SKETCH MAP OF N. W. FRONTIER.

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METEOROLOGICAL DEPARTMENT

METEOROLOGICAL CONDITIONS AFFECTING AVIATION OVER THE NORTHWEST FRONTIER

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By

Flt. Lt. R. G. VERYARD, B.Sc., R.A.F.

and

A. K. ROY, B.A., B.Sc.

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By

Flt. Lt. R. G. VERYARD, B.Sc., R.A.F.

and

A. K. ROY, B.A., B.Sc.

(*Received on 10th July 1933.*)

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1. INTRODUCTION.

In order to provide an efficient weather service for the various R. A. F. units stationed along the Indian north-west frontier, two forecasting centres were started in 1925 at Peshawar and Quetta. The two stations supply reports and forecasts to the R. A. F. for the whole of the Punjab, the North-West Frontier Province, Sind, and Baluchistan, but their main function is to give detailed information of weather conditions along the frontier itself. Owing to financial stringency, the net-work of observing and pilot-balloon stations used for the preparation of weather charts at Quetta and Peshawar is very limited, and even with the assistance of non-instrumental observations supplied by R. A. F. and military units at places where there are landing grounds, the data received at the two stations are by no means adequate. Upper-air and first-class observatories are maintained at both Peshawar and Quetta, other second or third class observatories on the frontier being located at Gilgit, Drosh, Parachinar, Cherat, Miranshah, D. I. Khan, Fort Sandeman, Chaman, and Dalbandin. Using the observations made at these places, the data of rainfall stations, and the references to climate in Gazetteers and military reports, together with the accumulated experience of the two forecasting centres, it has been possible to obtain a fairly comprehensive knowledge of the meteorological conditions affecting aviation along the north-west frontier. An attempt has been made in this paper to present this knowledge in as concise a form as possible. Although the paper has been written mainly for the benefit of air-pilots, it may also prove useful to military and political officials.

2. GEOGRAPHY OF THE NORTH-WEST FRONTIER.

Before proceeding to discuss the meteorology of the frontier it is considered desirable that a brief sketch should be drawn of its geographical features so that the variation of local climatic conditions may be appreciated fully. The frontier runs roughly from northeast to southwest, stretching from the Gilgit Agency and Chitral (Lat. 37°, Long. 74°) to Duzdap in north Baluchistan (Lat. 30°, Long. 61°). The great height of the mountains along

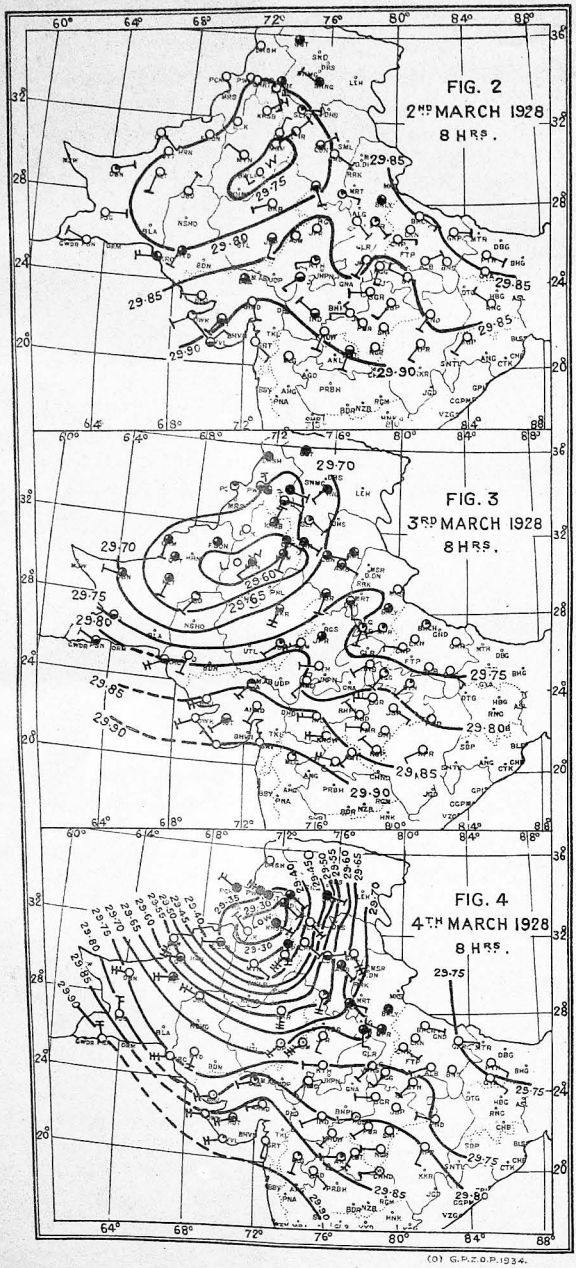
the frontier is itself sufficient to cause modifications of climate, and the distribution of vegetation and topographical conformation largely influence the conditions in regard to local temperatures and surface winds. For example, it may be found that the difference of temperature between forest-clad ranges and the plains is twice as much in April or May as in December or January, and the difference in temperature of a well-wooded hill-top and the open valley below may vary by 10° to 15° within 24 hours.

The Gilgit Agency is a particularly mountainous region with deeply sunk valleys lying between ranges which are rarely less than 15,000 feet high. The highest peak is Nanga Parbat (26,620 ft.), and the main river is the Indus, which in many places is confined to narrow gorges. The North-West Frontier Province itself may be regarded as the tract of country lying between this river and Afghanistan, *i.e.*, (i) the cis-Indus district of Hazara, (ii) the relatively narrow strip between the Indus and the hills constituting the districts of Peshawar, Kohat, Bannu, and D. I. Khan, (iii) the rugged mountainous region between these districts and the borders of Afghanistan. The vast range of the Hindukush mountains, which runs approximately from east to west, is met at the northeast corner of Chitral—where Tirich Mir (25,426 feet high) overlooks the Kunar Valley—by an extension of the western Himalayas. From this chain minor ranges run in a southwesterly direction, the whole length of Bajaur and Swat enclosing the Panjkora valley (Dir) and merging into the Mohmand and Tirah hills, thus connecting the mid-Himalayas with the Safed Koh which flanks the Kurram valley. At the head of this valley is Parachinar, overlooked by Sikaram, 15,621 feet high.

Peshawar, the capital of the North-West Frontier Province, lies in a plain of alluvial deposits of silt and gravel, surrounded by a horse-shoe shaped ring of hills with an exit to the Punjab in the east and the Khyber Pass to the west. South of Peshawar is the Kohat district into which the Tirah mountains extend their spurs. Proceeding to the south-west one enters Waziristan, enclosed between the Tochi and Gomal rivers. Between these two rivers there stretches the central dominating range of Waziristan from northeast to southwest which is geologically connected with the great limestone ranges of the Suleman hills to the south.

Separating Bannu and D. I. Khan is the Salt Range which crosses the Indus in the Mianwali tahsil and emerges eventually in the Waziri hills. The outstanding peaks in Waziristan are Sheikh Hardar (11,000 ft.), Pirghol (11,580 ft.) and Kansargarh (11,300 ft.). The physiography and temperate climate of north Waziristan is that of the Kurram valley to the north rather than that of the Suleman hills to the south. In south Waziristan the broad riverain tract extending from Tank to D. I. Khan is one of the hottest areas in India.

Hedged in between the Afghan border and the plains of the Indus stretch the long ridges of desiccated highlands in north Baluchistan which embrace the central ranges of the Suleman system. The wedge-shaped desert of Kach Gandawna forms a deep indentation into the mountains and is crossed by the railway to Quetta. Quetta itself is situated in an open plateau, 5,500 feet high, within a ring of mountains which overlook it at a height of over 11,000 feet. To the northwest is the Khojak Pass to Kandahar and to the south the Bolan Pass to Sind.



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3. GENERAL METEOROLOGICAL CONDITIONS OVER THE NORTH-WEST FRONTIER.

Judging from the main meteorological conditions prevalent over the extreme north-western part of India, the year over the north-west frontier may be broadly divided into two main seasons, winter and summer. During the former period, the great anti-cyclonic system extending from Siberia to Persia determines the normal pressure distribution over the region in question. The pressure gradient runs roughly from north to south, and winds blow normally from some northwesterly direction up to great heights. In the middle of April a reversal of pressure gradient begins to take place, and by June a vast low pressure area stretching from North-West India to Arabia induces the monsoonal weather conditions over the Indian Ocean and the Indian Peninsula. Under the influence of the above seasonal low over North-West India, and consequent pressure gradient from south to north, a steady southwesterly oceanic current blows over the whole of the Bay of Bengal and East Arabian Sea, which on reaching the land area causes cloudy skies and copious precipitation over the greater part of India.

While the year may thus be broadly divided into two main seasons, hot and cold, there are actually two other periods marking the transition from cold to hot weather and *vice versa*. Meteorologically, the year over the frontier may thus be classified into four seasons—

Winter period.—December to mid-April.

Transition period.—Mid-April to June.

Summer (Monsoon) period.—July to September.

Transition period.—October and November.

In winter, a succession of depressions from the west travels across the high pressure region over Central Asia. They generally pass through Persia and Afghanistan, cross the frontier and enter the plains of North-West India. The passage of these depressions[1] across the frontier, about five or six times on the average each month, causes marked variations of weather over this region during the winter period.

Normally, these winter depressions make their first appearance over the frontier about the middle of October, but owing to their passage through regions of higher latitudes, such as north Afghanistan and the extreme northern borders of the frontier, they do not at first cause unsettled weather except occasionally over the Chitral area, the northern half of the N. W. F. P. and in Kashmir. During the winter period, December to mid-April, they begin to pursue a more southerly course, are more frequent and generally more active. In the transition period, mid-April to June, they begin to recede again to higher latitudes and are less active, usually causing only localised disturbed weather associated with turbulent phenomena such as duststorms and thunderstorms.

In summer, an occasional advance of the southwest monsoon from the Arabian Sea or a deflected current from the Bay of Bengal causes cloudy weather and rainfall over the frontier. The advance of the monsoon is usually associated with the westward moving disturbances from the Bay of Bengal

[1] Meteorology of the Persian Gulf and Mekran by B. N. Banerji.

which sometimes merely cause an orientation or intensification of the seasonal low over North-West India. At other times they travel as fully formed depressions with well defined fronts marking the discontinuities between two or more samples of air. These depressions often begin to weaken during their westward march and generally lose much of their activity by the time they reach Central India or Rajputana. On a few occasions, however, they continue to be active and travel into the Persian area through Baluchistan, and sometimes recurve northeast or northwards from Rajputana and break over the Western Himalayas or the Kashmir hills. Except on such occasions, when the frontier region experiences fairly prolonged unsettled weather, the precipitation over this area in the summer season is usually in the nature of thunder-showers and occurs in the afternoon or early evening when convection is most marked.

4. SUMMARY OF METEOROLOGICAL ELEMENTS FOR THE FRONTIER AS A WHOLE.

(*a*) ***Rainfall.***—The total annual fall of rain gradually increases in quantity as we pass along the frontier from southwest to northeast, *i.e.*, the rain is heavier as we approach the Himalayas. The winter precipitation commences earlier in the north than in the south and also ends later. The limit of the snow-line in winter is about 7,000 feet, although it sometimes lies for a few days at 6,000 feet. Actually snow has been known to fall at Peshawar. In summer the snow-line recedes to 15,000 feet or more. The amount of rainfall is relatively small over the whole of the frontier in May and June and again in October and November. During the monsoon season, heavy falls of rain occur in the extreme north, the amount diminishing as we move westwards and southwards away from the Himalayas. Tables of rainfall normals are given at the end of this note.

(*b*) ***Cloud.***—Similar remarks apply to cloud as to rainfall. The amount of cloud is greatest in the winter months and in the monsoon season but diminishes from northeast to southwest. Skies are generally clear or lightly clouded in May, June, October and November. Low cloud of the cumulus and cumulo-nimbus type is very frequent over the hills during the hot weather, particularly in July and August over the North-West Frontier Province. The condensation of water-vapour from ascending currents caused by local convection and its gradual exhaustion with precipitation on successive ranges is very obvious during the monsoon season in the Hazara and Black Mountain Country—the windward face of each range being clothed day after day with a white crest of cloud whilst the slopes on the lee-side are often left entirely free. Diurnal variation is well-marked over the whole of the frontier, there being a tendency for clouds to decrease during the forenoon and after sunset.

(*c*) ***Visibility.***—Visibility remains very good for almost the whole of October and November, deteriorating occasionally owing to haze. From December to April it often becomes very poor owing to low clouds caused by the passage of depressions. During the fine spells between these depressions, however, visibility is remarkably good and landmarks stand out with great clearness. In the hot weather visibility deteriorates owing to dust-haze and duststorms, and is at times exceedingly bad over the plains and plateaus of the frontier. The haze often becomes so thick in parts of the North-West

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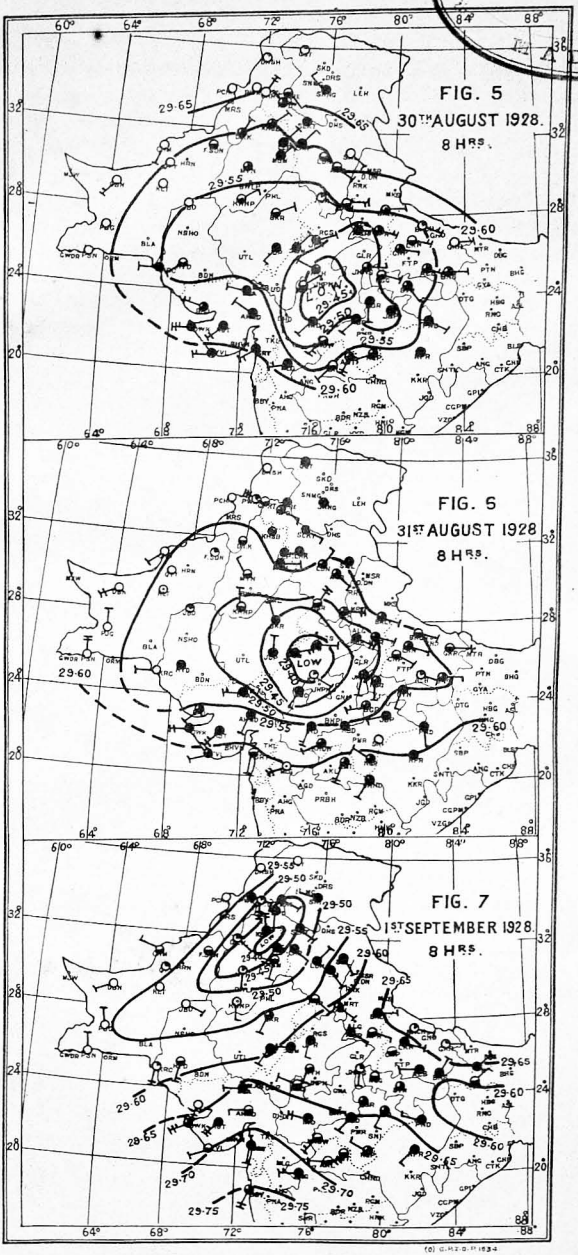

FIG. 5
30TH AUGUST 1928.
8 HRS.

FIG. 6
31ST AUGUST 1928
8 HRS.

FIG. 7
1ST SEPTEMBER 1928.
8 HRS.

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Frontier Province and Waziristan that for days at a time it is not possible to make cross country flights, and even local flying may be very restricted. During the monsoon months there is an occasional improvement after rain has fallen over North-West India. Throughout the year there is a tendency for visibility to improve in the middle of the day.

(*d*) ***Surface Winds.***—Owing to the hilly nature of the frontier, the large diurnal range of temperature, and great changes in pressure gradient, there is a complex variation in the surface winds during the year. In settled weather, katabatic and anabatic winds are very common—particularly the former. Associated with the passage of depressions, squalls and occasional gales occur during the winter and in early spring. During the hot weather, duststorms are experienced over all parts of the frontier—but are less frequent in the extreme North. Hot föhn winds occur periodically in the N. W. F. P. from May to September and the "seistan" wind of southeast Afghanistan is felt in north Baluchistan as a strong dust-raising wind. Dust-whirls are a common spectacle in the enclosed plateaus of north Baluchistan and are also seen occasionally in the plains of the North-West Frontier Province.

(*e*) ***Upper Winds.***—Wind frequencies up to 3 Kms. for Quetta and Peshawar are given in the tables at the end of the paper. It will be seen that throughout the year the normal direction is between north and west, tending to become stronger and more westerly with increasing height. With the approach of depressions from the west the upper winds first back towards SW/SE, and later change to NW/W or NE/E according as the path of the depression is to the north or the south respectively. With the occasional extension of the monsoon current into the frontier districts the upper winds have a marked easterly component which disappears as the current recedes again.

(*f*) ***Storms.***—Snowstorms occur at frequent intervals in the extreme north from December to March. Thunderstorms and occasional hailstorms occur in the spring and summer months—generally in the early evening or at night—see frequency table below :—

Mean Monthly Frequencies of Thunderstorms.

Station.	Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
N. W. F. P.													
Peshawar .	7	0·1	0	0·4	1·6	1·1	1·2	0·4	1·1	0·9	0·7	0	0
Cherat . .	18	0·2	0·6	0·9	2·6	2·5	1·3	2·9	3·0	2·4	1·5	0·1	0
Parachinar .	24	0·1	0·2	1·4	3·2	3·7	4·1	3·8	2·2	3·5	1·7	0·3	0·1
Baluchistan.													
Fort Sandeman	13	0·1	0·1	0·6	0·5	0·9	2·6	2·7	2·3	2·4	0·6	0·2	0·1
Quetta . .	7	0	0·1	2·1	2·1	1·9	0·7	5·0	1·4	0·4	0	0	0·1

Duststorms, which occur as a rule in the afternoons and evenings, are most frequent (4/5 per month) in May and June. They are also experienced in the North-West Frontier Province and Waziristan in July and August and occasionally in September. These storms are most vigorous and occur most frequently in south Waziristan and the Zhob Valley.

A tornado of moderate intensity has actually been observed at Peshawar, but such a phenomenon is of rare occurrence in this part of India. Apart from storms, turbulence associated with vertical currents and eddy-motion in the atmosphere causing "bumpiness" is most pronounced in the afternoons, especially over and near hills or uncultivated ground, and particularly in the hot weather. Marked turbulence is also felt in the immediate rear of active depressions, when strong descending currents may be experienced.

