	699	697	685	682	640	608	590	593	620	675	720	740	752	691	46	737	3950
15	729	710	713	716	714	710	700	698	688	697	703	692	685	678	650	605	552	510	500	511	584	649	700	718	659	36	695	4298
16	722	713	710	706	710	712	711	712	700	703	703	692	685	672	640	603	578	540	515	488	501	547	602	650	646	24	670	4504
17	681	709	716	732	752	728	735	700	708	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	707	703	710	720	727	717	715	710	636	569	610	588	611	660	712	690	−13	677	4446
19	721	767	777	771	770	750	770	753	738	737	732	732	735	722	717	710	670	633	600	618	661	720	765	817	724	−29	695	4298
20	850	810	788	779	770	780	771	767	763	748	730	741	755	740	730	700	650	622	618	612	658	713	785	813	737	−54	683	4396
21	858	808	820	792	798	810	790	781	790	769	745	754	767	752	772	779	730	736	719	692	713	735	747	803	769	−61	708	4190
22	822	830	800	790	794	800	790	787	780	783	782	778	777	775	773	769	750	729	748	718	692	707	728	760	769	−76	693	4314
23	782	842	861	838	828	818	808	776	797	784	767	792	820	803	792	749	694	653	629	647	690	748	780	795	771	−80	691	4331
24	839	814	800	801	821	831	838	832	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	812	790	781	775	770	760	744	699	668	650	665	686	742	792	831	774	−84	690	4339
26	838	822	818	800	813	790	773	779	790	798	802	796	793	785	763	730	700	666	640	660	705	750	798	803	767	−83	684	4388
27	820	879	898	870	839	822	822	822	805	800	792	778	767	742	708	664	598	542	570	620	715	777	792	830	761	−68	693	4314
28	815	831	807	838	885	822	802	832	780	783	783	770	760	748	737	700	658	617	620	607	679	748	855	837	763	-60	703	4231
Monthly Means..	742	749	749	749	753	747	750	747	742	737	730	724	721	711	697	675	643	612	596	601	631	673	712	734	705			
Temp. Corrections	-31	-27	-20	-16	-14	-11	-7	-6	-5	-4	-5	-2	-1	4	9	13	7	2	-6	-12	-20	-25	-29	-33	.....	-10		
Corrected Means.	711	722	729	733	739	736	743	741	737	733	725	722	720	715	706	688	650	614	590	589	611	648	683	701	.....	.....	695	
Mean Hourly Variations from Monthly Mean. = 00	-16	-27	-34	-38	-44	-41	-48	-46	-42	-38	-30	-27	-25	-20	-11	7	45	81	105	106	84	47	12	-6	.....	.....	.....	1·004298
	-0133	-0223	-0281	-0314	-0374	-0239	-0397	-0381	-0348	-0314	-0348	-0223	-0206	-0165	-0091	0058	0372	0669	0867	0876	0694	0389	0100	-0050				

FEBRUARY 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	802	801	800	798	798	797	795	794	793	792	791	790	790	790	790	787	788	789	790	791	794	796	797	799	7938			
2	799	798	795	794	792	792	792	791	790	790	790	789	788	787	785	783	783	788	790	790	792	796	798	798	7913			
3	797	796	796	796	796	794	795	794	793	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	793	794	793	792	790	790	789	790	792	795	796	798	799	800	801	7945			
5	802	802	800	800	800	797	797	796	798	798	798	798	798	798	798	798	800	802	803	804	805	808	810	810	8008			
6	810	810	808	808	807	806	806	806	805	805	805	805	805	804	803	803	805	805	807	808	810	810	811	811	8068			
7	811	811	809	809	808	804	803	802	802	802	802	801	800	800	799	797	798	799	800	805	806	807	808	808	8038			
8	809	809	807	804	803	802	800	799	800	800	800	800	800	797	792	790	792	795	796	798	800	801	804	805	8001			
9	807	806	803	801	800	799	797	796	796	796	796	795	795	792	790	790	792	793	795	798	799	800	801	802	7975			
10	802	801	800	799	798	797	796	795	794	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	797	800	799	799	797	792	792	793	795	799	800	800	802	804	805	7982			
12	805	804	802	800	800	799	798	797	795	793	792	791	790	790	785	783	787	790	791	795	798	800	800	801	7952			
13	802	801	800	799	798	798	798	797	798	798	798	795	793	791	790	787	790	791	793	795	798	799	800	802	7963			
14	801	801	798	795	795	793	793	792	790	789	789	788	788	785	784	781	784	785	788	790	793	797	798	799	7915			
15	800	800	797	796	796	794	793	792	792	791	791	790	790	790	788	787	790	790	794	798	799	800	802	803	7943			
16	804	803	800	800	799	799	799	799	799	798	798	797	797	793	790	789	790	792	797	798	800	802	804	807	7981			
17	807	808	807	806	806	803	801	801	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	805	810	810	810	810	810	810	810	811	812	812	817	816	814	814	8087			
19	815	814	812	810	810	810	810	810	810	810	810	810	810	810	810	810	810	812	815	819	820	823	826	828	8135			
20	829	826	820	817	819	819	819	819	820	819	819	818	818	817	815	816	818	818	820	823	827	826	827	830	8208			
21	830	829	827	826	826	823	822	821	818	817	816	815	814	814	819	819	820	822	824	828	830	830	831	832	8230			
22	833	831	830	829	829	829	826	825	825	825	825	824	823	822	821	820	823	824	829	831	831	833	834	834	8273			
23	834	831	830	829	829	828	820	826	827	827	828	829	830	830	830	829	827	824	824	825	829	831	832	832	8284			
24	833	832	832	833	832	832	832	834	833	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	830	828	826	825	822	820	820	822	825	829	830	832	834	836	838	8296			
26	838	836	831	830	830	830	830	830	830	829	829	828	827	825	823	822	824	826	828	830	831	831	833	834	8294			
27	835	833	830	827	827	827	827	827	827	826	826	824	823	820	818	815	817	820	821	823	826	828	827	829	8251			
28	830	829	825	824	822	822	822	821	820	820	820	820	820	818	818	815	817	820	822	820	828	829	830	830	8226			
Monthly Means...	8140	8130	8108	8096	8092	8081	8071	8068	8065	8062	8065	8056	8052	8038	8025	8013	8029	8045	8067	8086	8110	8124	8136	8147	8079			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3″·396 $k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75^\circ\ 15'$ Zero at Temperature 88°·8 = 1497.

Ditto to Therm. = −0°·5 Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

MARCH 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										0·2 *		−1·7 *															
1	809	830	857	840	829	818	820	817	790	792	795	776	760	760	728	700	653	629	618	642	735	750	772	833	765	−60	705	1·004215
2	804	799	836	788	788	798	797	796	786	791	796	779	765	763	750	695	650	632	645	670	707	754	810	822	759	−69	690	4339
3	817	795	792	780	780	814	791	808	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	813	827	816	808	808	808	803	779	728	667	628	639	719	803	850	847	780	−95	685	4380
5	828	835	812	810	809	799	790	800	800	799	798	802	810	798	780	739	665	599	534	541	589	660	740	797	747	−100	647	4694
6	875	850	837	842	847	842	848	832	840	827	815	799	786	773	757	704	632	570	514	549	580	667	719	803	754	−93	661	4579
7	840	818	801	806	799	794	793	789	780	769	758	750	746	737	735	706	660	599	562	575	622	677	702	717	731	−78	653	4644
8	738	757	768	762	768	767	764	778	820	790	760	738	720	707	690	637	581	532	500	565	580	665	730	787	704	−70	634	4801
9	782	818	845	889	921	942	900	868	830	821	812	786	764	760	784	770	755	688	678	695	730	788	830	842	804	−70	734	3975
10	823	830	811	818	802	824	804	818	804	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	807	810	806	806	797	770	732	685	650	620	637	674	731	780	820	769	−87	682	4404
12	832	879	982	960	1035	1021	958	978	933	911	890	860	833	890	898	918	878	823	854	837	850	880	905	927	905	−87	818	3281
13	910	898	908	884	840	912	901	867	853	856	860	852	848	842	832	800	772	740	742	690	746	796	832	841	834	−79	755	3802
14	850	855	850	859	849	848	850	858	853	846	840	843	850	830	809	754	697	669	659	715	786	838	850	837	812	−84	728	4025
15	825	840	882	904	902	880	860	842	832	826	820	808	800	782	775	738	688	640	597	632	670	771	843	870	793	−87	606	5032
16	860	830	832	820	826	848	850	856	860	840	820	810	804	801	795	750	689	622	569	570	599	700	736	782	770	−93	677	4446
17	799	780	800	803	813	781	808	799	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	823	840	832	828	812	780	752	744	727	690	678	695	740	789	831	781	−94	687	4363
19	878	860	890	848	871	861	835	789	830	806	782	789	799	770	752	734	678	620	600	672	700	820	865	890	789	−99	690	4339
20	862	858	860	865	869	878	859	861	824	827	830	828	830	822	808	770	728	675	650	671	698	758	820	850	804	−114	690	4339
21	864	870	858	858	853	851	853	855	842	855	868	874	883	866	841	811	738	679	667	648	700	747	815	840	814	−132	682	4404
22	849	860	869	880	872	850	888	863	849	849	850	843	840	830	824	798	740	698	666	654	683	720	782	830	808	−146	662	4570
23	858	862	843	838	847	858	836	820	850	839	828	822	820	818	808	770	728	669	652	636	675	736	790	826	793	−131	662	4570
24	852	860	861	906	895	862	860	834	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	833	827	817	810	805	792	760	683	632	607	615	677	754	802	890	795	−126	669	4573
26	897	878	890	878	855	839	873	828	850	842	835	827	822	820	810	778	739	702	704	723	777	824	841	857	820	−148	672	4487
27	860	848	838	838	836	825	827	814	800	798	796	781	770	785	762	740	708	663	637	680	741	775	800	837	782	−148	634	4801
28	865	871	846	839	842	869	862	848	840	836	832	832	837	822	797	777	709	665	640	664	715	769	815	858	802	−161	641	4744
29	852	850	843	840	847	857	846	845	850	848	847	842	840	836	817	780	728	660	654	673	710	750	810	841	803	−177	626	4867
30	862	857	906	892	862	904	892	878	880	875	870	857	847	840	830	785	735	682	630	651	710	770	841	858	821	−180	641	4744
Monthly Means..	842	842	851	848	848	852	845	836	832	828	823	814	809	803	789	757	707	659	635	651	695	755	803	836	790			
Temp. Corrections.	-132	-129	-121	-116	-112	-109	-108	-105	-101	-99	-99	-95	-92	-89	-83	-83	-88	-95	-105	-113	-120	-128	-134	-137	.....	-108		
Corrected Means..	710	713	730	732	736	743	737	731	731	729	724	719	717	714	706	674	619	564	530	538	575	627	669	699	.....	.....	682	
Mean Hourly Variations from Monthly Mean. = ·00	-28	-31	-48	-50	-54	-61	-55	-49	-49	-47	-42	-37	-35	-32	-24	8	63	118	152	144	107	55	13	-17				
	-0231	-0256	-0397	-0413	-0446	-0504	-0454	-0405	-0405	-0389	-0348	-0306	-0289	-0265	-0198	0066	0521	0975	1257	1190	0884	0454	0109	-0141	.....	.....	.....	1·004404

MARCH 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	830	830	828	826	826	824	823	822	820	820	820	819	819	818	815	815	817	819	820	823	825	828	830	830	8228			
2	830	830	828	827	827	824	823	823	823	822	822	822	822	821	820	819	820	822	825	828	830	832	834	835	8254			
3	835	835	831	830	830	830	830	830	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
4	—	—	—	—	—	—	—	—	—	831	833	831	830	830	830	830	830	832	835	838	838	840	840	840	8329			
5	840	840	839	837	837	834	834	831	830	830	830	830	830	830	830	830	831	832	836	838	839	840	840	840	8345			
6	840	840	839	838	837	837	837	836	833	831	830	827	825	824	823	823	826	828	830	831	833	835	837	838	8324			
7	839	838	836	834	832	830	830	828	828	826	825	822	820	820	818	819	820	823	827	829	830	830	833	834	8280			
8	834	834	832	830	829	829	829	828	825	823	822	821	820	820	818	818	819	820	821	824	828	830	831	832	8257			
9	831	831	830	829	827	825	825	825	823	822	821	820	820	820	818	818	820	822	825	829	830	833	834	834	8255			
10	834	834	831	832	831	827	827	825	824	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
11	—	—	—	—	—	—	—	—	—	828	832	831	830	830	828	825	827	830	831	832	834	835	837	838	8305			
12	839	838	835	834	832	832	831	831	830	830	830	829	829	828	824	822	823	826	828	830	831	832	834	836	8306			
13	836	833	832	831	830	830	830	830	830	829	829	826	824	822	820	820	821	822	827	828	829	830	833	835	8282			
14	836	835	832	831	830	830	830	829	830	829	829	828	828	824	822	820	822	825	829	830	832	835	837	838	8296			
15	838	837	833	831	830	830	830	830	829	828	828	827	827	823	822	822	825	828	830	833	835	838	839	840	8305			
16	840	838	835	833	832	832	832	832	830	830	830	830	830	829	826	827	827	830	831	833	835	837	839	840	8324			
17	840	839	837	835	833	833	832	831	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
18	—	—	—	—	—	—	—	—	—	830	830	830	830	829	824	826	828	829	830	833	835	839	840	840	8326			
19	840	839	838	837	834	831	832	830	830	830	830	830	830	830	828	828	829	830	832	836	839	842	844	847	8340			
20	846	844	841	840	840	839	838	836	835	834	834	833	832	832	830	830	832	835	839	842	845	848	850	850	8385			
21	850	849	848	846	843	840	840	840	840	840	840	840	841	840	837	838	838	839	844	847	852	852	854	854	8438			
22	854	853	853	852	852	852	852	852	850	849	848	845	843	841	839	838	840	842	843	846	848	850	852	855	8479			
23	854	851	850	850	849	847	845	843	842	842	842	841	840	840	836	834	838	840	840	840	842	844	846	848	8435			
24	849	849	845	843	843	840	838	835	831	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	836	841	840	840	839	835	835	838	840	841	845	848	852	854	855	8422			
26	857	855	850	850	849	849	849	849	849	847	846	844	842	840	840	840	842	845	848	850	853	855	858	858	8485			
27	859	857	853	852	850	850	850	850	849	846	843	841	840	840	840	840	841	842	849	851	852	856	858	858	8486			
28	860	858	856	852	852	852	852	852	850	850	850	847	844	842	843	845	849	850	852	858	860	860	862	863	8525			
29	862	861	860	856	856	857	856	855	855	853	852	851	850	850	849	850	853	855	859	862	863	867	868	868	8570			
30	867	867	860	860	859	859	858	858	853	852	852	851	850	850	850	850	850	855	859	861	865	868	869	869	8580			
Monthly Means...	8438	8429	8405	8391	8381	8370	8367	8358	8346	8342	8342	8329	8322	8312	8294	8293	8310	8331	8358	8383	8404	8426	8443	8452	8368			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3″·396 scd.

Ditto to Therm. = −0°·5

$k = a.\cos.v. = 0{\cdot}0003139 \times \cos.75°\,15'$

Zero. at Temperature 88°·8 1497

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

APRIL 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										0·4 *		−0·7 *																
March 31	862	845	850	854	862	869	864	861	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	865	860	854	850	849	837	796	729	660	617	642	710	793	862	892	815	−191	624	1·004884
2	901	888	878	880	878	872	850	818	790	802	813	818	825	842	825	785	708	633	608	660	710	788	860	881	805	−200	605	5041
3	890	892	894	886	881	872	850	880	837	848	858	843	830	835	828	790	753	700	708	720	866	940	1010	1045	852	−202	650	4669
4	1137	1159	1095	1045	1049	1060	1037	1042	1008	993	978	958	940	923	935	965	900	882	890	930	949	952	999	1050	995	−201	794	3479
5	1074	1013	1001	992	990	993	962	948	938	923	907	911	917	910	895	859	808	804	775	850	882	950	992	1020	930	−196	734	3975
6	1035	962	961	968	968	978	978	974	970	961	952	935	919	918	910	880	843	834	800	834	855	914	950	965	928	−201	727	4033
7	950	927	925	928	922	910	934	919	902	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	911	922	914	908	905	897	862	825	745	725	722	770	780	833	858	871	−187	684	4388
9	921	1002	983	960	952	947	920	909	887	891	895	889	884	880	891	845	785	750	737	800	851	874	886	940	887	−172	715	4132
10	987	970	963	950	970	938	891	902	910	901	892	887	884	868	850	820	762	745	749	765	829	870	881	877	878	−169	709	4182
11	880	897	902	900	897	890	892	884	887	879	870	867	866	842	830	793	740	698	702	708	750	780	818	850	834	−164	670	4504
12	877	881	910	964	962	970	979	953	910	908	905	917	930	941	928	894	863	890	832	822	864	899	906	960	911	−181	730	4008
13	1002	960	968	953	967	949	943	958	950	941	932	918	905	882	858	830	782	740	740	786	860	890	952	974	902	−201	701	4248
14	968	950	968	933	932	920	907	906	895	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	919	943	928	915	909	900	873	832	789	780	782	840	899	970	1067	905	−217	688	4355
16	1040	1006	972	969	962	959	956	957	928	929	930	928	927	900	876	842	810	770	763	802	816	868	915	950	907	−214	693	4314
17	942	938	968	959	971	953	930	905	948	935	921	910	900	898	875	845	788	710	690	740	791	863	957	988	889	−203	686	4371
18	960	951	1003	1008	982	982	939	944	940	935	930	928	927	930	932	925	880	790	771	766	788	860	948	980	917	−213	704	4223
19	972	952	956	972	990	1002	980	970	960	959	958	947	937	930	918	904	850	799	772	799	850	892	958	1000	926	−246	680	4421
20	1010	995	973	972	962	950	940	897	942	946	950	936	924	919	942	940	902	852	829	824	860	927	972	1000	932	−262	670	4504
21	992	1000	989	987	994	990	964	950	938	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	944	950	939	930	933	930	892	830	793	790	800	850	912	941	963	925	−270	655	4628
23	952	960	949	950	953	958	961	958	926	928	930	928	928	928	922	900	863	820	818	830	881	920	947	970	920	−258	662	4570
24	975	941	959	956	950	947	948	937	933	926	918	913	909	905	920	900	844	818	762	772	810	854	902	919	901	−258	643	4727
25	930	953	954	946	930	934	931	922	920	908	895	887	880	875	880	860	820	790	768	779	825	865	910	941	888	−251	637	4776
26	950	937	929	924	920	919	908	911	905	897	888	883	880	875	865	830	773	740	720	740	793	843	910	935	870	−256	614	4967
27	948	951	949	957	962	958	949	941	929	930	930	920	911	927	902	877	840	795	782	785	810	853	898	933	902	−277	625	4876
28	940	939	929	920	923	921	928	924	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	934	947	938	930	912	895	862	800	772	743	789	841	900	955	982	898	−262	636	4784
30	990	1004	988	973	993	990	984	964	923	953	982	962	944	962	950	890	835	797	812	906	960	1033	1100	1117	959	−257	702	4239
Monthly Means..	965	957	954	950	951	947	936	928	918	918	918	910	904	900	892	864	814	774	757	783	831	881	932	964	898			
Temp. Corrections	-247	-241	-233	-228	-225	-221	-215	-211	-207	-205	-205	-201	-199	-194	-191	-194	-199	-208	-220	-232	-243	-249	-252	-252	.....	-220		
Corrected Means..	718	716	721	722	726	726	721	717	711	713	713	709	705	706	701	670	615	566	537	551	588	632	680	712	.....	.....	678	
Mean Hourly Variations from Monthly Mean. = 00	-40	-38	-43	-44	-48	-48	-43	-39	-33	-35	-35	-31	-27	-28	-23	8	63	112	141	127	90	46	-2	-34	.....	.....	.....	1·004438
	-0331	-0314	-0356	-0364	-0397	-0397	-0356	-0322	-0273	-0289	-0289	-0256	-0223	-0231	-0190	0066	0521	0926	1165	1050	0744	0381	-0017	-0281				

APRIL 1855. Temperature of Horizontal Force Magnetometer.

	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.
										*		*													
March 31	868	866	860	860	859	859	857	855	855																
1	—	—	—	—	—	—	—	—	—	857	860	858	856	858	855	856	858	860	862	868	869	870	873	872	8613
2	871	869	869	867	866	863	860	858	861	860	859	858	857	857	857	858	859	862	866	869	871	872	873	875	8640
3	875	871	870	868	867	865	864	862	860	859	858	857	857	855	853	855	859	861	863	870	872	875	875	876	8645
4	877	874	870	868	868	866	862	861	860	859	858	857	857	855	856	857	857	860	864	869	870	872	873	872	8642
5	873	870	869	869	867	863	863	860	859	858	858	856	855	855	855	855	856	858	862	866	868	870	871	871	8628
6	870	869	868	867	866	864	862	862	861	860	860	860	860	858	858	858	860	860	862	866	871	872	874	873	8642
7	871	870	870	867	866	866	864	861	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	859	859	856	854	850	850	850	852	853	857	858	860	861	862	863	8600
9	864	862	860	860	859	859	858	856	852	852	852	851	850	849	847	848	850	852	854	857	859	860	860	861	8555
10	861	860	859	859	858	857	854	853	853	853	853	852	851	850	848	848	850	851	853	854	858	858	860	860	8547
11	860	860	858	855	853	853	853	853	851	850	850	850	850	849	845	846	849	850	852	855	858	860	860	861	8534
12	861	860	858	858	857	856	856	856	856	855	855	855	855	854	852	852	855	860	861	863	864	866	869	868	8584
13	869	869	864	863	862	862	861	861	860	860	860	860	860	859	858	859	860	862	865	869	871	875	875	874	8641
14	872	871	870	868	868	867	865	864	863	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	865	867	866	865	862	861	865	866	868	870	872	877	879	880	880	8688
16	878	876	876	874	873	870	868	865	865	865	865	863	862	860	858	860	861	863	868	870	871	873	874	874	8680
17	875	872	871	870	869	868	863	862	862	861	860	859	858	855	855	857	859	860	863	869	870	872	872	872	8647
18	872	871	870	868	867	864	863	861	861	860	860	862	865	865	864	864	864	868	872	874	877	878	879	879	8678
19	880	879	878	879	878	878	876	876	874	873	872	871	870	869	869	870	870	874	880	883	888	889	889	890	8773
20	889	886	882	881	881	880	880	875	875	874	873	873	873	872	873	873	876	880	887	890	897	899	900	898	8820
21	894	892	890	890	890	888	885	884	883	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	881	880	879	878	877	877	878	879	880	882	886	888	890	890	890	8846
23	888	886	886	880	880	879	879	879	878	878	878	876	875	873	873	873	875	880	883	886	889	890	890	890	8810
24	890	889	884	881	881	880	880	880	879	878	878	877	876	873	873	872	873	878	881	883	888	889	890	890	8810
25	888	885	884	881	881	880	878	874	874	873	872	871	870	870	870	870	870	875	880	885	890	891	891	892	8790
26	893	890	883	880	880	880	880	877	875	874	873	871	870	869	870	870	870	876	880	885	892	895	898	898	8804
27	896	894	890	890	889	888	887	886	882	881	880	879	878	875	875	876	880	882	888	890	894	898	898	897	8864
28	894	891	887	885	883	883	880	879	875	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	877	879	878	877	874	871	873	873	878	881	885	889	891	895	896	8822
30	894	891	888	886	884	884	881	881	883	879	876	874	872	870	868	868	870	871	879	881	886	889	890	891	8807
Monthly Means...	8778	8760	8736	8721	8712	8701	8684	8670	8660	8654	8652	8642	8635	8620	8612	8620	8635	8662	8698	8732	8764	8782	8793	8793	8697

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd. Zero. at Temperature 88°·8 = 1497.

Ditto to Therm. = −0°·5 $k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$ Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

MAY 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta X}{1+X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−0·2 *		1·1 *																
1	1086	1068	1026	1023	1018	1010	995	976	978	965	953	937	918	920	895	869	793	758	767	840	921	972	990	1010	945	−253	692	1·004322
2	1002	1005	981	1000	989	998	1010	990	914	940	967	972	975	963	938	918	870	837	819	848	881	930	983	1016	948	−264	684	4388
3	1030	1007	1000	975	1009	1014	1000	980	958	943	929	932	932	922	893	855	800	770	774	841	893	939	970	1002	932	−253	679	4430
4	1010	990	987	978	978	990	986	976	980	975	970	965	958	942	912	872	802	798	797	801	857	898	950	992	932	−264	668	4521
5	1004	970	986	1021	1007	1001	990	971	968	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	985	1002	1002	1000	961	955	960	917	850	828	861	919	940	994	1061	965	−292	673	4479
7	1053	1031	1019	1010	995	996	981	975	992	996	1000	999	996	988	980	933	885	859	812	834	859	911	985	998	962	−316	646	4702
8	1057	1071	1080	1099	1100	1178	1170	1179	1099	1110	1122	1096	1068	1049	1020	988	932	930	932	865	912	970	1024	1079	1047	−319	728	4025
9	1037	1102	1134	1106	1089	1125	1139	1142	1038	1019	1000	1007	1012	1008	970	949	913	872	848	869	895	903	975	1012	1007	−298	709	4182
10	1027	1002	1017	985	960	991	981	970	948	924	900	908	913	900	915	870	798	825	807	795	848	881	960	1041	924	−296	628	4851
11	1062	1079	1074	1058	1050	1042	1040	1045	980	985	990	993	993	972	944	918	907	888	930	914	920	945	909	1033	990	−309	681	4413
12	1059	1065	1035	1034	1020	1018	1010	1022	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
13	—	—	—	—	—	—	—	—	—	1007	1015	1009	1000	994	978	939	902	841	882	918	953	1012	1058	1060	993	−331	662	4570
14	1051	1070	1052	1035	1060	1067	1050	1035	1030	1021	1013	1012	1009	1002	980	965	902	848	855	922	954	1010	1058	1066	1003	−339	664	4554
15	1059	1070	1073	1073	1080	1029	1070	1009	1068	1055	1042	1033	1021	997	992	1005	972	938	903	916	960	1007	1075	1132	1024	−354	670	4504
16	1126	1110	1084	1074	1068	1062	1071	1057	1052	1047	1042	1032	1020	1027	1002	970	920	859	832	890	941	950	988	1030	1011	−362	649	4678
17	1060	1080	1070	1052	1048	1067	1047	1040	1022	1016	1010	1010	1007	1003	1000	972	933	898	922	965	977	1010	1050	1078	1014	−350	664	4554
18	1081	1070	1060	1060	1060	1044	1036	1039	1028	1034	1040	1037	1031	1002	987	950	903	860	842	851	930	970	1024	1055	1000	−342	658	4603
19	1060	1060	1061	1050	1043	1040	1038	1015	1047	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
20	—	—	—	—	—	—	—	—	—	1033	1019	1005	988	975	960	932	890	863	849	865	908	959	1008	1034	988	−360	628	4851
21	1070	1092	1081	1061	1058	1062	1028	1035	1007	1004	1002	1002	1000	990	981	952	897	859	925	910	931	980	1025	1068	1001	−377	624	4884
22	1089	1098	1092	1082	1080	1066	1052	1046	1030	1029	1028	1025	1020	1015	1002	977	935	900	900	920	985	1031	1070	1102	1024	−407	617	4942
23	1110	1123	1103	1092	1082	1070	1079	1078	1050	1047	1045	1044	1040	1028	1002	970	933	900	912	925	938	994	1038	1054	1027	−418	609	5008
24	1085	1094	1082	1070	1068	1054	1050	1020	1020	1019	1018	1010	1000	1001	980	974	927	893	871	880	920	968	1025	1092	1005	−432	573	5305
25	1140	1148	1179	1171	1132	1115	1113	1110	1097	1093	1090	1090	1088	1078	1040	998	949	911	911	960	1010	1078	1118	1141	1073	−450	623	4892
26	1148	1146	1130	1115	1098	1083	1070	1045	1090	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
27	—	—	—	—	—	—	—	—	—	1095	1100	1102	1102	1097	1055	1059	1050	1137	1087	1132	1209	1230	1245	1270	1121	−436	685	4380
28	1281	1245	1217	1243	1194	1138	1169	1161	1142	1141	1140	1129	1115	1110	1077	1048	1018	1017	1032	1072	1080	1127	1172	1200	1136	−439	697	4281
29	1202	1199	1164	1153	1140	1137	1129	1128	1090	1091	1092	1085	1075	1070	1043	1032	995	962	947	960	1001	1065	1050	1127	1081	−413	668	4521
30	1140	1130	1122	1100	1105	1108	1110	1099	1098	1085	1072	1061	1048	1030	1005	974	948	940	960	990	1048	1083	1062	1140	1061	−401	660	4587
31	1148	1150	1137	1129	1154	1098	1096	1091	1089	1083	1078	1060	1040	1038	1010	969	930	930	939	994	1037	1085	1118	1132	1064	−405	659	4595
Monthly Means..	1084	1084	1076	1068	1062	1059	1056	1046	1030	1027	1025	1021	1014	1003	982	956	912	887	885	909	951	994	1037	1075	1010			
Temp. Corrections	-391	-381	-367	-361	-357	-351	-346	-340	-336	-333	-331	-326	-322	-316	-312	-315	-322	-334	-349	-367	-382	-392	-399	-400	.....	-351		
Corrected Means..	693	703	709	707	705	708	710	706	694	694	694	695	692	687	670	641	590	553	536	542	569	602	638	675	.....	.....	659	
	-34	-44	-50	-48	-46	-49	-51	-47	-35	-35	-35	-36	-33	-28	-11	18	69	106	123	117	90	57	21	-16				
Mean Hourly Variations from Monthly Mean. = ·00	-0281	-0364	-0413	-0397	-0381	-0405	-0421	-0389	-0289	-0289	-0289	-0298	-0273	-0231	-0091	0149	0570	0876	1017	0967	0744	0471	0173	-0133	.....	.....	.....	1·004595

MAY 1855. Temperature of Horizontal Force Magnetometer.

	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.
										*		*													
1	890	887	883	880	880	879	878	874	876	874	873	871	870	868	868	869	870	873	880	888	891	893	895	897	8795
2	895	892	888	888	883	883	882	881	878	878	878	876	875	872	872	872	875	879	882	890	890	891	893	895	8828
3	893	890	886	885	883	881	880	878	877	876	875	873	871	870	867	869	871	875	880	882	885	885	888	890	8796
4	890	889	885	883	883	881	881	880	880	879	878	877	877	875	873	875	879	881	883	887	890	892	894	895	8828
5	895	891	889	888	887	885	885	884	883	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	886	890	888	887	883	882	883	887	890	895	900	905	907	908	908	8911
7	908	907	904	901	900	898	896	895	895	893	892	891	890	890	890	890	891	895	899	901	904	905	908	909	8980
8	910	908	901	900	900	900	900	900	898	896	894	893	893	891	890	890	891	896	899	901	903	905	908	906	8989
9	905	904	901	900	899	897	896	893	890	889	888	885	882	881	880	881	883	888	890	893	899	900	901	902	8928
10	903	901	897	893	892	892	890	889	888	887	886	884	883	882	881	882	883	888	892	899	902	905	907	907	8922
11	907	903	901	900	900	896	892	890	890	890	890	890	890	888	885	888	890	893	898	902	904	906	907	907	8961
12	907	904	900	900	900	899	898	897	896	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	—	—	—	—	898	900	900	900	898	895	896	899	899	903	909	912	915	916	916	9024
14	915	911	910	908	907	906	906	898	900	900	900	899	898	896	894	897	899	900	904	910	913	915	916	916	9049
15	916	915	910	910	907	907	907	908	905	904	904	909	900	899	896	899	900	902	910	917	924	926	926	925	9091
16	923	922	920	919	917	916	910	910	910	909	909	902	905	902	900	900	902	908	910	912	915	916	918	918	9116
17	918	916	912	910	910	910	910	907	906	904	902	901	901	901	900	901	903	906	910	911	911	913	915	914	9080
18	914	912	909	909	908	908	908	907	906	904	902	900	899	893	893	893	898	899	903	907	910	917	918	920	9057
19	920	918	912	910	909	909	907	906	904	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	906	908	905	903	901	901	901	901	905	910	918	922	930	930	928	9110
21	928	925	922	920	918	913	912	910	910	909	909	906	903	902	902	902	907	910	915	922	930	934	936	938	9160
22	938	933	930	927	926	926	926	920	920	919	918	916	915	912	911	910	913	918	920	928	935	940	947	948	9248
23	945	940	937	932	930	928	926	925	922	921	920	920	920	919	918	918	920	920	925	930	936	940	941	940	9280
24	940	940	937	933	931	930	929	928	926	925	925	924	923	921	921	922	925	928	934	938	943	947	950	950	9321
25	952	950	941	940	939	936	932	930	930	929	929	928	928	929	927	928	929	932	938	945	950	953	954	954	9376
26	952	948	942	941	940	938	934	932	932	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	—	—	—	926	920	919	919	917	915	918	920	923	927	935	941	949	954	957	9333
28	958	952	944	941	939	934	928	928	928	926	925	924	923	920	920	920	921	927	931	939	944	949	950	950	9342
29	946	940	934	932	930	928	927	926	923	921	920	919	918	914	912	911	914	919	925	929	936	938	940	940	9267
30	938	933	926	925	923	922	922	920	918	916	915	913	912	910	910	910	912	918	923	930	935	940	941	940	9230
31	938	935	930	929	928	922	921	920	918	916	915	913	912	910	910	910	913	920	924	930	940	941	944	944	9243
Monthly Means...	9201	9173	9130	9113	9100	9083	9068	9050	9040	9030	9024	9009	8999	8979	8968	8976	8999	9034	9078	9131	9174	9204	9224	9227	9084

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = −0·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$

Zero. at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JUNE 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{1+\frac{\Delta X}{X}}$
Madras Mean Time.	P.M.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.	h.m.				
	4 41	5 41	6 41	7 41	8 41	9 41	10 41	11 41	12 41	13 41	14 41	15 41	16 41	17 41	18 41	19 41	20 41	21 41	22 41	23 41	0 41	1 41	2 41	3 41				
										0·8 *		−0·9 *																
1	1132	1125	1120	1093	1098	1097	1099	1090	1085	1073	1060	1047	1035	1050	1021	995	969	950	955	980	1042	1075	1110	1108	1059	−415	644	1·004719
2	1087	1088	1080	1073	1060	1058	1051	1053	1050	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	1042	1032	1031	1031	1027	1020	1010	960	959	933	932	965	999	1055	1098	1029	−410	619	4926
4	1146	1140	1114	1112	1118	1097	1087	1072	1060	1053	1045	1046	1048	1043	1029	986	962	935	930	953	990	1027	1069	1105	1049	−423	626	4867
5	1132	1143	1080	1110	1093	1092	1080	1057	1072	1065	1056	1057	1060	1054	1030	1011	988	960	952	955	975	1005	1038	1074	1047	−415	632	4817
6	1087	1075	1059	1042	1048	1060	1021	1020	1030	1039	1047	1023	1000	992	975	964	968	954	962	937	1010	1048	1135	1148	1027	−385	642	4735
7	1128	1097	1100	1089	1054	1030	1034	1028	1030	1027	1022	1010	1000	1006	985	962	928	887	893	968	982	1008	1050	1096	1017	−355	662	4570
8	1090	1082	1107	1063	1045	1025	1017	1005	1010	996	981	985	990	1008	992	960	950	908	920	962	1000	1015	1020	1055	1008	−340	668	4521
9	1072	1020	1018	1021	1012	1011	1006	997	1010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	986	960	953	948	920	903	900	969	900	850	915	1007	1022	1035	1043	978	−328	650	4669
11	1050	1072	1031	1014	1010	1012	1015	1002	950	949	947	966	987	960	940	930	918	890	892	932	965	980	1015	1037	978	−319	659	4595
12	1032	1015	998	992	997	1000	988	980	970	966	960	960	962	938	941	918	890	908	888	870	892	917	957	968	954	−295	659	4595
13	990	984	990	1000	989	1003	990	990	983	981	977	968	960	942	940	921	890	852	825	836	858	900	943	980	945	−285	660	4587
14	1002	1008	982	980	978	963	962	965	940	936	930	925	922	905	879	842	790	750	761	807	862	920	950	975	914	−283	631	4826
15	972	959	948	946	953	948	942	943	938	930	920	914	910	910	892	870	850	810	797	800	830	901	965	1022	911	−294	617	4942
16	1050	1039	1010	1005	1000	998	990	981	972	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	951	928	921	916	910	900	872	826	839	790	727	765	810	862	910	915	−300	615	4959
18	940	948	938	935	930	930	869	890	910	909	907	903	900	889	861	832	790	750	748	760	787	822	880	923	873	−281	592	5148
19	942	945	960	956	945	942	938	922	912	911	908	904	902	900	879	858	821	784	740	752	795	854	918	957	889	−289	600	5082
20	958	950	940	935	930	930	922	920	920	920	918	928	940	927	904	892	876	824	828	820	840	870	901	941	906	−308	598	5099
21	945	980	973	980	975	972	969	960	965	962	957	942	928	919	892	880	860	830	815	830	895	927	958	962	928	−323	605	5041
22	986	977	962	909	900	973	1020	1047	1060	1053	1044	1025	1008	990	942	969	890	875	932	943	922	948	958	975	971	−320	651	4661
23	988	990	980	970	964	972	969	974	970	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	966	960	960	962	970	940	910	900	872	860	870	900	942	978	1005	949	−294	655	4628
25	1017	1018	1008	1001	998	1001	980	988	970	976	980	980	982	970	959	931	917	890	872	878	900	953	998	1029	966	−307	659	4595
26	1040	1035	1040	1038	1020	993	1001	1000	984	978	971	971	973	965	940	920	890	868	850	839	893	929	988	1008	964	−332	632	4817
27	1022	1002	986	980	970	968	960	971	960	964	967	964	962	960	950	925	866	812	800	830	912	978	1022	1037	949	−326	623	4892
28	1035	1048	1041	1028	1028	1012	1009	1000	985	983	980	966	954	957	960	930	919	902	879	882	850	833	850	872	954	−316	638	4768
29	930	965	972	966	989	992	985	978	960	950	938	942	948	940	910	889	919	863	820	827	900	983	1010	998	941	−283	658	4603
30																												
Monthly Means..	1031	1028	1017	1010	1004	1003	996	993	988	983	976	972	969	962	943	923	900	871	860	872	909	947	987	1013	965			
Temp. Corrections	-364	-357	-346	-341	-337	-334	-330	-326	-323	-319	-317	-312	-308	-301	-295	-297	-301	-309	-321	-335	-346	-355	-361	-362	.....	-329		
Corrected Means.	667	671	671	669	667	669	666	667	665	664	659	660	661	661	648	626	599	562	539	537	563	592	626	651	.....	.....	636	
	-31	-35	-35	-33	-31	-33	-30	-31	-29	-28	-23	-24	-25	-25	-12	10	37	74	97	99	73	44	10	-15				
Mean Hourly Variations from Monthly Mean = ·00	-0256	-0289	-0289	-0273	-0256	-0273	-0248	-0256	-0239	-0231	-0190	-0198	-0206	-0206	-0100	0083	0306	0611	0802	0618	0603	0364	0083	-0124	.....	.....	.....	1·004784

JUNE 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	942	940	931	930	928	928	928	924	922	921	921	919	918	913	910	911	915	920	930	932	940	943	945	940	9271			
2	935	932	930	929	926	923	921	920	918	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	918	918	917	917	914	912	914	918	920	924	933	940	942	949	950	9258			
4	950	942	938	938	937	931	928	927	925	923	921	919	918	916	915	916	920	923	929	933	938	940	940	940	9295			
5	940	940	935	930	930	930	930	928	925	923	921	920	920	919	918	917	919	920	923	930	932	933	932	935	9271			
6	932	930	922	920	918	920	917	915	915	914	913	911	910	908	907	908	910	912	918	923	929	930	930	929	9184			
7	923	919	915	913	912	910	910	908	908	905	902	901	900	899	899	900	902	908	910	914	916	918	918	916	9094			
8	915	912	909	907	905	905	904	901	900	900	900	899	899	898	897	898	900	902	909	912	913	913	913	915	9052			
9	912	909	906	902	901	900	900	900	899	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	898	898	897	896	892	890	891	893	898	900	907	910	911	913	913	9015			
11	912	910	906	902	900	898	896	895	893	892	892	891	891	890	890	890	892	896	900	908	910	910	908	904	8990			
12	895	896	893	893	892	892	892	892	892	891	890	889	888	884	883	883	885	888	889	890	900	902	903	900	8917			
13	900	898	897	894	894	892	892	892	892	892	892	890	888	884	881	881	879	878	878	880	884	890	893	895	8890			
14	896	895	891	890	890	888	887	887	887	884	882	880	879	878	877	879	880	882	886	892	900	900	900	900	8879			
15	899	896	894	893	892	891	890	889	890	890	890	887	885	880	880	880	881	882	887	892	900	903	910	913	8914			
16	913	909	903	900	899	900	900	900	899	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	894	890	890	890	888	884	882	882	882	883	888	889	890	891	893	8933			
18	895	891	889	888	888	888	888	888	888	886	885	884	883	880	879	878	880	882	885	890	893	898	900	901	8878			
19	900	895	892	891	890	890	890	888	885	885	885	884	883	880	880	881	881	885	889	895	890	903	910	909	8900			
20	902	900	897	895	894	894	893	893	893	892	892	892	893	892	890	890	890	892	896	899	902	904	906	906	8957			
21	904	903	901	902	902	902	901	902	900	901	900	896	892	890	888	889	890	894	900	904	908	909	910	912	9001			
22	913	910	907	907	905	903	901	901	903	900	900	897	894	892	890	892	893	896	898	899	898	897	895	895	8993			
23	892	891	889	889	888	888	887	886	884	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	886	889	888	888	887	884	888	889	890	895	899	901	905	908	908	8916			
25	906	905	902	901	901	898	895	895	892	891	890	889	889	887	885	886	887	888	890	892	899	902	908	912	8954			
26	913	915	912	910	910	908	907	905	903	902	901	899	898	897	893	893	894	896	898	900	900	902	904	905	9027			
27	907	907	904	903	902	902	901	900	900	899	899	898	898	897	893	894	894	893	898	901	905	910	910	911	9011			
28	912	912	910	909	905	904	902	900	900	899	898	895	893	890	890	890	889	889	890	891	891	895	898	899	8980			
29	899	898	897	897	897	896	893	892	891	890	890	888	886	882	881	880	880	881	882	883	883	884	885	886	8884			
30																												
Monthly Means..	9123	9102	9068	9053	9042	9032	9021	9011	9002	8990	8984	8968	8958	8935	8918	8924	8937	8959	8995	9035	9068	9094	9112	9115	9019			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = −0°·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$

Zero. at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

JULY 1855. Horizontal Force Magnetometer.

Gottingen Mean Time. / Madras Mean Time.	Noon P.M. h.m. 4 41	1 h.m. 5 41	2 h.m. 6 41	3 h.m. 7 41	4 h.m. 8 41	5 h.m. 9 41	6 h.m. 10 41	7 h.m. 11 41	8 h.m. 12 41	9 h.m. 13 41	10 h.m. 14 41	11 h.m. 15 41	12 h.m. 16 41	13 h.m. 17 41	14 h.m. 18 41	15 h.m. 19 41	16 h.m. 20 41	17 h.m. 21 41	18 h.m. 22 41	19 h.m. 23 41	20 h.m. 0 41	21 h.m. 1 41	22 h.m. 2 41	23 h.m. 3 41	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta X}{1+\frac{X}{X}}$
June 30	965	950	975	1000	990	1002	974	950	950	2·1 *		−0·2 *																
1	—	—	—	—	—	—	—	—	—	965	975	962	950	946	932	920	909	860	824	822	870	930	970	992	941	-285	656	1·004619
2	918	960	1005	1006	1010	998	1002	1003	990	983	972	971	970	938	882	900	880	868	859	910	940	980	1002	1040	958	-333	625	4876
3	1052	1048	1040	1037	1010	1008	1006	1007	980	985	985	980	975	980	970	948	930	892	908	877	910	940	992	1031	979	-325	654	4636
4	1055	1061	995	1021	1012	991	982	992	1005	1008	1006	1010	1014	990	960	940	927	889	845	908	970	1020	1031	1073	988	-323	665	4546
5	1060	1052	1076	1056	1044	1016	1019	1023	990	976	957	974	992	935	960	938	923	910	910	900	916	950	980	1008	982	-321	661	4579
6	1029	1038	1016	1002	1010	1015	1015	975	978	967	952	944	936	930	912	895	880	854	840	845	863	880	912	950	943	-301	642	4735
7	982	978	970	960	948	949	948	948	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	943	962	961	960	950	936	918	900	866	824	860	899	942	968	992	937	-298	639	4760
9	990	990	994	990	950	954	950	940	933	930	922	926	930	920	915	907	905	857	849	869	880	892	914	940	927	-300	627	4859
10	953	967	963	971	952	932	950	965	963	954	940	933	927	923	910	895	869	892	872	878	882	899	967	998	931	-308	623	4892
11	949	953	949	950	948	947	947	948	948	950	948	949	950	950	948	949	948	947	949	948	950	942	951	948	949	-325	624	4884
12	940	951	947	950	950	948	950	958	998	975	948	951	955	948	946	948	949	948	950	948	947	948	947	947	952	-325	627	4859
13	947	970	982	989	989	975	920	920	918	922	922	923	924	930	913	902	868	840	840	850	860	908	940	982	922	-326	596	5115
14	991	970	972	970	980	986	943	960	968	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	946	920	918	917	908	900	898	842	819	782	767	770	790	843	899	902	-312	590	5165
16	932	940	930	922	923	930	913	960	920	912	900	900	900	891	873	835	796	762	729	732	775	822	885	940	876	-298	578	5264
17	961	950	938	927	916	900	907	906	892	890	883	876	870	862	845	820	777	735	679	660	690	748	821	858	846	-271	575	5289
18	895	910	905	897	889	880	878	865	862	867	868	868	868	870	844	789	750	694	599	614	649	668	826	910	819	-267	552	5479
19	940	920	856	858	850	866	898	915	960	1030	1095	1067	1040	1060	1012	998	1017	946	940	997	1079	1098	1104	1141	987	-281	706	4206
20	1143	1167	1151	1132	1087	1065	1042	998	945	959	968	979	990	995	942	952	932	880	870	860	875	907	945	1010	991	-284	707	4198
21	1060	1054	1052	1020	1028	992	978	899	902	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	918	930	924	919	908	890	880	859	830	823	830	887	918	940	965	934	-238	696	4289
23	985	970	960	964	960	970	944	945	940	932	920	917	915	900	880	868	848	828	820	818	840	870	901	921	909	-238	671	4496
24	959	980	981	973	969	962	948	957	960	961	958	952	947	940	922	900	880	854	853	850	891	930	944	992	936	-272	664	4554
25	1000	1000	993	993	997	998	988	970	960	972	980	971	963	952	925	910	882	888	885	888	883	926	963	1001	954	-297	657	4611
26	1026	1012	990	993	980	1003	992	972	972	971	965	953	942	910	895	890	883	852	857	873	890	921	971	989	946	-294	652	4652
27	992	990	1005	1002	973	970	959	970	960	965	965	958	952	945	927	910	856	825	820	810	841	857	933	972	932	-306	626	4867
28	1000	983	960	952	975	965	962	960	920	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	950	975	977	980	949	956	930	889	848	840	850	882	990	1028	1043	948	-314	634	4801
30	1050	1041	1010	1008	998	1008	1022	1005	990	993	992	976	960	938	944	888	893	830	818	848	890	930	960	1005	958	-319	639	4760
31	1010	1020	1021	1001	1020	1025	1030	1015	993	986	974	952	930	927	925	894	863	835	828	850	880	939	992	1010	955	-307	648	4686
Monthly Means...	992	994	987	983	976	972	965	960	952	956	955	951	947	937	921	905	884	854	838	847	874	909	949	984	937			
Temp. Corrections	-333	-327	-319	-314	-310	-306	-302	-298	-294	-291	-288	-284	-280	-272	-265	-264	-269	-275	-284	-296	-309	-323	-333	-338	.....	-299		
Corrected Means.	659	667	668	669	666	666	663	662	658	665	667	667	667	665	656	641	615	579	554	551	565	586	616	646	.....	.....	638	
Mean Hourly Variations from Monthly Mean. = +·00	-21	-29	-30	-31	-28	-28	-25	-24	-20	-27	-29	-29	-29	-27	-18	-3	23	59	84	87	73	52	22	-8	.....	.....	.....	1·004768
	-0173	-0239	-0248	-0256	-0231	-0231	-0206	-0198	-0165	-0223	-0239	-0239	-0239	-0223	-0149	-0025	0190	0487	0694	0719	0603	0430	0182	-0066				

JULY 1855. Temperature of Horizontal Force Magnetometer.

Madras Mean Time.	Noon P.M. h.m. 4 41	1 h.m. 5 41	2 h.m. 6 41	3 h.m. 7 41	4 h.m. 8 41	5 h.m. 9 41	6 h.m. 10 41	7 h.m. 11 41	8 h.m. 12 41	9 h.m. 13 41	10 h.m. 14 41	11 h.m. 15 41	12 h.m. 16 41	13 h.m. 17 41	14 h.m. 18 41	15 h.m. 19 41	16 h.m. 20 41	17 h.m. 21 41	18 h.m. 22 41	19 h.m. 23 41	20 h.m. 0 41	21 h.m. 1 41	22 h.m. 2 41	23 h.m. 3 41	Means.
June 30	884	883	882	880	880	880	880	880	879	*		*													
1	—	—	—	—	—	—	—	—	—	884	890	889	888	885	884	886	889	890	892	898	902	907	911	914	8890
2	913	911	906	906	904	904	904	903	901	900	900	899	898	895	893	894	895	898	900	902	908	910	912	914	9029
3	911	908	908	907	906	902	901	901	900	899	898	896	895	892	890	890	891	895	898	900	902	907	910	910	9007
4	910	908	901	895	895	900	900	900	900	899	899	897	895	893	891	890	891	895	899	902	908	912	913	910	9001
5	910	908	905	905	905	902	900	900	898	896	894	893	892	890	890	890	890	892	898	900	903	908	908	909	8994
6	909	908	901	901	900	899	898	898	896	894	892	889	887	884	882	881	880	882	887	890	892	897	898	900	8935
7	900	898	896	895	894	892	891	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	889	889	888	887	885	884	884	888	889	890	892	897	900	906	908	8926
9	904	901	900	897	897	897	897	895	895	893	891	890	890	889	885	884	883	885	888	890	892	897	900	900	8933
10	901	900	900	900	897	897	897	896	895	893	892	891	890	888	885	885	887	888	890	898	900	905	910	911	8957
11	912	911	909	908	906	905	904	900	900	898	897	896	895	893	891	890	892	892	898	899	901	904	908	910	9008
12	911	910	907	905	903	901	900	900	900	900	900	897	895	893	892	892	893	893	898	900	902	907	910	911	9008
13	911	910	910	909	907	905	903	900	899	899	899	898	897	894	892	892	890	891	893	898	900	907	910	911	9010
14	910	906	903	902	900	900	900	900	899	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	898	897	894	892	890	890	889	890	890	890	892	897	897	898	900	8968
16	900	900	900	898	897	899	898	895	892	890	888	886	884	885	882	881	882	883	889	890	897	900	904	907	8928
17	900	898	895	893	891	889	886	884	883	881	880	880	880	878	875	873	877	877	878	880	884	890	891	892	8848
18	892	891	889	888	886	885	884	883	881	881	881	880	880	878	876	874	874	880	880	882	886	890	891	895	8836
19	896	897	898	899	896	890	890	890	890	890	890	887	884	880	874	874	877	878	880	881	886	890	892	895	8877
20	897	898	897	894	894	893	890	890	890	888	887	885	884	881	880	879	879	880	881	888	890	893	896	891	8885
21	890	888	888	884	882	880	879	877	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	871	870	870	870	867	862	862	865	868	870	871	877	879	880	880	8751
23	880	880	880	880	879	879	875	873	871	870	870	869	868	866	863	865	867	870	871	877	880	888	890	894	8752
24	896	897	892	890	889	887	885	883	882	881	880	878	877	875	872	873	878	879	880	885	890	894	899	904	8852
25	903	900	897	897	894	892	892	891	890	890	890	888	886	883	881	881	882	885	889	890	897	900	907	911	8923
26	909	903	898	897	897	894	891	890	890	888	887	885	883	881	880	880	880	882	887	890	898	900	902	907	8916
27	909	907	903	900	898	898	895	894	892	891	890	889	889	885	883	884	885	889	890	894	898	900	907	909	8950
28	908	902	900	900	899	899	898	898	898	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	894	891	890	890	888	886	887	888	890	895	900	902	908	912	915	8974
30	911	907	904	903	901	901	900	900	899	897	896	895	894	892	890	890	890	892	895	899	900	905	906	908	8990
31	907	903	901	900	900	898	897	894	892	891	890	890	890	888	884	885	887	889	890	897	900	904	907	906	8954
Monthly Means..	9031	9012	8989	8975	8962	8951	8939	8928	8916	8906	8899	8885	8874	8851	8829	8828	8841	8860	8887	8920	8959	9000	9029	9045	8930

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = — 0°·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$

Zero. at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

AUGUST 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−1·3		−0·9																
1	1008	1000	988	982	981	962	970	960	957	952	950	939	930	932	927	908	892	877	840	830	832	853	895	942	929	-301	628	1·004851
2	985	990	960	971	998	976	960	962	986	967	950	940	932	937	902	888	850	808	787	800	816	850	892	920	918	-290	628	4851
3	967	982	977	970	950	948	950	954	960	958	958	943	930	912	910	908	890	854	818	787	807	838	872	939	916	-296	620	4917
4	980	982	990	991	992	995	988	962	940	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	940	942	939	938	931	924	915	880	868	862	855	860	900	911	948	935	-299	636	4784
6	977	980	980	977	956	970	978	996	960	952	947	944	943	930	918	894	865	845	848	870	900	918	933	968	935	-305	630	4834
7	1000	1008	1005	999	991	982	979	970	960	953	948	943	940	932	918	902	875	848	842	835	832	851	898	947	932	-320	612	4983
8	983	992	990	986	980	972	969	968	900	922	947	939	932	918	902	891	852	804	772	775	820	861	910	950	914	-316	598	5099
9	962	960	950	955	944	940	933	928	930	931	935	933	932	933	915	888	835	777	755	798	838	875	920	963	905	-317	588	5182
10	980	970	961	965	967	962	960	950	939	938	940	932	925	912	895	888	822	790	782	797	810	850	908	962	909	-316	593	5140
11	970	983	1012	1030	1035	998	990	970	961	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	938	918	913	910	907	895	885	863	840	814	830	845	868	884	905	923	-304	619	4926
13	910	917	912	928	928	911	912	918	918	907	898	892	887	885	888	870	842	800	770	764	809	857	850	862	876	-273	603	5057
14	871	868	882	872	852	862	844	849	852	860	870	865	862	878	885	870	805	774	750	713	755	810	860	881	841	-249	592	5148
15	900	930	903	873	882	906	919	925	918	899	883	880	878	867	860	880	866	810	847	818	832	882	930	940	884	-238	646	4702
16	915	890	892	938	920	918	923	888	838	860	885	877	870	860	850	852	832	821	806	827	873	910	920	937	879	-225	654	4636
17	942	960	963	950	932	951	877	884	890	881	875	877	880	871	840	823	797	770	758	789	815	851	872	899	873	-236	637	4776
18	915	917	929	919	920	920	920	918	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	904	900	895	892	880	871	860	838	810	781	793	858	856	870	903	882	-246	636	4784
20	930	952	941	963	982	948	947	920	910	919	930	920	912	900	900	908	871	858	867	860	857	870	920	967	915	-262	653	4644
21	950	942	949	944	937	877	950	928	930	923	918	913	910	900	880	868	852	853	828	852	893	915	930	929	907	-267	640	4752
22	939	945	957	948	951	937	920	890	892	895	900	899	900	890	888	870	833	823	817	829	855	874	910	933	896	-274	622	4900
23	955	963	969	967	960	950	930	913	910	892	877	863	850	840	820	772	773	860	882	902	914	943	930	910	898	-285	613	4975
24	913	927	938	958	960	950	940	922	916	912	910	900	892	880	870	850	812	792	824	839	886	939	940	930	900	-245	655	4628
25	927	920	917	917	916	910	916	910	903	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	895	890	887	885	890	870	839	795	773	782	830	862	887	918	904	881	-268	613	4975
27	898	890	900	905	895	912	928	912	902	890	880	878	878	850	832	800	770	722	744	767	783	820	847	842	852	-257	595	5124
28	856	868	892	896	926	946	952	930	912	899	888	878	870	868	830	812	792	768	769	790	891	795	850	877	861	-245	616	4950
29	900	907	912	934	930	931	903	900	900	896	895	888	883	880	868	838	791	764	750	760	812	832	860	871	867	-286	581	5240
30	888	890	887	887	900	892	897	880	876	878	883	855	829	830	815	820	783	796	745	790	820	869	900	979	858	-275	583	5223
31	1034	1048	1080	1100	1135	1072	1057	1020	998	968	940	933	927	925	910	882	858	832	836	841	880	909	900	910	958	-285	673	4479
Monthly Means..	943	947	949	953	953	944	941	931	921	916	913	906	901	894	881	866	835	812	803	813	839	870	897	923	898			
Temp. Corrections	-308	-304	-297	-292	-287	-283	-279	-275	-272	-269	-266	-262	-260	-255	-249	-248	-251	-257	-265	-276	-286	-295	-303	-307	.....	-277		
Corrected Means..	635	643	652	661	666	661	662	656	649	647	647	644	641	639	632	618	584	555	538	537	553	575	594	616	.....	.....	621	
Mean Hourly Variations from Monthly Mean. = '00	-14	-22	-31	-40	-45	-40	-41	-35	-28	-26	-26	-23	-20	-18	-11	3	37	66	83	84	68	46	27	5				
	-0116	-0182	-0256	-0331	-0372	-0331	-0339	-0289	-0231	-0215	-0215	-0190	-0165	-0149	-0091	0025	0306	0546	0686	0694	0562	0381	0223	0041	.....	.....	.....	1·004909

AUGUST 1855. Temperature of Horizontal Force Magnetometer.

										*		*															
1	906	903	900	899	899	898	893	890	890	890	890	889	889	888	884	883	884	887	890	890	895	898	901	907	8935			
2	906	903	902	900	898	897	892	890	890	887	885	884	883	880	880	880	881	882	882	887	890	892	897	901	8904			
3	901	902	900	900	897	892	891	890	890	890	890	889	888	884	881	882	883	885	888	892	894	899	902	904	8922			
4	902	901	901	898	895	891	890	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
5	—	—	—	—	—	—	—	—	—	890	890	890	890	888	884	882	883	888	890	896	901	901	900	900	8930			
6	900	900	899	898	897	894	892	889	892	891	890	890	890	888	884	882	888	890	892	898	902	907	908	911	8947			
7	912	911	908	907	904	901	900	900	898	895	893	891	890	890	888	889	890	893	898	900	902	905	906	907	8991			
8	907	907	906	906	904	900	899	898	895	892	890	890	890	890	887	888	890	892	895	900	902	905	908	908	8979			
9	908	905	902	901	900	900	900	898	897	896	895	893	892	890	890	890	890	894	897	900	902	905	907	907	8983			
10	908	906	901	900	900	898	900	896	895	894	894	893	892	890	889	889	890	892	897	901	902	907	908	909	8980			
11	908	906	900	900	900	900	900	899	897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
12	—	—	—	—	—	—	—	—	—	893	890	890	890	890	888	889	890	890	890	892	892	891	891	891	8945			
13	891	890	890	890	890	889	890	886	885	883	882	881	880	879	877	875	875	878	880	885	890	894	897	894	8855			
14	892	891	890	887	880	880	880	880	878	877	877	876	875	872	870	870	868	869	872	874	878	880	882	881	8783			
15	881	880	880	873	870	878	876	875	875	874	873	872	872	870	870	870	871	870	872	878	880	880	880	879	8750			
16	878	876	872	872	870	870	867	868	870	870	870	869	868	867	863	863	865	866	870	872	878	880	882	884	8712			
17	884	884	883	880	878	878	874	874	874	872	870	868	866	864	863	868	868	870	873	873	879	880	881	881	8744			
18	881	881	880	880	880	877	875	874	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
19	—	—	—	—	—	—	—	—	—	873	877	876	875	872	871	871	872	872	875	878	882	885	889	889	8773			
20	890	888	886	884	884	884	884	884	883	882	881	880	880	879	878	875	875	878	879	881	884	888	889		8821			
21	890	889	887	885	884	884	885	885	884	883	883	882	881	880	880	879	878	879	880	882	884	885	888	890	8836			
22	890	890	890	890	889	888	888	885	883	882	881	880	880	880	878	878	879	880	883	886	889	893	898	900	8858			
23	902	902	898	898	896	893	890	890	890	888	886	884	882	880	880	880	880	882	885	887	890	892	892	889	8890			
24	885	881	880	880	880	880	879	878	877	875	873	872	871	871	870	868	869	870	873	876	880	884	888	890	8771			
25	889	888	882	882	880	880	880	880	878	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
26	—	—	—	—	—	—	—	—	—	880	883	881	880	880	880	878	880	881	884	888	891	893	897	897	8838			
27	898	897	897	894	888	883	881	880	880	879	878	877	877	875	871	870	870	870	874	877	878	880	881	881	8807			
28	881	881	880	878	880	880	878	876	874	873	872	871	871	870	869	869	870	873	874	881	880	885	888	895	8770			
29	900	902	898	895	895	892	891	890	890	889	888	885	882	880	879	879	879	883	883	887	890	892	896	894	8891			
30	893	891	890	890	889	890	890	888	888	886	884	882	881	880	876	876	878	880	880	882	886	890	896	898	8860			
31	898	895	895	892	889	890	887	887	888	886	884	885	886	886	882	881	882	884	886	890	891	893	896	898	8888			
Monthly Means..	8956	8944	8925	8911	8895	8884	8871	8859	8852	8841	8833	8822	8815	8801	8782	8779	8788	8806	8830	8863	8892	8919	8943	8953	8865			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = — 0°·5

$k. = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$

Zero. at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

SEPTEMBER 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$\frac{\Delta X}{1+\frac{\Delta}{X}}$
Madras MeanTime.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 18 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										1·3 *		−1·7 *																
1	909	931	945	964	963	961	948	938	948	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	921	891	885	882	873	853	818	786	742	764	794	872	910	950	980	893	-296	597	1·005107
3	978	972	978	972	980	958	969	967	966	945	922	908	898	880	848	832	817	808	820	848	900	907	910	943	914	-292	622	4900
4	960	935	920	917	926	910	928	929	930	926	920	913	910	879	862	833	817	797	784	800	814	852	880	910	885	-279	606	5032
5	930	928	932	940	930	910	912	915	900	898	893	888	886	877	882	867	819	789	778	809	845	896	900	900	884	-265	619	4926
6	918	883	880	888	886	893	888	884	882	877	870	863	860	855	842	820	792	773	773	798	842	879	890	898	860	-258	602	5065
7	855	847	871	892	917	910	890	894	890	886	880	868	860	855	828	802	776	765	733	768	803	873	930	916	855	-257	598	5099
8	908	923	904	892	938	942	940	959	930	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	898	863	855	850	849	834	788	748	712	718	766	833	881	892	910	864	-241	623	4892
10	890	862	857	841	840	840	838	834	840	837	832	828	827	850	832	850	790	738	675	665	689	730	742	790	805	-217	588	5182
11	831	875	907	937	968	939	919	878	912	919	924	916	912	892	899	862	810	777	779	805	846	873	920	937	885	-221	664	4554
12	910	887	893	911	919	906	902	925	895	894	890	877	867	850	832	792	751	757	708	777	840	875	912	922	862	-233	629	4843
13	913	882	879	882	880	874	872	867	870	861	850	858	870	858	830	799	762	733	730	732	788	831	854	870	839	-225	614	4923
14	872	868	861	865	868	870	861	860	857	861	862	858	857	851	840	808	758	750	732	795	858	865	853	858	841	-210	631	4826
15	878	882	866	881	880	879	878	870	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	872	875	871	870	869	868	847	790	755	778	830	892	900	910	902	863	-226	637	4776
17	900	895	899	898	898	892	887	875	890	881	870	860	853	850	868	840	829	790	762	782	835	842	856	892	860	-224	636	4784
18	900	892	889	892	892	880	880	879	890	882	872	868	867	858	850	847	800	762	748	778	825	865	915	922	861	-226	635	4793
19	906	892	882	880	905	920	889	872	870	876	880	873	870	870	850	834	782	750	742	785	859	878	900	888	861	-238	623	4892
20	900	902	912	899	904	914	918	911	912	912	910	898	890	885	871	840	798	778	750	766	810	873	897	912	873	-258	615	4959
21	927	910	940	942	940	965	917	904	895	890	882	879	880	863	890	892	862	833	875	893	892	915	920	920	901	-263	638	4768
22	913	902	919	930	935	920	920	914	910	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	890	868	868	872	865	859	831	792	760	747	755	807	842	880	910	867	-261	606	5032
24	912	907	912	920	921	893	894	872	873	863	850	843	840	828	812	763	702	660	660	692	740	795	850	880	828	-224	604	5049
25	878	842	841	868	867	880	864	842	840	831	820	823	830	810	818	780	720	642	640	665	705	760	808	828	800	-183	617	4942
26	80)	789	794	802	844	811	808	818	810	810	808	801	798	800	780	740	678	627	600	637	706	760	798	810	768	-176	592	5148
27	813	805	799	791	799	773	788	788	819	821	820	812	807	798	800	722	697	631	672	764	838	903	972	982	801	-192	609	5008
28	998	1017	949	937	924	852	899	897	880	880	878	862	850	830	828	820	768	742	770	772	850	888	948	920	873	-204	669	4513
29	898	890	917	890	895	888	890	878	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	854	835	831	830	828	819	802	763	720	697	705	759	788	810	827	828	-197	631	4826
Monthly Means..	900	893	894	897	905	895	892	887	886	879	871	864	861	853	844	817	776	744	737	767	818	855	884	897	855			
Temp. Corrections	-262	-257	-250	-245	-243	-241	-239	-236	-234	-230	-228	-224	-221	-215	-208	-208	-211	-216	-225	-234	-244	-250	-256	-259	.....	-235		
Corrected Means..	638	636	644	652	662	654	653	651	652	649	643	640	640	638	636	609	565	528	512	533	574	605	628	638	.....	.....	620	
	-18	-16	-24	-32	-42	-34	-33	-31	-32	-29	-23	-20	-20	-18	-16	11	55	92	108	87	46	15	-8	-18				
Mean Hourly Variations from Monthly Mean. = ·00	-0149	-0133	-0198	-0265	-0348	-0281	-0273	-0256	-0265	-0239	-0190	-0165	-0165	-0149	-0133	0091	0454	0761	0892	0719	0381	0124	-0066	-0149	.....	.....	.. ..	1·004917

SEPTEMBER 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	898	897	897	897	898	898	898	896	896	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	891	886	885	885	883	882	882	883	885	888	890	892	900	902	902	8921			
3	903	901	900	898	897	896	893	892	892	890	889	886	883	881	880	880	881	882	887	891	893	896	898	898	8911			
4	897	895	893	890	890	890	889	889	889	887	885	884	883	881	880	880	879	878	882	883	887	890	892	895	8870			
5	892	891	888	887	885	885	882	880	880	880	880	880	880	880	876	875	876	878	880	883	885	888	890	890	8830			
6	890	888	884	884	882	882	882	880	880	880	880	879	878	875	872	872	874	875	877	879	883	886	890	890	8809			
7	890	888	883	882	882	882	882	881	880	878	876	875	874	873	870	872	874	875	878	883	887	889	891	891	8807			
8	890	888	887	885	880	882	880	880	878	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	874	871	870	870	868	866	865	866	868	871	872	875	878	880	880	8760			
10	880	879	875	874	872	872	872	871	872	871	870	869	868	863	860	860	858	860	863	865	867	870	871	872	8689			
11	874	873	873	873	872	870	870	870	870	869	869	868	867	867	863	863	863	865	866	868	872	874	879	880	8699			
12	880	880	877	875	876	876	876	875	872	871	870	869	868	867	865	866	866	869	873	876	880	880	881	881	8737			
13	880	880	879	879	878	877	877	877	875	873	872	871	870	869	861	860	860	860	862	865	869	870	872	873	8712			
14	871	870	869	869	869	867	869	868	864	864	865	863	862	861	861	860	861	863	868	870	871	873	872	875	8669			
15	879	879	879	872	872	871	870	868	865	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	867	869	868	868	868	866	866	867	868	870	872	878	878	880	879	8716			
17	880	878	875	874	872	871	870	870	870	869	869	867	865	864	863	863	865	868	869	872	876	876	878	878	8709			
18	878	873	872	872	871	870	870	869	869	868	868	868	868	865	864	865	868	869	870	876	880	880	882	882	8715			
19	882	880	877	875	872	872	872	872	872	872	872	873	875	874	871	871	872	872	875	878	880	880	882	884	8752			
20	885	882	882	883	884	883	883	882	881	881	881	879	878	872	872	873	873	875	879	882	885	888	890	890	8810			
21	889	888	885	883	880	880	880	879	879	879	879	878	878	877	875	876	878	880	883	888	890	890	890	891	8823			
22	890	890	888	885	884	884	883	882	881	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	880	880	880	880	879	875	873	875	878	880	881	882	883	885	885	8818			
24	885	882	880	880	880	879	878	878	878	874	870	867	865	861	860	859	860	860	862	865	868	869	870	870	8708			
25	869	867	864	861	860	860	860	860	860	859	858	856	855	854	852	852	852	854	858	859	860	862	862	862	8590			
26	862	861	860	860	860	858	857	856	855	854	853	852	851	850	850	850	852	853	858	860	862	862	862	865	8568			
27	867	865	861	860	860	860	860	858	858	859	860	859	859	857	856	857	859	860	862	865	867	870	870	870	8616			
28	871	870	868	868	868	867	865	865	866	865	864	862	860	860	859	857	858	860	862	866	867	869	870	870	8649			
29	870	870	867	865	865	865	865	864	862	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	862	863	861	860	858	857	857	858	858	860	861	863	866	868	870	8631			
Monthly Means...	8821	8806	8785	8772	8764	8759	8753	8745	8738	8727	8720	8708	8700	8683	8662	8662	8671	8685	8713	8740	8768	8787	8803	8809	8741			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = −0°5

$k = a.\cot.v. = 0{\cdot}0003139 \times \cot.75°\,15'$

Zero. at Temperature 88°8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

OCTOBER 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	$\frac{\Delta X}{1+\frac{\Delta X}{X}}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−1·4 *		− 0·9 *																
1	842	865	904	925	927	918	913	915	875	856	840	828	818	820	812	790	740	718	702	730	767	800	828	840	832	−200	632	1.004817
2	832	840	845	840	833	825	815	817	818	819	822	818	815	810	822	784	739	686	670	702	730	780	811	860	797	−190	607	5024
3	925	950	999	1025	1040	1117	1140	1094	1067	1052	1040	1021	1004	979	903	860	838	828	818	828	859	893	913	911	963	−200	763	3735
4	900	917	913	894	897	912	913	900	902	883	867	878	890	910	932	960	918	988	914	904	930	920	983	965	916	−197	719	4099
5	963	970	968	965	938	932	923	921	910	902	897	898	900	882	868	835	795	763	732	732	772	830	869	890	877	−168	709	4182
6	877	872	866	887	862	867	862	855	837	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	792	750	741	734	718	697	648	589	533	525	550	582	643	672	670	735	−93	642	4735
8	680	682	682	693	702	707	710	708	710	704	700	696	694	690	672	630	588	568	520	556	602	647	692	713	664	−54	610	5000
9	731	752	767	734	729	750	749	750	707	687	670	653	637	625	717	730	663	632	592	590	625	699	750	762	696	−87	609	5008
10	770	782	784	783	767	752	750	755	760	744	730	724	719	727	725	688	629	569	525	530	588	660	700	742	704	−86	618	4934
11	770	740	754	693	738	742	740	735	735	731	730	730	732	720	730	700	680	628	554	585	660	690	720	728	707	−75	632	4817
12	760	758	752	742	758	740	729	728	737	737	740	727	715	710	737	732	680	610	563	580	640	697	728	757	711	−79	632	4817
13	770	768	769	754	748	748	750	722	790	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	755	722	715	710	702	740	708	653	600	590	559	598	660	732	750	709	−89	620	4917
15	766	757	760	760	755	761	756	759	762	757	755	747	741	757	760	742	699	640	628	618	665	700	774	799	734	−116	618	4934
16	800	770	764	774	786	793	805	789	760	777	797	798	800	810	794	733	690	650	637	685	722	775	802	828	764	−138	626	4867
17	830	822	835	836	837	830	850	858	810	805	803	796	790	798	777	732	649	590	560	580	622	682	711	730	756	−156	600	5082
18	729	740	782	827	853	907	980	982	1050	1027	1007	983	960	940	882	875	838	810	793	822	845	880	882	860	886	−132	754	3810
19	850	857	855	855	837	848	834	850	830	824	821	815	810	820	821	819	777	723	730	741	802	848	857	855	820	−100	720	4091
20	828	840	894	845	844	842	864	820	820	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	809	800	789	780	772	760	730	687	642	648	663	708	750	772	781	779	−106	673	4479
22	790	798	812	812	800	793	780	775	778	769	762	767	774	770	732	718	672	659	657	662	686	710	730	721	747	−108	639	4760
23	740	740	745	750	760	732	735	755	758	748	740	750	762	770	758	734	688	652	674	668	747	772	797	785	740	−84	656	4619
24	770	772	779	783	772	785	782	778	772	767	765	766	768	762	753	716	678	644	622	639	669	729	779	799	744	−91	653	4644
25	782	770	780	784	790	798	796	790	768	772	778	773	770	768	764	725	680	633	590	592	624	650	718	750	735	−112	623	4892
26	725	732	743	753	759	760	762	760	755	747	742	745	750	755	750	715	662	623	600	610	652	722	770	789	724	−112	612	4983
27	790	790	782	780	782	841	860	845	840	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	804	770	752	735	712	692	659	620	610	630	649	700	744	748	750	745	−89	656	4619
29	771	772	786	775	791	792	782	747	735	740	748	732	717	710	695	670	633	608	602	620	660	710	740	780	721	−68	653	4644
30	807	837	808	764	761	757	759	740	732	727	725	721	719	692	686	644	608	565	555	600	628	670	700	731	706	−89	617	4942
31	750	740	752	755	762	760	760	755	740	731	724	721	720	710	700	678	655	658	647	648	650	650	650	660	707	−82	625	4876
Monthly Means..	798	801	810	807	808	815	818	811	806	795	787	781	776	772	766	739	694	660	640	653	694	737	771	785	764			
Temp. Corrections	-136	-131	-125	-123	-120	-117	-115	-114	-113	-110	-108	-106	-104	-101	-99	-97	-100	-104	-109	-116	-122	-126	-131	-133	.....	-115		
Corrected Means..	662	670	685	684	688	698	703	697	693	685	679	675	672	671	667	642	594	556	531	537	572	611	640	652	.....	.....	649	
Mean Hourly Variations from Monthly Mean.	-13	-21	-36	-35	-39	-49	-54	-48	-44	-36	-30	-26	-23	-22	-18	7	55	93	118	112	77	38	9	-3				
= ·00	-0108	-0173	-0298	-0289	-0322	-0405	-0446	-0397	-0364	-0298	-0248	-0215	-0190	-0182	-0149	0058	0454	0769	0975	0926	0636	0314	0074	-0026	.....	.....	.....	1·004678

