

Table 212. Average Hourly Soil Temperature (°F).
January 1953–December 1964

100 CM DEPTH

HOUR	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	39.7	37.6	37.9	42.9	50.8	58.4	63.9	66.3	65.1	59.7	52.2	44.2
2	39.7	37.6	37.9	42.9	50.8	58.4	63.9	66.3	65.1	59.7	52.2	44.2
3	39.7	37.6	38.0	42.9	50.8	58.4	63.9	66.3	65.1	59.7	52.2	44.2
4	39.7	37.6	37.9	42.9	50.8	58.4	63.9	66.3	65.1	59.7	52.2	44.2
5	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.1	59.7	52.1	44.2
6	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.1	59.6	52.1	44.2
7	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.1	59.6	52.1	44.2
8	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.1	59.6	52.1	44.2
9	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.1	59.6	52.1	44.2
10	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.0	59.6	52.1	44.2
11	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.0	59.6	52.1	44.1
12	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.0	59.6	52.1	44.1
13	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.0	59.6	52.1	44.1
14	39.7	37.6	38.0	43.0	50.9	58.5	64.0	66.3	65.0	59.6	52.1	44.1
15	39.7	37.6	38.0	43.1	50.9	58.6	64.0	66.3	65.0	59.6	52.1	44.1
16	39.7	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.6	52.1	44.1
17	39.7	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.6	52.0	44.1
18	39.7	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
19	39.7	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
20	39.7	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
21	39.6	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
22	39.6	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
23	39.6	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.1
24	39.6	37.6	38.0	43.1	51.0	58.6	64.0	66.3	65.0	59.5	52.0	44.0

10 FT DEPTH

HOUR	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	50.1	47.5	45.6	45.1	46.6	49.7	53.3	56.4	58.2	58.4	56.7	53.6
2	50.1	47.5	45.6	45.1	46.6	49.7	53.3	56.4	58.2	58.4	56.7	53.6
3	50.1	47.5	45.6	45.1	46.6	49.7	53.3	56.4	58.2	58.4	56.7	53.6
4	50.1	47.5	45.6	45.1	46.7	49.7	53.3	56.4	58.2	58.4	56.7	53.6
5	50.1	47.5	45.6	45.1	46.7	49.7	53.3	56.4	58.2	58.4	56.7	53.6
6	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
7	50.1	47.5	45.6	45.1	46.7	49.7	53.4	56.4	58.2	58.4	56.7	53.6
8	50.1	47.5	45.6	45.1	46.7	49.7	53.4	56.4	58.2	58.4	56.7	53.6
9	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
10	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
11	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
12	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
13	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
14	50.1	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
15	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
16	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
17	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
18	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
19	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
20	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
21	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
22	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
23	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6
24	50.0	47.5	45.6	45.1	46.7	49.8	53.4	56.4	58.2	58.4	56.7	53.6

Table 213. Average Hourly Soil Temperature (°F).
January 1953-December 1964

29 FT DEPTH

HOUR	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
2	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
3	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
4	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
5	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
6	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
7	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
8	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
9	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
10	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
11	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
12	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
13	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
14	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
15	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
16	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
17	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
18	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
19	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
20	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
21	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
22	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
23	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0
24	52.2	52.3	52.1	51.8	51.4	51.0	50.7	50.6	50.8	51.2	51.6	52.0

Table 214. Annual Average Soil Temperature (°F) at Each Depth.
January 1953-December 1964

YEAR	DEPTH BELOW SURFACE						
	1 CM	10 CM	20 CM	50 CM	100 CM	10 FT	29 FT
1953	53.3	52.9	52.7	52.5	52.4	51.8	51.2
1954	53.5	52.8	52.6	52.5	52.5	52.5	51.6
1955	53.3	52.6	52.5	52.4	52.5	52.5	51.8
1956	52.3	51.7	51.5	51.4	51.3	51.6	51.7
1957	52.3	51.4	51.5	51.7	52.0	52.3	51.7
1958	52.0	50.8	50.9	51.0	51.2	51.5	51.4
1959	52.3	51.2	51.2	51.1	51.1	51.5	51.2
1960	51.7	50.9	51.0	51.0	51.0	51.1	51.1
1961	51.9	51.0	51.1	51.1	51.2	51.7	51.4
1962	51.5	50.7	50.9	50.9	50.9	51.3	51.4
1963	52.3	51.7	51.7	51.7	51.6	51.6	51.3
1964	52.4	51.6	51.6	51.6	51.8	52.2	51.6
MEAN	52.4	51.6	51.6	51.6	51.6	51.8	51.5

