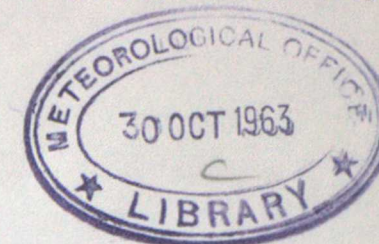


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18

Combined distribution of  
HOURLY VALUES OF DRY-BULB AND WET-BULB TEMPERATURES

Climatological Memorandum No. 18

ALDER ROVE

(1946-1955)

by J.G.Cottis & H.J.Groom

Other Climatological Memoranda in this series:

CM. 10* CROYDON, Surrey	CM. 16 LYMPNE, Kent
CM. 11 RENFREW, near Glasgow	CM. 17 ELMDON, Birmingham airport
CM. 12 DRIFFIELD, Yorkshire	CM. 19 PEMBROKE DOCK, Wales
CM. 13 BOSCOMBE DOWN, nr.Salisbury	CM. 20/ MILDENHALL, Suffolk
CM. 14 MANCHESTER airport	CM. 25 BIDSTON, Liverpool
CM. 15 STORNOWAY, Outer Hebrides	CM. 35 TURNHOUSE, near Edinburgh

\* including ogives of Table I-XII data. / not yet available.

15th December 1959

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## INTRODUCTION

Hourly observations of dry-bulb and wet-bulb temperature (to one tenth of a degree Fahrenheit) made at Aldergrove during the ten years 1946-1955 were analysed to obtain combined frequency distributions within ranges of two degrees Fahrenheit for each month, for each of the quarters, Winter (December-January-February), Spring (March-April-May), etc. and for the whole year. A ten-year period, giving 87,648 observations of each element, was considered to be the shortest which would give useful averages. Ranges of  $2^{\circ}\text{F.}$  were selected because they are sufficiently small to give a fairly detailed indication of frequencies at the higher and lower temperature limits of the distributions - often the regions of greatest interest.

## Method of tabulation of results

Tables I to XII are combined frequency tables of dry-bulb and wet-bulb temperatures for the months January to December respectively. Tables XIII to XVI are the corresponding tables for the four quarters, Winter (December-January-February), etc. Table XVII gives the corresponding annual frequencies. Table XVIII gives the frequencies of dry-bulb temperature irrespective of wet-bulb temperatures, and Table XIX gives the frequencies of wet-bulb temperatures irrespective of dry-bulb temperatures.

The tabulations were made for the two-degree ranges  $20.1-22.0^{\circ}\text{F.}$ ,  $22.1-24.0^{\circ}\text{F.}$ , etc. For brevity in the tables, the range of dry-bulb temperatures in the first column is indicated by T but refers to the range  $T-0.9$  to  $T+1.0$  degrees Fahrenheit. Similarly, the values T, T-2, T-4, etc. (second, third and fourth columns, respectively, of Tables I-XVII) of wet-bulb temperatures refer to the ranges  $T-0.9$  to  $T+1.0$ ,  $T-2.9$  to  $T-1.0$ ,  $T-4.9$  to  $T-3.0$  etc., where the value of T for any frequency in the table is given by the figure in the first column in the same row. For example, if T (first column) is  $45^{\circ}\text{F.}$

the range of dry-bulb temperature is  $44.1$  to  $46.0^{\circ}\text{F.}$ , and  
 the range of wet-bulb temperature is  $44.1$  to  $46.0^{\circ}\text{F.}$  (2nd col., T)  
 $42.1$  to  $44.0^{\circ}\text{F.}$  (3rd col., T-2)  
 $40.1$  to  $42.0^{\circ}\text{F.}$  (4th col., T-4)  
 etc.

For any given ranges of dry-bulb and wet-bulb temperature, two frequencies are indicated. The upper figure is the percentage frequency of occurrence within the given range; the lower figure is the cumulative percentage frequency of dry-bulb temperature and associated wet-bulb temperature greater than or equal to the lower values in the ranges indicated.

All percentage frequencies are corrected to one place of decimals except that frequencies less than 0.1 per cent are corrected to two places of decimals. Frequencies less than 0.005 per cent but greater than zero are entered as 0.0, while .. signifies that no occurrence was observed within the given range. The entry of 0.0 can occur only in the quarterly and annual summaries of frequencies but not in the monthly tables, where a single occurrence (that is, at one Hourly

observation) gives a frequency of 0.01 per cent approximately. The cumulative frequencies shown are merely the sums of the appropriate individual frequencies, corrected to one place of decimals, and entered as 0.0 if less than 0.05 but greater than zero.

## Example:-

For January (see Table I), the percentage frequency of hours with dry-bulb temperature in the range  $44.1$  to  $46.0^{\circ}\text{F.}$  and associated wet-bulb temperature in the range  $40.1$  to  $42.0^{\circ}\text{F.}$  is obtained by locating the value 45 for dry-bulb temperature in column one (T) and then locating the frequency in the row opposite 45 and in the wet-bulb column T-4. The value of this percentage frequency is 0.5.

Again, for January (see Table I), the percentage frequency of hours with dry-bulb temperature  $\geq 44.1^{\circ}\text{F.}$  and wet-bulb temperature  $\geq 40.1^{\circ}\text{F.}$  is obtained by locating the value 45 for dry-bulb temperature in column one (T) and then locating the cumulative frequency in the row opposite 45 and in the wet-bulb column T-4. The value of this cumulative percentage frequency is 22.6.

## ACCUMULATED TEMPERATURES

Table XVIII, which gives the percentage frequency of occurrence of hourly values of dry-bulb temperature within given ranges, may be used to obtain the average number of degree-hours (and thus degree-days) to be expected above or below any base temperature. The number of degree-hours above a base " $b$ "  $^{\circ}\text{F.}$  (where  $b$  is an even number) is given by the sum of the products obtained by multiplying the values given in each of the columns which refer to temperatures greater than  $b^{\circ}\text{F.}$  (i.e. to the right of the column with a temperature range whose upper limit is  $b$ ) by  $N/100$ ,  $3N/100$ ,  $5N/100$ , etc., respectively, where  $N$  is the number of hours in the month.

When  $b$  is an odd number, the above procedure should be carried out for  $(b-1)^{\circ}\text{F.}$  and  $(b+1)^{\circ}\text{F.}$ , and the mean of these two derived values will give a good approximation to the number of degree-hours above the base  $b^{\circ}\text{F.}$

To obtain the number of degree-hours below a given base  $b^{\circ}\text{F.}$  (where  $b$  is an even number), the procedure is the same except that the columns to be used are all those which would not be used in the above computation for degree-hours above the given base.

To obtain the number of degree-hours below a given base  $b^{\circ}\text{F.}$  where  $b$  is an odd number, the procedure is to calculate the number of degree-hours below base  $(b-1)^{\circ}\text{F.}$  and  $(b+1)^{\circ}\text{F.}$  and to take the mean of these two derived values.

Since hourly observations have been used in the present work, averages of accumulated temperature derived in the above manner would be more accurate than those derived by using more approximate methods, as for example in Brit. Clim. Branch Memo. No.5. It should be pointed out, however, that the averages given in Branch Memo. No. 5 relate to the 30-year period 1921-50 whereas the figures in Table XVIII are based on the 10-year period 1946-55.

ALDERGROVE, Co. Antrim, Northern Ireland.  $54^{\circ}39' \text{ N.}$ ,  $6^{\circ}13' \text{ W.}$   
 Irish National Grid Reference:  $\text{IJ}(33) 145801$ .  
 Altitude: 217 feet above sea level.