OCTOBER 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	869	867	864	864	863	863	863	862	862	861	860	859	858	856	856	858	859	860	864	868	870	872	878	878	8639			
2	872	872	869	866	865	860	860	858	855	855	855	855	855	853	853	853	854	858	860	863	863	868	870	870	8609			
3	869	867	865	865	863	862	862	860	860	860	860	860	860	860	859	858	859	861	865	868	870	874	873	873	8639			
4	872	871	870	869	869	867	865	865	864	863	862	861	860	860	860	860	860	860	858	858	858	858	860	860	8629			
5	861	860	859	857	857	857	856	856	855	853	851	850	850	850	850	850	849	849	850	852	857	859	860	860	8545			
6	856	853	852	852	852	851	850	850	848	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	837	827	825	824	822	821	819	818	818	818	817	817	817	817	818	8325			
8	818	818	818	817	818	818	819	818	818	817	817	816	816	816	815	816	819	820	825	828	830	833	835	835	8208			
9	835	832	830	830	830	830	829	830	830	830	830	830	830	828	829	830	832	832	831	830	830	830	832	835	8306			
10	835	835	833	833	832	830	829	828	828	828	828	828	828	828	830	830	830	830	830	830	830	830	831	832	8302			
11	832	831	831	830	830	829	829	829	829	828	828	827	827	826	823	821	820	820	822	825	828	828	829	830	8272			
12	830	830	828	827	826	826	826	828	828	827	827	826	825	825	825	825	825	828	830	832	832	833	834	836	8283			
13	836	833	831	831	830	830	829	827	826	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	828	831	830	829	827	826	825	828	830	830	832	838	839	840	840	8311			
15	840	840	838	837	836	836	836	836	836	836	836	836	836	836	835	835	838	840	840	842	845	847	848	850	8390			
16	850	849	846	846	846	842	841	841	841	841	841	841	841	841	841	841	844	845	847	850	852	853	858	859	8457			
17	858	855	852	850	850	850	850	850	850	850	850	850	850	850	850	849	849	850	850	850	853	855	852	852	8510			
18	851	851	849	849	848	848	848	848	848	848	848	845	843	840	838	837	837	837	838	840	840	840	841	841	8439			
19	841	839	837	837	837	834	833	832	832	831	831	831	831	830	830	830	830	831	834	836	840	840	840	840	8345			
20	840	839	836	835	835	835	835	835	835	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	837	839	837	836	833	832	831	832	832	835	838	840	840	840	840	8361			
22	840	839	839	838	838	838	838	838	838	837	836	835	834	834	831	831	831	832	836	839	841	842	842	839	8369			
23	837	832	830	830	828	828	827	828	828	827	827	827	827	827	827	825	827	829	830	833	836	834	834	833	8296			
24	833	831	831	831	830	830	830	830	830	830	830	830	830	830	831	828	829	830	832	834	836	836	838	840	8317			
25	840	839	840	840	840	839	840	840	840	840	840	839	838	836	836	835	834	833	835	836	837	837	840	841	8381			
26	843	840	840	840	840	837	837	836	836	835	834	833	832	832	832	832	833	836	838	840	845	848	848	848	8381			
27	848	842	842	840	838	838	838	837	834	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	830	826	824	823	822	821	820	822	823	825	830	830	831	832	834	8312			
29	834	832	828	828	826	824	821	821	820	820	820	820	820	819	818	818	820	820	824	828	831	834	837	840	8251			
30	840	838	835	834	833	832	830	830	830	830	830	829	829	826	824	822	825	828	830	832	833	835	837	839	8313			
31	838	836	834	833	831	830	830	830	830	830	830	830	830	828	826	823	825	826	826	827	826	825	828	828	8292			
Monthly Means...	8451	8434	8417	8411	8404	8394	8389	8386	8382	8374	8368	8361	8356	8346	8340	8334	8344	8355	8371	8392	8410	8421	8435	8441	8388			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = −0°·5

$k = a.\ \text{cotan.}\ v. = 0{\cdot}0003139 \times \text{cotan.}\ 75°\ 15'$

Zero at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

NOVEMBER 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										1·1 *		−1·6 *																
1	667	685	726	750	743	730	722	710	690	690	687	672	660	645	640	604	570	537	536	562	570	580	578	588	648	−29	619	1·004926
2	600	608	654	694	722	720	723	725	632	636	637	618	602	592	616	560	545	550	542	577	625	655	670	670	632	7	639	4760
3	667	668	664	674	680	672	669	660	650	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	654	655	656	660	650	652	620	590	558	560	592	640	685	700	690	649	−36	613	4975
5	671	682	673	682	686	676	674	648	738	759	777	780	787	782	760	725	677	630	608	679	732	747	802	798	716	−78	638	4768
6	770	770	804	847	839	804	758	769	770	775	777	763	753	762	725	700	690	682	685	695	717	729	747	752	753	−92	661	4579
7	790	810	819	800	790	749	726	760	764	758	750	733	720	741	748	700	655	622	620	662	703	733	760	770	737	−98	639	4760
8	762	767	789	776	767	791	768	772	770	767	762	757	755	730	728	688	667	637	620	650	688	718	746	780	736	−109	627	4859
9	796	830	808	807	793	795	748	770	780	774	766	761	760	748	730	682	640	618	597	623	662	708	735	750	737	−104	633	4809
10	744	747	785	788	771	763	758	750	743	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	723	700	697	697	693	675	647	600	565	552	597	648	689	726	734	700	−66	634	4801
12	729	715	705	708	706	713	712	710	704	702	697	690	687	684	662	617	575	542	550	603	650	692	722	730	675	−53	622	4900
13	723	710	719	717	718	712	715	715	690	687	682	681	683	672	652	640	608	582	557	545	587	620	668	700	666	−53	613	4975
14	711	692	694	700	691	691	683	683	660	657	652	648	647	638	612	560	525	495	480	480	520	568	620	668	624	−45	579	5256
15	689	683	669	667	662	661	658	652	653	644	633	620	610	620	605	590	562	537	502	508	529	562	607	622	614	−34	580	5248
16	630	630	660	672	708	708	707	707	712	699	684	671	662	661	642	613	587	585	572	560	590	620	631	650	648	−14	634	4801
17	679	700	758	769	744	744	759	700	663	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	668	670	661	655	650	632	602	580	559	555	560	588	600	630	638	657	−2	655	4628
19	660	671	692	691	701	684	677	671	653	653	650	644	642	635	610	577	560	544	538	550	561	598	640	662	632	1	633	4809
20	649	652	650	652	659	666	642	648	610	616	620	619	622	590	590	565	590	555	545	570	613	650	680	710	623	6	629	4843
21	713	700	745	759	755	723	740	731	688	676	662	662	665	652	623	602	570	557	574	600	627	644	670	705	668	2	670	4504
22	713	710	699	697	698	681	672	664	657	660	660	652	647	640	630	590	563	543	485	510	570	600	606	630	632	−15	617	4942
23	637	660	710	709	—	—	—	—	—	—	—	—	—	—	—	—	617	600	588	597	636	650	662	670	—	—	—	—
24	678	680	680	675	668	659	653	657	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	661	660	647	637	615	607	580	552	525	514	537	561	600	636	670	625	−14	611	4992
26	678	660	659	657	655	650	650	650	650	647	642	634	630	622	620	588	550	508	495	523	572	593	610	628	615	−17	598	5099
27	644	660	648	658	650	650	659	650	650	649	645	638	635	630	616	582	550	522	515	528	550	570	576	590	611	−19	592	5148
28	600	598	611	648	649	651	643	640	640	632	622	609	600	590	579	534	487	430	501	492	560	570	582	602	586	−15	571	5322
29	670	680	664	657	658	626	661	690	685	694	700	689	682	700	699	685	662	632	610	610	620	642	651	640	663	−9	654	4636
30	657	670	681	672	674	680	680	680	678	665	650	652	658	654	664	643	620	596	589	592	602	609	618	610	646	−17	629	4843
Monthly Means..	692	695	706	713	711	704	698	696	688	686	682	674	670	664	653	620	591	564	556	576	611	639	664	679	660			
Temp. Corrections.	-55	-51	-46	-43	-40	-38	-37	-35	-35	-32	-31	-29	-28	-25	-17	-14	-17	-24	-32	-38	-44	-49	-53	-54	.....	-36		
Corrected Means..	637	644	660	670	671	666	661	661	653	654	651	645	642	639	636	606	574	540	524	538	567	590	611	625	.....	.....	624	
	-13	-20	-36	-46	-47	-42	-37	-37	-29	-30	-27	-21	-18	-15	-12	18	50	84	100	86	57	34	13	-1				
Mean Hourly Variations from Monthly Mean. = ·00	-0108	-0165	-0298	-0381	-0389	-0348	-0306	-0306	-0239	-0248	-0223	-0173	-0149	-0124	-0100	0149	0413	0694	0826	0711	0471	0281	0108	-0008	.....	.....	.....	1·004884

NOVEMBER 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	828	825	821	820	820	820	820	818	817	817	817	815	814	812	809	808	805	804	804	805	805	807	807	807	8135			
2	807	807	806	806	802	802	802	802	802	801	801	800	800	800	800	794	794	797	800	804	808	811	813	815	8031			
3	813	813	812	811	810	810	810	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	811	813	812	812	812	811	813	814	818	820	825	827	828	828	828	8155			
5	829	829	829	829	828	828	827	826	825	825	825	823	822	822	822	821	825	829	831	832	834	835	837	837	8279			
6	837	836	835	832	830	830	830	830	830	830	830	830	830	830	827	828	829	830	833	834	837	838	838	839	8322			
7	839	838	835	834	834	834	834	833	832	831	831	830	830	830	829	828	830	831	833	837	840	840	840	841	8339			
8	840	839	839	839	838	837	836	835	835	835	835	834	834	833	832	833	835	836	838	840	840	840	842	842	8370			
9	842	840	839	837	837	836	838	837	836	835	835	834	834	832	831	830	831	832	833	835	838	839	839	838	8357			
10	837	835	831	830	830	830	830	828	827	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	823	820	820	820	819	815	814	817	818	820	822	823	825	825	825	8243			
12	825	825	823	823	822	821	820	820	820	820	820	820	820	818	816	813	815	818	820	820	823	824	824	826	8207			
13	826	824	822	822	821	820	820	820	820	820	820	819	819	817	812	812	815	819	820	821	824	826	827	827	8205			
14	828	825	823	822	821	820	820	819	819	817	816	816	816	816	812	810	812	814	815	818	819	820	821	821	8183			
15	820	820	820	820	819	817	817	816	816	814	813	812	812	810	809	808	810	810	812	813	815	818	820	820	8150			
16	820	818	817	815	815	812	810	808	808	808	808	807	806	804	800	800	801	804	807	808	810	810	811	812	8091			
17	812	811	810	810	810	810	810	808	807	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	805	804	803	802	800	798	796	796	800	802	806	806	809	810	811	8056			
19	810	810	807	807	805	805	805	805	807	805	803	802	801	801	800	800	801	801	803	805	806	808	809	810	8048			
20	809	809	807	806	804	801	801	801	800	800	800	800	800	800	798	796	799	800	802	805	808	809	810	811	8032			
21	810	810	806	807	805	805	804	803	802	802	802	801	801	800	799	798	799	800	804	806	809	810	812	812	8045			
22	812	811	810	809	809	809	810	810	810	810	810	808	806	806	803	802	804	805	808	811	814	815	816	817	8094			
23	817	816	811	810	810	—	—	—	—	—	—	—	—	—	—	—	804	808	811	814	815	817	818	817	—			
24	817	815	812	810	810	811	811	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
25	—	—	—	—	—	—	—	—	—	809	809	808	807	803	800	800	802	806	807	810	811	814	814	816	8092			
26	815	812	812	810	810	810	810	810	810	809	809	808	808	807	805	805	807	808	810	810	811	813	816	815	8100			
27	815	814	812	811	811	811	810	810	810	810	810	810	810	809	808	804	803	807	810	810	813	814	814	817	8105			
28	817	815	812	812	810	810	810	810	810	810	810	810	810	808	803	801	801	803	808	810	811	812	812	812	8095			
29	813	811	810	809	808	808	807	807	807	807	807	807	807	806	803	800	800	802	808	809	810	811	812	811	8075			
30	811	811	810	810	810	810	809	809	809	808	808	809	811	811	811	810	807	806	810	810	811	812	815	813	8100			
Monthly Means...	8213	8201	8184	8176	8168	8163	8160	8154	8152	8145	8142	8135	8133	8122	8101	8090	8101	8119	8143	8162	8181	8195	8205	8209	8156			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

† The wire of the reading telescope broken, and the observations of the 23rd, rejected from the hourly and daily Means.

Correction for 1° Faht. = 3·396 scd.

Ditto to Therm. = −0°·5

$k = a.\cos a.\, v. = 0{\cdot}0003139 \times \cos.\ 75^{\circ}\ 15'$

Zero. at Temperature 88°·8 = 1497.

Ditto reduced to 80° = 1215.

HORIZONTAL FORCE MAGNETOMETER.

DECEMBER 1855. Horizontal Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22½	23	Means.	Temperature Corrections	Corrected Means.	$1+\frac{\Delta X}{X}$
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−1·6 *		0·2 *																
1	620	632	661	662	659	667	668	667	660	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	642	627	630	632	646	628	620	608	585	573	570	570	582	590	567	624	−5	619	1·004926
3	570	575	580	579	552	550	540	533	575	586	600	592	583	578	595	610	580	570	559	560	575	588	593	600	576	34	610	5000
4	613	625	661	664	637	648	630	615	620	616	616	603	590	600	602	592	585	550	588	566	570	580	592	600	607	16	623	4892
5	610	621	631	629	628	625	630	630	622	616	613	616	618	620	604	573	550	529	532	550	578	590	605	608	601	18	619	4926
6	612	620	628	631	633	620	625	625	590	593	600	605	610	600	597	590	570	559	574	586	605	618	617	620	605	14	619	4926
7	618	630	624	623	620	619	613	615	619	613	610	608	606	610	598	578	570	535	550	552	604	635	640	652	606	10	616	4950
8	640	642	640	635	630	638	635	630	630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	633	639	626	612	602	578	540	522	474	488	508	570	620	651	648	601	5	606	5032
10	630	623	630	638	635	629	630	622	615	609	607	613	618	618	590	550	520	500	495	518	535	583	617	570	591	3	594	5132
11	567	570	592	590	608	609	587	575	565	556	550	550	550	530	500	472	435	392	418	430	435	620	660	715	545	24	569	5339
12	720	696	655	678	678	655	649	610	617	606	598	588	578	582	580	542	528	500	490	493	510	545	576	598	595	56	651	4661
13	610	598	582	583	585	574	570	568	574	559	547	543	538	530	520	508	470	440	453	452	474	500	550	573	538	73	611	4992
14	580	591	577	577	572	565	560	562	552	550	552	542	532	523	518	490	460	430	408	412	442	480	535	551	523	76	599	5091
15	564	567	562	568	569	561	540	530	518	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	513	512	501	490	472	496	472	452	420	410	430	485	535	542	590	512	91	603	5057
17	555	550	534	604	614	595	600	580	562	555	551	541	530	527	546	524	520	502	502	533	560	560	580	602	555	84	639	4760
18	600	591	588	588	592	595	595	573	570	569	572	557	542	552	529	512	498	470	465	490	527	525	532	528	548	90	638	4768
19	544	560	559	549	548	—	547	545	550	546	545	545	545	537	540	536	517	479	484	502	512	530	570	582	538	89	627	4859
20	570	566	570	592	584	583	579	580	561	554	550	540	530	520	508	500	468	470	440	437	473	525	542	547	533	95	628	4851
21	542	525	513	522	518	513	507	506	498	492	490	489	488	475	438	422	410	392	395	428	465	502	530	538	483	118	601	5074
22	532	540	532	529	521	520	520	523	525	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	502	482	477	472	480	470	443	403	372	373	400	454	515	540	542	486	110	596	5115
24	545	540	540	534	533	531	524	520	522	519	520	517	514	500	490	450	402	367	358	362	427	470	523	530	489	108	597	5107
25	522	535	547	558	577	563	523	529	523	515	510	506	501	490	480	440	415	385	363	370	386	420	462	493	484	128	612	4983
26	499	480	492	492	498	491	482	482	479	470	464	462	460	452	456	427	393	362	340	342	400	463	481	469	451	135	586	5198
27	430	440	485	497	485	470	473	471	470	467	467	459	450	472	483	465	440	394	363	378	393	428	462	492	451	135	586	5198
28	500	502	500	511	506	504	494	493	480	483	490	485	480	475	467	456	413	375	362	376	410	474	503	502	468	129	597	5107
29	508	513	510	514	490	511	501	495	483	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	532	585	589	592	580	580	558	530	477	460	462	510	560	592	600	530	106	636	4784
31	590	600	602	609	615	613	610	611	580	577	578	580	582	588	590	570	540	508	500	508	528	560	589	580	575	88	663	4562
Monthly Means..	573	574	577	583	580	578	570	565	560	557	557	552	548	545	538	517	492	463	459	470	500	539	564	573	543			
Temp. Corrections	51	56	60	63	67	67	69	72	74	76	77	80	81	84	87	89	87	82	75	68	61	56	53	53	.....	70		
Corrected Means..	624	630	637	646	647	645	639	637	634	633	634	632	629	629	625	606	579	545	534	538	561	595	617	626	.....	.....	613	
Mean Hourly Variations from Monthly Mean. = ·00	-11	-17	-24	-33	-34	-32	-26	-24	-21	-20	-21	-19	-16	-16	-12	7	34	68	79	75	52	18	-4	-13				
	-0091	-0141	-0198	-0273	-0281	-0265	-0215	-0198	-0173	-0165	-0173	-0157	-0133	-0133	-0100	0058	0281	0562	0652	0619	0430	0149	-0033	-0108	.....	.....	.....	1·004975

DECEMBER 1855. Temperature of Horizontal Force Magnetometer.

										*		*																
1	812	811	813	815	815	816	815	816	815	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	810	805	805	805	804	803	802	800	800	800	800	800	799	798	797	8065			
3	796	795	794	794	793	792	793	792	793	792	791	791	791	791	792	790	791	796	798	801	802	804	805	804	7950			
4	802	802	800	798	797	800	800	800	800	800	800	800	800	798	798	798	797	798	799	801	803	804	806	806	8003			
5	805	802	802	801	800	800	800	800	800	799	798	798	798	798	797	797	793	795	796	798	800	803	806	806	7997			
6	805	802	800	800	800	800	798	797	797	797	797	797	798	798	797	799	800	801	803	805	806	808	808	808	8009			
7	807	807	805	804	803	802	801	800	800	800	800	799	799	799	798	797	798	800	800	802	806	808	809	808	8022			
8	807	805	802	802	801	801	800	800	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	801	802	801	800	800	800	800	801	803	807	808	810	810	810	810	8034			
10	810	809	807	806	805	805	805	805	805	804	804	802	801	800	800	799	800	800	802	804	807	807	807	806	8042			
11	806	806	804	802	800	800	800	798	799	798	798	797	797	797	792	791	791	792	795	795	796	800	800	799	7980			
12	798	796	795	792	790	790	790	789	789	789	789	788	788	784	780	779	780	780	784	788	790	791	792	792	7885			
13	792	791	789	787	785	784	783	782	780	780	780	780	780	780	779	776	777	780	780	784	786	789	790	790	7835			
14	790	789	789	787	785	782	782	780	780	780	780	780	780	779	775	772	775	777	780	783	788	789	790	790	7826			
15	790	788	783	782	780	780	779	777	775	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	775	776	774	773	772	770	770	770	773	775	779	780	784	785	785	7781			
17	783	781	780	780	780	780	779	779	778	778	778	777	777	777	775	774	775	778	780	783	787	788	790	789	7802			
18	788	785	783	782	781	780	780	780	780	779	778	776	774	772	770	770	770	774	778	780	780	780	782	782	7785			
19	782	781	780	780	780	—	778	778	778	777	777	777	778	775	777	775	778	778	777	779	780	780	782	784	7787			
20	783	780	782	783	783	783	783	780	779	778	777	775	774	772	770	768	768	769	771	775	777	778	780	780	7770			
21	780	778	777	776	773	770	770	770	770	769	768	767	766	764	762	762	764	766	768	770	772	773	777	777	7704			
22	776	775	773	773	772	770	770	767	765	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	767	769	769	769	769	769	769	770	772	775	779	780	781	782	783	7727			
24	780	780	777	775	774	774	774	773	773	772	772	771	770	770	770	769	770	770	771	773	774	775	777	776	7733			
25	776	775	772	771	770	770	770	770	767	765	764	763	763	761	760	760	761	762	765	768	769	770	770	771	7672			
26	770	770	770	769	769	768	768	767	766	765	765	763	762	761	760	758	759	760	761	763	765	768	769	770	7652			
27	770	770	769	767	766	766	766	765	763	762	761	761	761	761	761	760	761	762	764	767	769	770	771	772	7652			
28	772	770	770	770	770	770	769	767	767	766	765	763	762	761	760	760	760	762	763	766	770	773	774	776	7669			
29	775	772	771	770	770	770	769	768	768	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	769	770	770	770	770	770	772	775	776	780	782	784	785	784	784	7739			
31	782	782	780	780	777	777	777	776	778	777	777	778	779	778	779	779	778	780	780	780	780	782	782	783	7792			
Monthly Means...	7899	7885	7872	7864	7853	7852	7846	7837	7833	7827	7823	7816	7813	7804	7794	7787	7793	7809	7828	7851	7870	7884	7895	7895	7843			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

† December 19—5h. Gottingen Mean Time. The reading not recorded.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·385 scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 39'\ 56'' \times \left(\frac{6{\cdot}918}{6{\cdot}312}\right)^2 = 0{\cdot}0002597$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JANUARY 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.
Madras Mean Time.	P.M. h. m. 4 41	h. m. 5 41	h. m. 6 41	h. m. 7 41	h. m. 8 41	h. m. 9 41	h. m. 10 41	h. m. 11 41	h. m. 12 41	h. m. 13 41	h. m. 14 41	h. m. 15 41	h. m. 16 41	h. m. 17 41	h. m. 18 41	h. m. 19 41	h. m. 20 41	h. m. 21 41	h. m. 22 41	h. m. 23 41	h. m. 0 41	h. m. 1 41	h. m. 2 41	h. m. 3 41			
										−2·4 *		12·0 *															
1	4561	4540	4540	4540	4569	4569	4569	4583	4612	4610	4612	4588	4540	4540	4569	4569	4608	4608	4575	4569	4578	4723	4643	4643	4586	20	4606
2	4643	4643	4575	4575	4575	4607	4563	4563	4511	4519	4532	4570	4583	4583	4615	4615	4615	4598	4585	4624	4684	4746	4719	4643	4604	14	4618
3	4589	4562	4564	4564	4564	4593	4593	4593	4615	4624	4637	4649	4637	4549	4582	4611	4668	4679	4717	4766	4832	4793	4720	4634	4639	10	4649
4	4634	4586	4586	4566	4566	4575	4575	4577	4553	4551	4553	4572	4567	4568	4594	4568	4621	4682	4711	4711	4846	4880	4768	4654	4628	1	4629
5	4593	4546	4590	4591	4584	4590	4591	4594	4590	4587	4589	4577	4540	4552	4567	4590	4590	4613	4595	4595	4675	4766	4766	4699	4607	1	4608
6	4623	4561	4561	4569	4569	4544	4544	4575	4558	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	4534	4514	4516	4493	4532	4551	4554	4554	4616	4641	4655	4576	4748	4709	4657	4581	−10	4571
8	4597	4597	4562	4562	4551	4551	4551	4551	4549	4553	4561	4570	4555	4517	4535	4508	4567	4553	4516	4516	4649	4721	4721	4645	4573	−19	4554
9	4609	4609	4625	4625	4582	4582	4562	4562	4542	4549	4560	4560	4535	4496	4541	4541	4575	4596	4688	4720	4700	4669	4615	4594	4593	−23	4570
10	4594	4567	4591	4580	4580	4580	4580	4560	4563	4551	4543	4555	4543	4565	4561	4591	4625	4688	4760	4760	4690	4665	4665	4633	4608	−19	4589
11	4613	4638	4608	4608	4608	4608	4538	4538	4587	4583	4583	4557	4506	4545	4570	4613	4611	4714	4749	4719	4790	4843	4765	4685	4632	−18	4614
12	4651	4699	4641	4641	4641	4641	4641	4619	4521	4507	4497	4534	4546	4546	4569	4646	4685	4743	4708	4708	4699	4796	4796	4744	4642	−21	4621
13	4724	4724	4724	4684	4613	4619	4604	4604	4606	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
14	—	—	—	—	—	—	—	—	—	4548	4494	4498	4478	4534	4495	4495	4685	4685	4710	4725	4741	4802	4730	4707	4635	−18	4617
15	4707	4643	4643	4643	4643	4615	4615	4615	4559	4548	4542	4560	4554	4559	4632	4644	4698	4772	4831	4864	4872	4894	4846	4779	4678	1	4679
16	4705	4705	4665	4665	4629	4629	4649	4649	4643	4617	4595	4596	4573	4592	4609	4652	4702	4725	4746	4714	4760	4714	4679	4642	4661	3	4664
17	4642	4666	4626	4626	4626	4630	4630	4617	4606	4608	4614	4618	4597	4597	4598	4640	4651	4672	4654	4680	4715	4756	4790	4734	4650	−3	4647
18	4690	4652	4652	4652	4652	4602	4602	4602	4662	4618	4579	4591	4579	4550	4606	4659	4591	4644	4630	4650	4674	4703	4681	4722	4635	−5	4630
19	4651	4612	4612	4612	4612	4603	4603	4604	4621	4619	4621	4601	4556	4631	4576	4630	4621	4629	4656	4600	4602	4602	4635	4635	4614	−10	4604
20	4642	4642	4642	4591	4591	4575	4575	4580	4580	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
21	—	—	—	—	—	—	—	—	—	4583	4590	4602	4590	4554	4555	4610	4611	4689	4713	4769	4835	4855	4884	4719	4649	−16	4633
22	4627	4605	4579	4579	4579	4601	4601	4601	4548	4560	4577	4558	4514	4551	4555	4555	4571	4611	4642	4668	4746	4813	4777	4734	4615	−11	4604
23	4693	4661	4658	4658	4645	4645	4645	4645	4619	4623	4631	4611	4567	4530	4590	4613	4679	4724	4700	4730	4763	4724	4769	4703	4659	−2	4657
24	4703	4665	4625	4625	4625	4595	4595	4595	4583	4565	4552	4572	4568	4575	4596	4574	4565	4637	4677	4756	4879	4961	4886	4807	4658	6	4664
25	4708	4666	4599	4656	4616	4615	4631	4589	4582	4579	4580	4583	4562	4551	4634	4574	4605	4589	4589	4530	4560	4671	4705	4663	4610	11	4621
26	4651	4694	4637	4635	4633	4633	4576	4576	4627	4625	4627	4615	4578	4579	4612	4636	4655	4679	4704	4704	4724	4795	4733	4704	4651	18	4669
27	4704	4681	4628	4607	4607	4607	4607	4607	4603	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
28	—	—	—	—	—	—	—	—	—	4593	4588	4590	4568	4587	4607	4579	4537	4537	4581	4599	4661	4744	4816	4802	4627	15	4642
29	4774	4700	4649	4649	4589	4606	4606	4647	4665	4666	4671	4652	4608	4635	4617	4621	4626	4641	4684	4684	4742	4806	4739	4686	4665	3	4668
30	4705	4670	4670	4670	4670	4670	4610	4610	4630	4631	4637	4625	4589	4589	4621	4645	4675	4700	4739	4786	4753	4735	4668	4692	4666	−5	4661
31	4692	4719	4719	4719	4662	4643	4643	4643	4584	4614	4649	4653	4632	4585	4634	4690	4748	4825	4795	4760	4711	4727	4705	4705	4686	−0	4686
Means.....	4656	4639	4621	4618	4607	4605	4596	4596	4590	4584	4583	4584	4561	4563	4585	4601	4627	4661	4678	4687	4721	4765	4738	4691	4632		
Temp. Corrections	-15	-10	-5	-3	-2	0	2	3	5	5	5	6	7	9	11	8	2	-5	-10	-14	-16	-18	-19	-18	.....	-3	
Corrected Means.	4641	4629	4616	4615	4605	4605	4598	4599	4595	4589	4588	4590	4568	4572	4596	4609	4629	4656	4668	4673	4705	4747	4719	4673	.....	.....	4629
Mean Hourly Variations from Monthly Mean.) ÷ ·00	-12	00	13	14	24	24	31	30	34	40	41	39	61	57	33	20	00	-27	-39	-44	-76	-118	-90	-44	.....	$\frac{\Delta Y}{Y} =$	.....	·00306
	-·0312	0000	0338	0364	0623	0622	0805	0779	0883	1039	1065	1013	1584	1480	0857	0619	0000	-0701	-1013	-1143	-1974	-3064	-2337	-1143			

JANUARY 1855. Temperature of Vertical Force Magnetometer.

										*		*															
1	797	788	785	785	785	785	783	781	780	780	780	779	779	778	777	777	782	785	792	795	797	797	797	796	7858		
2	795	791	790	790	790	788	788	788	788	787	787	786	786	786	786	787	787	787	792	793	795	796	798	795	7898		
3	792	791	791	790	790	792	790	789	788	787	787	787	787	786	785	785	786	790	800	802	805	806	807	808	7925		
4	805	800	798	798	797	796	796	796	795	795	795	794	793	792	791	794	800	800	806	810	809	808	805	809	7992		
5	805	802	800	800	798	798	798	797	797	796	796	795	795	792	792	795	799	805	805	802	800	803	806	807	7993		
6	805	804	800	797	797	796	796	795	795	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	—	—	—	803	811	809	808	803	801	804	806	812	815	820	822	823	822	822	8069		
8	819	818	814	814	812	810	810	808	808	807	807	806	806	805	806	806	810	815	820	824	825	826	828	829	8139		
9	824	822	818	818	816	815	813	812	810	810	810	810	810	808	806	806	815	818	820	825	828	830	830	829	8168		
10	826	820	816	816	816	812	810	810	808	807	807	806	805	805	805	805	809	815	820	822	825	825	823	821	8139		
11	820	815	814	812	812	810	810	808	805	805	805	805	805	804	803	806	812	817	820	822	825	826	828	826	8131		
12	824	820	816	815	813	812	810	810	808	807	806	805	805	803	803	806	812	820	821	825	830	830	830	828	8150		
13	826	822	819	817	816	815	815	815	814	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
14	—	—	—	—	—	—	—	—	—	811	808	807	807	805	802	805	806	810	815	815	817	819	816	816	8132		
15	812	808	807	806	804	800	798	796	795	793	792	791	790	790	785	785	790	799	804	805	807	807	809	808	7992		
16	805	802	799	795	795	793	792	792	790	790	790	789	789	787	785	788	797	802	805	806	810	815	817	815	7978		
17	814	808	805	803	803	801	800	800	800	800	800	798	797	796	795	795	795	797	798	800	806	811	813	809	8018		
18	807	804	803	803	802	801	801	801	800	800	800	799	799	799	800	804	805	806	810	811	810	810	808	807	8037		
19	807	804	803	802	800	800	800	800	800	800	800	800	800	800	800	805	809	812	816	820	822	823	824	822	8070		
20	819	812	810	806	805	808	807	806	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
21	—	—	—	—	—	—	—	—	—	806	807	806	806	806	804	809	811	816	819	822	823	824	824	822	8118		
22	819	816	812	810	807	806	805	804	805	804	804	804	804	802	798	796	802	810	811	815	815	817	817	815	8082		
23	815	810	805	805	804	802	800	799	798	797	796	796	796	792	788	790	796	800	800	806	810	810	811	811	8015		
24	808	804	800	798	797	795	795	794	792	791	790	790	790	788	783	785	790	795	798	800	804	805	806	806	7960		
25	807	803	800	797	794	790	790	787	785	785	785	784	784	779	778	780	786	792	796	800	800	801	802	803	7920		
26	803	801	792	790	788	785	785	780	780	779	778	777	777	775	770	770	780	785	790	795	797	799	803	801	7867		
27	801	797	793	791	787	785	780	776	774	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
28	—	—	—	—	—	—	—	—	—	780	787	785	784	780	776	775	779	790	798	800	802	805	806	807	7891		
29	804	802	796	795	794	794	792	792	792	791	790	789	788	784	790	793	796	804	806	810	810	812	816	817	7982		
30	814	808	804	802	802	800	800	798	796	794	793	791	790	790	792	799	805	810	813	815	815	817	819	819	8036		
31	817	813	805	805	805	803	800	798	795	792	790	790	790	789	788	793	797	800	800	805	807	808	809	809	8003		
Monthly Means...	8107	8069	8035	8022	8011	7997	7987	7975	7964	7962	7963	7955	7952	7935	7922	7942	7986	8034	8070	8098	8117	8131	8139	8132	8021		

N. B.—Decreasing numbers denote an increase in the Vertical Force. In the upper table the numbers are tenths of scale divisions; in the lower table, tenths of Farenheit degrees; and in Means, hundredths of degrees.

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corons rectiof interp olati ons.

Corr. for 1° Faht. $= \frac{q}{k} = 1.365$ scd. $\quad k. = a.\ \text{cotan.}\ \theta.\left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291. \times \text{cotan.}\ 7°\ 39'\ 20'' \times \left(\frac{6{\cdot}918}{6{\cdot}267}\right)^2 = 0{\cdot}0002638.$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

FEBRUARY 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
										14.9 *		7.7 *															
1	4720	4659	4659	4641	4641	4621	4621	4621	4662	4653	4614	4622	4614	4586	4634	4709	4748	4781	4781	4792	4765	4735	4754	4729	4682	4	4686
2	4700	4700	4700	4700	4654	4624	4624	4624	4609	4619	4600	4608	4601	4578	4634	4613	4664	4718	4754	4761	4794	4798	4772	4745	4675	8	4683
3	4701	4701	4701	4653	4653	4653	4653	4613	4613	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	4648	4654	4629	4588	4628	4630	4610	4648	4621	4607	4640	4724	4799	4770	4754	4662	4	4666
5	4701	4651	4621	4621	4621	4601	4601	4601	4736	4681	4597	4597	4582	4609	4609	4619	4595	4639	4665	4631	4679	4730	4696	4714	4642	−4	4638
6	4686	4665	4617	4642	4642	4642	4642	4642	4648	4657	4636	4641	4631	4610	4612	4646	4646	4712	4782	4711	4732	4708	4645	4633	4659	−12	4647
7	4684	4684	4645	4645	4645	4625	4625	4644	4635	4648	4632	4640	4632	4615	4622	4643	4693	4777	4866	4931	4865	4810	4732	4660	4692	−10	4682
8	4690	4700	4675	4675	4680	4720	4720	4720	4630	4651	4642	4650	4642	4611	4646	4697	4718	4785	4834	4850	4775	4775	4746	4646	4703	−4	4669
9	4676	4700	4668	4668	4668	4648	4648	4648	4637	4651	4636	4647	4642	4656	4694	4730	4791	4844	4897	4983	5007	4911	4868	4755	4736	−0	4736
10	4723	4698	4684	4685	4685	4685	4685	4680	4680	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	4673	4636	4663	4675	4644	4690	4641	4676	4714	4770	4783	4792	4792	4811	4774	4706	−2	4704
12	4744	4765	4720	4720	4720	4695	4652	4688	4686	4675	4634	4658	4667	4657	4657	4684	4728	4778	4778	4794	4836	4739	4765	4788	4718	4	4722
13	4738	4705	4705	4672	4672	4631	4631	4631	4654	4641	4599	4634	4654	4606	4656	4621	4699	4781	4863	4949	4914	4857	4774	4695	4708	2	4710
14	4695	4728	4664	4642	4686	4720	4738	4715	4661	4676	4661	4677	4678	4685	4699	4672	4729	4780	4821	4775	4705	4670	4609	4642	4697	6	4703
15	4689	4670	4670	4670	4670	4640	4706	4705	4634	4667	4671	4616	4546	4546	4626	4654	4749	4835	4923	4895	4868	4804	4732	4693	4703	4	4707
16	4693	4675	4664	4664	4664	4664	4667	4637	4612	4627	4612	4624	4621	4601	4646	4642	4717	4777	4810	4846	4867	4890	4849	4795	4703	1	4704
17	4770	4735	4735	4735	4735	4695	4695	4695	4700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	4678	4627	4635	4627	4608	4570	4570	4606	4722	4812	4903	4833	4882	4837	4837	4718	−14	4704
19	4758	4707	4653	4653	4661	4655	4655	4662	4683	4699	4686	4690	4679	4640	4578	4608	4642	4739	4825	4854	4880	4836	4729	4772	4706	−21	4685
20	4694	4671	4671	4631	4629	4629	4629	4591	4593	4631	4640	4649	4643	4615	4637	4672	4751	4841	4917	4899	4855	4826	4826	4750	4704	−31	4673
21	4726	4643	4680	4625	4620	4643	4624	4624	4595	4617	4609	4617	4609	4603	4613	4624	4667	4779	4844	4844	4902	4837	4814	4814	4691	−33	4658
22	4737	4671	4631	4616	4616	4616	4616	4616	4616	4640	4635	4648	4646	4594	4636	4610	4664	4728	4790	4763	4833	4924	4924	4826	4691	−40	4651
23	4756	4728	4673	4673	4643	4643	4634	4634	4631	4621	4582	4622	4646	4618	4611	4602	4696	4799	4848	4868	4829	4771	4692	4706	4689	−38	4651
24	4659	4629	4583	4611	4635	4631	4625	4610	4610	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	4623	4606	4602	4583	4583	4634	4663	4675	4789	4861	4861	4820	4786	4725	4700	4671	−41	4630
26	4659	4659	4629	4629	4622	4580	4580	4597	4616	4623	4600	4608	4600	4632	4585	4652	4749	4800	4866	4861	4847	4812	4833	4790	4685	−43	4642
27	4750	4731	4731	4731	4639	4635	4635	4630	4646	4661	4646	4625	4589	4587	4608	4593	4669	4799	4854	4891	4797	4645	4626	4700	4684	−38	4646
28	4677	4703	4648	4662	4662	4605	4605	4635	4636	4649	4633	4650	4651	4651	4660	4655	4716	4789	4836	4823	4785	4785	4689	4637	4685	−36	4649
Means.....	4709	4691	4668	4661	4657	4646	4646	4644	4643	4650	4629	4635	4627	4615	4633	4643	4693	4764	4817	4829	4821	4797	4759	4731	4692		
Temp. Corrections	-27	-23	-18	-15	-13	-11	-10	-9	-7	-6	-6	-5	-4	-1	2	-1	-8	-14	-19	-24	-27	-29	-30	-30	.....	-14	
Corrected Means..	4682	4668	4650	4646	4644	4635	4636	4635	4636	4644	4623	4630	4623	4614	4635	4642	4685	4750	4798	4805	4794	4768	4729	4701	.....	.....	4678
Mean Hourly Variations from Monthly Mean. = ·00	-4	10	28	32	34	43	42	43	42	34	55	48	55	64	43	36	-7	-72	-120	-127	-116	-90	-51	-23	.....	$\frac{\Delta Y}{Y} =$	..... ·003350
	-0106	0264	0739	0841	0897	1134	1108	1134	1108	0897	1451	1266	1451	1688	1134	0950	-0185	-1899	-3166	-3350	-3060	-2374	-1345	-0607			

FEBRUARY 1855. Temperature of Vertical Force Magnetometer.

										*		*															
1	810	808	806	800	800	796	795	794	790	790	790	789	789	785	785	788	792	795	800	805	807	807	809	807	7974		
2	803	801	797	796	794	793	792	791	789	787	785	785	785	782	781	784	790	795	800	800	803	805	808	807	7939		
3	807	803	803	799	799	795	794	793	790	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	790	790	790	790	788	787	787	792	798	802	804	807	810	810	810	7974		
5	808	807	803	801	799	800	798	797	795	795	795	793	792	790	793	799	805	810	810	813	815	817	819	818	8030		
6	818	814	810	806	806	805	804	803	804	804	804	804	804	804	805	805	805	807	810	813	817	819	819	818	8087		
7	817	814	809	808	807	805	804	804	805	804	803	802	802	800	795	796	802	806	810	815	817	819	819	818	8075		
8	817	814	806	804	804	804	803	803	800	800	800	798	797	793	790	790	795	800	806	808	809	810	810	815	8032		
9	813	810	805	803	801	800	799	796	795	795	795	793	792	790	790	790	796	799	801	803	806	809	810	812	8001		
10	810	807	800	799	798	797	797	796	795	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	797	800	798	796	794	788	791	796	805	809	810	812	812	813	811	8013		
12	810	807	804	802	803	798	795	795	795	792	790	788	786	785	780	778	790	799	800	805	807	808	807	808	7972		
13	805	803	800	800	798	798	797	796	795	795	795	793	792	788	785	787	794	800	802	805	806	808	809	807	7982		
14	805	804	798	797	796	796	796	795	792	791	791	790	790	787	782	781	790	794	796	799	802	804	806	805	7953		
15	807	805	804	803	801	795	793	791	790	790	790	789	788	785	782	785	792	797	802	807	809	809	810	810	7972		
16	810	808	802	801	800	798	798	796	795	793	792	791	790	790	785	786	792	797	803	807	809	813	814	815	7994		
17	816	812	812	812	812	806	804	804	802	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	805	808	807	807	807	805	806	809	811	813	818	820	818	815	815	8102		
19	817	815	812	810	808	810	810	810	810	810	810	810	810	808	804	809	810	819	820	826	827	831	834	835	8152		
20	833	828	823	820	819	819	818	817	816	815	815	815	815	812	812	816	822	820	827	834	836	836	836	837	8225		
21	837	830	826	825	825	825	822	821	818	815	812	810	808	808	815	820	823	829	832	835	837	837	839	840	8245		
22	839	838	834	829	826	826	826	825	823	822	822	821	820	820	819	822	826	829	835	839	839	841	842	842	8294		
23	839	834	829	828	824	825	825	825	826	825	825	825	825	825	824	820	820	823	828	830	832	836	839	840	8280		
24	839	838	834	831	830	829	829	826	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	825	825	823	822	820	818	820	825	830	835	836	839	842	843	843	8303		
26	842	838	835	834	830	830	830	828	828	827	826	825	825	822	820	824	830	833	835	837	839	842	842	840	8317		
27	839	838	832	830	829	829	829	826	822	822	822	821	820	817	813	813	820	825	830	834	838	838	838	838	8276		
28	834	832	826	825	824	823	822	822	820	820	820	820	820	820	816	815	820	826	830	835	839	839	840	839	8261		
Monthly Means...	8198	8170	8129	8110	8097	8084	8075	8064	8050	8045	8044	8033	8027	8008	7989	8005	8057	8103	8140	8174	8197	8212	8221	8221	8102		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Falt. $= \frac{q}{k} =$ 1·379 sed. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{t}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 38'\ 31'' \times \left(\frac{6{\cdot}917^s}{6{\cdot}304}\right)^2 = 0{\cdot}0002611$ Adopted Temperature 80°·

VERTICAL FORCE MAGNETOMETER.

MARCH 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										13·2		24·2																
1	4664	4705	4705	4620	4620	4599	4599	4599	4600	4624	4621	4640	4611	4611	4631	4660	4716	4780	4795	4822	4801	4677	4656	4740	4671	-35	4636	
2	4684	4684	4684	4581	4665	4630	4630	4630	4618	4632	4620	4650	4632	4666	4606	4617	4692	4747	4787	4809	4762	4669	4632	4592	4663	-39	4624	
3	4614	4614	4614	4614	4634	4607	4607	4615	4615	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	4627	4612	4644	4627	4603	4628	4696	4825	4979	5054	5065	4948	4820	4713	4651	4709	-49	4660	
5	4651	4662	4635	4601	4590	4602	4602	4602	4608	4631	4627	4646	4617	4600	4560	4539	4577	4659	4679	4710	4720	4691	4721	4721	4635	-52	4583	
6	4690	4652	4649	4649	4595	4595	4595	4595	4620	4638	4630	4657	4635	4635	4622	4645	4723	4723	4873	4884	4828	4798	4740	4776	4685	-49	4636	
7	4716	4672	4637	4617	4617	4591	4591	4591	4600	4614	4602	4628	4605	4587	4577	4577	4587	4625	4701	4736	4704	4717	4664	4696	4635	-40	4595	
8	4667	4643	4687	4655	4655	4655	4655	4655	4640	4641	4616	4626	4588	4588	4617	4622	4675	4764	4882	4866	4866	4772	4740	4747	4686	-38	4648	
9	4690	4732	4694	4685	4659	4638	4595	4595	4558	4571	4558	4606	4605	4623	4646	4698	4698	4766	4934	4881	4873	4821	4791	4791	4696	-37	4659	
10	4750	4693	4702	4702	4645	4645	4630	4556	4556	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	4603	4624	4652	4632	4616	4629	4680	4743	4844	4863	4843	4812	4795	4766	4789	4699	-46	4653	
12	4767	4767	4775	4705	4705	4661	4605	4657	4657	4668	4652	4653	4606	4702	4655	4650	4719	4754	4702	4729	4693	4711	4735	4712	4693	-45	4648	
13	4679	4679	4679	4661	4645	4645	4665	4665	4643	4634	4599	4626	4605	4621	4628	4650	4684	4684	4645	4609	4632	4632	4681	4705	4650	-43	4607	
14	4678	4678	4678	4678	4636	4636	4628	4617	4632	4627	4595	4619	4595	4630	4670	4701	4754	4779	4749	4640	4550	4505	4539	4607	4643	-45	4598	
15	4680	4712	4684	4684	4684	4661	4644	4644	4625	4619	4587	4611	4587	4590	4592	4645	4732	4788	4788	4742	4681	4640	4597	4669	4662	-44	4618	
16	4723	4752	4752	4647	4647	4682	4670	4659	4658	4662	4639	4661	4634	4617	4631	4665	4731	4860	4962	4962	4962	4825	4728	4679	4725	-48	4677	
17	4653	4694	4694	4694	4636	4614	4637	4637	4612	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	4652	4665	4668	4623	4655	4640	4640	4712	4700	4700	4733	4751	4796	4816	4821	4685	-48	4637	
19	4741	4676	4701	4651	4659	4659	4604	4604	4681	4659	4610	4641	4623	4623	4642	4680	4732	4775	4845	4845	4845	4775	4760	4760	4700	-52	4648	
20	4669	4694	4676	4676	4676	4676	4665	4665	4620	4610	4574	4616	4609	4595	4636	4674	4727	4777	4825	4825	4811	4788	4823	4745	4694	-57	4637	
21	4686	4667	4711	4670	4660	4660	4660	4660	4676	4681	4660	4684	4660	4625	4650	4701	4720	4720	4795	4840	4840	4827	4789	4775	4709	-63	4646	
22	4783	4732	4696	4664	4664	4655	4665	4665	4665	4678	4665	4691	4668	4609	4684	4740	4761	4800	4800	4825	4788	4788	4842	4804	4722	-67	4655	
23	4804	4723	4667	4667	4647	4647	4647	4627	4624	4636	4622	4636	4602	4602	4662	4670	4719	4751	4767	4766	4850	4892	4892	4820	4706	-62	4644	
24	4745	4725	4703	4703	4703	4712	4712	4712	4710	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	4657	4578	4602	4578	4600	4668	4699	4729	4820	4930	4980	4935	4961	4777	4680	4734	-61	4673	
26	4680	4697	4697	4674	4674	4621	4645	4597	4670	4662	4628	4661	4646	4614	4651	4606	4659	4740	4742	4742	4698	4698	4677	4700	4670	-69	4601	
27	4721	4675	4655	4655	4655	4666	4666	4636	4632	4645	4632	4646	4611	4625	4626	4648	4696	4729	4755	4755	4784	4775	4716	4775	4682	-69	4613	
28	4745	4708	4662	4662	4651	4636	4636	4629	4641	4634	4600	4639	4630	4596	4652	4699	4751	4808	4831	4872	4832	4811	4811	4736	4703	-74	4629	
29	4707	4681	4661	4661	4661	4636	4636	4636	4607	4620	4607	4636	4617	4579	4628	4641	4661	4729	4762	4786	4756	4762	4762	4704	4672	-79	4593	
30	4704	4667	4667	4687	4687	4637	4637	4625	4601	4628	4629	4631	4585	4609	4634	4680	4680	4680	4805	4842	4820	4711	4717	4669	4676	-79	4597	
Means.....		4703	4692	4683	4660	4653	4641	4636	4630	4630	4637	4617	4641	4617	4616	4633	4659	4708	4761	4805	4812	4790	4756	4734	4726	4685			
Temp. Corrections		-68	-63	-57	-54	-52	-51	-49	-48	-46	-45	-44	-42	-41	-39	-37	-42	-49	-55	-60	-64	-67	-70	-71	-71	.....	-54		
Corrected Means.		4635	4629	4626	4606	4601	4590	4587	4582	4584	4592	4573	4599	4576	4577	4596	4617	4659	4706	4745	4748	4723	4686	4663	4655	.....	.....	4631	
		-4	2	5	25	30	41	44	49	47	39	58	32	55	54	35	14	-28	-75	-114	-117	-92	-55	-32	-24		$\frac{\Delta Y}{Y} =$	.....	·003055
Mean Hourly Variations from Monthly Mean. = ·00		-0104	0052	0131	0653	0783	1071	1149	1279	1227	1018	1514	0836	1436	1410	0914	0366	-0731	-1958	-2976	-3055	-2402	-1436	-0835	-0627	.....			

MARCH 1855. Temperature of Vertical Force Magnetometer.

										*		*																
1	835	835	834	830	830	825	823	820	820	818	817	816	815	815	813	815	820	824	829	832	837	837	837	838	8256			
2	837	834	832	830	830	824	823	822	822	822	822	821	820	820	816	820	823	829	831	834	838	840	843	843	8282			
3	843	840	832	832	832	829	828	828	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	827	830	830	830	830	830	835	836	840	845	845	845	847	847	847	8355			
5	845	840	838	836	835	835	834	833	832	831	830	830	830	830	830	835	836	842	845	847	848	850	851	850	8380			
6	847	844	840	839	839	838	837	836	833	831	830	826	822	822	820	824	830	835	838	839	843	845	846	847	8355			
7	844	841	836	835	834	830	828	826	825	822	820	817	815	815	813	819	825	832	834	835	835	837	839	840	8290			
8	838	835	830	829	829	829	829	828	828	825	822	821	820	818	815	820	822	827	830	832	833	835	836	836	8278			
9	835	831	827	826	825	825	825	824	821	820	819	817	816	815	815	819	825	830	834	835	839	840	840	840	8268			
10	840	836	832	831	831	830	830	828	828	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	830	832	831	830	826	825	823	827	834	840	840	842	843	845	844	8332			
12	844	843	836	835	830	830	830	830	830	828	826	825	825	822	822	820	829	832	835	840	840	842	845	846	8327			
13	843	838	835	832	831	831	830	830	829	828	827	824	822	818	816	822	826	830	835	837	839	840	843	844	8312			
14	845	841	837	832	831	831	830	830	830	828	827	825	824	822	820	823	830	833	838	838	840	843	844	846	8328			
15	843	838	834	832	832	831	827	826	825	824	824	823	822	820	820	825	830	832	839	844	840	845	846	848	8321			
16	847	843	835	834	832	832	832	832	830	829	828	828	828	825	824	825	832	836	840	841	846	847	847	847	8350			
17	844	842	838	834	834	834	832	831	829	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	829	830	828	827	825	824	825	830	835	842	842	844	846	848	847	8350			
19	845	844	836	836	835	835	835	834	832	831	830	830	830	829	826	830	833	839	843	845	847	849	852	852	8374			
20	851	848	843	841	840	840	837	835	835	834	833	832	832	832	830	835	839	844	846	850	852	855	857	857	8416			
21	855	853	849	847	839	838	839	840	840	840	840	839	838	835	834	835	843	846	848	850	856	862	861	860	8453			
22	860	857	853	851	850	846	845	845	845	844	843	841	840	840	835	840	845	850	852	855	856	858	858	858	8486			
23	857	852	849	848	848	846	845	843	842	841	840	840	840	836	833	836	842	846	848	848	850	851	851	854	8452			
24	852	847	845	845	842	840	840	835	832	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	836	840	840	840	838	833	835	840	844	848	852	857	859	859	861	8442			
26	860	856	852	851	848	848	848	847	845	842	840	839	838	837	837	840	847	852	855	860	863	864	865	863	8499			
27	864	860	855	852	850	849	846	845	845	843	841	840	840	835	835	839	846	850	855	857	861	864	864	863	8500			
28	862	860	857	852	852	852	852	851	846	845	845	844	844	840	840	846	850	852	860	865	866	866	870	868	8535			
29	866	865	860	855	854	854	853	852	850	849	848	846	845	845	845	851	855	858	863	869	871	875	875	876	8575			
30	873	868	861	859	856	856	855	854	850	849	848	847	846	845	845	850	855	857	863	868	871	870	869	869	8577			
Monthly Means..	8490	8458	8414	8394	8380	8368	8359	8348	8334	8325	8320	8308	8300	8283	8268	8303	8352	8396	8437	8462	8484	8504	8515	8517	8388			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}387$ scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 37'\ 1'' \times \left(\frac{6{\cdot}917}{6{\cdot}333}\right)^2 = 0{\cdot}0002596$ $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

APRIL 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										7.7 *		3.9 *																
March 31	4642	4642	4642	4642	4617	4635	4656	4656	4685	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	4662	4624	4624	4617	4576	4592	4655	4744	4813	4921	4892	4805	4723	4601	4624	4679	-86	4593	
2	4652	4652	4656	4656	4647	4674	4674	4674	4650	4616	4567	4565	4555	4619	4637	4693	4771	4825	4871	4846	4785	4785	4689	4711	4686	-90	4596	
3	4668	4668	4699	4699	4606	4653	4608	4608	4608	4616	4608	4600	4585	4571	4596	4660	4764	4811	4838	4869	4903	4787	4662	4733	4684	-90	4594	
4	4777	4743	4605	4605	4626	4635	4594	4594	4594	4610	4611	4613	4608	4571	4664	4692	4637	4688	4688	4621	4586	4653	4653	4690	4640	-89	4551	
5	4659	4586	4618	4618	4618	4632	4535	4632	4607	4615	4607	4611	4607	4585	4623	4653	4734	4770	4812	4796	4718	4676	4676	4646	4651	-87	4564	
6	4676	4602	4597	4597	4595	4582	4582	4583	4603	4616	4608	4601	4586	4565	4601	4641	4674	4674	4687	4687	4746	4692	4635	4604	4627	-90	4537	
7	4604	4581	4573	4573	4573	4573	4624	4654	4654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
8	—	—	—	—	—	—	—	—	—	4627	4585	4562	4531	4582	4620	4697	4729	4776	4824	4824	4847	4789	4789	4751	4664	-84	4580	
9	4677	4698	4664	4618	4618	4586	4591	4595	4592	4596	4584	4588	4584	4619	4676	4691	4728	4774	4805	4868	4714	4714	4697	4664	4664	-77	4587	
10	4718	4635	4586	4575	4575	4576	4555	4568	4568	4568	4553	4546	4531	4586	4602	4664	4741	4769	4777	4747	4688	4647	4647	4663	4629	-77	4552	
11	4643	4660	4640	4640	4640	4616	4616	4564	4613	4621	4613	4612	4604	4551	4616	4664	4737	4761	4790	4726	4657	4627	4627	4660	4646	-75	4571	
12	4675	4641	4615	4615	4615	4610	4591	4591	4588	4569	4561	4546	4546	4610	4675	4768	4824	4785	4838	4812	4756	4775	4775		4666	-81	4585	
13	4693	4584	4584	4584	4584	4585	4585	4585	4590	4606	4607	4583	4552	4556	4614	4668	4668	4735	4769	4744	4665	4626	4598	4563	4622	-92	4530	
14	4635	4635	4655	4655	4638	4638	4638	4602	4612	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
15	—	—	—	—	—	—	—	—	—	4597	4567	4562	4550	4591	4580	4664	4727	4800	4876	4932	4898	4841	4733	4638	4678	-97	4581	
16	4608	4608	4617	4600	4597	4597	4597	4620	4572	4621	4654	4649	4637	4595	4600	4649	4720	4814	4876	4876	4835	4780	4736	4736	4675	-96	4579	
17	4658	4646	4671	4671	4671	4671	4651	4651	4635	4644	4638	4628	4611	4546	4641	4720	4796	4891	5004	5070	5013	4959	4838	4713	4735	-90	4645	
18	4622	4667	4696	4627	4646	4646	4596	4596	4636	4619	4587	4596	4597	4581	4597	4695	4715	4807	4918	4961	4967	4943	4910	4804	4710	-94	4616	
19	4683	4655	4624	4650	4685	4665	4642	4642	4585	4585	4570	4568	4559	4539	4606	4706	4767	4863	4999	4970	4894	4829	4749	4649	4695	-105	4590	
20	4649	4611	4587	4620	4620	4668	4668	4668	4574	4569	4548	4550	4544	4561	4606	4661	4747	4847	4948	4948	4855	4780	4755	4665	4677	-114	4563	
21	4632	4632	4607	4649	4610	4646	4646	4647	4647	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
22	—	—	—	—	—	—	—	—	—	4614	4566	4572	4570	4543	4559	4604	4623	4690	4714	4698	4636	4616	4616	4564	4621	-119	4502	
23	4564	4564	4564	4564	4564	4600	4610	4610	4591	4591	4576	4575	4567	4579	4589	4640	4707	4742	4774	4756	4713	4652	4652	4569	4621	-116	4505	
24	4639	4611	4567	4567	4567	4585	4585	4585	4580	4603	4611	4602	4585	4529	4597	4660	4699	4753	4826	4775	4775	4724	4739	4639	4642	-113	4529	
25	4639	4620	4620	4620	4620	4584	4584	4596	4597	4608	4604	4599	4586	4525	4588	4551	4652	4702	4750	4776	4734	4765	4688	4610	4634	-110	4524	
26	4587	4625	4566	4566	4566	4590	4590	4590	4589	4570	4535	4534	4525	4567	4633	4694	4755	4820	4882	4882	4821	4805	4746	4678	4655	-112	4543	
27	4630	4598	4598	4598	4598	4588	4588	4597	4598	4598	4582	4572	4554	4545	4593	4665	4729	4767	4740	4736	4724	4697	4640	4625	4632	-121	4511	
28	4670	4616	4616	4616	4616	4633	4633	4633	4630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
29	—	—	—	—	—	—	—	—	—	4615	4585	4574	4556	4549	4669	4719	4749	4777	4858	4883	4830	4804	4738	4697	4678	-114	4564	
30	4734	4673	4647	4647	4642	4642	4642	4642	4620	4638	4640	4601	4554	4669	4651	4635	4730	4773	4845	4824	4746	4687	4571	4523	4666	-112	4554	
eans.....	4655	4633	4620	4618	4614	4620	4612	4615	4609	4608	4592	4586	4573	4571	4614	4666	4723	4779	4830	4829	4783	4744	4698	4661	4661			
emp. Corrections	-112	-106	-101	-98	-96	-94	-91	-89	-87	-86	-85	-83	-82	-79	-80	-86	-93	-100	-106	-113	-116	-119	-119	-117	.....	-98		
orrected Means.	4543	4527	4519	4520	4518	4526	4521	4526	4522	4522	4507	4503	4491	4492	4534	4580	4630	4679	4724	4716	4667	4625	4579	4544	.....	.....	4563	
Mean Hourly ariations from onthly Mean.	20	36	44	43	45	37	42	37	41	41	56	60	72	71	29	-17	-67	-116	-161	-153	-104	-62	-16	19		$\frac{\Delta Y}{Y} =$		·004180
	0519	0935	1142	1116	1165	0961	1090	0961	1064	1064	1451	1558	1869	1843	0753	-0441	-1739	-3011	-4180	-3972	-2700	-1610	-0415	0493	.....		.....	

APRIL 1855. Temperature of Vertical Force Magnetometer.

										*		*																
March 31	869	866	861	858	856	855	853	852	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
1	—	—	—	—	—	—	—	—	—	852	855	853	852	852	855	856	862	867	870	876	878	879	880	878	8619			
2	873	868	867	865	865	861	860	858	857	856	856	854	853	852	853	859	861	870	870	879	880	882	881	880	8650			
3	874	870	867	866	865	862	860	858	857	855	854	853	852	851	850	853	860	869	870	880	882	885	886	884	8651			
4	881	875	869	869	868	863	860	857	854	853	853	851	850	850	850	854	856	861	869	875	880	880	882	880	8642			
5	880	874	869	867	864	860	858	855	854	853	852	851	851	850	851	855	860	864	866	871	875	876	878	876	8629			
6	870	866	865	864	864	863	863	862	862	859	856	854	852	854	855	860	862	866	870	875	878	880	880	880	8650			
7	875	872	866	864	862	860	860	860	860	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
8	—	—	—	—	—	—	—	—	—	860	860	856	852	845	845	848	855	859	861	864	865	866	869	868	8605			
9	866	863	859	856	856	854	853	853	850	850	850	849	848	845	843	846	852	857	860	862	865	866	868	868	8558			
10	867	864	859	856	855	854	853	852	851	851	851	850	849	845	843	848	852	856	858	860	863	864	866	867	8556			
11	864	860	856	855	849	849	849	848	848	848	848	847	846	845	845	850	852	855	860	865	866	865	865	865	8542			
12	863	860	857	856	856	855	854	852	852	851	850	850	850	848	847	855	858	864	866	869	871	872	873	870	8583			
13	870	868	864	864	863	861	860	859	860	860	860	859	858	856	853	860	865	868	874	880	881	883	886	884	8665			
14	880	876	869	866	865	863	862	860	858	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
15	—	—	—	—	—	—	—	—	—	861	865	864	864	860	861	865	870	874	880	883	885	885	884	884	8702			
16	882	877	876	875	875	869	865	862	860	860	860	859	858	854	855	860	865	868	873	879	880	883	883	881	8691			
17	880	875	872	866	864	864	861	861	860	858	857	856	855	851	850	856	862	866	871	876	876	877	877	875	8652			
18	873	869	868	866	866	863	860	860	860	858	856	857	859	860	860	863	865	870	877	879	881	883	883	884	8675			
19	883	876	870	870	870	870	866	865	866	864	863	863	863	862	865	869	875	885	890	895	898	898	897	894	8757			
20	888	881	881	881	881	880	878	870	870	868	867	867	867	866	872	875	880	889	895	900	904	907	906	900	8822			
21	895	893	891	887	885	885	884	882	882	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
22	—	—	—	—	—	—	—	—	—	881	880	878	877	873	875	880	884	886	890	892	895	895	895	893	8857			
23	894	892	890	886	884	884	884	884	877	874	872	871	870	872	871	875	879	885	889	891	896	897	898	897	8838			
24	895	890	883	882	880	880	879	877	875	873	872	871	870	868	870	871	879	884	887	890	895	897	897	895	8817			
25	890	886	886	878	876	875	874	873	870	868	867	866	865	863	865	871	875	882	890	894	900	900	899	899	8797			
26	894	888	881	880	880	878	876	874	872	870	868	867	866	865	866	868	879	882	889	895	899	901	904	900	8809			
27	898	897	896	895	893	886	885	885	880	878	876	874	873	870	873	878	882	888	895	900	900	905	902	899	8878			
28	894	892	885	885	882	882	880	879	876	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
29	—	—	—	—	—	—	—	—	—	873	870	869	869	865	864	870	880	884	890	894	899	900	900	900	8826			
30	898	894	885	883	882	880	880	878	876	874	872	869	867	865	860	868	871	877	882	889	891	897	898	895	8805			
Monthly Means..	8806	8766	8728	8708	8695	8675	8660	8645	8630	8618	8612	8599	8591	8572	8576	8620	8670	8722	8766	8813	8840	8855	8860	8845	8703			

* The numbers in these Columns are not observed but interpolated for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}313$ sec. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{T'}{T}\right)^3 = 0{\cdot}000291 \times \text{cotan.}\ 7^\circ\ 40'\ 1'' \times \left(\frac{6{\cdot}917}{6{\cdot}141}\right)^2 = 0{\cdot}0002743$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

MAY 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 6 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
										−0·9 *		10·6 *															
1	4587	4640	4602	4602	4602	4602	4602	4602	4605	4587	4570	4576	4560	4571	4615	4699	4737	4772	4831	4753	4734	4699	4662	4684	4646	-104	4542
2	4659	4642	4605	4630	4630	4630	4630	4630	4604	4607	4612	4623	4612	4574	4604	4673	4750	4827	4797	4775	4775	4691	4628	4628	4660	-109	4551
3	4617	4595	4635	4635	4635	4635	4563	4563	4573	4583	4595	4606	4595	4560	4597	4637	4720	4814	4814	4773	4834	4600	4553	4536	4636	-104	4532
4	4611	4629	4618	4618	4585	4585	4585	4585	4600	4581	4564	4577	4568	4525	4626	4665	4706	4706	4698	4677	4720	4707	4642	4586	4623	-109	4514
5	4625	4625	4625	4625	4596	4557	4557	4557	4558	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	4578	4600	4611	4600	4532	4601	4704	4750	4797	4876	4910	4869	4869	4801	4693	4671	-120	4551
7	4632	4632	4607	4607	4568	4599	4599	4599	4578	4586	4596	4602	4587	4572	4572	4585	4645	4716	4745	4745	4706	4737	4693	4640	4631	-129	4502
8	4613	4613	4613	4634	4634	4648	4623	4623	4600	4588	4577	4588	4577	4592	4635	4730	4779	4848	4848	4848	4825	4806	4806	4764	4684	-129	4555
9	4712	4679	4640	4620	4620	4620	4590	4590	4591	4595	4600	4611	4600	4611	4585	4576	4586	4626	4682	4721	4710	4710	4722	4672	4636	-124	4512
10	4633	4613	4611	4611	4548	4597	4575	4602	4513	4514	4517	4540	4541	4582	4611	4611	4646	4667	4591	4591	4554	4622	4713	4679	4595	-120	4475
11	4641	4675	4692	4741	4604	4604	4604	4640	4570	4569	4570	4593	4595	4592	4612	4663	4746	4764	4733	4659	4635	4681	4700	4662	4648	-126	4522
12	4645	4645	4581	4581	4581	4563	4563	4592	4592	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	4576	4562	4573	4562	4616	4689	4728	4797	4835	4791	4938	4889	4889	4857	4825	4686	-136	4550
14	4860	4984	4886	4886	4886	4873	4873	4873	4879	4876	4874	4885	4874	4916	4895	4935	5004	5001	5040	5000	4964	4934	4934	4921	4919	-139	4780
15	4921	4930	4930	4930	4853	4817	4817	4817	4922	4921	4922	4914	4884	4919	4959	5000	5020	5020	5020	5067	5083	5105	4893	4817	4937	-145	4792
16	4725	4725	4725	4725	4725	4704	4715	4696	4696	4695	4696	4676	4635	4696	4690	4694	4770	4830	4876	4959	4897	4832	4832	4800	4751	-148	4603
17	4702	4726	4726	4726	4667	4648	4648	4648	4701	4689	4679	4690	4679	4615	4684	4734	4775	4819	4869	4814	4782	4818	4792	4710	4723	-142	4581
18	4710	4705	4665	4665	4665	4665	4631	4631	4654	4653	4654	4688	4700	4634	4661	4622	4698	4781	4814	4853	4823	4766	4707	4674	4697	-139	4558
19	4674	4692	4690	4720	4720	4646	4646	4646	4612	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	4666	4721	4692	4642	4682	4742	4742	4764	4764	4765	4797	4797	4811	4814	4772	4717	-146	4571
21	4750	4711	4695	4695	4695	4695	4695	4670	4709	4708	4709	4719	4707	4730	4771	4771	4767	4799	4799	4770	4747	4768	4803	4770	4736	-153	4583
22	4797	4746	4694	4694	4741	4741	4741	4740	4695	4714	4734	4725	4694	4694	4716	4760	4799	4838	4838	4798	4821	4770	4770	4782	4752	-167	4585
23	4757	4723	4710	4710	4710	4710	4710	4710	4711	4718	4727	4738	4727	4700	4701	4700	4756	4815	4828	4758	4810	4810	4828	4828	4746	-172	4574
24	4767	4744	4728	4728	4728	4728	4728	4692	4692	4710	4730	4741	4730	4728	4703	4747	4718	4735	4759	4816	4816	4789	4789	4743	4741	-175	4566
25	4785	4759	4758	4758	4707	4707	4707	4707	4737	4736	4737	4759	4760	4735	4740	4731	4764	4764	4787	4818	4839	4763	4730	4704	4750	-181	4569
26	4750	4785	4756	4711	4710	4713	4780	4717	4717	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	4682	4649	4726	4782	4684	4731	4714	4866	4924	4916	5045	5045	4833	4855	4787	4787	-174	4613
28	4761	4738	4738	4738	4738	4738	4738	4702	4705	4719	4734	4745	4734	4724	4772	4823	4857	4970	5023	5023	5023	4975	4855	4855	4809	-177	4632
29	4770	4751	4751	4751	4751	4751	4701	4701	4702	4701	4702	4724	4725	4757	4734	4734	4791	4791	4846	4890	4873	4873	4855	4773	4767	-166	4601
30	4745	4745	4745	4745	4745	4761	4761	4720	4708	4713	4719	4730	4719	4700	4755	4744	4757	4790	4834	4908	4908	4886	4851	4752	4768	-160	4608
31	4774	4805	4805	4805	4805	4751	4727	4727	4769	4768	4769	4756	4722	4751	4751	4777	4814	4845	4899	4959	4919	4835	4718	4657	4788	-164	4624
Means	4712	4713	4697	4700	4683	4677	4671	4666	4666	4668	4671	4682	4671	4666	4695	4722	4770	4810	4827	4839	4830	4799	4770	4730	4722		
Temp. Corrections	-162	-155	-148	-143	-140	-138	-136	-134	-132	-130	-129	-127	-126	-123	-124	-129	-134	-141	-149	-158	-164	-168	-170	-169	.....	-143	
Corrected Means	4550	4558	4549	4557	4543	4539	4535	4532	4534	4538	4542	4555	4545	4543	4571	4593	4636	4669	4678	4681	4666	4631	4600	4561	.....		4579
	29	21	30	22	36	40	44	47	45	41	37	24	34	36	8	-14	-57	-90	-99	-102	-87	-52	-21	18		$\frac{\Delta Y}{Y} =$	
Mean Hourly Variations from Monthly Mean. = ·00	0796	0576	0828	0604	0988	1097	1207	1289	1234	1125	1015	0658	0933	0988	0219	-0384	-1564	-2469	-2716	-2798	-2386	-1426	-0576	0494	.....	.....	·002798

MAY 1855. Temperature of Vertical Force Magnetometer.