Table 215. Monthly Average Number of Hours per Year of Soil Temperature (°F) Equal to or Greater than Indicated. January 1953–December 1964

1 CM DEPTH													
(°F) TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUN	MONTH JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
95	0.0	0.0	0.0	0.0	0.0	1.0	0.7	0.6	0.5	0.0	0.0	0.0	2.8
90	0.0	0.0	0.0	0.0	0.0	4.8	9.8	5.0	1.9	0.0	0.0	0.0	21.5
85	0.0	0.0	0.0	0.0	0.0	20.3	48.5	29.2	8.4	0.0	0.0	0.0	106.4
80	0.0	0.0	0.0	0.0	0.0	73.4	159.8	121.0	28.7	0.0	0.0	0.0	383.9
75	0.0	0.0	0.0	0.0	13.8	191.3	341.8	298.8	92.6	1.0	0.0	0.0	939.3
72	0.0	0.0	0.0	0.2	42.1	301.8	493.6	459.2	168.8	5.4	0.0	0.0	1471.1
70	0.0	0.0	0.0	1.3	71.8	379.4	597.3	568.6	229.2	11.6	0.0	0.0	1859.0
68	0.0	0.0	0.0	2.3	116.1	465.4	673.3	647.7	303.1	25.7	0.0	0.0	2233.5
65	0.0	0.0	0.0	7.8	197.4	570.2	722.9	710.6	433.3	69.9	0.0	0.0	2712.1
60	0.0	0.0	0.7	43.5	385.4	692.1	735.8	737.3	606.3	211.4	2.5	0.0	3414.9
55	0.0	0.0	3.0	140.8	582.5	716.4	735.8	738.0	695.3	398.6	33.1	0.0	4043.4
50	0.0	0.0	14.3	304.2	696.3	717.6	735.8	738.0	715.1	601.7	104.6	0.0	4627.8
45	0.0	0.7	49.9	465.0	739.3	717.6	735.8	738.0	715.1	710.8	262.4	8.8	5143.3
MISSING	0.0	0.0	9.7	2.9	0.7	2.4	8.3	6.0	4.9	5.6	3.1	7.7	51.2

10 CM DEPTH													
(°F) TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUN	MONTH JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.2	0.5	1.3	0.0	0.0	0.0	0.0	1.9
85	0.0	0.0	0.0	0.0	0.0	5.6	14.3	7.7	1.7	0.0	0.0	0.0	29.2
80	0.0	0.0	0.0	0.0	0.0	36.8	87.1	52.9	12.3	0.0	0.0	0.0	189.0
75	0.0	0.0	0.0	0.0	1.3	123.8	271.7	225.7	56.3	0.0	0.0	0.0	678.7
72	0.0	0.0	0.0	0.0	8.7	235.8	447.8	422.1	120.9	0.9	0.0	0.0	1236.3
70	0.0	0.0	0.0	0.0	25.8	321.5	568.0	555.5	177.6	3.3	0.0	0.0	1651.8
68	0.0	0.0	0.0	0.0	58.9	415.6	657.2	644.7	266.2	10.1	0.0	0.0	2052.6
65	0.0	0.0	0.0	1.1	135.9	540.4	723.3	715.1	418.0	38.3	0.0	0.0	2572.1
60	0.0	0.0	0.0	19.9	337.5	689.0	735.8	737.8	614.0	195.9	1.1	0.0	3330.9
55	0.0	0.0	0.0	96.1	559.1	717.2	735.8	738.0	702.6	391.1	23.5	0.0	3963.3
50	0.0	0.0	4.8	253.8	688.8	717.6	735.8	738.0	715.1	598.9	100.5	0.0	4553.2
45	0.0	0.0	29.4	437.3	737.0	717.6	735.8	738.0	715.1	709.8	254.2	6.0	5080.1
MISSING	0.0	0.0	11.6	2.8	0.7	2.4	8.3	6.0	4.9	5.6	3.1	6.3	51.7