(*g*) ***Density.***—As a result of the large annual variation of temperature and pressure, there is also a marked change of density along the frontier throughout the year. The following table illustrates approximately the variation of the mean monthly density during the year calculated for mean sea level[1] :—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Density (gms. per cubicmetre) .	1260	1250	1210	1170	1140	1120	1130	1140	1150	1180	1220	1260

In order to counteract the effect of reduced air density on the "take off" and landing characteristics of an aerodrome where the density is appreciably lower than that in a standard atmosphere (density=1226 gms. per cubic metre) it is necessary to reduce the "all-up" weight of an aeroplane. For (*a*) landing and (*b*) take off the approximate percentage reduction is respectively (*a*) same as and (*b*) 1·15 times the percentage difference of the actual air density from the standard air density. For example in June at Peshawar when the air density may fall as low as 1100 gms. per cubic metre it might be necessary to reduce the "all-up" weight of an aeroplane by 10 per cent. in order to retain the same landing characteristics as on an aerodrome at sea-level with a standard atmosphere.

5. DETAILS OF WEATHER OVER VARIOUS RESTRICTED AREAS.

Quetta and Pishin.

The year over this district may be divided meteorologically into the four main seasons, winter, summer, and the two transition periods, as in the case of the frontier as a whole.

Winter Period (December to mid-April).—In this period about five western disturbances on the average affect this area per month, each causing unsettled weather for two to three days at a time. During the intervals between any two disturbances, weather is generally very fine with a mainly clear sky, good to excellent visibility, and fresh northwesterly winds. Frosts occur very frequently at Quetta during the period December to February, and are most severe during the intervals between two successive depressions, when 15 to 20 degrees of frost are of frequent occurrence. Frost of extreme severity occurred in December 1929, when the air minimum temperature on

[1] "Distribution of Air Density at m. s. l. over India": U. N. Ghosh, M.Sc., India Meteorological Department, Scientific Notes, Vol. III, No. 19.

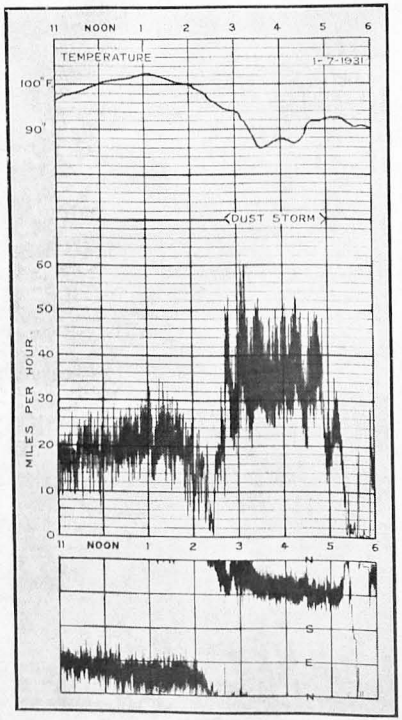

FIG. 8.

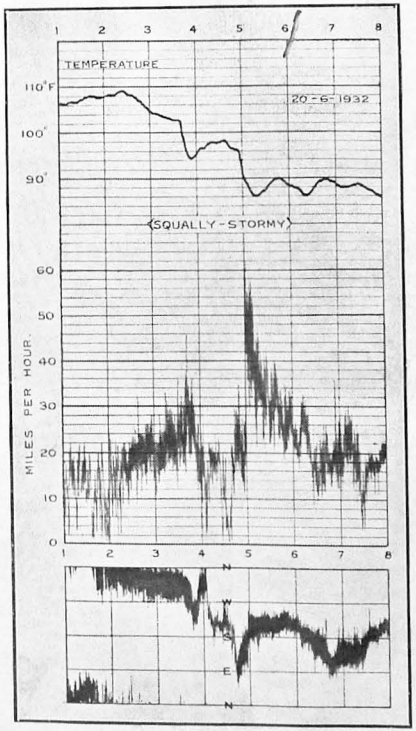

FIG. 9.

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one occasion was as low as —3·3 degrees F. With the approach of a disturbance, normal northwesterly winds begin to back towards south or southeast. High (cirrus and cirrostratus) clouds begin to appear, and gradually change to medium and then to low clouds. In the beginning of this period, an interval of 24 to 36 hours, or more, usually passes between the first appearance of high clouds and the subsequent development of low clouds and precipitation. During the middle of the season, however, the interval between the first signs of a disturbance and actual unsettled weather with precipitation, etc., is often much shorter, and is between 12 and 24 hours, while the period of disturbed weather and rain or snow is generally more prolonged and sometimes extends over three days or more. Towards the end of the season, the disturbances begin to assume the characteristics of those of the transition period and are sometimes associated with turbulent phenomena such as duststorms and thunderstorms, and the precipitation occasionally occurs in the form of hail, which is extremely rare in the earlier part of the season. The chances of precipitation during this season are more or less evenly distributed throughout the different hours of the day or night, although the frequency of occurrence of comparatively large amounts of precipitation is greatest in the afternoon or evening.[1]

There is a marked diurnal variation of cloudiness over this region, with two maxima, one in the early morning and the other in the afternoon. The minima occur during the forenoon and in early night ; of these, the former is most remarkable, for even on days with markedly unsettled conditions the sky sometimes clears almost completely between 0930 and 1130 hours ; this might give rise to a misleading impression in the mind of one without sufficient experience of this locality, that probably the disturbance was passing away or becoming unimportant.

Deterioration of visibility is generally caused by low clouds and precipitation, and on a very few occasions by fog or mist. Dust-haze is rare except towards the end of the season, when poor to bad visibility is caused at times by duststorms in the afternoon or evening. Visibility at this time of the year generally improves with the progress of the day, and is excellent on about four out of ten days in the afternoon.[2]

Normally, wind near the ground is light to moderate from a westerly or northwesterly direction, except in the early morning when it is usually light southerly or southeasterly. Moderate to fresh and gusty surface winds from south begin to blow immediately before the commencement of unsettled weather, and often continue throughout the disturbed period. Also the "cold front" at the rear of well marked depressions sometimes brings in strong northwesterly winds from higher latitudes which occasionally attain gale force.

The air is generally free from bumpiness except during the period of actual disturbed weather, or when a surface of discontinuity between two different air masses is present in this region.

Transition Period (Mid-April to June).—As has been mentioned in an earlier chapter, the western disturbances during this season gradually become

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[1] India Met. Dept. Sc. Notes, Vol. V, No. 51, by A. K. Roy and R. C. Bhattacharya.
[2] India Met. Dept. Sc. Notes, Vol. V, No. 47, by A. K. Roy.

less frequent, and begin to recede to higher latitudes. Weather begins to get more and more dry, the number of rainy days with precipitation amounting to 0·1 inch or more being about only 4 during the whole season. During the first half of the period, however, days with small amounts of rainfall are fairly frequent, and occur on the average on about five to six days. Rainfall during this transition period is more frequent in the afternoons and evenings, and is often associated with thunderstorms or preceded by duststorms. The diurnal variation of cloudiness during this season is more or less of the same nature as during the winter period, except that the early morning maximum is not so well pronounced. Visibility is generally good to fair, but poor to bad visibility occurs on about six to seven occasions during the whole period, owing chiefly to dustiness of the atmosphere. The deterioration due to the above cause is more frequent during the latter half of the period when thick dust-haze sometimes limits the range of visibility to a few hundred yards only in the morning. The haze generally begins to clear after 1000 hours, and by midday visibility usually becomes fair to good. Duststorms in the afternoon, which occur on about three to four days per month, also cause marked deterioration in visibility, but usually during the progress of the storms only. Winds during this season are usually strong at higher levels, and a velocity of 40 to 50 m.p.h. at a height of about 12,000 feet above sea level is not infrequent. Ground winds at Quetta generally freshen and become gusty in the afternoon. Owing to strong insolation, particularly during the second half of the season, the air is rather bumpy after mid-day.

Monsoon Period (July to September).—The effect of the southwest monsoon over this part of the country is usually slight, and prolonged unsettled weather with overcast skies and rain, as is generally experienced over most of the Indian Peninsula during this season, rarely occurs over the Quetta district and its neighbourhood.

Rainfall during this season is chiefly caused by instability set up by an occasional incursion of the monsoon into the strongly heated region to the west of the Indus, and is generally attended with thunder and lightning. Weather is usually fine or fair in the morning with a clear to partially clouded sky, and the disturbed weather is most often confined to afternoon and evening hours. Occasionally, however, a monsoon storm or a depression originating in the Bay of Bengal continues its westward march beyond Central India and Rajputana and travels through Sind and Baluchistan into the Persian area. On such occasions, weather sometimes continues disturbed and rainfall occurs more or less continuously for a day or more.

Visibility is generally fair in July and August, but excellent visibility is of extremely rare occurrence. Deterioration of visibility is principally caused by dust-haze in the morning and forenoon, and by duststorms in the afternoon. In September, visibility begins to improve, and good to excellent visibility occurs very frequently, particularly during afternoon and evening hours.

Normally, winds are moderate between southeast and southwest up to about 3,000 feet above ground level. On disturbed days, however, they usually blow from southeast to northeast up to about 4,000 feet, and from northeast to north at higher levels.

Owing to strong insolation and the inflow of a moist air current at lower levels, convection is usually most marked in the afternoons when the atmosphere is often very turbulent and bumpy.

Transition Period (October and November).—This is the most settled period over the Quetta district, and weather on most of the days is very fine with a practically clear sky and good to excellent visibility. Total rainfall of about half-an-inch during the two months is caused by western disturbances which occasionally affect the frontier, the normal number of rainy days with precipitation amounting to 0·1 inches or more being 1·2 only during the whole period. Dust-storms are of rare occurrence, and deterioration of visibility by dust-haze occurs on only one occasion on the average during the whole period. Mist or fog in the early morning occurs fairly frequently, but is usually confined to a shallow layer up to a height of about 500 feet above ground. Winds are mainly northwesterly and have a speed of 10 to 25 miles per hour up to 10,000 feet. The air is generally free from bumpiness during this season.

Zhob Valley and Loralai District.

The year is divisible into four main seasons as in the case of the Quetta and Pishin district.

Winter Period (December to mid-April).—The characteristics of weather during this season are roughly the same as described under Quetta and Pishin. Owing, however, to the fact that the western disturbances follow a more southerly track during January and February, rainfall over these areas during the first half of the season is less than that in the Quetta and Pishin district. Towards the end of the season, when the western disturbances begin to recede to higher latitudes, disturbed weather and the number of rainy days become somewhat more frequent over the Zhob.

Transition Period (Mid-April to June).—Weather during this period is usually fine or fair in the morning except on days when western disturbances are actually present in the neighbourhood of this region. The main feature of this period is the occurrence of dust and thunderstorms in the afternoon or evening which are somewhat more frequent than over the Quetta and Pishin district. Thunderstorms are at times very severe and are occasionally accompanied with hail. Visibility is generally fair to good in the morning, but deteriorates during the day owing to low clouds over the hills and during storms in the afternoons. Dust-haze causes local deterioration of visibility at and near Kajuri Kach.

Monsoon Period (July to September).—The monsoon is more active in these areas than over the Quetta and Pishin district and its effect is most marked over the Zhob. With the intensification or favourable orientation of the seasonal trough of low pressure, a moist easterly or northeasterly current sweeps over the plains of the Punjab. On reaching the high range of the Suleman hills, and being helped by strong insolation during the day, this moist air rises to form towering cumulus or cumulo-nimbus clouds, and light to moderate thunder-showers occur frequently in the afternoon or evening. This effect is more pronounced in the northeastern parts of the Zhob valley, that is, in the neighbourhood of Fort Sandeman, where monsoon rainfall is

nearly four times as great as at Quetta. Duststorms often precede rainfall during this season, and are at times very severe. Thick dust-haze sometimes causes marked deterioration in visibility in the mornings particularly in the vicinity of Kajuri Kach, while in the afternoons and evenings poor to bad visibility is usually associated with dust or thunderstorms. Air is bumpy in the afternoons when convection is usually very pronounced.

Transition Period (October and November).—Fine weather generally prevails during this season except on a few occasions, when under the influence of western disturbances travelling through the N. W. F. P. and Kashmir, cloudy weather and light showers occur over this region. Visibility is generally good to excellent in the morning. Low clouds during disturbed weather and occasional thunderstorms cause a deterioration in visibility in the afternoon.

Chagai District.

The most important difference in the meteorological characteristics over this area from those over the regions already discussed lies in the fact that whereas in the latter regions there are two maxima (in winter and monsoon) and two minima (during the two transition periods) of rainfall during a year, the curve showing the annual variation of rainfall in the Chagai area has only one maximum in the winter period. From the point of view of rainfall, therefore, the year is divisible into two principal seasons, *i.e.*, rainy period from December to May, and dry period from June to November. Notwithstanding the above difference, the year over the area under discussion, when judged in the light of detailed meteorological characteristics, is divisible into four seasons as in the case of the other three areas dealt with above, except for the fact that the period July to September over the Chagai area should more appropriately be called dry, instead of monsoon season.

Winter Period (December to mid-April).—The frequency of disturbed weather with precipitation over the Chagai district is nearly the same as over the Quetta and Pishin district, but usually the disturbed conditions over the former area are less prolonged, the amounts of precipitation being smaller than in the latter area. The frequency of very low clouds appears to be less than that over the Quetta district, and visibility, especially during the first half of the period, is generally good to fair except during rain. During the second half of the period, however, weather conditions often assume the characteristics of the following transition period, and strong dust-raising winds or duststorms and thunderstorms with light showers sometimes cause poor visibility in the afternoon.

Transition Period (Mid-April to June).—This season is characterised by the frequent occurrence of strong dust-raising winds from forenoon till afternoon when visibility is often fair or poor. The area receives very little rainfall during the second half of the period, when disturbed conditions usually manifest themselves by duststorms or dry thunderstorms. The mornings are usually fine with a clear to partially clouded sky and, except for occasional dust haze, visibility is good to fair.

Dry season (July to September).—The weather is usually dry except on rare occasions, when a depression of the monsoon season actually travels through Baluchistan or is unusually active over some adjoining regions. The

steep pressure gradient caused by the intensification of the seasonal low over Sind and Baluchistan often causes strong winds which make the afternoons extremely dusty. The frequency of duststorms over this area appears to be greater than in other parts of Baluchistan during the period July to September, but it is believed that these duststorms are usually more in the nature of strong dust-raising winds than of dust squalls. Thus, although the duration of such duststorms is generally quite long, they are usually not as turbulent as the other type of duststorms which are associated at times with violent squalls.

Transition Period (October and November).—The weather during this period is generally very fine with a clear sky and good to excellent visibility. On a few occasions, however, a fairly active western disturbance affects this region and causes cloudiness and light precipitation. The month of October is usually dry, and the only rainfall that occurs during this season is generally restricted to the month of November. Turbulent phenomena such as duststorms and thunderstorms are extremely rare in this season.

Waziristan.

Although the greater part of Waziristan is normally not affected by the monsoon, its climate may be divided into the same four periods, as the monsoon current sometimes extends into this area, causing occasional thunderstorms in July and August.

Winter Period (December to mid-April).—The disturbances which periodically enter North-West India at this time of the year produce much cloudiness and considerable precipitation at places above 4,000 ft. Snow begins to fall on the highest peaks in December, and increases during January and February. The rainfall over low-lying country is moderate, the heaviest falls occurring in March. Hailstorms occur in March and April and are at times severe, being more frequent in north and west Waziristan than in the southeast where the rainfall is considerably less. In between successive disturbances, when the sky is mainly clear, severe frosts occur, and strong gusty winds blow from NW/W. Visibility is generally good (with occasional early morning mists in the vicinity of the rivers) up to the end of March, but gradually deteriorates with the approach of the hot weather, owing to the development of dust-haze. Upper winds are normally between north-northwest and northwest, but back to SW/SE with the passage of a depression—veering to northwest again after its departure.

Transition Period (Mid-April to June).—Dust and thunderstorms are of frequent occurrence during this period. Visibility is fair to poor owing to dust-haze, which is very pronounced. *At times the dust haze is so thick as to render flying practically impossible.* This applies particularly to Miranshah, D. I. K., Tank, and to the vicinity of the Kajuri Kach. The sky is generally clear or lightly clouded, but considerable detached low clouds form over and near the hills during the day. The duststorms generally occur in the afternoon or evening ; they move in a direction between southwest and northwest, and are very severe at times, especially at D. I. K. and Tank. They are preceded, as a rule, by abnormally high temperature, a light southerly wind and low clouds and are followed by a drop in temperature and an improvement in the visibility. During the progress of a duststorm, the air is

very 'bumpy', wind sometimes reaches gale force, and visibility becomes almost *nil*. A thunderstorm often accompanies a duststorm, producing locally heavy rain over the hills. Apart from duststorms, which are individually local, surface winds are usually strong and gusty in the afternoons, blowing generally from a west-northwesterly direction. Upper winds to 10,000 ft. are normally between west-northwest and west-southwest of moderate intensity. Turbulence increases towards the end of May.

Monsoon Period (July to September).—It is only occasionally that the monsoon penetrates into Waziristan, but when it does, it generally produces locally heavy rain—chiefly in the northwest. Owing, however, to the high humidity together with high temperature, thunderstorms are more frequent in July and August than in May and June, and the cloud amount is somewhat greater. Visibility is slightly better, but the dust-haze continues to be very pronounced, especially when humidity is high and conditions are settled. Duststorms also occur quite often, but are less frequent than in May and June, and of shorter duration. Except when the monsoon current is very active in North-West India, the upper winds are generally from WNW/WSW. Turbulence is most pronounced during this period.

Transition Period (October and November).—At this time of the year, conditions are generally settled. By the middle of September, duststorms and thunderstorms are less frequent, and only one or two occur in October. The sky is mainly clear or lightly covered with high cloud, and visibility is good, the dust-haze gradually becoming thinner with decrease of temperature and humidity. Upper winds to 10,000 feet are normally from NNW/NW and of moderate intensity.

Tirah, Kohat District, Kurram Valley.