## I - JANUARY

## II - FEBRUARY

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)				DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)				
	T	T-2	T-4	T-6		T	T-2	T-4	T-6	T-8
	Per cent					Per cent				
11	0.03 100.0	..	..	..						
13	0.05 100.0	..	..	..						
15	0.07 99.9	0.03 99.9	..	..						
17	0.1 99.8	..	..	..	17	0.01 99.7	..	..	..	..
19	0.1 99.7	0.01 99.7	..	..	19	0.1 99.7	0.03 99.7	..	..	..
21	0.3 99.6	0.04 99.6	..	..	21	0.2 99.5	0.09 99.6	..	..	..
23	0.6 99.2	0.08 99.3	0.01 99.3	..	23	0.4 99.1	0.2 99.3	..	..	..
25	0.6 98.4	0.2 98.6	0.01 98.6	..	25	0.7 98.6	0.1 98.7	..	..	..
27	1.4 97.3	0.5 97.8	0.01 97.8	..	27	1.4 97.3	0.6 97.9	0.01 97.9	..	..
29	2.3 94.8	1.0 95.9	0.01 95.9	..	29	3.0 93.7	2.0 95.9	0.04 95.9	..	..
31	3.7 90.8	1.5 92.5	0.04 92.6	..	31	4.3 87.0	3.2 90.7	0.2 90.9	..	..
33	5.5 82.8	3.9 87.1	0.2 87.3	..	33	6.0 76.5	5.2 82.7	0.4 83.2	..	..
35	6.5 71.1	5.4 77.3	0.4 77.7	..	35	5.2 63.9	5.6 70.5	0.9 71.5	0.01 71.6	..
37	5.0 57.8	5.8 64.6	0.8 65.4	..	37	4.2 52.7	4.9 58.7	0.9 59.7	0.1 59.8	0.01 59.8
39	4.6 46.4	5.8 52.8	1.0 53.8	0.01 53.8	39	3.7 42.2	4.9 48.5	1.0 49.6	0.1 49.7	0.01 49.7
41	4.1 35.9	5.4 41.8	0.6 42.4	..	41	3.6 32.3	5.3 38.5	1.3 39.9	0.1 40.0	..
43	3.8 25.9	5.4 31.8	0.5 32.3	..	43	3.3 22.8	4.8 27.3	0.9 29.6	0.09 29.7	..
45	3.5 18.0	3.7 22.1	0.5 22.6	0.01 22.6	45	3.0 14.6	3.9 19.5	1.0 20.6	0.01 20.6	..
47	3.3 11.4	2.9 14.5	0.4 14.9	..	47	1.9 8.6	2.5 11.6	1.0 12.6	0.1 12.7	..
49	2.8 5.0	2.9 8.1	0.2 8.3	..	49	1.7 4.6	1.9 6.7	0.4 7.2	0.06 7.2	..
51	0.6 1.0	1.1 2.2	0.2 2.4	..	51	0.5 1.1	1.6 2.9	0.2 3.1	0.03 3.2	..
53	0.09 0.1	0.3 0.4	0.1 0.5	..	53	0.01 0.1	0.4 0.6	0.2 0.8	0.04 0.8	..
55	..	..	0.01 0.0	..	55	..	0.09 0.1	0.1 0.2	..	..
57	..	..	..	0.01 0.0						



## III - MARCH

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)					DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)						
	T	T-2	T-4	T-6	T-8		T	T-2	T-4	T-6	T-8	T-10	T-12
	Per cent						Per cent						
13	0.04 100.0	..	..	..	..	41	4.4 48.6	5.4 56.1	1.3 58.0	0.6 58.7	0.01 58.7	..	..
15	0.1 100.0	0.01 100.0	..	..	..	43	3.9 36.2	5.3 44.2	1.6 46.3	0.6 46.9	0.09 47.0	..	..
17	0.07 99.9	..	..	..	..	45	3.0 24.9	4.7 32.3	2.0 35.0	0.4 35.5	0.05 35.5	..	..
19	0.2 99.7	0.07 99.8	..	..	..	47	2.1 15.4	4.0 21.9	2.1 24.6	0.6 25.3	0.05 25.3	0.01 25.4	..
21	0.3 99.4	0.08 99.5	..	..	..	49	1.4 8.5	2.6 13.3	1.8 15.8	0.6 16.4	0.1 16.5	..	..
23	0.2 99.0	0.1 99.1	..	..	..	51	0.7 3.3	1.5 7.1	1.6 9.3	0.6 10.0	0.04 10.0	..	..
25	0.5 98.6	0.2 98.8	0.01 98.8	0.01 98.8	..	53	0.1 1.1	0.6 2.6	1.3 4.9	0.4 5.5	0.08 5.6	..	..
27	0.8 97.6	0.5 98.1	0.01 98.1	..	..	55	..	0.3 1.0	0.3 1.9	0.7 2.9	0.2 3.1	..	..
29	1.1 95.8	0.9 96.8	..	..	..	57	..	0.08 0.4	0.1 0.7	0.3 1.3	0.2 1.6	..	..
31	1.8 93.5	1.0 94.7	0.1 94.8	..	..	59	..	0.03 0.1	0.09 0.3	0.07 0.5	0.2 0.8	0.07 0.9	0.01 0.9
33	3.1 88.4	2.6 91.7	0.2 91.9	..	..	61	0.01 0.0	..	0.01 0.1	0.08 0.2	0.09 0.3	0.08 0.4	..
35	3.5 81.3	3.1 85.3	0.6 86.0	..	..	63	..	..	..	0.03 0.1	0.01 0.1	0.04 0.2	..
37	3.9 71.7	3.9 77.8	0.7 78.7	0.09 78.8	..	65	..	..	..	0.04 0.1	..	0.03 0.1	..
39	4.7 60.7	5.1 67.8	1.5 70.0	0.2 70.2	0.01 70.2	67	..	..	..	..	0.01 0.0	..	..