20 CM DEPTH													
(°F) TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUN	MONTH JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	35.7	159.9	116.3	31.0	0.0	0.0	0.0	14.1
72	0.0	0.0	0.0	0.0	0.0	122.9	380.3	381.8	85.7	0.0	0.0	0.0	970.6
70	0.0	0.0	0.0	0.0	0.0	211.6	552.2	563.3	136.5	0.6	0.0	0.0	1464.1
68	0.0	0.0	0.0	0.0	2.2	325.4	676.2	677.6	237.6	3.1	0.0	0.0	1922.0
65	0.0	0.0	0.0	0.0	43.5	502.0	733.9	735.9	448.5	15.6	0.0	0.0	2479.4
60	0.0	0.0	0.0	1.3	248.7	701.7	735.8	738.0	668.8	207.3	0.0	0.0	3301.5
55	0.0	0.0	0.0	48.5	551.9	717.6	735.8	738.0	715.0	446.2	16.7	0.0	3969.6
50	0.0	0.0	0.0	201.3	690.6	717.6	735.8	738.0	715.1	658.3	118.2	0.0	4574.8
45	0.0	0.0	14.8	406.6	743.3	717.6	735.8	738.0	715.1	733.9	352.7	2.7	5160.3
MISSING	0.0	0.0	11.6	2.8	0.7	2.4	8.3	6.0	4.9	5.6	3.1	6.3	51.7

50 CM DEPTH													
(°F) TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUN	MONTH JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	58.3	100.8	31.3	0.0	0.0	0.0	190.3
70	0.0	0.0	0.0	0.0	0.0	14.3	234.8	330.0	92.9	0.0	0.0	0.0	671.9
68	0.0	0.0	0.0	0.0	0.0	67.2	412.1	583.8	179.1	0.0	0.0	0.0	1242.1
65	0.0	0.0	0.0	0.0	0.0	220.4	717.8	738.1	467.1	10.6	0.0	0.0	2153.9
60	0.0	0.0	0.0	0.0	40.0	630.9	735.9	738.1	703.2	265.4	0.0	0.0	3113.5
55	0.0	0.0	0.0	0.0	349.9	717.6	735.9	738.1	715.1	580.3	19.6	0.0	3856.5
50	0.0	0.0	0.0	81.8	648.3	717.6	735.9	738.1	715.1	734.2	239.5	0.0	4610.4
45	0.0	0.0	0.0	322.3	743.3	717.6	735.9	738.1	715.1	738.4	563.3	8.3	5282.3
MISSING	0.0	0.0	6.3	2.8	0.7	2.4	8.1	5.9	4.9	5.6	3.1	6.3	46.1

Table 216. Monthly Average Number of Hours per Year of Soil Temperature (°F) Equal to or Greater than Indicated. January 1953-December 1964

100 CM DEPTH

TEMPERATURE (°F)	MONTH												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	5.0	105.8	43.2	0.0	0.0	0.0	154.0
60	0.0	0.0	0.0	0.0	0.0	178.3	731.8	738.8	715.9	353.8	0.0	0.0	1162.3
55	0.0	0.0	0.0	0.0	41.5	678.8	736.8	738.8	715.9	715.8	97.4	0.0	3724.8
50	0.0	0.0	0.0	0.0	493.8	717.8	736.8	738.8	715.9	739.4	567.3	4.9	4714.6
45	0.0	0.0	0.0	178.8	734.8	717.8	736.8	738.8	715.9	739.4	710.9	249.1	5522.2
MISSING	0.0	0.0	4.3	2.3	0.8	2.3	7.3	5.3	4.1	4.6	3.4	6.1	40.3