The climate of this area may also be divided approximately into four distinct periods :—

Cold Weather Period (December to mid-April).—This is the period of unsettled weather, during which frequent disturbances enter North-West India from the west. These disturbances cause much cloudiness and moderately heavy rain over the Tirah, especially in February, March and early April. There are occasional falls of snow, but the snow does not remain for more than two or three days, except on the highest peaks. The precipitation during this period is heavier over the northern half of the Tirah (*i.e.*, in the vicinity of the Safed Koh) than over the southern half (*i.e.*, near Thal). The depressions generally cause unsettled weather for three to five days at a time, during which the visibility is poor, the hills are covered with cloud, and upper winds blow from SSW/SSE. In between disturbances, there are spells of very fine weather, with mainly clear skies, excellent visibility, and upper winds from NNW/WNW up to 10,000 feet.

Hot Weather Period (Mid-April to June).—During this period, the weather over the Tirah is mainly settled, but owing to strong convection currents causing thick dust-haze, the visibility is generally poor and tubulence is at times severe. The main climatic feature at this time of the year is the occurrence of duststorms. These are very violent, although of short duration, and are most frequent in the afternoon or evening. There are also occasional hail and thunderstorms. The sky is generally clear or lightly clouded in the

early morning, but detached low cloud forms over the hill-tops during the day. Upper winds are normally from NW/W, up to 10,000 feet. Visibility is generally fair with moderate dust-haye but becomes very bad during the progress of a duststorm.

Monsoon Period (July to September).—Although the monsoon current does not fully penetrate into this part of India, it causes a high humidity, thus facilitating the development of thunderstorms, due to local heating. These storms occur very frequently in this period, causing very heavy rain at times, the fall being greater over the southern half of the Tirah (*i.e.*, Orakzai country) than over the northern half. For example the normal rainfall at Fort Lockhart for July and August is approximately 11″. The sky is generally lightly clouded and visibility good in the early morning, but much low cloud forms over the hills during the day. Visibility deteriorates soon after sunrise owing to the development of dust-haze, and thunderstorms occur in the evening or at night. Duststorms also occur in this period, but less frequently than in May and June. Upper winds are normally from NW/W, but vary according to the strength of the monsoon current. Turbulence is most pronounced during July and August.

Transition Period (October and November).—This is the most settled time of the year. There is little cloud, very little rain, and only an occasional dust or thunderstorm. Visibility is generally good, and upper winds to 10,000 ft. are normally moderate to fresh between northwest and west-northwest.

The Khyber, Mohmand Country and Bajaur.

The climate of this area is very similar to that of the previous division, and may be divided into the same four periods :—

Winter Period (December to mid-April).—This is the most unsettled period, during which the disturbances entering North-West India from the west cause much cloudiness and heavy rain, with occasional falls of snow. The rainfall is greatest in March and early April, and exceeds that of the Tirah. The depressions arrive at the rate of 3 or 4 a month ; their speed is variable, and they move in a direction between east-northeast and east-southeast. Their average path is farthest south in January and December, and gradually moves northwards in spring. Hence the heavy spring rains in this area. After a disturbance has moved away, the sky becomes clear, and strong, gusty winds blow from north to northwest. Visibility is excellent during these fine spells, but poor when conditions are unsettled.

Transition Period (Mid-April to June).—This is a period of settled weather, except for duststorms and occasional hail thunderstorms. These storms generally move from NW/W to SE/E, and are sometimes accompanied by winds of gale force. They generally occur in the afternoon or evening. During May and June the visibility is fair to poor owing to dust-haze, which often extends to above 10,000 feet. Whilst a duststorm is in progress, the visibility becomes very bad, and the air is exceedingly ‘ bumpy ’. Turbulence over the hills increases during June.

Monsoon Period (July to September).—The monsoon current does not affect the Mohmand and Bajaur area to the same extent as the Tirah,

but on the few occasions when the monsoon is very active in North-West India, heavy rain falls over the sub-montane district near Shabkadar and Charsadda, causing extensive flooding of the river valleys. Duststorms are again very frequent during this period, and are often followed by thunderstorms. On the whole, the sky is lightly clouded and visibility mainly good in the morning. Much low cloud forms over the hills in the afternoon and evening, and visibility deteriorates owing to the development of dust-haze. Upper winds are normally from NW/W, and turbulence very marked—at times severe.

Transition Period (October and November).—This is the most suitable time of the year for flying over the Mohmand country. The sky is clear to moderately clouded, visibility good, surface winds light and variable, and upper winds moderate from NNW/WNW up to 10,000 ft.

Peshawar Vale.

The four periods into which the climate of the preceding areas has been divided are very well marked in the Peshawar district where the rainfall has two distinct maxima, *i.e.*, in March and August. The effect of the monsoon is much greater in the North-West Frontier Province than in Baluchistan and as much as 17·75 inches of rain have been recorded at Peshawar in August, the recorded maximum in 24 hours for this month being 6·20 inches.

Winter Period (December to mid-April).—The disturbances which enter North-West India from Persia do not usually begin to cause unsettled weather in this area until the middle of December. Occasionally they have been known to cause moderate to heavy rainfall in October and November but such occasions are comparatively rare. The activity of these depressions increases in January, and as their path retreats northwards the periods of unsettled weather become more frequent and the rainfall greater. The effect of the disturbances is greatest in the Peshawar Vale from the beginning of March until the middle of April. By the end of April the depressions are less active, pursue a more northerly route into Kashmir, and are often merely "occlusions". In the early part of this period there are spells of fine weather between successive depressions, but by the end of February the spells are less frequent and of shorter duration owing to the increased frequency (6/7 per month or more) of the disturbances. During these spells of fine weather frosts and heavy dew occur, and visibility is remarkably good. The depressions are heralded by a rise of temperature and high clouds. The sky gradually becomes overcast with low clouds and visibility deteriorates (although there is often a temporary improvement in the forenoon). Rainfall occurs within 36/48 hours of the appearance of high cloud in January and February and lasts for a relatively short period, say 6/12 hours, whereas in March and early April precipitation occurs within 12/24 hours and may last intermittently for 2/3 days, or even longer when there are "secondaries" associated with the main depression. Towards the end of the period, *i.e.*, in early spring, when convection is becoming more pronounced, the passage of a disturbance is accompanied by thunderstorms and hailstorms. Occasional gales and squalls occur in the rear of depressions, and in April, 1933, a tornado was observed although this pheno-

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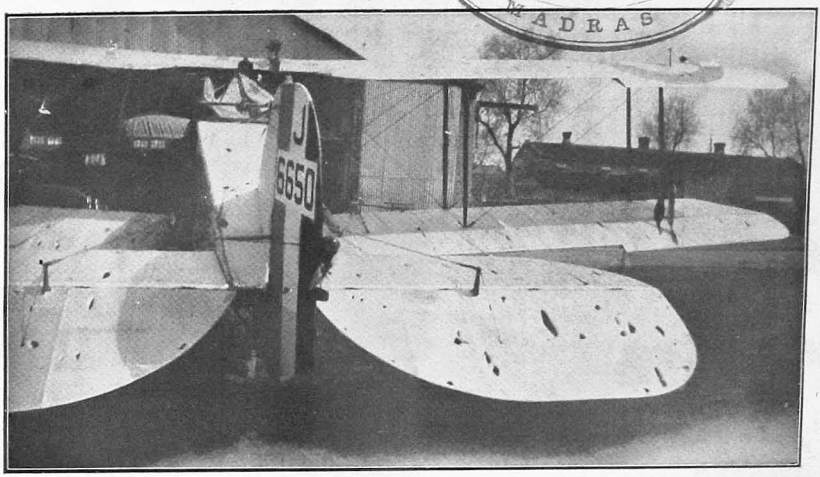
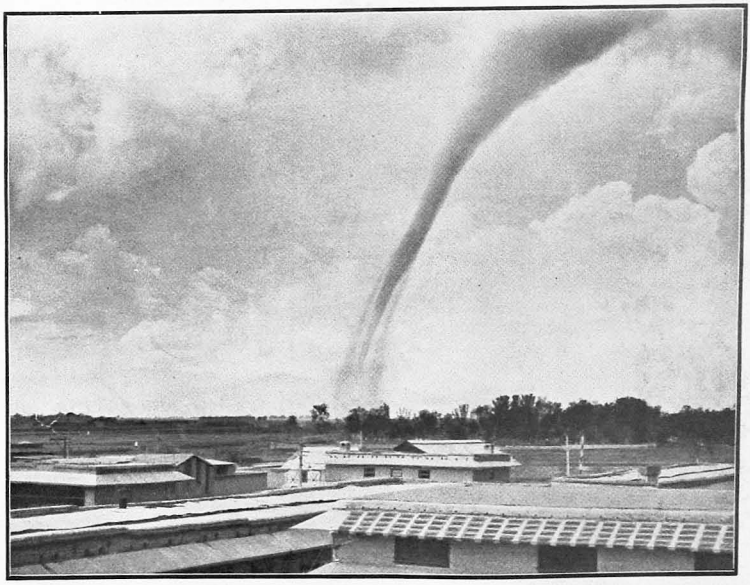
Fig. 10.



Hailstorm at Peshawar, 28th March 1928.
Aeroplane damaged by hailstones.



Tornado at Peshawar, 5th April 1933.

menon may be regarded as extremely rare.[1] Cloud amount even in unsettled periods tends to decrease in the forenoon and just after sunset. Visibility, except when there is low cloud and precipitation, is good—becoming excellent after the passage of a disturbance. Upper winds are normally from NNW/WNW—the westerly component increasing with height—but back to SE/SW with the approach of a disturbance and veer to NE/E as it passes away. Surface winds show a marked diurnal variation during settled periods, *i.e.*, light and southerly roughly from sunset to sunrise and moderate northerly during the day. In unsettled periods the surface winds follow the movement of the upper winds and are frequently strong and squally from NE/NW with the arrival of the "cold air" in the rear of a depression.

Transition Period (Mid-April to June).—The path of the winter depressions gradually retreats northwards in April and these disturbances become less frequent and less active. They continue to cause periods of unsettled and rainy weather up to the end of April—especially thunderstorms—but in May when the air is much dryer their effect is to produce duststorms. The duststorms are a marked feature of the climate of Peshawar Vale in May and June. The visibility, which is normally rather poor in this period owing to haze, becomes very bad during a duststorm. Fortunately the storms only last for an hour or two and generally occur in the afternoon or evening. Associated with local rainfall over the mountains surrounding Peshawar there is occasionally a föhn effect in this period causing hot winds at night. Cloudiness is greatest in the afternoons when considerable cumulus and cumulo-nimbus cloud extends over the plains from the Tirah and Mohmand hills. Upper winds are normally NW/W.

Monsoon Period (July to September).—The initial effect of the monsoon in the Peshawar Vale is to increase the humidity and the air becomes most oppressive during July and remains so until the end of September Although the continuous monsoon rains of southern India are not experienced in this district, there are frequent spells of cloudiness, and when a monsoon depression moves towards the frontier, rainfall is sometimes very heavy for 2/3 days causing local floods. The precipitation is greatest from the middle of July to the end of August and decreases rapidly during September. The greater part of the rainfall is caused by the instability of moist air owing to strong convection, and thunderstorms are frequent over the surrounding hills. Even hail has been known to fall in Peshawar in July and August. The thunderstorms usually occur in the evening or at night, and there are also occasional duststorms in the afternoon or evening. Visibility is mainly good after there has been rain, otherwise it is fair to poor owing to dust-haze—improving gradually towards the end of September. Surface winds are generally moderate but become strong and squally when a monsoon depression succeeds in reaching the southwest Punjab or Upper Sind. Upper winds, although normally between NNW and WNW, sometimes veer to NE/SE with the passage of a depression to the south of Peshawar.

Transition Period (October and November).—This is the most settled period of the year in the Peshawar Vale when the sky is generally clear and visibility good. Occasional depressions may cause brief spells of rain and low cloud but heavy rainfall is rare, especially in October when the normal

[1] India Met. Dept. Sc. Notes. Vol. V, No. 56, by R. G. Veryard.

amount is only 0·16 inches. Surface winds are usually light and variable in the mornings and evenings, and moderate with occasional slight gustiness in the afternoons. In the early part of October there is still a tendency for dust-haze to develop but it is rarely very thick. Upper winds are normally from N/NW.

Black Mountain Country and Hazara.

Like that of the Tirah and Mohmand area the climate of the Black Mountain country may be divided into four periods :—

Winter Period (December to mid-April).—This is the period of the cold-weather rains, when the disturbances which enter North-West India, cause unsettled conditions for 7/8 days every month. During these disturbed spells there is much low cloud—often covering the hill-tops, and winds become very strong and gusty. Snow falls on the highest peaks, and heavy rains swell the Indus and its tributaries. After periods of rain, mists occur in the early morning over the river and low-lying ground. Normally, the upper winds are from NW/W—but they back to SSW/SSE during the passage of a depression ; subsequently veering to N/NW again when the weather becomes fine. During the fine spells visibility is exceptionally good.

Transition Period (Mid-April to June).—This period is mainly fine but there are occasional hail and thunderstorms. Duststorms also occur, but are less frequent than over the Tirah area. These storms (which are associated with the passage of late depressions) are generally preceded by low cloud, a temperature above normal, and a light southerly wind. Upper winds are mainly from NW/WNW, the sky is clear to moderately clouded, and visibility fair with moderate dust-haze. Haze is pronounced after mid-day.

Monsoon Period (July to September).—The monsoon affects this area to a greater extent than the Tirah, and brings locally heavy rain to Hazara and the Black Mountain country, with frequent thunderstorms. The normal rainfall in August at Abbottabad is over 10″. The sky is overcast with low clouds for several days at a time ; and owing to the high humidity together with high temperature, it becomes most oppressive in the Indus valley. Visibility improves temporarily after falls of rain, but it is mainly fair during dry spells with moderate dust-haze. A few duststorms occur in this period but they are less violent than those in May and June. Upper winds vary according to the local strength of the monsoon current. During periods when the monsoon retreats from North-West India winds are from NW/W but when the monsoon is locally active they swing round to ENE/ESE.

Transition Period (October and November).—A period of almost continuous fine weather with clear to moderately clouded skies, good visibility, and north westerly winds—the most settled time of the year being in November.

Dir, Swat and Buner.

The climate of this area may be divided into four periods as for Tirah, Mohmand country, etc.

Winter Period (December to Mid-April).—In this period when depressions enter North-West India from the west, there are frequent spells of unsettled weather, with much low cloud, rain, and snow over the hills. Normally, the number of rainy days over the Dir, Swat, and Buner district is from 5 to 7 days per month, the heaviest falls occurring in March. As a depression

moves away, there is a cold inrush of northwesterly winds, often accompanied, in February and March, by hail or thunderstorms. Behind a depression, which may last for 3/4 days, there is generally a period of fine weather with very good visibility (except for morning mists).

Transition Period (Mid-April to June).—Over this area the hot weather sets in later and lasts a shorter time than in the Peshawar valley. Owing to the intense heat and resulting convection currents, frequent thunderstorms occur (generally in the afternoon or evening) during this period together with strong dust-raising winds. Visibility is rather poor, especially after mid-day owing to pronounced dust-haze, but improves beyond Dir towards Chitral. (Sometimes the dust-layer is so thick as to render the hills practically invisible more than 5 miles away). The sky is generally clear or moderately clouded in this period, but considerable detached low cloud forms over the hills after sunrise. Upper winds are normally from NW/WNW and the air is often very ' bumpy ' owing to ascending and descending currents caused by the uneven heating of the ground.

Monsoon Period (July to September).—The monsoon produces frequent rain over this area—the normal rainfall at Malakand being nearly 9″ in August. In the valleys the rainfall is less, the average amount being approximately 5″ in August. The number of rainy days varies locally from 6 to 9 per month in July and August, being greater in Swat and Buner than in Dir. The rain is generally associated with thunderstorms, especially in the Buner area, where they are often very violent. Visibility during this period is mainly fair with moderate dust-haze ; it improves temporarily after rain. During rainy spells, which may last for 3/4 days, the clouds fall very low, covering the tops of the hills. Upper winds vary from NW/W during fine weather to E/SE with the advance of the monsoon current. Strong dust-raising winds, blowing down the valleys, occur quite frequently.

Transition Period (October and November).—During this period conditions are generally fine. There are only one or two rainy days, visibility is mainly good, and skies clear or lightly clouded. Upper winds are from NNW/NW.

Chitral, Gilgit, and Kohistan.

The climate of this area is characterised by extremes of temperature—both seasonal and diurnal—and strong winds. It varies locally according to elevation.

There are two main seasons : the relatively cold and wet months from the end of September to the middle of May, and the hot and dry months from May to September. The monsoon does not often penetrate as far north as Chitral or Gilgit, although it produces a noticeable increase of cloud and humidity in July and August especially in Kohistan. Very little rain falls at Gilgit itself owing to its sheltered position—the yearly total being normally about 5 inches.

During the cold weather, the depressions which pass across North-West India cause much cloudiness, frequent rain, and heavy falls of snow over the mountains, with strong winds in the valleys. Conditions are most unsettled between the middle of February and the middle of May. Between Chitral and the Lowari Pass there are falls of snow from mid-December to mid-February but it rarely lies in the valleys for more than 2 to 3 days. The main passes, Baroghil, Shamdur, Lowari, and Babusar are normally not free from snow

until the beginning of June. Surface winds are very strong at times during the cold weather period ; they blow with great force from the direction of Terich Mir down the Kunar valley. Ground mists occasionally occur during this period in the early morning. Care should be taken to ascertain that the intervening passes and surrounding peaks are free from clouds before flying to Drosh or Gilgit—especially when a depression is moving towards Kashmir. In the fine spells between successive depressions conditions are very good for flying with excellent visibility although strong northerly or northwesterly winds would increase the time of approach by air.

In the transition period from cold to hot weather, masses of cumuliform cloud and heat thunderstorms develop over the hills—especially in April and May—and duststorms occur in the valleys. These storms are most frequent in the afternoon or evening. Owing to the development of strong convection currents and the hilly nature of the country the air becomes very turbulent during the day. In May and June visibility is sometimes poor owing to dust-haze.

In July and August the weather occasionally becomes disturbed owing to the extension of the monsoon current into North-West India which causes low cloud and locally heavy rain over the mountains along the Indus valley. Actually there is very little precipitation at Gilgit or Drosh during the monsoon season.