DRY-BULB T (°F.)		Associated wet-bulb temperature (°F.)							DRY-BULB T (°F.)		Associated wet-bulb temperature (°F.)								
		T	T-2	T-4	T-6	T-8	T-10	T-12			T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16
		Per cent									Per cent								
25	0.01 99.8	..	..	..	..	..	..	..	27	0.03 99.9	..	..	..	..	..	..	..	..	
27	0.1 99.8	..	..	..	..	..	..	..	29	0.07 99.8	0.04 99.8	..	..	..	..	..	..	..	
29	0.3 99.7	0.08 99.7	..	..	..	..	..	..	31	0.1 99.7	0.03 99.7	..	..	..	..	..	..	..	
31	0.9 99.1	0.2 99.3	..	..	..	..	..	..	33	0.4 99.5	0.1 99.6	..	..	..	..	..	..	..	
33	1.4 97.7	0.5 98.3	..	..	..	..	..	..	35	0.8 98.7	0.3 99.1	..	..	..	..	..	..	..	
35	1.9 94.9	1.3 96.3	0.03 96.3	..	..	..	..	..	37	0.8 97.0	0.9 97.9	0.04 98.0	..	..	..	..	..	..	
37	2.6 90.1	2.5 93.0	0.1 93.1	..	..	..	..	..	39	1.1 94.5	1.4 96.2	0.01 96.2	..	..	..	..	..	..	
39	2.8 82.5	3.9 87.5	0.3 87.9	..	..	..	..	..	41	1.4 89.9	2.3 93.4	0.3 93.7	0.01 93.7	..	..	..	..	..	
41	3.1 71.6	5.5 79.7	0.8 80.8	0.1 80.9	..	..	..	..	43	2.4 83.5	2.8 88.5	0.9 89.7	0.01 89.7	..	..	..	..	..	
43	3.2 58.2	6.0 68.5	1.7 71.1	0.3 71.4	..	..	..	..	45	2.9 73.5	4.4 81.1	1.2 83.3	0.3 83.6	..	..	..	..	..	
45	2.5 44.6	5.5 55.0	3.0 59.3	0.8 60.2	0.01 60.2	..	..	..	47	3.4 60.9	5.7 70.6	1.9 73.7	0.7 74.8	0.05 74.8	..	..	..	..	
47	2.8 31.7	5.2 42.1	3.3 47.0	1.2 48.3	0.1 48.4	..	..	..	49	2.8 46.1	5.6 57.5	2.4 61.5	1.0 62.7	0.3 63.1	..	..	..	..	
49	2.5 19.4	4.7 28.9	2.9 34.1	1.3 35.7	0.1 35.8	..	..	..	51	2.3 31.8	5.1 43.3	3.2 49.1	1.2 50.7	0.2 50.9	0.01 51.0	..	..	..	
51	1.6 10.0	3.2 16.9	2.6 21.7	1.8 24.0	0.3 24.3	..	..	..	53	1.2 20.3	3.7 29.5	3.4 35.9	1.9 38.5	0.4 38.9	0.04 38.9	..	..	..	
53	0.7 4.8	1.7 8.4	1.9 12.1	1.6 14.3	0.4 14.8	0.03 14.8	..	..	55	0.4 11.6	2.4 19.1	2.6 24.6	2.2 27.6	0.5 28.3	0.05 28.3	..	..	..	
55	0.2 1.9	0.8 4.1	1.1 6.0	1.2 7.8	0.5 8.5	0.03 8.5	..	..	57	0.2 6.5	1.2 11.2	2.2 16.3	1.8 19.2	0.7 20.0	0.1 20.2	..	..	..	
57	..	0.3 1.7	0.6 3.1	0.6 3.9	0.4 4.5	0.08 4.7	..	..	59	0.1 3.4	0.4 6.3	1.5 9.8	1.5 12.7	0.8 13.8	0.1 13.9	0.04 14.0	..	..	
59	..	0.1 0.5	0.5 1.4	0.5 2.2	0.2 2.4	0.2 2.6	0.04 2.7	..	61	..	0.4 3.3	0.7 5.7	1.1 7.8	0.9 9.2	0.3 9.5	0.03 9.5	..	..	
61	..	0.01 0.0	0.06 0.4	0.3 0.8	0.2 1.1	0.06 1.1	0.01 1.1	..	63	..	0.1 1.5	0.5 2.9	0.6 4.7	0.5 5.6	0.4 6.1	0.03 6.1	..	..	
63	..	..	..	0.1 0.3	0.1 0.5	..	..	..	65	..	0.05 0.5	0.3 1.4	0.4 2.3	0.3 3.5	0.3 3.9	0.04 4.0	..	..	
65	..	..	..	..	0.1 0.2	0.04 0.3	0.03 0.3	..	67	..	0.05 0.2	0.05 0.5	0.2 1.0	0.3 1.6	0.4 2.4	0.1 2.6	0.01 2.6	..	
67	..	..	..	..	..	0.1 0.1	0.01 0.1	..	69	0.03 0.0	..	0.01 0.2	0.1 0.4	0.2 0.7	0.1 1.0	0.3 1.4	0.05 1.5	..	
69	..	..	..	..	..	..	0.01 0.0	..	71	..	..	0.01 0.1	0.01 0.1	0.1 0.3	0.08 0.4	0.1 0.5	0.1 0.7	0.01 0.7	
									73	..	..	..	0.01 0.1	0.04 0.1	0.03 0.1	0.04 0.2	0.05 0.2	0.03 0.3	
									75	..	..	..	..	..	..	..	..	..	
									77	..	..	..	..	..	0.04 0.0	0.01 0.1	..	..	
									79	..	..	..	..	..	..	..	0.01 0.0	..	



## VI - JUNE

DRY-BULB TEMP. T (°F.)	Associated wet-bulb Temperature (°F.)								
	T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16
	Per cent								
35	0.04 99.8	..	..	..	..	..	..	..	..
37	0.1 99.7	..	..	..	..	..	..	..	..
39	0.2 99.5	0.1 99.7	..	..	..	..	..	..	..
41	0.4 99.1	0.2 99.3	0.01 99.3	..	..	..	..	..	..
43	1.0 97.9	0.7 98.7	0.01 98.7	..	..	..	..	..	..
45	1.3 95.1	1.4 96.9	0.1 97.0	..	..	..	..	..	..
47	2.1 90.1	2.5 93.8	0.4 94.2	0.01 94.2	..	..	..	..	..
49	3.0 79.4	5.4 88.0	0.9 89.2	0.04 89.2	..	..	..	..	..
51	3.6 64.8	6.0 76.4	2.0 79.6	0.3 79.9	..	..	..	..	..
53	3.7 49.2	5.9 61.2	3.2 66.8	0.9 68.0	0.01 68.0	..	..	..	..
55	2.4 33.9	5.2 45.5	3.4 51.6	1.8 54.0	0.3 54.3	..	..	..	..
57	2.4 22.6	4.0 31.5	3.1 37.9	2.0 40.6	0.5 41.2	..	..	..	..
59	1.2 13.5	2.5 20.2	2.1 25.1	2.2 28.4	0.6 29.1	0.04 29.2	..	..	..
61	0.4 7.4	1.7 12.3	1.8 16.5	1.7 19.3	0.9 20.4	0.1 20.5	0.01 20.5	..	..
63	0.1 4.0	1.1 7.0	1.1 10.2	1.3 12.6	0.8 13.7	0.2 13.9	0.01 13.9	..	..
65	0.01 1.9	0.5 3.9	0.8 5.8	1.0 7.9	0.8 9.0	0.2 9.3	0.01 9.3	..	..
67	0.01 0.8	0.08 1.9	0.5 3.4	0.6 4.5	0.6 5.6	0.2 5.9	0.01 6.0	0.01 6.0	..
69	..	0.08 0.8	0.3 1.8	0.5 2.8	0.3 3.3	0.3 3.8	0.04 3.9	0.03 4.0	..
71	..	0.01 0.2	0.1 0.7	0.3 1.4	0.3 1.9	0.2 2.1	0.08 2.3	0.08 2.4	0.01 2.4
73	..	..	0.01 0.2	0.2 0.6	0.2 1.0	0.1 1.2	0.06 1.2	0.07 1.3	0.04 1.3
75	..	..	..	0.01 0.1	0.1 0.4	0.1 0.6	0.04 0.7	..	..
77	..	..	..	..	0.01 0.1	0.06 0.3	0.07 0.4	0.03 0.4	..
79	..	..	..	..	..	0.04 0.1	0.06 0.3	..	..
81	..	..	..	..	..	0.01 0.0	0.04 0.1	0.06 0.1	..
83	..	..	..	..	..	..	0.03 0.0	0.01 0.0	..

## VII - JULY

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)								
	T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16
	Per cent								
39	0.03 99.8	..	..	..	..	..	..	..	..
41	0.01 99.7	0.03 99.8	..	..	..	..	..	..	..
43	0.2 99.7	0.01 99.7	..	..	..	..	..	..	..
45	0.2 99.4	0.1 99.5	..	..	..	..	..	..	..
47	1.0 98.6	0.6 99.2	0.01 99.2	..	..	..	..	..	..
49	2.0 95.4	1.5 97.6	0.05 97.6	..	0.01 97.6	..	..	..	..
51	3.2 87.2	4.4 93.4	0.5 94.1	..	..	..	..	..	..
53	4.7 73.3	6.7 84.0	1.4 85.8	0.1 86.4	..	..	..	..	..
55	4.1 55.5	7.9 68.6	2.7 72.6	0.3 73.0	0.05 73.1	..	..	..	..
57	3.1 38.5	6.8 51.4	3.3 56.6	1.1 57.9	0.07 58.0	..	..	..	..
59	2.2 25.3	4.2 35.3	3.6 41.5	1.5 43.4	0.2 43.6	0.03 43.6	..	..	..
61	1.7 16.2	3.3 23.1	2.8 28.9	1.9 31.5	0.3 31.9	0.01 31.9	..	0.01 31.9	..
63	0.8 8.7	2.3 14.5	1.9 18.1	2.0 21.1	0.6 21.8	0.03 21.9	..	..	..
65	0.1 3.9	1.1 7.9	1.7 11.4	1.1 13.1	0.8 14.1	0.09 14.3	0.01 14.3	..	..
67	..	0.4 3.9	1.1 6.7	1.1 8.5	0.4 9.1	0.2 9.3	..	0.01 9.4	..
69	0.01 0.5	0.2 1.8	0.5 3.5	0.8 5.2	0.4 5.9	0.1 6.1	..	..	..
71	..	0.03 0.5	0.3 1.6	0.5 2.7	0.6 3.7	0.2 4.0	0.08 4.1	..	..
73	..	..	0.08 0.4	0.3 1.3	0.4 1.9	0.3 2.3	0.09 2.4	0.05 2.4	..
75	..	..	0.01 0.2	0.03 0.3	0.3 0.9	0.2 1.1	0.07 1.2	..	..
77	..	..	..	0.04 0.2	0.03 0.3	0.2 0.5	0.05 0.6	..	0.01 0.6
79	..	..	..	0.03 0.1	0.04 0.1	0.05 0.2	0.03 0.3	..	..
81	..	..	..	..	0.01 0.0	0.01 0.1	0.07 0.1	..	..
83	..	..	..	..	..	0.03 0.0	..	..	..