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1	893	887	880	879	879	877	875	872	872	869	866	864	863	862	865	869	871	878	885	893	896	899	900	900	8789		
2	898	894	884	884	882	880	880	877	877	873	870	870	870	869	870	875	876	882	889	896	898	899	900	900	8830		
3	898	895	889	882	880	880	876	874	872	871	870	867	865	862	860	870	873	879	882	887	890	892	892	893	8791		
4	892	892	887	880	879	878	876	875	875	875	875	875	875	870	872	880	882	885	890	893	899	899	900	901	8835		
5	898	892	890	887	885	883	884	884	880	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
6	—	—	—	—	—	—	—	—	—	882	885	884	883	880	882	884	890	895	900	906	912	914	912	912	8918		
7	908	906	902	900	898	897	895	893	892	891	890	887	885	885	886	890	896	900	905	906	909	912	914	912	8983		
8	910	905	902	901	899	895	895	894	895	893	892	891	890	887	888	889	894	898	901	905	906	910	911	910	8984		
9	908	904	901	897	895	895	892	892	890	889	888	886	885	880	880	884	886	890	896	900	906	908	910	909	8946		
10	905	902	895	890	890	889	888	883	882	881	880	879	878	878	880	882	885	890	896	900	906	910	913	912	8914		
11	910	904	902	899	896	893	890	887	885	885	885	884	883	880	880	888	890	898	902	907	911	914	915	913	8959		
12	910	905	900	898	897	895	894	894	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
13	—	—	—	—	—	—	—	—	—	896	900	899	898	894	894	895	900	903	910	917	919	922	924	925	9034		
14	921	913	908	899	902	905	905	904	900	898	897	895	893	890	895	897	900	905	910	917	918	921	923	925	9059		
15	920	916	910	908	905	905	905	906	905	902	900	900	900	899	896	900	905	910	916	924	931	934	934	930	9109		
16	928	922	920	920	918	917	909	908	905	905	905	902	900	899	900	902	908	910	917	920	922	924	925	923	9129		
17	920	918	912	909	909	907	906	904	900	900	900	899	899	895	900	901	906	908	911	915	918	918	920	919	9081		
18	916	910	907	905	904	904	903	901	900	899	898	895	893	890	890	893	900	907	915	919	923	928	926	926	9063		
19	922	919	910	909	907	905	905	904	900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
20	—	—	—	—	—	—	—	—	—	902	905	902	900	897	895	897	900	910	915	925	934	940	936	935	9114		
21	932	927	919	915	910	910	910	907	906	905	905	902	900	900	902	905	910	915	921	929	940	944	945	946	9169		
22	943	937	933	927	926	925	925	920	918	916	915	913	912	910	908	911	915	921	926	935	944	950	960	962	9272		
23	953	947	934	930	929	926	924	924	922	921	920	918	916	915	916	918	925	930	935	942	948	949	948	946	9307		
24	944	939	936	932	928	926	926	926	925	924	923	922	921	921	924	925	930	935	941	947	950	953	956	955	9337		
25	955	950	940	936	934	932	931	930	930	929	928	925	923	923	925	928	930	935	945	952	956	960	960	958	9381		
26	955	949	940	936	930	928	925	925	924	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
27	—	—	—	—	—	—	—	—	—	918	913	912	912	910	915	917	923	926	938	944	952	957	964	968	9325		
28	965	958	946	940	935	931	927	926	925	922	920	920	920	916	915	918	922	930	935	942	948	954	958	959	9347		
29	950	938	936	930	928	924	921	917	917	916	915	912	910	906	906	907	915	920	930	940	948	950	952	948	9265		
30	942	938	922	921	918	910	906	909	910	909	908	906	905	903	905	910	915	920	932	943	948	949	951	948	9220		
31	942	934	930	928	927	925	921	920	912	911	910	908	907	905	907	910	916	925	934	940	945	948	949	949	9251		
Monthly Means	9236	9186	9124	9090	9070	9053	9035	9021	9004	8993	8986	8969	8958	8936	8947	8980	9023	9076	9140	9201	9251	9281	9296	9290	9089		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}369$ scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 42'\ 30'' \times \left(\frac{6{\cdot}916}{6{\cdot}260}\right) = 0{\cdot}0002630$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JUNE 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										13·7 *		8·4 *																
1	4706	4738	4738	4738	4720	4710	4740	4740	4706	4710	4686	4688	4674	4740	4777	4810	4866	4930	4930	4737	4919	4866	4807	4807	4770	−174	4596	
2	4772	4772	4772	4772	4772	4720	4720	4720	4731	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	4753	4747	4755	4747	4770	4745	4745	4840	4864	4931	4954	4901	4901	4812	4761	4791	−174	4617	
4	4735	4756	4746	4777	4777	4777	4777	4780	4763	4759	4727	4776	4809	4783	4811	4785	4809	4849	4898	4717	4717	4920	4860	4860	4790	−177	4613	
5	4811	4847	4797	4797	4797	4797	4797	4794	4784	4792	4772	4780	4772	4785	4785	4760	4785	4831	4851	4885	4851	4851	4882	4839	4810	−172	4638	
6	4802	4802	4749	4749	4749	4749	4749	4749	4777	4780	4755	4761	4751	4728	4758	4758	4813	4853	4910	4994	4994	5055	4978	4885	4819	−161	4658	
7	4823	4816	4755	4755	4736	4736	4736	4736	4743	4774	4778	4774	4754	4776	4759	4783	4783	4806	4830	4870	4836	4807	4807	4807	4782	−145	4637	
8	4774	4819	4786	4746	4746	4746	4746	4746	4734	4743	4724	4753	4766	4780	4770	4770	4850	4894	4946	4948	4919	4889	4889	4857	4806	−142	4664	
9	4806	4737	4738	4738	4770	4732	4711	4711	4691	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	4738	4757	4765	4757	4747	4759	4738	4758	4769	4752	4725	4711	4711	4738	4735	4741	−136	4605	
11	4781	4812	4725	4701	4701	4701	4701	4721	4701	4715	4701	4736	4754	4745	4744	4775	4775	4803	4815	4784	4746	4746	4797	4799	4749	−135	4614	
12	4842	4779	4740	4711	4711	4782	4739	4739	4708	4743	4751	4759	4751	4750	4775	4775	4800	4815	4764	4738	4738	4682	4766	4766	4755	−121	4634	
13	4798	4739	4694	4715	4715	4723	4723	4704	4705	4678	4686	4678	4715	4725	4736	4766	4802	4802	4816	4824	4743	4693	4727		4734	−119	4615	
14	4760	4760	4709	4722	4722	4722	4722	4722	4726	4738	4723	4741	4742	4709	4756	4799	4865	4917	4960	4950	4904	4852	4760	4702	4778	−118	4660	
15	4729	4729	4668	4649	4649	4715	4715	4715	4725	4739	4725	4721	4700	4702	4702	4667	4727	4766	4836	4877	4914	4914	4832	4774	4745	−123	4622	
16	4707	4763	4763	4737	4737	4737	4737	4737	4736	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	4734	4705	4713	4705	4721	4700	4688	4746	4827	4651	4962	4962	4908	4870	4825	4765	−126	4639	
18	4766	4798	4768	4768	4737	4737	4701	4701	4701	4704	4680	4688	4680	4754	4754	4761	4761	4810	4839	4882	4861	4814	4814	4779	4761	−120	4641	
19	4749	4749	4749	4719	4749	4684	4684	4720	4748	4763	4750	4757	4748	4748	4747	4778	4812	4832	4845	4845	4888	4854	4805	4840	4773	−124	4649	
20	4796	4823	4753	4753	4753	4700	4684	4684	4723	4750	4749	4747	4729	4740	4747	4739	4747	4775	4804	4839	4799	4789	4799	4778	4758	−133	4625	
21	4751	4751	4775	4728	4713	4713	4713	4703	4720	4745	4743	4754	4749	4755	4770	4770	4829	4865	4901	4901	4967	4913	4818	4767	4784	−134	4650	
22	4742	4742	4742	4742	4742	4783	4783	4763	4763	4777	4764	4760	4740	4705	4715	4762	4721	4784	4739	4713	4846	4846	4906	4807	4766	−136	4630	
23	4770	4802	4802	4802	4802	4750	4750	4750	4722	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	4754	4759	4765	4754	4779	4779	4802	4839	4839	4880	4901	4832	4832	4775	4747	4791	−125	4666	
25	4776	4811	4760	4748	4748	4748	4736	4736	4779	4788	4770	4778	4770	4760	4761	4730	4756	4811	4830	4770	4719	4719	4713	4675	4758	−131	4627	
26	4759	4800	4782	4782	4754	4692	4692	4692	4620	4709	4770	4793	4800	4805	4833	4864	4877	4859	4810	4850	4850	4849	4819	4764	4784	−144	4640	
27	4798	4758	4744	4716	4797	4731	4720	4720	4729	4773	4790	4798	4789	4767	4773	4778	4794	4827	4878	4878	4853	4853	4793	4793	4785	−140	4645	
28	4805	4833	4787	4787	4758	4721	4775	4775	4797	4811	4798	4797	4779	4795	4841	4836	4851	4851	4886	4874	4840	4843	4843	4854	4812	−135	4677	
29	4868	4823	4776	4813	4835	4834	4740	4740	4723	4766	4781	4806	4815	4768	4768	4806	4921	4871	4871	4916	4964	4847	4688	4688	4809	−122	4687	
Means.....	4777	4782	4753	4747	4748	4737	4732	4733	4730	4751	4743	4750	4749	4753	4766	4769	4804	4834	4844	4853	4854	4840	4811	4785	4777			
Temp. Corrections	-154	-149	-143	-141	-138	-136	-135	-132	-132	-130	-129	-128	-126	-124	-125	-128	-132	-138	-143	-148	-153	-155	-157	-155	.....	-139		
Corrected Means..	4623	4633	4610	4606	4610	4601	4597	4601	4598	4621	4614	4622	4623	4629	4641	4641	4672	4696	4701	4705	4701	4685	4654	4630	.....	.....	4638	
	15	5	28	32	28	37	41	37	40	17	24	16	15	9	-3	-3	-34	-58	-63	-67	-63	-47	-16	8				
Mean Hourly variations from Monthly Mean. ÷·00	0394	0132	0736	0841	0736	0973	1078	0973	1052	0447	0631	0421	0394	0237	-0079	-0079	-0894	-1525	-1657	-1762	-1657	-1236	-0421	0210	.....	$\frac{\Delta Y}{Y} =$	.....	·001762

JUNE 1855. Temperature of Vertical Force Magnetometer.

										*		*																
1	945	937	929	926	922	920	920	920	920	919	918	917	916	910	913	914	920	925	933	936	945	950	950	935	9267			
2	933	930	928	926	924	917	917	914	912	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
3	—	—	—	—	—	—	—	—	—	916	921	920	919	917	915	917	920	925	932	940	945	949	954	954	9269			
4	950	942	936	936	935	927	924	922	920	919	918	915	912	914	912	917	920	930	935	939	941	945	945	945	9291			
5	940	938	934	929	925	925	924	924	922	918	915	915	915	915	912	914	919	925	932	935	935	936	938	936	9259			
6	933	928	918	915	914	915	913	910	910	908	907	909	912	910	907	908	912	917	920	929	933	935	930	928	9175			
7	922	910	907	905	904	900	900	899	900	897	895	895	895	892	895	900	905	910	915	917	919	920	920	917	9058			
8	913	908	902	900	900	899	898	896	896	896	896	893	890	894	895	900	905	908	915	917	916	916	916	915	9035			
9	911	907	900	900	897	896	894	892	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
10	—	—	—	—	—	—	—	—	—	890	890	890	890	890	890	892	896	900	905	909	912	915	915	913	8993			
11	912	908	901	895	894	893	890	890	899	898	897	893	890	885	886	890	892	900	906	910	910	910	908	904	8984			
12	888	888	886	886	886	885	885	885	885	882	880	880	880	880	883	885	887	890	892	899	904	906	905	903	8887			
13	902	897	891	890	889	889	888	886	885	884	884	882	880	880	880	878	876	875	878	884	888	895	902	900	8868			
14	897	894	889	886	882	881	880	879	880	879	878	876	875	875	876	880	882	888	890	899	905	905	903	900	8866			
15	900	896	892	891	887	885	885	884	882	881	880	879	878	876	876	875	884	887	892	900	905	910	914	916	8898			
16	914	908	902	899	897	897	898	898	895	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
17	—	—	—	—	—	—	—	—	—	890	885	882	880	880	882	884	885	885	886	889	891	893	895	895	8921			
18	896	890	887	886	885	885	885	885	885	884	884	883	882	880	876	880	884	888	892	895	898	901	905	906	8884			
19	897	893	891	890	890	887	885	885	883	881	880	880	880	880	882	885	886	895	895	899	905	907	914	908	8907			
20	902	899	895	895	894	895	895	894	892	892	892	892	892	891	890	890	894	897	901	906	909	909	908	910	8972			
21	908	907	904	898	897	896	895	880	888	888	888	889	890	886	890	892	896	900	903	904	912	913	913	915	8980			
22	914	910	906	904	902	902	901	899	898	897	896	894	892	890	890	894	900	902	900	900	898	898	897	895	8991			
23	893	890	890	886	885	885	882	880	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
24	—	—	—	—	—	—	—	—	—	881	885	885	885	882	885	890	895	898	902	905	906	909	910	910	8915			
25	907	906	902	897	896	895	894	892	889	888	888	885	883	881	885	890	890	895	896	899	905	909	912	915	8958			
26	915	914	914	913	909	908	908	907	904	902	901	899	897	895	898	896	900	902	905	908	909	906	907	906	9051			
27	906	906	906	906	902	902	901	900	900	898	896	895	895	895	895	897	896	900	905	906	910	911	912	912	9022			
28	915	913	909	908	905	903	901	900	900	897	895	893	892	888	885	889	892	890	892	895	895	900	902	902	8984			
29	900	898	897	897	897	895	892	890	890	890	890	887	885	880	880	880	880	885	885	887	888	887	885	885	8887			
Monthly Means...	9125	9087	9046	9026	9007	8993	8982	8964	8961	8950	8944	8931	8922	8906	8911	8935	8966	9007	9043	9083	9114	9134	9144	9130	9013			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} =$ 1·331 scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 38'\ 20'' \times \left(\frac{6{\cdot}916}{6{\cdot}282}\right)^2 = 0{\cdot}0002630$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

JULY 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
										7·2 *		17·5 *															
June 30	4755	4802	4790	4806	4759	4773	4773	4723	4723	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
1	—	—	—	—	—	—	—	—	—	4762	4787	4794	4765	4786	4810	4854	4854	4933	4982	5017	4985	4985	4909	4868	4833	−126	4707
2	4833	4785	4770	4770	4786	4746	4763	4763	4714	4758	4787	4796	4769	4763	4781	4734	4768	4831	4916	4850	4927	4855	4855	4794	4796	−145	4651
3	4777	4814	4814	4814	4814	4759	4759	4759	4782	4789	4782	4811	4804	4729	4776	4776	4843	4905	4923	4951	4917	4939	4921	4838	4825	−140	4685
4	4792	4792	4776	4776	4744	4750	4750	4750	4704	4744	4770	4775	4744	4753	4682	4655	4679	4726	4785	4819	4845	4729	4739	4782	4753	−138	4615
5	4782	4799	4758	4758	4758	4720	4720	4770	4768	4775	4768	4793	4783	4735	4797	4834	4856	4893	4849	4849	4840	4805	4770	4814	4791	−137	4654
6	4793	4793	4700	4700	4700	4700	4700	4710	4748	4755	4748	4759	4735	4722	4726	4717	4735	4811	4850	4898	4856	4856	4821	4807	4764	−128	4636
7	4807	4785	4785	4785	4692	4730	4730	4730	4752	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
8	—	—	—	—	—	—	—	—	—	4757	4747	4744	4705	4725	4744	4745	4776	4805	4810	4848	4848	4736	4682	4730	4758	−132	4626
9	4753	4753	4723	4723	4723	4723	4688	4608	4692	4720	4733	4731	4693	4715	4780	4780	4815	4815	4828	4771	4759	4713	4713	4705	4736	−130	4606
10	4737	4759	4741	4741	4741	4741	4701	4717	4829	4832	4820	4809	4763	4765	4768	4768	4784	4816	4790	4839	4839	4870	4870	4857	4787	−134	4653
11	4823	4765	4755	4755	4742	4742	4742	4764	4754	4761	4754	4784	4778	4778	4796	4816	4833	4859	4884	4884	4940	4918	4859	4907	4808	−140	4668
12	4818	4784	4764	4764	4764	4782	4702	4702	4709	4723	4722	4760	4763	4736	4757	4711	4716	4760	4796	4767	4782	4782	4802	4778	4756	−141	4615
13	4778	4747	4747	4747	4775	4732	4732	4732	4672	4716	4745	4743	4705	4727	4727	4746	4767	4827	4868	4851	4893	4904	4888	4888	4777	−141	4636
14	4777	4777	4723	4723	4725	4767	4767	4771	4771	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
15	—	—	—	—	—	—	—	—	—	4747	4709	4727	4709	4727	4758	4758	4766	4805	4836	4875	4920	4962	4968	4891	4790	−133	4657
16	4833	4778	4737	4720	4720	4785	4729	4729	4717	4724	4717	4718	4684	4699	4759	4769	4811	4875	4931	4965	4927	4953	4911	4870	4794	−130	4664
17	4767	4729	4704	4704	4704	4712	4712	4712	4683	4695	4692	4736	4744	4738	4785	4804	4854	4884	4884	4965	5004	4994	4950	4937	4796	−118	4678
18	4847	4792	4785	4785	4785	4757	4757	4757	4773	4781	4775	4796	4782	4755	4747	4767	4801	4801	4756	4792	4763	4791	4835	4784	4782	−115	4667
19	4753	4738	4707	4701	4722	4722	4750	4750	4812	4812	4798	4809	4785	4741	4744	4816	4817	4750	4750	4874	4753	4581	4640	4614	4747	−120	4627
20	4662	4711	4700	4702	4681	4681	4681	4704	4729	4745	4747	4744	4706	4708	4715	4709	4752	4753	4753	4856	4830	4833	4811	4775	4737	−122	4615
21	4740	4740	4707	4707	4707	4694	4694	4694	4694	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
22	—	—	—	—	—	—	—	—	—	4724	4739	4715	4656	4720	4741	4790	4768	4826	4913	4978	5015	4875	4764	4679	4762	−104	4658
23	4679	4696	4720	4720	4720	4732	4732	4732	4723	4743	4748	4722	4661	4661	4749	4756	4773	4773	4816	4820	4877	4932	4974	4847	4763	−106	4657
24	4764	4721	4721	4721	4721	4708	4708	4708	4718	4725	4718	4723	4693	4745	4723	4723	4732	4749	4798	4798	4705	4682	4720	4770	4729	−121	4608
25	4802	4802	4762	4762	4731	4702	4702	4697	4719	4734	4735	4722	4673	4719	4743	4759	4811	4837	4905	4878	4813	4813	4794	4758	4766	−130	4636
26	4688	4726	4726	4726	4711	4732	4764	4727	4727	4724	4707	4713	4683	4714	4742	4742	4760	4762	4807	4824	4824	4758	4721	4624	4735	−125	4610
27	4651	4731	4733	4730	4730	4720	4720	4725	4730	4747	4750	4768	4750	4729	4781	4855	4887	4927	4967	5011	4961	4943	5011	5011	4815	−133	4682
28	4885	4884	4782	4782	4782	4754	4720	4720	4725	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
29	—	—	—	—	—	—	—	—	—	4701	4662	4667	4636	4686	4790	4790	4844	4900	4981	4958	4945	4945	4860	4762	4798	−136	4662
30	4762	4740	4730	4730	4723	4739	4750	4750	4677	4660	4628	4688	4713	4685	4744	4733	4809	4809	4890	4985	5090	4994	4857	4763	4777	−141	4636
31	4691	4691	4665	4665	4665	4665	4665	4684	4684	4691	4684	4712	4704	4722	4702	4663	4714	4751	4725	4702	4765	4723	4692	4650	4695	−132	4563
Means.....	4768	4764	4742	4741	4734	4732	4726	4725	4731	4742	4740	4750	4725	4729	4754	4762	4790	4822	4852	4875	4875	4847	4827	4796	4773		
Temp. Corrections	-147	-143	-136	-134	-131	-128	-126	-123	-121	-120	-120	-118	-117	-115	-112	-114	-120	-125	-130	-136	-143	-147	-150	-151	.....	-130	
Corrected Means.	4621	4621	4606	4607	4603	4604	4600	4602	4610	4622	4620	4632	4608	4614	4642	4648	4670	4697	4722	4739	4732	4700	4677	4645	.....	.....	4643
Mean Hourly Variations from Monthly Mean. = ·00	22	22	37	36	40	39	43	41	33	21	23	11	35	29	1	-5	-27	-54	-79	-96	-89	-57	-34	-2			
	0579	0579	0973	0947	1052	1026	1131	1078	0868	0552	0605	0289	0921	0763	0026	-0132	-0710	-1420	-2078	-2525	-2341	-1499	-0894	-0053	.....	$\frac{\Delta Y}{Y} =$	.....	·00252

JULY 1855. Temperature of Vertical Force Magnetometer.

											*		*														
June 30	885	884	882	881	880	880	879	877	876	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
1	—	—	—	—	—	—	—	—	—	883	890	888	886	884	885	890	895	897	900	906	915	917	922	920	8917		
2	920	916	905	905	904	904	904	903	900	900	900	899	899	897	890	895	900	905	910	912	915	920	922	918	9060		
3	912	908	908	906	905	898	897	897	897	896	896	896	896	893	893	890	896	900	905	907	910	913	917	917	9022		
4	915	911	900	900	897	895	895	894	894	893	893	892	891	889	887	890	895	900	905	910	915	920	920	915	9007		
5	913	910	905	905	903	900	899	898	896	893	890	889	888	888	885	885	892	899	905	908	912	915	916	915	9004		
6	912	909	902	900	900	899	898	893	892	891	890	888	886	885	880	877	882	886	890	895	900	904	902	905	8936		
7	903	902	900	899	898	897	895	894	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
8	—	—	—	—	—	—	—	—	—	891	890	889	888	887	887	886	890	894	897	900	904	908	913	914	8966		
9	908	902	898	897	896	895	893	891	890	889	888	888	888	887	884	883	890	890	895	896	902	907	908	908	8947		
10	908	907	905	904	901	900	898	894	890	889	888	887	887	885	883	885	890	895	899	905	909	911	916	917	8980		
11	915	913	908	906	905	904	903	899	898	896	894	893	892	892	890	895	900	900	900	905	908	910	912	914	9022		
12	916	915	907	906	900	900	900	899	897	895	894	893	892	895	893	896	896	897	902	909	911	915	917	918	9026		
13	918	915	912	910	910	905	903	900	895	894	894	893	892	892	888	890	895	897	900	905	910	913	917	918	9027		
14	912	908	907	902	900	897	893	890	885	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
15	—	—	—	—	—	—	—	—	—	891	898	897	896	895	890	888	888	895	896	900	900	902	904	904	8974		
16	905	905	899	897	897	896	893	890	890	890	890	888	887	882	880	882	885	890	894	900	905	907	912	913	8949		
17	903	897	893	892	890	887	886	882	881	880	830	880	880	878	872	877	880	880	882	886	894	896	898	899	8864		
18	898	898	890	887	885	881	880	879	879	876	873	873	874	873	872	869	873	880	886	887	890	898	899	903	8835		
19	902	900	899	897	890	885	883	883	880	880	880	877	875	875	872	876	880	884	886	890	897	899	900	905	8873		
20	904	902	894	893	893	891	890	884	880	879	879	879	879	878	878	880	882	885	890	895	897	899	902	897	8887		
21	896	890	888	885	884	877	874	872	872	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
22	—	—	—	—	—	—	—	—	—	870	868	867	867	865	862	864	866	872	875	878	882	885	885	884	8762		
23	884	885	880	880	879	876	875	873	870	869	869	867	866	863	860	865	870	875	880	885	890	896	900	898	8773		
24	901	900	895	890	882	886	885	884	884	883	882	880	879	877	873	875	883	885	890	893	897	902	907	910	8885		
25	908	906	895	895	894	892	890	890	890	889	888	887	886	882	880	885	890	894	896	900	905	909	914	917	8951		
26	911	905	897	895	895	892	889	885	884	883	882	881	880	880	878	880	884	890	895	900	905	905	910	910	8923		
27	912	906	899	898	896	895	892	890	890	890	890	889	889	883	882	884	886	890	895	901	907	910	916	918	8962		
28	912	904	899	899	898	898	898	895	895	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
29	—	—	—	—	—	—	—	—	—	892	890	889	889	885	887	889	890	896	900	905	912	915	920	923	8992		
30	918	910	906	905	901	900	902	900	900	900	900	898	897	897	892	890	895	900	903	905	910	912	909	912	9026		
31	908	904	90 4	902	900	900	894	890	890	888	887	886	885	880	882	885	886	890	895	906	908	913	916	912	8963		
Monthly Means...	9074	9041	8991	8976	8957	8937	8921	8899	8884	8878	8875	8864	8857	8840	8817	8834	8874	8913	8952	8996	9041	9074	9101	9105	8946		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}423$ sed. $k = a.\ \text{cotàn.}\ \theta.\left(\frac{t'}{T}\right)^2 = 0.0000291 \times \text{cotan.}\ 7^\circ\ 37'\ 45'' \times \left(\frac{6{\cdot}916}{6{\cdot}403}\right)^2 = 0{\cdot}0002534$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

AUGUST 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.
										−0·1			2·5														
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
1	4707	4742	4725	4725	4725	4716	4731	4731	4731	4737	4744	4747	4744	4717	4719	4763	4819	4889	4961	4938	4938	4961	4938	4874	4793	−135	4658
2	4793	4744	4726	4726	4726	4745	4745	4752	4756	4747	4739	4749	4753	4753	4700	4644	4676	4721	4779	4849	4767	4728	4797	4824	4747	−128	4619
3	4824	4731	4746	4746	4712	4765	4765	4770	4780	4769	4758	4742	4721	4694	4744	4666	4696	4758	4787	4767	4817	4877	4934	4894	4769	−133	4636
4	4805	4737	4737	4737	4737	4737	4737	4733	4733	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	—	—	—	—	—	—	—	—	—	4721	4709	4717	4719	4732	4735	4689	4755	4735	4701	4755	4755	4704	4751	4709	4732	−134	4598
6	4715	4715	4740	4740	4740	4713	4725	4725	4725	4733	4741	4744	4741	4754	4745	4754	4765	4781	4815	4760	4720	4778	4778	4701	4744	−137	4607
7	4769	4769	4740	4740	4740	4704	4704	4704	4751	4745	4740	4744	4742	4720	4745	4706	4729	4692	4692	4707	4705	4800	4829	4827	4739	−143	4596
8	4781	4737	4737	4737	4737	4747	4747	4755	4746	4746	4747	4763	4774	4771	4776	4776	4855	4833	4948	4994	4950	4925	4860	4803	4802	−143	4659
9	4766	4766	4732	4700	4700	4757	4757	4754	4754	4754	4754	4758	4756	4738	4774	4757	4773	4875	4942	4909	4847	4776	4756	4745	4775	−141	4634
10	4777	4777	4777	4777	4755	4755	4759	4759	4762	4766	4771	4774	4771	4775	4768	4761	4761	4799	4843	4843	4807	4761	4782	4823	4779	−142	4637
11	4791	4817	4750	4750	4750	4738	4738	4738	4741	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
12	—	—	—	—	—	—	—	—	—	4729	4717	4721	4719	4702	4751	4785	4829	4780	4833	4858	4825	4825	4801	4801	4770	−138	4632
13	4782	4755	4734	4734	4746	4746	4746	4736	4736	4760	4784	4754	4719	4731	4739	4779	4779	4857	4927	4960	4938	4970	4890	4839	4798	−123	4675
14	4788	4788	4735	4735	4728	4749	4709	4709	4709	4731	4753	4738	4718	4718	4740	4755	4805	4840	4893	4868	4850	4850	4860	4790	4773	−115	4658
15	4760	4790	4700	4700	4720	4750	4750	4750	4751	4733	4716	4721	4721	4705	4751	4820	4836	4888	4866	4856	4780	4827	4850	4800	4773	−110	4663
16	4752	4752	4710	4710	4710	4712	4712	4712	4660	4648	4637	4673	4704	4704	4734	4754	4835	4870	4910	4910	4944	4890	4868	4843	4765	−104	4661
17	4818	4773	4748	4741	4700	4728	4728	4692	4702	4711	4721	4720	4713	4671	4682	4716	4751	4792	4839	4882	4882	4882	4810	4782	4758	−106	4652
18	4803	4752	4707	4707	4707	4737	4755	4755	4755	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
19	—	—	—	—	—	—	—	—	—	4760	4766	4726	4680	4699	4727	4727	4800	4834	4862	4856	4856	4818	4783	4769	4764	−115	4649
20	4736	4736	4724	4702	4702	4689	4672	4672	4675	4685	4695	4702	4703	4700	4700	4700	4700	4714	4751	4670	4670	4670	4754	4788	4705	−119	4586
21	4788	4732	4666	4671	4671	4671	4710	4710	4688	4678	4669	4677	4680	4662	4733	4804	4801	4902	4874	4849	4849	4815	4868	4782	4748	−122	4626
22	4782	4750	4700	4700	4700	4701	4701	4677	4677	4690	4704	4713	4717	4704	4735	4766	4781	4781	4709	4739	4757	4757	4728	4708	4724	−126	4598
23	4750	4761	4692	4692	4692	4681	4681	4681	4683	4677	4671	4658	4640	4704	4707	4750	4961	4961	4804	4720	4701	4588	4555	4620	4710	−129	4581
24	4721	4748	4748	4688	4688	4700	4705	4705	4537	4605	4674	4665	4650	4650	4712	4767	4837	4865	4833	4786	4643	4643	4596	4596	4698	−109	4589
25	4685	4739	4679	4679	4679	4691	4752	4752	4752	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
26	—	—	—	—	—	—	—	—	—	4728	4705	4725	4739	4673	4728	4795	4885	4888	4872	4837	4837	4809	4767	4759	4756	−123	4633
27	4764	4764	4764	4764	4723	4759	4759	4759	4725	4707	4690	4698	4700	4700	4744	4793	4793	4888	4888	4832	4807	4786	4762	4725	4762	−116	4646
28	4758	4758	4708	4708	4743	4743	4743	4721	4695	4685	4676	4678	4675	4650	4750	4832	4895	4905	4863	4863	4863	4863	4774	4754	4763	−112	4651
29	4754	4767	4767	4697	4697	4697	4651	4651	4650	4650	4650	4681	4706	4707	4719	4781	4819	4849	4905	4930	4875	4793	4770	4770	4747	−127	4620
30	4783	4742	4712	4712	4712	4724	4724	4724	4717	4707	4697	4673	4643	4691	4708	4688	4766	4813	4856	4895	4793	4785	4813	4770	4744	−125	4619
31	4770	4721	4721	4721	4721	4700	4674	4674	4650	4664	4679	4694	4704	4705	4723	4762	4797	4767	4933	4934	4934	4904	4816	4769	4756	−131	4625
Means	4767	4754	4727	4720	4717	4724	4725	4722	4713	4714	4715	4717	4713	4709	4733	4751	4796	4825	4848	4843	4819	4807	4796	4773	4755		
Temp. Corrections	−144	−140	−133	−130	−127	−124	−121	−119	−117	−116	−116	−115	−113	−110	−109	−112	−115	−119	−126	−133	−138	−141	−146	−146	.....	−125	
Corrected Means	4623	4614	4594	4590	4590	4600	4604	4603	4596	4598	4599	4602	4600	4599	4624	4639	4681	4706	4722	4710	4681	4666	4650	4627	.....	.....	4630
Mean Hourly Variations from Monthly Mean. = ·00	7	16	36	40	40	30	26	27	34	32	31	28	30	31	6	−9	−51	−76	−92	−80	−51	−36	−20	3	.....	$\frac{\Delta Y}{Y} =$	.....	·002331
	0177	0405	0912	1014	1014	0760	0659	0684	0862	0811	0786	0709	0780	0786	0152	−0228	−1292	−1926	−2331	−2027	−1292	−0912	−0507	0076			

AUGUST 1855. Temperature of Vertical Force Magnetometer.

										*		*															
1	910	907	900	900	900	895	890	890	890	889	888	886	885	882	884	880	885	890	893	900	904	907	910	915	8950		
2	912	908	904	899	894	892	890	884	880	879	878	878	878	875	878	879	880	883	887	895	898	901	905	908	8902		
3	908	903	896	895	894	890	890	890	888	887	886	885	885	882	884	885	885	889	893	898	901	905	910	913	8934		
4	910	908	901	897	894	890	890	890	890	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
5	—	—	—	—	—	—	—	—	—	888	886	885	884	880	879	882	886	890	896	902	910	908	908	908	8943		
6	904	900	898	896	894	892	892	892	892	891	890	890	890	887	885	885	888	892	896	902	909	913	916	917	8963		
7	918	915	907	907	903	900	897	895	894	892	890	890	890	887	885	890	894	899	903	909	907	913	914	913	9005		
8	911	910	909	908	908	905	804	902	895	893	892	890	888	886	885	890	890	896	900	908	912	914	916	913	9010		
9	912	908	903	901	900	896	896	896	896	894	892	892	892	888	885	886	890	898	901	908	910	913	916	913	8994		
10	913	910	900	897	897	895	896	896	896	895	895	893	892	886	885	888	892	895	905	911	913	917	916	914	8999		
11	915	910	898	897	897	896	895	894	892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
12	—	—	—	—	—	—	—	—	—	897	902	901	900	896	888	886	890	890	892	899	900	900	899	899	8972		
13	897	895	894	893	893	888	886	882	880	879	878	877	876	875	872	871	876	882	886	894	900	902	903	900	8866		
14	899	898	897	893	888	880	878	876	875	874	874	873	873	870	867	865	865	870	875	885	888	891	892	893	8808		
15	889	885	880	880	880	879	879	877	875	874	874	872	870	868	870	872	871	871	872	882	887	886	883	887	8777		
16	883	877	875	875	874	872	870	868	866	865	865	865	865	863	862	865	865	870	875	878	882	886	890	893	8729		
17	892	892	882	880	878	872	867	865	865	864	863	861	860	860	863	870	872	875	880	880	886	886	890	886	8745		
18	885	885	879	878	875	875	875	873	870	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
19	—	—	—	—	—	—	—	—	—	875	880	876	873	872	872	876	878	880	885	887	892	895	902	899	8807		
20	897	895	890	887	885	884	882	882	878	877	877	876	875	875	875	879	878	880	883	885	888	891	896	897	8838		
21	895	895	890	886	886	885	882	882	882	882	882	882	882	880	880	880	880	882	885	890	890	894	896	899	8861		
22	897	897	894	890	890	887	884	884	885	883	882	881	880	880	877	880	884	887	889	889	896	900	907	910	8889		
23	910	908	900	897	895	894	890	886	885	885	885	884	883	881	880	882	884	887	890	894	896	898	898	892	8910		
24	887	882	878	875	875	875	875	872	870	870	870	870	870	868	866	866	870	876	878	883	886	891	896	898	8770		
25	897	893	894	885	880	878	878	876	875	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
26	—	—	—	—	—	—	—	—	—	879	883	881	880	879	880	881	882	888	891	895	898	902	904	902	8867		
27	900	897	896	892	882	882	880	880	880	878	877	876	876	874	870	872	872	875	880	883	884	885	888	890	8820		
28	888	886	882	880	880	880	877	875	872	871	870	870	870	868	870	870	874	874	880	882	887	889	897	900	8788		
29	900	905	895	893	892	891	890	890	886	885	884	881	878	878	880	884	885	862	890	894	897	900	903	902	8894		
30	900	898	892	891	886	886	885	885	885	884	883	881	880	875	876	880	881	884	887	892	896	900	907	908	8884		
31	903	900	898	896	896	896	887	885	884	883	882	882	883	882	880	885	886	890	900	900	900	901	907	905	8921		
Monthly Means	9012	8988	8938	8914	8895	8872	8854	8840	8824	8820	8818	8807	8799	8777	8770	8789	8809	8835	8886	8935	8969	8996	9026	9027	8883		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht.$=\frac{q}{k}=1{\cdot}359$ sec. $k=a.\ \text{cotan.}\ \theta.\left(\frac{t'}{T}\right)^2=0{\cdot}0000291\times\text{cotan.}\ 7°\ 37'\ 11''\times\left(\frac{6{\cdot}916}{6{\cdot}268}\right)^2=0{\cdot}0002648$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

SEPTEMBER 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 16 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										11·9 *		3·8 *																
1	4769	4750	4714	4660	4698	4689	4689	4690	4690	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	4701	4689	4711	4726	4726	4705	4750	4847	4900	4898	4898	4794	4794	4742	4757	4749	−127	4622	
3	4757	4757	4694	4694	4723	4723	4723	4723	4724	4727	4707	4715	4716	4696	4704	4704	4726	4734	4745	4745	4695	4619	4578	4628	4707	−126	4581	
4	4689	4721	4682	4669	4669	4685	4685	4685	4687	4690	4670	4674	4670	4714	4708	4708	4849	4911	4925	4891	4804	4776	4714	4680	4731	−118	4613	
5	4754	4735	4732	4700	4700	4700	4700	4700	4702	4703	4680	4694	4701	4666	4734	4769	4834	4895	4840	4802	4719	4570	4602	4670	4721	−116	4605	
6	4716	4741	4687	4687	4687	4684	4684	4684	4695	4701	4683	4681	4671	4702	4747	4829	4870	4983	4983	4895	4787	4696	4711	4711	4746	−113	4633	
7	4729	4708	4675	4675	4690	4690	4690	4690	4655	4685	4691	4704	4709	4709	4727	4819	4922	4945	4878	4826	4791	4745	4677	4628	4736	−118	4618	
8	4700	4770	4672	4672	4709	4702	4702	4669	4669	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	4684	4676	4680	4676	4690	4739	4883	4883	4821	4786	4719	4684	4627	4596	4630	4710	−108	4602	
10	4662	4704	4658	4658	4658	4685	4685	4695	4696	4694	4669	4661	4646	4712	4712	4851	4900	4874	4758	4758	4718	4707	4648	4692	4713	−96	4617	
11	4763	4800	4800	4800	4800	4661	4661	4661	4702	4692	4659	4678	4689	4689	4731	4807	4918	4983	4951	4875	4875	4706	4649	4649	4758	−97	4661	
12	4651	4706	4644	4644	4644	4644	4644	4661	4680	4684	4664	4654	4636	4630	4716	4809	4907	5048	5007	4897	4794	4712	4655	4675	4725	−104	4621	
13	4710	4737	4687	4687	4687	4668	4668	4640	4676	4690	4680	4691	4694	4669	4669	4771	4771	4979	5022	4979	4921	4777	4738	4738	4748	−97	4651	
14	4737	4750	4690	4690	4690	4677	4677	4627	4651	4663	4651	4662	4666	4628	4646	4712	4776	4835	4835	4859	4809	4658	4593	4640	4701	−92	4609	
15	4694	4694	4694	4694	4648	4648	4648	4654	4654	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	4686	4695	4699	4695	4641	4679	4697	4826	4878	4946	4879	4659	4582	4625	4625	4702	−100	4602	
17	4665	4665	4665	4665	4635	4622	4622	4648	4648	4662	4652	4656	4652	4635	4705	4743	4804	4806	4752	4752	4722	4732	4680	4680	4686	−96	4590	
18	4669	4669	4669	4673	4673	4673	4619	4619	4637	4652	4644	4656	4661	4661	4682	4792	4836	4910	4953	4967	4880	4787	4766	4634	4722	−99	4623	
19	4681	4710	4682	4682	4682	4629	4629	4629	4607	4653	4675	4681	4680	4672	4682	4762	4825	4852	4853	4830	4769	4712	4712	4698	4708	−105	4603	
20	4743	4734	4658	4639	4675	4685	4686	4637	4637	4666	4671	4683	4688	4661	4661	4719	4719	4795	4841	4803	4735	4681	4681	4627	4697	−111	4586	
21	4696	4696	4696	4646	4646	4684	4684	4684	4630	4656	4658	4651	4637	4640	4737	4761	4819	4835	4904	4786	4680	4619	4667	4667	4699	−116	4583	
22	4723	4723	4673	4673	4673	4626	4626	4603	4603	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	4648	4669	4673	4669	4640	4694	4781	4900	4986	4986	4986	4849	4756	4696	4755	4734	−114	4620	
24	4755	4722	4662	4679	4679	4679	4679	4647	4612	4667	4698	4697	4689	4680	4728	4794	4845	4960	4960	5011	4895	4821	4759	4759	4753	−96	4657	
25	4725	4678	4655	4643	4643	4677	4677	4591	4679	4691	4679	4678	4670	4690	4692	4741	4766	4857	4891	4788	4775	4775	4697	4693	4710	−80	4630	
26	4676	4676	4652	4652	4652	4632	4632	4651	4670	4670	4646	4650	4646	4652	4592	4702	4746	4779	4779	4827	4735	4697	4641	4641	4679	−78	4601	
27	4682	4686	4635	4635	4635	4586	4586	4586	4594	4653	4689	4677	4657	4610	4640	4689	4820	4880	4970	4970	4760	4727	4623	4658	4694	−86	4608	
28	4723	4723	4632	4632	4632	4564	4618	4618	4671	4667	4640	4670	4692	4671	4714	4800	4782	4891	4891	4891	4846	4766	4797	4714	4719	−91	4628	
29	4695	4675	4675	4675	4675	4675	4650	4630	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—	—	—	—	—	—	—	—	—	4676	4699	4712	4717	4686	4710	4757	4813	4862	4883	4888	4781	4775	4775	4766	4729	−85	4644	
Means.....	4711	4717	4679	4673	4676	4664	4663	4654	4660	4678	4673	4680	4678	4671	4698	4766	4828	4888	4889	4861	4779	4713	4678	4681	4719			
Temp. Corrections	-117	-113	-108	-105	-103	-101	-99	-98	-97	-96	-95	-93	-91	-88	-89	-92	-96	-102	-106	-110	-113	-116	-118	-118	.....	-103		
Corrected Means..	4594	4604	4571	4568	4573	4563	4564	4556	4563	4582	4578	4587	4587	4583	4609	4674	4732	4786	4783	4751	4666	4597	4560	4563	.....	.....	4616	
Mean Hourly Variations from Monthly Mean. = ·00	22	12	45	48	43	53	52	60	53	34	38	29	29	33	7	-58	-116	-170	-167	-135	-50	19	56	53	.....	$\frac{\Delta Y}{Y}=$	.....	·00450
	0583	0318	1192	1271	1138	1403	1377	1589	1403	0900	1006	0768	0768	0874	0185	-1536	-3072	-4502	-4422	-3575	-1324	0503	1483	1403				

SEPTEMBER 1855. Temperature of Vertical Force Magnetometer.

										*		*																
1	903	902	900	896	893	893	891	890	888	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
2	—	—	—	—	—	—	—	—	—	887	887	886	885	883	883	885	885	889	892	894	900	905	910	913	8933			
3	907	905	896	895	894	893	893	892	890	888	887	884	882	875	879	882	886	892	892	899	902	904	905	904	8927			
4	900	900	892	890	887	885	882	880	880	880	880	879	879	874	880	880	880	892	885	888	895	896	901	902	8870			
5	899	897	885	884	882	882	882	881	880	880	880	879	878	877	876	880	880	882	887	890	893	895	898	899	8852			
6	898	894	891	887	885	880	880	878	876	875	874	873	872	869	870	875	879	881	885	888	890	895	899	900	8831			
7	898	895	894	893	892	890	890	889	886	883	880	877	875	872	870	876	879	881	886	890	895	895	900	900	8869			
8	899	897	895	893	890	883	880	879	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
9	—	—	—	—	—	—	—	—	—	873	870	868	866	862	865	865	868	875	877	880	883	885	889	888	8795			
10	887	883	876	870	870	868	867	865	870	870	870	868	867	865	860	858	857	865	866	870	875	880	882	882	8705			
11	883	879	873	872	870	868	867	866	865	865	865	864	864	864	865	865	868	870	875	876	878	882	888	892	8718			
12	890	888	878	877	876	874	872	870	870	870	870	868	867	867	866	870	873	876	880	885	887	888	890	892	8768			
13	890	887	882	876	875	875	875	874	872	871	870	868	867	863	857	860	860	861	863	865	872	875	876	876	8712			
14	874	870	865	864	865	867	867	865	865	863	862	861	860	860	862	862	865	870	875	876	876	876	876	880	8677			
15	881	879	879	873	870	870	870	868	866	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
16	—	—	—	—	—	—	—	—	—	867	869	868	867	867	868	869	871	876	880	882	885	885	885	882	8740			
17	881	878	875	873	868	866	866	865	865	865	865	864	863	860	862	865	865	874	878	880	881	881	883	881	8710			
18	880	874	873	872	870	870	869	868	867	866	865	864	864	860	865	869	873	876	880	885	885	886	888	886	8731			
19	884	879	877	875	875	874	873	871	869	869	869	869	870	869	868	872	876	880	885	888	890	890	890	890	8772			
20	887	885	882	880	879	878	877	875	872	872	872	871	870	870	875	876	880	883	888	890	893	898	901	899	8814			
21	897	895	889	885	882	881	880	880	880	878	876	874	872	872	876	880	885	890	891	895	896	897	897	895	8851			
22	892	889	888	886	885	882	880	879	877	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
23	—	—	—	—	—	—	—	—	—	878	880	880	880	875	872	875	880	885	887	888	890	890	890	888	8832			
24	886	884	882	880	878	876	875	874	882	876	870	866	862	856	855	856	860	863	865	870	871	872	872	869	8708			
25	867	865	862	860	860	860	858	858	858	856	855	853	852	850	850	852	850	858	863	864	865	866	865	865	8588			
26	863	859	858	856	855	854	853	852	852	851	850	850	850	847	850	855	857	860	865	867	868	870	870	870	8576			
27	868	865	863	861	860	860	859	859	856	856	856	855	855	855	856	860	865	868	870	873	875	875	875	875	8633			
28	875	872	868	867	867	867	865	864	865	864	863	861	860	856	860	858	865	870	872	875	875	875	875	874	8672			
29	870	867	866	865	865	860	858	857	855	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
30	—		—	—	—	—	—	—	—	858	862	859	856	855	855	856	860	862	865	865	867	870	872	875	8625			
Monthly Means...	8864	8835	8796	8772	8757	8742	8732	8720	8713	8704	8699	8684	8673	8649	8658	8680	8707	8752	8781	8809	8835	8852	8871	8871	8756			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1.408$ scd. $\quad k. = a.\ \text{cotan.}\ \theta.\left(\frac{\acute{T}}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 38'\ 20'' \times \left(\frac{6{\cdot}915}{6{\cdot}370}\right)^2 = 0{\cdot}0002557$ s. $\quad$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

OCTOBER 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−3·6 *		7·2 *																
1	4766	4760	4760	4760	4760	4685	4661	4661	4640	4641	4650	4681	4697	4697	4705	4705	4808	4794	4830	4830	4783	4783	4805	4720	4733	−93	4640	
2	4688	4726	4726	4726	4676	4676	4697	4688	4670	4654	4644	4683	4708	4708	4672	4705	4730	4792	4849	4818	4786	4786	4745	4772	4722	−87	4635	
3	4802	4766	4766	4766	4766	4692	4706	4706	4651	4640	4637	4644	4637	4665	4695	4735	4749	4723	4723	4708	4708	4730	4704	4704	4709	−93	4616	
4	4725	4725	4685	4648	4648	4648	4648	4698	4698	4664	4637	4633	4615	4615	4620	4764	4780	4706	4814	4779	4835	4782	4752	4673	4700	−88	4612	
5	4650	4616	4616	4616	4616	4594	4594	4594	4658	4654	4658	4653	4634	4623	4636	4702	4744	4838	4924	4924	4870	4809	4760	4713	4696	−78	4618	
6	4673	4647	4647	4647	4665	4665	4632	4632	4632	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	4652	4680	4661	4628	4628	4662	4760	4874	4916	4846	4729	4614	4608	4590	4640	4680	−44	4636	
8	4695	4664	4671	4671	4671	4702	4656	4656	4658	4663	4675	4655	4620	4620	4654	4721	4795	4850	4803	4730	4609	4546	4586	4646	4676	−27	4649	
9	4691	4691	4637	4637	4637	4651	4651	4651	4620	4602	4591	4594	4582	4638	4731	4731	4734	4773	4725	4725	4705	4742	4688	4643	4670	−44	4626	
10	4643	4604	4579	4579	4579	4579	4579	4579	4653	4663	4680	4642	4590	4621	4655	4648	4720	4731	4821	4821	4821	4758	4685	4685	4663	−47	4616	
11	4705	4624	4624	4575	4645	4615	4615	4615	4586	4614	4650	4657	4650	4607	4567	4644	4672	4672	4783	4783	4681	4630	4608	4621	4643	−42	4601	
12	4671	4671	4627	4627	4627	4650	4680	4680	4563	4627	4699	4706	4699	4592	4659	4738	4740	4836	4872	4904	4864	4767	4677	4649	4701	−47	4654	
13	4649	4649	4643	4643	4643	4613	4613	4613	4613	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	4619	4632	4624	4602	4602	4620	4654	4775	4851	4882	4843	4843	4780	4711	4678	4683	−49	4634	
15	4636	4669	4669	4669	4644	4644	4644	4644	4647	4643	4647	4637	4612	4594	4618	4670	4770	4816	4839	4769	4769	4769	4769	4626	4684	−59	4625	
16	4648	4614	4614	4614	4614	4655	4646	4646	4654	4671	4695	4729	4749	4644	4634	4681	4811	4872	4858	4759	4701	4701	4744	4740	4696	−68	4628	
17	4695	4695	4634	4634	4634	4659	4659	4659	4652	4635	4625	4628	4616	4616	4614	4647	4735	4840	4855	4825	4825	4753	4753	4685	4691	−76	4615	
18	4710	4640	4640	4640	4640	4729	4729	4729	4704	4671	4646	4643	4625	4674	4732	4771	4819	4855	4791	4700	4644	4695	4695	4638	4698	−65	4633	
19	4656	4686	4686	4686	4663	4663	4661	4661	4640	4631	4629	4636	4629	4597	4652	4719	4797	4848	4898	4945	4885	4769	4769	4718	4713	−51	4662	
20	4671	4616	4661	4613	4613	4591	4591	4591	4584	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	4585	4593	4612	4617	4648	4657	4718	4851	4897	4909	4852	4780	4724	4693	4693	4682	−55	4627	
22	4688	4625	4621	4660	4660	4626	4626	4626	4644	4644	4651	4658	4651	4639	4655	4680	4739	4805	4786	4696	4674	4674	4676	4645	4669	−55	4614	
23	4645	4701	4701	4663	4663	4663	4619	4619	4680	4655	4638	4652	4651	4641	4685	4730	4756	4831	4810	4690	4654	4680	4614	4572	4676	−45	4631	
24	4630	4642	4642	4642	4626	4626	4626	4625	4661	4631	4609	4630	4636	4636	4600	4612	4720	4813	4825	4773	4716	4683	4659	4617	4662	−45	4617	
25	4689	4689	4632	4612	4612	4633	4633	4633	4605	4628	4658	4646	4620	4610	4623	4645	4724	4770	4770	4820	4807	4807	4725	4725	4680	−55	4625	
26	4660	4676	4670	4670	4670	4670	4670	4670	4599	4595	4599	4592	4570	4633	4636	4636	4679	4731	4706	4766	4816	4824	4764	4707	4675	−59	4616	
27	4684	4684	4647	4647	4647	4675	4675	4675	4675	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	4626	4585	4583	4567	4613	4579	4611	4608	4652	4652	4560	4604	4645	4693	4700	4637	−50	4587	
29	4724	4675	4605	4638	4638	4638	4629	4629	4627	4623	4627	4625	4609	4595	4660	4662	4651	4651	4607	4615	4655	4655	4752	4721	4646	−41	4605	
30	4747	4705	4634	4662	4662	4669	4669	4669	4668	4664	4668	4663	4643	4598	4669	4672	4724	4746	4728	4695	4666	4666	4698	4679	4678	−46	4632	
31	4670	4670	4670	4670	4670	4670	4649	4649	4647	4643	4647	4653	4645	4707	4707	4751	4800	4817	4747	4694	4648	4648	4722	4744	4689	−37	4652	
Means.....	4686	4671	4656	4652	4651	4651	4647	4648	4642	4638	4643	4645	4633	4632	4652	4693	4752	4794	4802	4769	4739	4719	4705	4680	4683			
Temp. Corrections	-71	-65	-61	-59	-57	-55	-53	-52	-50	-48	-48	-47	-46	-45	-45	-48	-54	-58	-62	-66	-68	-71	-72	-72	.....	-57		
Corrected Means..	4615	4606	4595	4593	4594	4596	4594	4596	4592	4590	4595	4598	4587	4587	4607	4645	4698	4736	4740	4703	4671	4648	4633	4608	.....	.....	4626	
	11	20	31	33	32	30	32	30	34	36	31	28	39	39	19	-19	-72	-110	-114	-77	-45	-22	-7	18				
Mean Hourly Variations from Monthly Mean. = ·00	0281	0511	0793	0844	0813	0767	0818	0767	0869	0921	0793	0716	0997	0997	0486	-0486	-1841	-2813	-2915	-1969	-1151	-0563	-0179	0460	.....	$\frac{\Delta Y}{Y} =$	.....	·002915

OCTOBER 1855. Temperature of Vertical Force Magnetometer.

										*		*																
1	870	868	865	865	864	862	861	860	858	858	858	855	852	850	855	860	864	869	875	878	882	884	889	888	8662			
2	880	872	870	869	862	855	855	850	850	850	850	850	850	850	849	852	860	864	869	872	870	875	878	876	8616			
3	872	868	865	864	862	860	860	857	860	859	858	857	857	859	855	858	865	868	875	877	880	886	883	880	8660			
4	878	873	869	866	866	867	865	865	865	862	860	860	860	860	860	856	860	858	856	855	858	860	864	866	8629			
5	867	862	860	858	856	854	853	851	850	850	850	849	848	848	847	846	849	850	855	863	865	868	869	868	8557			
6	861	858	856	856	852	852	850	850	847	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
7	—	—	—	—	—	—	—	—	—	835	823	822	821	820	818	813	810	814	815	815	815	814	813	813	8310			
8	813	812	811	811	813	814	815	818	807	806	805	805	805	805	807	813	825	830	832	836	840	843	845	845	8190			
9	841	834	831	830	830	830	830	828	825	825	825	825	825	822	825	828	838	840	835	835	830	835	838	842	8311			
10	842	836	835	834	833	832	830	830	830	830	830	829	829	829	830	830	835	835	832	835	834	839	840	842	8334			
11	840	836	835	834	833	829	829	829	829	829	829	828	828	825	821	819	820	825	826	830	832	831	836	838	8296			
12	840	837	835	835	834	834	833	833	832	831	830	828	827	823	823	824	830	831	837	840	840	843	844	844	8337			
13	842	836	830	830	830	830	830	829	823	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
14	—	—	—	—	—	—	—	—	—	826	830	829	828	826	827	830	835	836	840	845	846	850	852	851	8346			
15	849	842	840	839	839	839	837	836	835	835	835	834	833	833	835	839	845	846	850	852	855	855	854	854	8421			
16	855	849	846	846	844	843	842	841	841	840	840	839	838	838	840	845	852	857	857	860	860	865	865	865	8487			
17	863	860	855	855	855	854	850	850	850	849	849	849	849	849	847	850	854	855	856	860	862	860	858	859	8541			
18	857	855	853	852	851	849	848	848	848	847	847	844	842	840	837	836	838	837	839	844	850	852	851	848	8464			
19	847	841	840	835	835	835	834	833	831	831	831	830	830	830	828	827	828	835	841	845	846	846	845	845	8362			
20	841	839	836	835	835	834	834	835	831	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
21	—	—	—	—	—	—	—	—	—	837	844	843	842	839	837	835	837	838	840	846	846	848	847	844	8393			
22	842	840	839	838	837	837	835	835	833	832	831	830	829	829	830	834	840	845	845	850	852	853	851	847	8389			
23	840	832	830	827	827	827	823	825	830	829	828	828	828	828	825	825	832	835	840	844	845	843	842	842	8323			
24	837	835	834	833	832	830	827	826	825	825	825	825	825	824	825	829	832	835	840	840	840	839	842	850	8323			
25	849	845	844	839	835	835	835	835	835	835	835	835	835	834	836	835	835	836	836	840	846	848	849	849	8390			
26	851	847	845	844	844	840	838	837	834	833	833	833	834	834	832	835	836	844	850	854	854	855	852	852	8421			
27	850	845	843	840	838	838	838	836	834	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
28	—	—	—	—	—	—	—	—	—	830	827	825	824	822	823	825	828	832	836	840	840	844	847	846	8355			
29	845	841	836	829	827	825	822	820	817	817	817	816	815	815	816	822	825	830	835	837	842	845	848	851	8289			
30	852	845	838	835	834	830	829	829	818	816	815	814	814	814	818	827	834	839	840	845	846	848	850	850	8325			
31	847	842	836	836	830	826	820	818	813	813	813	813	813	812	816	819	824	828	830	835	835	835	835	834	8260			
Monthly Means...	8508	8463	8436	8420	8407	8393	8379	8372	8352	8344	8340	8331	8326	8318	8319	8338	8382	8412	8438	8471	8486	8505	8514	8514	8407			

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Fahr. $= \frac{q}{k} = 1{\cdot}314$ scd. $\quad k = a.\ \text{cotan.}\ \theta.\left(\frac{t'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7°\ 39'\ 3'' \times \left(\frac{6{\cdot}915}{6{\cdot}148}\right)^3 = 0{\cdot}0002740$ Adopted Temperature 80°

VERTICAL FORCE MAGNETOMETER.

NOVEMBER 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections.	Corrected Means.	
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41				
										−7·8 *		19·1 *																
1	4744	4722	4722	4722	4689	4714	4700	4700	4700	4697	4710	4729	4710	4710	4717	4780	4834	4885	4852	4852	4820	4854	4854	4795	4759	−16	4743	
2	4760	4722	4722	4722	4737	4737	4738	4738	4675	4667	4675	4712	4710	4710	4745	4750	4750	4839	4795	4740	4740	4715	4746	4746	4733	−5	4728	
3	4720	4859	4823	4787	4820	4820	4819	4819	4807	--	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	4797	4802	4812	4784	4791	4798	4808	4893	4962	4898	4856	4779	4779	4766	4821	4817	−26	4791	
5	4790	4765	4765	4765	4765	4734	4734	4734	4797	4811	4840	4859	4840	4795	4777	4824	4920	4997	4945	4850	4781	4781	4690	4760	4805	−42	4763	
6	4777	4777	4777	4777	4777	4751	4734	4734	4739	4731	4739	4768	4759	4800	4771	4848	4901	4901	4828	4828	4835	4835	4791	4751	4789	−47	4742	
7	4783	4750	4750	4750	4750	4688	4688	4688	4669	4697	4740	4759	4740	4719	4773	4749	4840	4885	4885	4818	4787	4737	4737	4757	4756	−50	4706	
8	4691	4780	4780	4780	4780	4753	4735	4735	4692	4708	4739	4758	4739	4714	4687	4737	4786	4807	4745	4769	4769	4744	4744	4752	4747	−56	4691	
9	4752	4722	4722	4722	4682	4682	4639	4639	4669	4662	4670	4690	4672	4658	4658	4658	4695	4722	4765	4757	4757	4740	4677	4696	4696	−51	4645	
10	4696	4630	4630	4630	4635	4635	4635	4634	4634	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	4629	4640	4659	4640	4566	4643	4643	4732	4816	4816	4777	4774	4720	4673	4673	4673	−37	4636	
12	4693	4653	4699	4631	4631	4681	4681	4681	4665	4650	4650	4669	4650	4704	4638	4638	4780	4821	4870	4769	4711	4711	4690	4649	4692	−33	4659	
13	4676	4676	4673	4673	4673	4673	4673	4643	4632	4655	4693	4693	4654	4644	4618	4648	4744	4744	4706	4748	4790	4790	4740	4694	4690	−36	4654	
14	4694	4639	4690	4690	4690	4666	4666	4666	4652	4644	4652	4671	4652	4625	4675	4738	4810	4901	4841	4808	4765	4741	4741	4696	4709	−32	4677	
15	4723	4689	4685	4685	4690	4669	4634	4634	4638	4630	4638	4654	4632	4667	4610	4683	4740	4789	4789	4826	4786	4786	4768	4734	4699	−29	4670	
16	4706	4706	4709	4709	4718	4718	4718	4718	4723	4684	4661	4684	4669	4672	4676	4742	4830	4878	4878	4812	4812	4787	4764	4724	4737	−20	4717	
17	4754	4709	4712	4712	4712	4712	4712	4715	4715	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	4677	4655	4774	4855	4682	4700	4675	4730	4799	4799	4783	4783	4816	4772	4772	4739	−13	4726	
19	4751	4693	4693	4693	4719	4695	4695	4695	4699	4679	4675	4694	4675	4684	4670	4734	4804	4871	4804	4737	4737	4769	4762	5126	4740	−12	4728	
20	4938	4938	4938	4938	4938	4929	4929	4929	4900	4890	4897	4924	4912	4959	4910	4968	5053	5084	5084	5058	5020	4970	4970	4948	4959	−11	4948	
21	4966	4858	4884	4870	4957	4664	4664	4664	4880	4878	4893	4907	4882	4874	4884	4916	4995	5054	5054	5038	5020	5020	5020	4966	4909	− 9	4900	
22	4966	4859	4872	4872	4872	4875	4875	4905	4872	4864	4872	4894	4877	4886	4899	4906	4989	5054	5064	5038	4989	4989	4902	4880	4920	−16	4904	
23	4902	4922	4922	4922	4895	4859	4859	4859	4866	4884	4918	4907	4858	4858	4849	4881	4949	5065	5040	4974	4950	4986	4915	4925	4915	−21	4894	
24	4885	4890	4890	4890	4829	4829	4829	4879	4879	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	4857	4852	4871	4852	4847	4938	4911	4966	4991	4991	4946	4926	4926	4931	4950	4898	−20	4878	
26	4909	4870	4870	4870	4924	4924	4924	4924	4934	4915	4912	4920	4889	4901	4901	4956	5031	5031	5096	5174	5089	5030	4985	4985	4957	−20	4937	
27	4945	4945	4943	4943	4941	4941	4941	4880	4880	4872	4880	4907	4896	4869	4863	4838	4838	4908	4880	4880	4850	4846	4849	4937	4895	−20	4875	
28	4965	4873	4936	4936	4924	4924	4924	4885	4886	4892	4914	4908	4863	4855	4907	4907	4966	5002	4999	4999	4910	4931	4931	4970	4925	−18	4907	
29	5009	4930	4930	4930	4925	4870	4870	4870	4868	4860	4868	4892	4877	4906	4902	4902	4954	4958	4971	4925	4925	4950	4918	4963	4916	−15	4901	
30	4941	4981	4889	4881	4843	4843	4843	4851	4803	4796	4803	4798	4755	4762	4774	4779	4805	4844	4848	4827	4860	4813	4811	4790	4831	−11	4820	
Means.....		4813	4791	4793	4788	4789	4769	4764	4762	4764	4759	4769	4789	4771	4764	4769	4793	4859	4908	4894	4869	4845	4837	4813	4825	4804			
Temp. Corrections		-39	-33	-29	-28	-26	-24	-22	-20	-18	-17	-16	-16	-15	-13	-11	-13	-19	-25	-30	-35	-39	-42	-43	-41	.....	-26		
Corrected Means.		4774	4758	4764	4760	4763	4745	4742	4742	4746	4742	4753	4773	4756	4751	4758	4780	4840	4883	4864	4834	4806	4795	4770	4784	.....	.....	4778	
		4	20	14	18	15	33	36	36	32	36	25	5	22	27	20	-2	-62	-105	-86	-56	-28	-17	8	-6				
Mean Hourly Variations from Monthly Mean	= ·00	0110	0548	0384	0493	0411	0304	0986	0986	0877	0986	0685	0137	0603	0740	0548	-0055	-1699	-2877	-2356	-1534	-0767	-0466	0219	-0164	.....	$\frac{\Delta Y}{Y} =$	.....	·002877

NOVEMBER 1855. Temperature of Vertical Force Magnetometer.

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1	830	825	824	820	820	818	818	815	815	815	815	812	810	806	805	804	802	802	803	805	807	809	809	808	8124			
2	808	807	807	806	802	800	800	800	800	800	800	798	797	795	797	792	793	800	806	812	817	820	820	820	8040			
3	819	813	809	809	809	809	809	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
4	—	—	—	—	—	—	—	—	—	815	820	818	816	815	810	813	818	825	831	835	840	838	838	839	8195			
5	839	835	830	830	830	826	823	821	822	823	824	823	823	822	824	829	830	835	840	846	848	849	850	850	8322			
6	847	842	840	835	834	833	833	832	830	827	825	824	823	823	825	829	835	840	845	845	846	845	850	853	8359			
7	849	843	840	837	836	836	835	834	833	832	831	829	827	827	829	832	837	839	840	845	848	847	848	850	8377			
8	848	846	845	845	842	841	840	839	839	837	836	835	834	832	835	838	844	848	849	850	850	854	852	850	8429			
9	850	844	840	839	838	837	835	835	835	835	835	833	832	832	834	830	837	841	842	845	846	847	847	845	8389			
10	842	838	833	832	831	831	830	828	825	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
11	—	—	—	—	—	—	—	—	—	824	823	821	820	817	812	818	825	826	830	833	834	833	833	833	8280			
12	832	827	825	825	824	823	822	821	820	818	817	816	816	815	812	815	820	825	828	835	839	842	842	840	8250			
13	839	832	830	830	830	830	829	827	820	821	822	819	817	812	812	815	822	825	828	834	840	842	844	840	8275			
14	837	830	826	824	823	821	820	819	817	816	815	818	822	819	807	813	816	822	826	833	835	839	839	838	8240			
15	833	831	830	830	830	826	820	817	815	813	812	812	812	810	806	808	815	819	821	826	832	835	838	837	8220			
16	833	829	828	828	827	823	817	810	806	805	804	803	802	800	800	803	808	812	815	820	823	825	827	824	8155			
17	821	819	818	817	816	815	813	809	806	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	—	—	—	803	800	800	800	798	795	793	796	805	811	817	818	824	825	825	8102			
19	822	815	807	806	806	806	805	804	805	802	800	800	800	800	800	802	805	808	812	818	822	825	823	822	8090			
20	817	812	810	810	808	807	806	805	802	801	800	800	800	800	796	798	803	810	812	812	818	825	827	821	8083			
21	817	813	807	806	806	806	805	804	802	801	800	800	800	800	798	795	800	808	814	816	817	818	818	817	8070			
22	816	813	810	809	809	809	808	805	803	802	802	802	802	804	804	806	814	815	820	824	828	829	832	831	8124			
23	828	822	818	816	812	810	810	808	806	805	805	804	804	804	802	806	812	816	822	830	833	835	836	832	8157			
24	827	822	819	817	813	813	812	810	810	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
25	—	—	—	—	—	—	—	—	—	807	805	804	804	804	800	805	810	815	820	826	828	831	832	829	8151			
26	825	819	815	815	812	812	810	808	806	806	806	805	805	805	806	812	815	819	820	822	827	830	831	828	8150			
27	827	823	820	820	820	820	818	810	810	810	810	808	807	805	805	803	805	810	815	817	821	824	825	828	8150			
28	827	821	820	820	816	811	809	808	808	808	808	806	805	805	803	802	806	812	815	820	821	823	823	825	8134			
29	825	819	818	817	816	809	808	806	805	805	805	805	805	805	800	798	805	810	815	818	823	822	822	819	8117			
30	818	812	810	809	810	810	808	805	806	805	805	805	806	807	805	803	802	805	810	812	813	814	814	816	8087			
Monthly Means..		8298	8251	8223	8212	8200	8185	8170	8150	8137	8129	8125	8119	8111	8101	8085	8101	8144	8189	8227	8268	8298	8317	8325	8315	81°5		

* The numbers in these Columns are not observed but interpolated, for the sake of obtaining the daily Means. The small figures heading them are the corrections of interpolations.

Corr. for 1° Faht. $= \frac{q}{k} = 1{\cdot}394$ scd. $\quad k = a.\ \text{cotan.}\ \theta. \left(\frac{T'}{T}\right)^2 = 0{\cdot}0000291 \times \text{cotan.}\ 7^\circ\ 37'\ 30'' \times \left(\frac{6{\cdot}915}{6{\cdot}345}\right)^2 = 0{\cdot}0002582$ Adopted Temperature 80°.

VERTICAL FORCE MAGNETOMETER.

DECEMBER 1855. Vertical Force Magnetometer.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Means.	Temperature Corrections	Corrected Means.
Madras Mean Time.	P.M. h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41			
										−2·2 *		7·6 *															
1	4761	4742	4742	4701	4754	4747	4747	4708	4708	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
2	—	—	—	—	—	—	—	—	—	4687	4671	4679	4671	4685	4665	4658	4688	4689	4689	4695	4643	4675	4675	4469	4690	−4	4686
3	4505	4424	4395	4436	4436	4420	4420	4420	4415	4423	4436	4418	4384	4384	4436	4454	4458	4458	4480	4480	4500	4533	4533	4572	4451	6	4457
4	4486	4414	4421	4405	4405	4434	4434	4434	4462	4425	4392	4371	4335	4365	4363	4384	4400	4400	4281	4303	4345	4455	4455	4415	4399	−0	4399
5	4496	4396	4413	4391	4391	4415	4415	4419	4405	4403	4405	4430	4439	4392	4454	4475	4475	4484	4503	4420	4420	4461	4441	4481	4434	1	4435
6	4450	4395	4395	4395	4395	4395	4365	4365	4223	4221	4223	4307	4376	4376	4411	4411	4419	4377	4280	4216	4233	4302	4366	4366	4344	−7	4337
7	4465	4425	4428	4428	4428	4428	4430	4430	4429	4425	4426	4427	4413	4420	4423	4423	4399	4429	4471	4437	4396	4372	4355	4382	4420	−7	4413
8	4382	4344	4344	4376	4376	4376	4376	4394	4394	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
9	—	—	—	—	—	—	—	—	—	4397	4404	4412	4404	4365	4364	4409	4496	4564	4528	4477	4417	4417	4443	4403	4411	−13	4398
10	4428	4405	4405	4405	4405	4387	4387	4387	4396	4395	4399	4405	4395	4393	4393	4415	4522	4522	4531	4531	4489	4526	4468	4409	4433	−12	4421
11	4409	4453	4454	4454	4420	4422	4422	4422	4424	4421	4422	4430	4422	4393	4443	4529	4625	4718	4746	4716	4716	4551	4461	4442	4496	−2	4494
12	4442	4411	4411	4450	4450	4450	4450	4450	4404	4402	4404	4412	4405	4405	4426	4470	4535	4595	4629	4587	4587	4538	4501	4463	4470	12	4482
13	4463	4438	4409	4409	4409	4386	4386	4386	4356	4380	4408	4421	4419	4419	4436	4505	4553	4635	4650	4583	4544	4544	4510	4510	4465	17	4482
14	4465	4504	4504	4504	4504	4414	4493	4493	4480	4478	4480	4495	4495	4496	4485	4516	4599	4711	4761	4759	4682	4633	4574	4574	4546	22	4568
15	4554	4517	4517	4517	4517	4491	4491	4491	4513	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
16	—	—	—	—	—	—	—	—	—	4504	4500	4500	4485	4485	4475	4479	4574	4643	4685	4719	4719	4664	4664	4577	4553	30	4583
17	4539	4562	4532	4583	4571	4575	4550	4550	4493	4508	4527	4535	4527	4504	4504	4490	4600	4644	4708	4708	4667	4624	4584	4604	4570	32	4602
18	4626	4592	4592	4592	4581	4581	4581	4581	4549	4561	4578	4575	4557	4576	4537	4600	4699	4815	4893	4893	4822	4727	4663	4663	4643	28	4671
19	4673	4623	4598	4598	4598	*	4575	4575	4559	4580	4605	4615	4610	4607	4600	4600	4655	4716	4804	4785	4759	4769	4719	4678	4648	30	4678
20	4635	4597	4616	4606	4597	4597	4597	4599	4599	4594	4594	4599	4589	4589	4599	4615	4638	4675	4643	4695	4695	4704	4657	4621	4623	34	4657
21	4621	4625	4618	4618	4595	4595	4595	4595	4631	4629	4631	4615	4584	4595	4605	4596	4640	4696	4737	4699	4699	4712	4622	4622	4632	44	4676
22	4622	4659	4595	4595	4595	4595	4595	4595	4595	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
23	—	—	—	—	—	—	—	—	—	4588	4585	4593	4585	4579	4581	4605	4629	4676	4698	4698	4655	4604	4604	4620	4614	39	4653
24	4630	4592	4592	4552	4552	4552	4552	4549	4555	4563	4575	4583	4575	4580	4549	4575	4607	4682	4682	4654	4654	4630	4561	4541	4589	36	4625
25	4596	4629	4646	4646	4646	4646	4646	4646	4620	4618	4620	4634	4633	4633	4539	4576	4623	4671	4671	4650	4650	4660	4633	4633	4632	44	4676
26	4630	4615	4614	4614	4614	4614	4580	4580	4568	4556	4548	4581	4599	4599	4607	4651	4696	4745	4745	4793	4710	4623	4591	4566	4627	49	4676
27	4589	4626	4626	4581	4630	4608	4608	4605	4585	4583	4585	4604	4608	4608	4557	4586	4686	4731	4673	4590	4618	4598	4598	4639	4613	47	4660
28	4661	4632	4628	4614	4614	4632	4594	4594	4609	4604	4603	4611	4604	4603	4601	4601	4638	4693	4768	4698	4657	4617	4576	4570	4626	47	4673
29	4623	4615	4624	4602	4602	4602	4602	4602	4615	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
30	—	—	—	—	—	—	—	—	—	4593	4575	4588	4585	4595	4595	4583	4605	4682	4743	4774	4795	4731	4647	4615	4633	37	4670
31	4615	4586	4561	4561	4561	4561	4577	4577	4578	4576	4578	4597	4600	4573	4568	4609	4731	4770	4693	4693	4716	4698	4590	4527	4612	28	4640
Means	4553	4532	4526	4524	4525	4517	4518	4517	4506	4504	4507	4517	4511	4508	4508	4531	4584	4632	4642	4625	4607	4591	4557	4537	4545		
Temp. Corrections	9	15	18	20	21	21	23	25	27	28	28	29	30	32	33	30	25	20	16	13	10	8	7	8	.....	21	
Corrected Means	4562	4547	4544	4544	4546	4538	4541	4542	4533	4532	4535	4546	4541	4540	4541	4561	4609	4652	4658	4638	4617	4599	4564	4545	.....	.....	4566
Mean Hourly Variations from Monthly Mean. = ·00	4	19	22	22	20	28	25	24	33	34	31	20	25	26	25	5	−43	−86	−92	−72	−51	−33	2	21	.....	$\frac{\Delta Y}{Y} =$	.....
	0103	0491	0563	0568	0516	0723	0646	0620	0852	0878	0800	0516	0646	0671	0646	−0129	−1110	−2221	−2376	−1859	−1317	−0852	0052	0542	.....		·002376

DECEMBER 1855. Temperature of Vertical Force Magnetometer.