In the transition period from hot to cold weather, *i.e.*, from the beginning of October to mid-December, conditions are normally very favourable for flying, with mainly clear skies and good visibility.

6. SUMMARY OF FLYING CONDITIONS.

Undoubtedly the period when conditions are most favourable for flying over the frontier is the transition period from the end of September to the beginning of December. Early depressions may cause short spells of unsettled weather in the extreme north in October and November but generally the weather during these months is continuously fine over the frontier as a whole with good visibility and mainly clear skies. The period when conditions are least favourable for flying is the cold weather (*i.e.*, from the end of December to the end of April) owing to frequent precipitation and cloudiness caused by passing depressions. It should be borne in mind, however, that during this period there are occasional spells of fine weather with clear skies and excellent visibility, especially in December and January.

In May-June dust-haze and duststorms interfere considerably with flying over the greater part of the frontier and visibility is rarely very good except perhaps in the extreme north (*i.e.*, Chitral and Gilgit).

During the monsoon months, July to September, conditions are often unfavourable for flying owing to low cloud, thunderstorms, occasional duststorms, and local dust-haze. The storms generally occur in the afternoons or evenings and are more frequent over the northern half than the southern half of the frontier. Except on the comparatively few occasions when the monsoon has temporarily extended well into the frontier districts causing low cloud all day with locally heavy rain, conditions are generally fit for flying before mid-day in July and August although dust-haze may render visibility very poor in the early morning. Conditions improve considerably in September and are mainly favourable for flying during the whole month.

TABLE I.

Station **Chitral** *Lat. 35° 54′ N Long. 71° 54′ E Ht. above M. S. L.* 5,486 ft.

(Table compiled from 6 to 16 years' observations between 1897 and 1912.)

Month.	Pressure reduced to 32°F. and lat. 45°.	Air temperature.							Relative humidity.	Vapour Pressure.	Cloud.	Rain.				
		Mean 8 hrs.	Mean daily.		Mean monthly.		Extreme.		Mean 8 hrs.			Mean monthly total.	Mean number of days.	Maximum in 24 hrs.	Total in rainiest month.	Total in driest month.
	Mean 8 hrs.	Dry bulb.	Max.	Min.	Max.	Min.	Max.	Min.								
	″	°	°	°	°	°	°	°	%	″		″		″	″	″
January	24·691	31·9	46·9	28·5	55·8	20·1	80·1	5·4	82	·149	4·2	1·35	3·7	0·90	4·88	0
February	24·673	34·6	50·0	31·0	59·4	22·5	69·1	10·0	78	·157	3·7	1·28	3·6	0·98	2·94	0
March	24·662	42·0	57·8	37·5	70·3	29·6	79·6	22·4	74	·199	4·3	3·67	7·1	2·50	15·25	1·05
April	24·595	52·4	68·6	46·1	81·6	36·5	89·7	23·0	71	·275	3·7	3·45	7·6	1·50	6·74	0·94
May	24·557	64·5	81·5	54·4	93·0	44·2	99·4	36·8	55	·334	2·0	1·85	3·9	2·26	5·05	0·29
June	24·443	75·2	91·4	62·4	100·0	53·5	105·0	49·0	45	·386	1·1	0·52	1·2	0·80	1·55	0
July	24·373	78·6	97·0	66·1	104·2	58·3	108·2	53·0	53	·517	1·2	0·35	0·7	1·20	2·05	0
August	24·433	76·5	96·3	65·8	103·8	58·1	108·5	54·0	59	·543	1·3	0·30	0·9	0·70	1·51	0
September	24·516	65·7	88·6	57·0	97·2	47·3	101·2	43·0	64	·409	1·3	0·43	1·0	2·00	3·10	0
October	24·629	50·4	77·0	45·4	87·7	37·2	92·2	35·2	75	·274	1·6	0·79	1·9	1·80	3·98	0
November	24·674	41·4	66·6	36·6	74·7	30·8	84·6	26·4	70	·185	1·4	0·42	1·1	0·76	2·25	0
December	24·698	34·7	53·8	30·6	64·2	24·9	85·1	14·5	77	·157	3·3	1·00	2·9	1·70	2·77	0
Means	24·579	54·0	73·0	46·8	..	..	..	..	67	·299	2·4	..	..	..	..	..
Totals	..	..	..	..	..	..	..	..	..	..	..	15·41	35·6	..	..	..
Extreme values	..	..	..	..	..	..	108·5	5·4	..	..	..	..	..	2·50	26·89	7·81
No. of years of observation	6	16	16	14	16	14	16	14	15	15	14	16	16	13	16	16

TABLE II.

Station **Drosh** *Lat. 35° 35′N Long. 71° 50′E Ht. above M. S. L.* 4,500 ft.

(Table compiled from 8 to 24 years' observations between 1897 and 1920.)

MONTH.	PRESSURE REDUCED TO 32°F. AND LAT. 45°.	AIR TEMPERATURE.							Relative humidity.	Vapour Pressure.	Cloud.	RAIN.					WIND.
		Mean 8 hrs.	Mean daily.		Mean monthly.		Extreme.		Mean 8 hrs.			Mean monthly total.	Mean number of days.	Maximum in 24 hrs.	Total in rainiest month.	Total in driest month.	Mean daily velocity in miles per hour.
	Mean 8 hrs.	Dry. bulb	Max.	Min.	Max.	Min.	Max.	Min.									
	"	°	°	°	°	°	°	°	%	"		"		"	"	"	
January	25·250	35·4	47·8	31·7	55·9	25·8	74·7	10·1	73	·148	4·4	0·91	2·8	1·14	3·75	0	3·1
February	25·156	36·8	49·7	33·3	59·1	34·6	67·5	17·5	71	·157	4·7	1·13	3·1	0·90	3·08	0	2·6
March	25·138	44·0	58·0	39·7	71·2	30·7	82·2	24·2	67	·189	4·8	3·42	7·4	2·69	12·12	0·87	3·5
April	25·095	54·2	69·0	48·9	82·2	38·2	88·6	29·1	64	·264	3·8	4·15	8·1	2·60	10·90	0·31	2·5
May	25·005	65·8	82·2	50·2	93·6	46·5	102·5	27·0	54	·340	2·2	1·95	4·1	2·41	5·45	0·23	3·3
June	24·863	75·7	92·2	68·4	100·6	56·8	105·2	41·1	47	·400	1·4	0·64	1·9	1·25	1·78	0	4·0
July	24·802	79·5	96·6	72·9	103·7	62·3	110·1	52·6	50	·501	1·8	0·57	1·5	0·98	2·44	0	5·3
August	24·845	77·8	95·5	72·2	102·7	62·7	107·1	51·4	57	·542	2·4	0·70	2·3	0·88	2·29	0	4·4
September	24·073	69·6	88·6	64·7	97·8	54·7	101·7	43·4	52	·377	1·8	0·63	1·7	1·12	1·98	0·04	3·6
October	25·128	56·7	77·0	53·1	88·9	44·5	95·7	29·0	52	·236	1·9	1·22	2·6	2·55	4·94	0	1·8
November	25·196	46·9	64·6	43·7	74·5	37·1	80·8	32·0	49	·154	2·2	0·36	1·3	0·65	1·82	0	1·3
December	25·217	37·7	51·3	35·0	61·2	28·2	74·7	22·1	64	·145	4·1	1·07	3·2	1·17	2·15	0·03	1·8
Means	25·056	56·7	72·7	51·9	..	..	..	..	58	·288	3·0	..	..	..	..	..	3·1
Totals	..	..	..	..	..	..	..	..	..	..	..	16·75	40·0	..	..	..	..
Extreme values	..	..	..	..	..	..	110·1	10·1	..	..	..	..	..	2·69	25·41	8·63	..
No. of years of observation	8	19	24	24	23	24	23	24	24	14	24	24	24	15	24	24	8

TABLE III.

Station **Parachinar** *Lat. 33° 54′N Long. 70° 07′E Ht. above M. S. L.* 6,000 ft.

(Table compiled from 21 to 24 years' observations between 1897 and 1920.)

Month.	Pressure reduced to 32°F. and lat. 45°.	Air temperature.							Relative humidity.	Vapour Pressure.	Cloud.	Rain.					Wind.
	Mean 8 hrs.	Mean 8 hrs.	Mean daily.		Mean monthly.		Extreme.		Mean 8 hrs.			Mean monthly total.	Mean number of days.	Maximum in 24 hrs.	Total in rainiest month.	Total in driest month.	Mean daily velocity in miles per hour.
		Dry bulb.	Max.	Min.	Max.	Min.	Max.	Min.									
	"	°	°	°	°	°	°	°	%	"		"		"	"	"	
January	24·472	34·9	50·5	29·1	59·9	18·8	65·5	—2·8	73	·149	3·9	2·12	4·5	2·10	6·24	0	1·8
February	24·423	36·7	51·5	30·9	62·2	20·9	69·1	6·4	72	·159	3·8	2·13	4·9	2·00	5·63	0·15	2·2
March	24·411	45·7	59·0	38·3	70·9	28·4	80·8	20·4	62	·190	4·1	4·54	8·9	2·20	10·45	0·92	2·6
April	24·390	56·4	67·9	46·4	79·2	37·4	87·8	27·0	56	·250	3·4	4·33	8·9	4·00	15·41	0·99	2·5
May	24·351	68·6	79·6	55·7	90·3	46·4	97·2	38·4	46	·305	2·1	2·51	7·1	2·35	5·61	0·40	2·6
June	24·266	76·5	87·9	63·8	96·7	55·1	101·3	49·0	40	·358	2·3	2·13	4·6	5·22	8·85	0	2·4
July	24·237	76·2	87·1	66·3	95·7	51·9	100·0	45·3	57	·504	3·8	3·38	6·5	2·98	6·18	0·21	2·1
August	24·282	74·2	85·0	64·9	91·7	58·4	95·3	52·5	63	·528	3·5	3·63	7·7	1·97	9·70	0·84	2·1
September	24·378	69·5	81·1	58·7	82·8	51·4	91·0	48·1	53	·381	2·4	2·20	4·7	2·45	6·73	0·42	2·2
October	24·478	60·9	74·5	48·8	82·3	41·5	87·7	37·1	41	·216	1·0	0·87	2·2	1·05	3·95	0·03	2·2
November	24·511	50·1	64·8	39·6	73·5	32·4	86·0	25·1	46	·165	1·8	0·51	1·6	1·12	2·50	0	1·8
December	24·492	39·3	54·3	32·2	65·0	23·9	71·1	16·1	62	·148	3·4	1·17	3·2	1·15	3·07	0·03	1·7
Means	24·391	57·4	70·3	47·9	..	..	..	..	56	·279	3·0	..	..	..	..	..	2·2
Totals	..	..	..	..	..	..	..	..	..	..	..	29·52	64·8	..	..	..	..
Extreme values	..	..	..	..	..	..	101·3	—2·8	..	..	..	..	..	5·22	41·50	19·83	..
No. of years of observation	21	22	22	22	24	22	24	22	22	22	23	24	24	23	24	24	23

TABLE IV.

Station **Cherat** *Lat. 33° 50′N Long. 72° 01′E Ht. above M. S. L.* 4,256 ft.

(Table compiled from 20 to 28 years' observations between 1892 and 1920.)

Month.	Pressure reduced to 32°F. and Lat. 45°. Mean 8 hrs.	Air Temperature. Mean 8 hrs. Dry bulb.	Air Temperature. Mean daily. Max.	Air Temperature. Mean daily. Min.	Air Temperature. Mean monthly. Max.	Air Temperature. Mean monthly. Min.	Air Temperature. Extreme. Max.	Air Temperature. Extreme. Min.	Relative humidity. Mean 8 hrs.	Vapour Pressure. Mean 8 hrs.	Cloud. Mean 8 hrs.	Rain. Mean monthly total.	Rain. Mean number of days.	Rain. Maximum in 24 hrs.	Rain. Total in rainiest month.	Rain. Total in driest month.	Wind. Mean daily velocity in miles per hour.	Wind. Mean direction at 8 hrs.	Wind. Percentage of wind at 8 hrs. from N	NE	E	SE	S	SW	W	NW	Calm.
	"	°	°	°	°	°	°	°	%	"		"		"	"	"		°									
January .	25·758	42·6	49·9	38·9	58·4	30·7	67·3	21·5	54	·140	4·2	2·51	3·9	4·21	7·92	0	9·8	N 11 W	52	5	0	3	3	1	0	25	10
February .	25·722	44·0	52·2	40·4	62·7	31·1	72·8	21·5	54	·151	4·3	2·98	4·3	5·24	7·52	0·01	9·4	N 10 W	50	5	0	5	5	1	1	23	9
March . .	25·694	51·2	60·4	46·8	73·6	36·6	82·4	25·5	56	·205	4·3	4·37	6·1	4·69	15·30	0·37	8·7	N 13 W	45	7	1	2	6	2	3	23	12
April . .	25·652	61·4	72·1	55·5	84·3	44·4	93·4	35·1	50	·263	3·3	2·66	5·1	4·15	9·18	0·23	8·5	N 12 W	46	6	1	3	8	2	2	21	12
May . .	25·580	72·5	86·4	66·7	97·0	53·3	103·7	42·3	37	·291	1·9	1·56	2·7	7·70	11·61	0·03	7·8	N 15 W	40	6	0	4	7	3	2	22	15
June . .	25·477	79·8	93·5	73·2	103·2	61·7	110·0	55·5	42	·417	2·0	1·38	2·2	3·58	7·07	0	6·3	N 13 W	29	6	0	9	17	4	2	12	20
July . .	25·455	76·9	89·4	71·4	101·0	61·8	106·5	58·2	67	·600	4·0	3·47	4·9	2·98	10·39	0·01	5·6	S 4 E	10	4	0	14	29	5	2	7	29
August . .	25·501	74·7	86·1	69·9	95·3	62·4	102·2	57·0	75	·636	4·3	4·30	6·1	6·50	20·69	0·05	4·9	S 5 E	10	2	0	14	23	5	2	5	38
September .	25·615	72·1	84·3	65·6	91·6	57·2	99·4	51·5	59	·465	2·2	2·16	3·0	4·30	8·55	0·03	4·6	N 61 W	20	4	1	8	14	7	4	7	35
October .	25·730	64·8	77·2	58·0	85·4	49·2	92·4	42·4	41	·249	1·1	0·43	1·2	1·70	4·51	0	5·9	N 22 W	36	5	0	4	11	6	5	13	20
November .	25·792	55·0	65·9	49·3	74·4	41·3	79·9	30·4	41	·175	1·8	0·23	0·6	1·40	2·04	0	6·9	N 10 W	49	5	0	2	3	1	1	20	21
December .	25·790	46·3	54·2	42·1	63·8	33·2	70·8	25·6	44	·135	3·5	1·46	1·9	3·87	5·86	0	9·7	N 12 W	52	5	0	2	3	1	1	23	14
Means . .	25·647	61·8	72·6	56·5	..	..	..	..	52	·311	3·1	..	..	..	..	..	7·3	N 14 W	37	5	0	6	11	3	2	17	20
Totals . .	..	..	..	..	..	..	..	..	..	..	..	27·51	42·0	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Extreme values	..	..	..	..	..	..	110·0	21·5	..	..	..	..	..	7·70	49·67	12·74	..	..	..	..	..	..	..	..	..	..	..
No. of years of observation.	28	28	28	27	28	27	28	27	28	28	28	28	28	28	28	28	28	20	20	20	20	20	20	20	20	20	20

TABLE V.

Station **Peshawar** *Lat. 34° 02′ N Long. 71° 37′E Ht. above M. S. L.* 1,164 ft.

(Table compiled from 20 to 45 years' observations between 1876 and 1920.)

Month.	Pressure Reduced to 32°F. and Lat. 45°. Mean. 8 hrs.*	Pressure Reduced to 32°F. and Lat. 45°. Mean. Daily range.	Air Temperature. Mean 8 hrs. Dry bulb.	Air Temperature. Mean 8 hrs. Wet bulb.	Air Temperature. Mean daily. Max.	Air Temperature. Mean daily. Min.	Air Temperature. Mean monthly. Max.	Air Temperature. Mean monthly. Min.	Air Temperature. Extreme. Max.	Air Temperature. Extreme. Min.	Relative humidity. Mean 8 hrs.	Vapour Pressure. Mean 8 hrs.	Cloud. Mean 8 hrs.	Rain. Mean monthly total.	Rain. Mean number of days.	Rain. Maximum in 24 hrs.	Rain. Total in rainiest month.	Rain. Total in driest month.	Wind. Mean daily velocity in miles per hour.	Wind. Mean direction at 8 hrs.	Wind. Percentage wind at 8 hrs from N	NE	E	SE	S	SW	W	NW	Calm.
	″	″	°	°	°	°	°	°	°	°	%	″		″		″	″	″		°									
January .	28·889	·003	42·7	39·5	63·2	39·4	71·4	32·3	77·1	27·9	73	·204	4·4	1·56	3·0	3·03	4·60	0	1·5	S 16 W	1	1	0	2	19	5	4	1	66
February .	28·840	·090	47·2	43·6	66·0	42·6	75·7	34·2	81·6	28·4	73	·239	4·3	1·35	3·1	2·17	4·34	0	1·9	S 23 W	2	1	1	3	16	8	5	2	62
March . .	28·757	·092	57·9	53·1	74·9	51·5	86·5	41·3	98·5	33·4	71	·343	4·4	2·25	4·4	2·17	7·53	0	2·2	S 48 W	2	2	1	2	10	6	7	4	67
April . .	28·650	·100	70·1	62·2	85·4	60·1	97·2	50·7	107·5	41·4	62	·450	3·6	1·85	4·0	2·42	7·35	0·03	2·4	S 75 W	4	3	2	3	6	5	7	5	65
May . .	28·509	·101	83·1	68·5	98·7	69·9	109·6	60·1	116·2	51·3	44	·485	2·1	0·82	2·0	3·85	5·16	0·03	2·7	N 46 W	8	2	3	2	4	2	7	9	63
June . .	28·351	·105	89·4	73·1	106·6	77·3	115·6	68·7	120·2	63·0	43	·581	1·8	0·36	1·0	2·65	3·85	0	2·6	N 17 W	14	5	3	1	2	2	6	8	59
July . .	28·321	·113	87·6	77·3	103·7	79·6	113·3	71·6	121·6	65·8	61	·786	2·9	1·24	2·0	2·75	4·57	0	2·4	N 11 W	21	7	2	1	2	1	5	11	50
August . .	28·389	·114	84·5	77·1	99·5	78·1	107·7	71·2	118·4	66·0	70	·826	3·2	2·24	2·6	6·20	17·75	0	2·1	N 17 W	20	5	3	0	1	0	6	15	50
September .	28·539	·113	78·9	70·9	95·9	70·7	101·9	62·5	109·6	57·9	66	·651	1·4	0·81	1·6	1·85	4·73	0	1·6	N 26 W	7	3	0	0	1	1	3	6	79
October .	28·722	·102	66·6	59·1	88·5	58·0	95·7	49·5	101·0	43·5	62	·409	1·1	0·16	0·4	1·22	1·64	0	1·2	S 84 W	2	1	0	0	3	1	2	1	89
November .	28·847	·100	52·3	47·5	77·0	45·8	84·6	37·4	88·6	24·7	68	·273	2·0	0·28	0·5	1·86	4·28	0	1·0	S 17 W	1	1	0	1	6	2	1	1	89
December .	28·903	·093	43·2	39·8	66·6	39·0	74·6	32·1	81·1	25·7	72	·206	3·7	0·59	1·3	1·61	4·35	0	1·2	S 5 W	0	1	1	2	13	4	1	1	77
Means . .	28·643	·101	67·0	59·3	85·5	59·3	..	..	..	..	64	·454	2·9	..	..	..	..	..	1·9	N 68 W	7	3	1	1	7	3	5	5	68
Totals . .	..	..	..	..	..	..	..	..	..	..	..	..	..	13·51	25·9	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Extreme values	..	..	..	..	..	..	..	..	121·6	24·7	..	..	..	..	..	6·20	26·32	4·12	..	..	..	..	..	..	..	..	..	..	..
No. of years of observation.	32	..	32	32	43	43	43	43	43	43	32	32	32	43	43	43	43	43	45	20	20	20	20	20	20	20	20	20	20

*The italicised figures refer to the R. A. F. site.