## VIII - AUGUST

## IX - SEPTEMBER

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)									DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)						
	T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16		T	T-2	T-4	T-6	T-8	T-10	T-12
	Per cent										Per cent						
39	0.05 99.8	..	..	..	..	..	..	..	..	31	0.06 99.9	..	..	..	..	..	..
41	0.1 99.7	0.03 99.8	..	..	..	..	..	..	..	33	0.1 99.7	0.06 99.8	..	..	..	..	..
43	0.3 99.6	0.05 99.7	..	..	..	..	..	..	..	35	0.1 99.6	0.04 99.6	..	..	..	..	..
45	0.8 99.2	0.1 99.3	..	..	..	..	..	..	..	37	0.3 99.4	0.07 99.5	..	..	..	..	..
47	1.2 97.9	0.5 98.4	..	..	..	..	..	..	..	39	0.3 99.0	0.1 99.1	..	..	..	..	..
49	2.2 95.3	1.3 96.7	0.01 96.7	..	..	..	..	..	..	41	0.6 98.4	0.3 98.7	..	..	..	..	..
51	4.0 89.6	2.9 93.1	0.07 93.2	..	..	..	..	..	..	43	0.8 97.3	0.4 97.8	..	..	..	..	..
53	5.4 77.1	6.4 85.6	0.5 86.2	0.01 86.2	..	..	..	..	..	45	1.8 95.0	1.1 96.5	0.1 96.6	..	..	..	..
55	4.9 59.7	7.7 71.7	1.5 73.8	0.1 73.9	..	..	..	..	..	47	2.9 90.1	2.1 93.2	0.2 93.6	..	..	..	..
57	3.9 41.3	7.9 54.8	2.8 59.1	0.5 59.7	..	..	..	..	..	49	3.5 80.6	4.6 87.2	0.8 88.2	0.2 88.4	..	..	..
59	3.3 26.1	6.0 37.5	3.6 43.0	1.1 44.5	0.1 44.6	..	..	..	..	51	4.1 68.1	6.5 77.1	1.5 79.1	0.2 79.3	0.01 79.3	..	..
61	1.8 14.9	3.8 22.8	3.5 28.1	1.5 30.1	0.4 30.5	0.01 30.5	..	..	..	53	4.8 52.9	7.3 64.0	1.7 66.5	0.4 67.0	0.06 67.0	..	..
63	0.4 7.9	2.3 13.1	2.6 17.2	1.3 19.1	0.4 19.5	..	..	..	..	55	5.2 35.7	7.4 48.1	2.8 51.9	0.7 52.7	0.1 52.8	..	..
65	0.07 4.2	1.1 7.5	1.5 10.4	1.0 11.9	0.5 12.5	0.04 12.5	..	0.01 12.5	..	57	3.0 20.9	5.9 30.5	3.6 35.5	0.7 36.5	0.1 36.6	..	..
67	0.01 1.5	0.6 4.2	1.0 6.3	0.9 7.7	0.5 8.3	..	..	..	..	59	2.2 11.3	3.8 17.9	2.6 21.6	1.3 23.0	0.2 23.3	..	..
69	..	0.1 1.5	0.8 3.5	0.7 4.7	0.4 5.2	0.05 5.3	0.01 5.3	..	..	61	0.9 5.2	2.3 9.1	1.9 11.9	1.0 13.0	0.1 13.1	0.03 13.2	..
71	..	0.07 0.4	0.3 1.4	0.7 2.7	0.3 3.1	0.08 3.2	..	..	..	63	0.3 1.9	1.4 4.3	1.0 5.9	0.8 6.8	0.1 6.9	0.01 6.9	..
73	..	..	0.07 0.3	0.2 1.0	0.3 1.6	0.1 1.7	0.03 1.8	..	..	65	0.04 0.4	0.4 1.6	0.6 2.6	0.5 3.2	0.08 3.3	..	..
75	..	..	..	0.05 0.3	0.2 0.7	0.2 1.0	0.01 1.0	0.03 1.1	..	67	..	0.08 0.3	0.4 1.2	0.3 1.6	0.08 1.7	..	..
77	..	..	..	0.01 0.1	0.07 0.2	0.2 0.5	0.03 0.6	..	..	69	..	0.01 0.1	0.08 0.3	0.2 0.7	0.07 0.8	0.03 0.8	..
79	..	..	..	..	0.03 0.1	0.05 0.1	0.07 0.2	0.05 0.3	0.01 0.3	71	..	..	0.03 0.1	0.08 0.2	0.2 0.4	0.03 0.4	0.01 0.5
81	..	..	..	..	..	0.04 0.1	..	..	..	73	..	..	..	0.03 0.1	..	0.03 0.1	..
83	..	..	..	..	..	..	0.01 0.0	..	..	75	..	..	..	0.01 0.0	0.03 0.0	..	..



## X - OCTOBER

## XI - NOVEMBER

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)					DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)				
	T	T-2	T-4	T-6	T-8		T	T-2	T-4	T-6	T-8
	Per cent						Per cent				
25	0.01 99.9	..	..	..	..	21	0.01 100.0	..	..	..	..
27	0.01 99.9	..	..	..	..	23	0.2 100.0	0.01 100.0	..	..	..
29	0.09 99.9	..	..	..	..	25	0.5 99.8	0.04 99.8	..	..	..
31	0.3 99.7	0.07 99.8	..	..	..	27	0.7 99.1	0.2 99.3	..	..	..
33	0.6 99.2	0.2 99.5	..	..	..	29	0.8 98.2	0.2 98.4	..	..	..
35	0.9 98.3	0.3 98.6	0.03 98.7	..	..	31	1.4 97.0	0.4 97.4	..	..	..
37	1.5 96.6	0.8 97.4	0.01 97.4	..	..	33	2.3 94.5	1.0 95.6	0.03 95.6	..	..
39	1.6 93.9	1.1 95.1	0.04 95.1	..	..	35	3.2 90.6	1.3 92.2	0.1 92.3	..	..
41	2.1 89.6	2.3 92.3	0.09 92.4	..	..	37	3.0 84.3	2.8 87.4	0.3 87.7	0.01 87.7	..
43	2.6 83.5	2.8 87.5	0.3 97.9	..	..	39	3.7 77.5	3.3 81.3	0.2 81.6	..	..
45	3.3 74.8	4.1 80.9	1.2 82.1	0.05 82.2	..	41	4.4 68.2	4.8 73.7	0.6 74.3	0.01 74.4	..
47	4.7 63.7	5.8 71.5	1.6 73.5	0.07 73.5	..	43	5.7 56.4	6.3 63.8	0.7 64.5	..	..
49	4.9 50.3	6.4 59.0	1.7 61.0	0.3 61.3	0.01 61.4	45	5.4 43.1	6.6 50.7	1.0 51.8	0.04 51.9	..
51	4.5 30.7	6.5 45.4	1.9 47.7	0.3 48.0	0.01 48.1	47	4.8 29.6	6.8 37.7	1.0 38.7	0.07 38.8	0.01 38.8
53	3.9 25.2	5.6 32.2	1.8 34.4	0.4 34.8	0.01 34.8	49	4.0 18.9	5.1 24.8	1.2 26.1	0.04 26.1	..
55	2.1 15.5	4.6 21.3	1.0 22.7	0.3 23.1	0.05 23.1	51	2.4 11.2	3.1 14.9	0.8 15.7	0.06 15.8	..
57	2.0 9.8	2.6 13.3	1.0 14.6	0.4 15.0	0.05 15.1	53	2.3 6.9	1.8 8.8	0.5 9.4	0.03 9.4	..
59	2.2 5.3	1.9 7.8	0.8 8.7	0.2 9.0	0.04 9.0	55	1.0 3.2	1.3 4.6	0.1 4.7	0.1 4.8	..
61	0.6 1.4	1.2 3.1	0.5 3.7	0.1 3.9	0.04 3.9	57	0.6 1.1	1.0 2.2	0.1 2.3	..	..
63	0.01 0.1	0.6 0.8	0.3 1.3	0.08 1.4	0.03 1.5	59	0.01 0.1	0.5 0.5	0.04 0.6	0.01 0.6	..
65	..	0.08 0.1	0.1 0.2	0.2 0.4	0.04 0.4	61	..	0.04 0.0	..	..	..
67	..	..	0.01 0.0	..	..						