										*		*															
1	815	811	810	808	809	808	808	805	805	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
2	—	—	—	—	—	—	—	—	—	803	802	802	802	802	800	796	800	802	798	801	798	797	797	795	8031		
3	794	794	794	793	792	790	790	790	790	790	790	789	788	786	788	790	795	800	805	807	811	815	813	810	7960		
4	806	804	803	800	800	800	799	797	795	795	795	794	794	795	795	794	796	798	802	808	808	811	808	808	8002		
5	807	803	801	801	800	800	800	798	795	795	795	794	793	793	792	795	793	794	795	799	802	808	810	812	7990		
6	809	805	803	800	800	800	798	797	797	797	797	796	796	796	798	800	805	812	815	815	820	820	820	820	8048		
7	815	808	804	802	801	800	800	799	799	799	799	797	796	795	796	798	804	808	810	815	819	820	821	817	8051		
8	815	811	807	805	804	803	802	801	800	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
9	—	—	—	—	—	—	—	—	—	802	804	803	802	800	800	805	810	815	818	820	826	828	825	823	8095		
10	817	810	810	808	806	806	805	805	805	804	803	801	800	800	800	802	806	812	815	818	819	818	816	813	8083		
11	813	810	807	805	802	802	801	802	800	798	797	796	795	792	790	791	795	800	802	804	806	808	812	810	8016		
12	807	805	800	795	795	792	789	787	786	785	785	785	785	782	778	780	788	791	795	796	798	796	798	800	7916		
13	798	792	790	788	787	786	785	784	782	782	782	781	780	778	776	781	787	791	793	790	795	797	800	801	7877		
14	798	793	790	788	785	786	785	785	782	781	780	779	778	775	775	775	780	782	785	786	788	788	790	791	7844		
15	790	787	785	784	780	777	776	774	774	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
16	—	—	—	—	—	—	—	—	—	775	776	774	772	770	770	770	775	780	780	780	785	786	785	786	7788		
17	785	780	776	774	774	774	771	768	768	767	767	766	766	770	770	775	775	780	785	788	793	795	796	794	7774		
18	792	787	786	785	784	784	784	777	775	775	775	772	770	768	765	770	775	780	782	785	785	785	785	785	7796		
19	784	780	778	778	778	*	775	775	776	775	775	774	773	772	771	772	775	777	785	785	787	787	788	788	7786		
20	785	780	776	777	778	777	776	774	772	771	770	770	770	767	765	768	768	772	777	780	782	784	785	785	7754		
21	781	776	775	774	773	773	768	766	764	762	761	759	758	756	753	757	764	769	770	771	775	776	780	780	7684		
22	778	775	773	772	771	770	770	769	769	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
23	—	—	—	—	—	—	—	—	—	765	762	763	764	765	765	765	770	776	777	779	780	783	785	785	7721		
24	780	775	774	774	774	774	774	773	772	771	770	770	770	768	766	768	772	777	778	779	780	782	781	780	7742		
25	777	772	770	770	770	769	769	769	767	765	764	762	761	758	757	762	767	769	771	775	775	775	775	775	7685		
26	774	772	770	770	770	768	768	767	766	764	762	761	760	758	755	755	755	760	764	766	768	768	769	771	7650		
27	773	771	768	767	766	764	764	763	760	759	758	758	758	757	756	760	766	766	770	774	775	776	777	780	7661		
28	777	772	770	769	769	768	767	766	765	762	760	760	760	760	757	757	760	764	765	770	772	774	775	775	7664		
29	773	770	770	770	770	767	767	765	762	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
30	—	—	—	—	—	—	—	—	—	764	767	767	768	770	770	775	780	780	781	785	786	786	785	785	7735		
31	782	780	780	780	780	780	780	779	778	777	776	776	776	776	777	780	778	780	780	780	783	785	785	785	7797		
Monthly Means	7933	7893	7873	7860	7853	7847	7835	7821	7809	7801	7797	7788	7783	7773	7763	7785	7823	7860	7884	7906	7929	7942	7947	7944	7852		

* The numbers in these Columns are not observed, but interpolated for the sake of obtaining the daily Means. The small figures heading the [illegible]re the corrections of Interpolations.
* Observation missed.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH JANUARY 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 24th January, 1855.														Thursday, 25th January, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1668	1663	1663	1661	1662	1660	1671	1699	1700	1692	1696	1693	1674	1674	1680	1684	1682	1688	1689	1682	1680	1680	1675	1672
5 0	68	63	63	61	62	61	73	99	00	95	95	94	73	74	80	84	82	88	89	82	80	80	75	72
10 0	68	63	64	60	62	63	74	99	00	95	94	95	72	74	80	84	82	89	89	82	80	80	75	72
15 0	68	63	64	60	61	61	75	1700	00	95	91	92	72	74	81	84	82	90	89	82	80	80	75	72
20 0	67	63	64	60	60	60	77	00	1699	95	89	90	72	74	81	84	82	90	87	81	80	78	75	72
25 0	67	62	64	60	59	61	80	00	97	96	89	88	72	74	81	83	83	90	85	80	80	78	75	70
30 0	67	62	64	62	60	61	85	00	95	95	90	85	72	74	81	83	83	90	85	80	80	78	73	70
35 0	67	62	63	62	60	62	89	1699	97	94	91	84	72	75	81	83	83	90	84	80	80	78	73	70
40 0	66	62	63	63	59	63	90	99	95	94	92	82	72	77	81	82	83	90	83	80	80	76	73	70
45 0	66	62	63	63	59	65	92	99	94	94	91	80	72	78	82	81	83	90	82	80	80	76	73	70
50 0	65	62	62	62	59	66	94	99	93	94	91	77	73	80	83	81	84	89	82	80	80	76	73	70
55 0	64	62	62	62	58	68	96	1700	93	94	90	76	74	80	83	81	86	89	82	80	80	76	72	70

HORIZONTAL FORCE.

m. s.																								
2 0	650	649	645	640	640	680	694	660	700	665	633	653	668	704	713	714	713	724	725	708	737	710	695	688
7 0	650	649	645	640	640	684	691	667	692	668	640	651	668	704	716	713	713	726	725	708	738	710	695	688
12 0	650	649	645	640	640	688	690	674	690	670	642	657	669	706	718	713	713	728	724	709	740	710	695	688
17 0	649	649	644	640	640	689	688	680	686	661	646	660	665	706	719	712	712	730	723	710	737	706	695	688
22 0	649	649	643	640	640	690	685	688	684	650	650	665	668	706	721	710	710	733	722	714	734	706	693	686
27 0	648	649	643	640	641	687	680	680	676	654	654	664	671	704	721	707	712	736	720	716	731	702	693	686
32 0	647	650	643	640	645	686	685	677	672	658	655	668	672	704	723	706	712	734	718	719	729	702	693	686
37 0	647	650	641	640	647	682	688	674	670	651	654	665	681	704	723	706	712	733	716	722	725	700	690	686
42 0	647	650	641	640	650	680	683	670	670	642	650	662	686	704	723	709	712	732	713	726	725	700	690	686
47 0	647	650	640	640	655	676	671	680	662	631	652	664	691	704	723	711	716	731	712	728	720	700	690	686
52 0	648	648	640	640	660	673	670	689	650	628	654	660	696	706	720	712	719	728	710	731	716	697	690	684
57 0	649	648	640	640	676	682	668	694	654	627	651	662	696	710	717	711	721	726	709	734	716	697	690	684
Faht...																								
Attached Thermometer...	79°·1	79°·1	79°·1	79°·1	79°·0	78°·6	78°·7	78°·8	79°·0	79°·1	79°·3	79°·5	79°·6	79°·9	79°·9	79°·9	79°·9	79°·8	79°·7	79°·7	79°·7	79°·5	79°·0	79°·2

VERTICAL FORCE.

m. s.																								
3 0	4552	4552	4568	4575	4596	4574	4565	4637	4677	4756	4879	4961	4886	4807	4708	4666	4599	4656	4616	4615	4631	4589	4582	4550
8 0	52	52	68	75	96	74	65	37	77	56	87	61	72	07	08	66	99	56	16	15	31	89	82	50
13 0	52	52	68	75	96	74	65	37	77	56	4901	70	64	07	08	66	99	56	16	15	31	89	82	50
18 0	52	52	68	75	96	74	65	37	77	70	12	78	60	07	08	66	99	56	16	15	31	89	82	50
23 0	52	52	68	75	96	70	65	37	77	82	25	84	60	07	08	60	99	56	16	15	31	89	82	50
28 0	52	52	68	75	96	73	65	85	77	94	25	80	60	07	08	60	99	56	16	15	31	89	82	50
33 0	52	52	68	75	96	75	65	85	77	4805	25	76	60	07	08	60	99	56	16	15	31	85	82	50
38 0	52	52	68	75	96	75	65	85	4702	14	28	64	60	07	08	60	99	56	06	15	31	85	70	50
43 0	52	52	68	75	96	75	65	85	23	26	31	52	60	4764	08	60	99	56	06	15	31	85	70	80
48 0	52	52	68	75	96	75	65	85	24	42	38	26	60	64	08	21	99	56	06	15	10	85	70	80
53 0	52	52	68	75	90	75	65	85	30	72	42	00	60	64	4666	21	99	56	06	15	10	85	70	80
58 0	52	52	68	75	90	75	65	85	38	81	65	4886	60	64	66	21	4612	56	15	15	10	85	70	80
Faht...																								
Attached Thermometer...	79°·0	79°·0	79°·0	78°·8	78°·3	78°·5	79°·0	79°·5	79°·8	80°·0	80°·4	80°·5	80°·6	80°·6	80°·6	80°·3	80°·0	79°·7	79°·4	79°·0	79°·0	78°·7	78°·5	78°·4

INDUCTION INCLINO-METER.

m. s.																								
0 20	1790	1788	1784	1782	1782	1780	1792	1812	1817	1812	1814	1812	1793	1796	1802	1808	1808	1810	1810	1805	1801	1801	1798	1795
5 20	90	88	84	82	81	82	94	13	17	12	12	11	92	96	03	08	08	10	10	05	00	01	98	95
10 20	90	87	84	82	81	82	95	14	16	13	11	12	92	96	04	08	08	10	10	05	00	01	98	95
15 20	90	87	84	82	81	84	97	15	15	13	09	10	92	96	06	08	08	10	10	05	00	01	98	95
20 20	90	87	84	83	81	86	99	16	15	12	08	09	92	96	06	08	08	11	08	05	00	00	98	95
25 20	90	87	84	83	80	86	1800	16	14	14	09	08	92	95	06	08	08	11	06	04	00	00	98	95
30 20	90	87	84	83	80	86	03	15	12	15	10	07	92	96	07	07	08	11	05	03	00	00	98	95
35 20	90	87	83	84	80	87	07	14	13	14	11	05	93	96	07	07	08	11	05	03	00	00	98	95
40 20	90	86	83	84	80	87	09	14	12	14	12	03	94	97	07	07	09	11	03	02	00	1799	98	94
45 20	89	86	83	83	78	88	10	14	10	13	12	01	95	98	08	07	09	11	02	01	00	99	98	94
50 20	89	85	82	83	78	89	11	14	09	12	12	1799	95	99	08	07	09	11	03	01	00	99	98	94
55 20	89	84	82	82	77	90	12	16	10	12	11	96	95	1801	08	07	10	10	04	01	00	99	98	94
Faht...																								
Attached Thermometer...	78°·2	78°·1	78°·0	77°·8	77°·7	77°·6	77°·4	78°·0	78°·5	79°·0	79°·2	79°·4	79°·5	79°·9	79°·7	79°·5	79°·2	78°·8	78°·1	78°·0	78°·0	77°·5	77°·2	77°·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 1·131	In. 1·126	In. 1·134	In. 1·144	In. 1·162	In. 1·166	In. 1·194	In. 1·200	In. 1·200	In. 1·182	In. 1·159	In. 1·130	In. 1·114	In. 1·106	In. 1·108	In. 1·118	In. 1·130	In. 1·150	In. 1·171	In. 1·174	In. 1·177	In. 1·168	In. 1·150	In. 1·140
Attached Thermometer.....	75°·0	75°·0	74°·5	74°·5	73°·0	71°·5	73°·0	75°·0	77°·0	77°·5	78°·5	78°·5	79°·0	79°·5	79°·0	78°·5	77°·5	76°·0	75°·0	74°·0	74°·0	73°·0	72°·5	72°·0
Dry Thermometer (standard)....	70°·0	68°·7	68°·2	68°·2	67°·9	70°·1	74°·7	78°·2	80°·3	80.5	81°·1	81°·0	81·0	80°·7	79°·7	78°·2	76°·7	75°·5	73°·6	72°·5	71°·6	71°·0	70°·5	70°·1
Wet Do.	66°·7	65°·2	65°·5	65°·8	65°·7	68°·0	69°·8	71°·7	68°·4	69°·7	70°·2	71°·2	71°·0	70°·6	70°·4	69°·7	69°·7	70°·0	69°·8	69°·0	69°·0	68°·5	68°·0	68°·0
Cloudy sky in 8ths.....	0	0	0	0	0	1	2	2	4	1	2	2	3	4	3	3	1	4	3	3	3	3	2	0
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·01	·02	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °	67	67	67	22	11	11	22	34	56	90	79	90	67	90	67	79	79	79	79	79	79	79	79	79
REMARKS ON THE WEATHER	clear, D	do. D.....	do. D.....	ny-clear, D.....	do. D.....	sc-cu.....	sc-cu, hz.....	fy-cu, st.....	do.....	sc-cu.....	do.....	do.....	do.....	fy-cu, hz.....	sc-cu.....	do.....	cu, cr-st, hz.....	cu, cu-st, cr-hz.....	do D.....	do D.....	do D.....	fy-cu, D.....	cu-hor, D.....	clear, D .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 23RD FEBRUARY 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.		Friday, 23rd February, 1855.														Saturday, 24th February, 1855.									
		P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 0	1660	1658	1660	1655	1659	1665	1676	1680	1678	1670	1660	1652	1661	1668	1679	1674	1672	1675	1677	1675	1674	1670	1670	1668
	5 0	60	58	60	54	60	65	76	80	78	70	58	52	61	70	78	74	72	75	77	75	73	70	70	68
	10 0	60	58	60	53	60	65	77	80	77	70	58	52	61	73	77	74	72	75	77	75	73	70	68	68
	15 0	58	58	60	53	60	66	77	80	77	70	55	52	62	74	77	73	72	75	77	75	73	70	68	68
	20 0	57	58	60	52	59	66	78	79	77	69	55	54	62	76	77	73	72	75	77	75	72	70	69	68
	25 0	55	59	61	52	60	68	80	78	77	69	55	56	62	77	77	72	72	75	77	75	72	70	69	68
	30 0	54	59	61	55	61	69	80	78	77	68	55	58	62	77	77	72	72	75	77	75	72	70	69	68
	35 0	55	60	60	58	62	71	80	78	75	65	52	60	62	78	76	71	73	76	76	75	72	70	69	68
	40 0	56	60	60	58	61	70	80	77	75	65	52	60	63	79	75	71	74	76	76	75	72	70	69	68
	45 0	56	60	59	58	63	74	80	78	73	62	52	60	64	80	75	72	74	77	75	75	72	70	69	68
	50 0	57	60	58	59	63	73	80	78	73	60	52	60	65	88	75	72	75	77	75	75	71	70	69	68
	55 0	57	60	57	59	63	74	80	78	72	60	52	60	66	79	74	72	75	77	75	75	71	70	69	68
HORIZONTAL FORCE.	m. s.																								
	2 0	767	771	820	803	792	749	688	653	629	647	690	748	780	795	839	814	800	801	821	831	838	832	830	813
	7 0	765	774	820	804	786	749	688	652	628	650	696	748	780	802	835	814	800	801	821	831	837	833	829	810
	12 0	763	776	824	803	783	741	689	650	628	650	702	750	780	810	832	813	800	801	821	831	836	833	829	808
	17 0	760	779	822	801	778	733	689	649	621	650	708	750	782	817	830	813	800	801	821	831	835	832	827	806
	22 0	758	789	820	803	772	724	685	642	622	654	713	752	784	825	830	811	800	801	822	834	834	832	825	804
	27 0	756	796	822	800	770	726	684	636	625	659	716	755	786	828	828	810	802	802	822	836	833	832	824	801
	32 0	757	800	822	800	770	727	683	635	627	665	725	763	788	830	827	810	798	806	822	839	835	834	824	798
	37 0	760	805	820	800	765	713	675	634	630	665	725	770	788	831	822	808	799	811	822	840	833	834	821	797
	42 0	762	811	819	800	761	709	670	632	633	665	730	775	789	835	820	807	800	817	823	841	832	834	819	794
	47 0	765	813	819	800	758	703	664	630	638	677	733	777	784	838	819	807	800	820	824	841	832	833	819	792
	52 0	766	815	812	800	758	697	658	628	643	683	740	779	788	840	817	804	800	820	826	841	832	833	817	790
	57 0	768	819	812	796	758	694	654	628	645	690	742	779	786	842	815	802	800	820	828	839	832	833	816	789
	Faht...																								
	Attached Thermometer...	82·8	83·0	83·0	83·0	83·0	82·9	82·7	82·4	82·4	82·5	82·9	83·1	83·2	83·2	83·3	83·2	83 2	83·3	83·2	83·2	83·2	83·4	83·3	83·2
VERTICAL FORCE.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	3 0	4582	4597	4646	4618	4611	4602	4696	4799	4848	4868	4829	4771	4692	4706	4659	4629	4583	4611	4635	4631	4625	4610	4610	4620
	8 0	82	97	46	18	11	02	96	99	48	68	29	71	92	06	59	29	83	11	35	31	25	10	10	20
	13 0	82	97	28	02	11	4593	96	4807	62	68	29	71	92	06	59	29	83	11	35	31	25	10	10	20
	18 0	82	97	32	02	11	4621	96	07	70	68	29	71	92	06	59	29	83	11	35	31	25	10	10	20
	23 0	82	97	32	02	02	21	4747	07	70	68	29	71	92	06	59	29	83	11	35	31	25	10	10	20
	28 0	82	97	40	02	02	21	47	07	4915	68	29	71	92	06	59	29	83	11	35	31	25	10	10	20
	33 0	82	4624	40	02	02	20	47	21	15	68	29	92	92	06	59	29	83	11	35	31	25	10	10	20
	38 0	82	52	40	02	02	21	87	21	15	45	29	92	92	06	59	29	83	11	35	32	25	10	10	20
	43 0	82	52	32	02	01	32	87	30	15	45	00	92	92	06	59	29	83	11	35	32	25	10	20	20
	48 0	97	19	32	02	01	57	87	30	15	45	00	92	92	06	59	29	4601	20	35	32	25	10	20	20
	53 0	97	19	32	14	01	57	87	41	4882	45	00	92	92	06	29	29	01	20	35	32	25	10	20	20
	58 0	97	40	30	14	02	96	99	46	82	45	00	92	92	06	29	29	01	20	35	32	25	10	20	20
	Faht...																								
	Attached Thermometer...	82·5	82·5	82·5	82·5	82·4	82·0	82·0	82·3	82·8	83·0	83·2	83·6	83·9	84·0	83 8	83·8	83·4	83·1	83·0	82·9	82·9	82·6	82·5	82·4
INDUCTION INCLINO-METER.	m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	0 20	1780	1778	1780	1774	1778	1781	1787	1789	1788	1782	1773	1768	1778	1786	1793	1794	1789	1789	1790	1790	1786	1783	1783	1782
	5 20	80	78	80	74	78	81	87	89	88	82	73	68	78	87	93	94	89	89	90	90	85	83	83	82
	10 20	80	78	80	74	78	80	87	90	88	82	73	68	78	89	94	94	89	89	90	90	84	83	83	81
	15 20	79	78	79	73	79	81	88	90	88	82	72	70	79	90	94	93	89	89	90	90	84	83	83	81
	20 20	78	78	79	73	78	81	89	90	88	82	72	70	79	91	94	93	88	89	90	90	84	83	83	81
	25 20	76	78	80	73	79	82	88	90	87	82	72	70	80	92	94	92	88	89	90	90	84	83	83	80
	30 20	75	78	79	75	78	81	88	90	87	80	70	70	80	92	94	91	88	89	90	90	84	83	83	80
	35 20	75	79	78	76	80	80	89	90	85	80	70	73	81	92	94	91	89	89	90	90	84	83	83	80
	40 20	76	79	78	77	80	80	89	90	83	80	69	75	81	93	94	90	89	90	90	90	84	83	83	80
	45 20	76	79	77	77	80	82	89	89	83	80	68	77	82	94	94	90	89	90	90	89	83	83	83	80
	50 20	77	79	77	77	80	84	89	89	83	77	68	77	82	94	93	89	89	90	90	88	83	83	83	80
	55 20	77	79	75	77	80	86	89	88	83	75	68	77	84	93	93	89	89	90	90	87	83	83	83	80
	Faht...																								
	Attached Thermometer...	82·0	82·0	81·9	81·7	81·5	81·0	81·3	81·6	81·9	82·2	82·7	83·1	83·2	83·3	83·0	82·8	82·4	82·2	82·2	82·2	82·0	82·0	82·0	82 0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) = 29·0+.		In. 1·038	In. 1·030	In. 1·038	In. 1·064	In. 1·098	In. 1·100	In. 1·112	In. 1·124	In. 1·132	In. 1·100	In. 1·082	In. 1·056	In. 1·038	In 1·031	In. 1·030	In. 1·032	In. 1 052	In. 1·081	In. 1·118	In. 1·128	In. 1·125	In. 1·114	In. 1·102	In. 1·098
Attached Thermometer.....		79·0	79·0	79·0	79·0	78·0	76·0	76·0	77 0	79·0	80·5	81·0	82·0	83·0	82·5	82·5	82·0	81·0	80·5	80·0	80·0	80·0	80·0	80·0	80·0
Dry Thermometer (standard)....		79·0	78·3	77·1	77·5	74·0	74·7	76·7	80·5	81·9	85·0	86·3	86·0	85·5	85·3	84.5	83·0	81·3	81·0	80 7	80·4	80·2	80·2	80·0	79·7
Wet Do.		75·0	75·5	74·7	75·2	71·6	73·0	74·3	76·0	75·9	77·8	78·4	78·2	79·2	78·9	79·0	79·0	78·2	78·0	78·0	77·6	77·4	77·4	77·0	77·0
Cloudy sky in 8ths.....		2	3	2	7	8	8	8	6	6	6	4	3	2	1	1	1	3	4	5	6	6	6	7	7
Wind. Force lbs.....		·00	·00	·00	·00	·02	·00	·00	·00	·00	·00	·00	·00	·10	·12	·22	·05	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °		157	157	157	157	270	124	247	247	157	157	112	135	135	135	135	135	135	135	124	124	124	124	124	124
REMARKS ON THE WEATHER.		cu, cr-hz, lg. N W....	cu, cr-st, hz, lg-NW.	cu, cr, lg-W.N.....	cu.....	ovt, hy-R, Th	ovt	ny-ovt.....	cu, cu-st, hz.....	cu, cr-cu, cr-st, hz...	do.....	cr, cr-hz, cu	do.....	cu-hor.....	do	do.....	do.....	cu, cr-hz.	cu, cr-st, hz, lg-W..	do do.....	cu, cr-cu, hz..	cu, cr-cu, hz.....	do	do.....	do.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 21ST MARCH 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 21st March, 1855.														Thursday, 22nd March, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1666	1664	1663	1658	1673	1673	1674	1678	1677	1656	1644	1640	1657	1662	1661	1660	1657	1659	1658	1658	1659	1662	1661	1662
5 0	67	64	63	58	73	74	74	76	76	56	43	40	57	62	61	60	57	59	58	58	59	62	61	62
10 0	67	63	62	59	74	74	74	76	76	55	42	40	57	62	61	60	57	58	58	58	60	62	61	62
15 0	67	63	62	61	74	74	75	75	74	55	42	40	57	62	61	60	57	57	58	58	60	62	61	62
20 0	66	65	61	63	75	74	75	75	70	54	42	44	57	62	61	60	57	58	58	59	60	62	61	62
25 0	65	64	61	64	72	74	76	76	65	52	42	47	57	62	60	60	58	59	58	59	60	62	61	62
30 0	65	64	61	66	71	74	76	77	64	50	42	49	57	62	60	60	59	58	58	59	60	62	61	62
35 0	65	64	61	66	71	74	76	77	63	47	40	50	58	62	60	59	59	58	58	60	60	62	61	62
40 0	65	64	61	67	71	74	76	80	61	46	40	50	59	62	60	58	60	58	58	60	60	62	61	62
45 0	65	64	60	68	72	74	77	80	60	46	40	52	60	62	60	57	60	58	58	60	60	62	62	62
50 0	65	64	60	69	73	74	76	79	60	45	40	53	61	62	60	57	60	59	58	60	60	61	62	62
55 0	65	63	59	71	73	73	77	78	58	45	40	54	62	62	60	58	60	58	58	59	61	61	62	62

HORIZONTAL FORCE.

m. s.																								
2 0	868	876	883	866	841	811	734	679	667	648	700	747	815	840	849	860	869	880	872	850	888	863	849	850
7 0	868	877	882	861	840	810	733	679	666	648	702	747	816	842	851	860	871	880	870	854	890	858	849	850
12 0	870	877	881	860	840	807	730	679	665	647	702	749	817	843	851	860	872	877	868	857	890	854	849	850
17 0	870	877	881	856	840	800	729	679	663	647	704	756	819	844	850	860	873	872	866	859	890	852	848	850
22 0	870	879	882	851	840	792	727	679	660	646	710	770	819	846	848	860	874	867	864	861	890	851	848	850
27 0	871	879	882	852	840	780	725	678	657	650	720	779	819	847	847	860	876	852	862	863	888	851	848	850
32 0	871	879	883	852	839	772	719	676	656	656	725	781	819	847	850	861	878	854	861	866	886	850	848	850
37 0	872	880	882	851	837	764	710	676	654	660	725	784	819	846	851	862	880	856	860	868	885	850	848	850
42 0	872	881	882	850	832	760	700	675	652	665	725	785	820	844	854	862	880	857	859	872	883	850	849	850
47 0	872	881	881	852	828	755	689	675	650	670	730	789	822	844	857	862	881	857	858	875	880	850	849	850
52 0	873	882	880	850	825	749	680	674	650	680	736	794	827	844	858	863	882	858	855	878	877	850	849	850
57 0	874	882	878	842	819	740	680	673	649	688	740	801	834	846	859	864	881	864	852	883	870	849	849	850
Faht...																								
Attached Thermometer...	84·0	84·0	84·1	84·0	83·7	83·8	83·8	83·9	84·4	84·7	85·2	85·2	85·4	85·4	85·4	85·3	85·3	85·2	85·2	85·2	85·2	85·1	85·0	84·9

VERTICAL FORCE.

m. s.																								
3 0	4660	4660	4660	4625	4650	4701	4744	4721	4795	4840	4840	4827	4789	4775	4783	4732	4696	4664	4664	4655	4665	4665	4665	4647
8 0	60	60	60	31	50	01	44	21	95	40	40	27	89	75	83	32	96	64	64	55	65	65	65	47
13 0	60	60	66	45	52	01	44	21	95	40	40	27	89	75	83	32	96	64	64	55	65	65	80	47
18 0	60	60	60	51	62	01	44	21	95	40	40	27	89	75	83	32	96	64	64	55	65	65	80	47
23 0	60	62	52	60	62	01	22	21	95	40	40	27	89	75	83	32	96	64	71	55	65	65	80	47
28 0	60	41	52	68	62	01	00	40	95	40	40	27	89	75	83	32	4701	64	71	55	65	65	80	47
33 0	60	41	52	68	62	25	00	78	95	40	40	27	89	75	83	32	01	64	71	55	65	65	80	47
38 0	60	46	52	64	62	25	00	78	4810	36	31	27	89	75	83	32	01	64	71	55	65	65	80	47
43 0	60	49	52	68	62	44	00	78	10	36	31	27	89	75	83	32	01	64	71	55	65	65	80	47
48 0	60	49	52	68	84	44	00	78	39	40	31	27	89	75	83	32	01	64	71	55	65	65	80	47
53 0	60	51	60	68	84	44	00	78	39	40	31	27	89	75	83	32	01	64	71	55	65	65	80	47
58 0	60	55	60	82	84	44	00	78	39	40	31	27	89	75	83	32	4664	64	71	55	65	65	80	47
Faht...																								
Attached Thermometer...	84·0	84·0	83·8	83·5	83·4	83·5	84·3	84·6	84·8	85·0	85·6	86·2	86·1	86·0	86·0	85·7	85·3	85·1	85·0	84·6	84·5	84·5	84·5	84·3

INDUCTION INCLINOMETER.

m. s.																								
0 20	1780	1780	1781	1777	1784	1791	1789	1788	1789	1776	1768	1762	1777	1781	1779	1777	1777	1779	1774	1775	1776	1780	1780	1779
5 20	80	80	81	77	84	91	88	88	89	76	68	62	77	80	79	77	77	79	74	75	76	80	80	78
10 20	80	80	81	78	84	91	87	87	89	75	67	62	77	80	79	77	77	79	75	75	76	80	80	78
15 20	80	80	81	80	85	92	87	87	88	75	66	62	77	80	79	77	77	78	75	75	76	80	80	78
20 20	80	81	80	81	85	92	87	86	87	74	66	64	78	80	79	77	77	78	75	76	76	80	80	78
25 20	80	81	80	82	85	92	87	88	85	74	65	67	78	80	79	77	78	79	75	76	76	80	79	78
30 20	80	81	80	82	86	92	87	90	85	74	65	69	79	80	79	77	79	79	75	76	76	80	79	78
35 20	80	81	80	83	86	92	87	90	84	73	62	71	79	80	79	77	79	79	75	76	76	80	79	78
40 20	80	81	79	83	86	91	86	91	82	72	62	71	80	80	78	76	80	78	75	75	76	80	79	77
45 20	80	81	79	82	85	90	86	91	80	72	62	72	80	80	77	76	80	78	75	75	77	80	79	77
50 20	80	81	79	82	87	90	86	90	80	72	62	74	81	80	77	77	80	76	75	75	78	80	79	77
55 20	80	82	78	84	90	90	87	89	78	72	62	75	81	80	77	77	80	75	75	76	79	80	79	77
Faht...																								
Attached Thermometer	83·2	83·0	82·8	82·5	82·3	83·0	83·6	83 9	84·2	84·7	85·4	86·0	86·0	85·9	85·7	85·3	84·7	84·2	84·2	84·0	84·0	84·0	83·9	83·7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 0·928	In. 0·916	In. 0·924	In. 0·940	In. 0·966	In. 0·990	In. 1·015	In. 1·020	In. 1·004	In. 0·994	In. 0·964	In 0·932	In. 0·916	In. 0·904	In 0·905	In. 0·908	In. 0·928	In. 0·944	In. 0·972	In. 0·994	In. 0·996	In. 0·994	In. 0·980	In. 0·967
Attached Thermometer.....	80·5	80·5	79·0	78·5	78·5	79·5	81·0	82·5	84·0	84·5	85·0	86·5	86·5	86·5	85·5	84·0	82·5	82·0	82·0	81·5	81·5	81·5	81·0	80 0
Dry Thermometer (standard)....	79·9	79·0	78·0	77·2	77·9	80·9	84·3	86·3	88·8	91·0	90·4	90·8	90·3	89·7	88·0	85·9	83·6	83·0	82·3	81·9	81·5	81·2	80·2	79·0
Wet Do.	75·0	75·0	74·4	74·4	74·9	76·5	78·0	80·0	79·0	77·0	74·0	76·2	75·5	77·0	77·1	77·3	77·2	76·0	76·0	75·2	75·0	75·0	75·2	74·8
Cloudy sky in 8ths.....	6	3	0	0	0	1	3	3	2	2	2	3	3	3	3	3	2	1	1	1	1	0	0	0
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·02	·01	·05	·03	·08	·06	·03	·04	·05	·01	·00	·00	·00	·00
Wind. Direction °	157	157	225	225	225	225	214	202	191	191	135	135	135	135	124	124	124	124	124	124	124	124	124	124
REMARKS ON THE WEATHER.	cu, cr-cu.....	do.	clear.....	do.	ny-clear.....	cr-st, lt-cr-hz.....	sc-cu, lt-cr-hz	do.	cr-hz	do.	do.	do.	cu, cu-st, hz...	do.	lt-cu, cr-st, hz.....	cr-st, hz	do.	do.	do.	do.	do.	ny-clear.....	clear.....	do. .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 18TH APRIL 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 18th April, 1855.														Thursday, 19th April, 1855.									
	P. M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1680	1680	1677	1681	1696	1706	1706	1692	1674	1655	1639	1630	1645	1659	1670	1681	1680	1678	1683	1680	1685	1682	1682	1684
5 0	80	80	77	84	97	06	07	90	72	54	38	30	47	60	71	80	80	78	82	80	85	82	82	84
10 0	80	80	77	87	98	07	08	89	71	53	37	30	49	60	72	80	80	79	81	80	85	82	84	82
15 0	80	80	77	87	1700	07	07	88	69	51	37	30	50	61	72	80	80	79	80	80	84	81	84	82
20 0	80	80	77	87	01	07	06	87	68	50	36	30	50	61	72	80	80	79	80	80	83	81	84	82
25 0	80	80	77	87	01	06	04	82	68	49	35	32	50	61	74	80	81	80	80	80	83	81	84	82
30 0	80	80	77	88	02	06	02	83	60	47	34	34	51	61	76	80	81	80	80	80	83	81	84	82
35 0	80	80	77	90	02	06	1698	83	59	46	34	35	51	62	79	80	80	80	80	81	83	81	84	80
40 0	80	80	78	91	02	07	97	83	58	44	33	38	52	62	80	80	79	80	81	81	82	81	84	80
45 0	80	79	78	91	03	07	96	82	58	44	32	39	54	64	81	81	77	80	81	82	82	81	84	80
50 0	80	77	78	92	04	08	94	82	57	42	30	40	55	66	82	82	75	82	82	82	82	81	84	80
55 0	80	77	80	94	05	07	93	79	56	41	30	43	57	68	82	82	76	82	81	83	82	81	84	80

HORIZONTAL FORCE.

m. s.																								
2 0	930	927	927	930	932	925	880	790	771	766	788	860	948	980	972	952	956	972	990	1002	980	970	960	960
7 0	930	927	927	930	932	923	875	785	772	766	789	861	955	980	972	951	959	971	995	02	980	970	960	960
12 0	928	927	925	932	932	920	866	780	800	768	801	864	959	979	974	950	960	971	999	01	980	969	960	960
17 0	925	930	925	932	931	918	860	770	782	769	803	871	961	979	975	950	962	970	1006	998	979	968	957	960
22 0	920	930	926	935	933	916	858	760	771	771	804	874	965	979	975	949	962	970	08	995	978	964	957	960
27 0	920	930	926	935	936	914	857	756	769	772	816	882	970	979	971	949	965	971	10	993	978	964	957	960
32 0	920	930	923	934	939	914	849	756	766	774	823	890	972	979	968	950	967	972	08	991	976	964	958	960
37 0	925	930	924	932	936	914	829	762	764	776	824	905	974	979	963	950	969	974	07	990	975	964	958	960
42 0	925	930	925	931	932	914	820	763	763	778	836	917	975	979	960	950	970	977	05	987	973	963	958	960
47 0	925	930	925	931	930	915	816	763	763	780	840	929	978	974	957	951	969	979	03	984	971	963	960	958
52 0	925	929	926	932	929	915	812	763	762	781	843	931	980	972	955	952	969	983	02	982	970	962	960	958
57 0	925	927	928	932	927	900	802	762	762	782	851	935	980	970	955	954	970	987	02	981	970	962	960	958
Faht...																								
Attached Thermometer...	86·0	86·1	86·5	86·5	86·4	86·4	86·4	86·8	87·2	87·4	87·7	87·8	87·9	87·9	88·0	87·9	87·8	87·9	87·8	87·8	87·6	87·6	87·4	87·2

VERTICAL FORCE.

m. s.																								
3 0	scd. 4587	scd. 4614	scd. 4597	scd. 4581	scd. 4597	scd. 4695	scd. 4715	scd. 4807	scd. 4918	scd. 4961	scd. 4967	scd. 4943	scd. 4910	scd. 4804	scd. 4683	scd. 4655	scd. 4624	scd. 4650	scd. 4685	scd. 4665	scd. 4642	scd. 4642	scd. 4585	scd. 4606
8 0	87	14	92	86	97	95	15	07	18	61	67	43	10	04	83	55	24	50	85	65	42	42	85	06
13 0	87	14	92	4600	97	95	15	07	45	61	67	43	10	04	83	55	24	50	85	65	42	42	85	06
18 0	87	14	92	00	4602	95	15	20	50	61	67	43	10	04	83	55	24	50	85	65	42	42	85	06
23 0	87	14	92	00	02	95	15	20	52	61	67	43	4877	4760	83	55	24	50	85	65	42	42	85	06
28 0	87	4582	92	00	02	90	15	44	52	61	67	43	77	60	83	55	24	50	85	65	42	42	85	06
33 0	87	82	4600	00	02	90	15	45	49	61	67	43	77	60	83	55	24	50	85	65	42	42	85	06
38 0	87	82	00	00	20	90	40	50	49	61	67	43	77	60	83	55	24	50	85	65	42	42	85	06
43 0	87	82	32	00	20	90	40	50	49	61	67	43	77	60	83	59	24	50	85	65	42	42	85	06
48 0	87	4601	32	4598	20	4715	40	69	49	61	67	43	42	37	83	55	24	50	85	65	42	42	85	06
53 0	87	01	32	97	40	15	62	69	49	61	67	43	42	37	83	55	24	50	85	42	42	42	85	06
58 0	87	78	14	97	40	15	62	4904	49	61	67	43	42	37	83	55	24	85	85	42	42	42	85	06
Faht...																								
Attached Thermometer...	85·6	85·7	85·9	86·0	86·0	86·3	86·5	87·0	87·7	87·9	88·1	88·3	88·3	88·4	88 3	87·6	87·0	87·0	87·0	87·0	86·6	86·5	86·6	86·7

INDUCTION INCLINOMETER.

m. s.																								
0 20	scd. 1771	scd. 1770	scd. 1770	scd. 1773	scd. 1784	scd. 1793	scd. 1794	scd. 1782	scd. 1769	scd. 1754	scd. 1742	scd. 1732	scd. 1745	scd. 1755	scd. 1760	scd. 1769	scd. 1771	scd. 1769	scd. 1772	scd. 1770	scd. 1772	scd. 1770	scd. 1770	scd. 1770
5 20	71	70	70	74	85	94	94	80	68	53	40	32	46	55	60	69	71	69	72	70	72	70	70	70
10 20	71	70	70	76	87	94	93	79	63	52	40	32	48	56	60	69	71	69	71	70	72	70	70	70
15 20	71	70	70	77	88	94	92	78	62	50	37	32	49	56	60	69	71	69	71	70	72	70	72	70
20 20	71	70	70	77	89	95	91	77	62	50	36	32	50	56	60	69	71	69	71	70	71	70	72	70
25 20	71	70	70	77	89	95	90	79	61	49	35	34	50	56	62	69	71	70	71	70	70	70	72	70
30 20	72	70	70	78	88	95	90	79	60	48	35	35	50	56	62	70	72	70	71	70	70	70	72	70
35 20	72	70	70	79	88	95	90	79	59	47	34	37	51	56	63	70	72	70	71	70	70	70	72	70
40 20	72	70	70	80	87	95	87	79	58	45	33	38	51	56	65	70	72	70	70	70	70	70	72	70
45 20	72	70	70	80	88	96	86	73	58	44	33	40	52	57	66	71	70	70	70	70	70	70	70	70
50 20	72	70	70	81	89	96	85	73	57	44	32	40	52	58	66	71	70	71	70	71	70	70	70	70
55 20	72	70	71	82	91	95	83	71	56	43	32	43	53	59	67	71	70	71	70	71	70	70	70	70
Faht...																								
Attached Thermometer...	85·0	85·1	85·2	85·2	85·1	85·5	86·2	87·0	87·8	88·3	88·4	88·3	88·2	88·2	88·0	87·7	87·2	86·9	86·7	86·5	86·2	86·0	86·2	86·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+.	In. 0·920	In. 0·914	In. 0·929	In. 0·942	In. 0·966	In. 0·982	In. 1·004	In. 1·012	In. 0·996	In. 0·980	In. 0·952	In. 0·915	In. 0·888	In. 0·863	In. 0·858	In 0.860	In. 0·876	In. 0·902	In. 0·824	In. 0·932	In. 0·930	In. 0·920	In. 0·914	In. 0·900
Attached Thermometer.....	82·5	82·5	82·5	82·0	82 0	83·0	84·5	86·0	87·0	88·0	88·5	88·5	88·0	87·5	87·0	86·0	84·5	84·0	84·0	83·0	83·0	83·0	83·0	83·0
Dry Thermometer (standard).....	82·6	82·1	81·7	81·2	83·3	86·6	88·9	92·0	91·6	93·0	92·4	92·4	92·1	91·7	90·7	88·6	86·0	85·3	85·0	84·9	84·4	84·3	84·0	83·5
Wet Do.	79·2	78·9	78·7	78·3	78·7	80·9	80·2	80·3	81·2	82·2	81·3	81·9	82·5	82·2	82·7	81·2	80·5	80·4	80·0	79·6	79·2	79·0	79·1	79·2
Cloudy sky in 8ths.....	1	0	0	3	0	4	6	6	5	5	3	2	2	0	0	1	1	0	1	1	1	1	0	3
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·06	·30	·88	·84	·65	·38	·48	·35	·30	·20	·15	·12	·13	·08	·00	·00
Wind. Direction °	202	202	202	202	214	214	225	169	146	146	146	146	146	146	146	146	157	169	169	169	180	180	202	191
REMARKS ON THE WEATHER.	sc-cu.....	clear	do.....	dt-cu.....	clear....	fy-cu, cr-hz.....	cu, cu-st, cr-hz.....	do	do	cu, cu-st, cr-st, hz...	cu, cu-st, hz.....	do.....	cu, hz.....	ny-clear.....	do.....	cr-hz.....	cu-hz.....	ny-clear, lg-NW.....	cu, hz, lg-W.....	do.....	do.....	do.....	clear	cr, cr-hz, cu.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 25TH MAY 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 25th May, 1855.														Saturday, 26th May, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1662	1666	1668	1676	1676	1674	1675	1669	1660	1655	1651	1655	1660	1662	1663	1652	1652	1650	1649	1649	1649	1650	1656	1656
5 0	62	66	68	77	76	76	75	69	60	54	51	55	60	62	63	52	51	50	49	49	49	50	56	56
10 0	62	67	68	78	76	77	74	69	60	54	51	55	60	63	63	51	50	50	49	49	49	50	56	56
15 0	62	68	69	78	76	77	72	67	60	53	51	55	60	63	63	51	50	50	49	49	49	50	56	56
20 0	62	69	70	78	76	77	72	64	60	53	53	55	60	63	62	50	50	50	49	49	49	51	56	55
25 0	62	68	71	77	76	77	73	61	59	53	53	55	60	63	60	50	50	50	49	49	50	51	56	55
30 0	62	68	72	77	76	78	70	60	59	53	54	55	60	63	59	50	50	50	49	49	50	51	57	55
35 0	62	68	72	77	76	78	70	60	59	52	55	55	61	63	58	50	50	49	49	50	50	52	57	55
40 0	62	68	73	77	77	77	69	60	59	52	55	56	61	63	58	50	50	49	49	49	50	52	57	55
45 0	62	68	73	76	76	77	69	60	59	51	55	58	61	64	57	52	50	49	49	48	50	53	57	54
50 0	63	68	74	76	76	77	69	59	57	51	55	58	62	64	55	54	50	49	49	49	50	54	58	54
55 0	65	68	75	76	75	76	69	60	57	51	55	59	62	63	54	53	50	49	49	49	50	55	58	54

HORIZONTAL FORCE.

m. s.																								
2 0	1090	1091	1088	1078	1040	998	949	911	911	960	1010	1078	1118	1141	1148	1146	1130	1115	1098	1083	1070	1045	1090	1100
7 0	90	92	88	74	38	992	945	910	911	960	10	82	18	41	48	43	30	12	96	83	68	50	97	00
12 0	90	92	88	70	34	985	940	910	911	963	13	88	20	44	45	42	27	10	94	83	66	54	99	00
17 0	90	92	88	68	30	984	945	910	920	963	15	97	20	48	42	40	25	10	92	81	66	59	1102	1097
22 0	90	92	88	67	25	983	940	910	930	965	17	1100	23	45	47	40	21	10	92	81	64	62	04	96
27 0	90	92	87	65	20	981	940	911	931	968	23	02	27	46	50	40	20	10	92	80	64	69	07	94
32 0	90	91	86	63	16	978	940	911	935	970	28	05	30	50	50	40	20	10	91	80	60	72	09	93
37 0	90	91	86	62	13	970	930	909	938	973	35	08	30	53	50	40	18	12	89	80	56	78	10	88
42 0	90	90	86	60	10	965	927	908	942	979	40	10	30	55	50	40	18	14	88	80	42	81	10	87
47 0	90	90	85	54	07	960	927	908	945	983	50	13	30	52	50	38	17	13	87	80	44	84	10	86
52 0	90	89	84	50	05	958	920	908	950	990	59	13	36	50	50	35	17	10	86	77	46	89	08	86
57 0	90	88	82	43	02	954	912	910	955	998	65	15	39	47	50	32	19	08	84	74	49	89	06	85
Faht...																								
Attached Thermometer...	92·9	92·9	92·8	92·9	92·7	92·8	92·9	93·2	92·8	94·5	95·0	95·3	95·4	95·4	95·2	94 8	94·2	94·1	94·0	93·8	93·4	93·2	93·2	93·0

VERTICAL FORCE.

m. s.																								
3 0	4737	4753	4760	4735	4740	4731	4764	4764	4787	4818	4839	4763	4730	4704	4750	4785	4756	4711	4710	4713	4780	4717	4717	4700
8 0	37	53	60	35	40	31	64	64	87	18	39	63	30	04	50	85	56	11	10	13	80	17	17	00
13 0	37	53	60	35	40	31	64	64	87	18	39	63	30	04	50	85	56	11	10	13	80	17	17	00
18 0	37	53	60	35	40	31	64	68	88	18	39	63	30	04	50	85	56	11	10	13	80	17	17	00
23 0	37	53	45	35	40	31	64	69	88	18	39	63	30	04	50	85	56	11	10	13	80	17	17	00
28 0	37	53	45	20	40	31	64	72	98	18	39	63	30	04	50	85	37	11	10	13	80	17	17	00
33 0	37	53	26	20	40	31	64	72	4817	18	39	63	30	04	50	85	37	11	10	13	89	17	17	00
38 0	37	53	26	20	40	31	64	72	17	18	39	63	30	04	50	85	37	18	10	13	80	17	17	00
43 0	37	53	02	20	40	31	64	73	17	18	39	63	30	04	50	85	37	18	10	13	80	17	17	00
48 0	37	53	02	20	40	31	64	80	17	18	00	63	30	04	50	85	37	18	10	13	80	17	17	00
53 0	37	53	04	20	40	31	64	79	17	18	00	63	30	04	67	85	37	18	10	13	80	17	20	00
58 0	37	53	04	20	31	64	64	79	17	18	00	63	30	04	67	85	37	18	10	13	80	17	20	00
Faht...																								
Attached Thermometer...	92·8	92·5	92·3	92·3	92·5	92·8	93·4	93·5	94·5	95·2	95·6	96·0	96·0	95·8	95·5	94·9	94·0	93·6	93·0	92·8	92·5	92·5	92·4	92·2

INDUCTION INCLINOMETER.

m. s.																								
0 20	1766	1765	1769	1780	1786	1782	1781	1770	1750	1740	1737	1742	1754	1756	1761	1760	1757	1750	1750	1750	1752	1754	1762	1761
5 20	66	66	69	82	86	83	80	70	50	40	37	44	54	56	61	60	57	50	50	50	52	54	62	61
10 20	66	67	69	82	86	84	79	70	50	40	37	44	54	57	61	60	55	50	50	50	52	54	62	61
15 20	65	67	70	83	86	84	80	68	50	39	37	44	54	57	61	59	53	50	50	50	52	54	62	60
20 20	60	67	71	84	85	84	78	60	49	38	39	45	55	58	60	59	52	50	50	50	52	55	63	60
25 20	60	67	72	84	85	84	78	58	49	38	40	46	55	58	60	59	51	50	50	50	52	57	63	60
30 20	60	68	73	83	85	84	74	59	48	37	40	46	55	58	60	59	50	50	50	50	52	59	63	60
35 20	60	68	74	83	85	83	73	57	48	37	41	47	55	59	60	60	50	50	50	50	52	60	63	60
40 20	60	68	74	83	86	83	71	52	48	36	41	50	55	60	60	60	50	50	50	51	52	60	63	60
45 20	60	68	75	84	85	82	71	52	45	35	42	50	55	61	60	60	50	50	50	51	53	60	63	60
50 20	64	68	76	85	84	82	70	51	43	35	42	52	55	62	60	60	50	50	50	52	53	61	62	60
55 20	65	68	77	85	83	82	70	51	43	36	42	52	56	61	60	58	50	50	50	52	53	61	62	60
Faht...																								
Attached Thermometer...	92·0	91·8	91·7	91·9	91·8	92·2	93·0	93·6	95·2	96·9	97·0	97·0	96·5	96·1	95·3	94·0	93·0	92·5	92·2	92·0	91·6	91·5	91·2	91·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected) =29·0+	In. 0·788	In. 0·790	In. 0·814	In. 0·842	In. 0·850	In. 0·872	In. 0·879	In. 0·879	In. 0·866	In. 0·850	In 0·828	In. 0·806	In. 0·784	In. 0·780	In. 0·786	In. 0·800	In. 0·819	In. 0·835	In. 0·858	In. 0·868	In. 0·866	In. 0·856	In. 0·848	In. 0·840
Attached Thermometer	90·0	90·0	89·0	89·5	90·0	90·5	91·5	93·0	95·0	97·5	98·0	97·0	95·5	95·0	93·0	91 5	88·0	87·5	87·0	87·0	86·5	86·0	86·0	86·0
Dry Thermometer (standard)	89·0	88·2	88·0	88·7	91·0	94.4	97·4	101·0	104·5	106·2	105·6	104·3	101·6	99·7	97·3	92·7	89·3	87·7	87·6	87·1	86·6	86·0	85·6	85·9
Wet Do.	79·0	80·6	77·2	78·0	79·8	80·2	80·5	80·7	79·9	79·0	82·5	83 3	82·5	82·0	82 6	82·8	82·5	82 5	82·0	81·4	81·3	81·0	80·8	80·1
Cloudy sky in 8ths	0	0	1	3	1	2	2	2	4	4	4	4	4	2	4	4	3	2	1	1	1	0	0	0
Wind. Force lbs.	·00	·00	·00	·00	·03	·08	·00	·00	·00	·00	·00	·00	·00	·00	·08	·60	1·25	1·10	0·55	·00	·00	·00	·00	·00
Wind. Direction •	225	225	236	247	247	247	259	259	259	304	202	124	146	146	180	180	180	180	180	180	180	180	180	180
REMARKS ON THE WEATHER.	clear.....	do.	cu.....	cr-cu, cr-hz	cr-st, cr-hz.....	do.	do.	do.	do.	do.	do.	do.	do.	cu, cr.....	cu, cr, cr-hz.....	do.	do.	cr, cr-hz, lg. S. hor...	cr-hz.....	do.	cr-st, hz	ny-clear.....	do.	do.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 20TH JUNE 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 20th June, 1855.													
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1659	1660	1660	1663	1676	1685	1690	1682	1670	1660	1643	1638	1632	1637
5 0	60	60	60	63	79	85	90	82	69	58	42	38	32	37
10 0	60	60	61	64	80	85	90	82	68	58	42	37	32	37
15 0	60	60	61	65	82	85	90	80	67	56	42	37	32	38
20 0	60	60	61	66	78	89	88	80	66	54	42	37	32	38
25 0	60	60	61	68	78	89	87	80	64	52	42	35	32	38
30 0	60	60	60	69	79	90	87	80	61	50	42	34	33	38
35 0	60	59	60	71	80	91	87	80	68	49	42	33	34	37
40 0	60	59	60	72	80	91	86	78	67	48	41	32	36	37
45 0	60	59	60	74	80	91	86	77	66	46	40	31	36	36
50 0	60	59	61	76	81	91	82	75	65	44	40	31	37	38
55 0	60	60	62	77	82	91	82	73	63	43	39	31	37	39

Gottingen Mean Time.	Thursday, 21st June, 1855.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1641	1649	1645	1640	1640	1642	1649	1652	1645	1650
5 0	41	49	45	40	40	42	49	52	45	50
10 0	40	49	44	40	40	42	50	52	45	50
15 0	40	49	44	40	41	42	50	50	47	50
20 0	41	50	43	40	42	44	50	50	47	55
25 0	43	50	43	40	42	45	50	47	50	55
30 0	43	50	42	40	42	46	50	47	50	55
35 0	44	50	42	40	42	47	50	47	50	55
40 0	44	50	40	40	42	48	50	47	50	55
45 0	44	50	40	40	42	48	50	45	50	55
50 0	45	48	40	40	42	48	50	45	50	56
55 0	47	47	40	40	42	49	50	45	50	56

HORIZONTAL FORCE.

m. s.														
2 0	918	920	940	927	904	892	876	824	828	820	840	870	901	941
7 0	918	924	940	924	902	891	874	824	828	820	841	871	902	945
12 0	918	926	939	923	900	892	872	824	828	820	842	872	902	947
17 0	918	927	937	921	897	892	870	820	827	821	842	873	903	949
22 0	917	929	937	919	901	887	860	819	827	822	843	874	906	950
27 0	917	931	940	917	902	887	850	819	824	826	843	876	910	950
32 0	917	934	938	915	899	882	848	819	820	828	844	877	914	950
37 0	917	936	934	914	898	881	845	819	818	829	846	879	921	944
42 0	917	938	930	912	898	881	842	822	817	830	850	880	927	941
47 0	918	940	930	910	896	882	840	825	816	834	854	884	935	938
52 0	918	940	930	907	894	882	830	827	815	836	861	897	939	939
57 0	918	940	927	907	894	882	830	830	817	839	864	899	940	939
Faht...														
Attached Thermometer...	89°2	89°3	89°3	89°2	89°0	89°0	89°0	89°2	89°6	89°9	90°2	90°4	90°6	90°6

m. s.														
3 0	4749	4749	4729	4740	4747	4739	4747	4775	4804	4809	4799	4789	4799	4778
8 0	49	49	29	40	47	39	47	75	04	09	99	89	99	78
13 0	49	49	29	40	52	40	47	75	04	09	99	89	99	78
18 0	49	49	29	40	52	40	47	75	04	09	99	89	99	78
23 0	49	49	29	40	52	40	47	75	04	09	99	89	99	78
28 0	49	49	29	40	52	40	47	75	04	09	99	89	99	78
33 0	49	49	50	40	52	40	47	75	04	09	99	89	99	78
38 0	49	49	50	35	52	39	47	75	04	09	99	89	99	78
43 0	49	49	50	35	52	39	47	75	04	09	99	89	99	78
48 0	49	49	50	35	52	39	55	75	04	4799	99	89	99	78
53 0	49	49	50	30	50	39	55	75	04	99	99	89	99	78
58 0	49	49	50	30	50	39	55	75	04	99	99	89	99	78
Faht...														
Attached Thermometer...	89°2	89°2	89°2	89°1	89°0	89°0	89°4	89°7	90°1	90°6	90°9	90°9	90°8	91°0

m. s.														
0 20	1770	1769	1770	1773	1784	1796	1802	1800	1789	1776	1766	1762	1755	1761
5 20	70	69	70	74	86	97	02	00	89	76	66	62	55	61
10 20	70	69	70	75	89	98	02	00	88	76	66	61	55	61
15 20	70	69	70	76	90	98	02	1799	87	75	66	61	55	61
20 20	70	69	70	77	90	1800	00	99	86	75	66	60	55	61
25 20	70	69	70	78	90	00	00	99	84	73	66	59	55	61
30 20	70	69	70	79	91	01	00	99	82	72	65	59	55	61
35 20	70	69	70	80	91	01	00	99	81	70	65	58	57	62
40 20	70	69	70	81	92	01	00	97	81	69	65	58	57	62
45 20	70	69	70	82	92	02	00	96	80	68	65	58	58	62
50 20	70	69	71	83	94	02	00	94	80	67	65	56	59	63
55 20	70	69	72	84	95	02	00	92	78	66	64	56	59	63
Faht...														
Attached Thermometer...	88°8	88°8	88°6	88°2	88°2	88°7	89°2	89°7	90°1	90°8	91°3	91°2	91°0	90°8

Gottingen Mean Time.	Thursday, 21st June, 1855.									
	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	4751	4751	4775	4728	4713	4713	4713	4703	4720	4747
5 0	51	51	75	28	13	13	13	03	20	47
10 0	51	51	75	28	13	13	13	13	20	47
15 0	51	51	75	28	13	13	13	13	20	47
20 0	51	51	75	28	13	13	13	13	20	47
25 0	51	51	75	28	13	13	13	13	20	47
30 0	51	51	75	28	13	13	13	13	20	47
35 0	51	51	75	43	13	13	13	13	20	47
40 0	51	51	75	43	13	13	13	13	20	47
45 0	51	51	75	43	13	13	40	13	35	43
50 0	51	51	75	43	13	13	46	13	35	43
55 0	51	51	75	43	13	13	80	13	35	43
Faht...	51	51	28	43	13	13	80	13	35	43
Attached Thermometer...	90°8	90°7	90°4	89°8	89°7	89°6	89°5	88°8	88°8	89°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.	In. 0·840	In. 0·840	In. 0·848	In. 0·856	In. 0·876	In. 0·894	In. 0·910	In. 0·916	In. 0·908	In. 0·900	In. 0·876	In. 0·846	In. 0·828	In. 0·827
Attached Thermometer.....	86°0	86°0	86°0	85°0	85 0	86°0	87°0	88°0	90°0	92°0	92°5	92°0	91°5	90°0
Dry Thermometer (standard)...	86·4	85·7	84·6	84·0	87·0	90·4	92·7	94·9	96·2	98·5	100·6	95·5	95·1	93·8
Wet Do.	78·0	76·5	75·0	73·4	74·5	75·5	76·8	76·9	77·2	78·7	78·2	77·5	77·5	78·5
Cloudy sky in 8ths.....	3	1	2	1	1	1	1	1	1	2	3	4	5	7
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °	259	259	270	270	270	281	281	292	304	315	0	0	112	135
REMARKS ON THE WEATHER.	cr-hz, cr-st.....	do	cu, cr-hz.....	cu, cu-st	do	cu, cu-st, hz.....	do	do	cu-st, hz.....	sc-cu, cr-st.....	sc-cu-st, cr-st.....	cu-st, cr-st, hz.....	do	cu, cr-hz.....

Gottingen Mean Time.	Thursday, 21st June, 1855.									
	Noon	1	2	3	4	5	6	7	8	9
Barometer (uncorrected)=29·0+.	In. 0·824	In. 0·839	In. 0·862	In. 0·874	In. 0·884	In. 0·896	In. 0·910	In. 0·900	In. 0·876	In. 0·864
Attached Thermometer.....	89°0	88°5	87°0	86°0	86°0	85°0	85°0	86°0	86°0	85°0
Dry Thermometer (standard)...	92·3	91·1	88·9	87·5	86·6	86·4	86·2	86·5	85·5	85·2
Wet Do.	80·2	81·0	81·0	80·8	81·0	81·0	81·0	79·5	79·0	77·0
Cloudy sky in 8ths.....	7	5	5	4	3	3	3	5	7	5
Wind. Force lbs.....	·00	·00	·00	01	.03	·05	·01	·02	*a*	*a*
Wind. Direction °	135	146	157	180	180	180	191	236	*a*	*a*
REMARKS ON THE WEATHER.	do	do	cu, cr-hz	do	do	do	do	cr, cr-hz, cu...	ny-overcast.....	cr, cr-hz.....

a Board stopped.

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 18TH JULY 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	WEDNESDAY, 18TH JULY 1855.														THURSDAY, 19TH JULY 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1645	1650	1651	1664	1678	1679	1669	1650	1635	1628	1618	1608	1620	1631	1643	1631	1624	1627	1628	1633	1642	1650	1650	1660
5 0	45	50	51	67	77	79	68	50	31	29	18	10	21	31	42	31	24	27	28	33	42	50	52	60
10 0	45	50	52	68	77	79	68	48	31	29	18	12	22	31	41	30	22	27	28	33	42	50	52	60
15 0	45	50	52	69	77	78	67	47	32	29	18	13	22	33	40	30	21	27	28	34	42	50	54	60
20 0	45	50	54	70	76	77	66	45	31	29	16	14	24	35	40	29	22	26	29	35	42	50	55	60
25 0	45	50	56	70	76	77	64	46	31	28	14	18	25	39	40	25	23	26	30	36	44	50	55	60
30 0	45	50	56	72	77	76	62	46	30	28	13	20	27	41	39	23	23	25	30	38	44	50	56	60
35 0	45	50	58	73	78	75	60	45	29	26	12	20	28	43	37	21	23	25	32	39	44	50	57	60
40 0	45	50	59	72	79	73	58	45	29	24	12	20	30	46	37	20	22	26	34	40	48	50	57	60
45 0	45	50	60	76	79	70	54	45	29	22	11	19	31	47	36	25	22	27	36	41	48	50	58	60
50 0	47	50	61	77	79	69	53	42	29	20	10	18	32	47	34	25	24	27	37	41	48	50	58	60
55 0	47	50	63	78	79	69	53	35	29	18	09	17	32	45	33	26	26	28	35	42	48	50	59	60

HORIZONTAL FORCE.

m. s.																								
2 0	868	862	868	870	844	789	750	694	596	614	649	668	826	910	940	920	856	858	850	866	898	915	960	1058
7 0	868	862	868	869	842	787	740	694	592	619	649	671	830	913	940	920	853	858	850	867	903	917	968	60
12 0	868	862	870	867	840	785	740	690	592	620	649	678	833	920	939	911	850	860	848	868	907	920	972	63
17 0	869	862	870	865	839	780	735	690	593	621	651	681	844	924	937	899	850	860	846	868	910	920	979	69
22 0	869	862	872	863	839	781	725	687	588	622	652	690	856	927	937	880	857	857	843	874	912	920	986	72
27 0	869	862	872	862	837	782	712	683	588	622	654	694	860	938	932	867	860	850	842	877	912	920	998	78
32 0	869	862	872	860	836	780	700	680	584	626	655	771	877	944	930	859	860	846	840	878	912	932	1006	85
37 0	869	863	872	856	836	777	695	682	588	631	656	784	883	951	929	839	862	840	843	880	912	938	12	86
42 0	869	863	873	850	835	773	700	682	592	638	657	794	889	948	929	825	864	842	844	883	912	945	15	86
47 0	867	863	873	848	830	768	703	681	594	640	660	798	895	943	924	852	864	845	849	886	913	948	30	86
52 0	865	865	874	850	820	764	705	689	594	644	664	803	899	940	921	858	861	847	858	889	913	953	37	88
57 0	865	865	872	845	805	760	707	699	598	646	668	820	903	938	920	860	860	848	859	892	913	955	40	88
Faht...																								
Attached Thermometer...	88·1	88·0	88·0	87·8	87·6	87·4	87·4	88·0	88·0	88·2	88·6	89·0	89·1	89·5	89·6	89·7	89·8	89·9	89·6	89·0	89·0	89·0	89·0	89·0

VERTICAL FORCE.

m. s.																								
3 0	scd. 4775	scd. 4751	scd. 4782	scd. 4755	scd. 4747	scd. 4767	scd. 4801	scd. 4801	scd. 4756	scd. 4792	scd. 4763	scd. 4791	scd. 4835	scd. 4784	scd. 4753	scd. 4738	scd. 4707	scd. 4701	scd. 4722	scd. 4722	scd. 4750	scd. 4750	scd. 4812	scd. 4776
8 0	75	51	82	55	47	67	01	01	56	92	63	4834	35	84	53	38	07	01	22	22	50	50	12	76
13 0	75	51	82	55	47	67	01	01	56	92	63	34	35	84	53	38	4675	01	22	22	50	50	12	76
18 0	75	67	82	40	47	67	01	01	56	92	63	34	35	84	53	38	75	01	22	22	50	50	12	76
23 0	75	67	82	32	47	67	01	01	56	92	63	34	35	84	53	38	75	01	22	22	50	50	12	76
28 0	75	67	82	32	47	67	01	01	56	92	63	34	35	4807	53	17	50	01	22	22	50	50	12	76
33 0	75	67	82	32	47	70	01	01	56	92	63	34	35	07	53	17	50	01	22	22	50	85	12	76
38 0	75	42	82	32	47	70	01	01	62	92	63	4918	35	4773	53	4697	86	01	22	22	50	85	12	76
43 0	75	42	94	32	47	70	01	01	62	92	63	18	35	73	53	97	86	01	22	22	50	85	12	76
48 0	75	42	4802	32	47	70	01	01	62	92	63	18	35	73	53	4703	4729	01	22	22	50	85	12	76
53 0	75	42	02	32	47	70	01	01	62	92	63	18	35	73	53	03	29	22	22	22	50	85	12	76
58 0	75	42	4792	32	67	80	01	4756	62	92	63	18	35	73	53	03	29	22	22	22	50	85	12	76
Faht...																								
Attached Thermometer...	87·3	87·4	87·4	87·3	87·2	86·9	87·3	88·6	88·6	88·7	89 0	89·8	89·9	90·3	90·2	90·0	89·9	89·7	89·0	88·5	88·3	88·1	88·0	88·0

INDUCTION INCLINOMETER.

m. s.																								
0 20	scd. 1770	scd. 1771	scd. 1772	scd. 1783	scd. 1792	scd. 1795	scd. 1782	scd. 1769	scd. 1759	scd. 1754	scd. 1748	scd. 1740	scd. 1750	scd. 1761	scd. 1773	scd. 1760	scd. 1752	scd. 1746	scd. 1748	scd. 1752	scd. 1760	scd. 1764	scd. 1765	scd. 1774
5 20	70	71	72	85	91	95	81	69	59	55	48	41	50	61	72	60	51	45	48	52	60	64	66	74
10 20	70	71	72	85	90	94	81	67	59	55	48	42	50	62	71	60	50	45	48	52	60	64	66	74
15 20	70	70	72	86	90	94	80	65	59	55	48	43	50	63	70	60	50	45	48	52	60	64	68	74
20 20	70	70	73	88	90	93	78	65	58	55	47	46	50	65	69	59	50	44	48	52	60	64	69	75
25 20	70	70	74	89	90	93	77	66	58	55	46	47	52	70	69	56	50	44	49	52	60	64	70	75
30 20	70	70	75	90	91	93	77	66	55	53	44	49	54	72	69	53	50	44	49	52	60	64	70	75
35 20	70	70	75	90	92	90	76	65	54	51	43	50	55	73	67	52	51	44	49	54	60	64	72	75
40 20	70	70	77	88	92	88	75	65	54	51	42	51	56	73	66	51	51	45	50	56	66	64	72	75
45 20	70	70	79	88	93	85	73	65	54	50	41	50	58	74	66	53	51	46	50	57	66	64	73	76
50 20	70	70	81	88	93	82	70	59	54	49	40	50	58	74	63	52	49	46	50	58	66	64	73	76
55 20	70	71	82	91	94	80	69	59	54	48	39	49	59	75	62	52	48	47	51	58	66	64	73	76
Faht...																								
Attached Thermometer...	87·0	87·0	86·8	86·2	86·2	86·4	87·0	87·6	88·3	88·7	89·3	90·2	90·3	90·7	90·5	90·1	89·8	89 2	88·0	87·9	87·6	87·0	86·8	86·6

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.	In. 0·868	In. 0·876	In. 0·880	In. 0·894	In. 0·906	In. 0·923	In. 0·934	In. 0·940	In. 0·936	In. 0·918	In. 0·903	In. 0·878	In. 0·848	In. 0·830	In. 0·826	In. 0·830	In. 0·846	In. 0·890	In. 0·892	In. 0·908	In. 0·908	In. 0·892	In. 0·868	In. 0·868
Attached Thermometer	82·5	82 5	82·5	82·5	82·0	82·5	84·0	85·5	86·0	88 0	88·5	91·0	90·5	91·0	90·5	90·0	89·0	88·0	86·5	85·0	85·0	84·0	83·0	83·0
Dry Thermometer (standard)	82·0	81·6	81·3	80 8	82·5	85·3	88·7	91·7	93·4	96·3	97·3	99·6	99·0	97·8	96·7	96·0	91·7	84·7	83·6	82·3	82·6	83·0	82·0	82·5
Wet Do.	75·3	74·9	74·8	74·5	75·7	77·9	77·2	81·0	79·0	79·4	80 1	79·6	79·6	79·0	78·8	80·0	79·4	78·0	77·0	77·0	78·0	79·5	79·8	78·0
Cloudy sky in 8ths	2	0	3	2	5	6	6	4	5	6	6	7	6	8	7	6	7	8	8	7	8	8	6	6
WIND. Force lbs	·00	·00	·00	·00	·00	·00	·00	·01	·00	·00	·00	·00	·00	·00	·01	·00	·00	·55	·00	·00	·00	·00	·00	·00
WIND. Direction •	270	270	259	270	270	259	281	270	270	270	259	270	281	281	247	247	180	247	315	191	180	180	225	281
REMARKS ON THE WEATHER.	cu, hz	ny-clear.....	cu, hz.....	cu, cr-cu.....	do.	do.	do.	do.	do.	cu, cu-st, d-hz..	do.	do.	do.	cu, cr-hz, nim.....	do	cu, cr-hz, cr-st.....	cu, cr-hz, nim... ...	overcast R..... ...	do. lt-R	ny-overcast..... ...	overcast.....	do.	cr, cr-hz, cu.	do. ....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 31ST AUGUST 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Friday, 31st August 1855.													Saturday, 1st September 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. *s.*																								
0 0	sed. 1660	sed. 1661	sed. 1667	sed. 1677	sed. 1691	sed. 1692	sed. 1682	sed. 1669	sed. 1654	sed. 1632	sed. 1616	sed. 1623	sed. 1630	sed. 1645	sed. 1660	sed. 1660	sed. 1654	sed. 1652	sed. 1651	sed. 1650	sed. 1650	sed. 1658	sed 1660	sed. 1660
5 0	60	61	68	78	92	92	82	69	52	31	16	23	31	46	60	60	54	52	51	50	50	58	60	60
10 0	61	61	67	78	91	92	82	69	50	31	16	24	32	48	61	60	53	52	51	50	50	58	60	60
15 0	61	62	68	78	92	92	80	69	49	30	15	26	33	48	63	60	52	52	51	50	50	58	60	60
20 0	60	63	69	79	92	92	79	63	49	30	15	25	33	49	62	60	54	51	51	50	50	58	60	60
25 0	60	63	70	80	90	89	79	61	48	28	16	24	35	49	62	60	55	51	50	50	51	58	60	60
30 0	60	63	69	81	92	89	79	60	46	26	17	24	36	49	61	60	56	50	50	50	52	58	60	60
35 0	60	63	69	84	92	89	79	59	46	22	17	23	38	51	60	58	56	50	50	50	53	58	60	60
40 0	60	64	70	87	91	89	72	58	43	19	18	25	39	53	60	57	57	50	50	50	55	58	60	60
45 0	60	66	70	84	91	89	71	57	40	19	19	25	40	55	60	55	55	50	50	50	56	59	60	60
50 0	60	66	72	86	92	89	70	56	36	18	21	26	42	57	60	55	54	50	50	50	56	59	60	60
55 0	60	67	73	90	92	87	69	56	33	17	22	28	43	58	60	55	52	50	50	50	57	59	60	60

HORIZONTAL FORCE.

m. *s.*																								
2 0	940	930	927	925	910	882	858	832	836	841	880	909	900	910	909	931	945	964	963	961	948	938	948	966
7 0	936	930	926	926	910	882	858	832	835	840	880	907	905	910	910	932	947	964	963	961	947	938	948	966
12 0	932	930	926	926	906	882	858	832	834	840	879	905	909	910	920	932	947	964	963	961	946	938	949	967
17 0	930	930	927	926	904	880	855	832	834	844	877	903	910	913	924	935	947	964	963	961	945	938	952	967
22 0	934	930	928	926	902	880	849	829	834	848	875	900	910	911	928	937	950	964	963	961	944	938	953	967
27 0	932	930	930	926	903	872	849	829	836	852	876	895	915	910	930	938	952	964	963	961	944	938	955	967
32 0	930	930	930	926	900	872	849	832	840	853	878	890	913	910	930	940	955	964	963	961	942	939	957	967
37 0	930	930	930	920	900	872	849	832	844	860	880	885	909	910	930	940	956	963	963	959	942	939	959	968
42 0	930	928	931	920	892	869	839	834	846	862	885	888	907	908	930	941	958	963	963	958	941	940	960	969
47 0	930	926	932	915	892	862	838	836	842	870	887	890	910	904	930	941	960	964	963	956	940	942	962	970
52 0	931	927	930	917	890	862	838	837	838	875	890	892	911	904	931	941	964	964	962	954	939	944	963	970
57 0	931	927	926	915	890	870	832	837	838	877	895	896	913	900	931	940	966	964	962	952	939	945	964	970
Falt...																								
Attached Thermometer...	° 88·4	° 88 5	° 88·6	° 88·6	° 88·2	° 88·1	° 88·2	° 88·4	° 88·6	° 89·0	° 89·1	° 89·3	° 89·6	° 89·8	° 89·8	° 89·7	° 89 7	° 89·7	° 89·8	° 89·8	° 89·8	° 89·6	° 89·6	° 89·6

VERTICAL FORCE.

m. *s.*																								
3 0	sed. 4679	sed. 4700	sed. 4704	sed. 4705	sed. 4723	sed. 4762	sed. 4797	sed. 4867	sed. 4933	sed. 4934	sed. 4934	sed. 4904	sed. 4816	sed. 4769	sed. 4769	sed. 4750	sed. 4714	sed. 4660	sed. 4698	sed. 4689	sed. 4689	sed. 4690	sed. 4690	sed. 4715
8 0	79	00	04	05	23	62	97	67	33	34	34	04	16	69	69	50	14	60	98	89	89	90	90	15
13 0	79	00	04	05	23	62	97	67	33	34	34	04	16	69	69	50	14	60	98	89	89	90	90	15
18 0	79	00	30	05	30	62	97	67	33	34	34	04	16	69	69	50	14	60	98	89	89	90	90	15
23 0	79	00	30	4692	30	62	4807	67	33	34	34	04	16	69	69	50	14	60	98	89	89	90	90	15
28 0	79	00	24	92	30	70	07	82	32	34	34	04	00	69	69	50	14	60	98	89	89	90	90	15
33 0	79	00	10	92	31	70	07	82	32	34	34	04	00	69	69	50	14	60	98	89	89	90	4715	15
38 0	79	00	10	4718	31	70	07	82	32	34	04	04	00	69	69	50	14	60	98	89	89	90	15	15
43 0	79	42	10	10	32	79	07	82	32	34	04	4867	00	69	69	50	14	60	98	89	89	90	15	15
48 0	79	42	10	10	32	79	07	82	32	34	04	67	00	69	69	50	14	60	98	89	89	90	15	15
53 0	79	42	4685	10	56	79	35	82	32	34	04	67	00	69	69	50	14	60	98	89	89	90	15	15
58 0	79	24	85	14	56	79	35	82	32	34	04	67	00	69	69	50	14	60	98	89	89	90	15	15
Falt...																								
Attached Thermometer...	° 88·2	° 88·2	° 88 3	° 88·2	° 88·0	° 88·5	° 88·6	° 89·0	° 90·0	° 90·0	° 90·0	° 90·0	° 90·1	° 90·7	° 90·5	° 90·3	° 90·2	° 90·0	° 89·6	° 89·3	° 89·3	° 89·1	° 89·0	° 88·8	° 88·6

INDUCTION INCLINOMETER.