TABLE VI.

Station **D. I. Khan** *Lat. 26° 51′N Long. 88° 39′E Ht. above M. S. L.* 590 ft.

(Table compiled from 11 to 48 years' observations between 1872 and 1920.)

Month.	Pressure reduced to 32°F. and lat. 45°. Mean. 8 hrs.	Pressure reduced to 32°F. and lat. 45°. Mean. Daily range.	Air temperature. Mean 8 hrs. Dry bulb.	Air temperature. Mean 8 hrs. Wet bulb.	Air temperature. Mean daily. Max.	Air temperature. Mean daily. Min.	Air temperature. Mean monthly. Max.	Air temperature. Mean monthly. Min.	Air temperature. Extreme. Max.	Air temperature. Extreme. Min.	Relative humidity. Mean 8 hrs.	Vapour Pressure. Mean 8 hrs.	Cloud. Mean 8 hrs.	Rain. Mean monthly total.	Rain. Mean number of days.	Rain. Maximum in 24 hrs.	Rain. Total in rainiest month.	Rain. Total in driest month.	Wind. Mean daily velocity in miles per hour.	Wind. Mean direction at 8 hrs.
	″	″	°	°	°	°	°	°	°	°	%	″		″		″	″	″		°
January	29·476	·082	44·3	40·9	68·6	40·5	76·3	32·1	82·7	28·0	72	·215	3·2	0·49	1·4	1·70	2·63	0	0·9	N37W
February	29·421	·086	49·7	45·4	71·6	44·6	81·2	35·2	88·7	26·8	70	·253	3·2	0·65	1·7	1·43	4·72	0	1·3	N22W
March	29·321	·097	61·8	55·7	81·8	55·1	92·3	44·3	106·5	36·5	66	·365	3·4	1·02	2·3	2·10	7·46	0	1·5	N13W
April	29·197	·103	74·7	65·0	92·8	65·2	103·5	54·5	113·5	43·8	57	·488	2·6	0·74	1·7	1·57	2·62	0	1·8	N5E
May	29·050	·100	86·4	72·3	103·7	74·8	113·5	64·6	119·5	58·0	48	·599	1·1	0·40	0·9	3·70	3·85	0	1·9	N16E
June	28·887	·100	90·6	77·8	107·8	81·5	116·4	72·3	121·5	59·7	54	·776	1·2	0·67	1·3	3·14	3·34	0	1·9	N51E
July	28·865	·093	88·4	80·4	103·3	82·7	112·8	73·4	120·5	65·8	69	·919	2·3	2·18	2·7	4·05	8·76	0	1·9	N69E
August	28·937	·096	86·1	79·9	100·7	81·3	102·7	73·8	113·5	68·8	75	·927	2·2	1·94	2·2	4·95	9·05	0	1·5	N72E
September	29·085	·096	81·7	74·3	99·6	75·3	105·2	67·0	110·5	61·1	69	·749	1·0	0·55	0·9	4·10	6·25	0	1·2	N67E
October	29·273	·092	70·2	61·9	93·5	61·5	100·4	52·0	105·5	45·8	60	·448	0·5	0·09	0·2	1·35	1·35	0	0·8	N34E
November	29·422	·085	55·9	50·5	81·9	48·4	89·3	40·1	93·4	28·0	66	·300	1·3	0·16	0·4	1·28	1·95	0	0·5	N9E
December	29·491	·083	45·2	41·7	71·7	40·6	79·8	33·7	84·8	26·0	72	·222	2·7	0·20	0·6	0·77	1·55	0	0·5	N32W
Means	29·202	·093	69·6	62·1	89·7	62·6	..	..	..	..	65	·522	2·1	..	..	..	..	..	1·3	N25E
Totals	..	..	..	..	..	..	..	..	..	..	..	..	..	9·09	16·3	..	..	..	..	..
Extreme values	..	..	..	..	..	..	..	..	121·5	26·0	..	..	..	..	..	4·95	19·82	3·88	..	..
No. of years of observation	32	..	32	32	43	43	43	43	43	43	32	32	32	43	43	43	43	43	48	11

TABLE VII.

Station **Fort Sandeman** *Lat. 31° 21′ N Long. 69° 29′ E Ht. above M. S. L.* 4,614 ft.

(Table compiled from 7 to 9 years' observations between 1912 and 1920.)

MONTH.	PRESSURE REDUCED TO 32°F. AND LAT. 45°.	AIR TEMPERATURE.							Relative humidity.	Vapour Pressure.	Cloud.	RAIN.					WIND.
	Mean 8 hrs.	Mean 8 hrs.	Mean daily.		Mean monthly.		Extreme.		Mean 8 hrs.			Mean monthly total.	Mean number of days.	Maximum in 24 hrs.	Total in rainiest month.	Total in driest month.	Mean daily velocity in miles per hour
		Dry bulb.	Max.	Min.	Max.	Min.	Max.	Min.									
	″	°	°	°	°	°	°	°	%	″		″		″	″	″	
January	25·482	36·0	60·5	31·3	72·5	24·5	85·7	22·1	67	·150	2·4	0·53	2·0	0·47	1·20	0·10	1·4
February	25·404	38·9	60·2	34·2	72·3	22·9	77·9	14·5	67	·173	2·5	0·85	2·6	0·76	2·45	0	2·5
March	25·378	49·8	70·7	44·1	82·5	35·3	93·7	33·1	59	·206	2·5	1·58	3·5	1·35	4·20	0·32	3·3
April	25·340	60·3	79·9	53·4	90·9	43·1	97·0	35·3	55	·282	1·9	1·39	4·3	1·02	2·65	0·68	3·1
May	25·289	73·1	92·0	63·8	101·8	55·2	106·2	50·0	37	·288	0·7	0·74	1·3	2·60	3·20	0·02	3·2
June	25·170	81·0	100·0	72·1	107·1	64·4	110·2	61·1	39	·393	0·7	0·81	1·7	1·72	2·11	0	3·3
July	25·130	81·2	100·1	74·7	107·5	64·9	110·7	60·3	57	·597	1·7	2·06	3·6	1·14	3·45	1·05	3·3
August	25·185	78·4	96·5	72·5	104·5	66·1	109·9	63·5	62	·593	1·5	1·68	3·6	2·15	3·24	0·53	2·9
September	25·288	72·5	92·6	65·2	99·5	56·7	101·9	51·6	54	·432	0·6	0·64	1·4	1·07	3·20	0	2·4
October	25·428	59·9	83·6	52·0	91·3	41·6	94·9	36·9	39	·205	0·4	0·23	0·5	0·86	0·91	0	1·6
November	25·478	44·8	71·3	39·3	81·0	30·7	86·0	24·7	48	·145	1·1	0·25	0·6	0·81	1·79	0	1·1
December	25·475	35·7	60·8	31·2	71·2	21·6	77·1	14·1	69	·161	2·2	0·53	1·2	0·71	0·92	0	1·3
Means	25·337	59·3	80·7	52·8	..	..	..	..	54	·302	1·5	..	..	..	..	..	2·5
Totals	..	..	..	..	..	..	..	..	..	..	..	11·29	26·3	..	..	..	..
Extreme values	..	..	..	..	..	..	110·7	14·1	..	..	..	..	..	2·60	15·70	7·50	..
No. of years of observations	8	8	9	8	8	8	8	8	8	8	8	8	8	9	8	8	7

TABLE VIII.

Station **Quetta** *Lat. 30° 12′N Long. 67° 00′E Ht. above M. S. L.* 5,502 ft.

(Table compiled from 12 to 43 years' observations between 1878 and 1920.)

Month.	Pressure reduced to 32°F. and lat. 45°. Mean 8 hrs.	Pressure reduced to 32°F. and lat. 45°. Mean daily range.	Air temperature. Mean 8 hrs. Dry bulb.	Air temperature. Mean daily. Max.	Air temperature. Mean daily. Min.	Air temperature. Mean monthly. Max.	Air temperature. Mean monthly. Min.	Air temperature. Extreme. Max.	Air temperature. Extreme. Min.	Relative humidity. Mean 8 hrs.	Vapour pressure. Mean 8 hrs.	Cloud. Mean 8 hrs.	Rain. Mean monthly total.	Rain. Mean number of days.	Rain. Maximum in 24 hrs.	Rain. Total in rainiest month.	Rain. Total in driest month.	Wind. Mean daily velocity in miles per hour.	Wind. Mean direction at 8 hrs.	Wind. Percentage of wind at 8 hrs. from N	NE	E	SE	S	SW	W	NW	Calm.
	8 hrs.																												
	″	″	°	°	°	°	°	°	°	%	″		″		″	″	″		°										
January	24·662	·074	31·7	51·2	28·5	64·3	16·7	77·7	3·0	82	·151	3·9	1·93	4·7	2·20	6·37	0·02	2·0	S 17 E	1	..	1	7	4	1	2	1	84
February	24·630	·072	35·7	53·2	30·0	67·1	19·4	79·8	7·7	75	·164	3·7	1·86	4·4	1·42	7·77	0·03	2·4	S 37 E	3	2	3	8	7	1	2	2	73
March	24·618	·073	46·6	63·6	38·8	75·5	27·3	84·2	14·8	64	·207	3·5	1·88	5·0	1·82	5·30	0	2·8	S 17 E	2	2	3	11	8	3	4	3	63
April	24·595	·073	58·6	73·7	45·6	84·0	34·6	90·0	26·9	54	·262	2·5	1·03	2·9	1·20	5·08	0	2·4	S 52 W	3	2	2	5	5	3	3	6	73
May	24·559	·069	68·6	83·8	52·0	92·0	42·7	97·5	33·6	46	·323	1·0	0·37	1·0	0·98	1·96	0	2·2	N 66 W	2	1	..	1	1	1	3	2	88
June	24·448	·071	74·4	91·1	58·5	97·2	49·3	102·3	42·9	47	·406	0·6	0·15	0·4	0·74	1·14	0	2·0	S	0	0	1	2	2	1	1	1	92
July	24·392	·076	76·3	93·4	64·6	94·1	55·8	103·9	46·9	56	·514	1·3	0·63	1·3	2·31	11·32	0	2·1	S 4 E	0	..	0	3	3	1	1	..	91
August	24·444	·076	73·1	91·6	61·5	96·7	51·7	100·1	44·9	58	·475	1·3	0·46	0·8	3·18	3·97	0	1·8	S 7 E	..	..	1	3	2	2	1	0	92
September	24·565	·080	64·4	85·9	49·5	91·2	39·8	97·1	33·8	49	·304	0·4	0·07	0·2	0·77	1·15	0	1·4	N 45 E	0	1	..	0	0	..	0	0	98
October	24·692	·077	52·0	75·5	38·7	83·5	30·2	89·1	23·8	48	·191	0·4	0·13	0·3	0·95	1·87	0	1·2	N 45 E	0	1	1	1	0	0	1	1	95
November	24·729	·078	40·6	65·4	32·4	73·9	23·7	79·7	11·7	59	·163	1·5	0·32	0·9	1·03	3·76	0	1·3	S 13 E	0	..	1	3	1	1	1	1	93
December	24·707	·076	32·9	56·0	28·7	66·6	19·1	75·8	10·8	77	·155	3·1	0·92	2·3	1·70	4·24	0	1·6	S 8 E	2	0	1	3	4	1	1	1	87
Means	24·587	·075	54·6	73·7	44·1	..	..	..	..	60	·276	1·9	..	..	..	..	..	1·9	S 14 E	1	1	1	4	3	1	2	1	86
Totals	..	..	..	..	..	..	..	..	..	..	..	..	9·75	24·2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Extreme values	..	..	..	..	..	..	..	103·9	3·0	..	..	..	..	..	3·18	21·58	3·90	..	..	..	..	..	..	..	..	..	..	..
No. of years of observations.	32	..	32	43	43	43	43	43	43	32	32	32	43	43	43	43	43	41	12	12	12	12	12	12	12	12	12	12

NOTE.—From 1889 to October 1912 the observations were recorded at 8 hrs.; from November 1912 to date at 7 hrs.

TABLE IX.

Station **Chaman** *Lat. 30° 55′N Long. 66° 28′E Ht. above M. S. L.* 4,311 ft.

(Table compiled from 12 to 28 years' observations between 1892 and 1920.)

Month.	Pressure Reduced to 32°F. and Lat. 45°. Mean 8 hrs.	Air Temperature. Mean 8 hrs. Dry bulb.	Air Temperature. Mean daily. Max.	Air Temperature. Mean daily. Min.	Air Temperature. Mean monthly. Max.	Air Temperature. Mean monthly. Min.	Air Temperature. Extreme. Max.	Air Temperature. Extreme. Min.	Relative humidity. Mean 8 hrs.	Vapour Pressure. Mean 8 hrs.	Cloud. Mean 8 hrs.	Rain. Mean monthly total.	Rain. Mean number of days.	Rain. Maximum in 24 hrs.	Rain. Total in rainiest month.	Rain. Total in driest month.	Wind. Mean daily velocity in miles per hour.	Wind. Mean direction at 8 hrs.	Wind. Percentage of wind at 8 hrs from N	NE	E	SE	S	SW	W	NW	Calm.
	"	°	°	°	°	°	°	°	%	"		"		"	"	"		°									
January	25·745	39·2	53·8	35·0	66·8	21·9	80·3	0·2	70	·175	4·3	1·57	4·1	1·65	3·89	0	4·4	S 58 E	8	4	22	28	11	6	2	5	13
February	25·706	42·5	57·6	36·9	69·7	23·2	78·1	10·5	65	·189	4·0	1·42	3·9	1·42	3·51	0·03	5·2	S 40 E	7	5	14	28	16	10	2	3	16
March	25·676	52·7	64·9	44·7	79·4	30·0	85·3	13·1	58	·219	4·2	1·65	4·5	1·49	5·16	0·17	5·9	S 37 E	5	5	16	26	19	9	3	6	13
April	25·642	65·6	76·8	54·1	89·7	41·0	94·5	29·9	51	·295	3·1	0·68	1·9	0·80	2·83	0	5·5	S 2 E	9	4	10	14	21	18	5	5	14
May	25·590	77·8	90·9	64·3	100·9	53·0	109·8	40·2	36	·333	0·9	0·12	0·4	0·52	0·59	0	5·5	S 20 W	5	4	8	13	18	31	8	5	8
June	25·457	83·9	99·2	71·5	106·0	61·7	112·0	51·1	34	·386	0·4	0·02	0	0·60	0·60	0	5·7	S 28 W	4	3	10	9	17	32	9	7	8
July	25·393	85·3	101·1	75·1	106·7	67·2	110·8	61·3	37	·437	0·6	0·09	0·2	0·70	1·02	0	5·7	S 23 W	5	4	10	9	20	31	9	5	7
August	25·447	81·5	98·3	72·3	104·4	63·4	107·2	56·1	39	·418	0·7	0·04	0·1	0·33	0·43	0	5·3	S 23 W	3	2	12	7	17	37	8	2	13
September	25·592	73·7	90·6	62·7	98·1	53·4	104·2	48·1	36	·284	0·3	0	0	0	0	0	4·9	S 5 E	4	3	13	15	14	23	4	3	20
October	25·753	61·8	79·7	52·0	89·0	41·0	94·2	31·8	40	·215	0·6	0·11	0·3	0·92	1·16	0	4·6	S 35 E	5	3	17	19	12	13	3	4	23
November	25·791	51·7	67·5	42·2	79·1	33·0	89·8	20·3	45	·161	1·3	0·31	0·9	0·82	2·23	0	4·1	S 63 E	7	4	21	29	9	4	2	7	17
December	25·787	41·8	55·3	34·9	69·6	26·6	79·8	17·5	65	·163	3·5	1·21	3·1	1·80	4·94	0	4·1	S 66 E	4	5	30	30	8	4	2	5	12
Means	25·632	63·1	78·0	53·8	..	..	..	..	48	·273	2·0	..	..	..	..	..	5·1	S 17 E	5	4	15	19	15	18	5	5	14
Totals	..	..	..	..	..	..	..	..	..	..	..	7·22	19·4	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Extreme values	..	..	..	..	..	..	112·0	0·2	..	..	..	..	..	1·80	12·34	2·68	..	..	..	..	..	..	..	..	..	..	..
No. of years of observation.	27	28	12	12	28	28	28	28	12	12	28	28	28	28	28	28	28	12	12	12	12	12	12	12	12	12	12

Table X.