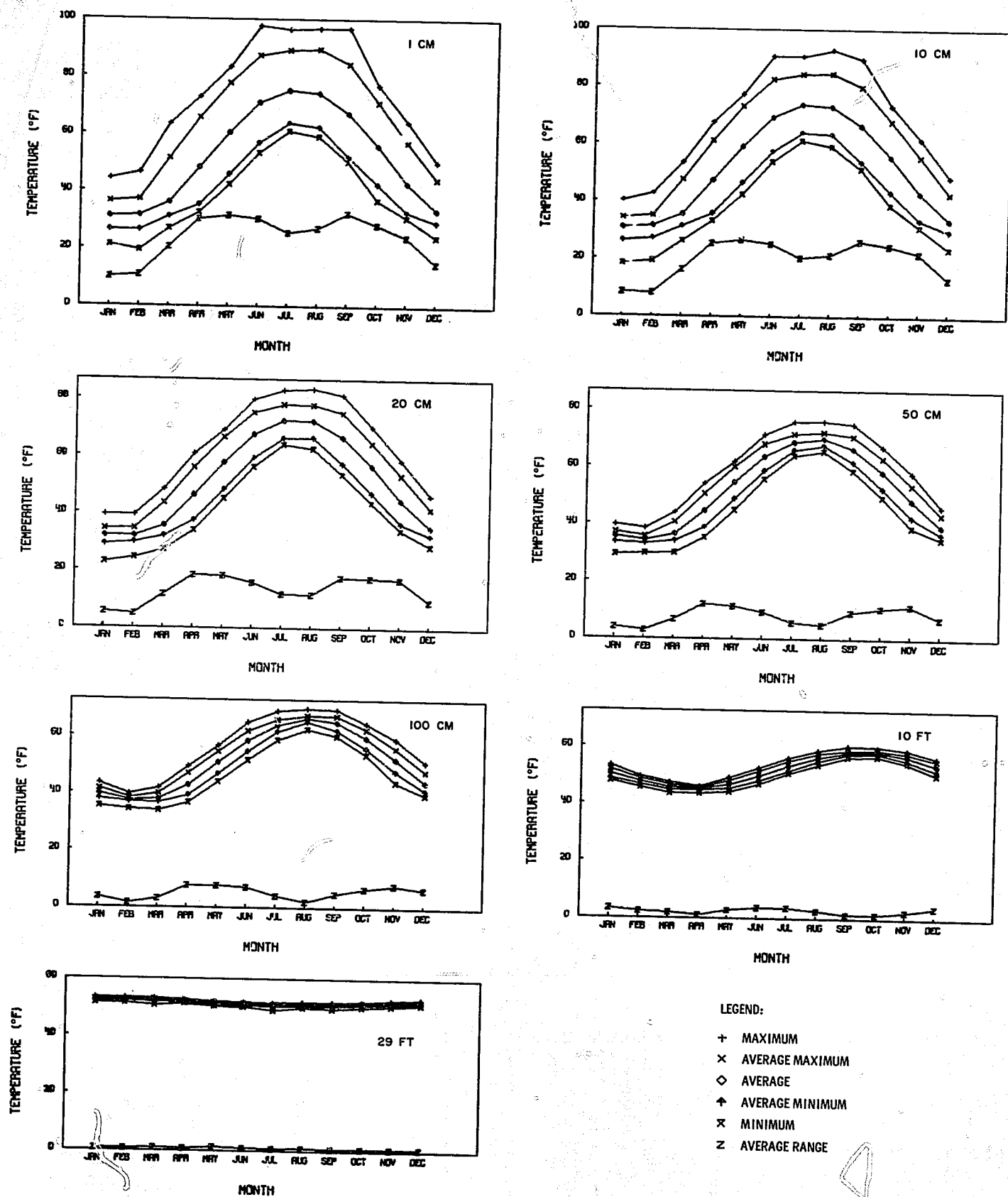
10 FT DEPTH

TEMPERATURE (°F)	MONTH												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	2.0	0.0	0.0	16.0
55	0.0	0.0	0.0	0.0	0.0	0.0	77.3	684.0	716.3	738.0	703.4	123.7	3042.6
50	407.9	0.0	0.0	0.0	0.0	340.6	739.1	740.4	716.3	738.0	717.9	737.9	5138.1
45	744.0	678.0	618.7	481.5	730.7	717.8	739.1	740.4	716.3	738.0	717.9	737.9	8360.2
MISSING	0.0	0.0	2.0	2.3	0.5	2.3	4.9	3.6	3.8	6.0	2.1	6.1	33.4

29 FT DEPTH

TEMPERATURE (°F)	MONTH												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	744.0	678.0	684.0	657.8	681.4	657.8	682.8	740.4	716.0	738.0	717.9	737.9	8435.9
45	744.0	678.0	684.0	657.8	681.5	657.8	705.0	740.4	716.3	738.0	717.9	737.9	8458.5
MISSING	0.0	0.0	60.0	62.3	62.5	62.3	39.0	3.6	3.8	6.0	2.1	6.1	307.5

Figure 50. Monthly Maximum, Average Maximum, Average, Average Minimum, Minimum and Average Daily Range of Soil Temperature (°F).
January 1953–December 1964



LEGEND:
 + MAXIMUM
 x AVERAGE MAXIMUM
 ◇ AVERAGE
 ⊕ AVERAGE MINIMUM
 x MINIMUM
 z AVERAGE RANGE

Figure 51. Average Monthly Soil Temperature (°F) at Each Depth for Each Year. January 1953–December 1964