m. *s.*																								
0 20	scd. 1773	sed. 1773	sed. 1775	sed. 1786	sed. 1800	sed. 1802	sed 1798	sed. 1784	sed. 1775	sed. 1755	sed. 1742	sed. 1752	sed. 1759	sed. 1768	sed. 1779	sed. 1780	sed. 1773	sed. 1771	sed. 1771	sed. 1769	sed. 1769	sed. 1772	sed. 1772	sed. 1774
5 20	73	73	75	90	00	02	98	84	74	55	42	52	59	69	80	80	72	71	71	69	69	72	72	74
10 20	73	73	75	91	00	02	98	84	73	55	43	52	60	70	80	80	72	71	71	69	69	72	72	74
15 20	73	73	77	91	01	02	96	84	70	53	42	52	60	70	80	80	72	71	71	69	69	72	72	74
20 20	73	74	77	93	01	02	99	79	68	52	42	52	61	70	80	80	72	71	71	69	69	72	72	74
25 20	72	74	77	93	01	01	99	79	66	50	44	52	62	70	80	80	72	70	70	69	70	72	72	74
30 20	72	74	77	94	03	01	99	79	64	48	45	53	64	70	80	80	72	70	70	69	70	72	72	74
35 20	72	74	77	96	03	01	99	79	62	45	45	53	64	71	80	79	72	70	70	69	70	72	72	74
40 20	72	75	78	98	02	01	88	78	62	43	46	54	64	72	80	77	73	70	70	69	70	72	72	74
45 20	72	75	78	97	02	01	89	77	59	43	50	54	65	73	80	77	73	70	70	69	71	72	72	74
50 20	72	75	79	99	02	01	89	77	56	43	51	56	65	75	80	75	72	70	69	69	71	72	72	74
55 20	72	75	80	99	02	1798	88	77	55	43	52	57	66	77	80	74	72	70	69	69	71	72	72	74
Falt...																								
Attached Thermometer...	° 87·5	° 87·5	° 87·5	° 87·3	° 87·1	° 87·9	° 88·2	° 89·0	° 90·0	° 90·0	° 90·0	° 90·1	° 90 3	° 90·0	° 89·8	° 89·4	° 89·1	° 89·0	° 88·9	° 88·8	° 88·7	° 88·0	° 88·0	° 88·0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)= 29·0+.	In. 0·882	In. 0·880	In. 0·884	In. 0·882	In. 0·898	In. 0·920	In. 0·928	In. 0·932	In. 0·928	In. 0·908	In. 0·866	In. 0·838	In. 0·831	In. 0·824	In. 0·818	In. 0·831	In. 0·837	In. 0·870	In. 0·892	In. 0·917	In. 0·908	In. 0·898	In. 0.890	In. 0·880
Attached Thermometer.....	° 84·5	° 84·0	° 84·0	° 83·5	° 84·0	° 84·5	° 86·0	° 88·0	° 89·0	° 91 0	° 91·0	° 90·5	° 90·0	° 89·5	° 89·0	° 87·0	° 86·0	° 86·0	° 86·0	° 85·5	° 85·5	° 85·0	° 85·0	° 84·5
Dry Thermometer (standard)....	84·4	83·6	82·7	82·8	84·3	87·4	90·3	92·2	94·6	95·4	94·8	94·3	94·8	92·6	91·0	89·3	87·8	87·4	86·9	86·3	85·9	85·6	85·0	84·6
Wet Do.	77·5	77·0	76·0	74·5	74·1	75·2	78·2	75·8	75·0	74 2	76·2	78·5	79·5	80·8	80·8	80·5	80·0	80·0	80·2	79·5	79·3	79·0	79·0	78·8
Cloudy sky in 8ths.....	6	5	5	1	0	1	1	0	0	1	5	5	6	7	6	6	7	7	7	8	8	8	7	6
Wind. Force lbs.....	·00	·00	·00	·00	·00	·05	·01	·00	·00	·00	·02	·00	·01	·00	·01	·00	·00	·00	·00	·00	·03	·08	·02	·00
Wind. Direction °	191	191	191	247	259	270	292	315	304	349	90	90	101	112	135	135	146	146	157	157	180	180	191	214
REMARKS ON THE WEATHER.	cu, cu-st, cr-st, hz	cu, cu-st, cr-cu, cr-hz...	cu.....	cr, cr-hz	ny-clear	cr-st, hz.....	do.	ny-clear.....	do.	cr-st, hz.....	cr, cu-st, lt-hz.....	do.	cu, cu-st, cr-hz.....	cu, cr-hz, nim.....	do.	do.	do.	ny-overcast.....	do.	overcast.....	do.	do.	ny-overcast.....	cu, cu-st, cr-hz, nim....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH SEPTEMBER 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 19th September, 1855.														Thursday, 20th September, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1685	1682	1695	1698	1720	1721	1703	1681	1665	1649	1650	1658	1672	1683	1688	1676	1675	1670	1671	1673	1674	1679	1680	1680
5 0	86	83	95	1700	20	21	03	80	63	49	50	58	72	85	86	76	75	70	71	73	74	79	80	80
10 0	86	84	95	02	20	21	01	79	61	49	50	59	73	85	86	76	75	70	71	73	74	80	80	80
15 0	87	84	95	05	21	21	01	77	60	49	50	59	74	87	84	76	75	70	71	73	74	80	80	80
20 0	87	85	94	06	22	21	1698	75	59	49	50	59	74	88	84	76	74	70	71	73	74	80	80	80
25 0	87	88	94	08	22	21	98	74	57	50	50	60	74	88	83	76	73	70	72	73	75	80	80	80
30 0	87	92	94	11	23	18	90	72	55	50	50	60	77	90	83	76	73	70	72	73	75	80	80	80
35 0	86	91	94	12	23	17	89	72	52	50	52	62	77	90	80	76	73	70	72	73	75	80	80	80
40 0	84	90	94	14	23	13	88	72	52	50	54	64	79	90	80	76	73	70	72	73	77	80	80	80
45 0	83	91	95	15	22	13	87	70	51	50	55	67	80	90	78	76	72	70	72	73	78	80	80	80
50 0	82	92	97	16	21	09	86	69	50	50	56	70	82	90	78	76	72	70	72	73	78	80	80	80
55 0	82	93	98	19	21	09	84	67	50	50	57	71	83	90	78	76	72	70	73	73	78	80	80	80

HORIZONTAL FORCE.

m. s.																								
2 0	880	878	870	870	850	834	782	750	742	785	859	878	900	888	900	902	914	899	904	914	918	911	912	899
7 0	878	877	870	870	850	834	782	750	743	792	859	878	897	890	900	905	914	899	903	914	918	910	912	897
12 0	877	878	866	867	850	838	788	747	744	799	860	879	895	892	900	907	915	899	903	914	918	910	912	900
17 0	874	880	864	865	860	838	788	745	744	805	860	880	895	894	900	907	915	899	903	914	918	910	912	900
22 0	875	882	863	863	861	838	779	745	745	809	863	882	893	894	900	907	912	899	903	916	918	912	912	900
27 0	875	882	863	860	861	838	779	742	747	817	865	885	893	895	900	910	910	899	903	916	918	912	911	900
32 0	873	882	863	854	858	838	763	741	749	828	868	886	890	895	900	910	904	900	905	916	919	915	909	900
37 0	872	883	863	856	852	802	770	740	752	839	872	887	890	895	901	910	902	900	908	916	920	915	909	904
42 0	876	883	863	857	852	798	765	740	758	850	877	888	890	895	901	910	902	899	910	916	920	915	906	906
47 0	879	879	863	857	840	798	762	740	766	852	880	889	888	897	902	910	902	899	912	916	917	915	904	910
52 0	880	872	863	857	838	798	760	740	771	854	879	893	888	897	902	912	901	900	912	916	914	913	901	910
57 0	878	876	867	852	831	798	755	741	779	857	878	897	888	898	902	912	900	902	914	916	914	913	900	910
Faht...																								
Attached Thermometer...	87·2	87·4	87·5	87·4	87·1	87·1	87·2	87·2	87·5	87·8	88·0	88·0	88·2	88·4	88·5	88·2	88·2	88·3	88·4	88·3	88·3	88·2	88·1	88·1

VERTICAL FORCE.

m. s.																								
3 0	4675	4675	4680	4672	4682	4762	4825	4852	4853	4830	4769	4712	4712	4698	4743	4734	4658	4639	4675	4685	4686	4637	4637	4637
8 0	75	75	80	72	82	62	25	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
13 0	75	75	62	72	82	93	25	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
18 0	75	75	62	75	4700	93	25	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
23 0	75	75	62	64	00	93	27	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
28 0	75	75	62	64	00	95	27	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
33 0	75	75	62	50	26	4802	30	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
38 0	75	75	62	50	26	02	30	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
43 0	75	75	62	43	26	06	30	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
48 0	75	75	62	64	26	06	30	52	53	30	69	12	12	98	43	34	58	39	75	85	86	37	37	37
53 0	75	75	62	64	26	08	52	52	30	30	12	12	12	98	43	34	58	39	75	85	86	37	37	37
58 0	75	75	72	70	26	08	52	52	30	30	12	12	12	98	43	34	58	39	75	85	86	37	37	37
Faht...																								
Attached Thermometer...	86·9	87·0	87·0	86·9	86·8	87·2	87·6	88·0	88·5	88·8	89·0	89 0	89·0	89·0	88·7	88 5	88·2	88·0	87·9	87·8	87·7	87·5	87·2	87·2

INDUCTION INCLINOMETER.

m. s.																								
0 20	1780	1779	1783	1785	1804	1801	1789	1773	1760	1750	1752	1760	1772	1781	1783	1772	1772	1769	1770	1772	1773	1773	1775	1775
5 20	80	79	82	86	04	01	89	71	60	50	52	60	72	83	83	72	72	69	70	72	73	73	75	75
10 20	80	80	82	88	03	02	89	70	60	50	52	60	73	83	82	72	72	69	70	72	73	73	75	75
15 20	80	80	81	89	05	02	89	70	59	50	52	60	75	84	82	72	72	69	70	72	73	74	75	75
20 20	80	80	81	91	03	02	80	69	59	50	52	60	75	85	80	72	72	69	70	72	73	74	75	75
25 20	80	80	81	93	03	02	80	69	58	50	52	60	75	85	80	72	71	69	70	72	73	74	75	74
30 20	80	80	81	95	03	1793	79	67	58	51	52	62	76	85	78	73	70	70	70	72	73	74	75	74
35 20	80	80	81	96	03	92	79	69	56	51	54	63	76	85	78	73	70	70	70	72	73	74	75	74
40 20	80	80	81	97	03	97	79	67	55	52	56	63	79	86	75	73	70	70	70	72	73	75	76	74
45 20	80	80	82	98	02	97	78	65	53	52	58	64	80	85	75	73	70	70	70	72	73	75	76	74
50 20	80	81	83	1800	02	93	76	63	52	52	59	66	80	85	75	73	70	70	71	72	73	75	76	74
55 20	79	82	84	02	02	93	74	62	51	52	59	69	80	85	74	73	69	70	71	72	73	75	76	74
Faht...																								
Attached Thermometer..	86·5	86·6	86·3	86·0	86·0	86·6	87·1	87·4	88·0	88·2	88·5	88·9	88·8	88 9	88·6	88·0	88·0	87·9	87·6	87·2	87·2	87·6	86·3	86·3

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+..	In. 0·920	In. 0·920	In. 0·926	In. 0·932	In. 0·954	In. 0·976	In. 0·978	In. 0·980	In. 0·978	In. 0·954	In. 0·926	In. 0·898	In. 0·882	In. 0·876	In. 0·870	In. 0·882	In. 0·904	In. 0·936	In. 0·950	In. 0·974	In. 0·972	In. 0·956	In. 0·952	In. 0·936
Attached Thermometer.....	82·5	82·5	83·0	83·0	83·0	83·0	84·5	86·5	88·0	89·5	89·0	89·0	89·0	88·0	88·0	87·5	86·0	86·0	85·5	85·5	85·5	84·5	83·5	83·0
Dry Thermometer (standard)....	83·5	83 0	82·5	82·1	83·3	85·2	88·2	90·7	93·4	94·6	94·0	95·0	92·6	91·2	91·5	88 7	87·1	86·3	85·6	84·9	84·6	84·7	84·3	84·3
Wet Do. ...	78·8	78·8	78·0	78·0	79·0	78·3	78·9	78·2	79·0	79·0	79·0	79·2	79·0	79·0	78·5	77·8	79·0	79·4	79·3	79·3	79·0	79·2	79·5	79·5
Cloudy sky In 8ths	4	2	0	2	1	2	2	3	4	4	4	4	5	3	3	2	2	2	3	3	6	7	7	5
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °	214	191	191	180	202	225	281	281	304	337	79	79	79	79	112	112	112	112	135	146	157	169	180	180
REMARKS ON THE WEATHER.	cu, cr-hz, nim, sh-lg S. E.....	do. ft. sh-lg. S. E....	ny-clear.....	cr-st, cr-hz.....	do	do.....	do.....	cu, cr-st, cr-hz.....	sc-cu, cr-st, cr-hz....	do.....	cu, cu-st, cr-hz.....	do	do	do	cu, cr, cr-hz	cr, cr-hz.....	cu, st.....	cu, cr-cu, hz.....	do.....	cu, cr-cu, cu-st, hz..	hy-cu, cu-st, hz.. ..	cu, cr-hz, nim, lt-R.	cu, cr-hz.....	do .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 24TH OCTOBER 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

Gottingen Mean Time.	Wednesday, 24th October, 1855.													
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23
DECLINATION.														
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1690	1686	1685	1683	1687	1701	1711	1712	1679	1672	1678	1689	1697	1700
5 0	90	86	85	84	88	01	11	12	79	72	78	89	97	00
10 0	88	86	85	84	88	02	11	12	79	72	78	89	97	1698
15 0	88	87	85	84	89	02	13	12	78	72	78	89	97	97
20 0	86	87	85	84	90	06	13	00	73	73	78	89	97	97
25 0	86	87	85	85	90	06	15	1697	73	73	78	89	98	97
30 0	86	87	84	86	91	04	15	97	72	73	81	90	98	97
35 0	86	85	84	86	91	04	16	98	72	74	84	91	98	95
40 0	86	85	84	86	90	03	15	98	71	76	86	92	99	93
45 0	86	85	83	87	90	10	15	89	70	76	86	95	99	92
50 0	86	85	83	88	90	10	12	89	70	78	87	96	99	92
55 0	86	85	83	87	94	11	12	89	72	78	88	97	99	93
HORIZONTAL FORCE.														
m. s.														
2 0	765	760	768	762	753	710	678	643	622	639	669	729	779	799
7 0	765	760	768	764	750	710	678	643	622	639	669	729	779	799
12 0	765	762	768	763	745	710	678	643	622	640	669	729	781	799
17 0	763	762	768	762	741	710	664	643	621	640	669	729	782	798
22 0	763	765	767	761	740	708	664	634	622	647	669	729	782	797
27 0	760	765	767	762	737	708	660	623	622	653	701	734	786	797
32 0	760	765	765	760	734	700	657	623	623	660	702	741	789	797
37 0	757	768	763	760	730	700	657	622	623	663	704	755	789	792
42 0	757	768	763	758	730	700	647	622	623	666	706	761	790	788
47 0	757	768	763	758	728	690	647	623	623	666	712	767	794	782
52 0	760	768	762	754	727	690	644	623	623	667	718	770	794	782
57 0	760	768	762	756	726	678	644	623	630	669	721	774	798	782
Faht...														
Attached Thermometer...	83·0	83·0	83·0	83·0	83·1	82·8	82·9	83·0	83·2	83·4	83·6	83·6	83·8	84·0
VERTICAL FORCE.														
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
3 0	4609	4626	4636	4636	4600	4612	4720	4813	4825	4773	4716	4683	4659	4617
8 0	09	26	36	36	12	12	20	13	25	73	16	83	59	17
13 0	09	26	36	4704	12	12	20	13	25	73	16	83	59	17
18 0	09	26	36	4663	12	12	20	13	26	73	16	83	59	17
23 0	09	26	36	28	12	42	20	50	26	73	16	83	59	17
28 0	09	26	36	28	12	70	47	50	26	73	16	83	59	17
33 0	09	26	36	04	12	72	50	50	27	73	16	83	59	17
38 0	09	26	36	04	12	72	67	50	27	73	16	83	59	40
43 0	09	26	36	18	12	76	4814	50	4780	73	16	83	59	40
48 0	09	26	36	18	12	76	14	41	80	40	16	83	59	40
53 0	09	26	36	18	12	80	14	41	80	40	16	83	59	40
58 0	09	26	36	18	12	4720	14	41	80	40	16	83	59	40
Faht...														
Attached Thermometer...	82·5	82·5	82·5	82·4	82·5	82·9	83·2	83·5	83·9	84·0	84·0	83·9	84·2	85·0
INDUCTION INCLINO-METER.														
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 20	1790	1785	1784	1782	1786	1795	1802	1800	1778	1772	1778	1784	1790	1790
5 20	90	85	84	83	87	96	02	00	78	72	78	84	90	90
10 20	90	85	84	83	88	95	03	00	79	72	78	84	90	90
15 20	88	85	84	83	88	95	05	00	77	72	78	84	90	90
20 20	88	85	85	83	89	99	05	1790	77	72	78	84	90	90
25 20	87	85	85	83	90	99	04	88	73	73	78	84	90	90
30 20	87	85	83	84	90	99	04	88	73	74	78	86	90	90
35 20	87	85	83	84	89	99	04	89	70	75	81	87	90	90
40 20	85	85	83	84	89	99	04	89	70	76	85	88	90	90
45 20	85	84	83	85	89	1800	04	82	71	76	82	89	91	89
50 20	85	84	83	86	88	00	00	82	71	76	82	89	91	89
55 20	85	84	82	85	90	02	00	82	71	77	83	89	91	89
Faht...														
Attached Thermometer...	82·0	82·0	82·0	81·8	81·5	82·0	82·5	82·8	83·2	83·5	83·4	83·5	84·1	84·5

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)=29·0+.	In. 0·964	In. 0·956	In. 0·972	In. 0·992	In. 1·022	In. 1·038	In. 1·062	In. 1·068	In. 1·056	In. 1·025	In. 0·991	In. 0·967	In. 0·954	In. 0·956
Attached Thermometer.....	77·5	77·0	77·5	77·5	78·0	79·0	79·5	80·0	81·0	82·5	83·0	82·5	83·5	84·0
Dry Thermometer (standard)...	77·0	77·3	77·5	78·0	78·8	81·2	83·3	83·7	85·9	87·7	86·6	86·6	87·2	87·0
Wet Do.	75·6	76·0	76·2	76·5	77·2	78·0	79·1	79·3	80·2	80·3	80·6	80·4	80·2	79·5
Cloudy sky in 8ths.....	7	7	7	7	7	6	6	4	5	5	6	5	3	4
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction •	326	259	259	225	214	225	225	225	225	225	169	169	169	180
REMARKS ON THE WEATHER.	cu, cr-cu.....	do	do	do	do	do	cu, cr-cu, cu-st.....	do	cu, cu-st, cr-st, hz...	cu-st, cr-st, hz.....	cu-st, hz.....	cu, cr-st, hz.....	cu-st, cr-st, hz.....	cu, cr-hz. .....

Gottingen Mean Time.	Thursday, 25th October, 1855.								
	Noon	1	2	3	4	5	6	7	8	9
DECLINATION.										
	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	1695	1690	1689	1690	1690	1690	1690	1691	1692	1690
	95	90	89	90	90	90	90	91	92	90
	95	90	89	90	90	90	90	93	92	90
	94	90	89	90	90	90	90	93	92	90
	94	90	90	90	90	90	90	93	92	90
	92	90	90	90	90	90	90	93	92	90
	91	90	90	90	90	90	90	93	92	90
	90	90	90	90	90	90	90	92	91	90
	90	90	90	90	90	90	90	92	91	90
	90	89	90	90	90	90	90	92	91	90
	90	89	90	90	90	90	90	92	91	90
HORIZONTAL FORCE.										
	782	770	780	784	790	798	796	790	768	780
	782	770	780	783	790	796	797	787	768	780
	782	770	780	783	790	794	797	787	768	780
	780	770	780	782	790	794	796	785	768	780
	780	771	780	784	790	792	795	782	770	780
	778	771	780	785	790	792	795	780	770	780
	778	771	780	786	790	792	795	780	773	780
	776	771	780	787	790	792	795	778	775	780
	773	771	780	788	792	792	797	778	775	779
	773	775	783	788	793	792	798	773	777	779
	771	777	786	789	795	793	795	770	777	779
	771	779	785	789	796	794	792	770	778	778
	84·0	83·9	84·0	84·0	84·0	84·0	84·0	84·0	84·0	84·0
VERTICAL FORCE.										
	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	4689	4689	4632	4612	4612	4633	4633	4633	4605	4605
	89	89	32	12	12	33	33	30	05	05
	89	89	32	12	12	33	33	30	05	05
	89	89	32	12	12	33	33	30	05	05
	89	89	32	12	12	33	33	30	05	05
	89	89	32	12	12	33	33	30	05	05
	89	89	4592	12	12	33	33	30	05	05
	89	89	92	12	33	33	33	30	05	05
	89	89	92	12	33	33	33	30	05	05
	89	89	92	12	33	33	33	30	05	05
	89	89	92	12	33	33	33	30	05	05
	89	89	4612	12	33	33	33	30	05	05
	84·9	84·5	84·4	83·9	83·5	83·5	83·5	83·5	83·5	83·5
INDUCTION INCLINO-METER.										
	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
	1790	1786	1783	1783	1788	1788	1789	1790	1789	1790
	90	86	83	83	88	88	89	92	89	90
	90	85	83	83	88	88	89	92	89	90
	90	85	83	83	88	88	89	92	89	90
	90	85	83	83	88	88	89	92	89	90
	89	85	83	83	88	88	89	92	89	90
	89	84	83	83	88	88	90	90	89	90
	89	84	83	84	88	88	90	90	90	89
	88	84	83	84	88	88	90	90	90	89
	87	84	84	86	88	88	90	90	90	89
	87	84	84	86	88	89	90	90	90	88
	86	83	83	87	88	89	90	90	90	88
	84·3	83·5	83·2	83·0	82·8	82·8	82 8	82·6	82·5	82·2

Barometer (uncorrected)=29·0+.	In. 0·970	In. 0·976	In. 1·001	In. 1·028	In. 1·044	In. 1·060	In. 1·060	In. 1·054	In. 1·046	In. 1·032
Attached Thermometer.....	83·5	82·5	81·0	81·0	81·0	80·5	80·0	80·5	80·0	80·0
Dry Thermometer (standard)...	86·0	83·7	82·5	81·8	81·4	81·4	80·8	80·8	80·5	80·1
Wet Do.	79·5	79·0	78·9	78·8	78·5	78·0	78·0	78·3	79·0	79·0
Cloudy sky in 8ths.....	6	4	4	3	4	3	2	3	7	7
Wind. Force lbs.....	·00	·00	·00	·00	.00	·00	·00	·00	·00	·00
Wind. Direction •	169	169	169	180	180	180	180	304	270	270
REMARKS ON THE WEATHER.	do	do	do sh-lg-N, N.W	do...	cu, cr-cu, cr-st.....	do lg. N.W....	do.....	cu, cr-hz.....	cu, cr-cu, hz...	cu, cr-cu.....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 30TH NOVEMBER 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	FRIDAY, 30TH NOVEMBER 1855.														SATURDAY, 1ST DECEMBER, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. *s.*	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd	scd.	scd.	scd.	scd	scd.
0 0	1659	1657	1662	1661	1668	1671	1675	1676	1672	1672	1682	1680	1680	1683	1688	1687	1689	1684	1685	1681	1680	1680	1680	1678
5 0	59	56	62	62	67	71	75	76	72	72	82	80	80	83	89	87	89	84	85	81	80	80	80	78
10 0	59	55	63	63	67	71	76	76	72	74	82	80	80	82	89	87	90	83	85	81	80	80	80	78
15 0	59	54	62	63	67	72	76	76	71	74	82	82	80	84	89	87	90	83	85	80	80	80	80	78
20 0	59	53	61	63	67	72	76	76	71	74	82	82	82	84	89	87	88	83	85	80	80	80	80	78
25 0	59	52	61	63	67	72	75	76	71	77	80	82	82	85	89	87	87	83	85	79	80	80	80	78
30 0	58	52	60	64	67	73	75	76	71	77	80	82	84	85	88	87	86	82	85	79	80	80	79	78
35 0	58	51	61	65	66	73	75	76	72	78	80	82	85	84	88	87	85	82	85	79	80	80	79	78
40 0	58	51	60	65	67	73	75	75	72	78	80	82	85	84	87	87	85	82	85	79	80	80	79	78
45 0	58	56	60	66	67	73	75	74	72	78	80	82	86	85	86	87	85	83	85	79	80	80	79	78
50 0	57	60	61	67	70	73	76	72	72	80	80	82	84	86	85	87	84	83	85	79	80	80	79	78
55 0	57	64	60	68	70	75	76	72	72	80	80	80	84	88	85	88	84	84	85	79	80	80	79	78

HORIZONTAL FORCE.

m. *s.*																								
2 0	650	650	658	654	664	643	620	596	589	592	602	609	618	610	620	632	661	662	659	667	668	667	660	660
7 0	650	650	659	654	664	643	620	596	589	592	602	610	618	610	620	635	664	662	659	667	667	667	660	659
12 0	650	650	660	653	665	643	619	595	588	592	600	610	618	610	622	638	666	665	660	667	667	667	660	659
17 0	650	650	659	653	665	641	619	595	591	595	600	612	619	613	625	638	669	667	660	667	667	666	660	659
22 0	649	652	657	660	664	641	619	590	592	595	600	612	620	615	625	641	667	669	661	667	667	666	660	658
27 0	649	653	655	660	663	641	605	590	592	595	604	612	616	619	628	645	667	667	662	667	667	665	660	658
32 0	649	654	655	662	663	640	602	590	592	595	604	612	613	617	628	648	665	667	662	667	667	664	660	658
37 0	649	658	655	662	663	640	601	590	598	600	607	612	611	617	629	650	662	667	663	668	667	664	660	658
42 0	650	659	656	663	665	635	600	590	598	600	607	615	607	615	630	650	662	665	664	668	667	663	660	658
47 0	650	662	657	663	665	635	600	589	595	600	608	615	603	615	630	650	662	663	666	668	667	662	660	656
52 0	650	662	657	662	660	635	600	588	593	600	608	615	605	615	630	652	662	660	666	667	667	662	660	656
57 0	650	660	655	662	650	625	600	588	593	600	608	615	608	615	628	657	662	660	667	667	667	661	660	655
Faht...																								
Attached Thermometer...	80°8	81°0	81°1	81°1	81°1	81°0	80°7	80°6	81°0	81°0	81°1	81°2	81°5	81°3	81°1	81°1	81°3	81°5	81°5	81°6	81°5	81°6	81°5	81°4

VERTICAL FORCE.

m. *s.*																								
3 0	4803	4775	4755	4762	4774	4779	4805	4844	4848	4827	4860	4813	4811	4790	4761	4742	4742	4701	4754	4747	4747	4708	4708	4708
8 0	03	75	55	62	74	79	05	44	48	27	60	13	11	90	61	42	42	01	54	47	47	08	08	08
13 0	03	75	55	62	74	79	05	44	49	27	60	13	13	90	61	42	42	01	54	47	47	08	08	08
18 0	03	75	55	62	74	79	05	44	49	27	60	13	13	90	61	42	42	01	54	47	47	08	08	17
23 0	03	75	80	62	74	79	05	44	49	27	60	13	13	90	61	42	42	01	54	47	47	08	08	17
28 0	03	75	80	62	74	79	05	44	38	27	60	13	13	90	61	42	42	01	54	47	47	08	08	17
33 0	03	75	80	84	74	79	05	44	38	27	60	13	13	90	61	42	42	01	54	47	47	08	08	17
38 0	03	75	80	84	74	79	05	44	38	50	60	13	13	90	61	42	42	01	54	47	47	08	08	17
43 0	03	75	80	84	74	80	15	46	38	50	60	13	13	90	61	42	42	19	54	47	47	08	08	17
48 0	03	92	80	84	74	89	20	47	38	50	45	13	13	90	61	42	42	19	54	47	47	08	08	17
53 0	03	92	80	84	79	95	20	49	38	50	45	13	13	90	61	42	42	19	54	47	47	08	08	17
58 0	4775	92	80	84	79	95	20	48	38	50	45	13	13	90	61	42	42	19	54	47	47	08	08	17
Faht...																								
Attached Thermometer...	80°5	80°5	80°6	80°7	80°5	80°3	80°2	80°5	81°0	81°2	81°3	81°4	81°4	81°6	81°5	81°1	81°0	80°8	80°9	80°8	80°8	80°5	80°5	80°4

INDUCTION INCLINO-METER.

m. *s.*																								
0 20	1780	1778	1774	1773	1774	1770	1770	1770	1775	1772	1780	1778	1777	1780	1783	1783	1782	1780	1782	1779	1774	1773	1775	1775
5 20	80	77	74	73	74	70	70	70	75	74	80	78	77	80	83	83	82	80	82	79	74	73	75	75
10 20	80	77	75	73	73	70	70	70	76	74	80	77	77	80	83	83	82	80	82	79	74	73	75	74
15 20	80	76	74	73	73	69	70	70	76	74	80	77	77	80	83	82	82	80	82	79	74	73	75	74
20 20	80	75	74	73	73	69	70	70	76	74	80	77	77	80	83	82	82	80	82	79	74	73	75	74
25 20	80	75	73	73	72	69	70	70	72	76	79	77	78	81	83	82	81	80	82	78	74	73	75	74
30 20	80	75	73	73	72	68	70	70	72	76	79	76	79	81	83	82	81	80	82	78	74	73	75	74
35 20	79	75	73	74	72	68	70	70	73	76	79	76	79	81	83	82	81	80	83	78	74	73	75	74
40 20	79	75	73	75	75	69	70	72	72	76	78	75	79	81	83	82	81	81	83	78	74	74	75	74
45 20	79	75	73	75	77	69	70	74	72	76	78	75	80	81	83	82	81	81	83	78	74	74	75	74
50 20	79	75	72	75	70	69	70	78	72	78	78	75	80	81	83	82	81	81	83	77	74	74	75	74
55 20	78	75	73	75	70	70	70	78	72	78	78	75	80	82	83	82	81	82	83	75	74	74	75	74
Faht...																								
Attached Thermometer...	79°8	79°8	79°9	79°9	79°4	79°4	79°0	79°7	80°2	80°8	80°8	80°9	80°9	80°5	80°2	80°0	80°0	80°0	80°1	80°1	80°0	80°0	80°0	80°0

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)= 29·0 +.	In. 1·064	In. 1·048	In. 1·056	In. 1·076	In. 1·086	In. 1·100	In. 1·116	In. 1·116	In. 1·106	In. 1·072	In. 1·050	In. 1·030	In. 1·026	In. 1·039	In. 1·057	In. 1·079	In. 1·088	In. 1·112	In. 1·130	In. 1·132	In. 1·112	In. 1·098	In. 1·080	In. 1·058
Attached Thermometer.....	79·0	78·0	78·5	78·5	76·0	74·0	75·0	77·0	78·0	79 0	79·0	79·0	79·0	79·5	79·0	78·5	77·5	77·5	78·0	78·0	78·0	78·0	78·0	77·5
Dry Thermometer (standard)....	77·0	77·5	77·3	76·2	74·0	73·7	76·7	78·3	80·8	80·9	80·9	81·6	81·5	78·2	78·3	78·3	77·3	77·5	77·8	77·6	77·8	78·0	77·3	76·9
Wet Do.	74·0	74·0	75·2	75·5	73·0	73·3	76·9	77·4	78·0	78·0	78·2	78·6	78·5	77·7	77·0	76·8	76·8	76·8	77·4	77·2	77·4	76·6	75·5	75·4
Cloudy sky in 8ths.....	8	8	8	8	8	8	8	8	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Wind. Force lbs.....	·15	·30	·12	·15	·02	·00	·00	·65	1·10	1·15	1·35	1·32	1·40	·75	·75	1·00	·35	1·45	·65	·45	·62	·60	·30	·30
Wind. Direction	34	45	22	45	11	0	45	56	67	67	67	67	67	67	45	34	34	45	45	34	34	34	45	45
REMARKS ON THE WEATHER.	overcast.....	do	do	R.....	do	do	R.....	hy-R	ny-overcast.....	lt-R.....	overcast	do	do	R.....	do	R....	do	do	do	lt-R.....	do	do	do	do .....

ABSTRACT OF TERM-DAY OBSERVATIONS, COMMENCING AT 10 P. M. OF 19TH DECEMBER 1855, GOTTINGEN MEAN TIME.

MAGNETICAL OBSERVATIONS.

DECLINATION.

Gottingen Mean Time.	Wednesday, 19th December, 1855.														Thursday, 20th December, 1855.									
	P.M. 10	11	12	13	14	15	16	17	18	19	20	21	22	23	Noon	1	2	3	4	5	6	7	8	9
m. s.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.	scd.
0 0	1667	1666	1668	1669	1675	1683	1690	1675	1654	1650	1658	1655	1658	1670	1678	1670	1678	1680	1683	1680	1679	1680	1675	1673
5 0	67	64	69	69	75	85	90	75	54	50	58	55	58	70	78	70	78	80	82	80	80	80	75	73
10 0	67	64	70	69	75	86	90	74	53	50	59	56	58	70	78	72	78	80	82	80	80	80	75	73
15 0	67	63	70	70	75	86	90	73	53	50	59	58	58	72	78	72	78	80	81	80	80	80	75	73
20 0	67	61	70	70	74	87	88	72	52	50	59	58	60	72	76	72	78	80	81	80	80	80	75	72
25 0	67	61	70	71	73	88	88	70	52	50	58	57	60	72	76	74	78	81	80	80	80	79	75	72
30 0	67	60	70	71	73	88	86	70	52	50	58	57	63	74	75	74	78	81	80	80	80	79	74	72
35 0	67	62	70	72	73	89	84	70	52	52	58	56	65	74	75	75	78	83	80	79	80	77	74	72
40 0	67	65	70	72	76	90	82	65	51	54	58	56	67	74	75	75	78	85	80	78	80	76	74	72
45 0	66	68	70	73	81	90	80	65	51	55	56	55	67	77	72	75	78	85	80	78	80	76	74	72
50 0	66	68	69	74	82	90	78	65	51	57	55	55	69	77	72	75	77	85	80	78	80	76	73	72
55 0	66	68	69	75	81	90	78	66	50	58	55	56	69	77	72	76	77	85	80	78	80	75	73	72

HORIZONTAL FORCE.

m. s.																								
2 0	545	550	545	537	540	536	517	479	484	502	512	530	570	582	570	566	570	592	584	583	579	580	561	558
7 0	545	550	545	538	540	530	517	478	484	504	514	533	570	582	570	566	570	592	585	582	580	580	560	558
12 0	545	550	545	539	540	526	517	478	488	506	516	537	569	584	570	566	570	592	585	582	580	579	560	557
17 0	547	552	545	540	540	524	514	480	488	508	517	542	570	584	570	566	572	592	586	581	580	578	560	556
22 0	547	548	545	540	541	522	506	486	491	510	518	548	570	584	570	566	572	592	587	580	580	578	560	556
27 0	547	545	545	540	541	520	497	488	482	512	516	552	570	580	570	568	575	592	587	580	580	576	560	555
32 0	547	545	544	539	542	520	492	488	482	512	514	556	573	580	570	568	577	590	588	580	578	575	560	554
37 0	547	545	544	539	543	520	490	488	482	512	512	562	576	578	570	568	580	588	588	579	576	574	560	554
42 0	547	544	541	538	545	520	486	477	498	512	512	566	578	575	568	568	582	586	588	578	575	572	559	553
47 0	547	544	541	539	543	520	482	468	498	512	515	568	578	573	568	568	584	584	588	578	573	570	559	553
52 0	549	545	540	540	544	520	480	468	499	512	518	570	580	573	568	568	587	582	586	578	576	568	559	552
57 0	549	547	540	540	542	520	479	468	501	512	524	570	580	571	565	568	587	582	585	578	578	566	558	551
Faht...																								
Attached Thermometer...	77°7	77°6	77°8	77°5	77°7	77°5	77°8	77°8	77°7	77°9	78°0	78°0	78°2	78°4	78°3	78°0	78°2	78°3	78°3	78°3	78°3	78°0	77°9	77°8

VERTICAL FORCE.

m. s.																								
3 0	scd. 4605	scd. 4605	scd. 4610	scd. 4607	scd. 4600	scd. 4600	scd. 4655	scd. 4716	scd. 4804	scd. 4785	scd. 4759	scd. 4769	scd. 4719	scd. 4678	scd. 4635	scd. 4597	scd. 4616	scd. 4606	scd. 4597	scd. 4597	scd. 4597	scd. 4599	scd. 4599	scd. 4599
8 0	05	05	10	07	00	12	55	16	04	85	59	69	19	78	35	97	16	06	97	97	97	99	99	99
13 0	05	05	10	07	00	12	55	16	04	85	59	69	19	78	35	97	16	06	97	97	97	99	99	99
18 0	05	05	10	07	00	12	55	60	04	85	59	69	19	79	35	97	16	06	97	97	97	99	99	99
23 0	05	05	10	07	00	12	55	60	04	85	59	69	19	79	20	97	16	06	97	97	97	99	99	99
28 0	05	4576	10	07	00	12	4710	60	08	85	59	69	19	79	20	97	16	06	97	97	97	99	99	99
33 0	05	76	10	20	00	12	10	60	08	85	59	69	19	79	20	97	16	06	97	97	97	99	99	99
38 0	05	76	10	20	00	12	10	60	08	59	59	69	4685	79	20	97	16	06	97	97	97	99	99	99
43 0	05	76	10	03	00	12	16	60	00	59	59	69	85	79	20	97	05	06	97	97	97	99	99	99
48 0	05	76	4585	03	00	12	16	60	00	59	69	69	85	79	20	97	05	06	97	97	97	99	99	99
53 0	05	76	85	03	00	12	16	60	00	59	69	69	85	79	20	97	05	06	97	97	97	99	99	99
58 0	05	76	85	03	00	12	16	60	00	59	69	19	85	79	20	97	05	06	97	97	97	99	99	99
Faht...																								
Attached Thermometer...	77°5	77°5	77°3	77°2	77°1	77°2	77°5	77°7	78°5	78°5	78°7	78°7	78°8	78°8	78°5	78°0	77°6	77°7	77°8	77°7	77°6	77°4	77°2	77°0

INDUCTION INCLINO-METER.

m. s.																								
0 20	scd. 1783	scd. 1782	scd. 1784	scd. 1783	scd. 1788	scd. 1791	scd. 1798	scd. 1794	scd. 1772	scd. 1772	scd. 1779	scd. 1780	scd. 1782	scd. 1792	scd. 1798	scd. 1793	scd. 1798	scd. 1797	scd. 1797	scd 1793	scd. 1792	scd. 1790	scd. 1788	scd. 1785
5 20	83	82	84	83	87	92	98	94	72	72	80	80	82	92	98	95	98	97	97	93	92	90	88	85
10 20	83	82	84	83	88	93	98	94	72	72	80	80	82	93	98	95	98	97	97	93	92	90	88	85
15 20	83	81	84	84	88	95	97	92	72	73	80	80	84	94	98	97	98	97	96	93	92	90	88	84
20 20	83	80	84	84	89	95	97	91	72	73	80	80	84	95	98	97	98	97	96	93	92	90	87	84
25 20	83	80	84	85	89	96	97	90	72	73	80	80	85	95	97	97	98	97	96	93	92	90	86	84
30 20	83	80	83	85	90	96	96	90	72	74	80	80	85	95	97	99	98	97	95	93	91	90	86	84
35 20	83	83	83	86	90	97	96	90	72	74	80	80	87	95	97	99	97	98	94	93	91	90	85	84
40 20	83	83	83	86	91	98	96	90	71	76	80	80	88	96	97	99	97	98	94	92	90	90	85	85
45 20	83	83	83	87	91	98	95	90	71	77	80	80	88	96	95	98	97	98	93	92	90	90	85	85
50 20	83	83	83	88	91	98	95	90	71	78	80	80	88	96	95	98	96	98	93	92	90	90	85	85
55 20	83	85	82	88	91	98	95	88	72	78	80	81	90	96	95	98	96	99	93	92	90	90	85	85
Faht...																								
Attached Thermometer...	76°8	76°6	76°3	76°0	76°0	76°1	77°0	77°0	77°2	77°8	77°8	78°0	78°0	78°0	77°8	77°2	77°0	77°0	76°9	76°7	76°7	76°3	76°0	75°7

METEOROLOGICAL OBSERVATIONS.

Barometer (uncorrected)= 29·0+.	In. 1·167	In. 1·152	In. 1·140	In. 1·165	In. 1·190	In. 1·207	In. 1·220	In. 1·216	In. 1·212	In. 1·186	In. 1·162	In. 1·132	In. 1·120	In. 1·118	In. 1·130	In. 1·150	In. 1·164	In. 1·136	In. 1·198	In. 1·201	In. 1·199	In. 1·184	In. 1·160	In. 1·150
Attached Thermometer.....	75·5	75·5	73·5	73·0	74·0	74·0	74·0	75·0	76·0	77·0	77·0	77·5	78·0	78·0	78·0	77·0	77·0	76·0	75·0	73·5	73·5	73·5	74·0	74·0
Dry Thermometer (standard)....	74·0	72·8	70·6	72·5	72·3	76·8	81·0	83·0	84·7	85·5	85·7	85·6	84·8	83·7	81·2	78·6	77·0	75·6	73·6	73 4	72·4	71·0	69·9	69·2
Wet Do.	67·0	65·7	64·2	64·0	65·1	68·9	70·0	68·3	69·4	70 5	71·0	72·0	71·0	69·8	69·0	69·2	68·0	68·1	67·5	67·7	67·1	66·0	65·9	65·4
Cloudy sky in 8ths.....	5	2	0	0	0	1	2	2	4	3	3	3	3	3	3	2	2	2	6	2	2	3	2	0
Wind. Force lbs.....	·00	·00	·00	·00	·00	·00	·00	·00	·00	·01	·00	·05	·07	·12	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
Wind. Direction °	45	45	45	34	22	315	315	22	22	22	22	22	22	22	0	0	0	0	0	0	337	337	337	337
REMARKS ON THE WEATHER.	cu, cu-st, hz.....	do	clear.....	do	do	cu, cu-st, cr.....	do	do	do	cu, cr-cu, cr-hz.....	do	do	do	do	fy-cu, hz.....	cu-hor.....	fy-cu	fy-cu, cr.....	hy-cu, hz.....	fy-cu, hz.....	do	cu, cu-st, cr-hz..	cu, cr-hz, D.....	ny-clear, D .....

HOURLY OR HOUR-DAY OBSERVATIONS. COMMENCING AT 10 P. M. OF 16TH DECEMBER 1856, GOTTINGEN MEAN TIME.

	WEDNESDAY, 16TH DECEMBER, 1856.																									THURSDAY, 17TH DECEMBER, 1856.																							
Hour.	10	11	12	13	14	15	16	17	18	19	20	21	22	23		Hour.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.			red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	red.	
	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670	1670			1670	1670	1670	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	1680	
	70	70	70	70	70	70	70	70	70	70	70	70	70	70			70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
16 P.M. 5 41	1635	1630	1202	1365
6 41	40	34	1063	947
51	46	36	1124	1183
7 1	42	34	1140	1275
11	40	30	1150	1273
21	34	28	1159	1280
31	34	28	1200	1380
41	30	26	1200	1469
51	32	27	1275	1620
8 1	40	30	1284	1680
11	40	32	1283	1610
21	47	38	1257	1550
31	50	40	1250	1550
41	40	35	1227	1341
46	37	34	1201	1394
51	35	32	1197	1394
56	36	32	1200	1368
9 1	38	33	1219	1401
6	39	33	1230	1428
11	40	35	1251	1474
21	38	32	1270	1490
31	38	32	1283	1490
41	40	32	1280	1452
51	40	33	1271	1440
10 1	40	31	1260	1375
11	45	34	1268	1346
21	47	35	1279	1316
31	43	33	1286	1381
41	40	33	1300	1414
51	38	32	1309	1414
11 1	40	33	1292	1355
11	40	33	1235	1214
21	40	33	1239	1230
31	39	32	1240	1230
41	45	36	1250	1360
51	50	40	1250	1360
17 A.M. 0 1	52	42	1259	1360
11	54	44	1307	1497
21	56	45	1370	1710
26	58	46	1400	1747
31	58	46	1421	1760
36	58	46	1477	1985
41	66	50	1513	2085
46	70	52	1545	2197
51	68	52	1570	2216
56	70	55	1560	2216
1 1	72	56	1571	2150
6	70	55	1558	2104
11	69	54	1545	2177
16	70	54	1550	1999
21	70	54	1550	1900
26	68	53	1541	1819
31	68	53	1538	1700
36	70	54	1517	1604
41	70	54	1495	1497
46	70	54	1490	1452
51	69	53	1473	1410
56	68	53	1457	1367
2 1	66	52	1450	1367
11	67	54	1447	1380
21	69	55	1432	1412
31	68	55	1417	1260
41	66	52	1400	1272
51	64	50	1420	1346
3 1	62	50	1430	1408
11	62	50	1426	1370
21	60	50	1423	1335
31	60	50	1420	1335
41	60	50	1430	1378
51	63	52	1445	1450
4 1	67	55	1460	1588
11	68	57	1460	1580
21	70	57	1465	1528
31	67	53	1450	1400

Madras Mean Time.	Magnetometers. Declination	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
17 A.M. 4 41	1662	1651	1433	1374
51	60	50	1400	1220
5 1	56	45	1382	1188
6	55	44	1370	1240
11	58	46	1360	1317
16	63	50	1376	1426
21	64	50	1390	1457
26	64	50	1403	1457
31	63	50	1410	1457
36	60	50	1425	1457
41	59	48	1435	1480
46	60	50	1440	1445
51	60	50	1440	1445
56	60	50	1440	1468
6 1	60	50	1440	1468
11	60	50	1440	1500
21	56	46	1442	1398
31	50	40	1454	1280
41	40	32	1462	1286
51	35	30	1458	1286
7 1	34	30	1455	1270
	—	—	—	—
20 A.M. 7 41	1614	1620	1170	1415
8 41	55	55	1155	1835
51	60	59	1158	1888
56	64	62	1160	1973
9 1	66	63	1145	1973
6	65	63	1138	1990
11	62	61	1110	2024
16	64	62	1115	2080
21	67	63	1117	2137
26	67	63	1115	2137
31	67	63	1115	2179
36	68	64	1120	2300
41	70	65	1145	2469
46	70	66	1138	2490
51	70	68	1110	2538
56	70	69	1078	2604
10 1	71	68	1075	2775
6	70	66	1077	2855
11	70	67	1062	2900
16	70	68	1069	2947
21	71	65	1048	2972
26	71	64	1050	2980
31	70	63	1053	2998
36	68	61	1080	2960
41	65	58	1080	2887
46	63	57	1140	2887
51	60	56	1180	2887
56	50	50	1200	2800
11 1	34	40	1342	2039
6	29	36	1390	1970
11	25	30	1404	1904
16	19	28	1353	1954
21	17	27	1341	1954
26	16	25	1290	1960
31	14	21	1100	2018
36	12	22	1060	1981
41	12	21	1034	1936
46	12	22	1072	1936
51	11	22	1100	1920
56	10	21	1136	1920
P.M. 0 1	04	16	1142	1990
6	02	12	1100	2072
11	00	10	1062	2090
16	00	11	1090	2027
21	00	11	1128	1975
26	1595	10	1120	1898
31	92	08	1151	1680
36	97	11	1160	1638
41	1604	18	1109	1950
46	09	20	1110	2031
51	10	21	1158	2180

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
20 P.M. 0 56	1612	1624	1132	2185
1 1	19	26	1131	2235
6	20	28	1165	2244
11	19	28	1160	2244
16	20	29	1198	2169
21	17	27	1226	2120
26	15	26	1260	2008
31	14	25	1282	1801
36	19	29	1293	1718
41	19	29	1311	1710
46	20	30	1289	1778
51	22	32	1278	1769
56	23	33	1251	1801
2 1	26	36	1239	1769
6	25	35	1281	1668
11	24	34	1309	1620
16	22	33	1321	1610
21	19	31	1302	1598
26	15	26	1302	1389
31	18	29	1283	1360
36	19	30	1290	1418
41	19	30	1283	1660
46	20	30	1298	1801
51	20	30	1322	1770
56	25	33	1375	1735
3 1	28	37	1410	1707
6	30	39	1425	1771
11	32	40	1431	1848
16	34	40	1450	1904
21	32	40	1471	1972
26	30	38	1445	2015
31	29	36	1437	2269
36	34	40	1471	2376
41	40	45	1516	2520
46	45	48	1572	2620
51	43	46	1582	2490
56	42	45	1589	2449
4 1	38	43	1565	2326
6	47	51	1600	2529
11	60	62	1634	2645
16	68	70	1631	2352
21	69	70	1610	2277
26	64	66	1603	1996
31	50	52	1640	1905
36	45	50	1585	1854
41	50	51	1580	1794
46	48	50	1610	1817
51	43	48	1600	1884
56	41	47	1592	1841
5 1	47	50	1600	1947
6	43	48	1598	1804
11	40	48	1610	1804
16	38	45	1621	1840
21	40	43	1660	1878
26	35	41	1673	1912
31	37	42	1675	1893
36	39	44	1682	1952
41	52	58	1721	2099
46	56	62	1720	2080
51	60	66	1718	2031
56	68	70	1713	2129
6 1	70	71	1684	1901
6	71	71	1685	1801
11	67	67	1686	1732
16	53	58	1659	1547
21	44	53	1640	1455
26	42	52	1689	1560
31	41	50	1678	1602
36	48	52	1688	1637
41	44	52	1672	1581
46	42	52	1688	1624
51	42	52	1716	1689
56	42	52	1718	1720
7 1	44	52	1738	1761

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
20 P.M. 7 6	1645	1652	1742	1770
11	49	56	1772	1823
21	53	59	1778	1852
26	54	60	1798	1887
31	57	62	1792	1865
36	61	63	1803	1874
41	58	62	1822	1847
46	56	61	1832	1800
51	53	60	1812	1765
56	52	59	1802	1664
8 1	53	60	1782	1616
6	55	61	1740	1459
11	59	62	1708	1394
16	62	67	1662	1248
21	60	65	1640	1184
26	60	65	1647	1206
31	62	68	1652	1217
36	63	66	1666	1280
41	62	66	1663	1318
46	61	65	1670	1318
51	61	65	1667	1305
56	63	66	1662	1305
9 1	62	62	1669	1374
6	62	64	1672	1374
11	60	62	1662	1352
16	60	62	1660	1352
21	59	61	1644	1352
26	59	62	1656	1352
31	59	62	1663	1360
36	56	59	1648	1370
41	57	58	1652	1370
46	57	57	1660	1347
51	60	59	1629	1310
56	60	61	1640	1310
10 1	58	59	1589	1262
6	59	61	1545	1210
11	56	58	1520	1180
16	57	60	1517	1065
21	54	57	1505	1065
26	52	55	1500	1007
31	52	58	1497	1061
36	51	60	1490	1107
41	51	62	1471	1252
46	53	61	1456	1304
51	50	59	1447	1297
56	47	56	1480	1415
11 1	47	54	1495	1177
6	48	54	1509	1112
11	50	55	1517	1047
16	51	56	1505	982
21	52	56	1500	982
26	50	55	1517	941
31	48	53	1523	972
36	46	51	1507	1057
41	45	50	1492	1202
46	44	50	1490	1242
51	43	50	1486	1242
56	43	50	1490	1237
21 A.M. 0 1	43	50	1492	1215
11	42	48	1490	1215
21	45	49	1490	1227
31	44	49	1485	1251
41	43	49	1472	1276
51	42	48	1468	1242
1 1	40	47	1459	1241
11	40	47	1455	1247
21	41	47	1450	1285
31	41	47	1445	1316
41	42	47	1440	1347
51	42	47	1440	1347
2 1	48	52	1490	1398
6	48	52	1498	1398
11	47	52	1492	1380
16	45	51	1487	1380

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Sept. 1851 d. h m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Sept. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
21 A.M. 2 21	1645	1650	1480	1380	19 P.M. 0 11	1649	1649	1544	1386	4 A.M. 10 11	—	1642	1495	6248	4 P.M. 4 21	1647	1642	1988	4780
26	42	47	1473	1365	21	48	48	1520	1443	16	—	43	1510	6166	26	—	45	1980	4799
31	40	47	1470	1365	31	49	50	1512	1653	21	—	42	1493	6051	31	49	46	1976	4954
36	43	48	1476	1365	41	55	54	1491	1713	26	—	38	1400	6946	36	—	48	1949	4846
41	45	50	1480	1376	51	60	60	1530	1713	31	—	36	1388	7094	41	53	50	1922	4790
46	47	52	1483	1376	1 1	59	59	1529	1650	36	—	37	1319	7467	46	—	52	1920	4923
51	49	52	1489	1376	11	61	60	1500	1667	41	1653	38	1325	8610	51	58	53	1940	5027
3 1	50	53	1485	1376	21	60	60	1523	1573	46	—	35	1336	8166	56	—	53	1949	5150
6	50	54	1485	1370	31	60	60	1530	1498	51	51	32	1310	8499	5 1	60	53	1951	5125
11	47	51	1482	1370	41	57	55	1525	1449	56	—	30	1361	8488	6	—	53	1904	4863
16	45	50	1478	1370	51	56	53	1517	1480	11 1	55	42	1488	8767	11	64	58	1819	4586
21	44	50	1470	1355	2 1	55	53	1500	1512	6	—	41	1508	8731	16	—	60	1821	4531
26	44	50	1463	1355	11	52	52	1500	1475	11	53	38	1512	8745	21	67	60	1878	4660
31	44	49	1455	1355	21	50	50	1500	1380	16	—	38	1530	8850	26	—	58	1919	4976
36	43	48	1450	1355	31	50	50	1518	1400	21	50	36	1550	8917	31	63	56	1970	5280
41	44	49	1460	1385	41	50	50	1518	1313	26	—	37	1609	8808	36	—	52	1968	5379
46	46	49	1467	1385	51	47	50	1510	1400	31	45	32	1535	8944	41	65	58	1998	5510
51	45	50	1473	1360	3 1	46	50	1510	1400	36	—	38	1574	8930	46	—	56	2004	5470
56	45	50	1465	1360		--	—	—	—	41	57	42	1662	8664	51	63	52	2023	5452
4 1	42	48	1460	1360	July 1851					46	—	42	1680	8300	56	—	54	2037	5597
11	42	48	1460	1358	18 P.M. 3 41	1610	1601	1300	6752	51	48	39	1612	8318	6 1	66	54	2063	5652
21	42	47	1447	1358	4 41	30	20	1497	5878	56	—	38	1522	8515	6	—	54	2060	5588
31	40	45	1440	1358	51	32	21	1502	5790	P. M. 0 1	50	40	1525	8837	11	58	52	2000	5207
41	40	44	1433	1337	5 1	35	24	1517	5582	6	—	40	1502	9065	16	—	53	1998	5160
51	40	44	1433	1337	11	40	31	1490	5540	11	65	49	1619	9238	21	58	50	1950	4798
5 1	40	44	1433	1337	21	43	35	1495	5580	16	—	50	1688	9275	26	—	50	1922	4581
	—	—	—	—	31	45	32	1470	5317	21	66	51	1770	9145	31	53	48	1912	4490
					41	43	30	1459	5018	26	—	50	1824	9219	36	—	48	1918	4490
22 A.M. 7 41	1650	1650	1314	1304	51	44	31	1440	4977	31	73	57	1924	8760	41	51	46	1922	4515
8 41	80	73	1285	1724	6 1	49	34	1407	4790	36	—	62	1950	8333	46	—	42	1912	4472
51	80	74	1280	1785	11	50	33	1390	4874	41	87	71	1942	8046	51	46	41	1901	4431
9 1	80	76	1265	1899	21	51	32	1372	4936	46	—	68	1920	7461	56	—	41	1898	4370
11	80	76	1257	1890	31	51	32	1363	4954	51	75	64	1919	6983	7 1	37	38	1890	4234
21	80	77	1245	1873	41	50	31	1362	5003	56	—	64	1902	6828	6	—	37	1891	4222
31	78	75	1239	1974	51	50	31	1368	5106	1 1	77	66	1912	6615	11	34	33	1892	4222
41	73	70	1233	2015	7 1	50	30	1370	5100	6	--	66	1910	6449	16	—	32	1888	4194
51	71	70	1230	2015	11	47	28	1373	5098	11	78	65	1842	6567	21	34	34	1890	4249
	—	—	—	—	21	41	26	1372	5038	16	—	65	1830	6567	26	—	32	1889	4224
Febr. 1851					31	40	22	1369	5016	21	77	67	1909	6400	31	31	30	1890	4194
6 A.M. 11 41	1613	1630	883	2647	41	38	22	1372	4967	26	--	69	1998	5951	36	—	30	1890	4194
P.M. 0 41	04	26	1057	2098	51	39	22	1368	4976	31	76	70	2054	5156	41	28	29	1886	4184
51	02	24	1067	1907	8 1	39	21	1362	4920	36	—	68	2101	4940	46	—	30	1880	4184
1 1	1599	22	1121	1753	11	38	21	1368	4945	41	77	70	2122	4475	51	27	28	1860	4142
6	96	20	1116	1704		—	—	—	—	46	—	64	1988	5047	56	—	28	1854	4120
11	93	19	1132	1640	Aug. 1851					51	71	60	1962	5802	8 1	27	28	1852	4118
16	92	18	1143	1540	26 A.M. 8 41	1660	1645	1210	5822	56	—	60	1854	6209	6	—	27	1842	4078
21	90	17	1157	1502	9 41	25	12	1150	6048	2 1	70	60	1859	6412	11	27	27	1846	4078
26	89	15	1161	1436	10 1	15	—	1158	5860	6	—	59	1948	5873	16	—	30	1860	4180
31	88	16	1179	1375	11	10	02	1171	5740	11	67	59	2004	5107	21	29	32	1870	4291
36	90	18	1180	1345	21	08	00	1170	5760	16	—	57	2029	5007	26	—	32	1895	4360
41	91	19	1187	1352	31	02	1596	1168	5790	21	65	56	2058	4819	31	34	34	1915	4384
46	92	19	1194	1350	41	00	91	1168	5814	26	—	58	2162	4076	36	—	36	1910	4428
51	93	21	1185	1350	51	1595	90	1155	5902	31	63	60	2183	3824	41	38	35	1919	4468
56	93	21	1180	1341	11 1	93	90	1153	5902	36	—	59	2146	3680	46	—	38	1907	4440
2 1	95	22	1180	1341		—	—	—	—	41	58	58	2093	3724	51	35	35	1912	4420
6	96	23	1182	1340	Sept. 1851					46	—	54	2057	3986	56	—	32	1908	4440
11	96	23	1189	1330	4 A.M. 7 41	1665	1656	1305	5156	51	55	52	2019	4068	9 1	42	40	1873	4317
16	96	23	1197	1321	8 41	58	49	1310	6196	56	—	52	2014	4220	6	—	40	1871	4317
21	97	24	1209	1321	51	*—	46	1330	6270	3 1	57	52	2010	4272	11	42	39	1849	4139
26	97	24	1216	1334	56	—	45	1345	6364	6	—	50	1995	4272	16	—	39	1810	4029
31	1699	26	1228	1334	9 1	—	44	1340	6522	11	52	48	2000	4197	21	42	39	1798	4008
36	02	28	1236	1334	6	—	43	1352	6566	16	—	46	2011	4177	26	—	35	1792	4008
41	08	30	1245	1311	11	—	42	1384	6544	21	47	44	2009	4274	31	40	33	1779	4008
46	08	31	1245	1311	16	—	40	1420	6525	26	—	43	2012	4274	36	—	36	1810	4201
51	09	31	1247	1311	21	—	39	1390	6487	31	47	45	2010	4497	41	45	38	1840	4672
56	10	32	1250	1311	26	—	38	1385	6487	36	—	48	2029	4497	46	—	38	1840	4600
3 1	12	33	1257	1356	31	—	37	1390	6492	41	48	48	2034	4560	51	45	38	1835	4533
6	14	35	1263	1356	36	—	39	1410	6554	46	—	44	2031	4560	56	—	39	1850	4657
	—	—	—	—	41	47	40	1412	6583	51	47	42	2019	4612	10 1	46	40	1860	4818
					46	—	40	1426	6508	56	—	—	—	—	6	—	42	1875	4883
19 A.M. 10 41	1639	1637	1349	2027	51	—	40	1438	6442	4 1	47	43	2000	4641	11	49	44	1840	4695
11 41	48	47	1550	1349	56	—	40	1420	6498	6	—	41	1990	4663	16	—	42	1862	4740
51	46	46	1568	1296	10 1	—	40	1443	6440	11	46	42	1990	4663	21	45	40	1890	4707
P.M. 0 1	44	44	1547	1402	6	—	41	1470	6337	16	—	42	1984	4663	26	—	40	1900	4809

The suspending fibres of the Declination Magnetometer being broken, readings of the Deflection Room Magnetometer were recorded on September 4th, 5th and up to 6h, 21m. P. M. on the 30th.—Corrections were duly applied for the mean difference between the two instruments as shewn by previous and subsequent comparisons.

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Sept. 1851. d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Sept. 1851. d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Sept. 1851. d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Sept. 1851. d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
4 P.M. 10 31	1647	1640	1947	4975	5 A.M. 8 11	1665	1650	1528	4879	30 A.M. 7 37	—	1642	1645	7020	30 A.M. 10 47	—	1647	1677	6735
36	—	40	1970	4912	21	62	48	1492	4907	39	1677	55	1630	7014	51	—	40	1562	6271
41	45	40	1955	4944	31	56	45	1522	4907	41	1715	70	1780	7490	53	1667	41	1615	6952
46	—	40	1930	4831	41	55	43	1520	4993	43	—	73	1840	7817	55	—	40	1628	6550
51	46	40	1942	4650	9 11	47	40	1490	4940	45	10	65	1695	6986	57	—	42	1600	6620
56	—	40	1940	4517	41	43	32	1478	4905	47	—	65	1810	6954	59	—	40	1641	6775
11 1	44	39	1920	4502	10 11	37	30	1450	4886	49	1685	56	1825	7591	11 1	60	39	1553	6355
6	—	39	1907	4502	41	28	23	1472	4972	51	—	52	1811	7310	3	—	36	1562	6656
11	42	37	1899	4450	11 11	25	20	1488	4972	53	70	50	1845	6808	5	—	37	1542	6072
16	—	35	1897	4417	41	16	15	1477	4910	55	—	50	1915	6541	7	—	39	1573	6975
21	38	35	1850	4386		—	—	—	—	57	65	45	1865	6068	9	—	38	1560	6407
26	—	34	1803	4327						59	—	42	1880	6009	11	62	40	1540	6620
31	39	32	1810	4401	30 A.M. 2 41	1630	—	1400	5774	8 1	56	42	1910	6553	13	—	41	1530	6570
36	—	30	1813	4476	4 41	65	—	1613	7561	3	—	41	1955	6080	15	—	40	1590	6435
41	40	38	1820	4586	46	—	—	1618	7700	5	55	46	1960	6214	17	—	40	1560	6632
46	—	38	1851	4650	51	68	1650	1625	7808	7	—	43	1955	6077	19	—	40	1689	6420
51	42	38	1867	4617	56	—	50	1638	7980	9	61	46	2000	5929	21	63	43	1719	6632
56	—	37	1860	4617	5 1	70	50	1650	8038	11	—	43	2020	5875	23	—	45	1742	6437
5 A.M. 0 1	43	38	1871	4700	6	—	52	1658	8200	13	59	43	2011	5959	25	—	43	1740	6332
6	—	38	1880	4759	11	72	54	1666	8052	15	—	41	1998	6007	27	—	42	1759	6632
11	45	40	1861	4800	16	—	51	1675	7930	17	52	46	1972	6147	29	—	40	1762	6632
16	—	43	1830	4657	21	68	48	1680	7706	19	—	43	1977	5834	31	62	41	1743	6730
21	50	45	1795	4790	26	—	—	1687	7585	21	65	47	1955	5956	33	—	42	1745	6750
26	—	45	1720	4397	31	62	41	1692	7480	23	—	46	1946	5976	35	—	42	1750	6867
31	57	47	1699	4311	36	—	—	1708	7300	25	65	47	1936	6078	37	—	39	1700	6695
36	—	49	1675	4217	41	65	42	1722	7127	27	—	49	1922	6470	39	—	39	1680	7062
41	65	50	1662	4135	46	—	—	1700	7100	29	64	50	1905	6625	41	60	39	1682	7052
46	—	51	1660	4017	51	78	50	1692	7025	31	65	46	1900	6076	43	—	38	1702	6775
51	68	52	1660	3933	56	—	—	1685	6970	36	—	49	1884	6115	45	—	38	1686	6945
56	—	55	1647	4125	6 1	90	60	1660	6995	41	75	49	1899	6151	47	—	38	1672	6945
1 1	64	53	1640	4199	6	—	55	1632	7200	46	—	49	1840	6456	49	—	35	1616	6885
6	—	50	1631	4241	11	60	30	1557	5030	51	78	50	1787	6850	51	58	35	1598	7062
11	57	47	1660	4170	13	—	27	1390	4036	56	—	45	1771	6891	53	—	36	1615	6975
21	53	49	1675	4080	15	—	23	1373	—	9 1	80	47	1754	6655	55	—	38	1622	6842
31	45	44	1689	4100	17	—	17	1002	760	6	—	50	1680	6500	57	—	38	1628	6842
41	42	40	1692	4297	19	—	15	972	407	11	72	50	1624	7050	59	—	38	1634	6775
51	45	42	1705	4417	21	—	10	930	12	16	—	45	1665	6657	P.M. 0 1	58	37	1632	6532
2 1	50	44	1717	4350	23	—	10	1014	470	21	74	49	1558	6461	6	—	35	1618	6672
11	54	46	1740	4682	25	—	10	1098	885	26	—	54	1648	6302	11	58	38	1583	6493
21	55	48	1740	4682	27	—	10	1115	908	31	70	64	1772	6670	16	—	40	1630	6554
31	55	49	1743	4654	29	—	08	1140	1201	36	—	61	1926	6696	21	57	42	1700	6056
41	57	50	1745	4649	31	20	03	908	—	41	84	60	2011	6455	26	59	42	1680	6460
51	58	50	1748	4700	33	—	00	1040	1032	43	—	56	1937	6526	31	60	40	1678	6352
3 1	58	50	1752	4790	35	—	1598	1098	503	45	80	52	1830	6295	36	64	42	1703	6491
11	58	50	1738	4665	37	—	92	1110	783	47	—	54	1765	6981	41	65	48	1743	6635
21	55	46	1700	4528	39	—	87	1192	825	49	74	50	1790	6556	46	65	44	1756	6582
31	52	42	1685	4484	41	1597	87	1217	1984	51	—	51	1775	6910	51	64	44	1733	6754
41	49	39	1678	4484	43	—	88	1285	2038	53	78	52	1758	6565	56	64	42	1740	6547
51	48	40	1670	4435	45	99	90	1330	2500	55	—	54	1778	6570	1 1	66	45	1762	6725
4 1	47	40	1656	4435	47	—	92	1300	3626	57	—	53	1850	6410	11	63	43	1780	6116
11	47	40	1660	4480	49	—	96	1388	5038	59	—	48	1800	5740	21	65	45	1760	6454
21	48	40	1660	4612	51	1600	98	1500	5719	10 1	74	50	1771	6980	31	68	48	1763	6148
31	50	40	1664	4612	53	—	99	1565	5875	3	—	47	1771	6185	41	68	48	1770	6147
41	50	40	1668	4681	55	—	1606	1580	6000	5	—	49	1650	6565	51	69	49	1757	5911
51	51	40	1675	4700	57	—	13	1616	6157	7	—	48	1663	6414	2 1	71	51	1740	5724
5 1	51	42	1687	4785	59	—	15	1640	6194	9	—	57	1732	6652	11	73	51	1732	5593
11	52	43	1687	4785	7 1	27	20	1655	6113	11	70	51	1740	6006	21	74	52	1730	5790
21	53	45	1687	4736	3	—	18	1654	6070	13	—	53	1727	6812	31	74	52	1722	5707
31	55	48	1675	4680	5	—	20	1700	6097	15	—	54	1740	6250	41	77	55	1730	5749
41	58	50	1660	4616	7	29	20	1650	5743	17	—	50	1670	6385	51	79	56	1738	5734
51	58	50	1645	4587	9	—	21	1702	5968	19	—	49	1672	6748	3 1	81	58	1735	5657
6 1	61	52	1640	4566	11	35	26	1712	6364	21	70	51	1681	6615	11	87	62	1750	5789
11	63	53	1637	4608	13	—	24	1705	6210	23	—	53	1665	6615	21	85	60	1741	5789
21	65	56	1640	4656	15	40	31	1711	6134	25	—	50	1755	6802	31	83	60	1750	5664
31	70	58	1638	4600	17	—	30	1740	5883	27	—	51	1660	6628	41	95	69	1773	5947
41	73	60	1630	4692	19	40	31	1670	6053	29	—	49	1708	6578	51	1700	72	1790	6086
51	75	62	1616	4730	21	—	30	1587	5913	31	70	48	1658	6741	4 1	1692	67	1802	5570
7 1	75	60	1610	4752	23	44	29	1650	5516	33	—	47	1720	6780	11	86	60	1736	5173
11	75	60	1588	4619	25	—	33	1680	6271	35	—	45	1660	6400	21	90	63	1742	5452
21	74	60	1584	4710	27	47	34	1791	5664	37	—	50	1655	7125	31	97	69	1774	5869
31	72	59	1580	4783	29	—	31	1772	6497	39	—	44	1710	6615	41	90	60	1742	5290
41	71	59	1568	4863	31	44	35	1615	6505	41	60	46	1680	6740	51	86	60	1779	5600
51	72	59	1552	4930	33	—	40	1810	7850	43	—	47	1644	6740	5 1	80	53	1759	5305
8 1	71	57	1552	4977	35	40	40	1720	6816	45	—	47	1690	6795	11	73	51	1758	5295

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Sept. 1851 d. h. m	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Oct. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Nov. 1851 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Jan. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
30 P.M. 5 21	1672	1650	1749	5310	29 P.M. 3 26	1680	1650	1640	5285	22 P.M. 2 1	1692	1641	1330	−1039	20 P.M. 0 46	1719	1686	1311	4618
31	70	50	1732	5216	31	80	50	1642	5285	6	98	42	1351	−977	51	20	90	1328	4700
41	70	48	1712	5137	41	80	48	1630	5271	11	97	43	1370	−977	56	18	88	1350	4631
51	69	47	1704	5138	51	77	44	1638	5148	16	98	44	1381	−984	1 1	14	84	1352	4688
6 1	69	47	1700	5138	4 1	76	42	1647	5148	21	99	45	1390	−991	6	14	84	1448	4568
11	67	44	1693	5087	11	75	41	1650	5258	26	95	42	1406	−958	11	20	90	1498	4639
21	67	44	1701	5251	21	77	42	1623	5180	31	97	43	1410	−940	16	22	90	1482	4680
31	68	45	1704	5196	31	80	45	1625	5087	36	97	43	1415	−940	21	20	90	1462	4700
41	66	43	1699	5163	41	80	47	1624	5012	41	1700	49	1408	−911	26	16	84	1460	4661
51	66	43	1699	5219	51	79	48	1629	4901	51	00	49	1418	−891	31	10	80	1446	4706
7 1	67	43	1700	5274	5 1	78	46	1600	4834	3 1	00	48	1430	−891	36	08	80	1400	4680
11	68	44	1700	5234	11	78	47	1603	4800	11	1699	48	1442	−891	41	02	74	1360	4736
21	70	45	1701	5234	21	75	43	1607	4800	21	98	47	1450	−891	46	1690	66	1360	4709
31	70	49	1700	5250	31	76	44	1596	4752	31	98	46	1447	−850	51	88	62	1350	4686
41	68	46	1682	5140	41	81	47	1644	4760	41	95	44	1435	1864	56	90	64	1380	4691
51	69	47	1692	5140	46	33	47	1630	4700	51	92	42	1430	1904	2 1	84	60	1370	4691
8 1	70	46	1698	5307	51	81	46	1620	4730	4 1	92	41	1419	1896	6	80	60	1367	4691
11	68	44	1685	5252	56	79	43	1600	4795	11	92	41	1389	1848	11	80	56	1377	4626
21	70	45	1699	5322	9 1	80	44	1592	4704	21	89	39	1368	1775	21	78	56	1396	4585
31	69	44	1708	5322	6	79	43	1587	4704	31	84	34	1342	1723	31	74	50	1358	4560
41	67	42	1693	5289	11	78	42	1580	4704	41	80	27	1337	1707	41	70	50	1338	4554
51	70	45	1706	5372	16	77	41	1583	4704	51	76	23	1340	1707	51	68	48	1318	4554
9 1	69	44	1702	5290	21	76	42	1587	4704	5 1	71	20	1348	1707	3 1	67	47	1298	4554
11	70	44	1700	5209	26	77	43	1585	4690	11	70	21	1358	1813	11	67	46	1284	4554
21	69	44	1695	5176	31	78	44	1584	4674	21	78	27	1342	1841	21	67	44	1270	4554
31	69	44	1689	5250	36	76	43	1580	4674	31	82	31	1331	1835	31	64	42	1278	4554
41	70	44	1677	5319	41	75	42	1569	4674	41	82	29	1353	1820	41	68	47	1274	4605
56	70	43	1673	5319	46	74	42	1570	4660	51	82	29	1372	1872	51	64	46	1296	4605
10 11	68	42	1667	5319	51	74	41	1571	4650	6 1	77	24	1400	1878	4 1	64	44	1298	4605
26	67	41	1660	5319	56	74	42	1571	4672	11	74	22	1414	1884	11	66	44	1310	4605
41	68	41	1650	5287	7 1	73	42	1572	4674	21	76	24	1432	1902	21	68	48	1330	4674
56	68	41	1662	5287	11	73	42	1569	4674	31	77	25	1449	1979	31	70	49	1340	4674
11 11	67	41	1657	5287	21	72	41	1562	4629	41	78	26	1450	2000	41	70	48	1360	4670
	—	—	—	—	31	73	42	1563	4660	51	78	26	1450	2000	51	70	47	1365	4670
Oct. 1851					41	72	42	1542	4595	7 1	79	29	1447	2047	5 1	68	44	1380	4670
29 A.M. 10 41	1660	1631	1270	6470	51	72	42	1527	4488	11	80	30	1454	2080	11	68	46	1390	4609
11 41	1710	70	1705	5657	3 1	71	39	1531	4497	21	81	31	1460	2032	21	68	46	1386	4609
46	07	68	1719	5680	11	72	39	1538	4585	31	81	31	1472	2032	31	68	47	1383	4642
51	09	68	1732	5703	21	72	39	1532	4592	41	82	31	1480	2039	41	70	48	1389	4538
56	10	70	1740	5718	31	71	38	1533	4747	51	81	30	1473	2029	51	70	48	1389	4501
P. M. 0 1	09	70	1760	5402	41	72	39	1531	4717	8 1	83	29	1471	1995	6 1	68	46	1386	4470
6	14	77	1798	4985	51	72	38	1540	4771	11	82	29	1469	1970	11	67	45	1384	4441
11	16	78	1814	4736	9 1	72	38	1538	4701	21	84	31	1464	1950	21	71	49	1339	4314
16	10	73	1800	4700	11	72	37	1520	4658	31	85	31	1461	1925	31	72	50	1288	4300
21	08	70	1792	4725	21	70	35	1511	4612	41	86	31	1442	1888	41	74	51	1279	4228
26	10	72	1780	4780	31	70	34	1510	4612	51	85	30	1447	1888	51	75	52	1271	4228
31	10	74	1767	4933	41	70	38	1508	4642	9 1	80	28	1435	1870	7 1	75	52	1271	4241
36	10	74	1788	4900	51	69	34	1489	4653	11	76	26	1428	1857	11	75	50	1264	4274
41	10	74	1812	4882	10 1	68	34	1487	4640	21	73	23	1400	1718	21	70	48	1260	4315
46	10	73	1825	4865	11	68	34	1490	4625	31	74	24	1387	1685	31	71	49	1278	4304
51	10	73	1813	4821	21	68	32	1492	4650	41	76	25	1384	1685	41	70	48	1292	4292
56	10	73	1818	4764	31	68	31	1490	4686	51	80	27	1380	1750	51	70	48	1307	4328
1 1	10	71	1800	4851	41	68	30	1488	4687	10 1	80	29	1380	1786	8 1	70	48	1318	4353
11	07	69	1766	4890	56	68	30	1486	4687	11	80	30	1382	1786	11	72	50	1329	4353
21	08	70	1745	4703	11 11	68	30	1484	4690	21	78	27	1382	1840	21	72	50	1300	4460
31	10	72	1750	4931	26	68	30	1482	4706	31	79	27	1385	1840	31	72	50	1285	4100
41	10	74	1760	4841	41	68	30	1480	4724	41	80	29	1386	1841	41	70	48	1262	4100
51	13	77	1758	4949	56	60	30	1482	4740	51	80	30	1386	1841	51	68	47	1250	4100
2 1	14	76	1740	5116	30 A.M. 0 11	60	30	1489	4782	11 1	80	30	1385	1841	9 1	70	48	1277	4348
11	10	73	1748	4903	26	54	29	1497	4806		—	—	—	—	11	70	50	1295	4495
16	06	70	1730	5083	41	50	28	1500	4849						21	72	50	1310	4495
21	05	70	1725	5166	56	53	29	1477	4849	Jan. 1852					31	72	50	1320	4495
26	04	70	1720	5166	1 11	58	30	1480	4849	20 A.M. 10 41	1662	1640	780	5199	41	72	51	1332	4495
31	02	68	1704	5166	26	60	30	1480	4835	11 41	98	70	1190	4592	51	74	52	1301	4480
36	00	64	1688	5166	41	60	30	1472	4835	51	1700	70	1184	4694	10 1	75	54	1288	4480
41	1698	62	1665	5121	56	59	30	1472	4835	P. M. 0 1	1692	74	1199	4694	11	74	54	1260	4480
46	95	58	1650	5106	2 11	58	29	1471	4800	6	1710	78	1250	4613	21	78	52	1274	4480
51	90	56	1647	5084		—	—	—	—	11	10	80	1260	4598	31	78	52	1290	4301
56	86	54	1650	5084	Nov. 1851					16	14	80	1278	4566	41	78	53	1280	4301
3 1	86	53	1650	5138	22 P.M. 0 41	1668	1622	1160	1567	21	08	78	1290	4579	51	76	52	1270	4301
6	83	53	1653	5150	1 41	90	39	1319	−1102	26	14	84	1330	4547	11 1	76	50	1272	4285
11	81	53	1645	5206	46	91	40	1309	−1102	31	17	85	1345	4562	11	77	50	1284	4285
16	81	52	1637	5245	51	92	40	1301	−1050	36	20	87	1312	4647	21	79	52	1290	4285
21	80	50	1642	5245	56	93	41	1325	−1050	41	20	90	1330	4626	31	79	52	1304	4285