Monthly Wind Frequency at ***Quetta.***

(Ht. of Quetta = 1,680 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.	Number of observations.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			January.										**February.**								
Surface . . .	139	6-25	1	1	1	9	7	1	1	12	64	125	..	2	2	13	10	2	2	5	64
		26-50	..	..	..	..	1	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	118	6-25	3	1	..	7	19	3	14	32	13	106	11	..	1	2	22	4	7	28	7
		26-50	..	..	..	2	2	..	3	3	..		..	..	..	1	9	2	4	3	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	117	6-25	3	1	..	9	19	2	10	30	18	121	11	1	3	5	14	1	8	27	12
		26-50	..	..	..	..	5	..	1	3	..		..	..	..	1	16	1	2	2	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	111	6-25	1	..	..	1	3	12	9	18	2	116	1	..	..	..	3	10	6	8	..
		26-50	5	..	..	1	3	5	10	27	..		2	..	..	..	7	10	12	32	..
		51-75	..	..	..	..	..	..	1	2	..		1	..	..	..	..	2	3	3	..
		> 75	..	..	..	..	..	1	..	1	..		..	..	..	..	..	..	..	..	..
			March.										**April.**								
Surface . . .	154	6-25	..	1	3	8	11	3	1	3	69	158	1	3	2	5	9	2	2	2	73
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	1	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	126	6-25	5	3	1	5	21	8	15	23	5	134	5	2	..	6	19	7	12	23	10
		26-50	..	..	..	..	4	1	4	2	..		2	..	..	..	5	..	2	5	..
		51-75	..	..	..	..	..	..	2	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	139	6-25	9	2	3	9	19	4	14	24	9	135	9	3	4	3	33	4	12	20	4
		26-50	..	..	..	..	2	1	3	1	..		..	..	..	..	4	..	1	3	..
		51-75	..	..	..	..	..	1	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	137	6-25	3	..	..	1	1	10	10	17	1	132	2	..	..	..	4	11	12	16	..
		26-50	1	..	..	..	1	10	13	27	..		1	..	..	1	3	7	11	25	..
		51-75	1	..	..	..	..	..	2	3	..		..	..	..	..	..	..	..	7	..
		>75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

TABLE X—*contd.*

Monthly Wind Frequency at ***Quetta***—contd.

(Ht. of Quetta = 1,680 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.	Number of observations.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			May.										**June.**								
Surface . . .	171	6-25	..	2	2	6	8	1	1	..	82	168	1	2	3	13	6	..	..	..	75
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	140	6-25	6	..	..	4	17	1	19	21	3	138	4	1	1	4	29	9	18	20	10
		26-50	1	..	..	..	1	1	8	9	..		..	..	..	..	..	..	1	3	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Meters above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	146	6-25	7	3	1	2	23	7	23	21	8	158	3	3	3	6	30	8	11	21	14
		26-50	..	..	..	..	2	1	2	1	..		..	..	..	..	2	..	1	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	138	6-25	4	..	..	..	2	7	12	12	..	157	7	1	1	1	3	6	18	28	1
		26-50	1	..	..	..	1	2	10	38	..		5	..	..	..	..	..	5	21	..
		51-75	..	..	..	..	..	..	3	7	..		..	..	..	..	..	..	1	3	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
			July.										**August.**								
Surface . . .	180	6-25	..	..	2	15	12	1	..	..	69	176	..	1	3	14	15	2	..	..	66
		26-50	..	..	..	..	1	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	149	6-25	5	1	1	12	30	1	11	7	14	143	5	1	1	6	28	13	19	13	13
		26-50	..	..	..	..	1	..	1	..	..		..	..	..	..	1	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	178	6-25	2	2	4	9	44	10	8	6	12	179	5	4	6	9	33	4	6	15	18
		26-50	..	..	..	..	2	..	..	..	..		..	..	..	..	1	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	172	6-25	3	3	2	1	2	6	20	30	1	178	6	1	1	1	2	4	23	32	1
		26-50	..	1	..	..	1	2	10	20	..		1	..	1	..	..	..	11	19	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

TABLE X—*concld.*

Monthly Wind Frequency at ***Quetta*** —concld.

(Ht. of Quetta = 1,680 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.	Number of observations.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			September.										**October.**								
Surface . . .	153	6-25	..	2	3	7	4	..	..	..	84	167	1	2	4	7	7	2	1	..	77
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	123	6-25	9	2	..	7	18	7	13	21	24	136	17	2	..	2	11	4	13	25	27
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	169	6-25	8	3	4	9	29	4	7	14	24	179	10	2	3	3	16	5	13	23	25
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	1	..	1	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	168	6-25	7	4	..	1	4	10	20	28	1	177	11	..	..	..	2	4	15	23	2
		26-50	1	..	1	1	..	..	8	14	..		6	..	..	..	1	2	6	28	..
		51-75	..	..	..	..	..	..	1	2	..		..	..	..	..	..	..	1	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
			November.										**December.**								
Surface . . .	170	6-25	..	2	2	9	3	2	..	..	81	159	1	..	..	9	13	3	..	1	74
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	1	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	140	6-25	11	3	1	4	9	3	14	36	18	119	7	3	3	3	26	3	13	19	20
		26-50	..	..	..	..	1	1	..	..	..		..	..	..	1	4	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	..	6-25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	172	6-25	8	3	3	7	9	3	7	32	26	165	5	4	3	8	20	1	10	24	21
		26-50	..	..	..	..	1	..	..	..	..		..	..	..	1	5	1	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	171	6-25	12	2	1	1	5	6	17	19	2	154	4	2	1	2	7	8	14	19	3
		26-50	6	1	1	..	..	1	3	21	..		3	..	..	1	1	5	7	22	..
		51-75	..	..	..	..	..	..	..	2	..		..	..	..	..	1	1	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

TABLE XI.

Monthly Wind Frequency at **Peshawar.**

(Ht. of Peshawar = 350 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations.									Number of observations.	Percentage of Observations.								
			N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.		N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			January.										**February.**								
Surface . . .	130	6-25	..	..	2	2	6	9	1	2	79	118	..	..	1	..	7	4	..	..	88
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	129	6-25	16	4	1	2	4	5	19	26	22	117	20	4	2	2	3	6	15	26	21
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	2	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	154	6-25	14	3	..	1	3	7	16	41	14	136	18	4	1	1	4	2	13	36	19
		26-50	1	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	151	6-25	28	13	10	3	3	3	1	24	5	130	25	6	8	14	2	3	3	15	7
		26-50	..	1	..	..	1	..	1	8	..		..	..	..	1	1	..	1	12	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	144	6-25	9	10	13	10	6	7	8	16	8	122	3	13	7	9	10	10	12	12	3
		26-50	..	1	1	1	1	1	2	4	..		2	..	..	1	3	1	3	8	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	4	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
			March.										**April.**								
Surface . . .	142	6-25	..	..	..	1	8	8	..	2	80	135	1	..	1	3	5	3	..	2	85
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	142	6-25	27	11	5	2	1	3	9	27	13	*156	33	10	..	3	1	1	6	28	11
		26-50	1	..	..	..	..	..	..	1	..		1	..	..	..	..	..	..	5	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	163	6-25	25	7	5	1	1	3	12	34	9	155	32	10	1	3	1	..	6	34	8
		26-50	1	..	1	..	..	..	1	3	..		1	..	..	..	..	..	..	5	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	158	6-25	21	4	4	4	8	6	4	23	4	154	21	4	5	8	3	4	6	20	8
		26-50	1	..	..	1	3	1	2	14	..		2	1	1	..	..	..	2	14	..
		51-75	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	2	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	150	6-25	10	7	1	3	3	9	17	16	3	153	5	1	1	3	6	9	15	18	3
		26-50	..	..	..	1	1	7	7	13	..		3	..	..	1	2	10	8	13	..
		51-75	..	..	..	..	1	1	1	..	..		..	..	1	..	1	..	..	2	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

* This includes observations at 650 m. above surface for the year 1922.

TABLE XI—*contd.*

Monthly Wind Frequency at **Peshawar**—contd.

(Ht. of Peshawar = 350 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.	Number of observations.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			May.										**June.**								
Surface . . .	139	6-25	..	..	1	2	5	2	1	2	86	139	3	..	1	2	2	4	1	1	85
		26-50	..	..	..	..	..	..	1	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	139	6-25	29	13	5	3	1	1	7	27	5	140	27	7	5	2	4	2	6	28	14
		26-50	1	..	..	..	..	..	..	7	..		1	1	..	..	..	..	..	3	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	139	6-25	27	10	4	2	3	1	7	35	4	140	24	9	2	4	..	5	8	27	9
		26-50	..	..	..	..	..	..	..	7	..		..	..	..	..	..	..	1	5	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	139	6-25	20	5	4	5	1	1	8	29	5	140	11	4	2	3	3	11	9	29	17
		26-50	1	1	1	..	..	1	4	14	..		1	..	..	..	..	1	4	16	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	138	6-25	6	4	4	4	1	7	15	22	4	138	9	..	1	2	1	10	23	29	2
		26-50	2	2	..	1	1	1	9	15	..		4	..	..	..	1	1	4	12	..
		51-75	..	..	1	..	..	..	1	1	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
			July.										**August.**								
Surface . . .	133	6-25	8	1	1	1	1	..	5	7	76	125	6	..	..	..	2	1	2	6	84
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	133	6-25	23	5	3	3	7	1	8	23	23	124	23	5	6	5	1	3	10	27	21
		26-50	..	..	..	..	..	..	..	3	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	132	6-25	17	4	5	5	8	2	12	20	25	124	24	5	6	8	5	7	8	14	23
		26-50	..	..	..	..	..	..	..	2	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	127	6-25	10	2	9	6	6	13	16	19	16	121	6	..	2	8	10	14	13	8	27
		26-50	..	..	..	..	..	..	2	2	..		..	..	..	..	..	1	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	123	6-25	8	2	3	1	4	9	16	32	6	116	6	3	1	3	2	5	14	44	9
		26-50	..	..	..	..	..	..	2	15	..		..	..	..	..	..	1	2	10	..
		51-75	..	..	..	..	..	..	1	..	..		..	..	..	..	..	..	1	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

TABLE XI—*concld.*

Monthly Wind Frequency at **Peshawar**—concld.

(Ht. of Peshawar = 350 metres)

Height.	Number of observations.	Speed limits Km/hr.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.	Number of observations.	Percentage of Observations. N	NE	E	SE	S	SW	W	NW	5 Km. per hr. or less.
			September.										**October.**								
Surface	136	6-25	1	2	..	1	1	5	1	1	86	152	..	..	1	3	11	3	1	1	82
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	135	6-25	39	7	2	..	3	1	7	17	21	*174	45	10	2	1	..	3	2	25	10
		26-50	1	..	..	..	..	..	..	1	..		1	..	1	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	135	6-25	36	10	3	1	2	3	7	15	21	174	46	7	2	1	1	..	5	25	11
		26-50	1	..	..	..	..	..	..	1	..		..	..	1	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	134	6-25	13	4	5	2	8	11	18	22	11	172	17	5	2	2	6	5	6	28	17
		26-50	1	..	1	..	..	..	1	5	..		1	..	..	..	..	..	1	8	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	1	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	134	6-25	6	2	1	..	5	10	16	37	2	170	12	3	2	1	3	14	11	32	4
		26-50	1	..	..	..	..	5	2	13	..		2	..	..	..	..	1	1	12	..
		51-75	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
			November.										**December.**								
Surface	150	6-25	1	..	..	1	17	3	1	..	78	152	..	..	1	3	11	6	..	..	80
		26-50	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
500 Metres above surface.	*171	6-25	41	5	1	..	..	3	7	22	20	†175	15	2	1	1	5	11	11	26	29
		26-50	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
1,000 Metres above M. S. L.	171	6-25	35	4	..	1	1	3	7	28	20	174	14	2	1	2	3	6	12	37	22
		26-50	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..
		51-75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
2,000 Metres above M. S. L.	167	6-25	23	5	5	2	3	4	4	29	12	175	30	14	7	9	2	2	4	14	5
		26-50	1	..	..	..	..	..	2	9	..		2	..	..	..	..	..	..	10	..
		51-75	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..
3,000 Metres above M. S. L.	163	6-25	17	3	5	1	3	9	12	24	7	157	13	13	10	8	6	11	7	12	5
		26-50	3	..	..	..	..	1	2	13	..		1	1	1	2	1	1	2	6	..
		51-75	..	..	..	..	..	..	..	1	..		1	..	..	..	..	..	..	..	..
		> 75	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..

* This includes observations at 650 m. above surface for the year 1921.

† This includes observations at 650 m. above surface for the years 1921 and 1923.

Mean Monthly Temperatures (°A—200) at different heights.

TABLE XII.—QUETTA.

Ht. (Km.)	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4·5	..	..	..	..	72·5 (1)	76·5 (1)	78·0 (1)	82·7 (2)	..	67·3 (1)	..	..
4·0	66·9 (7)	70·4 (4)	70·7 (7)	76·6 (13)	79·1 (4)	81·4 (9)	83·6 (9)	86·5 (3)	77·6 (8)	74·4 (12)	71·6 (12)	70·0 (5)
3·5	69·9 (28)	71·1 (32)	75·0 (42)	78·4 (54)	81·8 (55)	86·0 (39)	86·5 (37)	85·6 (35)	82·3 (40)	77·5 (40)	74·2 (39)	71·2 (23)
3·0	72·3 (32)	73·9 (38)	78·5 (46)	82·1 (56)	86·2 (56)	90·2 (39)	90·5 (39)	89·3 (38)	86·7 (44)	81·3 (40)	77·3 (42)	73·7 (23)
2·5	74·5 (33)	77·1 (38)	81·6 (48)	86·1 (58)	90·4 (56)	94·4 (39)	94·1 (41)	93·3 (38)	90·8 (44)	85·1 (40)	80·8 (42)	77·1 (24)
2·0	76·1 (34)	80·2 (38)	85·2 (48)	90·3 (58)	94·6 (56)	98·3 (39)	97·6 (41)	96·9 (38)	94·2 (44)	88·7 (40)	83·7 (42)	79·7 (24)
Surface.	78·1 (34)	81·3 (38)	87·8 (48)	93·1 (58)	97·9 (56)	101·7 (39)	101·2 (41)	99·7 (38)	95·8 (44)	90·2 (40)	84·2 (42)	80·5 (24)

Numbers in brackets indicate the total number of observations (from June 1927 to December 1930).

TABLE XIII.—PESHAWAR.

Ht. (Km.)	Jan.	Feb.	Mar.	Apl.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
5·5	..	..	..	..	..	74·7 (1)	..	..	..	..	..	..
5·0	..	..	..	..	75·5 (8)	76·2 (1)	..	..	..	..	..	..
4·5	58·5 (21)	61·0 (23)	62·5 (10)	70·8 (38)	75·3 (33)	77·6 (10)	78·0 (3)	80·4 (12)	75·7 (27)	71·8 (31)	67·3 (32)	63·7 (13)
4·0	63·1 (30)	63·7 (44)	68·8 (44)	74·3 (47)	78·7 (58)	81·3 (38)	81·1 (33)	82·2 (30)	78·9 (48)	74·8 (62)	71·2 (57)	67·0 (20)
3·5	66·3 (43)	66·8 (57)	72·3 (49)	78·0 (52)	82·2 (65)	84·4 (42)	84·3 (38)	84·6 (40)	82·4 (56)	78·2 (68)	74·3 (69)	70·6 (36)
3·0	69·5 (48)	70·0 (61)	75·9 (50)	81·4 (57)	85·9 (67)	87·7 (42)	87·5 (41)	87·5 (43)	85·6 (58)	82·0 (69)	77·7 (70)	73·0 (45)
2·5	72·7 (50)	73·4 (65)	79·4 (53)	85·1 (57)	89·8 (67)	91·8 (42)	91·0 (41)	90·2 (46)	89·0 (59)	85·7 (70)	81·1 (71)	76·0 (46)
2·0	75·8 (54)	76·6 (68)	83·0 (53)	88·7 (58)	93·1 (67)	95·7 (42)	94·3 (41)	93·4 (46)	91·5 (59)	89·5 (70)	84·4 (71)	79·2 (46)
1·5	79·0 (54)	79·9 (68)	86·0 (53)	92·3 (88)	96·6 (67)	98·9 (42)	97·3 (41)	96·3 (48)	95·7 (59)	93·2 (70)	87·5 (71)	82·2 (46)
1·0	81·6 (54)	82·5 (68)	88·9 (53)	95·5 (58)	99·6 (67)	102·7 (42)	100·5 (41)	99·3 (48)	98·7 (59)	96·0 (70)	89·9 (71)	84·9 (46)
0·5	82·5 (36)	83·6 (43)	89·8 (26)	97·3 (42)	102·2 (50)	104·4 (27)	102·7 (30)	101·5 (37)	100·0 (44)	97·5 (54)	89·0 (46)	86·5 (35)
Surface.	82·7 (36)	83·9 (44)	91·2 (26)	99·4 (42)	103·1 (50)	105·2 (27)	104·1 (30)	102·4 (37)	100·7 (44)	98·0 (54)	88·8 (46)	86·4 (35)

Numbers in brackets indicate the total number of observations (from January 1927 to December 1929).

NOTE.—Only ascents between 8 and 11 hrs. have been considered for the purpose of taking the means.

TABLE XIV.

RAINFALL NORMALS, NORTH-WEST FRONTIER PROVINCE.

from records up to 1920.

Normal rainfall in inches printed in ordinary type.