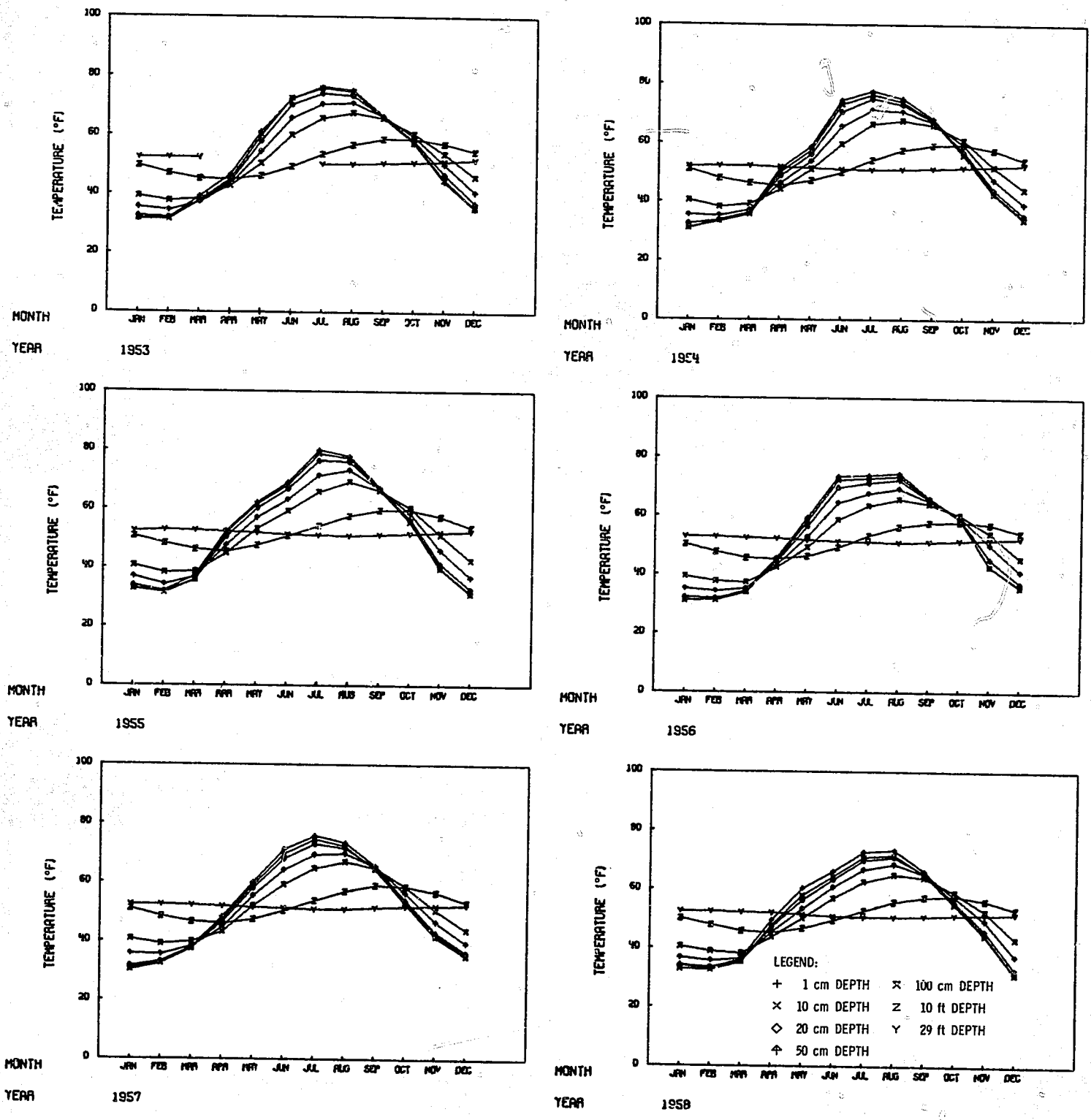


Figure 52. Average Monthly Soil Temperature (°F) at Each Depth for Each Year. January 1953–December 1964