Madras Mean Time.	Magnetometers.				Madras. Mean Time.	Magnetometers.				Madras Mean Time.	Magnetometers.				Madras Mean Time.	Magnetometers.			
	Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.		Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.		Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.		Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Jan. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
20P.M.11 41	1680	1653	1309	4345	16A.M. 7 51	1634	1600	1434	4305	16P.M. 6 1	1684	1637	1372	4680	18P.M. 4 56	1718	1659	1512	5950
51	80	53	1310	4345	8 1	48	10	1399	4305	11	85	39	1375	4680	5 1	20	61	1600	5990
21A.M. 0 1	80	53	1316	4345	11	44	12	1388	4028	21	83	37	1379	4700	6	25	65	1645	5990
11	80	53	1319	4345	21	42	10	1388	3975	31	82	37	1385	4685	11	19	61	1690	5800
21	80	52	1321	4317	31	44	12	1420	3706	41	83	37	1390	4705	16	16	58	1715	5592
31	80	52	1325	4317	41	48	12	1448	3942	51	85	39	1387	4705	21	17	60	1712	5592
41	80	52	1328	4317	51	52	16	1440	3877	7 1	84	37	1389	4705	26	15	58	1702	5500
51	78	51	1320	4317	9 1	52	18	1420	3970						31	12	54	1740	5500
1 1	77	51	1314	4317	11	59	24	1450	3970		—	—	—	—	36	10	51	1759	5900
11	75	51	1309	4300	21	64	26	1494	3905	18A.M.10 41	1650	1612	1167	3957	41	08	49	1792	5720
21	71	50	1296	4300	31	68	28	1501	4039	11 41	77	33	917	3688	46	24	66	1785	5600
31	64	48	1270	4300	41	68	28	1447	4377	46	80	38	925	3651	51	32	75	1759	5302
41	60	46	1261	4300	51	70	30	1490	4200	51	85	40	940	3651	56	58	99	1752	5150
51	59	45	1250	4241	10 1	70	30	1499	4200	56	82	36	987	3490	6 1	48	90	1725	5005
2 1	57	40	1241	4241	11	71	31	1462	4359	P.M. 0 1	76	32	1032	3385	6	38	80	1708	4802
11	56	38	1229	4204	21	67	28	1433	4495	6	54	15	980	4002	11	42	86	1730	4900
21	54	36	1210	4204	31	74	29	1358	4692	11	62	20	1127	4774	16	60	1704	1740	5102
31	52	35	1200	4204	41	72	32	1420	4402	16	75	30	1230	7527	21	80	1678	1760	4804
41	50	32	1178	4080	51	74	35	1486	4200	21	97	41	1345	7710	26	70	70	1740	4750
51	50	33	1184	4080	11 1	76	38	1527	4000	26	1713	50	1210	8690	31	42	60	1725	4602
3 1	54	36	1188	4124	6	70	34	1540	3744	31	21	54	1165	9050	36	10	52	1705	4500
11	58	38	1190	4205	11	70	33	1508	3947	36	52	82	1200	10442	41	1692	44	1733	4438
21	54	34	1193	4175	16	66	30	1527	3895	41	60	86	1145	10039	46	93	44	1795	4499
31	51	31	1197	4188	21	62	28	1545	3680	46	83	1700	1255	9810	51	70	22	1882	4602
41	51	31	1202	4209	26	60	27	1540	3680	51	1807	20	1497	10040	56	1705	56	1895	5310
51	54	33	1216	4280	31	58	25	1537	3797	53	1773	00	1510	9305	7 1	1690	44	1845	5162
4 1	57	37	1230	4352	36	59	25	1512	3850	55	58	1683	1450	9127	6	66	27	1924	5705
11	54	33	1218	4290	41	60	25	1455	3989	57	60	90	1650	8509	11	82	38	1800	5502
21	51	32	1200	4218	46	65	27	1440	3995	59	50	80	1699	7832	16	1709	50	1753	5000
31	52	32	1204	4200	51	67	29	1429	4107	1 1	42	81	1850	6913	18	12	60	1705	4900
41	53	33	1208	4186	56	68	30	1420	4213	3	45	80	1780	6540	20	20	66	1600	4500
51	52	32	1212	4186	P.M. 0 1	65	30	1437	4280	5	30	77	1855	5716	22	09	50	1505	4249
5 1	52	32	1213	4186	6	61	27	1450	4315	7	30	77	1875	5201	24	1673	40	1542	3900
11	53	33	1212	4186	11	59	26	1457	4315	9	29	72	1840	5266	26	91	56	1450	3460
	—	—	—	—	21	62	28	1430	4260	11	28	76	1890	4974	28	85	50	1413	3250
					31	65	29	1452	4260	16	20	70	1905	4851	30	89	50	1502	3405
23P.M. 4 41	1680	1655	1190	4148	41	70	30	1473	3954	21	15	62	1880	4344	32	98	59	1452	3602
5 41	70	48	1312	4400	51	72	31	1480	3990	26	10	60	1890	4232	36	1712	62	1605	4102
51	65	45	1325	4 386	1 1	74	33	1500	3990	31	05	57	1881	4085	38	19	69	1740	5140
6 1	62	42	1340	4 374	11	76	35	1498	3990	36	1699	54	1840	4085	40	09	60	1790	—
11	62	41	1357	4371	21	80	37	1482	4192	41	91	54	1850	4014	42	05	60	1805	5540
21	70	48	1360	4398	31	82	38	1469	4241	46	95	56	1878	4105	46	10	62	1882	5981
31	69	48	1372	4365	41	87	42	1380	4648	51	1700	57	1910	4186	51	18	63	1980	6025
41	70	48	1399	4384	46	90	44	1362	4690	56	03	60	1850	4710	56	22	68	2118	6487
51	73	52	1408	4425	51	92	45	1330	4851	2 1	09	64	1811	5057	8 1	40	80	2150	6554
7 1	80	53	1408	4410	56	93	45	1352	4917	6	05	61	1770	4620	6	50	90	2022	5989
11	80	54	1430	4415	2 1	90	42	1367	4978	11	11	65	1702	4870	11	51	92	1972	5527
21	79	53	1433	4400	6	87	40	1372	4938	16	08	62	1790	4502	16	50	89	1920	5100
31	72	51	1452	4358	11	86	40	1370	4938	21	10	63	1920	4410	21	38	80	1890	4828
41	69	48	1472	4365	16	82	38	1382	4910	26	02	60	2040	4017	26	32	78	1860	4745
51	71	49	1476	4385	21	80	35	1340	4961	31	1698	58	1970	4152	31	30	77	1868	4794
8 1	70	48	1479	4367	26	75	32	1310	4890	36	90	52	1912	4380	36	30	74	1890	4931
11	70	48	1482	4367	31	77	33	1327	5020	41	82	46	1870	4821	41	28	72	1898	4912
21	68	46	1480	4300	36	79	35	1305	5078	46	75	38	1840	4750	46	30	70	1890	4912
31	65	44	1477	4300	41	80	35	1285	5400	51	78	40	1821	4870	51	28	72	1887	4917
41	60	41	1460	4285	51	79	34	1272	5367	56	70	30	1811	4815	56	27	73	1880	4917
51	60	41	1458	4285	3 1	78	33	1309	5396	3 1	70	28	1770	4970	9 1	22	70	1910	4917
9 1	60	40	1457	4285	11	80	33	1325	5487	6	68	27	1740	5010	6	19	68	1858	4765
	—	—	—	—	21	80	33	1332	5487	11	67	25	1702	5057	11	19	68	1847	4750
Feb.					31	80	33	1358	5292	16	65	25	1685	5057	16	10	62	1800	4600
16A.M. 4 41	1623	—	1182	4511	41	76	32	1374	5215	21	67	26	1677	4910	21	01	57	1763	4380
5 41	12	—	1304	4900	51	73	31	1380	5215	26	70	28	1660	4910	26	00	52	1700	4343
51	17	1580	1322	4964	4 1	72	29	1362	5172	31	72	30	1652	4887	31	00	52	1700	4343
6 1	20	84	1339	5020	11	70	27	1353	4902	36	71	30	1640	4850	36	1696	50	1580	3988
11	20	83	1340	5020	21	68	27	1352	4902	41	70	30	1620	4813	41	1700	54	1580	3725
21	22	84	1351	5020	31	70	29	1350	4902	46	68	29	1617	4813	46	10	60	1568	4203
31	20	84	1379	4926	41	70	29	1360	4978	51	68	27	1610	4916	51	16	64	1580	4240
41	10	80	1400	4916	51	68	27	1368	4978	56	66	26	1610	4968	56	10	60	1570	4290
51	09	78	1391	4916	5 1	70	28	1370	4957	4 1	65	25	1606	4968	10 1	24	70	1630	4392
7 1	13	81	1410	4916	11	72	30	1374	4852	11	68	27	1602	4950	6	10	60	1666	4209
11	20	89	1450	4807	21	74	32	1374	4700	21	71	28	1588	4907	11	10	60	1726	4695
21	10	80	1432	4484	31	75	32	1360	4700	31	75	30	1580	4907	16	06	58	1745	4740
31	10	80	1420	4295	41	78	34	1363	4680	41	78	34	1566	4960	21	10	58	1736	4740
41	20	89	1430	4305	51	82	36	1365	4680	51	1700	50	1420	5472	26	00	50	1748	4740

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
18P.M.10 31	1700	1650	1730	4800	19A.M.7 21	1666	1622	1370	4829	20A.M. 2 41	1673	—	1472	4430	20 P.M.0 6	1710	1660	1769	4840
36	02	51	1746	4800	31	72	24	1364	4934	4 41	70	1636	1850	4724	11	05	57	1795	4802
41	04	55	1718	4842	41	70	25	1348	4978	46	70	35	1861	4724	16	02	55	1820	4705
46	08	58	1700	4842	51	74	26	1334	4978	51	68	35	1869	4724	21	10	60	1857	4621
51	00	52	1710	4868	8 1	79	30	1327	5070	56	66	34	1852	4724	26	12	61	1870	4621
56	1698	50	1700	4900	11	80	30	1321	5122	5 1	66	34	1850	4770	31	13	61	1882	4570
11 1	90	42	1690	4900	21	87	33	1314	5166	6	65	32	1848	4770	36	19	64	1860	4743
6	92	44	1685	4900	31	89	37	1309	5027	11	65	32	1846	4770	41	18	65	1850	4821
11	90	40	1672	4808	41	89	38	1303	5218	16	65	32	1844	4770	46	20	67	1862	4821
16	90	40	1660	4808	51	90	39	1308	5500	21	65	30	1843	4770	51	20	68	1880	4886
21	96	48	1674	4605	9 1	89	38	1287	5520	26	64	28	1840	4808	56	20	67	1877	4932
26	1700	50	1689	4605	11	90	39	1255	5395	31	64	27	1836	4808	1 1	21	67	1860	4966
31	1694	47	1660	4605	21	88	36	1244	5432	36	62	25	1821	4808	6	20	67	1886	4967
36	98	50	1650	4605	31	82	34	1228	5432	41	60	23	1819	4956	11	20	67	1876	4967
41	98	50	1648	4530	41	82	34	1240	5452	51	60	22	1805	4956	16	21	68	1860	4991
46	1700	52	1648	4530	51	82	34	1224	5530	6 1	59	18	1749	4850	21	19	68	1836	5014
51	00	52	1640	4530	10 1	80	30	1250	5417	11	58	08	1720	4645	26	17	67	1805	5040
56	1698	50	1650	4554	11	75	28	1252	5407	21	53	02	1692	4505	31	18	67	1815	5127
19A.M.0 1	96	49	1640	4554	21	75	29	1257	5417	31	57	10	1710	4591	36	20	68	1832	5070
6	90	42	1644	4554	31	75	28	1280	5417	41	60	12	1700	4656	41	17	62	1760	5375
11	1700	50	1630	4554	41	75	28	1299	5422	51	60	12	1680	4656	46	14	61	1724	5402
16	04	53	1622	4554	51	75	28	1293	5422	7 1	60	16	1650	4598	51	12	60	1707	5402
21	00	50	1620	4554	11 1	73	28	1253	5465	11	60	19	1620	4598	56	10	60	1752	5320
26	00	52	1610	4520	11	71	25	1261	5370	21	65	30	1618	4748	2 1	10	60	1797	5297
31	04	54	1600	4520	26	72	26	1273	5413	31	60	26	1610	4688	6	08	59	1810	5250
36	01	52	1600	4520	41	77	30	1249	5487	41	66	32	1650	4889	11	07	58	1832	5332
41	00	50	1600	4491	56	79	31	1247	5431	51	64	32	1668	4889	16	09	60	1850	5332
46	1696	48	1592	4491	P.M.0 11	80	31	1255	5305	8 1	62	40	1678	4889	21	10	60	1872	5350
51	92	46	1590	4491	26	78	31	1293	5172	11	68	48	1672	5034	26	12	62	1860	5469
56	90	43	1586	4491	41	80	31	1310	5105	21	66	42	1480	5190	31	14	63	1875	5408
1 1	90	43	1584	4491	56	80	31	1324	5105	26	68	42	1500	5190	36	13	62	1884	5408
6	90	42	1580	4502	1 21	87	37	1280	5150	31	68	42	1470	5309	41	21	67	1827	5223
11	90	40	1580	4502	41	82	34	1305	5067	36	68	42	1538	5309	46	17	64	1851	5075
16	88	40	1578	4502	2 1	86	38	1327	5109	41	66	44	1530	5455	51	19	63	1832	5145
21	87	40	1577	4502	21	78	32	1340	5109	46	67	44	1595	5455	56	22	65	1847	5145
26	85	38	1576	4502	41	67	23	1345	4818	51	67	44	1600	5470	3 1	24	66	1870	5121
31	84	37	1574	4502	3 1	63	22	1327	4780	56	—	40	1609	5470	6	22	65	1850	5174
36	84	35	1570	4502	21	57	16	1318	4801	9 1	—	42	1618	5310	11	20	64	1862	5117
41	84	33	1570	4502	41	55	12	1290	5001	6	86	41	1604	5670	16	18	62	1880	5050
46	82	33	1570	4502	4 1	58	15	1284	5122	11	87	36	1542	5698	21	17	60	1895	5025
51	82	32	1569	4502	21	60	16	1290	5122	16	86	40	1588	5522	26	17	61	1877	5025
56	80	32	1569	4502	41	60	16	1298	5172	21	87	43	1607	5730	31	18	63	1870	5047
2 1	80	32	1568	4579	5 41	1702	51	1451	5293	26	90	43	1607	5730	36	19	64	1862	5029
11	79	30	1568	4579	51	04	53	1448	5195	31	93	45	1608	5728	41	17	63	1890	5022
21	79	30	1567	4579	6 1	1692	42	1424	5002	36	96	46	1600	5704	46	16	62	1902	4999
31	78	30	1565	4579	11	83	35	1409	4905	41	93	43	1578	5685	51	15	61	1910	4999
41	78	30	1568	4579	21	75	30	1431	4905	46	99	49	1608	5728	56	15	61	1915	4976
51	76	28	1564	4579	31	70	26	1445	4905	51	1700	50	1608	5358	4 1	14	60	1920	4970
3 1	75	26	1560	4602	41	78	32	1428	4774	56	00	50	1628	5358	6	15	61	1900	5005
11	72	26	1551	4602	51	82	36	1415	4774	10 1	02	53	1666	5546	11	16	61	1887	5064
21	72	24	1549	4602	7 1	80	34	1435	4825	6	01	52	1660	5682	16	16	61	1880	4997
31	70	21	1540	4602	11	80	35	1440	4825	11	02	52	1659	5682	21	15	60	1871	4910
41	67	18	1530	4602	21	84	38	1448	4825	16	03	52	1652	5698	26	15	60	1867	4830
51	65	17	1521	4602	31	74	30	1382	4508	21	05	54	1677	5487	31	13	59	1851	4772
4 1	64	15	1500	4602	41	70	32	1349	4482	26	05	55	1711	5443	36	10	59	1840	4727
11	61	13	1496	4715	51	72	38	1400	4777	31	04	54	1721	5443	41	09	58	1827	4602
21	58	12	1460	4715	8 1	70	38	1450	4888	36	05	55	1711	5215	46	08	58	1815	4602
31	54	11	1407	4715	11	70	39	1488	4950	41	03	55	1698	5087	51	07	58	1800	4570
41	50	10	1380	4715	21	68	39	1500	4950	46	00	53	1670	5042	56	10	60	1795	4548
51	50	10	1380	4715	31	62	38	1511	4944	51	1699	52	1652	5042	5 1	12	60	1790	4548
5 1	52	10	1383	4715	41	60	40	1490	4829	56	1704	54	1701	5109	11	08	58	1788	4548
11	55	10	1387	4715	51	60	38	1495	4829	11 1	07	56	1727	5120	16	09	58	1780	4548
21	56	12	1390	4719	9 1	60	38	1495	4860	6	08	58	1750	5120	21	07	57	1782	4548
31	58	13	1395	4719	11	60	37	1484	4805	11	08	55	1686	5337	31	06	56	1781	4500
41	58	14	1399	4719	21	54	32	1440	4805	16	09	57	1550	5436	41	04	55	1785	4460
51	58	14	1410	4719	31	60	34	1468	4805	21	10	57	1512	5430	51	02	53	1779	4460
6 1	58	14	1428	4719	41	60	34	1424	4640	26	12	62	1590	5335	6 1	02	54	1778	4405
11	58	14	1441	4889	51	60	34	1424	4640	31	14	64	1688	5162	11	03	54	1767	4405
21	59	13	1477	4889	10 1	60	35	1410	4640	36	13	62	1690	5104	21	05	56	1745	4405
31	53	12	1460	4889	11	60	35	1414	4640	41	12	61	1695	5078	31	08	57	1728	4207
41	52	12	1438	4860	21	60	40	1410	4710	46	10	60	1712	4997	41	10	59	1690	4079
51	59	14	1423	4860	31	60	40	1420	4710	51	07	58	1735	4930	51	09	59	1690	4180
7 1	60	20	1404	4860	41	60	38	1420	4626	56	05	57	1770	4869	7 1	07	67	1680	4100
11	61	20	1380	4829	—	—	—	—	—	P.M.0 1	08	59	1762	4840	11	06	67	1679	4105

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Feb. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
0P.M. 7 21	1705	1655	1645	4105
31	03	52	1652	4367
41	00	50	1650	4498
51	00	50	1650	4560
8 1	07	56	1656	4622
11	09	56	1602	4232
21	1690	40	1580	4002
31	83	39	1602	4166
41	86	41	1620	4308
51	1700	50	1600	4308
9 1	1698	50	1584	4260
11	1700	50	1574	4260
21	1698	49	1548	4624
31	92	46	1530	4181
41	90	40	1560	4225
51	88	39	1580	4225
10 1	89	40	1590	4225
11	90	40	1590	4225
21	90	40	1596	4240
31	94	46	1590	4443
41	98	48	1590	4407
51	1700	49	1594	4407
11 1	1698	48	1588	4407
11	96	47	1570	4407
21	95	47	1574	4407
31	95	47	1564	4325
41	94	46	1550	4325
51	92	45	1530	4325
1A.M.0 1	90	44	1515	4325
11	87	42	1492	4370
21	86	42	1488	4370
31	88	42	1480	4370
41	89	40	1480	4419
51	88	40	1472	4419
1 1	90	42	1460	4419
11	88	42	1480	4419
21	88	42	1477	4419
31	86	41	1470	4419
41	85	40	1468	4419
51	85	40	1461	4419
2 1	84	41	1450	4419
11	86	40	1442	4453
21	87	42	1433	4453
31	88	42	1420	4453
41	88	40	1413	4453
	—	—	—	—
March				
27A.M.0 41	1637	—	1150	4364
2 41	88	—	1514	4446
51	86	1645	1500	4446
3 1	84	50	1480	4446
11	80	50	1470	4458
21	85	52	1465	4458
31	82	48	1480	4322
41	72	36	1430	4206
46	60	30	1390	4206
51	57	28	1370	4206
56	58	28	1348	4247
4 1	58	28	1350	4247
6	60	29	1380	4247
11	60	30	1390	4335
16	60	30	1406	4335
21	59	30	1424	4335
26	65	34	1432	4378
31	70	38	1440	4378
36	64	34	1452	4378
41	60	30	1460	4381
46	60	31	1468	4381
51	58	32	1474	4381
56	60	31	1468	4381
5 1	62	31	1480	4399
6	62	32	1494	4399
11	62	30	1502	4399
16	64	32	1510	4399
21	72	40	1504	4397

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
March 1852 d. h. m	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
27A.M. 5 26	1674	1644	1500	4397
31	70	42	1504	4391
36	71	40	1500	4391
41	70	40	1496	4402
46	71	40	1490	4402
51	70	40	1480	4402
56	68	37	1470	4354
6 1	68	34	1480	4354
11	62	30	1470	4308
21	60	30	1470	4308
31	60	30	1470	4308
41	60	30	1468	4296
51	58	29	1460	4296
7 1	60	30	1470	4296
	—	—	—	—
April				
20A.M11 41	1600	1584	1149	4000
P.M. 0 41	00	82	1313	3788
51	03	88	1328	3515
1 1	05	90	1345	3339
11	09	90	1348	3105
21	06	90	1336	2995
31	01	90	1330	3127
41	04	90	1322	3156
51	04	90	1330	3395
2 1	04	90	1332	3395
11	07	91	1350	3498
21	07	91	1358	3604
31	10	94	1382	3550
41	10	94	1390	3692
51	12	96	1396	3595
3 1	16	1600	1392	3542
	—	—	—	—
20P.M. 5 41	1609	1590	1369	3348
6 41	13	93	1543	3958
51	15	94	1552	4002
7 1	23	1602	1589	4315
11	25	07	1605	4315
21	35	15	1650	4400
31	40	20	1700	4500
41	41	20	1710	4555
46	46	26	1722	4175
51	44	23	1739	4210
56	40	21	1751	4242
8 1	40	18	1811	4418
6	40	17	1829	4635
11	41	17	1838	4470
16	32	10	1817	4149
21	42	19	1834	4398
26	48	25	1842	4535
31	52	23	1854	4535
36	53	22	1862	4498
41	40	17	1850	4115
46	38	13	1840	4012
51	35	11	1822	3913
56	34	11	1800	3703
9 1	37	14	1807	3719
6	38	14	1792	3719
11	37	12	1808	3719
16	33	10	1793	3575
21	32	10	1795	3575
26	32	10	1796	3575
31	32	10	1797	3540
36	32	10	1800	5582
41	32	10	1803	3582
46	36	12	1789	3582
51	38	13	1780	3582
56	39	13	1786	3582
10 1	40	13	1790	3678
11	40	13	1797	3678
21	41	17	1764	3490
31	43	20	1718	3165
41	42	20	1688	2985
	42	20	1658	2850

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
April 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
20P.M.10 51	1640	1620	1614	2800
11 1	40	20	1602	2714
11	40	20	1600	2714
21	44	22	1597	2714
31	47	24	1586	2901
41	49	26	1580	2901
51	51	26	1571	2984
21 A.M.0 1	56	25	1560	2984
11	58	27	1557	3013
21	59	30	1555	3051
31	60	29	1554	3051
41	60	30	1552	3159
51	60	30	1550	3159
	—	—	—	—
21A.M. 8 41	1670	1640	1490	3854
9 41	31	08	1520	4023
51	30	08	1541	4050
10 1	27	06	1532	4050
11	22	04	1558	4088
21	18	00	1460	4406
31	18	00	1494	4510
41	15	00	1590	4380
51	10	1594	1580	4236
11 1	10	92	1600	4005
11	07	90	1578	4086
21	08	90	1590	4205
31	02	88	1590	4205
41	00	90	1648	3844
51	02	90	1728	3577
P.M. 0 1	10	96	1700	3540
11	10	94	1684	3540
21	12	97	1672	4030
31	12	97	1692	4182
41	12	98	1678	4375
51	10	94	1620	4401
1 1	08	94	1680	4297
11	17	98	1716	4297
21	18	1602	1788	4012
31	20	04	1760	4044
41	20	02	1780	3891
51	20	02	1798	4060
2 1	26	05	1748	4327
11	37	16	1782	4207
21	40	20	1772	4207
31	50	30	1780	4360
41	48	29	1790	3739
51	42	22	1786	3739
3 1	46	26	1820	3835
11	40	20	1830	3297
21	40	20	1814	3444
31	40	20	1827	3210
41	35	16	1832	2900
51	40	19	1820	3220
4 1	45	21	1850	3490
11	50	22	1890	3704
21	60	30	1896	3839
31	64	36	1882	3712
41	62	38	1840	3390
51	64	38	1830	3304
5 1	62	38	1820	3340
11	60	35	1819	3340
21	56	30	1840	3200
31	53	28	1632	3052
41	50	26	1820	2920
51	50	25	1810	2920
6 1	49	24	1850	3025
11	46	21	1880	3150
21	43	19	1889	3300
31	43	19	1889	3300
41	38	13	1800	2804
51	43	19	1769	2679
7 1	40	17	1803	3002
11	65	40	1785	3120
21	65	37	1700	2600

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
April 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc d-t.
21P.M. 7 31	1650	1623	1650	2107
41	54	28	1665	2405
51	55	28	1667	2424
8 1	55	28	1671	2424
11	47	21	1672	2355
21	49	22	1708	2680
31	43	19	1702	2752
41	50	22	1738	3144
51	50	22	1747	3155
9 1	50	22	1758	3205
11	57	27	1759	3205
21	60	31	1770	3232
31	60	31	1754	3190
41	60	30	1720	2986
51	60	30	1703	2772
10 1	60	30	1712	2812
11	60	30	1700	2812
21	58	30	1685	2644
31	58	28	1690	2603
41	58	28	1682	2790
51	54	25	1640	2790
11 1	60	28	1602	2502
11	56	25	1590	2490
21	55	24	1590	2554
31	55	24	1598	2554
41	55	24	1604	2603
51	56	25	1602	2603
22A.M. 0 1	57	25	1602	2628
	—	—	—	—
Sept.				
30P.M. 1 41	1606	1606	1222	3640
2 41	30	26	1408	4332
51	30	30	1448	4285
3 1	30	32	1469	4285
11	30	30	1502	4195
21	32	30	1514	4114
31	32	30	1504	3792
41	30	30	1490	3575
51	30	30	1482	3552
4 1	32	32	1460	3408
11	32	32	1452	3322
21	34	33	1435	3239
31	33	31	1410	3092
41	30	30	1390	2861
51	30	29	1368	2861
5 1	30	28	1370	2861
11	22	23	1368	2861
21	22	21	1378	2990
31	23	22	1390	3010
41	26	24	1417	3209
51	26	24	1419	3298
6 1	27	25	1427	3327
11	26	24	1413	3219
21	27	25	1411	3284
31	28	26	1424	3299
41	32	29	1422	3291
51	33	30	1421	3291
7 1	33	30	1381	3399
11	32	28	1370	3269
21	30	26	1360	3200
31	32	28	1387	3120
41	33	30	1400	3156
51	33	29	1400	3156
8 1	31	28	1395	3156
11	30	27	1398	3156
21	30	27	1397	3166
31	30	26	1399	3080
41	30	25	1402	3010
	—	—	—	—
Nov.				
1A.M. 5 41	1666	—	1069	2251
6 41	33	1590	840	1025
51	40	90	852	1428
56	42	93	880	1658
7 1	48	98	902	1700

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Nov. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
1 A.M. 7 6	1649	1599	914	1925
11	50	99	924	2056
16	52	1600	952	2126
21	51	00	951	2126
26	58	00	963	1893
31	59	02	988	2026
36	67	08	1028	2192
41	68	10	1030	2248
46	70	10	1028	2248
51	72	10	1040	2248
56	72	11	1058	2261
8 1	72	11	1054	2097
6	72	10	1058	2097
11	72	11	1062	2003
16	72	11	1060	2003
21	73	12	1067	1809
26	75	15	1069	1838
31	70	11	999	1660
36	71	11	973	1710
41	72	12	955	1817
46	72	12	962	1912
51	72	12	979	2009
56	72	13	979	2009
9 1	72	13	980	2134
6	78	20	1020	2170
11	79	20	1029	2199
16	79	21	988	2104
21	80	21	970	1992
26	72	12	1017	2201
31	70	10	1060	2392
36	80	20	1126	2364
41	78	19	1102	2470
46	77	19	1090	2490
51	76	18	1076	2479
56	79	20	1040	2406
10 1	70	10	1031	2388
6	64	07	1021	2370
11	62	06	1011	2431
16	64	.07	990	2419
21	62	05	998	2358
26	68	09	942	2579
31	68	09	930	2788
36	66	06	906	2706
41	68	08	949	2554
46	70	10	948	2554
51	70	10	940	2554
56	68	10	939	2448
11 1	67	10	937	2448
11	69	11	958	2498
21	73	13	939	2661
31	78	17	927	2769
41	77	17	920	2803
51	77	17	919	2803
	—	—	—	—
Dec.				
10A.M10 41	1680	1612	859	2979
11 41	96	28	1030	2781
51	97	28	1060	2781
56	99	30	1084	2781
P.M. 0 1	1702	32	1092	2454
6	05	32	1098	2454
11	02	32	1098	2454
16	02	32	1090	2454
21	02	34	1079	2525
26	02	33	1076	2513
31	03	32	1074	2513
36	02	32	1072	2513
41	05	32	1070	2640
46	05	32	1068	2640
51	04	32	1060	2640
1 1	05	32	1052	2788
10	02	30	1062	2788
21	00	30	1030	2788
31	1696	27	1076	2788
41	92	25	1072	2820

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Dec. 1852 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
10P.M. 1 51	1692	1625	1070	2820
2 1	90	21	1064	2820
11	89	20	1070	2759
21	88	20	1065	2759
31	86	18	1060	2759
41	88	20	1044	2819
51	87	19	1038	2819
	—	—	—	—
May 1853				
25A.M. 8 41	1715	1656	1379	4872
9 41	1670	15	1555	4839
51	67	12	1608	4798
10 1	60	09	1630	4767
11	55	05	1598	4831
21	55	04	1610	4840
31	50	00	1643	4875
41	45	1597	1665	4930
51	43	96	1672	4808
11 1	40	94	1658	4782
11	30	88	1695	4818
16	28	87	1632	4840
21	27	85	1585	4840
26	27	83	1620	4776
31	26	84	1657	4732
36	26	84	1680	4647
41	27	87	1697	4610
46	27	87	1699	4610
51	24	85	1650	4675
56	22	84	1611	4728
P.M. 0 1	23	82	1577	4774
6	21	80	1525	4856
11	20	80	1547	4820
16	20	80	1580	4793
21	19	80	1580	4910
26	18	79	1557	5040
31	16	79	1590	5061
36	16	79	1598	4998
41	15	79	1583	4850
46	15	79	1570	4850
51	17	81	1562	4850
56	19	84	1558	4827
1 1	23	88	1520	4779
6	26	90	1511	4779
11	28	91	1505	4779
16	29	92	1502	4750
21	27	92	1478	4762
26	26	91	1466	4762
31	27	91	1462	4724
36	28	91	1459	4724
41	31	92	1462	4684
46	30	92	1457	4684
2 1	26	89	1440	4684
11	23	88	1450	4733
21	27	90	1464	4733
31	29	91	1459	4747
41	30	91	1440	4726
51	30	91	1438	4726
3 1	31	91	1429	4726
11	31	92	1427	4726
	—	—	—	—
25P.M. 5 41	1639	1597	1400	4645
6 41	65	—	1550	4784
51	62	1612	1568	4814
7 1	64	11	1586	4802
11	63	11	1610	4805
21	69	18	1620	4805
31	68	16	1614	4809
41	71	19	1591	4801
51	78	20	1564	4754
8 1	78	20	1560	4754
11	72	20	1547	4753
21	72	18	1530	4753
31	70	18	1519	4753
41	71	18	1520	4673

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
May 1853 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
25P.M. 8 51	1670	1617	1524	4673
9 1	71	18	1521	4673
11	72	19	1513	4695
21	73	19	1500	4695
31	73	18	1493	4695
41	70	17	1490	4678
51	70	16	1483	4678
10 1	70	15	1480	4694
11	68	14	1475	4694
21	70	13	1462	4694
31	70	13	1450	4694
41	70	13	1438	4664
	—	—	—	—
June				
3 A.M. 0 41	1672	—	1410	4626
2 41	1707	1640	1242	4576
51	03	39	1250	4592
3 1	00	38	1257	4592
11	1696	36	1270	4620
16	90	32	1299	4637
21	85	27	1310	4637
26	82	23	1317	4654
31	79	20	1320	4654
36	75	18	1337	4672
41	72	17	1350	4702
46	72	17	1347	4702
51	74	17	1340	4681
56	76	18	1335	4681
4 1	77	18	1331	4681
11	80	20	1344	4690
21	80	20	1352	4711
31	80	20	1364	4739
41	82	20	1348	4721
51	86	22	1353	4721
5 1	88	24	1359	4721
11	90	25	1358	4721
21	96	28	1358	4721
31	1700	30	1358	4721
	—	—	—	—
July				
13A.M. 5 41	1668	—	1299	4581
6 41	1700	1643	1360	4611
46	03	47	1357	4611
51	07	49	1350	4629
56	14	52	1340	4656
7 1	17	56	1328	4656
6	18	57	1319	4638
11	20	58	1300	4614
16	20	59	1304	4614
21	18	58	1285	4614
26	20	58	1247	4595
31	15	55	1270	4578
36	10	53	1292	4578
41	07	50	1310	4554
46	09	51	1288	4554
51	10	52	1270	4587
56	10	53	1260	4587
8 1	09	52	1256	4587
6	07	50	1254	4587
11	02	49	1252	4587
16	00	48	1250	4587
21	00	44	1254	4640
26	1698	43	1240	4640
31	92	40	1230	4640
36	90	40	1222	4640
41	86	34	1220	4664
46	86	33	1229	4664
51	81	31	1260	4664
56	78	30	1270	4664
9 1	80	30	1290	4664
6	78	28	1290	4664
11	72	26	1280	4664
16	70	23	1292	4664
21	63	20	1290	4703
26	61	20	1301	4703

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
July 1853 d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
13 A.M. 9 31	1660	1618	1320	4703
36	60	17	1323	4703
41	52	13	1300	4618
46	50	10	1294	4618
51	48	08	1303	4618
56	45	07	1305	4560
10 1	42	05	1307	4560
6	40	02	1320	4547
11	39	02	1313	4557
16	36	00	1309	4547
21	35	1598	1280	4587
26	30	94	1201	4658
31	27	92	1202	4658
36	26	88	1180	4658
41	24	89	1104	4681
46	24	86	1041	4681
51	23	85	1000	4681
56	21	86	1099	4681
11 1	25	89	1187	4660
6	20	85	1270	4683
11	25	88	1233	4683
16	22	86	1300	4422
21	18	84	1333	4635
26	15	80	1309	4672
31	14	80	1305	4672
36	13	80	1300	4695
41	11	78	1300	4675
46	10	78	1305	4675
51	08	78	1310	4675
56	06	75	1301	4675
P.M. 0 1	06	76	1290	4675
6	07	76	1282	4707
11	07	77	1272	4723
16	07	78	1263	4739
21	08	76	1286	4722
26	08	76	1295	4722
31	06	75	1308	4885
36	05	75	1330	4687
41	08	77	1334	4684
46	10	79	1336	4684
51	12	80	1338	4684
56	11	78	1325	4684
1 1	12	82	1326	4675
6	15	83	1320	4675
11	14	83	1322	4675
16	14	83	1301	4649
21	14	83	1300	4649
26	14	83	1298	4649
31	15	84	1298	4649
36	17	86	1297	4649
41	18	88	1295	4649
46	18	88	1295	4649
56	19	88	1301	4649
2 1	18	88	1296	4649
6	18	88	1296	4649
11	20	89	1298	4649
16	21	90	1300	4649
21	21	90	1303	4649
26	23	90	1301	4651
31	23	90	1300	4651
36	24	91	1309	4651
41	25	91	1303	4680
46	26	92	1305	4680
51	26	92	1305	4680
56	29	93	1316	4680
3 1	29	93	1314	4680
6	29	93	1313	4680
11	29	93	1312	4680
16	29	93	1310	4680
21	29	94	1310	4680
26	29	94	1310	4680
31	29	94	1316	4660
36	29	94	1321	4660
41	28	95	1322	4646
46	28	95	1323	4646

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
July 1853				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
13P.M. 3 51	1628	1595	1323	4646
56	28	95	1328	4646
4 1	28	96	1332	4646
6	28	95	1326	4646
11	29	96	1328	4646
16	30	96	1337	4646
21	30	98	1341	4634
26	30	98	1339	4634
31	30	98	1334	4634
36	32	99	1330	4634
41	35	1600	1330	4600
46	35	00	1330	4600
51	37	01	1341	4600
56	37	02	1342	4600
5 1	38	03	1344	4600
6	38	03	1342	4600
11	38	02	1338	4574
16	39	01	1338	4572
21	40	02	1347	4616
26	40	02	1340	4616
31	40	02	1332	4596
41	42	06	1332	4576
51	42	05	1831	4576
6 1	43	05	1329	4576
11	44	07	1329	4576
21	46	09	1329	4576
31	48	10	1325	4576
41	43	06	1327	4602
	—	—	—	—
Sept.				
2 A.M. 6 41	1680	1790	969	4672
7 41	82	93	1110	5050
46	79	91	1135	5050
51	75	88	1170	5077
56	70	86	1154	5095
8 1	68	85	1132	5095
6	66	83	1170	5060
11	65	80	1180	5060
16	62	76	1168	5013
21	59	75	1160	5013
26	57	73	1113	5029
31	55	72	1085	5044
36	55	71	1078	5044
41	50	68	1074	4936
46	48	64	1070	4900
51	45	59	1068	4900
56	42	52	1069	4804
9 1	40	50	1070	4804
6	37	48	1073	4771
11	31	47	1075	4771
16	27	46	1076	4771
21	22	47	1076	4763
26	20	47	1078	4763
31	20	46	1080	4763
36	17	44	1074	4763
41	10	40	1070	4786
46	10	40	1073	4786
51	11	40	1077	4786
56	12	40	1080	4786
10 1	10	39	1081	4786
6	10	38	1082	4786
11	10	36	1080	4786
16	10	35	1071	4809
21	10	33	1065	4809
26	08	30	1042	4809
31	04	28	1029	4850
36	02	28	1018	4850
41	1598	22	1020	4850
46	96	22	1023	4850
51	93	22	1028	4850
56	92	22	1030	4850
11 1	94	23	1057	4912
6	97	25	1080	4912
11	99	27	1093	4912

Madras Mean Time.	Magnetometers. Declination	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Sept. 1853				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
2A.M. 11 16	1600	1730	1100	5000
21	00	30	1129	5000
26	00	30	1137	5000
31	03	30	1185	5047
36	06	32	1207	5047
41	07	33	1236	5070
46	09	34	1250	5070
51	10	36	1288	5070
56	12	36	1310	5096
P.M. 0 1	12	38	1357	5096
11	12	38	1376	5060
21	14	40	1399	5060
31	16	43	1457	4996
41	20	50	1520	4842
51	25	54	1556	4800
1 1	32	60	1562	4783
11	38	66	1575	4783
21	40	70	1585	4852
31	44	72	1586	4707
41	50	75	1590	4665
51	50	75	1604	4620
2 1	48	75	1622	4500
11	46	75	1647	4459
21	47	77	1630	4420
31	47	77	1600	4420
41	47	77	1593	4460
51	49	78	1590	4460
3 1	50	78	1585	4460
11	50	79	1579	4460
	—	—	—	—
2 P.M. 5 41	1668	1793	1460	4653
6 41	68	96	1578	4810
51	68	97	1578	4798
7 1	74	1801	1540	4764
11	82	03	1522	4735
21	82	05	1538	4742
31	82	06	1535	4742
41	82	08	1528	4742
51	84	08	1533	4729
8 1	82	05	1541	4732
11	80	00	1560	4746
21	76	00	1572	4766
31	80	05	1581	4786
41	81	01	1588	4763
51	80	00	1585	4733
9 1	80	00	1580	4720
11	79	00	1587	4657
26	78	1799	1599	4657
41	76	97	1604	4657
56	70	94	1572	4541
10 1	67	91	1540	4517
6	62	88	1500	4602
11	56	84	1461	4673
16	51	80	1407	4710
21	50	80	1415	4747
26	49	80	1439	4747
31	49	79	1450	4724
36	51	79	1471	4724
41	52	80	1482	4680
51	52	80	1478	4680
11 1	52	80	1472	4680
11	52	80	1472	4680
26	52	80	1471	4680
41	53	80	1483	4680
56	53	80	1487	4662
	—	—	—	—
3 A.M. 0 11	1652	1779	1479	4662
26	50	77	1470	4647
41	50	76	1358	4608
51	48	73	1369	4608
1 1	47	72	1377	4608

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Sept. 1853				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
3 A.M. 1 11	1646	1771	1381	4547
21	45	71	1390	4547
31	45	70	1388	4547
41	44	70	1388	4547
51	44	70	1392	4520
2 1	44	70	1394	4520
11	43	70	1390	4520
21	42	70	1387	4520
31	41	70	1384	4520
41	40	72	1382	4643
51	40	72	1380	4643
3 1	40	71	1371	4643
11	39	70	1364	4643
21	38	69	1350	4643
31	37	68	1332	4643
41	35	67	1319	4552
51	34	67	1310	4552
4 1	34	65	1303	4552
11	34	65	1284	4552
21	33	64	1263	4552
31	32	64	1230	4552
41	32	63	1218	4552
51	32	63	1226	4552
5 1	31	63	1240	4629
11	30	63	1258	4629
21	30	62	1270	4629
31	48	70	1298	4688
41	60	78	1338	4705
51	64	81	1364	4705
6 1	70	84	1370	4762
11	82	97	1353	4762
21	89	1809	1352	4762
31	91	10	1350	4794
41	98	12	1367	4794
51	98	12	1381	4794
7 1	93	10	1362	4794
11	92	08	1339	4794
21	90	06	1330	4794
31	90	07	1347	4815
41	89	05	1368	4821
51	86	04	1374	4852
8 1	84	03	1380	4852
11	73	1795	1338	4872
21	74	95	1309	4885
31	75	96	1310	4885
41	76	97	1322	4950
51	74	93	1319	4950
9 1	70	92	1317	4950
11	69	90	1329	4950
21	67	88	1340	4950
31	57	85	1378	4999
41	53	77	1375	5004
51	50	76	1370	4980
10 1	50	77	1357	4920
11	50	78	1361	4965
21	48	76	1370	4955
31	40	67	1373	4955
41	34	63	1350	5000
51	27	56	1415	4965
11 1	22	50	1412	4965
11	18	45	1415	4930
21	06	39	1398	4986
31	00	33	1366	5066
41	02	30	1420	4957
51	00	30	1423	4963
P.M. 0 1	1598	29	1440	4963
11	90	22	1462	4900
21	83	20	1460	4872
31	80	20	1496	4834
41	84	20	1462	4938
51	86	22	1424	4938
1 1	82	20	1425	4850
11	80	20	1452	4707
21	86	26	1496	4734

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Sept. 1853				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
3 P.M. 1 31	1595	1734	1485	4748
41	95	32	1460	4783
51	93	30	1482	4783
2 1	90	30	1490	4762
11	90	30	1483	4762
21	94	32	1477	4800
31	1606	45	1498	4800
41	20	53	1480	4722
51	24	55	1496	4722
3 1	25	57	1493	4722
11	27	60	1500	4720
21	27	60	1500	4720
31	25	60	1502	4720
41	30	70	1532	4762
51	30	70	1540	4762
4 1	33	72	1555	4762
11	37	73	1558	4762
21	40	74	1560	4794
31	46	75	1557	4794
41	50	77	1582	4762
51	50	78	1594	4762
5 1	50	79	1603	4762
	—	—	—	—
Decr.				
6 P.M. 6 41	1669	—	920	4734
7 41	—	—	1145	—
46	87	1825	1197	4869
51	85	26	1212	4864
56	90	26	1220	4864
8 1	90	26	1239	4864
6	90	29	1250	4864
11	90	30	1258	4864
16	89	29	1274	4864
21	95	33	1297	4864
26	97	34	1310	4864
31	1700	40	1300	4832
36	00	40	1300	4832
41	04	40	1302	4832
46	10	47	1300	4832
51	14	50	1292	4832
56	15	50	1291	4832
9 1	17	52	1290	4787
6	13	50	1287	4787
11	12	48	1281	4787
16	06	41	1278	4787
21	05	40	1274	4695
26	04	40	1269	4695
31	03	40	1270	4695
36	05	40	1270	4695
41	03	37	1267	4717
46	01	35	1263	4717
51	1698	33	1259	4717
56	95	30	1253	4690
10 1	93	28	1250	4690
6	92	26	1245	4671
11	90	25	1240	4671
16	89	23	1245	4578
21	87	21	1241	4578
26	85	20	1237	4595
31	85	20	1230	4595
36	87	21	1236	4617
41	88	23	1240	4634
51	85	21	1238	4634
11 1	83	20	1235	4634
11	81	20	1227	4650
21	80	20	1219	4650
31	80	19	1209	4621
41	80	19	1200	4621
51	80	19	1202	4621
	—	—	—	—
7 A.M. 0 1	1682	1820	1190	4640
11	89	25	1151	4672
16	91	27	1170	4672

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
Decr. 1853					Decr. 1853					March 1854					March 1854				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
7 A.M. 0 21	1694	1828	1188	4658	7 A.M. 6 51	1671	1811	1052	4622	16A.M. 8 26	1692	1802	971	4846	29A.M. 1 1	1714	1821	1179	5073
26	96	30	1199	4658	7 1	70	09	1042	4622	31	90	01	989	4840	11	13	21	1197	5055
31	98	31	1212	4690	16	68	02	1020	4622	36	94	03	970	4840	21	12	20	1205	5032
36	99	32	1226	4690	31	68	02	1010	4622	41	1700	08	970	4872	31	10	18	1214	5032
41	1700	34	1230	4700	41	63	02	999	4608	46	00	09	964	4872	41	09	16	1221	5059
46	1697	32	1237	4700		—	—	—	—	51	00	09	958	4860	51	07	14	1215	5064
51	95	31	1248	4700						56	1699	08	952	4860	2 1	04	13	1202	5064
56	93	30	1262	4681	21 P.M. 4 41	1659	1800	662	4670	9 1	97	08	946	4852	11	02	11	1199	5064
1 1	92	29	1270	4657	5 41	70	07	747	4812	6	96	08	930	4852	21	00	10	1175	5080
6	90	26	1237	4620	51	70	06	802	4812	11	95	07	924	4845	31	1695	06	1123	5037
11	85	21	1200	4577	6 1	70	06	820	4812	16	95	07	920	4845	41	90	02	1060	4961
16	80	19	1171	4532	11	68	04	842	4737	21	93	07	918	4845	46	92	03	1031	4940
21	72	17	1147	4510	21	60	1799	851	4722	31	92	05	882	4909	51	89	01	1010	4940
26	68	12	1105	4471	31	60	99	860	4722	41	92	03	872	4928	56	86	1799	989	4932
31	62	05	1090	4471	41	56	93	866	4724	51	93	03	871	4928	3 1	84	96	1010	4932
36	64	03	1072	4495	51	54	92	866	4724		—	—	—	—	6	82	95	1030	4960
41	72	10	1047	4524	7 1	54	93	866	4720						11	82	94	1038	4960
46	76	13	1065	4548	11	54	93	868	4720	28P.M. 5 41	1688	1809	1327	5203	16	82	93	1046	4960
51	78	18	1078	4572	21	54	93	868	4720	6 41	88	—	1228	5106	21	81	93	1049	4989
56	83	23	1090	4572	31	54	93	866	4720	51	—	—	1255	—	26	81	92	1050	5022
2 1	87	29	1107	4617	41	54	93	860	4685	7 1	1700	1815	1338	5206	31	82	93	1055	5022
6	90	32	1135	4617	51	54	93	857	4685	11	1699	13	1352	5180	36	84	94	1061	5022
11	94	37	1140	4635	8 1	59	1803	868	4685	21	99	10	1370	5212	41	85	97	1069	5022
16	94	36	1146	4635	11	60	02	874	4685	31	1700	10	1376	5215	46	86	98	1072	5072
21	95	36	1149	4635	21	60	02	886	4685	41	05	16	1378	5215	51	87	98	1077	5072
26	95	34	1157	4655	31	60	00	894	4685	51	11	21	1388	5190	56	87	99	1080	5072
31	95	33	1169	4655	41	58	1795	916	4700	8 1	12	21	1382	5172	4 1	85	98	1080	5072
36	95	32	1173	4655	51	57	93	919	4700	11	12	22	1388	5172	6	82	97	1080	5072
41	95	30	1179	4674	9 1	50	88	910	4672	21	16	24	1372	5193	11	81	95	1077	5072
46	96	30	1182	4674	11	45	82	904	4670	31	16	23	1326	5150	16	80	93	1069	5072
51	97	30	1186	4674	16	49	86	885	4627	41	17	23	1282	5105	21	80	92	1067	5072
56	98	30	1188	4674	21	54	90	870	4627	51	17	23	1270	5105	26	78	91	1062	5072
3 1	98	30	1187	4674	26	57	92	851	4600	9 1	17	22	1297	5105	31	78	90	1057	5072
6	98	30	1185	4674	31	58	94	830	4600	11	14	20	1310	5105	36	78	90	1050	5072
11	99	30	1183	4674	36	56	95	805	4615	21	18	25	1325	5141	41	78	90	1042	5050
16	1700	30	1181	4671	41	55	93	780	4615	31	20	28	1298	5141	46	78	90	1041	5050
21	00	30	1180	4671	46	54	92	768	4557	41	18	26	1313	5141	51	79	90	1042	5050
26	1699	30	1180	4671	51	52	91	752	4557	51	15	24	1310	5127	56	79	90	1043	5050
31	96	30	1176	4641	56	51	90	770	4576	10 1	14	23	1252	5107	5 1	80	91	1045	5050
36	94	29	1170	4641	10 1	51	90	765	4576	6	11	21	1198	4988	6	80	91	1047	5050
41	90	28	1162	4641	6	50	88	750	4550	11	09	20	1150	4988	11	80	90	1048	5050
46	90	28	1160	4641	11	50	88	748	4550	16	14	22	1130	4927	16	80	90	1049	5050
51	95	30	1158	4641	21	50	88	760	4602	21	17	25	1102	4870	21	80	90	1050	5050
56	98	30	1150	4641	31	50	89	778	4632	26	12	24	1144	4901	26	80	90	1050	5050
4 1	1700	30	1140	4641	41	51	89	795	4678	31	10	21	1181	4987	31	80	90	1050	5050
6	1698	30	1140	4641	51	51	90	793	4678	36	08	20	1190	4987	36	80	90	1050	5074
11	95	30	1142	4641	11 1	52	90	797	4678	41	10	19	1197	5057	41	80	90	1051	5074
16	92	30	1140	4630	11	52	90	797	4678	46	13	21	1211	5080	46	80	90	1051	5074
21	92	30	1140	4630	21	53	90	800	4660	51	15	23	1245	5124	51	80	90	1052	5074
26	90	30	1140	4630	31	53	91	795	4660	56	17	24	1260	5124	6 1	78	90	1050	5074
31	88	28	1139	4605	41	53	91	792	4660	11 1	19	26	1275	5150	11	78	90	1040	5074
36	85	26	1138	4605		—	—	—	—	6	17	25	1264	5162	21	80	90	1037	5074
41	83	25	1138	4605						11	20	27	1240	5162	31	80	90	1028	5074
46	83	23	1138	4605	March 1854					16	19	27	1221	5127	41	80	90	1022	5081
51	82	21	1137	4605	16A.M. 5 41	1709	—	989	4706	21	17	25	1254	5100	51	80	90	1030	5081
56	81	19	1136	4605	6 41	1697	1802	1030	4830	26	15	23	1277	5100		—	—	—	—
5 1	80	19	1135	4605	51	98	04	1047	4811	31	13	22	1284	5055	April				
6	80	18	1132	4604	7 1	99	05	1062	4811	36	12	22	1265	5032	11A.M. 6 41	1691	1790	998	4889
11	80	18	1130	4604	6	1700	06	1070	4839	41	10	20	1230	5000	7 41	1708	1800	1130	4989
16	80	18	1128	4604	11	01	07	1081	4839	46	07	18	1197	4956	51	10	01	1145	4989
21	80	18	1126	4604	16	1697	05	1087	4806	51	05	16	1170	4987	8 1	12	03	1107	5144
26	81	19	1120	4604	21	95	05	1095	4777	56	06	16	1157	5029	11	16	05	1134	5180
31	83	20	1114	4604	26	98	07	1102	4777		—	—	—	—	21	17	06	1157	5180
36	82	20	1110	4596	31	1700	09	1089	4796						31	14	02	1180	5212
41	82	20	1109	4596	36	01	09	1080	4796	29A.M. 0 1	1708	1817	1113	5029	41	09	1799	1162	5149
46	81	20	1105	4596	41	1696	06	1075	4796	6	11	19	1100	5029	51	05	96	1150	5149
51	80	20	1100	4596	46	93	03	1068	4775	11	14	21	1087	5047	9 1	02	92	1186	5149
56	80	20	1100	4596	51	90	01	1057	4775	16	17	23	1070	5069	11	1697	88	1215	5149
6 1	80	20	1096	4596	56	92	00	1033	4813	21	20	25	1090	5069	21	93	86	1258	5149
6	80	20	1094	4596	8 1	92	01	1007	4829	26	20	25	1099	5069	26	98	89	1286	5220
11	80	20	1092	4596	6	93	01	977	4829	31	17	24	1115	5107	31	1700	92	1318	5220
21	80	18	1082	4586	11	90	00	952	4829	36	15	22	1127	5107	36	00	93	1297	5220
31	78	15	1080	4586	16	89	00	954	4829	41	12	20	1150	5073	41	04	97	1310	5277
41	73	12	1069	4622	21	93	01	973	4846	51	12	20	1157	5073	46	11	96	1327	5260

Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.	Madras Mean Time.	Magnetometers. Declination.	Induction Inclinometer.	Horizontal Force.	Vertical Force.
April 1854					April 1854					April 1854					April 1854				
d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.	d. h. m.	sc-d-t.	sc-d-t.	sc-d-t.	sc-d-t.
11 A.M. 9 51	1702	1798	1336	5260	11 P.M. 0 16	1670	1777	1633	4950	11 P.M. 2 31	1667	1772	1540	5108	11 P.M. 4 51	1735	1828	1725	5080
56	1698	95	1365	5166	21	69	76	1610	4950	36	65	70	1548	5108	56	30	23	1710	5046
10 1	98	94	1390	5166	26	67	73	1608	4950	41	65	70	1554	5154	5 1	26	20	1678	5046
6	92	92	1421	5142	31	65	72	1604	4950	46	67	72	1559	5154	6	20	15	1675	4984
11	91	90	1420	5142	36	62	70	1600	4950	51	70	72	1562	5154	11	10	06	1650	4984
16	90	90	1465	5095	41	60	70	1578	4903	56	70	73	1560	5212	16	03	00	1630	4910
21	90	90	1410	5163	46	60	70	1562	4903	3 1	74	77	1587	5212	21	1695	1796	1624	4887
26	90	90	1389	5163	51	60	70	1550	4903	6	79	80	1605	5376	26	90	93	1618	4887
31	87	87	1397	5135	56	60	70	1545	4967	11	87	83	1647	5376	31	88	90	1610	4887
36	83	85	1415	5097	1 1	63	72	1558	4967	16	93	86	1683	5376	36	86	88	1613	4887
41	80	82	1426	5082	6	67	73	1567	5022	21	97	95	1698	5420	41	84	86	1615	4934
46	77	80	1433	5082	11	70	74	1572	5022	26	1700	99	1706	5420	46	80	84	1610	4934
51	72	77	1410	5082	16	78	80	1550	5022	31	05	1800	1748	5497	51	79	82	1603	4934
56	69	75	1397	5082	21	83	86	1543	5071	36	10	06	1775	5330	56	77	80	1590	4909
11 1	67	72	1388	5082	26	90	90	1535	5071	41	18	10	1806	5298	6 1	77	80	1598	4909
11	72	75	1435	5140	31	93	95	1550	5071	46	23	15	1844	5298	11	75	80	1594	4909
21	80	82	1470	5140	36	97	97	1568	5071	51	28	20	1870	5298	21	76	80	1586	4909
26	83	86	1518	5037	41	1700	1800	1585	5049	4 1	29	20	1863	5253	31	78	81	1580	4909
31	86	90	1540	5037	46	00	00	1570	5049	6	30	22	1855	5253	41	77	81	1560	4911
36	85	90	1577	4982	51	00	00	1562	5049	11	25	18	1800	5154	51	78	81	1540	4911
41	83	87	1603	5000	56	1690	1791	1530	5049	16	20	14	1772	5154	7 1	78	80	1535	4911
46	80	85	1640	5000	2 1	86	86	1499	5049	21	27	19	1754	5154	11	78	81	1540	4911
51	78	84	1678	5000	6	80	80	1500	5030	26	33	24	1782	5217	21	79	80	1542	4911
56	75	84	1699	4927	11	78	77	1503	5030	31	40	30	1800	5217	31	79	80	1560	4911
P.M. 0 1	74	81	1690	4927	16	70	75	1508	5030	36	43	33	1800	5148	41	77	82	1525	4911
6	73	81	1680	4927	21	70	74	1500	5108	41	44	35	1783	5148	51	82	85	1505	4949
11	71	79	1657	4950	26	67	72	1522	5108	46	40	31	1750	5080	8 1	83	85	1500	4949

MADRAS, **1851.**—OBSERVATIONS OF THE MAGNETIC INCLINATION, OR DIP.

Day.	Min. and Sec. of Max.	Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min.	Mean Dip.
Jan. 3	41′ 34″	39′ 56″	7° 40′ 45″	Apr. 1	39′ 56″	34′ 1″	7° 36′ 58″	July 1	′ ″	′ ″	° ′ ″	Oct. 3	41′ 0″	34′ 55″	7° 37′ 58″
7	38 56	34 45	7 36 50	4	41 20	34 32	7 37 56	4	42 28	39 19	7 40 53	7	40 2	33 34	7 36 48
10	38 0	34 34	7 36 17	8	41 36	36 7	7 38 51	8	40 32	37 9	7 38 50	10	39 23	36 44	7 38 3
14	37 49	34 56	7 36 22	11	39 39	35 20	7 37 30	11	40 3	36 37	7 38 20	14	39 42	34 53	7 37 17
17	39 22	37 48	7 38 35	15	38 37	36 2	7 37 20	15	—	—	—	17	41 4	36 51	7 38 57
21	39 15	34 37	7 36 56	18	39 14	34 12	7 36 43	18	40 53	35 37	7 38 15	21	42 29	41 49	7 42 9
24	39 34	34 4	7 36 49	22	39 0	34 10	7 36 35	22	—	—	—	24	38 31	34 8	7 36 20
28	—	—	—	25	39 11	36 49	7 38 0	25	39 46	37 2	7 38 24	28	43 10	35 29	7 39 20
31	35 1	35 45	7 35 23	29	38 56	33 3	7 36 0	29	38 27	35 23	7 36 55	31	43 17	34 35	7 38 56
Mean.	38 41	35 48	7 37 15	Mean.	39 43	34 55	7 37 19	Mean.	40 21	36 51	7 38 36	Mean.	40 58	35 53	7 38 25
Feb. 4	38′ 46″	30′ 28″	7° 34′ 37″	May 2	39′ 36″	38′ 59″	7° 39′ 18″	Aug. 1	38′ 53″	34′ 50″	7° 36′ 52″	Nov. 4	′ ″	′ ″	° ′ ″
7	37 22	29 49	7 33 35	6	40 49	37 38	7 39 13	5	39 6	37 53	7 38 30	7	—	—	—
11	32 6	31 15	7 31 40	9	40 19	38 42	7 39 30	8	—	—	—	11	41 17	35 7	7 38 12
14	37 45	36 45	7 37 15	13	39 19	34 47	7 37 3	12	39 43	37 18	7 38 30	14	—	—	—
18	41 15	34 4	7 37 40	16	39 36	33 28	7 36 32	15	39 17	40 4	7 39 40	18	37 45	36 35	7 37 10
21	40 37	32 37	7 36 37	20	44 7	38 10	7 41 8	19	39 29	36 12	7 37 50	21	39 11	36 47	7 37 59
25	39 37	35 0	7 37 18	23	40 29	37 0	7 38 45	22	38 23	36 22	7 37 22	25	41 26	35 3	7 38 14
28	39 4	32 49	7 35 56	27	37 41	36 12	7 36 56	26	39 3	36 43	7 37 53	28	38 17	34 31	7 36 24
				30	38 29	35 4	7 36 46	29	39 43	39 46	7 39 45				
Mean.	38 19	32 51	7 35 35	Mean.	40 3	36 40	7 38 21	Mean.	39 12	37 24	7 38 18	Mean.	39 35	35 37	7 37 36
Mar. 4	38′ 4″	32′ 41″	7° 35′ 22″	June 3	41′ 20″	35′ 40″	7° 38′ 30″	Sept. 2	39′ 4″	36′ 50″	7° 37′ 57″	Dec. 2	39′ 2″	39′ 22″	7° 39′ 12″
7	37 19	32 22	7 34 50	6	40 23	36 0	7 38 11	5	46 52	37 2	7 41 57	5	39 1	36 10	7 37 35
11	37 8	34 22	7 35 45	10	40 12	36 37	7 38 25	9	40 20	33 31	7 36 56	9	39 3	36 18	7 37 40
14	37 30	35 26	7 36 28	13	39 9	36 44	7 37 56	12	39 35	36 53	7 38 14	12	39 18	37 24	7 38 21
18	39 4	31 11	7 35 7	17	39 56	36 26	7 38 11	16	42 14	33 14	7 37 44	16	39 4	36 29	7 37 47
21	38 41	33 30	7 36 5	20	39 28	39 38	7 39 33	19	40 15	38 59	7 39 37	19	38 50	33 20	7 36 5
25	39 0	29 56	7 34 28	24	41 5	35 50	7 38 27	23	39 26	33 16	7 36 21	23	41 42	38 19	7 40 0
28	38 26	32 30	7 35 28	27	40 5	37 1	7 38 33	26	37 20	35 14	7 36 17	26	37 19	31 40	7 34 30
								30	46 26	37 15	7 41 50	30	42 45	42 5	7 42 25
Mean.	38 9	32 45	7 35 27	Mean.	40 12	36 44	7 38 28	Mean.	41 17	35 48	7 38 33	Mean.	39 34	36 47	7 38 11

Mean Dip. for the year = 7° 37′ 40″

Mean Daily Range = 4′ 0″.

Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.
	Max.	Min.			Max.	Min.			Max.	Min.			Max.	Min.	
Jan. 2	38 21	37 15	7 37 48	April 2	39 56	37 15	7 38 35	July 2	38 15	37 41	7 37 58	Oct. 1	41 31	38 27	7 39 59
6	38 1	38 23	7 38 12	6	40 41	33 19	7 37 0	6	40 0	36 4	7 38 2	5	41 24	36 39	7 39 2
9	38 31	30 52	7 34 42	9	40 0	35 40	7 37 50	9	38 45	38 19	7 38 32	8	—	—	—
13	46 1	38 1	7 42 1	13	39 33	34 19	7 36 56	13	40 22	37 49	7 39 6	12	40 10	34 6	7 37 8
16	32 50	34 51	7 33 50	16	39 49	36 48	7 38 19	16	39 11	36 52	7 38 1	15	40 2	37 21	7 38 41
20	41 46	37 2	7 39 24	20	39 51	34 49	7 37 20	20	37 30	39 15	7 38 22	19	40 4	37 22	7 38 43
23	36 12	37 57	7 37 4	23	37 5	34 51	7 35 58	23	38 15	39 52	7 39 2	22	40 4	41 17	7 40 40
27	39 36	37 44	7 38 40	27	42 54	34 49	7 38 52	27	38 34	37 52	7 38 13	26	39 27	37 30	7 38 28
30	40 55	35 18	7 38 7	30	39 24	39 24	7 39 24	30	39 37	40 41	7 40 9	29	42 7	37 20	7 39 44
Mean.	39 8	36 23	7 37 45	Mean.	39 55	35 42	7 37 48	Mean.	38 57	38 16	7 38 36	Mean.	40 36	37 30	7 39 3
Feb. 3	39 34	32 24	7 35 59	May 4	41 11	39 13	7 40 12	Aug. 3	41 19	38 45	7 40 2	Nov. 2	39 45	34 45	7 37 15
6	39 0	32 57	7 35 59	7	39 52	38 45	7 39 18	6	38 45	37 45	7 38 15	5	39 48	37 41	7 38 44
10	39 56	35 56	7 37 56	11	38 39	37 47	7 38 13	10	37 47	33 49	7 35 48	9	40 21	38 5	7 39 13
13	38 59	34 19	7 36 39	14	39 18	36 4	7 37 41	13	—	—	7 —	12	40 58	37 35	7 39 16
17	40 29	36 6	7 38 17	18	37 17	34 53	7 36 5	17	40 14	33 38	7 36 56	16	41 50	35 41	7 38 46
20	41 56	35 52	7 38 54	21	40 37	35 36	7 38 7	20	39 3	37 47	7 38 25	19	41 14	34 2	7 37 38
24	39 48	36 14	7 38 1	25	39 28	40 17	7 39 52	24	39 26	36 46	7 38 6	23	40 5	35 17	7 37 41
27	36 6	35 13	7 35 40	28	40 4	35 36	7 37 50	27	39 41	38 32	7 39 7	26	40 22	34 23	7 37 23
								31	39 53	35 28	7 37 40	30	—	—	—
Mean.	39 29	34 53	7 37 11	Mean.	39 33	37 16	7 38 25	Mean.	39 31	36 34	7 38 2	Mean.	40 33	35 56	7 38 15
Mar. 2	40 3	36 5	7 38 4	June 1	36 39	32 14	7 34 26	Sept. 3	38 33	34 23	7 36 28	Dec. 3	40 31	39 31	7 40 1
5	40 41	35 30	7 38 5	4	40 46	35 20	7 38 3	7	39 40	38 22	7 39 1	7	39 22	38 17	7 38 50
9	40 4	35 40	7 37 52	8	40 34	36 49	7 38 42	10	40 9	33 16	7 36 42	10	39 40	37 26	7 38 33
12	39 5	36 36	7 37 50	11	45 37	39 45	7 42 41	14	39 4	35 16	7 37 10	14	39 44	38 0	7 38 52
16	39 24	33 22	7 36 23	15	38 11	32 41	7 35 26	17	39 56	34 6	7 37 1	17	38 19	39 59	7 39 9
19	38 35	39 49	7 39 12	18	40 4	32 11	7 36 8	21	39 29	37 46	7 38 38	21	39 31	38 4	7 38 47
23	40 25	33 53	7 37 9	22	40 4	35 8	7 37 36	24	39 34	36 34	7 38 4	24	40 55	37 54	7 39 24
26	39 30	35 14	7 37 22	25	40 11	37 4	7 38 37	28	39 32	31 52	7 35 42	28	38 56	37 22	7 38 9
30	39 43	35 10	7 37 27	29	39 38	32 41	7 36 10					31	39 19	34 46	7 37 3
Mean.	39 43	35 42	7 37 43	Mean.	40 12	34 53	7 37 32	Mean.	39 30	35 12	7 37 21	Mean.	39 35	37 55	7 38 45

Mean Dip. for the year = 7 38 2 Mean daily Range = 3 22.

MADRAS, **1853.**—OBSERVATIONS OF THE MAGNETIC INCLINATION, OR DIP.

Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.	Day.	Min. and Sec. of		Mean Dip.
	Max.	Min.			Max.	Min.			Max.	Min.			Max.	Min.	
Jan. 4	40 3	37 37	7 38 50	Apr. 1	40 11	33 24	7 36 48	July 1	38 22	37 52	7 38 7	Oct. 4	41 34	33 15	7 37 24
7	37 28	33 39	7 35 33	5	38 38	35 41	7 37 9	5	40 56	41 8	7 41 2	7	42 26	36 38	7 39 32
11	35 51	35 52	7 35 52	8	39 45	34 0	7 36 52	8	41 26	42 0	7 41 43	11	44 8	40 30	7 42 19
14	37 21	37 18	7 37 20	12	39 56	36 38	7 38 17	12	—	—	—	14	36 30	35 52	7 36 11
18	36 48	36 1	7 36 24	15	40 41	35 26	7 38 4	15	41 37	40 0	7 40 48	18	41 26	40 38	7 41 2
21	37 29	36 23	7 36 56	19	39 45	36 23	7 38 4	19	40 26	41 0	7 40 43	21	38 41	35 41	7 37 11
25	38 20	34 4	7 36 12	22	37 22	37 45	7 37 33	22	38 52	36 0	7 37 26	25	40 4	36 4	7 38 4
28	37 40	33 45	7 35 43	26	39 38	35 11	7 37 25	26	41 49	35 30	7 38 39	28	40 38	31 8	7 35 53
				29	40 49	36 11	7 38 30	29	43 26	40 15	7 41 51				
Mean.	37 37	35 35	7 36 86	Mean.	39 38	35 38	7 37 38	Mean.	40 52	39 13	7 40 2	Mean.	40 41	36 13	7 38 27
Feb. 1	39 53	38 16	7 39 4	May 3	39 15	36 7	7 37 41	Aug. 2	40 7	39 52	7 40 0	Nov. 1	38 52	36 0	7 37 26
4	37 4	34 1	7 35 32	6	41 0	39 22	7 40 11	5	41 11	37 19	7 39 15	4	—	—	—
8	35 55	31 32	7 33 43	10	40 45	35 53	7 38 19	9	42 0	40 15	7 41 7	8	—	—	—
11	35 33	33 28	7 34 31	13	40 15	38 7	7 39 11	12	41 7	36 26	7 38 46	11	—	—	—
15	38 47	38 5	7 38 26	17	42 34	38 11	7 40 22	16	42 19	41 41	7 42 0	15	40 41	35 53	7 38 17
18	37 23	33 42	7 35 32	20	39 22	34 11	7 36 46	19	43 22	40 30	7 41 56	18	42 11	34 19	7 38 15
22	41 47	39 19	7 40 33	24	40 30	35 22	7 37 56	23	43 34	37 19	7 40 27	22	42 30	36 52	7 39 41
25	37 13	37 11	7 37 12	27	41 38	39 41	7 40 39	26	39 56	38 30	7 39 13	25	41 0	38 22	7 39 41
				31	40 56	38 38	7 39 47	30	39 38	42 45	7 41 11	29	43 37	37 11	7 40 24
Mean.	37 57	35 42	7 36 49	Mean.	40 42	37 17	7 38 59	Mean.	41 28	39 24	7 40 26	Mean.	41 28	36 26	7 38 57
Mar. 1	40 48	35 19	7 38 3	June 3	41 34	37 38	7 39 36	Sept. 2	39 56	37 8	7 38 32	Dec. 2	42 53	38 19	7 40 36
4	36 58	33 8	7 35 3	7	38 22	39 34	7 38 58	6	40 22	34 38	7 37 30	6	38 4	34 22	7 36 13
8	38 11	30 52	7 34 31	10	40 22	37 45	7 39 3	9	41 49	36 23	7 39 6	9	42 11	38 11	7 40 11
11	39 38	33 15	7 36 26	14	47 7	40 45	7 43 56	13	41 56	36 15	7 39 6	13	40 34	36 11	7 38 22
15	38 8	35 8	7 36 38	17	43 22	34 45	7 39 4	16	45 11	40 34	7 42 52	16	43 26	39 49	7 41 37
18	40 22	37 30	7 38 56	21	40 8	39 0	7 39 34	20	38 41	33 38	7 36 10	20	43 26	39 8	7 41 17
22	39 49	35 30	7 37 39	24	37 15	36 4	7 36 40	23	39 4	37 56	7 38 30	23	42 0	36 56	7 39 28
25	37 11	32 41	7 34 56	28	38 30	34 30	7 36 30	27	40 11	38 41	7 39 26	27	42 26	37 49	7 40 8
29	40 8	37 38	7 38 53					30	41 0	38 34	7 39 47	30	42 22	39 56	7 41 9
Mean.	39 1	34 33	7 36 47	Mean.	40 50	37 30	7 39 10	Mean.	40 54	37 5	7 39·00	Mean.	41 56	37 51	7 39 53

Mean Dip. for the year = 7 38 34 Mean daily Range = 3 23.

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MADRAS, **1854.**—OBSERVATIONS OF THE MAGNETIC INCLINATION, OR DIP.

Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.
Jan. 3	44′ 6″	37′ 4″	° 7′ 40′ 35″	April 4	39′ 22″	37′ 11″	° 7′ 38′ 16″	July 4	45′ 45″	34′ 26″	° 7′ 40′ 5″	Oct. 3	38′ 34″	36′ 56″	° 7′ 37′ 45″
6	40 2	36 49	7 38 25	7	40 11	34 52	7 37 31	7	41 11	37 0	7 39 6	6	41 7	36 11	7 38 39
10	38 15	34 52	7 36 33	11	46 30	37 11	7 41 50	11	39 26	39 19	7 39 22	10	42 4	40 26	7 41 15
13	36 26	34 26	7 35 26	14	47 4	37 56	7 42 30	14	40 0	38 26	7 39 13	13	48 20	38 42	7 43 31
17	34 41	33 49	7 34 15	18	37 56	37 41	7 37 48	18	—	—	—	17	—	—	—
20	48 4	39 22	7 43 43	21	38 4	36 34	7 37 19	21	40 42	33 49	7 37 16	20	41 53	35 17	7 38 35
24	37 4	36 52	7 36 58	25	34 22	30 7	7 32 14	25	37 34	34 45	7 36 10	24	40 32	40 24	7 40 28
27	44 7	40 45	7 42 26	28	34 34	31 49	7 33 11	28	37 34	32 45	7 35 10	27	42 5	36 59	7 39 32
31	40 41	40 4	7 40 22									31	44 17	40 24	7 42 20
Mean.	40 23	37 7	7 38 45	Mean.	39 45	35 25	7 37 35	Mean.	40 19	35 47	7 38 3	Mean.	42 22	38 10	7 40 16
Feb. 3	42′ 11″	35′ 4″	° 7′ 38′ 37″	May 2	41′ 56″	38′ 41″	° 7′ 40′ 18″	Aug. 1	45′ 34″	33′ 30″	° 7′ 39′ 32″	Nov. 3	36′ 59″	37′ 11″	° 7′ 37′ 5″
7	44 15	38 7	7 41 11	5	36 56	36 45	7 36 50	4	40 30	34 15	7 37 23	7	39 46	38 59	7 39 22
10	41 49	40 41	7 41 15	9	—	—	—	8	—	—	—	10	—	—	—
14	39 41	36 52	7 38 16	12	—	—	—	11	—	—	—	14	—	—	—
17	37 22	35 30	7 36 26	16	—	—	—	15	41 30	41 4	7 41 17	17	41 2	35 20	7 38 11
21	39 30	38 41	7 39 5	19	—	—	—	18	34 41	34 30	7 34 36	21	37 36	34 35	7 36 6
24	42 19	39 0	7 40 39	23	—	—	—	22	38 34	37 15	7 37 55	24	—	—	—
28	40 11	38 30	7 39 20	26	—	—	—	25	38 52	36 45	7 37 48	28	43 25	41 27	7 42 26
				30	—	—	—	29	—	—	—				
Mean.	40 55	37 48	7 39 21	Mean.	39 26	37 43	7 38 34	Mean.	39 57	36 13	7 38 5	Mean.	39 46	37 30	7 38 38
Mar. 3	40′ 45″	39′ 26″	° 7′ 40′ 5″	June 2	40′ 4″	39′ 56″	° 7′ 40′ 0″	Sept. 1	37′ 15″	36′ 56″	° 7′ 37′ 5″	Dec. 1	41′ 50″	37′ 48″	° 7′ 39′ 49″
7	41 49	39 15	7 40 32	6	41 22	39 26	7 40 24	5	38 37	37 52	7 38 14	5	40 39	40 46	7 40 42
10	42 22	39 15	7 40 48	9	42 19	39 41	7 41 0	8	38 56	38 37	7 38 46	8	39 13	39 41	7 39 27
14	40 37	40 11	7 40 24	13	41 34	35 4	7 38 19	12	41 52	41 11	7 41 31	12	38 37	37 23	7 38 0
17	43 49	36 15	7 40 2	16	42 52	32 22	7 37 37	15	41 19	38 52	7 40 5	15	42 11	40 32	7 41 21
21	39 11	35 19	7 37 15	20	43 4	37 19	7 40 11	19	40 19	39 49	7 40 4	19	36 35	39 51	7 38 13
24	42 49	38 37	7 40 43	23	—	—	—	22	37 22	37 15	7 37 18	22	—	—	—
28	41 4	36 52	7 38 58	27	41 56	40 49	7 41 22	26	36 7	35 19	7 35 43	26	37 50	36 31	7 37 10
31	46 19	37 41	7 42 0	30	41 0	34 34	7 37 47	29	39 4	36 34	7 37 49	29	—	—	—
Mean.	42 5	38 6	7 40 5	Mean.	41 46	37 24	7 39 35	Mean.	38 59	38 3	7 38 31	Mean.	39 34	38 56	7 39 15

Mean Dip for the year = ° 7′ 38′ 54″

Mean daily Range = 3′ 5″

MADRAS, **1855.**—OBSERVATIONS OF THE MAGNETIC INCLINATION, OR DIP.

Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.	Day.	Min. and Sec. of Max.	Min. and Sec. of Min.	Mean Dip.
Jan. 2	41′ 39″	38′ 45″	° 7′ 40′ 12″	Apr. 3	39′ 20″	35′ 40″	° 7′ 37′ 30″	July 3	39′ 42″	37′ 38″	° 7′ 38′ 40″	Oct. 2	45′ 57″	36′ 21″	° 7′ 41′ 9″
5	42 23	35 57	7 39 10	6	41 8	37 5	7 39 6	6	42 4	38 45	7 40 25	5	41 32	40 46	7 41 9
9	39 19	38 51	7 39 5	10	34 30	33 59	7 34 15	10	37 34	35 56	7 36 45	9	42 21	36 16	7 39 18
12	39 36	36 39	7 38 7	13	39 2	37 4	7 38 3	13	44 45	39 26	7 42 6	12	—	—	—
16	—	—	—	17	39 48	38 11	7 39 0	17	39 24	35 8	7 37 16	16	41 0	34 45	7 37 52
19	43 8	41 3	7 42 5	20	39 37	33 52	7 36 44	20	—	—	—	19	—	—	—
23	39 11	39 59	7 39 35	24	39 35	34 5	7 36 50	24	36 49	34 30	7 35 39	23	41 0	38 23	7 39 41
26	41 41	41 30	7 41 35	28	35 30	33 52	7 34 41	27	40 38	37 56	7 39 17	26	37 53	37 41	7 37 47
30	39 57	39 26	7 39 41					31	38 26	34 41	7 36 33	30	33 38	29 11	7 31 24
Mean.	40 52	39 1	7 39 56	Mean.	38 34	35 28	7 37 1	Mean.	39 55	36 45	7 38 20	Mean.	40 29	36 12	7 38 20
Feb. 2	37′ 5″	37′ 28″	° 7′ 37′ 16″	May 1	44′ 11″	32′ 19″	° 7′ 38′ 15″	Aug. 3	′ — ″	′ — ″	° — ′ — ″	Nov. 2	38′ 6″	36′ 9″	° 7′ 37′ 7″
6	41 13	41 7	7 41 10	4	42 3	32 34	7 37 18	7	38 56	36 15	7 37 36	6	43 59	43 19	7 43 39
9	40 45	39 8	7 39 56	8	43 6	39 55	7 41 30	10	39 11	35 49	7 37 30	9	41 4	40 4	7 40 34
13	40 27	39 48	7 40 7	11	43 30	42 22	7 42 56	14	37 53	32 20	7 35 6	13	39 49	37 4	7 38 26
16	44 19	35 51	7 40 5	15	—	—	—	17	42 34	34 46	7 38 40	16	35 4	34 19	7 34 41
20	—	—	—	18	42 36	36 15	7 39 25	21	37 7	37 4	7 37 6	20	44 15	34 15	7 39 15
23	42 9	36 28	7 39 18	22	—	—	—	24	40 23	40 15	7 40 19	23	37 0	35 4	7 36 2
27	39 21	35 32	7 37 27	25	40 41	40 30	7 40 36	28	—	—	—	27	46 22	38 56	7 42 39
				29	41 41	38 26	7 40 4	31	41 41	34 15	7 37 58	30	—	—	—
Mean.	40 46	37 54	7 39 20	Mean.	42 33	37 29	7 40 1	Mean.	39 41	35 49	7 37 45	Mean.	40 42	37 24	7 39 3
Mar. 2	40′ 30″	38′ 1″	° 7′ 39′ 15″	June 1	44′ 11″	41′ 4″	° 7′ 42′ 37″	Sept. 4	38′ 34″	39′ 19″	° 7′ 38′ 56″	Dec. 4	′ — ″	′ — ″	° — ′ — ″
6	43 24	38 14	7 40 49	5	42 45	43 7	7 42 56	7	43 4	33 4	7 38 4	7	—	—	—
9	39 39	33 46	7 36 42	8	46 26	46 22	7 46 24	11	36 41	35 4	7 35 53	11	40 46	37 0	7 38 53
13	—	—	—	12	46 7	42 19	7 44 13	14	—	—	—	14	36 10	34 35	7 35 22
16	38 30	37 11	7 37 50	15	—	—	—	18	—	—	—	18	42 46	36 50	7 39 48
20	42 12	37 54	7 40 3	19	40 5	39 14	7 39 35	21	34 4	33 19	7 33 41	21	35 10	33 27	7 34 19
23	35 9	36 34	7 35 50	22	39 4	38 15	7 38 40	25	—	—	—	25	40 4	36 4	7 38 4
27	46 43	35 18	7 41 0	26	48 7	42 45	7 45 26	28	39 56	38 41	7 39 19	28	43 49	33 15	7 38 32
30	37 48	35 26	7 36 37	29	40 32	39 40	7 40 6								
Mean.	40 29	36 33	7 38 31	Mean.	43 25	41 36	7 42 30	Mean.	38 28	35 54	7 37 11	Mean.	39 49	35 12	7 37 30

Mean Dip for the year = ° 7′ 38′ 47″

Mean daily Range = 3′ 23″

1851.	Distances in feet. R ; R′.	Deflection in scale divisions. u ; u′.	Log. $\frac{m}{X}$	X in British units.
Jan. 28	5·0006 / 6·5008	110·99 / 50·54	0·13282	8·1860
	5·0006 / 6·7510	110·99 / 45·19	0·13410	8·1740
	5·0006 / 7·0006	110·99 / 40·42	0·13167	8·1970
	5·1673 / 6·5008	100·50 / 50·54	0·13357	8·1790
	5·1673 / 6·7510	100·50 / 45·19	0·13481	8·1673
	5·1673 / 7·0006	100·50 / 40·42	0·13209	8·1930
	5·3342 / 6·5008	91·43 / 50·54	0·13304	8·1839
	5·3342 / 6·7510	91·43 / 45·19	0·13450	8·1703
	5·3342 / 7·0006	91·43 / 40·42	0·13160	8·1975
Feb. 27	5·0006 / 6·5008	110·19 / 50·51	0·13670	8·1478
	5·0006 / 6·7510	110·19 / 45·07	0·13535	8·1606
	5·0006 / 7·0006	110·19 / 40·36	0·13359	8·1772
	5·1673 / 6·5008	99·92 / 50·51	0·13713	8·1438
	5·1673 / 6·7510	99·92 / 45·07	0·13557	8·1585
	5·1673 / 7·0006	99·92 / 40·36	0·13338	8·1790
	5·3342 / 6·5008	91·11 / 50·51	0·13537	8·1604
	5·3342 / 6·7510	91·11 / 45·07	0·13400	8·1732
	5·3342 / 7·0006	91·11 / 40·36	0·13215	8·1907
Mar. 27	5·0006 / 6·5008	109·38 / 50·23	0·13538	8·1520
	5·0006 / 6·7510	109·38 / 44·73	0·13196	8·1840
	5·0006 / 7·0006	109·38 / 40·30	0·13558	8·1500
	5·1673 / 6·5008	99·45 / 50·23	0·13410	8·1642
	5·1673 / 6·7510	99·45 / 44·73	0·13055	8·1975
	5·1673 / 7·0006	99·45 / 40·30	0·13469	8·1604
	5·3342 / 6·5008	90·36 / 50.23	0·13532	8·1527
	5·3342 / 6·7510	90·36 / 44·73	0·13118	8·1914
	5·3342 / 7·0006	90.36 / 40·30	0·13556	8·1504
Apr. 28	5·0006 / 6·5008	109·76 / 50·28	0·13432	8·1518
	5·0006 / 6·7510	109·74 / 44·98	0·13548	8·1410
	5·0006 / 7·0006	109·74 / 40·22	0·13228	8·1708
	5·1673 / 6·5008	99·38 / 50·28	0·13578	8·1382
	5·1673 / 6·7510	99·38 / 44·98	0·13674	8·1290
	5·1673 / 7·0006	99·38 / 40·22	0·13315	8·1628
	5·3342 / 6·5008	90·52 / 50·28	0·13511	8·1444
	5·3342 / 6·7510	90·52 / 44·98	0·13631	8·1332
	5·3342 / 7·0006	90·52 / 40·22	0·13246	8·1692
June 4	5·0006 / 6·5008	110·11 / 50·39	0·13461	8·1442
	5·0006 / 6·7510	110·11 / 45·00	0·13423	8·1478
	5·0006 / 7·0006	110·11 / 40·45	0·13589	8·1322
	5·1673 / 6·5008	100·05 / 50·39	0·13337	8·1558
	5·1673 / 6·7510	100·05 / 45·00	0·13314	8·1580
	5·1673 / 7·0006	100·05 / 40·45	0·13511	8·1396
	5·3342 / 6·5008	90·82 / 50·39	0·13504	8·1402
	5·3342 / 6·7510	90·82 / 45·00	0·13446	8·1456
	5·3342 / 7·0006	90·82 / 40·45	0·13636	8·1278
do. 25	5·0006 / 6·5008	110·24 / 50·42	0·13451	8·1510
	5·0006 / 6·7510	110·24 / 45·21	0·13805	8·1178
	5·0006 / 7·0006	110·24 / 40·49	0·13624	8·1347
	5·1673 / 6·5008	100·01 / 50·42	0·13438	8·1523
	5·1673 / 6·7510	100·01 / 45·21	0·13822	8·1162
	5·1673 / 7·0006	100·01 / 40·49	0·13626	8·1345
	5·3342 / 6·5008	91·20 / 50·42	0·13212	8·1736
	5·3342 / 6·7510	91·20 / 45·21	0·13682	8·1292
	5·3342 / 7·0006	91·20 / 40·49	0·13490	8·1472
July 29	5·0006 / 6·5008	110·04 / 50·29	0·13292	8·1658
	5·0006 / 6·7510	110·04 / 45·31	0·14109	8·0895
	5·0006 / 7·0006	110·04 / 40·57	0·13878	8·1110
	5·1673 / 6·5008	99·78 / 50·29	0·13306	8·1460
	5·1673 / 6·7510	99·78 / 45·31	0·14189	8·0820
	5·1673 / 7·0006	99·78 / 40·57	0·13931	8·1060
	5·3342 / 6·5008	90·84 / 50·29	0·13222	8·1726
	5·3342 / 6·7510	90·84 / 45·31	0·14212	8·0798
	5·3342 / 7 0006	90·84 / 40·57	0·13927	8·1064
Aug.....	No observations of Deflection or Vibration made during this month.			
Sept. 29	5·0006 / 6·5008	109·86 / 50·52	0·13875	8·1195
	5·0006 / 6·7510	109·86 / 44·99	0·13522	8·1527
	5·0006 / 7·0006	109·86 / 40·26	0·13274	8·1798
	5·1673 / 6·5008	99·65 / 50·52	0·13932	8·1142
	5·1673 / 6·7510	99·65 / 44·99	0·13535	8·1514
	5·1673 / 7·0006	99·65 / 40·26	0·13270	8·1762
	5·3342 / 6·5008	90·64 / 50·52	0·14015	8·1064
	5·3342 / 6·7510	90·64 / 44·99	0·13563	8·1488
	5·3342 / 7·0006	90·64 / 40·26	0·13269	8·1764
Oct. 27	5·0006 / 6·5008	110·00 / 50·40	0·13547	8·1428
	5·0006 / 6·7510	110·00 / 44·99	0·13456	8·1512
	5·0006 / 7·0006	110·00 / 40·24	0·13175	8·1777
	5·1673 / 6·5008	99·80 / 50·40	0·13547	8·1428
	5·1673 / 6·7510	99·80 / 44·99	0·13446	8·1596
	5·1673 / 7·0006	99·80 / 40·24	0·13146	8·1803
	5·3342 / 6·5008	90·77 / 50·40	0·13580	8·1398
	5·3342 / 6·7510	90·77 / 44·99	0·13462	8·1506
	5·3342 / 7·0006	90·77 / 40·24	0·13133	8·1816
Nov. 27	5·0006 / 6·5008	109·98 / 50·39	0·13539	8·0940
	5·0006 / 6·7510	109·98 / 44·98	0·13446	8·1025
	5·0006 / 7·0006	109·98 / 40·35	0·13426	8·1044
	5·1673 / 6·5008	99·86 / 50·39	0·13481	8·0993
	5·1673 / 6·7510	99·86 / 44·98	0·13387	8·1082
	5·1673 / 7·0006	99·86 / 40·35	0·13377	8·1090
	5·3342 / 6·5008	90·74 / 50·39	0·13584	8·0898
	5·3342 / 6·7510	90·74 / 44·98	0·13461	8·1012
	5·3342 / 7·0006	90·74 / 40·35	0·13436	8·1034
Dec. 22	5·0006 / 6·5008	110·18 / 50·44	0·13533	8·1102
	5·0006 / 6·7510	110·18 / 45·12	0·13648	8·0995
	5·0006 / 7·0006	110·18 / 40·46	0·13587	8·1052
	5·1673 / 6·5008	99·82 / 50·44	0·13627	8·1014
	5·1673 / 6·7510	99·82 / 45·12	0·13734	8·0915
	5·1673 / 7·0006	99·82 / 40·46	0·13656	8·0988
	5·3342 / 6·5008	90 92 / 50·44	0·13542	8·1092
	5·3342 / 6·7510	90·92 / 45·12	0·13676	8·0970
	5·3342 / 7·0006	90·92 / 40·46	0 13601	8·1038

CORRECTED TIMES OF VIBRATION IN SECONDS, AND LOGARITHMIC VALUES OF m X USED IN REDUCING THE ABOVE OBSERVATIONS.

	s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X
Jan. 28	9·764	0·45249	Mar. 27	9·776	0·45143	June 4	9·794	0·44983	July 29	9·787	0·45045	Sept. 29	9·777	0·45133	Nov. 27	9·846	0·44523
Feb. 27	9·766	0·45231	Apr. 28	9·788	0·45035	June 25	9·787	0·45045	Aug.	—	—	Oct. 27	9·786	0·45053	Dec. 22	9·827	0·44691

1852.	Distances in feet. R ; R′	Deflection in scale divisions. u ; u′	Log. $\frac{m}{X}$	X in British units.	1852.	Distances in feet. R ; R′	Deflection in scale divisions. u ; u′	Log. $\frac{m}{X}$	X in British units.	1852.	Distances in feet. R ; R′	Deflection in scale divisions. u ; u′	Log. $\frac{m}{X}$	X in British units.
	5·0006	109·89				5·0006	110·16				5·0006	110·52		
	6·5008	50·41	0·13633	8·0917		6·5008	50·26	0·13164	8·1296		6·5008	50·49	0·13445	8·1102
	5·0006	109·89				5·0006	110·16				5·0006	110·52		
	6·7510	44·94	0·13403	8·1132		6·7510	45·08	0·13572	8·0915		6·7510	44·98	0·13189	8·1342
	5·0006	109·89				5·0006	110·16				5·0006	110·52		
	7·0006	40·26	0·13265	8·1260		7·0006	40·25	0·13136	8·1322		7·0006	40·35	0·13207	8·1324
	5·1673	99·79				5·1673	99·83				5·1673	100·25		
	6·5008	50·41	0·13580	8·0966		6·5008	50·26	0·13201	8·1262		6·5008	50·49	0·13427	8·1118
Jan. 30.	5·1673	99·79			May 27.	5·1673	99·83			Sept. 28.	5·1673	100·25		
	6·7510	44·94	0·13335	8·1195		6·7510	45·08	0·13635	8·0858		6·7510	44·98	0·13149	8·1378
	5·1673	99·79				5·1673	99·83				5·1673	100·25		
	7·0006	40·26	0·13200	8·1320		7·0006	40·25	0·13158	8·1302		7·0006	40·35	0·13175	8·1354
	5·3342	90·78				5·3342	90·98				5·3342	91·06		
	6·5008	50·41	0·13600	8·0948		6·5008	50·26	0·13008	8·1442		6·5008	50·49	0·13537	8·1016
	5·3342	90·78				5·3342	90·98				5·3342	91·06		
	6·7510	44·94	0·13328	8·1200		6·7510	45·08	0·13526	8·0958		6·7510	44·98	0·13209	8·1322
	5·3342	90·78				5·3342	90·98				5·3342	91·06		
	7·0006	40·26	0·13179	8·1342		7·0006	40·25	0·13023	8·1430		7·0006	40·35	0·13225	8·1308
	5·0006	109·90				5·0006	110·25				5 0006	109·99		
	6·5008	50·40	0·13606	8·0958		6·5008	50·62	0·13866	8·0728		6·5008	50·46	0·13681	8·0913
	5·0006	109·90				5·0006	110·25				5·0006	109·99		
	6·7510	45·09	0·13715	8·0858		6·7510	45·12	0·13614	8·0960		6·7510	45·00	0·13483	8·1098
	5·0006	109·90				5·0006	110·25				5·0006	109·99		
	7·0006	40·38	0·13525	8·1034		7·0006	40·48	0·13601	8·0973		7·0006	40·36	0·13445	8·1133
	5·1673	99·76				5·1673	100·07				5·1673	99·77		
	6·5008	50·40	0·13578	8·0986		6·5008	50·62	0·13859	8·0733		6·5008	50·46	0·13710	8·0886
Feb. 23.	5·1673	99·76			June 29.	5·1673	100·07			Oct. 28.	5·1673	99·77		
	6·7510	45·09	0·13701	8·0870		6·7510	45·12	0·13585	8·0988		6·7510	45·00	0·13488	8·1092
	5·1673	99·76				5·1673	100·07				5·1673	99·77		
	7·0006	40·38	0·13500	8·1057		7·0006	40·48	0·13575	8·0997		7·0006	40·36	0·13447	8·1132
	5·3342	90·86				5·3342	91·07				5·3342	90·92		
	6·5008	50·40	0·13495	8·1062		6·5008	50·62	0·13863	8·0730		6·5008	50·46	0·13594	8·0993
	5·3342	90·86				5·3342	91·07				5·3342	90·92		
	6·7510	45·09	0·13647	8·0920		6·7510	45·12	0·13559	8·1012		6·7510	45·00	0·13371	8·1202
	5·3342	90·86				5·3342	91·07				5·3342	90·92		
	7·0006	40·38	0·13436	8·1117		7·0006	40·48	0·13551	8·1020		7·0006	40·36	0·13344	8·1227
	5·0006	110·04				5·0006	110·44				5·0006	109·41		
	6·5008	50·46	0·13653	8·0908		6·5008	50·63	0·13782	8·0862		6·5008	50·19	0·13443	8·1152
	5·0006	110·04				5·0006	110·44				5·0006	109·41		
	6·7510	45·13	0·13736	8·0830		6·7510	45·12	0·13525	8·0913		6·7510	44·90	0·13545	8·1057
	5·0006	110·04				5·0006	110·44				5·0006	109·41		
	7·0006	40·38	0·13469	8·1080		7·0006	40·41	0·13370	8·1244		7·0006	40·13	0·13177	8·1402
	5·1673	99·79				5·1673	100·16				5·1673	99·33		
	6·5008	50·46	0·13695	8·0868		6·5008	50·63	0·13817	8·0828		6·5008	50·19	0·13408	8·1184
Mar. 27.	5·1673	99·79			July 27.	5·1673	100·16			Nov. 30.	5·1673	99·33		
	6·7510	45·13	0·13776	8·0792		6·7510	45·12	0·13529	8·1096		6·7510	44·90	0·13525	8·1076
	5·1673	99·79				5·1673	100·16				5·1673	99·33		
	7·0006	40·38	0·13484	8·1064		7·0006	40·41	0·13364	8·1250		7·0006	40·13	0·13133	8·1442
	5·3342	90·83				5·3342	91·20				5·3342	90·50		
	6·5008	50·46	0·13681	8·0882		6·5008	50·63	0·13766	8·0874		6·5008	50·19	0·13296	8·1288
	5·3342	90·83				5·3342	91·20				5·3342	90·50		
	6·7510	45·13	0·13773	8·0796		6·7510	45·12	0·13459	8·1162		6·7510	44·90	0·13446	8·1148
	5·3342	90·83				5·3342	91·20				5·3342	90·50		
	7·0006	40·38	0·13455	8·1092		7·0006	40·41	0·13289	8·1320		7·0006	40·13	0·13031	8·1538
	5·0006	110·21				5·0006	110·45				5·0006	110·12		
	6·5008	50·59	0·13826	8·0772		6·5008	50·56	0·13630	8·0913		6·5008	50·35	0·13376	8·1255
	5·0006	110·21				5·0006	110·45				5·0006	110·12		
	6·7510	45·10	0·13592	8·0988		6·7510	45·25	0·13795	8·0758		6·7510	45·11	0·13654	8·0995
	5·0006	110·21				5·0006	110·45				5·0006	110·12		
	7·0006	40·40	0·13442	8·1128		7·0006	40·48	0·13518	8·1016		7·0006	40·22	0·13084	8·1528
	5·1673	99·90				5·1673	100·08				5·1673	99·88		
	6·5008	50·59	0·13913	8·0690		6·5008	50·56	0·13714	8·0833		6·5008	50·35	0·13374	8·1257
Apr. 27.	5·1673	99·90			Aug. 26.	5·1673	100·08			Dec. 24.	5·1673	99·88		
	6·7510	45·10	0·13640	8·0943		6·7510	45·25	0.13875	8·0684		6·7510	45·11	0·13674	8·0977
	5·1673	99·90				5·1673	100·08				5·1673	99·88		
	7·0006	40·40	6·13474	8·1098		7·0006	40·48	0·13569	8·0970		7·0006	40·22	0·13060	8·1552
	5·3342	91·02				5·3342	90·92				5·3342	90·99		
	6·5008	50·59	0·13833	8·0764		6·5008	50·56	0·13856	8·0702		6·5008	50·35	0·13236	8·1386
	5·3342	91·02				5·3342	90·92				5·3342	90·99		
	6·7510	45·10	0·13548	8·1028		6·7510	45·25	0·14005	8·0564		6·7510	45·11	0·13596	8·1050
	5·3342	91·02				5·3342	90·92				5·3342	90·99		
	7·0006	40·40	0·13380	8·1186		7·0006	40·48	0·13650	8·0893		7·0006	40·22	0·12939	8·1666

CORRECTED TIMES OF VIBRATION IN SECONDS, AND LOGARITHMIC VALUES OF m X USED IN REDUCING THE ABOVE OBSERVATIONS.

	s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X
Jan. 30	9·838	0·44593	Mar. 27	9·837	0·44603	May 27	9·845	0·44531	July 27	9·828	0·44681	Sept. 28	9·837	0·44603	Nov. 30	9·831	0·44655
Feb. 23	9·836	0·44611	Apr. 27	9·834	0·44629	June 29	9·835	0·44621	Aug. 26	9·839	0·44585	Oct. 28	9·833	0·44637	Dec. 24	9·826	0·44699

1853.	Distances in feet. R ; R′	Deflection in scale divisions. u ; u′	Log. $\frac{m}{X}$	X in British units.
Jan. 27.	5·0006 / 6·5008	109·69 / 50·29	0·13494	8·1195
	5·0006 / 6·7510	109·69 / 44·99	0·13604	8·1092
	5·0006 / 7·0006	109·69 / 40·39	0·13630	8·1068
	5·1673 / 6·5008	99·52 / 50·29	0·13499	8·1192
	5·1673 / 6·7510	99·52 / 44·99	0·13617	8·1082
	5·1673 / 7·0006	99·52 / 40·39	0·13645	8·1055
	5·3342 / 6·5008	90·52 / 50·29	0·13538	8·1154
	5·3342 / 6·7510	90·52 / 44·99	0·13661	8·1040
	5·3342 / 7·0006	90·52 / 40·39	0·13681	8·1022
Feb. 24.	5·0006 / 6·5008	109·70 / 50·31	0·13529	8·1096
	5·0006 / 6·7510	109·70 / 45·09	0·13810	8·0833
	5·0006 / 7·0006	109·70 / 40·26	0·13343	8·1268
	5·1673 / 6·5008	99·54 / 50·31	0·13529	8·1096
	5·1673 / 6·7510	99·54 / 45·09	0·13833	8·0812
	5·1673 / 7·0006	99·54 / 40·26	0·13330	8·1282
	5·3342 / 6·5008	90·58 / 50·31	0·13531	8·1094
	5·3342 / 6·7510	90·58 / 45·09	0·13866	8·0782
	5·3342 / 7·0006	90·58 / 40·26	0·13312	8·1298
Mar. 22	5·0006 / 6·5008	109·76 / 50·35	0·13581	8·1006
	5·0006 / 6·7510	109·76 / 44·90	0·13381	8·1193
	5·0006 / 7·0006	109·76 / 40·16	0·13099	8·1458
	5·1673 / 6·5008	99·25 / 50·35	0·13837	8·0768
	5·1673 / 6·7510	99·25 / 44·90	0·13573	8·1014
	5·1673 / 7·0006	99·25 / 40·16	0·13244	8·1320
	5·3342 / 6·5008	90·50 / 50·35	0·13714	8·0882
	5·3342 / 6·7510	90·50 / 44·90	0·13446	8·1132
	5·3342 / 7·0006	90·50 / 40·16	0·13107	8·1450
Apr. 25	5·0006 / 6·5008	109·42 / 50·29	0·13645	8·0840
	5·0006 / 6·7510	109·42 / 44·88	0·13497	8·0978
	5·0006 / 7·0006	109·42 / 40·29	0·13523	8·0954
	5·1673 / 6·5008	99·49 / 50·29	0·13520	8·0956
	5·1673 / 6·7510	99·49 / 44·88	0·13380	8·1087
	5·1673 / 7·0006	99·49 / 40·29	0·13427	8·1044
	5·3342 / 6·5008	90·58 / 50·29	0·13480	8·0993
	5·3342 / 6·7510	90·58 / 44·88	0·13332	8·1132
	5·3342 / 7·0006	90·58 / 40·29	0·13390	8·1078
May 31.	5·0006 / 6·5008	110·07 / 50·40	0·13509	8·0948
	5·0006 / 6·7510	110·07 / 45·05	0·13550	8·0928
	5·0006 / 7·0006	110·07 / 40·33	0·13346	8·1118
	5·1673 / 6·5008	99·90 / 50·40	0·13475	8·0998
	5·1673 / 6·7510	99·90 / 45·05	0·13524	8·0954
	5·1673 / 7·0006	99·90 / 40·33	0·13310	8·1152
	5·3342 / 6·5008	90·87 / 50·40	0·13485	8·0990
	5·3342 / 6·7510	90·87 / 45·05	0·13536	8·0942
	5·3342 / 7·0006	90·87 / 40·33	0·13301	8·1162
June 29	5·0006 / 6·5008	110·52 / 50·42	0·13296	8·1198
	5·0006 / 6·7510	110·52 / 45 21	0·13677	8·0844
	5·0006 / 7·0006	110 52 / 40·41	0·13339	8·1160
	5·1673 / 6·5008	100·11 / 50·42	0·13366	8·1133
	5·1673 / 6·7510	100·11 / 45·21	0·13765	8·0762
	5·1673 / 7·0006	100·11 / 40·41	0·13390	8·1112
	5·3342 / 6·5008	91·14 / 50·42	0·13272	8·1222
	5·3342 / 6·7510	91·14 / 45·21	0·13731	8·0794
	5·3342 / 7·0006	91·14 / 40·41	0·13327	8·1170
July 29	5·0006 / 6·5008	110·05 / 50·26	0·13226	8·1248
	5·0006 / 6·7510	110·05 / 45·04	0·13540	8·0954
	5·0006 / 7·0006	110·05 / 40·37	0·13442	8·1048
	5·1673 / 6·5008	99·74 / 50·26	0·13267	8·1210
	5·1673 / 6·7510	99·74 / 45·04	0·13599	8·0900
	5·1673 / 7·0006	99·74 / 40·37	0·13486	8·1004
	5·3342 / 6·5008	90·70 / 50·26	0·13283	8·1195
	5·3342 / 6·7510	90·70 / 45·04	0·13645	8·0858
	5·3342 / 7·0006	90·70 / 40·37	0·13515	8·0978
Aug. 26	5·0006 / 6.5008	110·19 / 50·43	0·13505	8·1028
	5·0006 / 6·7510	110·19 / 45·01	0·13410	8·1117
	5·0006 / 7·0006	110·19 / 40·34	0·13319	8·1202
	5·1673 / 6·5008	99·78 / 50·43	0·13633	8·0910
	5·1673 / 6,7510	99·78 / 45·01	0·13506	8·1028
	5·1673 / 7·0006	99·78 / 40·34	0·13397	8·1130
	5·3342 / 6.5008	90·99 / 50·43	0·13448	8·1082
	5·3342 / 6·7510	90·99 / 45·01	0·13343	8·1180
	5·3342 / 7·0006	90·99 / 40·34	0·13248	8·1268
Sept. 26	5·0006 / 6·5008	110·14 / 50·40	0·13469	8·1053
	5·0006 / 6·7510	110·14 / 45·09	0·13602	8·0928
	5·0006 / 7·0006	110·14 / 40·25	0·13143	8·1358
	5·1673 / 6·5008	99·78 / 50·40	0·13565	8·0964
	5·1673 / 6·7510	99·78 / 45·09	0·13690	8·0846
	5·1673 / 7·0006	99·78 / 40·25	0·13184	8·1318
	5·3342 / 6.5008	90·87 / 50·40	0·13485	8·1038
	5.3342 / 6·7510	90·87 / 45·09	0·13639	8·0895
	5·3342 / 7·0006	90·87 / 40·25	0·13096	8·1402
Oct. 27.	5·0006 / 6·5008	109·86 / 50·36	0·13546	8·0948
	5·0006 / 6·7510	109·86 / 44·89	0·13311	8·1168
	5·0006 / 7·0006	109·86 / 40·32	0·13410	8·1076
	5·1673 / 6·5008	99·64 / 50·36	0·13575	8·0922
	5·1673 / 6·7510	99·64 / 44·89	0·13313	8·1167
	5·1673 / 7·0006	99·64 / 40·32	0·13420	8·1066
	5·3342 / 6·5008	90·65 / 50·36	0·13595	8·0904
	5·3342 / 6·7510	90·65 / 44·89	0·13302	8·1176
	5·3342 / 7·0006	90·65 / 40·32	0·13419	8·1068
Nov. 28	5·0006 / 6·5008	109·57 / 50·32	0·13624	8·1048
	5·0006 / 6·7510	109·57 / 44·80	0·13258	8·1200
	5·0006 / 7·0006	109·57 / 40·35	0·13592	8·0890
	5·1678 / 6·5008	99·51 / 50 32	0·13575	8·0906
	5·1673 / 6·7510	99·51 / 44·80	0·13182	8·1272
	5·1673 / 7·0006	99·51 / 40·35	0·13556	8·0922
	5 3342 / 6·5008	90·48 / 50 32	0·13656	8·0830
	5·3342 / 6·7510	90·48 / 44 80	0·13207	8·1250
	5·3342 / 7·0006	90·48 / 40·35	0·13606	8·0876
Dec. 19.	5·0006 / 6·5008	109·55 / 50·29	0·13572	8·1030
	5·0006 / 6·7510	109·55 / 44·91	0·13500	8·1098
	5·0006 / 7·0006	109·55 / 40·25	0·13384	8·1206
	5·1673 / 6·5008	99·40 / 50·29	0·13587	8·1018
	5·1673 / 6·7510	99·40 / 44·91	0·13503	8·1096
	5·1673 / 7·0006	99·40 / 40·25	0·13380	8·1210
	5·3342 / 6·5008	90·80 / 50·29	0·13264	8·1318
	5·3342 / 6·7510	90·80 / 44·91	0·13234	8·1347
	5·3342 / 7·0006	90 80 / 40·25	0·13142	8·1433

CORRECTED TIMES OF VIBRATION IN SECONDS, AND LOGARITHMIC VALUES OF m X USED IN REDUCING THE ABOVE OBSERVATIONS.

	s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X
Jan. 27	9·820	0·44753	Mar. 22	9·833	0·44637	May 31	9·846	0·44523	July 29	9·844	0·44541	Sept. 26	9·840	0·44575	Nov. 28	9·846	0·44523
Feb. 24	9·828	0·44681	Apr. 25	9·846	0·44523	June 29	9·842	0·44559	Aug. 26	9 839	0·44585	Oct. 27	9·844	0·44541	Dec. 19	9·831	0·44655

1854.	Distances in feet. R ; R′.	Deflection in scale divisions. u ; u′.	Log. $\frac{m}{X}$	X in British units.
Jan. 26.	5·0006 / 6·5008	109·47 / 50·22	0·13473	8·1042
	5·0006 / 6·7510	109·47 / 44·71	0·13112	8·1378
	5·0006 / 7·0006	109·47 / 40·28	0·13481	8·1034
	5·1673 / 6·5008	99·39 / 50·22	0·13434	8·1078
	5·1673 / 6·7510	99·39 / 44·71	0·13046	8·1440
	5·1673 / 7·0006	99·39 / 40·28	0·13455	8·1058
	5·3342 / 6·5008	90·45 / 50·22	0·13424	8·1087
	5·3342 / 6·7510	90·45 / 44·71	0·12996	8·1488
	5·3342 / 7·0006	90·45 / 40·28	0·13448	8·1064
Feb. 23.	5·0006 / 6·5008	109·69 / 50·28	0·13474	8·1090
	5·0006 / 6·7510	109·69 / 44·93	0·13478	8·1087
	5·0006 / 7·0006	109·69 / 40·29	0·13414	8·1146
	5·1673 / 6·5008	99·55 / 50·28	0·13457	8·1108
	5·1673 / 6·7510	99·55 / 44·93	0·13461	8·1104
	5·1673 / 7·0006	99·55 / 40·29	0·13397	8·1163
	5·3342 / 6·5008	90·43 / 50·28	0·13601	8·0973
	5·3342 / 6·7510	90·43 / 44·93	0·13578	8·0993
	5·3342 / 7·0006	90·43 / 40·29	0·13487	8·1080
Mar. 30	5·0006 / 6·5008	109·69 / 50·24	0·13389	8·1096
	5·0006 / 6·7510	109·69 / 44·79	0·13178	8·1292
	5·0006 / 7·0006	109·69 / 40·45	0·13761	8·0750
	5·1673 / 6·5008	99·52 / 50·24	0·13385	8·1100
	5·1673 / 6·7510	99·52 / 44·79	0·13153	8·1317
	5·1673 / 7·0006	99·52 / 40·45	0·13786	8·0726
	5·3342 / 6·5008	90·58 / 50·24	0·13349	8·1133
	5·3342 / 6·7510	90·58 / 44·79	0·13101	8·1366
	5·3342 / 7·0006	90·58 / 40·45	0·13795	8·0718
Apr. 28	5·0006 / 6·5008	109·61 / 50·20	0·13349	8·1083
	5·0006 / 6·7510	109·61 / 44·94	0·13535	8·0910
	5·0006 / 7·0006	109·61 / 40 25	0·13360	8·1072
	5·1673 / 6·5008	99·25 / 50·20	0·13488	8·0954
	5·1673 / 6·7510	99·25 / 44·94	0·13663	8·0790
	5·1673 / 7·0006	99·25 / 40·25	0·13457	8·0982
	5·3342 / 6·5008	90·40 / 50·20	0·13418	8·1018
	5·3342 / 6·7510	90·40 / 44·94	0·13625	8·0826
	5·3342 / 7·0006	90·40 / 40·25	0·13406	8·1028
May 31	5·0006 / 6·5008	109·70 / 50·00	0·12876	8·1518
	5·0006 / 6·7510	109·70 / 44·73	0·13045	8·1360
	5·0006 / 7·0006	109·70 / 40·23	0·13277	8·1142
	5·1673 / 6·5008	99·42 / 50·00	0·12898	8·1497
	5·1673 / 6·7510	99·42 / 44·73	0·13075	8·1332
	5·1673 / 7·0006	99·42 / 40·23	0·13322	8·1100
	5·3342 / 6·5008	90·55 / 50·00	0·12744	8·1642
	5·3342 / 6·7510	90·55 / 44·73	0·12970	8·1430
	5·3342 / 7·0006	90·55 / 40·23	0·13255	8·1163
June 28	5·0006 / 6·5008	110·22 / 50·35	0·13320	8·1234
	5·0006 / 6·7510	110·22 / 44·95	0·13268	8·1283
	5·0006 / 7·0006	110·22 / 40·37	0·13372	8·1186
	5·1673 / 6·5008	99·76 / 50·35	0·13463	8·1102
	5·1673 / 6·7510	99·76 / 44·95	0·13378	8·1180
	5·1673 / 7·0006	99·76 / 40·37	0·13476	8·1088
	5·3342 / 6·5008	90·69 / 50·35	0·13529	8·1040
	5·3342 / 6·7510	90·69 / 44·95	0·13424	8·1137
	5·3342 / 7·0006	90·69 / 40·37	0·13521	8·1048
July 27.	5·0006 / 6·5008	109·74 / 50·16	0·13192	8·1312
	5·0006 / 6·7510	109·74 / 44·90	0·13389	8·1128
	5·0006 / 7·0006	109·74 / 40·31	0·13436	8·1083
	5·1673 / 6·5008	99·81 / 50·16	0·12984	8·1506
	5·1673 / 6·7510	99·81 / 44·90	0·13234	8·1272
	5·1673 / 7·0006	99·81 / 40·31	0 13310	8·1200
	5·3342 / 6·5008	90·72 / 50·16	0·13001	8·1492
	5·3342 / 6·7510	90·72 / 44·90	0·13275	8·1234
	5·3342 / 7·0006	90·72 / 40·31	0·13348	8·1165
Sept. 1.	5·0006 / 6·5008	104·11 / 47·76	0·11288	8·0758
	5·0006 / 6·7510	104·11 / 42·42	0·10705	8·1302
	5·0006 / 7·0006	104·11 / 38·29	0·11261	8·0783
	5·1673 / 6·5008	94·48 / 47·76	0·11282	8·0764
	5·1673 / 6·7510	94·48 / 42·42	0·10646	8·1358
	5·1673 / 7·0006	94·48 / 38·29	0·11255	8·0788
	5·3342 / 6·5008	86·03 / 47·76	0·11229	8·0812
	5 3342 / 6·7510	86·03 / 42·42	0·10536	8·1462
	5·3342 / 7·0006	86·03 / 38·29	0·11216	8·0826
Sept. 25	5·0006 / 6·5008	104·25 / 47·86	0·11428	8·0636
	5·0006 / 6·7510	104·25 / 42·61	0·11064	8·0975
	5·0006 / 7·0006	104·25 / 38·41	0·11475	8·0592
	5·1673 / 6·5008	94·48 / 47·86	0·11530	8·0542
	5·1673 / 6·7510	94·48 / 42·61	0·11114	8·0928
	5·1673 / 7·0006	94·48 / 38·41	0·11550	8·0523
	5·3342 / 6·5008	85·89 / 47·86	0·11648	8·0432
	5·3342 / 6·7510	85·89 / 42·61	0·11169	8·0876
	5·3342 / 7·0006	85·89 / 38·41	0·11631	8·0447
Oct. 26.	5·0006 / 6·5008	104·35 / 47·89	0·11436	8·0582
	5·0006 / 6·7510	104·35 / 42·62	0·11039	8·0950
	5·0006 / 7·0006	104·35 / 38·35	0·11301	8·0707
	5·1673 / 6·5008	94·72 / 47·89	0·11419	8·0597
	5·1673 / 6·7510	94·72 / 42·62	0·10987	8·0998
	5·1673 / 7·0006	94·72 / 38·35	0·11279	8·0728
	5·3342 / 6·5008	86·21 / 47·89	0·11407	8·0608
	5·3342 / 6·7510	86·21 / 42·62	0·10932	8·1052
	5·3342 / 7·0006	86·21 / 38·35	0·11258	8·0748
Dec. 6.	5·0006 / 6·5008	104·19 / 47·79	0·11318	8·0828
	5·0006 / 6·7510	104·19 / 42·51	0·10876	8·1240
	5·0006 / 7·0006	104·19 / 38 38	0·11440	8·0714
	5·1673 / 6·5008	94·41 / 47·79	0·11422	8·0732
	5·1673 / 6·7510	94·41 / 42·51	0·10921	8·1197
	5·1673 / 7·0006	94·41 / 38·38	0·11522	8·0638
	5·3342 / 6·5008	85·96 / 47·79	0·11395	8·0755
	5·3342 / 6·7510	85·96 / 42·51	0·10848	8·1266
	5·3342 / 7·0006	85·96 / 38·38	0·11510	8·0650
do. 23.	5·0006 / 6·5008	103·94 / 47·58	0·11001	8·1057
	5·0006 / 6·7510	103·94 / 42·57	0·11137	8·0930
	5·0006 / 7·0006	103·94 / 38·16	0·11044	8·1018
	5·1673 / 6·5008	94·35 / 47·58	0·10950	8·1106
	5·1673 / 6·7510	94·35 / 42·57	0·11108	8·0958
	5·1673 / 7·0006	94·35 / 38·16	0·11014	8·1046
	5·3342 / 6·5008	85·81 / 47·58	0·10968	8·1088
	5·3342 / 6·7510	85·81 / 42·57	0·11135	8·0932
	5·3342 / 7·0006	85·81 / 38·16	0·11027	8·1032

CORRECTED TIMES OF VIBRATION IN SECONDS, AND LOGARITHMIC VALUES OF m X USED IN REDUCING THE ABOVE OBSERVATIONS.

	s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X
Jan. 26	9·841	0·44567	Mar. 30	9·844	0·44541	May 31	9·851	0·44479	July 27	9·840	0·44575	Sept. 25	10·102	0·42086	Dec. 6	10·091	0·42182
Feb. 23	9·835	0·44621	Apr. 28	9·850	0·44487	June 28	9·835	0·44621	Sept. 1	10·103	0·42078	Oct. 26	10·108	0·42036	Dec. 23	10·099	0·42112

1855.	Distances in feet. R ; R′.	Deflection in scale divisions. n , n′.	Log. $\frac{m}{X}$	X in British units.
Jan. 29	5·0006	103·73	0·11302	8·0874
	6·5008	47·66		
	5·0006	103·73	0·11464	8·0724
	6·7510	42·67		
	5·0006	103·73	0·10786	8·1356
	7·0006	38·01		
	5·1673	93·98	0·11445	8·0740
	6·5008	47·66		
	5·1673	93·98	0·11585	8·0610
	6·7510	42·67		
	5·1673	93·98	0·10841	8·1304
	7·0006	38·01		
	5·3342	85·78	0·11219	8·0950
	6·5008	47·66		
	5·3342	85·78	0·11428	8·0757
	6·7510	42·67		
	5·3342	85·78	0·10641	8·1492
	7·0006	38·01		
Mar. 1	5·0006	103·64	0·11247	8·0788
	6·5008	47·61		
	5·0006	103·64	0·11239	8·0796
	6·7510	42·55		
	5·0006	103·64	0·11194	8·0838
	7·0006	38·17		
	5·1673	94·09	0·11231	8·0803
	6·5008	47·61		
	5·1673	94·09	0·11226	8·0808
	6·7510	42·55		
	5·1673	94·09	0·11178	8·0854
	7·0006	38·17		
	5·3342	85·58	0·11290	8·0750
	6·5008	47·61		
	5·3342	85·58	0·11273	8·0764
	6·7510	42·55		
	5·3342	85·58	0·11212	8·0822
	7·0006	38·17		
Mar. 30	5·0006	103·34	0·11600	8·0500
	6·5008	47·69		
	5·0006	103·34	0·10695	8·1343
	6·7510	42·24		
	5·0006	103·34	0·12050	8·0085
	7·0006	38·49		
	5·1673	94·16	0·11372	8·0712
	6·5008	47·69		
	5·1673	94·16	0·10418	8·1604
	6·7510	42·24		
	5·1673	94·16	0·11926	8·0200
	7·0006	38·49		
	5·3342	85·43	0·11663	8·0442
	6·5008	47·69		
	5·3342	85·43	0·10558	8·1472
	6·7510	42·24		
	5·3342	85·43	0·12164	7·9980
	7·0006	38·49		
Apr. 28	5·0006	103·24	0·11020	8·1016
	6·5008	47·40		
	5·0006	103·24	0·11129	8·0913
	6·7510	42·41		
	5·0006	103·24	0·11113	8·0928
	7·0006	38·06		
	5·1673	93·90	0·10863	8·1162
	6·5008	47·40		
	5·1673	93·90	0·11005	8·1028
	6·7510	42·41		
	5·1673	93·90	0·11009	8·1025
	7·0006	38·06		
	5·3342	85·69	0·10592	8·1416
	6·5008	47·40		
	5·3342	85·69	0·10805	8·1216
	6·7510	42·41		
	5·3342	85·69	0·10840	8·1184
	7·0006	38·06		

1855.	Distances in feet. R ; R′.	Deflection in scale divisions. n ; n′.	Log. $\frac{m}{X}$	X in British units.
May 29.	5·0006	103·82	0·11206	8·0842
	6·5008	47·64		
	5·0006	103·82	0·11085	8·0954
	6·7510	42·52		
	5·0006	103·82	0·11003	8·1030
	7·0006	38·12		
	5·1673	94·10	0·11295	8·0758
	6·5008	47·64		
	5·1673	94·10	0·11145	8·0898
	6·7510	42·52		
	5·1673	94·10	0·11049	8·0988
	7·0006	38·12		
	5·3342	85·78	0·11165	8·0880
	6·5008	47·64		
	5·3342	85·78	0·11025	8·1010
	6·7510	42·52		
	5·3342	85·78	0·10939	8·1090
	7·0006	38·12		
June 30.	5·0006	104·00	0·11233	8·0816
	6·5008	47·70		
	5·0006	104·00	0·11176	8·0870
	6·7510	42·60		
	5·0006	104·00	0·10994	8·1040
	7·0006	38·15		
	5·1673	94·06	0·11474	8·0593
	6·5008	47·70		
	5·1673	94·06	0·11367	8·0692
	6·7510	42·60		
	5·1673	94·06	0·11145	8·0898
	7·0006	38·15		
	5·3342	85·76	0·11354	8·0705
	6·5008	47·70		
	5·3342	85·76	0·11259	8·0792
	6·7510	42·60		
	5·3342	85·76	0·11035	8·1000
	7·0006	38·15		
July 27	5·0006	103·85	0·10318	8·1666
	6·5008	47·25		
	5·0006	103·85	0·11427	8·0628
	6·7510	42·68		
	5·0006	103·85	0·11104	8·0930
	7·0006	38·17		
	5·1673	94·25	0·10213	8·1764
	6·5008	47·25		
	5·1673	94·25	0·11438	8·0620
	6·7510	42·68		
	5·1673	94·25	0·11092	8·0942
	7·0006	38·17		
	5·3342	86·04	0·09802	8·2152
	6·5008	47·25		
	5·3342	86·04	0·11240	8·0803
	6·7510	42·68		
	5·3342	86·04	0·10893	8·1126
	7·0006	38·17		
Aug. 29	5·0006	104·12	0·10715	8·1310
	6·5008	47·50		
	5·0006	104·12	0·11004	8·1040
	6·7510	42·55		
	5·0006	104·12	0·11266	8·0796
	7·0006	38·29		
	5·1673	94·00	0·11028	8·1018
	6·5008	47·50		
	5·1673	94·00	0·11282	8·0782
	6·7510	42·55		
	5·1673	94·00	0·11524	8·0556
	7·0006	38·29		
	5·3342	85·64	0·10921	8·1117
	6·5008	47·50		
	5·3342	85·64	0·11222	8·0837
	6·7510	42·55		
	5·3342	85·64	0·11492	8·0586
	7·0006	38·29		

1855.	Distances in feet. R ; R′.	Deflection in scale divisions. n ; n′.	Log. $\frac{m}{X}$	X in British units.
Sept. 27	5·0006	103·91	0·11109	8·0956
	6·5008	47·62		
	5·0006	103·91	0·11152	8·0917
	6·7510	42·57		
	5·0006	103·91	0·11032	8·1028
	7·0006	38·15		
	5·1673	94·31	0·11084	8·0980
	6·5008	47·62		
	5·1673	94·31	0·11133	8·0934
	6·7510	42·57		
	5·1673	94·31	0·11009	8·1050
	7·0006	38·15		
	5·3342	85·70	0·11194	8·0878
	6·5008	47·62		
	5·3342	85·70	0·11226	8·0848
	6·7510	42·57		
	5·3342	85·70	0·11076	8·0988
	7·0006	38·15		
Oct. 30	5·0006	104·02	0·11419	8·0636
	6·5008	47·79		
	5·0006	104·02	0·10986	8·1040
	6·7510	42·52		
	5·0006	104·02	0·11354	8·0698
	7·0006	38·31		
	5·1673	94·50	0·11352	8·0700
	6·5008	47·79		
	5·1673	94·50	0·10889	8·1130
	6·7510	42·52		
	5·1673	94·50	0·11302	8·0746
	7·0006	38·31		
	5·3342	85·89	0·11468	8·0592
	6·5008	47·79		
	5·3342	85·89	0·10935	8·1087
	6·7510	42·52		
	5·3342	85·89	0·11374	8·0678
	7·0006	38·31		
Nov. 22	5·0006	104·30	0·11471	8·0582
	6·5008	47·89		
	5·0006	104·30	0·10845	8·1163
	6·7510	42·52		
	5·0006	104·30	0·11027	8·0993
	7·0006	38·22		
	5·1673	94·05	0·11938	8·0150
	6·5008	47·89		
	5·1673	94·05	0·11177	8·0854
	6·7510	42·52		
	5·1673	94·05	0·11323	8·0718
	7·0006	38·22		
	5·3342	85·85	0·11779	8·0295
	6·5008	47·89		
	5·3342	85·85	0·10968	8·1050
	6·7510	42·52		
	5·3342	85·85	0·11161	8·0868
	7·0006	38·22		
Dec. 24	5·0006	103·86	0·11528	8·0664
	6·5008	47·80		
	5·0006	103·86	0·11572	8·0623
	6·7510	42·75		
	5·0006	103·86	0·10978	8·1176
	7·0006	38·12		
	5·1673	94·40	0·11448	8·0738
	6·5008	47·80		
	5·1673	94·40	0·11507	8·0682
	6·7510	42·75		
	5·1673	94·40	0·10880	8·1268
	7·0006	38·12		
	5·3342	85·94	0·11436	8·0750
	6·5008	47·80		
	5·3342	85·94	0·11504	8·0686
	6·7510	42·75		
	5·3342	85·94	0·10820	8·1324
	7·0006	38·12		

CORRECTED TIMES OF VIBRATION IN SECONDS, AND LOGARITHMIC VALUES OF m X USED IN REDUCING THE ABOVE OBSERVATIONS.

	s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X		s	Log. m X
Jan. 29	10·087	0·42216	Mar. 30	10·099	0·42112	May 29	10·102	0·42086	July 27	10·103	0·42078	Sept. 27	10·099	0·42112	Nov. 22	10·104	0·42070
Mar. 1	10·104	0·42070	Apr. 28	10·102	0·42086	June 30	10·102	0·42086	Aug. 29	10·101	0·42096	Oct. 30	10·103	0·42078	Dec. 24	10·087	0·42216

Date.	Simultaneous Readings of Declination Magnetometer A, and of that in the Deflection Room, B.								Readings of Magnetometer A, corrected for changes of Declination.				Differences.			Sums.	Torsion for 90°; in Arc.	Torsion Factor. $1+\frac{H}{F}$
	In the plane of Detorsion.		East of Meridian.		West of Meridian.		In the plane of Detorsion.											
	A.	B.	A.	B.	A.	B.	A.	B.	a.	b.	c.	a.	b-a.	a-c.	b-c.			
1849 April 23	1610	414	1641	412	1581	413	1608	411	1610	1643	1582	1611	33	29	61	123	2′ 3″·9	1·000383
27	1638	449	1671	450	1610	451	1643	453	1638	1670	1608	1639	32	31	62	125	2 5·9	1·000389
1851 Aug. 27	1659	450	1677	450	1638	450	1655	447	1659	1677	1638	1658	18	20	39	77	1 17·6	1·000240
1853 May 2	1682	755	1730	751	1636	753	1678	750	1682	1734	1638	1683	52	45	96	193	3 14·4	1·000602

The unit of the readings is one-tenth of a scale division, and is equal to 4″·03.

The Torsion Factors actually employed in the reductions appear in the heading of each page, and differ slightly from the above determinations.

DETERMINATIONS OF THE ZERO OF THE DECLINATION MAGNETOMETER SCALE.

Date.	Simultaneous Readings of the Declination Magnetometer A, and of that in the Deflection Room, B.				Readings of the Magnetometer A, corrected for changes of Declination.		Zero.	Date.	Simultaneous Readings of the Declination Magnetometer A, and of that in the Deflection Room, B.				Readings of the Magnetometer A, corrected for changes of Declination.		Zero.
	Direct.		Inverted.		Direct.	Inverted.			Direct.		Inverted.		Direct.	Inverted.	
	A.	B.	A.	B.					A.	B.	A.	B.			
1854 March 13 ...	1658	621			1658			1854 Dec. 29 ...	1676	763			1676		
			1336	620		1335	1495				1316	758		1311	1494
	1651	621			1651		1498		1670	757			1676		1495
			1353	622		1354	1503				1323	757		1317	1495
	1653	622			1652		1501		1669	763			1669		1495
			1337	628		1344	1497				1325	763		1325	1497
	1656	630			1647				1667	763			1667		
					Mean.....		1499						Mean.....		1495

The adopted reading for the Zero of the scale was 1497 throughout the five years.

AZIMUTH ERRORS OF THE SMALL TRANSIT INSTRUMENT USED WITH THE DECLINATION MAGNETOMETER.

Date.	Star Observed.	Sidereal Time of crossing centre wire.	Apparent Right Ascension from the Nautical Almanac.	Nautical Almanac — Observed Transit.	Meridian Factor $\frac{\sin(\text{Lat}-\text{Dec})}{15\cos.\text{Dec.}}$	Azimuth of centre wire. +E. −W.	Initials of Observer.
		h. m. s.	h. m. s.	m. s.		′ ″	
1851 January 10	51 Cephei	6 28 42·2	6 29 23·5	+ 0 41·3	— 1·34	— 0 30·6	R.
14	δ Urs. Min. S.P.	6 20 42·7	6 20 7·7	— 0 35·0	+ 1·11	— 0 31·6	,,
,,	51 Cephei	6 28 42·7	6 29 23·8	+ 0 41·1	— 1·34	— 0 30·6	,,
February 25	δ Urs. Min. S.P.	6 20 8·2	6 20 16·3	+ 0 8·1	+ 1·11	+ 0 7·3	,,
,,	51 Cephei	6 29 24·2	6 29 14·0	— 0 10·2	— 1·34	+ 0 7·6	,,
May 26	α Urs. Maj.	10 54 31·2	10 54 29·5	— 0 1·7	— 0·11	+ 0 15·5	M.
June 15	λ Urs. Min.	20 14 13·8	20 13 3·6	— 1 10·2	— 3·26	+ 0 21·8	R.
October 25	do	20 12 52·9	20 11 47·9	— 1 5·0	— 3·26	+ 0 20·2	,,
27	do	20 12 55·1	20 11 45·4	— 1 9·7	— 3·26	+ 0 21·6	,,
1852 July 15	ξ Urs. Min.	15 51 0·5	15 49 30·2	— 1 30·3	— 0·30	+ 5 1·0	R.
16	ξ do	15 50 59·5	15 49 30·1	— 1 29·4	— 0·30	+ 4 58·0	,,
19	δ do	18 25 50·9	18 20 22·0	— 5 28·9	— 1·08	+ 5 4·0	,,
October 25	Polaris	1 19 19·5	1 6 31·3	— 12 48·2	— 2·51	+ 5 11·6	S.
27	do	1 19 33·9	1 6 31·0	— 13 2·9	— 2·51	+ 5 18·1	M.
29	do	1 19 30·0	1 6 30·7	— 12 59·3	— 2·51	+ 5 16·8	,,
November 24	do	1 19 15·9	1 6 21·0	— 12 54·9	— 2·51	+ 5 14·4	R.

Date.	Star Observed.	Sidereal Time of crossing centre wire.	Apparent Right Ascension from the Nautical Almanac.	Nautical Almanac — Observed Transit.	Meridian Factor $\frac{\sin(\text{Lat}-\text{Dec})}{15\cos\text{Dec}}$	Azimuth of centre wire. + E. — W.	Initials of Observer.
		h. m. s.	h. m. s.	m. s.			
1853 February 7	δ Urs. Min. S.P.	18 13 47·3	18 19 33·4	+ 5 46·1	+ 1·11	+ 5 11·8	V.
March 2	51 Cephei	6 44 54·9	6 30 12·9	— 14 12·0	— 1·34	+ 10 53·3	M.
3	δ Urs. Min. S.P.	6 7 24·7	6 19 40·3	+ 12 15·6	+ 1·11	+ 11 2·6	S.
„	51 Cephei	6 44 56·7	6 30 12·6	— 14 44·2	— 1·34	+ 10 54·2	„
4	δ Urs. Min. S.P.	6 7 29·7	6 19 40·6	+ 12 10·9	+ 1·11	+ 10 58·4	M.
10	δ do do	6 19 43·1	6 19 42·6	— 0 0·5	+ 1·11	— 0 0·4	S.
„	51 Cephei	6 30 2·6	6 30 9·7	+ 0 7·1	— 1·34	— 0 5·3	„
16	δ Urs. Min. S.P.	6 19 46·7	6 19 44·7	— 0 2·0	+ 1·11	— 0 1·8	„
„	51 Cephei	6 29 57·7	6 30 7·3	+ 0 9·6	— 1·34	— 0 7·0	„
April 15	Polaris S.P.	13 5 5·0	13 5 0·1	— 0 4·9	+ 2·53	— 0 2·0	M.
18	do do	13 5 14·2	13 5 0·7	— 0 13·5	+ 2·53	— 0 5·4	„
July 29	δ Urs. Min.	18 20 8·7	18 20 0·0	— 0 8·7	— 1·08	+ 0 8·1	R.
September 14	δ do	18 19 46·7	18 19 43·3	— 0 3·4	— 1·08	+ 0 3·2	S.
October 25	Polaris	1 7 1·4	1 6 42·2	— 0 19·2	— 2·51	+ 0 7·8	M.
27	do	1 7 7·3	1 6 41·8	— 0 25·5	— 2·51	+ 0 10·0	„
November 22	do	1 6 59·8	1 6 33·0	— 0 26·8	— 2·51	+ 0 10·8	R.
December 23	do	1 6 22·5	1 6 12·6	— 0 9·9	— 2·51	+ 0 4·0	B.
1854 March 10	δ Urs. Min. S.P.	6 19 18·6	6 19 22·4	+ 0 3·8	+ 1·11	+ 0 3·4	S.
April 25	Polaris S.P.	13 5 14·3	13 5 13·5	— 0 0·8	+ 2·53	— 0 0·3	M.
August 22	δ Urs. Min.	18 19 28·2	18 19 31·9	+ 0 3·7	— 1·08	— 0 3·4	V.
November 6	Polaris	1 6 41·9	1 6 52·0	+ 0 10·1	— 2·51	— 0 4·1	M.
December 15	do	1 6 27·0	1 6 31·5	+ 0 4·5	— 2·51	— 0 1·8	„
1855 March 6	δ Urs. Min. S.P.	6 18 50·5	6 19 0·1	+ 0 9·6	+ 1·11	+ 0 8·6	„
7	δ do do	6 18 50·7	6 19 0·4	+ 0 9·7	+ 1·11	+ 0 8·8	„
8	δ do do	6 18 49·4	6 19 0·7	+ 0 11·3	+ 1·11	+ 0 10·0	„
April 26	Polaris do	13 5 4·9	13 5 27·2	+ 0 22·3	+ 2·53	+ 0 8·9	„
September 18	δ Urs. Min.	18 19 35·3	18 19 0·0	— 0 35·3	— 1·08	+ 0 31·8	R.
November 13	Polaris	1 7 57·7	1 7 4·9	— 0 52·8	— 2·51	+ 0 21·5	V.
14	do	1 7 58·0	1 7 4·5	— 0 53·5	— 2·51	+ 0 21·7	„
December 7	do	1 7 26·2	1 6 52·4	— 0 33·8	— 2·51	+ 0 13·7	B.
1856 January 22	51 Cephei	6 32 18·9	6 31 59·9	— 0 19·0	— 1·34	+ 0 14·2	R.
28	51 do	6 32 27·2	6 31 59·2	— 0 28·0	— 1·34	+ 0 20·9	M.
October 3	λ Urs. Min.	20 8 52·3	20 7 5·8	— 1 46·5	— 3·26	+ 0 32·2	C.
19	Polaris	1 8 30·0	1 7 1·0	— 1 29·0	— 2·51	+ 0 34·9	V.
20	do	1 8 27·2	1 7 0·2	— 1 27·0	— 2·51	+ 0 34·1	„

DETERMINATIONS OF THE DEVIATION OF THE READING TELESCOPE OF THE DECLINATION MAGNETOMETER FROM THE TRUE NORTH.

Date.	Angle between the Reading Telescope of the Declination Magnetometer and the Centre Wire of the Transit.						Correction for Azimuth of centre wire of the Transit.	Eastern Deviation of the Reading Telescope from true North.	Initials of Observer.
	Readings of the Verniers of the Theodolite.			Mean.	Differences.	No. of Repetitions.	Reading Telescope—Centre wire of Transit.		
	A.	B.	C.						
1851 January 11	° ′ ″	′ ″	′ ″	° ′ ″	° ′ ″		° ′ ″	′ ″	° ′ ″	
	180 0 0	59 10	0 0	179 59 43	3 33 15	5	0 42 39·0	+0 30·6	0 43 9·6	RR.
	183 32 45	33 0	33 10	183 32 58						
15	165 58 30	59 10	59 10	165 58 57	7 3 36	10	42 21·6	+0 31·1	42 52·7	„
	173 2 20	2 40	2 40	173 2 33						
February 27	352 46 30	46 20	46 20	352 46 23	7 13 27	10	43 20·7	− 0 7·5	43 13·2	„
	360 0 0	− 0 20	− 0 10	359 59 50						
May 27	342 30 30	30 10	30 10	342 30 17	17 29 30	24	43 43·7	− 0 15·5	43 28·2	„
	360 0 0	− 0 20	− 0 20	359 59 47						
June 17	0 48 30	48 20	48 50	0 48 33	7 12 37	10	43 15·7	− 0 21·8	42 53·9	MC.
	8 1 10	1 20	1 0	8 1 10						
October 28	0 4 20	4 0	4 10	0 4 10	28 18 50	40	42 28·2	− 0 20·9	42 7·3	„
	28 23 0	22 50	23 10	28 23 0						
1852 July 15	0 9 10	9 0	8 50	0 9 0	15 34 43	20	46 44·2	− 5 1·0	41 43·2	„
	15 43 40	43 50	43 40	15 43 43						
16	160 0 0	− 0 10	0 30	160 0 7	7 50 36	10	47 4·0	− 4 58·0	42 6·0	RR.
	167 50 30	50 20	51 20	167 50 43						
20	82 9 10	9 0	9 30	82 9 13	7 50 47	10	47 5·0	− 5 4·0	42 1·0	„
	90 0 0	− 0 10	0 10	90 0 0						
Mean Azimuth of the Reading Telescope from 1st January 1851 to 30th September 1852...								0 42 37·2		

Date.	Angle between the Reading Telescope of the Declination Magnetometer and the centre wire of the Transit.							Correction for Azimuth of centre wire of the Transit.	Eastern Deviation of the Reading Telescope from true North.	Initials of Observer.
	Readings of the Verniers of the Theodolite.			Mean.	Differences.	No. of Repetitions.	Reading Telescope—Centre wire of Transit.			
	A.	B.	C.							
1852 October 26	0 0 10	0 0	0 20	0 0 10	15 35 23	20	0 46 46·2	− 5 11·6	0 41 36·6	MC.
	15 35 30	35 30	35 40	15 35 33						
28	7 52 30	52 20	52 40	7 52 30	7 48 13	10	46 49·3	− 5 18·1	41 31·2	RR.
	15 40 40	40 30	41 0	15 40 43						
30	0 19 10	18 50	19 10	0 19 3	9 23 20	12	46 56·7	− 5 16·8	41 39·9	MC.
	9 42 30	42 10	42 30	9 42 23						
November 26	44 28 0	27 40	28 20	44 28 0	15 32 10	20	46 36·5	− 5 14·4	41 22·1	RR.
	60 0 0	0 0	0 30	60 0 10						
1853 February 8	243 18 40	18 30	18 50	243 18 40	15 45 27	20	47 16·3	− 5 11·8	42 4·5	MC.
	259 4 20	4 10	3 50	259 4 7						
March 5	0 24 20	24 20	24 20	0 24 20	8 45 53	10	52 35·3	−10 57·1	41 38·2	„
	9 10 20	10 0	10 20	9 10 13						
11	0 0 0	0 0	0 0	0 0 0	13 41 30	20	41 4·5	+0 2·8	41 7·3	„
	13 41 40	41 20	41 30	13 41 30						
17	13 41 40	41 30	41 40	13 41 37	6 50 50	10	41 5·0	+0 4·4	41 9·6	„
	20 32 30	32 10	32 40	20 32 27						
April 19	0 10 10	9 50	10 10	0 10 3	7 0 7	10	42 7·6	+0 3·7	42 11·3	„
	7 10 20	9 50	10 20	7 10 10						
„	0 23 30	23 10	23 20	0 23 20	14 3 40	20				
	14 27 0	26 40	27 20	14 27 0						
July 30	1 31 30	31 10	31 20	1 31 17	20 19 30	30	40 39·0	− 0 8·1	40 30·9	„
	21 51 0	50 40	50 40	21 50 47						
September 15	0 20 20	19 50	20 20	0 20 10	6 47 10	10	40 43·0	− 0 3·2	40 39·8	„
	7 7 30	7 0	7 30	7 7 20						
October 26	7 8 0	7 50	8 10	7 8 0	6 48 33	10	40 51·3	− 0 7·8	40 43·5	„
	13 56 40	56 20	56 40	13 56 33						
28	13 56 40	56 20	56 40	13 56 33	13 38 57	20	40 56·8	− 0 10·0	40 56·8	„
	27 35 30	35 20	35 40	27 35 30						
November 23	27 35 50	35 40	35 50	27 35 47	6 47 53	10	40 47·3	− 0 10·8	40 36·5	„
	34 23 40	23 30	23 50	34 23 40						
December 24	27 4 0	3 30	4 0	27 3 50	13 54 43	20	41 44·2	− 0 4·0	41 40·2	„
	40 58 40	58 10	58 50	40 58 33						
1854 March 13	215 29 50	29 50	29 50	215 29 50	6 45 40	10	0 40 34·0	− 0 3·4	0 40 30·6	„
	222 15 30	15 30	15 30	222 15 30						
April 25	221 36 10	36 0	36 20	221 36 10	13 42 0	20	41 6·0	+0 0·3	41 6·3	„
	235 18 0	18 10	18 20	235 18 10						
26	235 18 0	18 10	18 20	235 18 10	6 51 13	10	41 7·3	+0 0·3	41 7·6	„
	242 9 30	9 30	9 10	242 9 23						
August 23	205 21 10	21 10	21 20	205 21 13	6 51 0	10	41 6·0	+0 3·4	41 9·4	„
	212 12 10	12 20	12 10	212 12 13						
September 14	0 0 0	0 10	0 0	0 0 3	6 53 24	10	41 20·4	+0 3·4	41 23·8	„
	6 53 30	53 20	53 30	6 53 27						
November 6	6 45 50	45 30	45 40	6 45 40	6 49 40	10	40 58·0	+0 4·1	41 2·1	„
	13 35 30	35 0	35 30	13 35 20						
December 16	13 28 50	28 20	28 40	13 28 37	6 48 3	10	40 48·3	+0 1·8	40 50·1	„
	20 16 50	16 20	16 50	20 16 40						
1855 March 9	15 55 50	55 40	55 50	15 55 47	13 45 50	20	41 17·5	− 0 9·1	41 8·4	„
	29 41 40	41 30	41 40	29 41 37						
April 27	27 8 10	7 50	8 20	27 8 7	22 11 10	32	41 36·0	− 0 8·9	41 27·1	„
	49 19 20	19 10	19 20	49 19 17						
September 19	137 19 30	19 20	19 40	137 19 30	6 56 3	10	41 36·3	− 0 31·8	41 4·5	„
	144 15 40	15 20	15 40	144 15 33						
November 16	305 18 0	17 40	18 0	305 17 53	13 47 50	20	41 23·5	− 0 21·6	41 1·9	„
	319 5 50	5 30	5 50	319 5 43						
December 8	317 36 30	36 20	36 40	317 36 30	6 53 13	10	41 19·3	− 0 13·7	41 5·6	„
	324 29 50	29 30	29 50	324 29 43						
1856 January 22	286 16 30	16 20	16 0	286 16 17	13 43 28	20	41 10·3	− 0 14·2	40 56·1	RR.
	300 0 0	− 0 20	− 0 25	299 59 45						
28	284 54 0	53 50	53 50	284 53 53	15 17 54	22	41 43·4	− 0 20·9	41 22·5	„
	300 11 50	11 50	11 40	300 11 47						
October 7	75 46 10	46 50	46 10	75 46 27	8 20 30	12	42 16·5	− 0 32·2	41 44·3	„
	84 6 20	7 0	7 30	84 6 57	7 6 7	10				
„	77 0 30	1 10	0 50	77 0 50	7 6 10	10				
	84 6 50	7 30	6 40	84 7 0						
December 20	0 0 0	− 0 20	0 30	0 0 3	8 8 7	12	40 39·1	− 0 34·9	40 4.2	„
	8 8 10	7 50	8 30	8 8 10						
„	360 1 20	1 0	0 40	360 1 20	3 22 57	5				
	183 24 10	23 50	24 50	183 24 17						
22	339 40 20	40 10	40 40	339 40 23	20 19 40	30	40 39·3	− 0 34·1	40 5·2	„
	360 0 0	− 0 20	0 30	360 0 3						

Mean Azimuth of the Reading Telescope from 1st October 1852 to 31st December 1855..... 0 41 8·2

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE MONTHS.