Normals of rainy days printed in heavy type.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
HAZARA—														
Abbottabad	55	3·47 **5·9**	4·05 **6·5**	4·45 **7·6**	3·56 **7·1**	2·28 **4·6**	3·26 **5·0**	8·67 **11·4**	10·02 **11·9**	3·63 **5·9**	1·31 **2·7**	0·74 **1·2**	1·61 **3·1**	47·05 **72·9**
Mansahra	55	2·88 **5·1**	2·94 **5·6**	4·01 **6·5**	3·15 **5·6**	1·62 **3·4**	2·24 **4·1**	6·27 **8·9**	7·55 **9·6**	2·82 **5·1**	1·08 **2·2**	0·72 **1·1**	1·71 **2·5**	36·99 **59·7**
Haripur	55	2·27 **4·0**	2·48 **4·5**	3·02 **5·0**	2·25 **4·2**	1·20 **2·5**	1·63 **3·0**	5·66 **7·1**	6·25 **7·9**	2·91 **4·1**	0·68 **1·4**	0·46 **0·8**	1·21 **1·9**	30·02 **46·4**
Oghi	19	4·93 **6·6**	4·36 **5·8**	6·39 **8·4**	4·97 **7·9**	1·85 **4·2**	2·56 **4·6**	5·94 **8·7**	8·57 **10·2**	2·84 **4·9**	1·87 **3·0**	0·57 **1·2**	2·78 **4·8**	47·63 **70·3**
Dunga Gali	19					3·10 **5·9**	4·39 **6·5**	12·34 **13·4**	13·15 **14·7**	5·35 **6·9**	1·69 **2·7**			
DIR, SWAT AND CHITRAL—														
Malakand	18	3·27 **4·7**	3·78 **4·7**	5·23 **7·1**	3·67 **6·1**	0·77 **1·9**	0·82 **1·6**	5·34 **5·5**	8·66 **7·7**	2·88 **2·9**	0·62 **1·3**	0·19 **0·7**	2·09 **2·7**	37·32 **46·9**
Drosh	10	0·97 **3·1**	1·17 **2·7**	3·83 **8·0**	3·99 **7·8**	1·29 **3·3**	0·65 **1·9**	0·58 **1·3**	0·47 **1·5**	0·45 **0·7**	1·17 **3·1**	0·37 **1·4**	1·13 **3·4**	16·07 **38·2**
Chitral	10	1·17 **3·9**	1·57 **4·2**	3·21 **7·1**	3·94 **6·6**	0·74 **2·0**	0·34 **1·0**	0·08 **0·3**	0·16 **0·7**	0·21 **1·0**	0·69 **2·1**	0·29 **1·0**	0·90 **3·1**	13·30 **33·0**
PESHAWAR		1·71 **2·7**	1·53 **2·9**	2·03 **3·5**	1·47 **2·8**	0·65 **1·2**	0·46 **0·8**	2·22 **2·7**	3·30 **3·6**	1·20 **1·7**	0·31 **0·6**	0·42 **0·6**	0·64 **1·2**	15·94 **24·3**
Swabi	50	2·01 **3·0**	1·82 **3·1**	2·18 **3·7**	1·60 **2·8**	0·83 **1·5**	0·87 **1·5**	3·88 **4·6**	5·02 **5·3**	1·84 **2·2**	0·49 **0·9**	0·44 **0·6**	0·86 **1·5**	21·84 **30·7**
Nowshera	55	1·77 **2·8**	1·51 **2·8**	2·01 **3·5**	1·29 **2·4**	0·72 **1·1**	0·39 **0·8**	1·87 **2·6**	2·56 **3·6**	0·98 **1·7**	0·30 **0·7**	0·39 **0·5**	0·55 **1·1**	14·34 **23·6**
Mardan	55	1·75 **2·9**	1·66 **3·3**	2·17 **3·8**	1·40 **3·0**	0·59 **1·3**	0·65 **0·9**	2·96 **3·5**	4·62 **4·5**	1·76 **2·0**	0·31 **0·7**	0·41 **0·6**	0·75 **1·3**	19·03 **27·8**
Katlang	50	1·74 **2·4**	1·55 **2·6**	1·89 **3·1**	1·19 **2·1**	0·63 **0·9**	0·48 **0·9**	2·97 **3·2**	4·03 **4·1**	1·24 **1·5**	0·41 **0·7**	0·47 **0·6**	0·72 **1·2**	17·32 **23·3**
Charsadda	55	1·42 **2·6**	1·28 **2·6**	1·73 **3·4**	1·19 **2·7**	0·48 **1·1**	0·27 **0·5**	1·43 **2·0**	2·52 **3·0**	1·03 **1·6**	0·23 **0·5**	0·41 **0·6**	0·57 **1·1**	12·56 **21·7**
Nahakki	51	1·74 **2·4**	1·64 **2·7**	2·23 **3·2**	1·94 **2·9**	0·58 **1·0**	0·24 **0·4**	1·23 **1·3**	2·21 **2·1**	0·69 **1·1**	0·23 **0·4**	0·41 **0·5**	0·48 **0·9**	13·62 **18·9**
Peshawar	55	1·54 **2·9**	1·23 **3·0**	2·01 **4·1**	1·70 **3·6**	0·73 **1·6**	0·32 **0·7**	1·20 **1·9**	2·11 **2·5**	0·83 **1·5**	0·17 **0·5**	0·39 **0·6**	0·58 **1·4**	12·81 **24·3**
Cherat	14	2·36 **3·3**	2·61 **3·5**	4·09 **4·8**	3·68 **5·3**	1·07 **2·3**	2·06 **2·6**	2·93 **5·1**	5·29 **6·9**	2·29 **3·0**	0·54 **1·4**	0·34 **0·8**	1·49 **2·1**	28·75 **41·1**
Lahor (Utman Bolak)	38	1·74 **2·6**	1·67 **3·0**	1·55 **2·9**	1·35 **2·2**	0·50 **1·0**	0·71 **0·8**	3·26 **3·4**	4·08 **4·0**	1·69 **1·8**	0·32 **0·6**	0·42 **0·6**	0·84 **1·0**	18·13 **23·9**
Abazai	26	1·49 **3·0**	1·46 **3·5**	1·95 **4·1**	1·59 **3·1**	0·80 **1·5**	0·25 **0·7**	2·16 **2·5**	3·29 **3·8**	0·86 **1·8**	0·13 **0·4**	0·34 **0·5**	0·68 **1·6**	15·00 **26·5**
Khan Mahi	18	1·54 **3·4**	1·43 **3·7**	1·79 **4·3**	1·31 **3·6**	0·70 **1·2**	0·36 **0·9**	2·03 **3·2**	3·23 **4·8**	1·57 **2·4**	0·27 **0·6**	0·06 **0·2**	0·60 **1·5**	14·89 **29·8**

TABLE XIV—*contd.*

RAINFALL NORMALS, NORTH-WEST FRONTIER PROVINCE.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
KHYBER—														
Landi Kotal .	18	1·72 **3·5**	1·39 **3·9**	3·15 **6·1**	3·17 **6·4**	1·18 **2·7**	0·62 **1·5**	1·00 **1·8**	1·16 **1·9**	0·76 **1·3**	0·23 **0·6**	0·15 **0·6**	0·88 **1·7**	15·41 **32·0**
KOHAT .		1·32 **2·6**	1·25 **3·0**	2·27 **4·8**	1·79 **4·1**	1·23 **2·7**	1·51 **2·9**	3·86 **5·8**	4·39 **5·9**	1·81 **3·0**	0·58 **1·1**	0·35 **0·6**	0·52 **1·2**	20·88 **37·7**
Kohat . .	55	1·34 **2·7**	1·33 **3·1**	2·29 **4·7**	1·52 **3·9**	1·35 **2·8**	1·01 **2·1**	3·02 **4·7**	3·13 **4·8**	1·59 **2·7**	0·53 **1·1**	0·47 **0·6**	0·54 **1·3**	18·12 **34·5**
Banda Daud Shah	32	1·23 **2·3**	1·17 **3·0**	2·00 **4·8**	1·81 **4·1**	1·18 **2·5**	2·00 **3·2**	4·16 **6·0**	5·02 **5·8**	1·90 **2·9**	0·54 **1·1**	0·20 **0·5**	0·45 **1·1**	21·66 **37·3**
Hangu . .	32	1·63 **3·3**	1·45 **3·3**	2·65 **5·3**	2·31 **5·4**	1·53 **3·5**	2·00 **4·4**	4·65 **7·6**	5·57 **7·7**	2·47 **4·3**	0·74 **1·5**	0·46 **0·7**	0·61 **1·5**	26·07 **48·5**
Fort Lockhart	23	2·97 **3·0**	3·04 **2·9**	3·67 **6·5**	3·16 **6·3**	2·82 **4·1**	2·55 **5·5**	5·35 **8·6**	5·42 **8·3**	2·88 **4·6**	0·98 **1·8**	0·50 **0·8**	1·04 **1·4**	34·38 **53·8**
Thal . .	31	1·08 **2·0**	1·03 **2·5**	2·14 **4·3**	1·52 **2·9**	0·84 **1·8**	1·04 **1·9**	3·60 **5·0**	3·84 **5·3**	1·28 **2·0**	0·52 **0·8**	0·26 **0·5**	0·49 **1·0**	17·64 **30·0**
KURRAM—														
Parachinar	25	1·58 **3·5**	2·00 **4·7**	4·33 **8·5**	4·35 **9·1**	2·43 **6·8**	2·06 **4·4**	3·34 **6·2**	3·66 **7·8**	2·21 **4·8**	0·82 **2·1**	0·59 **1·6**	1·02 **2·8**	28·39 **62·3**
Alizai . .	15	1·28 **2·7**	1·31 **3·3**	2·13 **4·9**	2·80 **5·7**	1·14 **2·6**	2·12 **3·8**	1·97 **4·1**	3·02 **5·3**	1·54 **2·9**	0·37 **0·7**	0·21 **0·7**	0·64 **1·3**	18·53 **38·0**
BANNU .		0·83 **1·8**	0·68 **1·8**	1·24 **2·8**	1·02 **2·6**	0·60 **1·3**	0·72 **1·5**	2·37 **3·1**	2·38 **3·4**	0·67 **1·3**	0·16 **0·5**	0·16 **0·4**	0·26 **0·6**	11·09 **21·1**
Bannu . .	55	0·89 **2·1**	0·78 **2·2**	1·53 **3·3**	1·18 **2·6**	0·70 **1·5**	0·78 **1·5**	2·52 **3·6**	2·43 **3·3**	0·66 **1·1**	0·14 **0·5**	0·19 **0·5**	0·31 **0·8**	12·11 **23·0**
Marwat .	37	0·79 **1·8**	0·83 **1·9**	1·36 **3·4**	0·91 **2·4**	0·83 **1·6**	0·90 **1·9**	3·07 **3·8**	2·74 **3·9**	0·88 **1·8**	0·07 **0·3**	0·15 **0·4**	0·30 **0·7**	12·83 **23·9**
Ahmadzai .	13	0·80 **1·6**	0·44 **1·4**	0·84 **1·8**	0·98 **2·8**	0·26 **0·7**	0·48 **1·1**	1·51 **1·9**	1·98 **3·1**	0·48 **1·1**	0·28 **0·6**	0·13 **0·2**	0·18 **0·4**	8·36 **16·7**
TOCHI . .		1·01 **2·2**	0·76 **2·2**	1·97 **3·3**	1·40 **3·1**	0·38 **1·2**	0·40 **0·8**	1·50 **2·6**	1·69 **2·5**	0·32 **0·6**	0·17 **0·3**	0·12 **0·3**	0·46 **1·1**	10·18 **20·2**
Idak . .	18	1·01 **2·2**	0·76 **2·2**	1·97 **3·3**	1·40 **3·1**	0·38 **1·2**	0·40 **0·8**	1·50 **2·6**	1·69 **2·5**	0·32 **0·6**	0·17 **0·3**	0·12 **0·3**	0·46 **1·1**	10·18 **20·2**
Datta Khel .	17	0·95 **2·4**	0·79 **2·5**	2·44 **5·1**	1·58 **4·5**	0·49 **1·8**	0·38 **1·4**	0·82 **2·1**	1·40 **3·6**	0·28 **0·7**	0·22 **0·5**	0·20 **0·9**	0·51 **1·6**	10·06 **27·1**
D. I. KHAN .		0·35 **1·0**	0·37 **1·0**	0·80 **2·0**	0·71 **1·5**	0·36 **0·9**	0·44 **0·8**	1·50 **1·9**	1·69 **2·0**	0·47 **0·8**	0·09 **0·2**	0·07 **0·2**	0·15 **0·4**	7·00 **12·7**
Tank . .	40	0·63 **1·5**	0·61 **1·5**	1·16 **2·6**	0·90 **2·2**	0·36 **0·9**	0·54 **1·0**	2·65 **3·1**	1·94 **2·5**	0·49 **0·8**	0·17 **0·3**	0·10 **0·3**	0·27 **0·6**	9·82 **17·3**
Kulachi .	55	0·50 **1·3**	0·54 **1·5**	1·01 **2·3**	0·69 **1·5**	0·47 **1·0**	0·59 **1·0**	2·19 **2·6**	1·63 **2·3**	0·55 **0·7**	0·08 **0·1**	0·11 **0·2**	0·19 **0·5**	8·55 **15·0**
D. I. Khan .	55	0·47 **1·4**	0·66 **1·9**	1·00 **2·5**	0·68 **2·0**	0·40 **1·0**	0·67 **1·3**	1·99 **2·8**	1·74 **2·4**	0·61 **1·0**	0·10 **0·2**	0·16 **0·4**	0·21 **0·7**	8·69 **17·6**
Shekh Budin .	28	0·54 **0·8**	1·06 **1·3**	2·27 **2·4**	1·37 **1·8**	0·87 **1·2**	1·14 **1·7**	3·55 **3·6**	3·37 **3·4**	1·12 **1·5**	0·17 **0·4**	0·10 **0·3**	0·32 **0·4**	15·88 **18·8**
Chaudhwan .	6	0·17 **0·6**	0 **0**	0·41 **1·2**	0·19 **1·0**	0·45 **1·3**	0·08 **0·3**	0·32 **0·5**	2·31 **1·4**	0 **0**	0 **0**	0 **0**	0·04 **0·2**	3·97 **6·5**
Miran . .	5	0 **0**	0·06 **0·3**	0·43 **1·4**	1·09 **1·0**	0·12 **0·4**	0·32 **0·3**	0·36 **0·5**	0·81 **1·2**	0·71 **1·6**	0·08 **0·2**	0 **0**	0·02 **0·2**	3·99 **7·1**
Wano . .	17	1·19 **2·5**	1·24 **2·6**	2·95 **4·1**	1·48 **3·5**	0·48 **1·4**	0·40 **1·4**	1·48 **3·3**	0·99 **2·4**	0·27 **0·9**	0·18 **0·4**	0·25 **0·6**	0·37 **1·1**	11·28 **24·2**

TABLE XIV—*contd.*

RAINFALL NORMALS, BALUCHISTAN

from records up to 1920.

Normal rainfall in inches printed in ordinary type.

Normals of rainy days printed in heavy type.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
SIBI . .		0·97 **2·1**	1·07 **2·1**	1·28 **2·5**	0·65 **1·6**	0·33 **0·7**	0·49 **1·0**	1·75 **3·0**	1·81 **2·8**	0·47 **0·9**	0·18 **0·4**	0·29 **0·6**	0·49 **1·1**	9·78 **18·8**
Ziarat . .	9					0·97 **1·9**	0·59 **1·6**	2·44 **5·1**	2·58 **4·6**	0·49 **1·2**	0·16 **0·3**			
Kachh . .	31	2·48 **4·9**	2·36 **4·9**	2·36 **5·8**	0·96 **2·7**	0·39 **0·7**	0·15 **0·3**	0·35 **1·0**	0·26 **0·6**	0·05 **0·2**	0·08 **0·3**	0·47 **1·1**	1·18 **3·0**	11·09 **2·55**
Mangi . .	30	1·35 **3·1**	1·63 **3·4**	1·82 **4·0**	0·68 **2·2**	0·28 **0·6**	0·35 **0·8**	0·47 **1·5**	0·39 **1·0**	0·11 **0·3**	0·11 **0·3**	0·39 **1·2**	0·79 **1·8**	8·37 **20·2**
Dirgi . .	30	1·54 **3·4**	1·68 **3·0**	1·65 **3·7**	0·78 **2·3**	0·35 **0·8**	0·45 **0·8**	0·81 **1·7**	0·56 **1·2**	0·16 **0·3**	0·22 **0·4**	0·38 **1·1**	0·84 **1·8**	9·42 **20·5**
Khost . .	30	1·32 **3·1**	1·41 **3·1**	1·48 **3·1**	0·67 **1·8**	0·33 **0·6**	0·38 **0·8**	1·05 **1·8**	1·01 **1·7**	0·19 **0·3**	0·09 **0·3**	0·45 **0·8**	0·55 **1·4**	8·93 **18·8**
Shahrig (Hospital)	30	1·51 **2·8**	1·58 **2·8**	1·75 **3·3**	0·73 **1·6**	0·45 **0·7**	0·59 **1·3**	2·41 **4·0**	2·38 **3·6**	0·72 **1·5**	0·11 **0·3**	0·41 **0·7**	0·57 **1·3**	13·21 **23·9**
Sharig (Railway Station)	16	1·42 **3·1**	1·60 **3·1**	1·88 **3·7**	1·09 **2·1**	0·31 **0·5**	0·59 **1·4**	2·31 **3·8**	3·05 **4·2**	0·59 **1·3**	0·17 **0·3**	0·25 **0·6**	0·59 **1·1**	13·85 **25·2**
Nakas . .	31	1·09 **2·5**	1·36 **2·8**	1·44 **2·8**	0·56 **1·5**	0·32 **0·5**	0·72 **1·5**	2·18 **3·8**	2·52 **3·4**	0·50 **0·8**	0·17 **0·4**	0·42 **0·7**	0·64 **1·4**	11·92 **22·1**
Harnai (Hospital)	10	0·90 **2·3**	0·75 **1·4**	1·94 **3·4**	1·22 **2·5**	0·30 **0·6**	0·65 **1·6**	3·15 **4·9**	3·09 **4·7**	0·89 **1·8**	0·26 **0·9**	0·44 **0·7**	0·34 **1·0**	13·93 **25·8**
Harnai (Railway Station)	31	1·05 **2·4**	1·31 **2·7**	1·48 **2·8**	0·58 **1·6**	0·25 **0·5**	0·91 **1·6**	2·50 **4·3**	2·62 **4·0**	0·59 **1·2**	0·12 **0·4**	0·34 **0·6**	0·59 **1·4**	12·34 **23·5**
Sanari . .	31	0·91 **2·0**	1·03 **2·5**	1·29 **2·4**	0·60 **1·6**	0·30 **0·7**	0·69 **0·9**	2·46 **3·8**	3·03 **3·6**	0·76 **1·1**	0·16 **0·4**	0·35 **0·5**	0·50 **1·1**	12·08 **20·6**
Spintangi .	31	0·67 **1·5**	1·02 **2·5**	0·96 **1·8**	0·46 **1·1**	0·27 **0·5**	0·56 **1·0**	2·31 **3·5**	2·31 **3·1**	0·55 **0·8**	0·14 **0·2**	0·26 **0·4**	0·40 **0·9**	9·91 **17·3**
Babar Kachh	31	0·62 **1·3**	0·71 **1·9**	0·72 **1·3**	0·40 **0·8**	0·14 **0·3**	0·40 **0·6**	1·38 **2·1**	1·64 **2·6**	0·39 **0·7**	0·11 **0·2**	0·17 **0·4**	0·31 **0·8**	6·99 **13·0**
Sibi (Hospital)	31	0·53 **1·2**	0·46 **1·2**	0·55 **1·1**	0·24 **0·6**	0·17 **0·4**	0·37 **0·5**	1·47 **2·0**	1·16 **1·6**	0·33 **0·6**	0·08 **0·2**	0·11 **0·3**	0·33 **0·9**	5·80 **10·6**
Sibi (Railway Station)	22	0·39 **1·1**	0·31 **0·9**	0·66 **1·2**	0·28 **0·5**	0·19 **0·3**	0·27 **0·4**	1·30 **1·7**	1·04 **1·4**	0·40 **0·7**	0·12 **0·3**	0·03 **0·1**	0·24 **0·6**	5·23 **9·2**
Jhatpat (Hospital)	31	0·22 **0·6**	0·28 **0·7**	0·22 **0·6**	0·11 **0·3**	0·14 **0·5**	0·27 **0·5**	0·75 **1·4**	0·74 **1·3**	0·19 **0·3**	0·05 **0·1**	0·07 **0·1**	0·14 **0·4**	3·18 **6·8**
Jhatpat (Railway Station)	8	0·01 **0**	0·16 **0·3**	0·39 **0·6**	0·24 **0·5**	0·16 **0·5**	0·16 **0·3**	0·94 **1·5**	1·12 **2·0**	0·39 **0·7**	0·29 **0·5**	0·03 **0·1**	0·16 **0·4**	4·05 **7·4**
Kohlu . .	8	0·48 **1·7**	0·48 **1·3**	1·10 **2·7**	1·52 **3·3**	0·62 **1·9**	0·71 **2·1**	3·26 **6·4**	2·99 **5·4**	1·07 **2·3**	0·74 **1·1**	0·31 **0·6**	0·09 **0·5**	13·37 **29·3**
Mudgorge .	18	1·79 **4·1**	1·82 **4·2**	2·10 **5·1**	0·75 **2·4**	0·43 **0·9**	0·29 **0·7**	0·42 **1·1**	0·29 **0·7**	0·05 **0·2**	0·08 **0·2**	0·64 **1·6**	0·76 **2·2**	9·42 **23·4**
LORALAI .		0·83 **2·0**	0·74 **1·8**	1·61 **3·3**	1·43 **3·3**	0·74 **1·7**	0·89 **1·7**	2·22 **4·1**	2·23 **3·8**	0·81 **1·3**	0·45 **0·7**	0·23 **0·6**	0·30 **1·0**	12·48 **25·3**