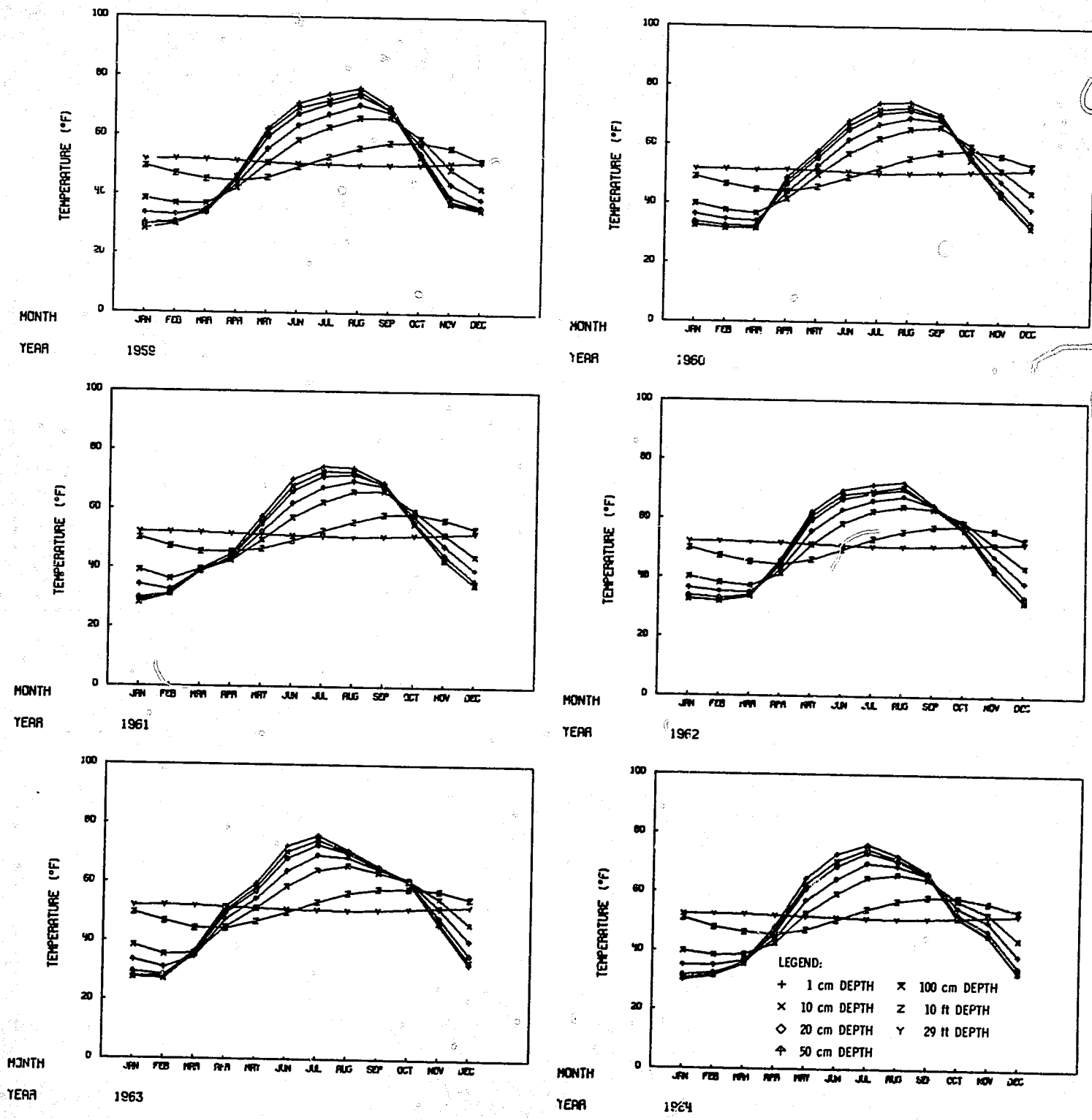