Gottingen Mean Time.	Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean absolute Declination to the East of North.
Madras Mean Time.	h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41	
January 1851	8	- 4	4	16	12	4	4	8	12	4	4	- 4	-16	-28	-24	-12	61	85	29	-24	-48	-48	-40	- 8	0 58 38
2	16	4	8	16	12	8	8	8	12	0	- 8	-16	-28	-40	-64	-72	-20	28	36	36	20	4	-12	0	1 0 28
3	4	4	8	12	8	8	8	8	4	0	- 8	-16	-28	-44	-65	-73	-20	32	44	44	32	16	- 8	-12	1 0 44
4	29	12	25	29	21	17	17	17	12	8	4	- 4	-12	-32	-44	-40	4	21	-20	-60	-48	- 8	12	29	0 58 55
5	24	28	32	32	24	16	16	16	8	0	-12	-16	-28	-44	-61	-61	-20	28	32	12	4	4	- 8	4	1 0 8
Mean	16	9	15	21	16	11	11	11	10	2	- 4	-11	-22	-38	-52	-52	1	39	24	2	- 8	- 6	-11	3	0 59 47
February 1851	38	- 7	-15	-15	-11	-11	- 7	1	1	1	1	- 7	-11	-23	-23	-19	- 3	1	- 3	- 7	5	13	38	54	0 58 34
2	4	8	4	12	20	12	8	16	20	8	0	-20	-36	-44	-60	-48	- 4	20	24	4	12	4	- 4	- 8	1 0 20
3	40	12	8	8	16	8	8	8	0	0	0	-12	-20	-28	-41	-37	0	20	4	-24	-24	-12	16	40	1 0 20
4	0	0	4	8	12	12	12	24	28	20	12	0	-17	-29	-49	-45	-12	20	36	0	-26	-25	-17	- 4	0 59 24
6	8	8	4	8	8	8	4	4	4	0	- 6	-13	-21	-29	-37	-29	12	48	40	8	- 6	- 6	-13	0	0 59 12
Mean	18	4	1	4	9	6	5	11	11	6	2	-10	-21	-31	-42	-36	- 1	22	20	- 4	- 7	- 5	4	16	0 59 34
March 1851	16	- 9	-25	-25	-13	-13	- 9	- 1	8	12	8	3	- 1	- 1	20	32	44	48	24	-26	-57	-53	-13	20	0 58 56
2	- 4	-16	-16	-20	-12	-12	- 4	- 4	- 4	0	- 4	-12	-20	-24	4	44	80	80	36	-16	-41	-41	-20	- 4	0 59 28
3	20	0	- 8	-12	- 4	- 4	- 8	0	8	8	4	- 4	- 8	-20	0	20	44	49	24	-20	-48	-40	0	28	1 1 8
4	4	- 4	0	- 4	8	4	8	12	16	16	12	4	0	- 4	8	24	40	40	20	-28	-60	-52	-32	- 8	1 0 12
5	4	0	- 4	- 4	0	0	4	8	4	12	8	4	0	0	16	36	44	36	0	-37	-57	-53	-21	4	0 59 24
Mean	8	- 6	-11	-13	- 4	-6	- 2	3	6	10	6	- 1	- 6	-10	10	31	50	51	21	-25	-53	-48	-17	8	0 59 50
April 1851	- 4	0	- 8	-16	-16	- 4	13	13	21	29	25	17	9	9	65	81	77	57	- 4	- 76	-108	- 96	-60	-24	0 58 59
2	8	4	- 4	- 8	- 4	- 4	4	8	20	24	24	20	16	32	92	109	80	24	-57	-117	-129	-101	-57	-20	0 59 32
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	4	8	- 8	-12	- 4	0	8	16	24	33	29	24	20	33	85	105	89	41	-24	- 88	-125	-101	-76	-32	1 0 44
6	12	16	- 4	-12	- 8	4	4	12	20	28	28	20	12	20	77	101	85	40	-32	- 93	-113	-101	-61	-16	1 0 4
Mean	5	7	-6	-12	- 8	- 1	7	12	21	28	26	20	14	24	80	99	83	40	-29	- 93	-119	-100	-64	-23	0 59 50
May 1851	3	15	- 1	-17	-17	- 9	- 5	3	11	23	27	18	16	27	95	112	87	19	-46	- 90	-102	- 86	-54	-21	0 59 29
2	12	16	- 8	-21	-21	- 8	0	8	20	24	28	32	32	64	129	129	80	- 8	-77	-129	-137	- 97	-57	-21	0 59 20
3	4	12	- 9	-17	-13	- 4	4	16	32	28	28	28	32	64	125	121	76	0	-73	-125	-146	-109	-65	-33	0 59 16
4	-16	4	0	- 8	- 4	12	20	32	44	49	53	53	57	89	129	129	77	-16	-97	-149	-169	-137	-93	-56	1 2 29
5	- 4	- 8	-16	-20	-24	-12	- 4	0	8	12	20	16	16	40	84	101	76	16	-33	- 65	- 73	- 65	-45	-20	0 59 40
Mean	0	8	- 7	-17	-16	- 4	3	12	23	27	31	30	30	57	112	118	79	2	-65	-112	-125	- 99	-63	-30	1 0 3
June 1851	1	5	- 7	-23	-19	-15	-11	1	13	17	21	17	17	63	130	146	106	41	-43	- 96	-128	-112	- 80	-35	0 58 2
2	-16	4	- 8	-24	-16	-12	- 8	- 8	- 8	8	20	24	36	64	137	157	121	48	-28	- 93	-117	-113	- 89	-49	0 59 48
3	-13	0	-21	-29	-21	- 9	4	16	28	40	52	52	60	88	149	149	96	12	-73	-138	-166	-146	-105	-57	0 57 11
4	-37	-12	-16	-24	-12	4	16	24	28	32	40	32	36	52	96	109	80	24	-37	- 93	-121	-109	-101	-65	1 1 37
5	-12	- 4	-16	-24	-20	-12	0	4	8	16	24	20	24	49	105	125	93	36	-24	- 72	- 85	- 80	- 68	-44	0 58 27
Mean	-15	- 1	-14	-25	-18	- 9	0	7	14	23	31	29	35	61	123	137	99	32	-41	- 98	-123	-112	-89	-50	0 59 1
July 1851	-16	- 2	-10	-23	-31	-23	-15	- 6	2	18	30	30	34	54	139	155	118	54	-19	- 95	-123	-123	-91	-51	0 69 14
2	-12	- 4	-16	-24	-20	-12	- 8	0	12	24	28	33	41	69	117	125	81	12	-48	-109	-125	-105	-60	-28	1 0 44
3	- 8	- 4	-25	-33	-29	-17	0	4	8	20	24	32	44	80	153	153	96	8	-61	-109	-129	-113	-73	-17	0 57 19
4	-32	-20	-20	-24	-16	- 4	8	16	24	37	41	37	37	53	101	109	77	28	-28	- 72	- 92	- 88	-72	-48	1 2 45
5	-32	-16	-24	-20	-24	-12	- 4	12	12	24	28	28	38	53	113	125	97	49	-20	- 80	-109	-101	-65	-60	0 58 27
Mean	-20	- 9	-19	-25	-24	-14	- 4	6	12	25	30	32	38	62	125	133	84	30	-35	- 93	-116	-106	-76	-41	0 59 42
August. 1851	-11	- 7	- 7	-16	-15	-51	-11	- 3	9	17	21	25	29	53	126	142	88	21	-47	- 96	-104	- 92	-59	-19	1 0 11
2	28	24	- 4	-16	-16	-16	- 4	- 4	8	12	16	20	24	65	177	177	105	8	-84	-125	-125	-105	-68	-16	1 0 28
3	21	21	- 8	-16	-16	-12	- 4	0	12	16	21	25	33	73	164	166	109	8	-88	-149	-157	-121	-92	-24	1 0 52
4	- 4	- 8	-24	-28	-20	-12	0	0	8	16	24	28	38	57	121	133	83	24	-40	- 89	-105	- 85	-68	-40	1 2 29
5	- 9	- 9	-13	-13	- 6	0	8	16	24	28	36	38	36	60	116	125	76	8	-65	-113	-130	-109	-73	-41	0 59 12
Mean	5	4	-11	-18	-14	-18	- 2	2	12	18	24	27	32	62	139	149	96	14	-65	-114	-124	-102	-72	-28	1 0 38
September 1851	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	28	4	0	- 4	-12	-12	- 8	- 8	- 4	4	16	16	12	28	96	113	64	16	-49	-105	-113	- 93	-41	8	0 59 36
3	32	8	0	0	0	- 4	- 4	4	8	8	4	16	28	61	149	153	77	-16	-89	-149	-165	-125	-52	12	1 0 32
4	37	12	4	0	- 4	- 4	8	12	20	24	24	24	24	48	121	125	66	-16	-88	-149	-153	-109	-40	20	1 0 40
5	32	0	-20	-20	-12	- 8	- 4	4	12	16	16	20	20	48	133	149	97	12	-81	-145	-157	-117	-48	12	1 0 12
Mean	32	6	- 4	- 6	- 7	- 7	- 2	3	9	13	15	19	21	46	125	135	76	- 1	-77	-137	-147	-111	-45	13	1 0 12
October 1851	-40	-36	-19	-11	-16	1	21	65	29	41	49	41	33	17	41	49	33	9	-48	-72	-72	-68	-32	11	1 1 36
2	16	-12	- 4	0	- 4	0	4	12	8	8	4	- 4	-12	-16	12	48	56	24	-36	-65	-44	-20	8	32	0 58 31
3	8	-16	-12	- 4	- 8	- 4	4	8	8	8	8	- 4	-12	- 8	20	32	24	8	-24	-48	-40	-24	8	20	1 0 20
4	28	0	0	4	0	0	8	16	12	12	4	0	- 4	0	28	36	32	- 4	-52	-76	-52	-16	20	40	1 0 28
6	21	0	0	0	0	8	8	8	17	13	8	0	- 4	- 8	17	49	49	25	-36	-76	-60	-28	8	29	1 1 0
Mean	7	-13	- 7	- 2	- 5	1	9	22	15	16	15	7	0	- 3	24	43	39	12	-39	-67	-64	-31	2	26	1 0 23
November 1851	10	- 6	6	6	2	2	6	10	6	10	10	- 2	-14	-22	-22	- 2	10	-10	-38	-38	- 6	22	35	36	1 0 46
2	8	- 4	8	8	8	4	8	6	0	- 4	- 8	-20	-32	-45	-57	-24	20	40	24	8	12	24	16	20	1 0 20
3	24	8	12	12	8	4	8	12	12	4	0	-13	-25	-41	-41	-33	- 9	-13	-17	-21	- 4	20	32	32	1 1 17
4	20	16	12	16	12	4	12	12	12	6	0	-16	-28	-40	-68	-48	-20	0	- 4	0	36	53	32	24	1 0 32
5	20	12	12	12	12	8	8	4	8	4	- 4	-12	-20	-28	-32	-12	4	- 8	-36	-44	-16	12	28	28	1 0 28
Mean	16	6	10	11	8	4	8	9	8	4	0	-13	-24	-35	-44	-24	1	2	-14	-19	4	26	29	28	1 0 41
December. 1851	32	12	24	24	16	8	4	4	4	0	- 8	-12	-20	-28	-36	- 32	- 8	-12	-36	-28	- 8	12	20	36	1 0 36
2	44	28	28	28	16	12	16	12	12	0	- 8	-24	-41	-61	-87	-101	-61	-20	8	20	32	40	44	44	1 0 24
3	37	20	20	25	20	12	12	8	8	4	0	- 8	-16	-28	-48	- 48	-20	-20	-28	-16	0	4	16	29	0 58 47
4	36	24	16	16	12	12	12	12	12	4	- 8	-16	-28	-40	-52	- 56	-28	- 4	-12	-16	0	12	20	36	1 0 28
5	28	16	20	20	16	8	8	4	- 4	- 4	- 8	-16	-24	-32	-24	4	28	0	-44	-52	-24	4	16	32	1 0 28
Mean	35	20	22	23	16	10	10	8	6	1	- 6	-15	-26	-38	-61	- 47	-18	-11	-22	-18	0	14	23	35	1 0 9
Mean of 5 years	9	3	- 2	- 5	- 4	- 2	4	9	12	14	14	9	6	12	44	55	49	19	-26	-63	-71	-55	-31	- 3	0 59 [illegible]

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE YEARS.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean absolute Declination to the East of North.
Madras Mean Time	h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41	
1851 January	8	- 4	4	16	12	4	4	8	12	4	4	- 4	-16	-28	- 24	- 12	61	85	29	-24	- 48	- 48	-40	- 8	0 ° 58 ′ 39 ″
February	38	- 7	-15	-15	-11	-11	- 7	1	1	1	1	- 7	-11	-23	- 23	- 19	- 3	1	- 3	- 7	5	13	38	54	58 34
March	16	- 9	-25	-25	-13	-13	- 9	- 1	8	12	8	3	- 1	- 1	20	32	44	48	24	-25	- 57	- 53	-13	20	58 56
April	- 4	0	- 8	-16	-16	- 4	13	13	21	29	25	17	9	9	65	81	77	57	- 4	-76	-108	- 96	-60	-24	58 59
May	3	15	- 1	-17	-17	- 9	- 5	3	11	23	27	19	15	27	95	112	87	19	-46	-90	-102	- 86	-54	-21	59 29
June	1	5	- 7	-23	-19	-15	-11	1	13	17	21	17	17	53	130	146	106	41	-43	-98	-128	-112	-80	-35	58 2
July	-15	- 2	-10	-23	-31	-23	-15	- 6	2	18	30	30	34	54	139	155	118	54	-19	-95	-123	-123	-91	-51	59 14
August	-11	- 7	- 7	-15	-15	-51	-11	- 3	9	17	21	25	29	63	126	142	98	21	-47	-96	-104	- 92	-59	-19	1 0 11
September	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
October	-40	-36	-19	-11	-15	1	21	65	29	41	49	41	33	17	41	49	33	9	-48	-72	- 72	- 68	-32	11	1 36
November	10	- 6	6	6	2	2	6	10	6	10	10	- 2	-14	-22	- 22	- 2	10	-10	-38	-38	- 6	22	35	35	0 46
December	32	12	24	24	16	8	4	4	4	0	- 8	-12	-20	-28	- 36	- 32	- 8	-12	-36	-28	- 8	12	20	36	0 36
Mean	3	-3	-5	-9	-10	-10	-1	9	11	16	17	12	7	10	47	59	57	28	-21	-59	-68	-57	-31	0	0 59 33
1852 January	16	4	8	16	12	8	8	8	12	0	- 8	-16	-28	-40	- 64	- 72	- 20	28	36	36	20	4	-12	0	1 0 28
February	4	8	4	12	20	12	8	16	20	8	0	-20	-36	-44	- 60	- 48	- 4	20	24	4	12	4	- 4	- 8	0 20
March	- 4	-16	-16	-20	-12	-12	- 4	- 4	- 4	0	- 4	-12	-20	-24	4	44	80	80	36	- 16	- 41	- 41	-20	- 4	0 59 28
April	8	4	- 4	- 8	- 4	- 4	4	8	20	24	24	20	16	32	92	109	80	24	-57	-117	-129	-101	-57	-20	59 32
May	12	16	- 8	-21	-21	- 8	0	8	20	24	28	32	32	64	129	129	80	- 8	-77	-129	-137	- 97	-57	-21	59 20
June	-16	4	- 8	-24	-16	-12	- 8	- 8	- 8	8	20	24	36	64	137	157	121	48	-28	- 93	-117	-113	-89	-49	59 48
July	-12	- 4	-16	-24	-20	-12	- 8	0	12	24	28	33	41	69	117	125	81	12	-48	-109	-125	-105	-60	-28	1 0 44
August	28	24	- 4	-16	-16	-16	- 4	- 4	8	12	16	20	24	65	177	177	105	8	-84	-125	-126	-105	-68	-16	0 28
September	28	4	0	- 4	-12	-12	- 8	- 8	- 4	4	16	16	12	28	96	113	64	16	-49	-105	-113	- 93	-41	8	0 59 36
October	16	-12	- 4	0	- 4	0	4	12	8	8	4	- 4	-12	-16	12	48	56	24	-36	- 65	- 44	- 20	8	32	58 31
November	8	- 4	8	8	8	4	8	8	0	- 4	- 8	-20	-32	-45	- 57	- 24	20	40	24	8	12	24	16	20	1 0 20
December	44	28	28	28	16	12	16	12	12	0	- 8	-24	-41	-61	- 97	-101	- 61	-20	8	20	32	40	44	44	0 24
Mean	11	5	-1	-4	-4	-3	1	4	8	9	9	4	-1	8	41	55	50	23	-21	-58	-63	-50	-28	-3	0 59 50
1853 January	4	4	8	12	8	8	8	8	4	0	- 8	-16	-28	-44	- 65	- 73	- 20	32	44	44	32	16	- 8	- 12	1 0 44
February	40	12	8	8	16	8	8	8	0	0	0	-12	-20	-28	- 41	- 37	0	20	4	- 24	- 24	- 12	16	40	0 20
March	20	0	- 8	-12	- 4	- 4	- 8	0	8	8	4	- 4	- 8	-20	0	20	44	49	24	- 20	- 48	- 40	0	28	1 8
April	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
May	4	12	- 9	-17	-13	- 4	4	16	32	28	28	28	32	64	125	121	76	0	-73	-125	-146	-109	- 65	- 33	0 59 16
June	-13	0	-21	-29	-21	- 9	4	18	28	40	52	62	60	88	149	149	96	13	-73	-138	-166	-146	-105	- 57	57 11
July	- 8	- 4	-25	-33	-29	-17	0	4	8	20	24	32	44	80	153	163	86	8	-61	-109	-129	-113	- 73	- 17	57 19
August	21	21	- 8	-16	-16	-12	- 4	0	12	16	21	25	33	73	154	166	109	8	-88	-149	-157	-121	- 92	- 24	1 0 52
September	32	8	0	0	0	- 4	- 4	4	8	8	4	16	28	61	149	153	77	-16	-89	-149	-165	-125	- 52	12	0 32
October	8	-16	-12	- 4	- 8	- 4	4	8	8	8	8	- 4	-12	- 8	20	32	24	8	-24	- 48	- 40	- 24	8	20	0 20
November	24	8	12	12	8	4	8	12	12	4	0	-13	-25	-41	- 41	- 33	- 9	-13	-17	- 21	- 4	20	32	32	1 17
December	37	20	20	25	20	12	12	8	8	4	0	- 8	-16	-28	- 48	- 48	- 20	-20	-28	- 16	0	4	16	29	0 58 47
Mean	18	6	-3	-5	-4	-2	3	8	12	12	12	9	8	18	50	55	43	8	-35	-69	-77	-59	-29	2	0 59 48
1854 January	29	12	25	29	21	17	17	17	12	8	4	- 4	-12	-32	- 44	- 40	4	21	-20	- 60	- 48	- 8	12	29	0 58 55
February	0	0	4	8	12	12	12	24	28	20	12	0	-17	-29	- 49	- 45	-12	20	36	0	- 25	- 25	- 17	- 4	59 24
March	4	- 4	0	- 4	8	4	8	12	16	16	12	4	0	- 4	8	24	40	40	20	- 28	- 60	- 52	- 32	- 8	1 0 12
April	4	8	- 8	-12	- 4	0	8	16	24	33	29	24	20	33	85	105	89	41	-24	- 88	-125	-101	- 76	-32	0 44
May	-16	4	0	- 8	- 4	12	20	32	44	49	53	53	57	89	129	129	77	-16	-97	-149	-169	-137	- 93	-56	2 29
June	-37	-12	-16	-24	-12	4	16	24	28	32	40	32	36	52	96	109	80	24	-37	- 93	-121	-109	-101	-65	1 37
July	-32	-20	-20	-24	-16	- 4	8	16	24	37	41	37	37	53	101	109	77	28	-28	- 72	- 92	- 88	- 72	-48	2 45
August	- 4	- 8	-24	-28	-20	-12	0	0	8	16	24	28	36	57	121	133	93	24	-40	- 89	-105	- 85	- 88	-40	2 29
September	37	12	4	0	- 4	- 4	8	12	20	24	24	24	24	49	121	125	65	-16	-88	-149	-153	-109	- 40	20	0 40
October	28	0	0	4	0	0	8	16	12	12	4	0	- 4	0	28	36	32	- 4	-52	- 76	- 52	- 16	20	40	0 28
November	29	16	12	16	12	4	12	12	12	8	0	-16	-28	-40	- 68	- 48	-20	0	- 4	0	36	53	32	24	0 32
December	36	24	16	16	12	12	12	12	12	4	- 8	-16	-28	-40	- 52	- 56	-28	- 4	-12	- 16	0	12	20	36	0 28
Mean	6	3	-1	-2	0	4	11	16	20	22	20	14	10	16	40	48	41	13	-29	-68	-76	-55	-35	-9	1 0 54
1855 January	24	28	32	32	24	16	16	16	8	0	-12	-16	-28	-44	- 61	- 61	-20	28	32	12	4	4	- 8	4	1 0 8
February	8	8	4	8	8	8	4	4	4	0	- 5	-13	-21	-29	- 37	- 29	12	48	40	8	- 5	- 5	-13	0	0 59 12
March	4	0	- 4	- 4	0	0	4	8	4	12	8	4	0	0	16	38	44	36	0	- 37	- 57	- 53	-21	4	59 24
April	12	16	- 4	-12	- 8	4	4	12	20	28	28	20	12	20	77	101	85	40	-32	- 93	-113	-101	-61	-16	1 0 4
May	- 4	- 8	-16	-20	-24	-12	- 4	0	8	12	20	16	16	40	84	101	76	16	-33	- 65	- 73	- 65	-45	-20	0 59 40
June	-12	- 4	-16	-24	-20	-12	0	4	8	16	24	20	24	49	105	125	93	36	-24	- 72	- 85	- 80	-68	-44	58 27
July	-32	-16	-24	-20	-24	-12	- 4	12	12	24	28	28	36	53	113	126	97	49	-20	- 80	-109	-101	-85	-60	58 27
August	- 9	- 9	-13	-13	- 5	0	8	16	24	28	36	36	36	60	116	125	76	8	-65	-113	-130	-109	-73	-41	59 12
September	32	0	-20	-20	-12	- 8	- 4	4	12	16	18	20	20	48	133	149	97	12	-81	-145	-157	-117	-48	12	1 0 12
October	21	0	0	0	0	8	8	8	17	13	8	0	- 4	- 8	17	49	49	25	-36	- 76	- 60	- 28	8	29	1 0
November	20	12	12	12	12	8	8	4	8	4	- 4	-12	-20	-28	- 32	- 12	4	- 8	-36	- 44	- 16	12	28	28	0 28
December	28	16	20	20	16	8	8	4	- 4	- 4	- 8	-16	-24	-32	- 24	4	28	0	-44	- 62	- 24	4	16	32	0 28
Mean	8	4	-2	-3	-3	1	4	8	10	12	12	7	4	11	42	59	53	24	-25	-63	-69	-53	-31	-6	0 59 43
Mean of 5 years	9	3	-2	-5	-4	-2	4	9	12	14	14	9	6	12	44	55	49	19	-26	-63	-71	-55	-31	-3	° 0 ′ 59 ″ 59

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE MONTHS.

Gottingen Mean Time.		Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	$1+\frac{\Delta X}{X}$
Madras Mean Time.		h. m. 4 41	h.m. 6 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41	
January.	1851	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	000	·000	·00	·00	·00	·00	·000	·000	·000	
	2	-116	-198	-248	-306	-331	-372	-389	-422	-479	-405	-323	-298	-273	-265	-289	-124	173	0696	1074	1199	1018	537	215	-050	1·001605
	3	-116	-256	-265	-364	-413	-430	-421	-389	-364	-339	-298	-298	-289	-265	-149	050	372	0644	0934	0909	0761	521	248	050	0777
	4	-108	-268	-298	-405	-421	-454	-430	-354	-298	-256	-215	-215	-198	-190	-100	066	306	0561	0769	0843	0810	562	306	116	2182
	5	-165	-273	-323	-348	-323	-356	-364	-356	-348	-323	-289	-265	-248	-182	-108	100	438	0802	1018	0950	0678	306	041	-091	3256
	5	-124	-206	-256	-314	-331	-348	-389	-372	-256	-239	-215	-157	-108	-058	000	058	223	0389	0562	0694	0686	463	281	033	4314
Mean		-126	-238	-278	-347	-364	-392	-399	-381	-349	-312	-268	-247	-223	-192	-129	030	302	0598	0871	0919	0791	478	218	012	1·002427
February	1851	-165	-133	-273	-397	-414	-464	-406	-513	-431	-431	-372	-364	-354	-406	-281	083	645	1208	1440	1274	0860	339	008	-157	1·001746
	2	-033	-215	-298	-438	-454	-454	-421	-397	-273	-281	-256	-273	-306	-348	-289	008	348	0719	0975	1157	0909	496	223	083	0331
	3	-216	-281	-372	-496	-513	-561	-586	-570	-446	-396	-323	-273	-240	-231	-206	050	604	1000	1281	1257	0984	578	198	-091	2298
	4	-182	-248	-281	-413	-438	-454	-471	-471	-391	-348	-265	-248	-248	-198	-100	074	364	0678	0892	0992	0818	546	240	-033	3231
	5	-133	-223	-281	-314	-374	-339	-397	-361	-348	-314	-248	-223	-206	-165	-091	058	372	0669	0867	0876	0694	389	100	-050	4298
Mean		-146	-220	-301	-412	-439	-454	-474	-466	-379	-354	-293	-276	-273	-270	-193	055	447	0855	1091	1111	0853	470	154	-050	1·002381
March	1851	-206	-190	-298	-455	-521	-687	-645	-620	-604	-597	-546	-521	-513	-504	-364	033	670	1274	1680	1564	1208	662	173	-108	1·002192
	2	-165	-223	-314	-405	-421	-438	-446	-389	-306	-331	-339	-314	-323	-384	-537	-050	619	1207	1388	1248	0950	496	165	-066	0554
	3	-140	-215	-289	-364	-364	-381	-396	-388	-372	-364	-323	-314	-314	-323	-231	008	430	0843	1055	1049	0752	421	198	-033	2256
	4	-265	-298	-372	-463	-454	-430	-405	-364	-331	-331	-323	-281	-256	-256	-223	025	495	0967	1190	1157	0876	413	017	-182	3388
	5	-281	-256	-397	-413	-446	-504	-454	-405	-405	-389	-348	-306	-289	-265	-198	066	521	0975	1257	1190	0884	454	108	-141	4404
Mean		-201	-236	-334	-420	-441	-453	-459	-433	-404	-400	-376	-347	-339	-346	-311	016	547	1053	1316	1242	0934	489	132	-106	1·002559
April	1851	-182	-231	-331	-480	-521	-554	-687	-562	-513	-504	-496	-464	-431	-439	-331	008	637	1299	1580	1415	1034	546	149	-074	1·002358
	2	-273	-323	-463	-588	-611	-578	-521	-446	-331	-331	-314	-298	-273	-231	-108	182	694	1157	1405	1182	0769	323	058	-074	0447
	3	-281	-281	-446	-555	-546	-521	-471	-463	-396	-395	-381	-356	-331	-314	-190	157	661	1240	1471	1240	0851	463	083	-157	2578
	4	-265	-281	-348	-454	-446	-446	-421	-397	-331	-305	-256	-215	-165	-133	-091	124	513	0859	1115	0981	0686	331	116	-182	3182
	5	-331	-314	-356	-364	-397	-397	-356	-322	-273	-289	-289	-256	-223	-231	-190	066	521	0926	1165	1050	0744	381	-017	-281	4438
Mean		-266	-286	-389	-488	-504	-499	-471	-438	-369	-365	-347	-318	-285	-270	-182	107	605	1096	1347	1174	0817	409	078	-154	1·002601
May	1851	-141	-240	-381	-488	-480	-496	-496	-472	-414	-422	-422	-455	-447	-431	-256	-058	554	1010	1258	1266	0960	571	255	000	1·002375
	2	-231	-348	-405	-488	-438	-471	-496	-463	-388	-339	-281	-306	-298	-281	-091	223	603	0967	1198	1050	0851	454	066	-116	1041
	3	-148	-190	-323	-413	-364	-356	-339	-331	-281	-281	-281	-248	-173	-140	-074	100	454	0761	0851	0761	0586	348	116	-058	2479
	4	-165	-265	-397	-488	-430	-438	-421	-430	-372	-364	-348	-314	-256	-223	-100	121	504	0802	1009	1009	0761	529	206	-017	3447
	5	-281	-364	-413	-397	-381	-405	-421	-389	-289	-289	-289	-298	-273	-231	-091	149	570	0876	1017	0967	0744	471	173	-133	4595
Mean		-193	-281	-384	-455	-419	-433	-435	-417	-349	-339	-324	-324	-289	-251	-122	107	537	0883	1057	1011	0780	475	163	-065	1·002787
June	1851	-074	-149	-265	-306	-306	-348	-356	-372	-397	-422	-431	-406	-381	-356	-273	-083	215	0612	0927	1043	0927	662	364	074	1·002814
	2	-281	-372	-372	-372	-331	-348	-339	-314	-306	-281	-256	-265	-256	-240	-133	058	413	0678	0926	0917	0785	570	248	-074	1239
	3	-190	-298	-331	-381	-389	-364	-323	-314	-323	-298	-248	-223	-198	-198	-050	148	529	0736	0881	0785	0586	395	116	-074	2686
	4	-256	-298	-339	-356	-331	-348	-331	-298	-281	-265	-215	-198	-173	-182	-083	083	364	0653	0825	0818	0678	421	157	-133	3843
	5	-256	-289	-289	-273	-256	-273	-248	-256	-239	-231	-190	-198	-206	-265	-100	083	306	0611	0802	0818	0603	364	083	-124	4784
Mean		-211	-281	-319	-338	-323	-336	-319	-311	-309	-299	-268	-258	-243	-235	-128	058	365	0658	0873	0875	0716	483	194	-056	1·003073
July	1851	-298	-339	-348	-397	-391	-389	-372	-372	-381	-381	-331	-331	-323	-281	-173	017	298	0736	1050	1099	0901	644	289	000	1·000818
	2	-248	-265	-314	-372	-356	-848	-314	-298	-273	-273	-215	-215	-206	-133	017	157	389	0678	0810	0802	0636	372	116	-173	1306
	3	-149	-240	-298	-381	-405	-397	-364	-306	-256	-289	-256	-265	-265	-231	-100	100	421	0711	0959	0851	0644	446	182	-041	2851
	4	-265	-356	-356	-356	-298	-323	-289	-265	-248	-256	-206	-206	-198	-182	-091	033	306	0595	0818	0851	0702	529	240	-050	3743
	5	-173	-239	-248	-256	-231	-231	-206	-198	-165	-223	-239	-239	-239	-223	-149	-025	190	0487	0694	0719	0503	430	182	-066	4768
Mean		-227	-288	-313	-352	-334	-338	-309	-288	-265	-284	-249	-251	-246	-210	-099	056	321	0611	0866	0864	0697	484	202	-066	1·002607
August	1851	-060	-190	-265	-339	-339	-339	-323	-306	-298	-314	-323	-306	-289	-248	-215	-074	248	0562	0761	0834	0785	595	323	108	1·000702
	2	-215	-265	-314	-381	-372	-364	-348	-289	-231	-231	-240	-223	-216	-190	-083	091	471	0719	0752	0752	0628	430	223	008	1603
	3	-149	-182	-256	-339	-331	-331	-314	-273	-240	-248	-213	-265	-248	-231	-182	033	397	0719	0818	0744	0603	381	190	000	3182
	4	-231	-223	-248	-314	-298	-298	-281	-273	-273	-240	-223	-215	-206	-182	-091	050	265	0603	0777	0719	0619	381	124	-091	3956
	5	-116	-182	-256	-331	-372	-331	-339	-289	-231	-215	-215	-190	-165	-149	-091	025	306	0546	0686	0694	0562	381	223	041	4909
Mean		-152	-208	-268	-341	-342	-333	-321	-286	-255	-250	-255	-240	-225	-200	-132	025	337	0630	0759	0749	0639	434	217	013	1·002872
September	1851	-223	-198	-240	-339	-372	-397	-397	-348	-248	-281	-281	-273	-265	-281	-108	-066	405	0802	1165	1058	0744	331	017	-223	0·999834
	2	-190	-173	-289	-381	-381	-348	-273	-240	-149	-133	-091	-074	-083	-100	-124	041	364	0694	0876	0802	0529	215	-116	-306	1·001356
	3	-223	-273	-381	-454	-471	-430	-356	-314	-216	-206	-165	-116	-083	-124	-108	008	471	0810	1025	0867	0562	248	025	-133	2785
	4	-182	-173	-223	-281	-281	-306	-289	-306	-265	-265	-240	-182	-157	-149	-157	-017	356	0702	0813	0752	0546	298	050	-116	3868
	5	-149	-133	-198	-265	-348	-281	-273	-256	-265	-239	-190	-165	-165	-149	-133	091	454	0761	0892	0719	0381	124	-066	-149	4917
Mean		-193	-190	-266	-344	-371	-352	-318	-293	-228	-225	-193	-162	-151	-161	-126	011	410	0754	0960	0840	0552	243	-018	-185	1·002552
October	1851	-265	-364	-381	-413	-397	-454	-471	-504	-446	-356	-281	-273	-273	-306	-248	149	628	1033	1306	1140	0769	405	083	-124	1·000232
	2	-231	-339	-389	-430	-430	-463	-454	-463	-381	-364	-348	-306	-265	-256	-157	100	586	1090	1248	1207	0859	438	058	-198	1677
	3	-041	-165	-356	-446	-479	-513	-513	-513	-446	-372	-298	-314	-314	-298	-231	074	654	0934	1115	1066	0818	486	173	008	3305
	4	-231	-165	-240	-306	-323	-372	-381	-381	-298	-298	-298	-248	-206	-206	-157	124	537	0909	1066	0975	0628	215	-083	-190	3983
	5	-108	-173	-298	-289	-322	-405	-446	-397	-354	-298	-248	-215	-190	-182	-149	058	454	0769	0975	0926	0636	314	074	-025	4678
Mean		-175	-241	-333	-377	-390	-441	-453	-452	-387	-338	-295	-271	-250	-250	-188	101	552	0929	1142	1063	0742	372	061	-105	1·002775
November	1851	-149	-231	-372	-446	-479	-430	-463	-438	-348	-323	-273	-256	-248	-231	-173	100	513	0892	1115	1066	0777	372	091	-074	1·000777
	2	-198	-256	-323	-372	-381	-348	-389	-413	-348	-323	-265	-281	-298	-289	-116	190	537	0867	1038	1033	0702	381	033	-165	1752
	3	-216	-273	-323	-389	-413	-356	-372	-389	-323	-314	-281	-248	-231	-190	-056	215	570	0867	0992	0876	0586	306	058	-091	3182
	4	-190	-314	-364	-389	-397	-421	-430	-381	-348	-323	-265	-215	-173	-157	-025	215	513	0719	0859	0810	0603	372	165	-025	4148
	5	-108	-165	-298	-381	-380	-348	-306	-306	-239	-248	-223	-173	-149	-124	-100	149	413	0694	0826	0711	0471	281	108	-008	4884
Mean		-172	-248	-336	-395	-412	-381	-392	-385	-321	-306	-261	-235	-220	-198	-096	174	509	0808	0970	0809	0628	342	091	-073	1·002949
December	1851	-066	-157	-215	-298	-372	-421	-405	-381	-364	-306	-281	-281	-281	-231	-149	033	356	0661	0917	0901	0620	421	173	008	1·000620
	2	-157	-240	-314	-331	-323	-372	-356	-331	-306	-248	-215	-206	-190	-141	-017	190	430	0619	0711	0641	0529	350	190	008	1777
	3	-033	-198	-331	-463	-566	-513	-397	-364	-306	-273	-256	-240	-190	-149	-050	086	289	0554	0761	0785	0678	438	265	116	3082
	4	-108	-190	-223	-265	-314	-298	-331	-298	-273	-231	-206	-206	-190	-141	-083	091	231	0471	0651	0702	0644	413	206	050	4248
	5	-091	-141	-198	-273	-281	-265	-215	-198	-173	-165	-173	-167	-133	-133	-100	058	281	0562	0652	0619	0430	149	-033	-108	4976
Mean		-091	-185	-256	-326	-369	-374	-341	-314	-284	-245	-226	-218	-197	-169	-080	088	317	0573	0740	0730	0580	354	169	015	1·002940
Mean of 5 years		-179	-242	-315	-383	-392	-400	-392	-372	-325	-310	-280	-262	-245	-238	-149	059	437	0790	1000	0956	0727	419	138	-069	1·002718

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE YEARS.

Gottingen Mean Time.	Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	$1+\frac{\Delta X}{X}$
Madras Mean Time.	h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41	
1851 January	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·000	·00	·00	·00	·00	·000	·000	·000	
February	-116	-198	-248	-306	-331	-372	-389	-422	-479	-405	-323	-298	-273	-265	-289	-124	173	0596	1074	1199	1018	537	215	-050	1·001605
March	-165	-133	-273	-397	-414	-464	-496	-513	-431	-431	-372	-364	-364	-406	-281	083	645	1208	1440	1274	0860	339	008	-157	1746
April	-206	-190	-298	-455	-521	-587	-645	-620	-604	-587	-546	-521	-513	-504	-364	033	670	1274	1689	1564	1208	662	173	-108	2192
May	-182	-231	-331	-480	-521	-554	-587	-562	-513	-504	-496	-464	-431	-439	-331	008	637	1289	1580	1415	1034	546	149	-074	2358
June	-141	-240	-381	-488	-480	-496	-496	-472	-414	-422	-422	-455	-447	-431	-256	-058	554	1010	1258	1266	0960	571	256	000	2375
July	-074	-149	-265	-306	-306	-348	-356	-372	-397	-422	-431	-406	-381	-356	-273	-082	215	0612	0927	1043	0927	662	364	074	2814
August	-098	-339	-348	-397	-381	-389	-372	-372	-381	-381	-331	-331	-323	-281	-173	017	298	0736	1050	1099	0901	644	289	000	0818
September	-050	-190	-265	-339	-339	-339	-323	-306	-298	-314	-323	-306	-289	-248	-215	-074	248	0562	0761	0834	0785	595	323	108	0702
October	-223	-198	-240	-339	-372	-397	-397	-348	-248	-281	-281	-273	-265	-281	-108	-066	405	0802	1165	1058	0744	331	017	-223	0·999834
November	-265	-364	-381	-413	-397	-454	-471	-504	-446	-356	-281	-273	-273	-306	-248	149	628	1033	1306	1140	0769	405	083	-124	1·000232
December	-149	-231	-372	-446	-479	-430	-463	-438	-348	-323	-273	-256	-248	-231	-173	100	513	0892	1115	1066	0777	372	091	-074	0777
	-066	-157	-215	-298	-372	-421	-405	-381	-364	-306	-281	-281	-281	-231	-149	033	356	0661	0917	0901	0620	421	173	008	0620
Mean	-161	-219	-301	-389	-409	-438	-450	-442	-410	-394	-363	-352	-341	-332	-238	001	445	0890	1189	1155	0884	507	178	-052	1·001339
1852 January	-116	-256	-265	-364	-413	-430	-421	-389	-364	-339	-298	-298	-289	-265	-149	050	372	0644	0934	0909	0761	521	248	050	1·000777
February	-033	-215	-298	-438	-454	-454	-421	-397	-273	-281	-256	-273	-306	-348	-289	008	348	0719	0975	1157	0909	496	223	083	0331
March	-165	-223	-314	-405	-421	-438	-446	-389	-306	-331	-339	-314	-323	-884	-537	-050	619	1207	1388	1248	0950	496	165	-066	0554
April	-273	-323	-463	-586	-611	-578	-521	-446	-331	-331	-314	-298	-273	-231	-108	182	694	1157	1405	1182	0769	323	058	-074	0447
May	-231	-348	-405	-488	-438	-471	-496	-463	-388	-339	-281	-306	-298	-281	-091	223	603	0967	1198	1050	0851	454	066	-116	1041
June	-281	-372	-372	-372	-331	-348	-339	-314	-306	-281	-256	-265	-256	-240	-133	058	413	0678	0926	0917	0785	570	248	-074	1239
July	-248	-265	-314	-372	-356	-348	-314	-298	-273	-273	-215	-215	-206	-133	017	157	389	0678	0810	0802	0636	372	116	-173	1306
August	-215	-265	-314	-381	-372	-364	-348	-289	-231	-231	-240	-223	-215	-190	-083	091	471	0719	0752	0752	0628	430	223	008	1603
September	-190	-173	-289	-381	-381	-348	-273	-240	-149	-133	-091	-074	-083	-100	-124	041	364	0694	0876	0802	0529	215	-116	-306	1356
October	-231	-339	-389	-430	-430	-463	-454	-463	-381	-364	-348	-306	-265	-256	-157	100	586	1000	1248	1207	0859	438	058	-198	1677
November	-198	-256	-323	-372	-381	-348	-389	-413	-348	-323	-265	-281	-298	-289	-116	190	537	0867	1058	1033	0702	381	033	-165	1752
December	-157	-240	-314	-331	-323	-372	-356	-331	-306	-248	-215	-206	-190	-141	-017	190	430	0619	0711	0641	0529	350	190	008	1777
Mean	-195	-273	-338	-410	-409	-414	-398	-369	-305	-290	-260	-255	-250	-280	-149	103	485	0829	1023	0975	0742	420	126	-085	1·001156
1853 January	-108	-256	-298	-405	-421	-454	-430	-364	-298	-256	-215	-215	-198	-190	-100	066	306	0561	0769	0843	0810	562	306	116	1·002182
February	-215	-281	-372	-496	-513	-561	-586	-570	-446	-396	-323	-273	-240	-231	-206	050	604	1000	1281	1257	0984	578	198	-091	2298
March	-140	-215	-289	-364	-364	-381	-396	-388	-372	-364	-323	-314	-314	-323	-231	008	430	0843	1066	1049	0752	421	198	-033	2256
April	-281	-281	-446	-555	-546	-521	-471	-463	-396	-396	-381	-356	-331	-314	-190	157	661	1240	1471	1240	0851	463	083	-157	2578
May	-148	-190	-323	-413	-364	-356	-339	-331	-281	-281	-248	-173	-140	-074	100	454	0761	0851	0761	0586	348	116	-058	2479
June	-190	-298	-331	-381	-389	-364	-323	-314	-323	-298	-248	-223	-198	-198	-050	148	529	0736	0884	0785	0586	398	116	-074	2686
July	-149	-240	-298	-381	-405	-397	-364	-306	-256	-289	-256	-265	-265	-231	-100	100	421	0711	0959	0851	0644	448	182	-041	2851
August	-149	-182	-256	-339	-331	-331	-314	-273	-240	-248	-273	-265	-248	-231	-182	033	397	0719	0818	0744	0603	381	190	000	3182
September	-223	-273	-381	-454	-471	-430	-356	-314	-215	-206	-165	-116	-083	-124	-108	008	471	0810	1025	0867	0562	248	025	-133	2785
October	-041	-165	-356	-446	-479	-513	-513	-513	-448	-372	-298	-314	-314	-298	-231	074	554	0934	1115	1066	0818	488	173	008	3305
November	-215	-273	-323	-389	-413	-356	-372	-389	-323	-314	-281	-248	-231	-190	-066	215	570	0867	0992	0876	0586	306	058	-091	3182
December	-033	-198	-331	-463	-556	-513	-397	-364	-306	-273	-256	-240	-190	-149	-050	066	289	0554	0761	0785	0678	438	265	116	3082
Mean	-158	-238	-334	-424	-438	-431	-405	-382	-325	-308	-275	-256	-232	-218	-132	085	465	0811	0999	0927	0705	423	159	-036	1·002739
1854 January	-165	-273	-323	-348	-323	-356	-364	-356	-348	-323	-289	-265	-248	-182	-108	100	438	0802	1018	0950	0678	306	041	-091	1·003256
February	-182	-248	-281	-413	-438	-454	-471	-471	-397	-348	-265	-248	-248	-198	-100	074	364	0678	0892	0992	0818	546	240	-033	3231
March	-265	-298	-372	-463	-454	-430	-405	-364	-331	-331	-323	-281	-258	-256	-223	025	496	0967	1190	1157	0876	413	017	-182	3388
April	-265	-281	-348	-454	-446	-446	-421	-397	-331	-306	-256	-215	-165	-133	-081	124	513	0859	1115	0984	0686	331	116	-182	3182
May	-165	-265	-397	-488	-430	-438	-421	-430	-372	-364	-348	-314	-256	-223	-100	121	504	0802	1009	1009	0761	529	206	-017	3447
June	-256	-298	-339	-356	-331	-348	-331	-298	-281	-265	-215	-198	-173	-182	-083	083	364	0653	0826	0818	0678	421	157	-133	3843
July	-265	-356	-356	-356	-298	-323	-289	-265	-248	-256	-206	-206	-198	-182	-091	033	306	0595	0818	0851	0702	529	240	-050	3743
August	-231	-223	-248	-314	-298	-298	-281	-273	-273	-240	-223	-215	-206	-182	-091	050	265	0603	0777	0719	0619	381	124	-091	3966
September	-182	-173	-223	-281	-281	-306	-289	-306	-265	-265	-240	-182	-167	-149	-157	-017	356	0702	0843	0752	0546	298	050	-116	3868
October	-231	-165	-240	-308	-323	-372	-381	-381	-298	-298	-248	-206	-206	-157	124	537	0909	1066	0975	0628	215	-083	-190	3983
November	-190	-314	-364	-389	-397	-421	-430	-381	-348	-323	-265	-215	-173	-157	-025	216	513	0719	0859	0810	0603	372	185	-025	4148
December	-108	-190	-223	-265	-314	-298	-331	-298	-273	-231	-206	-206	-190	-141	-083	091	231	0471	0661	0702	0644	413	206	050	4248
Mean	-209	-257	-310	-369	-361	-374	-368	-352	-314	-296	261	-233	-206	-183	-109	085	407	0730	0923	0893	0687	396	123	-088	1 003692
1855 January	-124	-206	-256	-314	-331	-348	-389	-372	-268	-239	-215	-157	-108	-068	000	058	223	0389	0562	0694	0686	463	281	033	1·004314
February	-133	-223	-281	-314	-374	-339	-397	-381	-348	-314	-248	-223	-206	-165	-091	058	372	0669	0867	0876	0694	389	100	-050	4299
March	-231	-256	-397	-413	-446	-504	-454	-405	-405	-389	-348	-306	-289	-265	-198	086	521	0976	1257	1190	0884	464	108	-141	4404
April	-331	-314	-366	-364	-397	-397	-356	-322	-273	-289	-289	-256	-223	-231	-190	066	521	0926	1165	1050	0744	381	-017	-281	4438
May	-281	-364	-413	-397	-381	-405	-421	-389	-289	-289	-289	-298	-273	-231	-091	149	570	0876	1017	0967	0744	471	173	-133	4595
June	-256	-289	-289	-273	-256	-273	-248	-256	-239	-231	-190	-198	-206	-206	-100	083	366	0611	0802	0818	0603	364	083	-124	4784
July	-173	-239	-248	-266	-231	-231	-206	-198	-165	-223	-239	-239	-223	-149	-025	190	0487	0694	0719	0603	430	182	-066	4768
August	-116	-182	-256	-331	-372	-331	-339	-289	-231	-215	-215	-190	-165	-149	-091	025	306	0546	0686	0694	0562	381	223	041	4909
September	-149	-133	-198	-285	-348	-281	-273	-256	-285	-239	-190	-165	-165	-149	-133	091	464	0761	0892	0719	0381	124	-066	-149	4917
October	-108	-173	-298	-289	-322	-405	-446	-397	-364	-298	-248	-215	-190	-182	-149	068	454	0769	0975	0926	0636	314	074	-025	4678
November	-108	-165	-298	-381	-389	-348	-306	-306	-239	-248	-223	-173	-149	-124	-100	149	413	0694	0826	0711	0471	281	108	-008	4884
December	-091	-141	-198	-273	-281	-265	-216	-198	-173	-165	-173	-157	-133	-133	-100	068	291	0562	0652	0619	0430	149	-033	-108	4975
Mean	-175	-224	-291	-322	-344	-344	-337	-314	-271	-262	-239	-215	-195	-176	-116	070	384	0689	0868	0832	0620	350	101	-084	1·004864
Mean of 5 years	-179	-242	-316	-383	-392	-400	-392	-372	-325	-310	-280	-262	-245	-238	-149	069	437	0790	1000	0956	0728	419	137	-069	1·002718

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE MONTHS.

Gottingen Mean Time.		Noon.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Madras Mean Time.		h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41
January	1851	·00 0360	·00 0475	·00 0285	·00 0909	·00 0917	·00 1024	·00 1024	·00 0975	·00 0786	·00 1024	·00 1237	·00 1122	·00 1204	·00 1196	·00 1384	·00 1376	·00 0206	·00 -1861	·00 -3039	·00 -3301	·00 -3703	·00 -2712	·00 -1098	·00 -0311
	2	-0191	0100	0366	0366	0308	0466	0532	0607	0540	0640	0715	0540	0574	0682	0773	0856	0507	-0324	-0766	-0890	-1746	-2087	-1554	-0973
	3	-0413	-0246	0082	0156	0173	0296	0296	0493	0542	0715	0871	0822	0986	0920	0608	0534	0074	-0682	-0978	-1168	-1282	-1142	-1010	-0600
	4	0699	0517	0122	0517	0638	0851	0608	1064	0942	1003	1003	0851	1520	1216	1307	0678	-0882	-2888	-3891	-3800	-2493	-0973	0669	0760
	5	-0312	0000	0338	0364	0623	0623	0805	0779	0883	1039	1065	1013	1584	1480	0857	0519	0000	-0701	-1013	-1143	-1974	-3064	-2337	-1143
	Mean	0027	0169	0239	0462	0532	0652	0653	0784	0739	0894	0978	0870	1174	1099	0986	0773	-0019	-1289	-1937	-2058	-2240	-1996	-1066	-0453
February	1851	1035	0764	0967	0942	0993	1078	1171	1162	1281	1188	1349	1171	1128	1222	0950	-0136	-2189	-4378	-5413	-4319	-2249	0204	2002	2002
	2	-0721	-0352	0598	0606	0705	0844	0976	1018	1163	1065	1229	1131	1172	1114	1319	1450	0721	-0221	-1262	-1491	-3941	-2450	-2786	-1901
	3	0251	0220	0471	0345	0345	0502	0643	0612	0753	0565	0816	0737	0894	0941	0832	0910	0502	-0847	-2160	-2762	-2746	-1679	-0486	0031
	4	-0428	-0163	0276	0122	0306	0275	0214	0153	0367	0122	0765	0398	0561	1010	0888	0643	0275	-0398	-0765	-0765	-0918	-1438	-1408	-0673
	5	-0106	0264	0739	0844	0897	1134	1108	1134	1108	0997	1461	1266	1451	1688	1134	0950	-0185	-1899	-3166	-3350	-3060	-2374	-1345	-0607
	Mean	0006	0149	0610	0572	0649	0767	0822	0815	0934	0767	1122	0941	1039	1195	1025	0763	-0176	-1549	-2551	-2637	-2583	-1547	-0805	-0230
March	1851	0124	0364	0521	0554	0712	0852	1009	1059	1158	1043	1167	1059	1374	1713	1961	1398	-0033	-2317	-3790	-3542	-2896	-1969	-1134	-0323
	2	-0341	0263	0526	0619	0836	0898	0975	1068	1215	1076	1153	0991	1223	1548	1564	0720	-0441	-2268	-3290	-2957	-2268	-1556	-1022	-0619
	3	-0287	-0261	0287	0444	0836	1202	1620	1410	1280	0836	1045	0444	1097	1672	1620	0601	-0576	-2403	-3500	-3657	-2612	-1123	-0340	0052
	4	-0029	0176	0439	0351	0644	0996	1406	1289	1347	0967	1377	0498	1054	1201	1142	1054	0117	-0967	-3134	-3427	-2958	-2197	-1318	-0498
	5	-0104	0052	0131	0653	0783	1071	1149	1279	1227	1018	1514	0836	1436	1410	0914	0366	-0731	-1968	-2976	-3056	-2402	-1436	-0835	-0627
	Mean	-0127	0119	0381	0524	0762	1004	1232	1221	1245	0988	1251	0766	1237	1509	1440	0828	-0333	-1983	-3338	-3328	-2627	-1656	-0930	-0403
April	1851	0360	0619	0619	0798	0910	1111	1238	1387	1372	1223	1216	1231	1320	1633	1522	0753	-0947	-2745	-4073	-4165	-3165	-1939	-0671	0328
	2																								
	3	0161	0376	0645	1048	1102	1451	1532	1774	1397	1344	1693	1801	2096	2419	2042	0242	-1935	-3977	-5267	-4972	-3521	-1989	-0134	0296
	4	0486	0488	0911	1165	1094	1337	1306	1580	1124	0881	1094	1185	1549	1671	0820	0213	-1367	-2917	-4010	-4041	-2977	-1823	-0152	0616
	5	0619	0935	1142	1116	1168	0961	1090	0961	1064	1064	1454	1558	1869	1843	0763	-0441	-1739	-3011	-4186	-3972	-2700	-1610	-0415	0493
	Mean	0386	0604	0829	1037	1068	1215	1291	1426	1239	1128	1364	1444	1708	1891	1284	0192	-1497	-3162	-4382	-4285	-3088	-1840	-0343	0408
May	1851	0331	0066	-0066	0381	0588	0927	0968	0911	0977	0844	0720	0687	0853	1407	1838	1631	0099	-1888	-2534	-3502	-2583	-1921	-0836	0331
	2	0413	0400	0526	0700	0778	0874	0840	0844	0923	0970	1031	0957	0983	1327	1183	0504	-0800	-2257	-2745	-2866	-2218	-1618	-0783	0048
	3	0319	0584	0611	1089	0850	1461	1142	0903	1009	1036	1036	0877	1302	1222	0717	0053	-1195	-2364	-3719	-3241	-2736	-1195	-0319	0478
	4	0541	0693	0232	0825	0748	1134	0645	0593	0851	0851	0851	0722	1160	0954	1057	0000	-1418	-2449	-2862	-2681	-1908	-0990	-0258	0670
	5	0796	0576	0823	0604	0988	1097	1207	1289	1234	1125	1015	0658	0933	0988	0219	-0384	-1564	-2469	-2716	-2798	-2386	-1426	-0576	0494
	Mean	0480	0444	0425	0720	0790	1099	0960	0908	0999	0965	0931	0780	1046	1180	1003	0361	-0976	-2285	-2915	-3018	-2368	-1428	-0554	0404
June	1851																								
	2	-0098	0018	0142	0320	0484	0524	0613	0711	0724	0609	0635	0604	0671	0933	0893	0649	0004	-0893	-1057	-1595	-1968	-1364	-1008	-0511
	3	-0026	-0390	0312	0442	0521	0494	0703	1171	1016	0625	0963	0521	0521	0573	0026	0078	-0599	-1379	-1900	-1822	-1119	-0677	0234	0156
	4	0696	0361	0316	0619	0645	0567	0722	1109	0902	0490	0799	0516	0645	0722	0361	0387	-0645	-1521	-2140	-2526	-1779	-1083	-0361	0387
	5	0394	0132	0736	0841	0736	0973	1078	0973	1052	0447	0631	0421	0394	0239	-0079	-0079	-0894	-1525	-1657	-1762	-1657	-1236	-0421	0210
	Mean	0241	0030	0426	0555	0596	0640	0779	0991	0923	0543	0757	0515	0558	0617	0300	0259	-0533	-1329	-1688	-1926	-1631	-1090	-0389	0060
July	1851	0263	0609	0441	0522	0606	0708	0801	0825	0764	0661	0647	0595	0703	0891	0914	0609	-0145	-1036	-1664	-2147	-2101	-1776	-1111	-0586
	2	0291	0013	-0030	0091	0260	0338	0416	0468	0455	0156	-0069	-0061	0113	0247	0000	-0091	-0755	-1037	-1024	-0716	-0152	0030	0629	0421
	3	0451	-0080	-0159	-0133	0106	0133	0285	0345	0398	0371	0477	0557	0636	0504	0053	-0318	-0981	-1484	-1590	-1007	-0424	0451	1007	0769
	4	0206	0514	0643	0823	1132	1106	1003	1183	0926	0642	0746	0309	0797	1029	-0028	-0514	-1286	-1646	-1800	-1929	-1517	-1492	-0900	-0180
	5	0579	0579	0973	0947	1052	1026	1131	1078	0868	0552	0605	0289	0921	0763	0026	-0132	-0710	-1420	-2078	-2525	-2341	-1499	-0894	-0053
	Mean	0358	0327	0374	0450	0631	0662	0723	0780	0682	0476	0481	0338	0634	0687	0193	-0089	-0781	-1325	-1631	-1665	-1319	-0857	-0254	0074
August	1851	-0125	0287	0443	0569	0560	0622	0757	0891	0783	0743	0712	0721	0739	0986	0452	-0188	-0861	-1254	-1330	-1307	-1263	-1240	-1030	-0582
	2	0310	0153	0418	0513	0486	0499	0562	0688	0616	0548	0504	0513	0557	0652	0292	-0787	-1821	-2356	-1848	-1146	-0499	0229	0369	0544
	3	0907	0207	0078	0570	0363	0259	0467	1114	0492	0467	0440	0269	0207	0492	-0052	-0778	-1737	-2721	-2488	-1114	-0285	0415	1270	1218
	4	0252	0378	0780	1284	1082	0906	1032	1661	1007	0956	0881	0654	0554	1158	0302	-0705	-2089	-2718	-2643	-2643	-1359	-0931	-0352	0458
	5	0177	0405	0912	1014	1014	0760	0659	0684	0862	0811	0786	0709	0760	0786	0152	-0228	-1292	-1926	-2331	-2027	-1292	-0912	-0507	0076
	Mean	0304	0286	0526	0790	0701	0609	0695	1008	0752	0706	0665	0571	0563	0795	0229	-0537	-1558	-2195	-2128	-1647	-0940	-0488	-0050	0343
September	1851	0561	0600	0818	0883	0978	1007	1046	1219	1304	1284	1366	1209	1095	1300	0763	-0381	-1535	-2982	-3947	-3546	-2552	-0913	0108	0306
	2	1022	0840	0958	1135	1317	1539	1785	1844	1803	1762	1835	1735	1685	1848	0722	-1385	-3515	-5036	-5885	-4677	-2379	-0377	0445	1022
	3	0293	0426	0612	0799	0958	1358	1757	2236	2050	1651	1864	1677	1730	1810	0452	-1864	-3221	-4313	-4872	-3834	2156	-0452	0879	0519
	4	0253	0404	0985	1061	1238	1364	1541	1945	1692	1314	1518	1339	1364	1566	0152	-1718	-3132	-3800	-4042	-2930	-1067	-0581	0328	0379
	5	0383	0318	1192	1271	1138	1403	1377	1589	1403	0900	1006	0768	0788	0874	0185	-1536	-3072	-4503	-4422	-3575	-1324	0503	1483	1403
	Mean	0542	0518	0913	1030	1126	1334	1501	1767	1650	1382	1617	1346	1328	1480	0455	-1377	-2896	-4145	-4634	-3712	-2016	-0364	0640	0766
October	1851	-0154	0250	0703	0898	1003	1103	1220	1207	1370	1461	1534	1425	1416	1797	1520	0485	-1125	-2799	-3997	-3298	-2386	-1828	-1066	-0653
	2	-0241	0247	0771	0901	0912	1195	1507	1307	1336	1454	1548	1613	1772	2001	1789	0800	-1107	-2649	-3855	-3125	-3314	-2543	-1583	-0871
	3	0053	0372	0717	1089	0903	0958	1036	0637	1248	1514	1567	1408	1673	1912	0637	-0877	-1939	-3054	-3028	-2443	-2151	-1116	-0744	-0.52
	4	0329	0835	0860	1113	0810	0734	0769	0405	0987	1341	1569	1366	1594	1594	0683	-0481	-1897	-3365	-3921	-3112	-2125	-0885	0105	0885
	5	0281	0511	0793	0844	0818	0767	0818	0767	0869	0921	0793	0716	0997	0997	0486	-0486	-1841	-2813	-2915	-1969	-1151	-0563	-0179	0460
	Mean	0054	0443	0769	0969	0889	0951	1068	0865	1162	1338	1402	1306	1490	1666	1023	-0112	-1582	-2936	-3503	-2789	-2225	-1387	-0633	-0126
November	1851	-1874	-1280	-1109	-0620	-0264	0158	0369	0792	0950	1122	1082	1082	1610	2376	2705	2468	0185	-1372	-1768	-2732	-1623	-1201	-0409	-0739
	2	-0131	0226	0379	0671	0880	1013	1072	1067	0904	1261	1524	1393	1653	1940	1903	1670	0328	-1181	-2574	-3347	-3544	-3136	-2523	-1371
	3	0000	0225	0506	0760	0732	1041	0814	1013	0703	1041	0985	0478	1041	1210	1238	0563	-0814	-2110	-2560	-2589	-2083	-1463	-0563	0169
	4	0051	0565	0691	0694	0720	0643	0771	0668	0745	0900	0643	0206	0745	0745	0540	0540	0051	-0640	-0745	-0951	-1594	-2262	-2230	-0977
	5	0110	0548	0384	0493	0411	0904	0986	0988	0877	0986	0685	0137	0603	0740	0548	-0056	-1699	-2877	-2356	-1534	-0767	-0466	0219	-0164
	Mean	-0369	0057	0160	0400	0498	0758	0802	0903	0836	1062	0984	0659	1110	1402	1387	1037	-0390	-1616	-2001	-2231	-1922	-1706	-1102	-0616
December	1851	-0063	0251	0179	0188	0304	0376	0626	0779	0644	0726	0770	0805	0984	1263	1047	0653	-0421	-1396	-1817	-1745	-1718	-1396	-0805	-0242
	2	-0986	-0570	-0733	-0461	-0118	-0027	0226	0344	0190	0235	0281	0226	0335	0896	0995	1041	0570	0299	0228	0308	-0163	-1113	-1303	-0760
	3	-0312	-0511	-0227	-0227	0085	0170	0709	1192	0738	0768	0653	0511	0766	1050	0880	1107	0142	-0681	-0965	-0880	-1646	-1562	-1107	-0464
	4	-0186	0453	0586	0692	0613	0639	0719	0799	0905	0879	0746	0586	0826	1012	0820	0203	-0266	-0692	-1305	-1039	-1385	-1593	-1198	-0772
	5	0103	0491	0568	0568	0516	0723	0648	0620	0852	0878	0800	0516	0646	0671	0646	-0129	-1110	-2221	-2376	-1859	-1317	-0852	0052	0542
	Mean	-0289	0023	0075	0152	0280	0376	0586	0747	0666	0697	0650	0529	0711	0876	0879	0503	-0217	-0938	-1247	-1043	-1246	-1304	-0872	-0337
Mean of 5 years		0128	0262	0171	0633	0706	0836	0922	1011	0982	0914	1007	0834	1047	1206	0852	0224	-0909	-2056	-2650	-2500	-2005	-1300	-0635	-0018

MEAN HOURLY VARIATIONS FROM THE MONTHLY MEANS ARRANGED BY THE YEARS.

Gottingen Mean Time.	Noon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Madras Mean Time	h.m. 4 41	h.m. 5 41	h.m. 6 41	h.m. 7 41	h.m. 8 41	h.m. 9 41	h.m. 10 41	h.m. 11 41	h.m. 12 41	h.m. 13 41	h.m. 14 41	h.m. 15 41	h.m. 16 41	h.m. 17 41	h.m. 18 41	h.m. 19 41	h.m. 20 41	h.m. 21 41	h.m. 22 41	h.m. 23 41	h.m. 0 41	h.m. 1 41	h.m. 2 41	h.m. 3 41
	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00	·00
January	0360	0475	0285	0909	0917	1024	1024	0975	0786	1024	1237	1122	1204	1198	1384	1376	0205	-1851	-3039	-3301	-3703	-2712	-1098	-0311
February	1035	0764	0987	0942	0993	1078	1171	1162	1281	1188	1349	1171	1128	1222	0950	-0136	-2189	-4378	-5413	-4319	-2249	0204	2002	2002
March	0124	0364	0521	0554	0712	0852	1009	1059	1168	1043	1167	1059	1374	1713	1961	1398	-0033	-2317	-3790	-3542	-2896	-1969	-1134	-0323
April	0380	0619	0619	0798	0910	1111	1238	1387	1372	1223	1216	1231	1320	1633	1522	0753	-0947	-2745	-4073	-4155	-3155	-1939	-0671	0328
May	0331	0066	-0066	0381	0588	0927	0968	0911	0977	0844	0720	0687	0853	1407	1838	1631	0099	-1888	-2534	-3502	-2583	-1921	-0836	0331
1851 June																								
July	0262	0609	0441	0522	0605	0708	0801	0825	0764	0661	0647	0595	0703	0891	0914	0609	-0146	-1036	-1664	-2147	-2161	-1776	-1111	-0586
August	-0125	0287	0443	0569	0560	0622	0757	0891	0783	0743	0712	0721	0739	0886	0452	-0188	-0851	-1264	-1330	-1307	-1263	-1240	-1030	-0682
September	0561	0600	0818	0883	0978	1007	1046	1219	1304	1284	1366	1209	1095	1300	0763	-0381	-1635	-2982	-3947	-3546	-2552	-0913	0108	0306
October	-0154	0250	0703	0898	1003	1103	1220	1207	1370	1461	1534	1425	1416	1797	1620	0485	-1125	-2799	-3997	-3298	-2386	-1828	-1066	-0653
November	-1874	-1280	-1109	-0620	-0264	0158	0369	0792	0950	1122	1082	1082	1610	2375	2705	2468	0185	-1372	-1768	-2732	-1623	-1201	-0409	-0739
December	-0063	0251	0179	0188	0304	0376	0626	0779	0644	0725	0770	0805	0984	1253	1047	0653	-0421	-1396	-1817	-1745	-1718	-1396	-0805	-0242
Mean	0076	0273	0346	0548	0664	0815	0930	1019	1035	1029	1073	1010	1130	1425	1369	0788	-0614	-2183	-3034	-3054	-2390	-1517	-0550	-0043
January	-0191	0100	0366	0366	0308	0466	0532	0607	0540	0640	0715	0540	0574	0682	0773	0858	0507	-0324	-0765	-0890	-1746	-2087	-1554	-0973
February	-0721	-0352	0598	0600	0705	0844	0975	1016	1163	1066	1229	1131	1172	1114	1319	1450	0721	-0221	-1262	-1491	-3941	-2450	-2786	-1901
March	-0341	0263	0526	0619	0836	0898	0975	1068	1215	1076	1153	0991	1223	1548	1564	0720	-0441	-2268	-3290	-2957	-2268	-1556	-1022	-0619
April																								
May	0413	0400	0526	0700	0778	0874	0840	0844	0923	0970	1031	0957	0983	1327	1183	0504	-0800	-2267	-2745	-2866	-2218	-1618	-0783	0048
1852 June	-0098	0018	0142	0320	0484	0524	0613	0711	0724	0609	0635	0604	0671	0933	0893	0649	0004	-0893	-1057	-1595	-1968	-1364	-1068	-0511
July	0291	0013	-0030	0091	0260	0338	0416	0468	0465	0156	-0069	-0061	0113	0247	0000	-0091	-0785	-1037	-1024	-0716	-0152	0030	0629	0421
August	0310	0163	0418	0513	0486	0499	0562	0688	0616	0548	0504	0513	0657	0652	0292	-0787	-1821	-2356	-1848	-1146	-0499	0229	0369	0544
September	1022	0840	0958	1135	1317	1539	1785	1844	1803	1762	1835	1735	1685	1848	0722	-1385	-3518	-5036	-5885	-4677	-2379	-0377	0445	1022
October	-0241	0247	0771	0901	0912	1195	1507	1307	1338	1464	1548	1613	1772	2001	1789	0800	-1107	-2649	-3655	-3125	-3314	-2543	-1583	-0871
November	-0131	0226	0379	0671	0890	1043	1072	1057	0904	1261	1524	1393	1553	1940	1903	1670	0328	-1181	-2674	-3347	-3544	-3138	-2523	-1371
December	-0986	-0570	-0733	-0461	-0118	-0027	0226	0344	0180	0235	0281	0226	0335	0896	0995	1041	0570	0299	0226	0308	-0163	-1113	-1303	-0760
Mean	-0061	0122	0356	0496	0623	0745	0864	0905	0897	0889	0944	0877	0967	1199	1039	0493	-0576	-1629	-2171	-2046	-2047	-1453	-1011	-0452
January	-0419	-0246	0082	0168	0173	0296	0296	0493	0642	0715	0871	0922	0986	0920	0608	0534	0074	-0682	-0978	-1158	-1282	-1142	-1010	-0600
February	0251	0220	0471	0345	0315	0502	0643	0612	0753	0565	0816	0737	0894	0941	0832	0910	0502	-0847	-2150	-2762	-2746	-1679	-0486	0031
March	-0287	-0261	0287	0444	0836	1202	1620	1410	1280	0838	1045	0444	1097	1672	1620	0601	-0575	-2403	-3500	-3657	-2612	-1123	-0340	0052
April	0161	0376	0015	1048	1102	1451	1532	1774	1397	1344	1693	1801	2096	2419	2042	0242	-1935	-3977	-5267	-4872	-3521	-1989	-0134	0296
May	0319	0584	0611	1089	0860	1461	1142	0903	1009	1038	1036	0877	1302	1222	0717	0053	-1195	-2364	-3719	-3241	-2736	-1195	-0319	0478
1853 June	-0026	-0390	0312	0442	0521	0494	0703	1171	1015	0625	0963	0521	0521	0573	0026	0078	-0599	-1379	-1900	-1822	-1119	-0677	0231	0156
July	0451	-0080	-0159	-0133	0106	0133	0265	0345	0398	0371	0477	0557	0636	0504	0053	-0318	-0981	-1481	-1590	-1907	-0424	0451	1007	0769
August	0907	0207	0678	0570	0363	0258	0167	1114	0192	0467	0440	0259	0207	0492	-0052	-0778	-1737	-2721	-2488	-1114	-0285	0415	1270	1218
September	0293	0426	0612	0799	0953	1358	1757	2236	2050	1651	1864	1677	1730	1810	0152	-1864	-3221	-4313	-4872	-3834	-2156	-0452	0879	0719
October	0053	0372	0717	1089	0903	0956	1036	0637	1248	1514	1567	1408	1673	1912	0637	-0877	-1939	-3054	-3028	-2443	-2151	-1116	-0744	-0462
November	0000	0225	0506	0760	0732	1041	0414	1013	0703	1041	0985	0478	1041	1210	1238	0563	-0814	-2110	-2560	-2589	-2083	-1463	-0563	0169
December	-0312	-0511	-0227	-0227	0085	0170	0709	1192	0738	0766	0653	0511	0766	1050	0880	1107	0142	-0681	-0966	-0880	-1646	-1562	-1107	-0454
Mean	0116	0077	0328	0532	0581	0777	0915	1075	0969	0911	1034	0841	1079	1227	0754	0021	-1023	-2168	-2751	-2457	-1897	-0961	-0109	0199
January	0699	0517	0122	0517	0638	0851	0608	1064	0942	1003	1003	0851	1520	1216	1307	0578	-0882	-2888	-3891	-3800	-2493	-0973	0669	0760
February	-0428	-0153	0275	0122	0306	0275	0214	0153	0367	0122	0765	0398	0551	1010	0888	0643	0275	-0398	-0765	-0765	-0918	-1438	-1408	-0673
March	-0029	0176	0439	0351	0644	0996	1406	1289	1347	0967	1377	0498	1054	1201	1142	1054	0117	-0967	-3134	-3427	-2958	-2197	-1318	-0498
April	0486	0486	0911	1185	1094	1337	1306	1580	1124	0881	1094	1185	1549	1671	0820	0213	-1367	-2917	-4010	-4041	-2977	-1823	-0152	0516
May	0541	0593	0232	0825	0748	1134	0645	0593	0851	0851	0851	0722	1160	0951	1057	0000	-1418	-2449	-2862	-2681	-1908	-0980	-0258	0670
1854 June	0696	0361	0516	0619	0645	0567	0722	1109	0902	0490	0799	0516	0645	0722	0361	0387	-0646	-1621	-2140	-2526	-1779	-1083	-0361	0387
July	0206	0514	0643	0423	1132	1106	1003	1183	0926	0642	0746	0309	0797	1029	-0028	-0514	-1286	-1646	-1800	-1929	-1517	-1192	-0900	-0180
August	0262	0378	0780	1284	1082	0906	1032	1661	1007	0956	0881	0651	0554	1158	0302	-0705	-2089	-2718	-2643	-2613	-1349	-0931	-0352	0458
September	0253	0104	0985	1061	1238	1364	1541	1945	1692	1314	1518	1339	1364	1566	0152	-1718	-3132	-3890	-4042	-2930	-1667	-0581	0328	0379
October	0329	-0835	0860	1113	0810	0734	0759	0405	0987	1341	1569	1366	1594	1594	0683	-0481	-1897	-3365	-3921	-3112	-2125	-0885	0405	0885
November	0051	0565	0591	0694	0720	0643	0771	0668	0745	0900	0643	0206	0745	0745	0540	0540	0061	-0540	-0745	-0951	-1594	-2262	-2236	-0977
December	-0166	0453	0586	0692	0613	0639	0719	0799	0905	0879	0746	0586	0826	1012	0826	0293	-0266	-0692	-1305	-1039	-1385	-1598	-1198	-0772
Mean	0239	0127	0578	0774	0806	0879	0894	1037	0983	0862	0999	0719	1030	1156	0671	0024	-1045	-1999	-2605	-2487	-1880	-1354	-0565	0080
January	-0312	0000	0338	0364	0623	0623	0805	0779	0883	1039	1065	1013	1584	1480	0857	0519	0000	-0701	-1013	-1143	-1974	-3064	-2337	-1143
February	-0106	0264	0739	0844	0897	1134	1108	1134	1108	0897	1451	1266	1451	1688	1134	0950	-0185	-1899	-3166	-3350	-3060	-2374	-1345	-0607
March	-0104	0052	0131	0653	0743	1071	1149	1279	1227	1018	1514	0836	1436	1410	0914	0366	-0731	-1958	-2976	-3055	-2402	-1436	-0835	-0627
April	0519	0935	1142	1116	1168	0961	1090	0961	1064	1064	1454	1558	1869	1843	0753	-0441	-1739	-3011	-4180	-3972	-2700	-1610	-0415	0493
May	0796	0576	0823	0604	0988	1097	1207	1289	1234	1125	1016	0658	0933	0988	0219	-0384	-1564	-2469	-2716	-2798	-2386	-1426	-0576	0494
1855 June	0394	0132	0736	0341	0736	0973	1078	0973	1032	0447	0631	0421	0394	0239	-0079	-0079	-0894	-1525	-1657	-1762	-1657	-1236	-0421	0210
July	0579	0579	0973	0947	1052	1026	1131	1078	0868	0762	0605	0289	0921	0763	0026	-0132	-0710	-1420	-2078	-2525	-2341	-1499	-0894	-0053
August	0177	0405	0912	1014	1014	0760	0659	0684	0962	0811	0786	0709	0760	0786	0152	-0228	-1292	-1926	-2331	-2027	-1292	-0912	-0507	0076
September	0583	0318	1192	1271	1138	1403	1377	1589	1403	0900	1006	0768	0768	0474	0186	-1536	-3072	-4502	-4422	-3575	-1324	0503	1483	1403
October	0281	0511	0793	0844	0818	0767	0818	0767	0869	0921	0793	0716	0997	0997	0486	-0486	-1841	-2813	-2915	-1969	-1151	-0563	-0179	0460
November	0110	0548	0384	0493	0411	0904	0986	0986	0877	0986	0685	0137	0603	0740	0548	-0055	-1699	-2877	-2356	-1534	-0767	-0466	0219	-0164
December	0103	0401	0568	0568	0516	0723	0646	0620	0852	0874	0800	0516	0646	0671	0646	-0129	-1110	-2221	-2376	-1859	-1317	-0852	0052	0542
Mean	0252	0101	0728	0797	0845	0954	1005	1012	1025	0886	0934	0741	1030	1040	0487	-0136	-1236	-2277	-2682	-2464	-1864	-1245	-0480	0090
Mean of 5 years	0128	0262	0471	0633	0706	0836	0922	1011	0982	0914	1007	0834	1047	1206	0852	0224	-0909	-2056	-2650	-2500	-2005	-1300	-0535	-0018