## XII - DECEMBER

## XIII - WINTER \*

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)				DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)				
	T	T-2	T-4	T-6		T	T-2	T-4	T-6	T-8
	Per cent					Per cent				
13	0.01 100.0	..	..	..	11	0.01 99.9	..	..	..	..
15	..	..	..	..	13	0.02 99.9	..	..	..	..
17	0.4 100.0	..	..	..	15	0.02 99.9	0.01 99.9	..	..	..
19	0.1 99.9	..	..	..	17	0.05 99.9	..	..	..	..
21	0.2 99.8	0.04 99.8	..	..	19	0.1 99.8	0.01 99.8	..	..	..
23	0.4 99.5	0.09 99.6	..	..	21	0.2 99.6	0.06 99.7	..	..	..
25	0.7 99.1	0.03 99.1	..	..	23	0.5 99.3	0.1 99.4	0.0 99.4	..	..
27	1.2 98.2	0.2 98.4	..	..	25	0.7 98.7	0.1 98.8	0.0 98.8	..	..
29	1.5 96.7	0.3 97.0	..	..	27	1.3 97.6	0.4 98.0	0.01 98.0	..	..
31	2.9 94.3	0.8 95.2	..	..	29	2.3 95.0	1.2 96.3	0.02 96.3	..	..
33	4.2 89.3	2.0 91.5	0.01 91.5	..	31	3.6 90.7	1.8 92.7	0.08 92.8	..	..
35	5.4 81.9	2.9 85.1	0.1 85.3	..	33	5.2 82.9	3.7 87.1	0.2 87.3	..	..
37	6.0 70.2	5.8 76.5	0.3 76.9	..	35	5.7 72.3	4.6 77.7	0.5 78.2	0.0 78.2	..
39	5.3 57.9	5.8 64.2	0.5 64.7	0.01 64.7	37	5.1 60.3	5.5 66.7	0.7 67.4	0.03 67.4	0.0 67.4
41	4.1 47.3	4.8 52.6	0.5 53.1	..	39	4.5 48.9	5.5 55.2	0.8 56.1	0.04 56.1	0.0 56.1
43	4.6 37.2	5.5 43.2	0.5 43.7	..	41	3.9 38.6	5.2 44.4	0.8 45.2	0.03 45.3	..
45	5.0 27.4	4.7 32.6	0.5 33.1	..	43	3.9 28.7	5.2 34.7	0.6 35.3	0.03 35.3	..
47	4.6 17.6	4.7 22.4	0.5 22.9	0.01 22.9	45	3.8 20.1	4.1 24.8	0.7 25.6	0.01 25.6	..
49	4.3 9.5	3.4 13.0	0.1 13.1	..	47	3.3 12.6	3.4 16.3	0.6 16.9	0.04 17.0	..
51	1.8 3.4	1.8 5.2	0.09 5.3	..	49	2.9 6.4	2.7 9.3	0.3 9.6	0.02 9.6	..
53	0.4 0.8	0.8 1.6	0.04 1.6	..	51	1.0 1.9	1.5 3.5	0.2 3.7	0.01 3.7	..
55	0.2 0.3	0.1 0.4	0.03 0.4	..	53	0.2 0.3	0.5 0.9	0.1 1.0	0.01 1.0	..
57	..	0.07 0.1	..	..	55	0.07 0.1	0.06 0.1	0.05 0.2	..	..
					57	..	0.02 0.0	..	0.0 0.0	..

\* December, January and February



## XIV - SPRING\*

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)					DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)									
	T	T-2	T-4	T-6	T-8		T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16	
	Per cent						Per cent									
13	0.01 100.0	..	..	..	..	47	2.8 35.9	5.0 44.8	2.4 48.4	0.8 49.4	0.07 49.5	0.0 49.5	..	..	..	
15	0.03 100.0	0.0 100.0	..	..	..	49	2.2 24.5	4.3 33.1	2.4 37.0	1.0 38.2	0.2 38.4	..	..	..	..	
17	0.02 100.0	..	..	..	..	51	1.5 14.9	3.3 22.3	2.5 26.6	1.2 28.1	0.2 28.3	0.0 28.3	..	..	..	
19	0.07 100.0	0.02 100.0	..	..	..	53	0.7 8.7	2.0 13.4	2.2 17.5	1.3 19.3	0.3 19.6	0.02 19.6	..	..	..	
21	0.1 99.9	0.03 99.9	..	..	..	55	0.2 4.5	1.2 8.0	1.3 10.7	1.4 12.6	0.4 13.1	0.03 13.1	..	..	..	
23	0.07 99.8	0.03 99.8	..	..	..	57	0.07 2.3	0.5 4.3	1.0 6.6	0.9 8.0	0.4 8.5	0.06 8.6	..	..	..	
25	0.2 99.7	0.07 99.7	0.0 99.7	0.0 99.7	..	59	0.03 1.1	0.2 2.2	0.7 3.8	0.7 5.0	0.4 5.5	0.1 5.6	0.03 5.7	..	..	
27	0.3 99.3	0.2 99.5	0.0 99.5	..	..	61	0.0 0.5	0.1 1.1	0.3 2.0	0.5 2.9	0.4 3.4	0.1 3.5	0.01 3.5	..	..	
29	0.5 98.6	0.3 98.9	..	..	..	63	..	0.03 0.5	0.2 0.9	0.2 1.6	0.2 1.9	0.1 2.1	0.01 2.1	..	..	
31	0.9 97.7	0.4 98.1	0.03 98.1	..	..	65	..	0.02 0.2	0.1 0.4	0.1 0.7	0.1 1.2	0.1 1.3	0.02 1.3	..	..	
33	1.6 95.4	1.1 96.7	0.07 96.8	..	..	67	..	0.02 0.1	0.02 0.1	0.07 0.3	0.1 0.5	0.2 0.8	0.04 0.9	0.0 0.9	..	
35	2.1 91.9	1.6 93.8	0.2 94.1	..	..	69	0.01 0.0	..	0.0 0.0	0.03 0.1	0.07 0.2	0.03 0.3	0.1 0.4	0.02 0.5	..	
37	2.4 86.4	2.4 89.7	0.3 90.1	0.03 90.1	..	71	..	..	0.0 0.0	0.0 0.0	0.03 0.1	0.03 0.1	0.03 0.1	0.03 0.2	0.0 0.2	
39	2.9 79.4	3.5 84.0	0.6 84.9	0.07 85.0	0.0 85.0	73	..	..	..	0.0 0.0	0.01 0.0	0.01 0.0	0.01 0.0	0.02 0.1	0.01 0.1	
41	3.0 70.1	4.4 76.5	0.8 77.6	0.3 77.9	0.0 77.9	75	..	..	..	..	..	..	..	..	..	
43	3.2 59.3	4.7 67.1	1.4 69.1	0.3 69.4	0.03 69.5	77	..	..	..	..	..	0.01 0.0	0.0 0.0	..	..	
45	2.8 47.6	4.9 56.1	2.1 59.2	0.5 59.8	0.02 59.8	79	..	..	..	..	..	..	..	0.0 0.0	..	