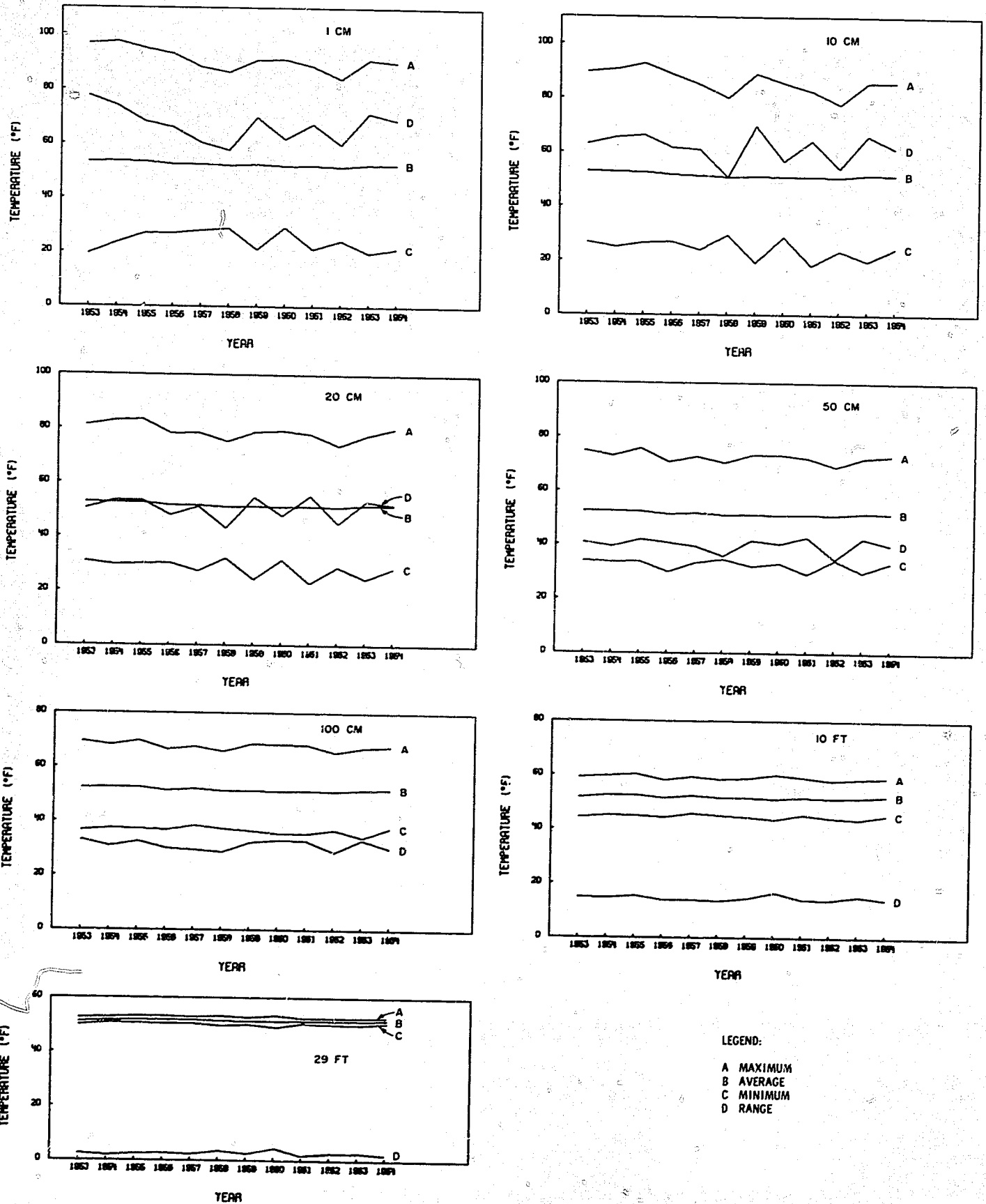