TABLE XIV—*contd*

RAINFALL NORMALS, BALUCHISTAN.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
LORALAI—*contd.*														
Sanjawi	10	0·91 2·1	0·65 1·9	2·19 3·6	1·80 3·9	0·50 1·5	0·39 1·3	1·63 2·7	1·20 3·1	0·58 1·3	0·30 0·8	0·31 0·9	0·32 0·8	10·78 23·9
Loralai (Hospital)	29	0·90 2·0	0·95 2·5	1·37 3·0	1·09 2·7	0·60 1·1	0·43 0·9	1·37 2·4	1·39 1·9	0·25 0·6	0·12 0·3	0·19 0·5	0·39 1·3	9·05 19·2
Duki	20	0·76 1·9	0·91 1·8	1·49 2·9	1·20 2·7	0·47 1·1	0·36 0·9	1·71 3·1	1·85 2·5	0·36 0·7	0·26 0·4	0·18 0·4	0·37 1·3	9·92 19·7
Musa Khel	10	0·84 2·2	0·73 1·9	1·97 4·4	1·74 4·1	0·86 2·5	2·11 3·1	3·36 6·4	3·34 5·9	1·19 2·1	0·52 0·8	0·29 0·8	0·31 1·0	17·20 35·2
Barkhan	9	0·76 1·7	0·45 1·0	1·01 2·5	1·33 3·0	1·25 2·3	1·17 2·2	3·10 6·1	3·38 5·7	1·67 2·0	1·03 1·1	0·19 0·4	0·12 0·6	15·46 28·6
Loralai (Staff Office)	12	0·58 1·6	1·02 2·9	1·60 4·0	0·62 1·5	0·82 1·3	0·49 1·1	1·07 2·1	1·00 1·7	0·37 0·5	0·02 0·1	0·17 0·5	0·34 0·9	8·10 18·2
Manzai	5	0·62 1·2	0·52 1·6	1·20 2·0	0·45 1·2	0·06 0·2	0·25 0·8	2·03 2·8	1·02 2·0	0·97 1·2	0·95 1·4	0·11 0·4	0·17 0·8	8·35 15·6
ZHOB		0·92 2·3	0·86 2·2	1·56 3·7	1·06 3·0	0·54 1·2	0·49 1·1	1·75 2·9	1·31 2·6	0·26 0·5	0·20 0·4	0·23 0·6	0·39 1·1	9·57 21·6
Fort Sandeman	28	0·79 2·5	0·97 2·0	1·76 4·5	1·19 3·2	0·54 1·0	0·72 1·7	1·99 3·8	1·42 3·2	0·24 0·6	0·10 0·3	0·23 0·6	0·40 1·1	10·35 25·4
Kila Saifulla	20	0·61 1·7	0·56 1·7	1·46 3·7	0·99 3·1	0·49 0·9	0·16 0·5	1·25 1·7	0·79 1·6	0·23 0·3	0·16 0·3	0·21 0·6	0·26 0·9	7·17 17·0
Hindubagh	20	1·60 2·9	1·17 2·8	1·60 3·5	0·58 2·2	0·39 0·8	0·14 0·4	0·54 0·7	0·39 0·9	0·03 0·1	0·10 0·3	0·20 0·4	0·66 1·5	7·40 16·5
Murgha	10	0·69 2·2	0·73 1·3	1·42 2·9	1·47 3·4	0·75 2·2	0·96 1·9	3·24 5·4	2·63 4·6	0·55 1·0	0·45 0·7	0·29 0·7	0·25 1·1	13·43 27·4
QUETTA-PISHIN		2·05 4·4	1·84 4·1	2·01 4·9	0·85 2·3	0·22 0·6	0·07 0·2	0·22 0·6	0·21 0·5	0·03 0·1	0·14 0·3	0·45 1·2	1·20 2·9	9·29 22·1
Sariab	21	1·58 3·7	1·12 3·1	1·63 4·5	0·70 2·0	0·28 0·8	0·10 0·3	0·27 0·7	0·39 0·8	0·03 0·1	0·10 0·3	0·30 1·1	0·90 2·0	7·40 19·4
Quetta (Hospital)	31	1·91 4·7	1·90 4·5	1·79 4·9	0·93 2·5	0·34 1·0	0·16 0·5	0·25 0·8	0·34 0·7	0·04 0·1	0·14 0·3	0·42 1·2	1·15 3·0	9·37 24·2
Quetta (Railway Station)	21	1·68 4·2	1·30 3·6	1·86 5·3	0·83 2·5	0·43 1·0	0·07 0·2	0·23 0·7	0·27 0·6	0·08 0·1	0·13 0·3	0·40 1·0	1·04 2·9	8·32 22·4
Beleli	31	1·95 4·3	1·77 4·4	1·59 4·5	0·75 2·2	0·17 0·5	0·13 0·2	0·17 0·5	0·33 0·6	0·01 0·1	0·13 0·4	0·44 1·2	1·09 2·8	8·53 21·7
Kuchlak	31	2·05 4·3	1·58 4·0	1·86 4·7	0·79 2·1	0·27 0·7	0·08 0·2	0·19 0·5	0·11 0·4	0·07 0·1	0·15 0·4	0·47 1·2	1·14 2·8	8·76 21·4
Bostan	31	1·94 4·5	1·94 4·6	2·03 5·2	0·75 2·1	0·24 0·7	0·11 0·2	0·22 0·5	0·11 0·4	0·03 0·1	0·11 0·3	0·42 1·2	1·25 3·0	9·15 22·8
Khanai	30	1·85 4·5	1·85 4·9	1·82 5·0	0·81 2·2	0·15 0·5	0·20 0·3	0·14 0·5	0·10 0·2	0·01 0·1	0·13 0·3	0·41 1·4	0·93 2·7	8·40 22·6
Yaru Karez	31	1·65 3·7	1·57 2·8	1·60 4·6	0·67 2·0	0·13 0·5	0·04 0·1	0·11 0·2	0·17 0·3	0 0	0·12 0·3	0·33 0·9	1·23 2·8	7·62 18·2
Pishin	36	2·27 5·0	1·95 4·5	2·04 4·8	0·96 2·7	0·21 0·6	0·04 0·1	0·12 0·5	0·17 0·3	0·01 0·1	0·13 0·3	0·47 1·1	1·30 2·9	9·67 22·9
Saranan	26	1·87 4·0	1·46 3·3	1·83 4·6	0·70 1·9	0·11 0·3	0·05 0·1	0·17 0·2	0·08 0·2	0 0	0·16 0·3	0·47 1·3	1·17 2·7	8·07 18·9
Gulistan	30	2·60 4·4	1·73 3·7	1·66 4·0	0·59 1·7	0·08 0·3	0·02 0·1	0·15 0·3	0·05 0·1	0·01 0·1	0·10 0·3	0·48 1·0	1·15 2·9	8·62 18·9

TABLE XIV—*contd.*

RAINFALL NORMALS, BALUCHISTAN.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
QUETTA-PISHIN—*concld.*														
Killa Abdulla	30	2·49 4·9	2·12 4·4	2·11 4·8	0·84 2·2	0·11 0·4	0·01 0	0·21 0·4	0·05 0·1	0·01 0	0·12 0·3	0·72 1·4	1·25 3·1	10·04 22·0
Shelabagh .	29	3·02 5·3	3·05 5·0	3·78 6·3	1·11 2·8	0·19 0·6	0·05 0·1	0·23 0·4	0·07 0·3	0 0	0·12 0·5	0·57 1·2	1·86 3·9	14·05 26·4
Sanzal . .	29	2·76 4·9	2·12 4·5	2·36 5·3	0·91 2·2	0·11 0·3	0·03 0·1	0·11 0·3	0·04 0·1	0 0	0·09 0·2	0·53 1·1	1·55 3·4	10·61 22·4
Chaman .	28	1·63 4·2	1·46 3·7	1·74 4·7	0·70 2·0	0·11 0·3	0·03 0	0·08 0·2	0·04 0·1	0 0	0·11 0·3	0·35 1·0	1·18 3·1	7·43 19·6
Khushdil Khan Band	11	2·13 4·9	1·45 3·6	1·87 4·5	0·87 2·5	0·16 0·6	0·02 0·2	0·13 0·5	0·23 0·6	0·02 0·1	0·18 0·4	0·41 1·4	1·25 3·7	8·72 23·0
Urak . .	7	1·48 4·0	2·91 4·7	2·63 5·8	1·59 4·2	0·61 0·8	0·09 0·2	0·90 2·3	1·10 2·1	0·15 0·4	0·41 0·6	0·45 1·1	0·94 2·3	13·26 28·5
Barshore .	11	2·63 5·8	1·79 3·5	2·35 4·9	1·08 2·6	0·24 0·6	0·31 0·7	0·28 0·7	0·30 0·7	0 0	0·21 0·5	0·45 1·2	1·83 3·5	11·47 24·7
Syad Hamid .	25	1·84 4·0	2·10 4·5	1·60 4·3	0·67 1·8	0·06 0·2	0·04 0·1	0·04 0·1	0 0	0 0	0·09 0·2	0·65 1·7	1·07 2·7	8·16 19·6
Fullers Camp	17	2·00 4·2	2·28 5·5	2·57 6·9	1·23 3·7	0·41 1·4	0·17 0·4	0·31 0·9	0·08 0·4	0·04 0·1	0·10 0·3	0·61 1·7	1·11 3·3	10·91 28·8
Nar Nullah Reservoir	9	2·19 4·4	1·49 3·9	2·06 5·6	0·92 2·7	0·17 0·6	0·19 0·9	0·35 1·1	0·61 1·4	0·21 0·4	0·35 0·7	0·49 1·3	1·13 2·9	10·16 25·9
Sabura . .	6	1·05 3·2	2·56 4·0	2·68 5·0	1·39 3·1	1·03 0·7	0·02 0	0·04 0·2	1·15 1·2	0 0	0·02 0	0·64 1·0	0·85 1·5	11·43 19·9
BOLAN PASS		1·07 2·4	1·09 2·3	1·03 2·5	0·43 1·1	0·20 0·4	0·21 0·3	0·78 1·3	0·97 1·5	0·18 0·3	0·09 0·2	0·18 0·5	0·51 1·2	6·74 14·0
Spezand .	19	1·40 3·3	1·46 3·1	1·29 3·3	0·44 1·7	0·11 0·3	0·02 0·1	0·25 0·7	0·10 0·6	0·04 0·1	0·07 0·2	0·13 0·6	0·44 1·6	5·75 15·6
Kolpur . .	31	2·01 4·0	1·58 3·4	1·68 4·0	0·62 1·6	0·23 0·7	0·15 0·4	0·71 1·1	0·59 0·9	0·12 0·1	0·18 0·2	0·25 0·8	0·96 2·3	9·08 19·5
Hirock . .	31	1·61 3·3	1·76 3·5	1·26 3·3	0·59 1·4	0·14 0·4	0·29 0·4	0·97 1·7	1·12 1·5	0·17 0·4	0·09 0·2	0·43 0·7	0·88 2·0	9·31 18·8
Mach (Hospital)	22	1·11 2·5	1·22 2·2	1·13 2·7	0·51 1·2	0·38 0·5	0·24 0·3	1·04 1·5	1·54 2·3	0·19 0·4	0·09 0·2	0·22 0·6	0·60 1·2	8·27 15·6
Mach (Railway Station)	29	1·12 2·6	1·32 2·8	0·97 2·6	0·48 1·1	0·30 0·4	0·32 0·5	0·99 1·8	1·49 2·1	0·14 0·3	0·17 0·3	0·19 0·7	0·49 1·2	7·98 16·4
Abigum .	25	0·79 1·7	0·83 1·7	0·92 2·2	0·39 0·8	0·14 0·4	0·26 0·4	0·66 1·2	1·04 1·6	0·23 0·3	0·06 0·1	0·12 0·3	0·37 0·8	5·81 11·5
Panir . .	28	0·56 1·3	0·60 1·5	0·67 1·7	0·27 0·8	0·23 0·3	0·14 0·3	0·72 1·2	0·87 1·5	0·11 0·3	0·03 0·1	0·06 0·3	0·30 0·7	4·56 10·0
Pishi . .	22	0·61 1·5	0·60 1·5	0·70 1·8	0·34 1·0	0·16 0·4	0·19 0·2	0·57 1·1	0·85 1·5	0·21 0·5	0·04 0·2	0·11 0·4	0·34 0·8	4·72 10·9
Mushkaf .	27	0·38 1·0	0·44 1·2	0·65 1·3	0·20 0·4	0·12 0·2	0·26 0·4	1·10 1·4	1·09 1·3	0·38 0·6	0·06 0·1	0·09 0·2	0·21 0·5	4·98 8·6
CHAGAI .		1·22 3·0	1·31 2·5	1·02 2·5	0·48 0·9	0·07 0·2	0·03 0·1	0·08 0·3	0·18 0·5	0·01 0	0·13 0·3	0·18 0·5	0·73 1·9	5·44 12·7
Galangur .	15	1·19 2·6	1·23 2·3	1·34 2·9	0·72 1·1	0 0	0·06 0·3	0·18 0·5	0·24 0·6	0·03 0·2	0·15 0·3	0·28 0·7	0·70 1·6	6·12 13·1

TABLE XIV—*concld.*

RAINFALL NORMALS, BALUCHISTAN.

DISTRICT Station	No. of years.	January	February	March	April	May	June	July	August	September	October	November	December	Annual
CHAGAI—*concld.*														
Kishingi .	15	1·53 3·9	1·85 3·3	1·12 3·0	0·48 0·7	0·03 0·1	0·05 0·2	0·11 0·3	0·25 0·6	0 0	0·16 0·3	0·17 0·5	0·82 2·1	6·57 15·0
Nushki (Hospital)	20	1·39 3·5	1·36 2·7	1·34 3·3	0·53 1·3	0·11 0·3	0·02 0·1	0·05 0·2	0·08 0·2	0 0	0·12 0·2	0·14 0·4	0·89 2·4	6·03 14·6
Nushki (Railway Station)	15	1·31 3·4	1·60 2·7	1·16 2·2	0·43 0·6	0·01 0	0·01 0·1	0·05 0·1	0·17 0·3	0 0	0·17 0·3	0·14 0·2	0·83 2·1	5·88 12·0
Chagai . .	9	1·02 2·6	0·80 2·0	0·58 1·7	0·44 1·1	0·13 0·4	0 0	0·07 0·2	0·15 0·4	0 0	0·14 0·3	0·24 0·9	0·59 1·3	4·16 10·9
Dalbandin .	10	0·88 1·8	1·00 2·3	0·58 2·1	0·30 0·7	0·13 0·3	0·02 0·1	0·04 0·2	0·20 0·6	0 0	0·04 0·1	0·12 0·3	0·52 1·6	3·83 10·1
Mushkichah .	7	0·39 1·0	0·31 1·0	0·30 1·3	0·22 0·9	0·08 0·3	0 0	0 0	0·04 0·3	0 0	0·02 0·1	0·05 0·4	0·14 0·4	1·55 5·7
Robat . .	9	0·59 1·7	0·80 1·9	0·99 2·3	0·49 1·5	0·03 0·1	0·01 0	0 0	0 0	0 0	0·08 0·2	0·20 0·7	0·83 1·9	4·02 10·3

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