\* March, April and May



## XV - SUMMER\*

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)								
	T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16
					Per cent				
35	0.01 99.9	..	..	..	..	..	..	..	..
37	0.03 99.9	..	..	..	..	..	..	..	..
39	0.1 99.8	0.03 99.9	..	..	..	..	..	..	..
41	0.2 99.6	0.09 99.7	0.0 99.7	..	..	..	..	..	..
43	0.5 99.1	0.3 99.4	0.0 99.4	..	..	..	..	..	..
45	0.8 97.9	0.6 98.6	0.03 98.6	..	..	..	..	..	..
47	1.4 95.5	1.2 97.1	0.1 97.2	0.0 97.2	..	..	..	..	..
49	2.4 90.0	2.8 94.1	0.3 94.5	0.01 94.5	0.0 94.5	..	..	..	..
51	3.6 80.6	4.4 87.6	0.9 88.9	0.1 89.0	..	..	..	..	..
53	4.6 66.6	6.3 77.0	1.7 79.6	0.3 80.0	0.0 80.0	..	..	..	..
55	3.8 49.7	6.9 62.0	2.5 66.1	0.7 67.0	0.1 67.1	..	..	..	..
57	3.1 34.2	6.2 45.9	3.1 51.3	1.2 52.9	0.2 53.1	..	..	..	..
59	2.2 21.9	4.2 31.1	3.1 36.6	1.6 38.9	0.3 39.3	0.02 39.3	..	..	..
61	1.3 13.1	2.9 19.7	2.7 24.7	1.6 27.1	0.6 27.8	0.04 27.9	0.0 27.9	0.0 27.9	..
63	0.4 7.0	1.9 11.8	1.9 15.5	1.5 17.8	0.6 18.5	0.08 18.6	0.0 18.6	..	..
65	0.06 3.5	0.9 6.6	1.3 9.5	1.0 11.3	0.7 12.1	0.1 12.2	0.01 12.3	0.0 12.3	..
67	0.01 1.3	0.4 3.4	0.9 5.6	0.9 7.2	0.5 8.0	0.1 8.2	0.0 8.2	0.01 8.2	..
69	0.0 0.3	0.1 1.3	0.6 3.0	0.7 4.3	0.4 5.0	0.2 5.3	0.02 5.3	0.01 5.4	..
71	..	0.04 0.3	0.2 1.2	0.5 2.3	0.4 2.9	0.2 3.2	0.05 3.3	0.03 3.3	0.0 3.3
73	..	..	0.05 0.3	0.2 1.0	0.3 1.5	0.2 1.8	0.06 1.9	0.04 1.9	0.01 1.9
75	..	..	0.0 0.1	0.03 0.3	0.2 0.7	0.2 1.0	0.04 1.0	0.01 1.1	..
77	..	..	..	0.02 0.1	0.04 0.2	0.2 0.5	0.05 0.6	0.01 0.6	0.0 0.6
79	..	..	..	0.01 0.0	0.02 0.1	0.05 0.2	0.05 0.2	0.02 0.3	0.0 0.3
81	..	..	..	..	0.0 0.0	0.02 0.0	0.04 0.1	0.02 0.1	..
83	..	..	..	..	..	0.01 0.0	0.01 0.0	0.0 0.0	..

\* June, July and August



## XVI - AUTUMN\*

DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)					DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)						
	T	T-2	T-4	T-6	T-8		T	T-2	T-4	T-6	T-8	T-10	T-12
	Per cent						Per cent						
21	0.0 100.0	..	..	..	..	49	4.1 50.1	5.3 57.2	1.2 58.6	0.2 58.8	0.0 58.8	..	..
23	0.07 100.0	0.0 100.0	..	..	..	51	3.7 38.9	5.4 46.0	1.4 47.8	0.2 48.0	0.01 48.0	..	..
25	0.2 99.9	0.01 100.0	..	..	..	53	3.7 28.5	4.9 35.2	1.3 36.9	0.3 37.3	0.02 37.3	..	..
27	0.2 99.7	0.07 99.7	..	..	..	55	2.8 18.2	4.4 24.8	1.3 26.6	0.4 27.0	0.05 27.1	..	..
29	0.3 99.4	0.07 99.5	..	..	..	57	1.9 10.7	3.2 15.4	1.6 17.6	0.4 18.1	0.05 18.1	..	..
31	0.6 98.9	0.2 99.1	..	..	..	59	1.5 5.5	2.1 8.8	1.1 10.3	0.5 10.9	0.08 11.0	..	..
33	1.0 97.9	0.4 98.3	0.01 98.3	..	..	61	0.5 2.2	1.2 4.1	0.8 5.2	0.4 5.6	0.05 5.7	0.01 5.7	..
35	1.4 96.3	0.5 96.9	0.04 96.9	..	..	63	0.1 0.7	0.7 1.7	0.4 2.3	0.3 2.7	0.04 2.7	0.0 2.7	..
37	1.6 93.6	1.2 94.9	0.1 95.0	0.0 95.0	..	65	0.01 0.1	0.2 0.6	0.2 0.9	0.2 1.1	0.04 1.2	..	..
39	1.9 90.3	1.5 92.0	0.08 92.1	..	..	67	..	0.03 0.1	0.1 0.4	0.1 0.5	0.03 0.5	..	..
41	2.4 85.9	2.5 88.4	0.2 88.6	0.0 88.6	..	69	..	0.0 0.0	0.03 0.1	0.07 0.2	0.02 0.3	0.01 0.3	..
43	3.0 79.1	3.2 83.1	0.3 83.5	..	..	71	..	..	0.01 0.0	0.03 0.1	0.07 0.1	0.01 0.1	0.0 0.1
45	3.5 71.1	3.9 76.1	0.8 76.9	0.03 77.0	..	73	..	..	..	0.01 0.0	..	0.01 0.0	..
47	4.1 61.3	4.9 67.6	0.9 68.7	0.05 68.7	0.0 68.7	75	..	..	..	0.0 0.0	0.01 0.0	..	..

\* September, October and November.



DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)						DRY-BULB TEMP. T (°F.)	Associated wet-bulb temperature (°F.)										
	T	T-2	T-4	T-6	T-8	T-10		T	T-2	T-4	T-6	T-8	T-10	T-12	T-14	T-16		
	Per cent							Per cent										
11	0.0						49	2.9	3.8	1.1	0.3	0.05						
	100.0	..	..	..	..	..		42.6	48.2	49.8	50.1	50.2	..	..	..	..		
13	0.01						51	2.5	3.6	1.2	0.4	0.05	0.0					
	100.0	..	..	..	..	..		33.9	39.7	41.5	42.0	42.0	42.0	..	..	..		
15	0.01	0.0					53	2.3	3.4	1.3	0.5	0.08	0.01					
	100.0	100.0	..	..	..	..		25.9	31.4	33.6	34.2	34.3	34.3	..	..	..		
17	0.02						55	1.7	3.1	1.3	0.6	0.1	0.01					
	100.0	..	..	..	..	..		18.0	23.6	25.7	26.6	26.7	26.7	..	..	..		
19	0.04	0.01					57	1.3	2.5	1.4	0.6	0.2	0.01					
	99.9	99.9	..	..	..	..		11.8	16.3	18.8	19.6	19.9	19.9	..	..	..		
21	0.07	0.02					59	0.9	1.6	1.2	0.7	0.2	0.03	0.01				
	99.9	99.9	..	..	..	..		7.1	10.5	12.5	13.6	13.8	13.9	13.9	..	..		
23	0.2	0.03	0.0				61	0.5	1.0	0.9	0.6	0.3	0.04	0.0	0.0			
	99.8	99.8	99.8	..	..	..		4.1	6.2	8.0	8.8	9.2	9.2	9.2	9.2	..		
25	0.3	0.05	0.0	0.0			63	0.1	0.7	0.6	0.5	0.2	0.05	0.0				
	99.5	99.6	99.6	99.6	..	..		2.0	3.5	4.7	5.6	5.8	5.9	5.9	..	..		
27	0.5	0.2	0.0				65	0.02	0.3	0.4	0.3	0.2	0.05	0.01	0.0			
	99.0	99.2	99.2	..	..	..		0.9	1.9	2.7	3.3	3.7	3.7	3.7	3.7	..		
29	0.8	0.4	0.01				67	0.0	0.1	0.3	0.3	0.2	0.07	0.01	0.0			
	98.1	98.5	98.5	..	..	..		0.3	0.9	1.5	2.0	2.3	2.4	2.5	2.5	..		
31	1.3	0.6	0.03				69	0.0	0.03	0.2	0.2	0.1	0.06	0.03	0.01			
	96.6	97.3	97.3	..	..	..		0.1	0.3	0.8	1.1	1.3	1.4	1.5	1.5	..		
33	1.9	1.3	0.07				71	..	0.01	0.05	0.1	0.1	0.06	0.02	0.01	0.0		
	93.8	95.3	95.4	..	..	..			0.1	0.3	0.6	0.7	0.8	0.8	0.9	0.9		
35	2.3	1.7	0.2	0.0			73	..	..	0.01	0.05	0.08	0.05	0.02	0.01	0.01		
	89.9	91.9	92.1	92.1	..	..				0.1	0.3	0.4	0.5	0.5	0.5	0.5		
37	2.3	2.3	0.3	0.01	0.0		75	..	..	0.0	0.01	0.05	0.05	0.01	0.0			
	84.8	87.6	87.9	87.9	87.9	..				0.0	0.1	0.2	0.3	0.3	0.3	..		
39	2.4	2.6	0.4	0.03	0.0		77	..	..	..	0.01	0.01	0.05	0.01	0.0	0.0		
	79.3	82.5	83.0	83.0	83.0	..				..	0.0	0.1	0.1	0.1	0.1	0.1		
41	2.4	3.0	0.5	0.08	0.0		79	..	..	..	0.0	0.01	0.01	0.01	0.01	0.0		
	73.2	76.9	77.5	77.6	77.6	..				..	0.0	0.0	0.0	0.1	0.1	0.1		
43	2.6	3.3	0.6	0.08	0.01		81	..	..	..	..	0.0	0.01	0.01	0.01	..		
	66.3	70.8	71.5	71.6	71.6	..				..	..	0.0	0.0	0.0	0.0	..		
45	2.7	3.4	0.9	0.1	0.01		83	..	..	..	..	..	0.0	0.0	0.0	..		
	59.0	63.7	64.9	65.0	65.0	..				..	..	..	0.0	0.0	0.0	..		
47	2.9	3.6	1.0	0.2	0.02	0.0												
	51.1	56.3	57.6	57.9	57.9	57.9												



## XVIII - PERCENTAGE NUMBER OF HOURS WITH DRY-BULB TEMPERATURE WITHIN RANGES OF 2°F.

## Dry-bulb Temperature

	10.1 to 12.0	12.1 to 14.0	14.1 to 16.0	16.1 to 18.0	18.1 to 20.0	20.1 to 22.0	22.1 to 24.0	24.1 to 26.0	26.1 to 28.0	28.1 to 30.0	30.1 to 32.0	32.1 to 34.0	34.1 to 36.0	36.1 to 38.0	38.1 to 40.0	40.1 to 42.0	42.1 to 44.0	44.1 to 46.0	46.1 to 48.0	48.1 to 50.0	50.1 to 52.0	52.1 to 54.0	54.1 to 56.0	56.1 to 58.0	58.1 to 60.0	60.1 to 62.0	62.1 to 64.0	64.1 to 66.0	66.1 to 68.0	68.1 to 70.0	70.1 to 72.0	72.1 to 74.0	74.1 to 76.0	76.1 to 78.0	78.1 to 80.0	80.1 to 82.0	82.1 to 84.0			
	Per cent.																																							
JANUARY	0.03	0.05	0.1	0.1	0.1	0.3	0.7	0.8	1.9	3.3	5.2	9.6	12.3	11.6	11.4	10.1	9.7	7.7	6.6	5.9	1.9	0.5	0.01	0.01	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
FEBRUARY	..	..	..	0.01	0.1	0.3	0.6	0.8	2.0	5.0	7.7	11.6	11.7	10.1	9.7	10.3	9.1	7.9	5.5	4.1	2.3	0.7	0.2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
MARCH	..	0.04	0.1	0.07	0.3	0.4	0.3	0.7	1.3	2.0	2.9	5.9	7.2	8.6	11.5	11.7	11.5	10.1	8.9	6.5	4.4	2.5	1.5	0.7	0.5	0.3	0.08	0.07	0.01	..	..	..	..	..	..	..	..	..	..	
APRIL	..	..	..	..	..	..	..	0.01	0.1	0.4	1.1	1.9	3.2	5.2	7.0	9.5	11.2	11.8	12.6	11.5	9.5	6.3	3.8	2.0	1.5	0.6	0.2	0.2	0.1	0.01	..	..	..	..	..	..	..	..	..	
MAY	..	..	..	..	..	..	..	..	0.03	0.1	0.1	0.5	1.1	1.7	2.5	4.0	6.1	8.8	11.7	12.1	12.0	10.6	8.1	6.2	4.4	3.4	2.1	1.4	1.1	0.8	0.4	0.2	..	0.05	0.01	..	..	..	..	
JUNE	..	..	..	..	..	..	..	..	..	..	..	..	0.04	0.1	0.3	0.6	1.7	2.8	5.0	9.3	11.9	13.7	13.1	12.0	8.6	6.6	4.6	3.3	2.0	1.6	1.1	0.7	0.3	0.2	0.1	0.1	0.1	0.04	..	
JULY	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.03	0.04	0.2	0.3	1.6	3.6	8.1	12.9	15.1	14.4	11.7	10.0	7.6	4.9	3.2	2.0	1.7	1.2	0.6	0.3	0.1	0.09	0.03	..	..	
AUGUST	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.05	0.1	0.3	0.9	1.7	3.5	7.0	12.3	14.2	15.1	14.1	11.0	7.0	4.2	3.0	2.1	1.5	0.7	0.5	0.3	0.2	0.04	0.01	..	..	
SEPTEMBER	..	..	..	..	..	..	..	..	..	..	0.06	0.2	0.1	0.4	0.4	0.9	1.2	3.0	5.2	9.1	12.3	14.3	16.2	13.3	10.1	6.2	3.6	1.6	0.9	0.4	0.3	0.06	0.04	..	..	..	..	..	..	..
OCTOBER	..	..	..	..	..	..	..	0.01	0.01	0.09	0.4	0.8	1.2	2.3	2.7	4.5	5.7	8.7	12.2	13.3	13.2	11.7	8.1	6.1	5.1	2.4	1.0	0.4	0.01	..	..	..	..	..	..	..	..	..	..	
NOVEMBER	..	..	..	..	..	0.01	0.2	0.5	0.9	1.0	1.8	3.3	4.6	6.1	7.2	9.8	12.7	13.0	12.7	10.3	6.4	4.6	2.5	1.7	0.6	0.04	..	..	..	..	..	..	..	..	..	..	..	..	..	
DECEMBER	..	0.01	..	0.04	0.1	0.2	0.5	0.7	1.4	1.8	3.7	6.2	8.4	12.1	11.6	9.4	10.6	10.2	9.8	7.8	3.7	1.2	0.3	0.07	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
WINTER (Dec.-Feb.)	0.01	0.02	0.03	0.05	0.1	0.3	0.6	0.8	1.7	3.5	5.5	9.1	10.8	11.3	10.8	9.9	9.7	8.6	7.3	5.9	2.7	0.8	0.2	0.02	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
SPRING (Mar.-May)	..	0.01	0.03	0.02	0.09	0.1	0.1	0.3	0.5	0.8	1.3	2.8	3.9	5.1	7.1	8.5	9.6	10.3	11.1	10.1	8.7	6.5	4.5	2.9	2.2	1.4	0.7	0.4	0.5	0.3	0.1	0.06	..	0.01	0.0	..	..	..		
SUMMER (Jun.-Aug.)	..	..	..	..	..	..	..	..	..	..	..	..	0.01	0.03	0.1	0.3	0.8	1.4	2.7	5.5	9.0	12.9	14.0	13.8	11.4	9.2	6.4	4.1	2.8	2.0	1.4	0.9	0.5	0.3	0.2	0.08	0.02	..	..	
AUTUMN (Sep.-Nov.)	..	..	..	..	..	0.0	0.07	0.2	0.3	0.4	0.8	1.4	1.9	2.9	3.5	5.1	6.5	8.2	9.9	10.8	10.7	10.2	8.9	7.1	5.3	3.0	1.5	0.7	0.3	0.1	0.1	0.02	0.01	..	..	..	..	..	..	
ANNUAL	0.0	0.01	0.01	0.02	0.05	0.09	0.2	0.3	0.7	1.2	1.9	3.3	4.2	4.9	5.4	6.0	6.6	7.1	7.7	8.1	7.7	7.6	6.8	6.0	4.6	3.3	2.1	1.3	1.0	0.6	0.4	0.2	0.1	0.08	0.04	0.03	0.0	..		



## XIX - PERCENTAGE NUMBER OF HOURS WITH WET-BULB TEMPERATURE WITHIN RANGES OF 2°F.

	Wet - bulb																T e m p e r a t u r e															
	10.1 to 12.0	12.1 to 14.0	14.1 to 16.0	16.1 to 18.0	18.1 to 20.0	20.1 to 22.0	22.1 to 24.0	24.1 to 26.0	26.1 to 28.0	28.1 to 30.0	30.1 to 32.0	32.1 to 34.0	34.1 to 36.0	36.1 to 38.0	38.1 to 40.0	40.1 to 42.0	42.1 to 44.0	44.1 to 46.0	46.1 to 48.0	48.1 to 50.0	50.1 to 52.0	52.1 to 54.0	54.1 to 56.0	56.1 to 58.0	58.1 to 60.0	60.1 to 62.0	62.1 to 64.0	64.1 to 66.0	66.1 to 68.0	68.1 to 70.0	70.1 to 72.0	72.1 to 74.0
	P e r c e n t .																															
JANUARY	0.03	0.08	0.07	0.1	0.1	0.4	0.8	1.1	2.4	4.0	8.0	11.7	13.3	11.4	10.5	10.0	7.9	6.6	6.4	4.0	0.9	0.09	..	..	..	..	..	..	..	..	..	..
FEBRUARY	..	..	..	0.04	0.2	0.4	0.5	1.3	3.6	6.6	10.5	12.6	11.2	10.5	9.9	9.5	8.3	5.9	4.0	3.5	1.0	0.1	..	..	..	..	..	..	..	..	..	..
MARCH	..	0.05	0.1	0.1	0.3	0.4	0.4	1.0	1.8	2.3	5.1	7.1	9.6	11.0	12.1	12.4	11.3	9.5	6.9	5.2	2.2	0.7	0.3	0.07	0.05	0.01	..	..	..	..	..	..
APRIL	..	..	..	..	..	..	..	0.01	0.2	0.5	1.4	2.8	4.8	7.6	10.9	13.4	13.6	12.8	12.3	9.4	5.3	2.8	1.5	0.5	0.01	..	..	..	..	..	..	..
MAY	..	..	..	..	..	..	..	..	0.07	0.1	0.2	0.7	1.7	2.5	4.7	6.4	9.9	12.7	14.7	14.3	11.5	8.7	5.2	3.0	1.9	0.9	0.3	0.1	0.06	0.03	..	..
JUNE	..	..	..	..	..	..	..	..	..	..	..	..	0.04	0.2	0.4	1.2	2.8	5.0	10.8	14.5	15.6	15.3	11.3	9.2	6.1	3.5	2.1	1.1	0.7	0.1	0.04	..
JULY	..	..	..	..	..	..	..	..	..	..	..	..	..	0.06	0.03	0.3	0.9	3.2	8.2	13.9	17.7	17.1	13.1	9.1	7.5	4.8	2.1	1.3	0.3	0.1	0.07	..
AUGUST	..	..	..	..	..	..	..	..	..	..	..	..	..	0.08	0.1	0.4	1.3	2.6	5.7	12.5	17.4	18.3	15.2	11.3	7.0	3.6	2.8	1.1	0.3	0.09	..	..
SEPTEMBER	..	..	..	..	..	..	..	..	..	..	0.1	0.1	0.2	0.4	0.6	1.1	2.3	5.0	9.5	12.5	15.1	17.2	14.8	9.6	6.1	3.3	1.5	0.3	0.1	0.01	..	..
OCTOBER	..	..	..	..	..	..	..	0.01	0.01	0.2	0.5	0.9	1.7	2.7	4.3	6.2	8.6	11.1	13.5	13.5	11.5	9.7	5.6	4.5	3.9	1.3	0.1	..	..	..	..	..
NOVEMBER	..	..	..	..	..	0.02	0.2	0.7	0.9	1.2	2.5	3.9	6.2	6.9	9.3	11.8	13.3	13.5	10.7	7.7	4.3	3.7	2.0	1.1	0.05	..	..	..	..	..	..	..
DECEMBER	..	0.01	..	0.04	0.1	0.3	0.4	0.9	1.5	2.3	5.0	7.4	11.7	12.3	10.6	10.1	9.8	9.8	8.1	6.1	2.6	0.5	0.3	..	..	..	..	..	..	..	..	..
WINTER (Dec.-Feb)	0.01	0.03	0.02	0.06	0.2	0.3	0.6	1.1	2.6	4.3	7.8	10.5	12.0	11.4	10.3	9.8	8.6	7.5	6.2	4.5	1.6	0.3	0.09	..	..	..	..	..	..	..	..	..
SPRING (Mar.-May)	..	0.01	0.03	0.04	0.1	0.1	0.1	0.4	0.6	1.0	2.2	3.6	5.4	7.0	9.3	10.8	11.7	11.7	11.4	9.6	6.2	4.1	2.3	1.2	0.6	0.3	0.1	0.03	0.01	0.01	..	..
SUMMER (Jun.-Aug.)	..	..	..	..	..	..	..	..	..	..	..	..	0.01	0.06	0.2	0.5	1.2	2.4	5.5	9.4	13.9	16.9	15.5	12.4	8.8	6.1	3.5	2.1	1.0	0.3	0.07	0.02
AUTUMN (Sep.-Nov.)	..	..	..	..	..	0.0	0.08	0.3	0.3	0.5	1.0	1.6	2.7	3.3	4.7	6.5	8.0	9.8	11.1	11.3	10.4	10.3	7.5	5.1	3.3	1.5	0.5	0.1	0.03	0.0	..	..
ANNUAL	0.0	0.01	0.01	0.03	0.06	0.1	0.2	0.5	0.9	1.5	2.8	3.9	5.1	5.5	6.1	6.9	7.4	7.9	8.5	8.6	8.0	7.9	6.3	4.6	3.1	2.1	1.1	0.6	0.2	0.06	0.03	0.0