Figure 53. Annual Maximum, Minimum, Average and Extreme Range of Soil Temperature (°F) at Each Depth. January 1953–December 1964



Part II

RELATIONS BETWEEN TWO OR MORE METEOROLOGICAL VARIABLES

The joint percentage frequency distributions presented in the tables of Part II show bivariate relations between meteorological variables. In general, hourly observations are used, but in a few cases one or both of the variables are derived. These include 150/19-foot wind speed ratio, air minus soil temperature difference and 2-, 11- and 23-hour ranges of variables. The 150/19-foot wind speed ratio is defined as the hourly observation of 150-foot wind speed divided by the corresponding hourly observation of 19-foot wind speed. The ratio is calculated before the wind speed is rounded. If either wind speed is missing or the 19-foot wind speed is equal to 0.0 mph, the 150/19-foot wind speed ratio is considered missing.

The air minus soil temperature difference is defined as the hourly 5.5-foot air temperature minus the corresponding 1- or 10-cm hourly soil temperature.

The 2-, 11- and 23-hour ranges are based on the hourly observations of the variables. The 2-hour range of a variable is defined as the difference between the maximum and minimum of three consecutive hourly observations. A range was calculated for 2-hour intervals beginning with each hour of the day. For example, the difference between the highest and lowest of the hourly values in the period 0100 through 0300 CST is calculated. The next range is calculated as the difference between the highest and lowest of the hourly values in the period 0200 through 0400 CST. The procedure is repeated for periods beginning with each of the remaining hours of the day. In comparing ranges of two variables in bivariate frequency distributions, ranges calculated for periods beginning on the same hour are considered jointly. The 11- and 23-hour ranges are computed in a similar manner using 12 and 24 consecutive hourly observations respectively.

A table entry in a joint percentage frequency distribution represents the percent of the total number of observations, as specified on the individual tables, during which the two variables in question simultaneously attained values within the specified intervals. The total number of observations includes the number of missing observations. Rows and columns labeled "total" present the distributions of the single variables. These totals represent the number of observations in the row or column divided by the total number of observations and multiplied by 100. Owing to rounding of the table entries, these totals may not be the exact sum of the percents listed in the row or column. The rows and columns labeled "cumulative total" present the cumulative distribution of the variables.

When the table for the total period of record is the only one presented, the table entries are given to three-decimal place accuracy to show extreme

entries in the distribution. If individual monthly tables are shown, extremes can be found by an examination of these tables; the data in the total period table in these cases is presented to only two decimal places. The period of record and the breakdown by months, total period, or both is indicated in the list of tables and in the individual write-ups of the tables.

The conventions adopted and explanatory information concerning each of the variables are presented in the appropriate section of Part I.

Section 2.1

Relationship between Wind Speed,
Wind Direction and Air Temperature

Tables 218 through 224. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature ($^{\circ}\text{F}$). Monthly and Total Period. January 1950-December 1964.

The data in these tables are particularly useful for evaluating wind chill,¹⁶ that is, the cooling power of specific wind and temperature conditions.

Tables 225 through 231. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature ($^{\circ}\text{F}$). Monthly and Total Period. January 1950-December 1964.

The predominant wind direction is west for lower temperatures and shifts to the southwest for higher temperatures.

Tables 232 through 235. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and 144- minus 5.5-foot Temperature Difference ($^{\circ}\text{F}$). Monthly and Total Period. July 1951-December 1964.

During stable conditions vertical motion is suppressed and the interchange of momentum from one height to the next is reduced. One would expect, therefore, to find high values of wind speed ratio with extreme inversion conditions and low wind speed ratios with unstable conditions. In general, this relationship between wind speed ratio and temperature differences is indicated by the data. A temperature decrease of 0.76°F from 5.5 to 144 feet represents the adiabatic lapse rate or neutral stability.

Tables 236 through 239. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 144- minus 5.5-foot Temperature Difference ($^{\circ}\text{F}$). Monthly and Total Period. July 1951-December 1964.

When high surface winds are present, there is a considerable amount of turbulence and the lower layer of the atmosphere is well mixed. Under such conditions the temperature difference between the 144- and 5.5-foot levels should be small. These tables show this to be the case. Extreme temperature differences rarely occur with wind speed exceeding 31 mph.

Tables 240 through 243. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 150/19-foot Wind Speed Ratio. Monthly and Total Period. January 1950-December 1964.

With high winds considerable turbulence is present in the lower layers and momentum exchange is high. One would, therefore, expect the

wind speed ratios to be relatively small during periods of high wind speeds. These data show that as the wind speed becomes higher, there is a tendency for the wind speed ratio to approach a value in the 1.3-1.5 range.

During clear nights when the terrestrial radiation losses are high, a strong inversion develops and the wind flow is characterized by a marked suppression of fluctuations in both speed and direction. The flow may approach the laminar state. Under these conditions the wind speed at the 150-foot level may exceed 12 mph, while the wind speed at the 19-foot level may be only 2 to 3 mph. A relatively high wind speed ratio results. A secondary maximum frequency of wind speed ratios at the higher end of the scale is found in most of these tables for wind speeds in the 4-7, 8-12 and 13-18 mph groupings. It is the frequency of occurrence of this stable regime which gives rise to the secondary maximum.

Tables 244 through 256. Joint Percentage Frequency Distribution of 19- and 150-foot Wind Direction and 144- minus 5.5-foot Temperature Difference ($^{\circ}\text{F}$). Monthly and Total Period. July 1951-December 1964.

Although there is little or no relationship evident between wind direction and atmospheric stability as measured by the vertical temperature difference, these tables are retained since they are of interest in problems arising in urban planning.

Table 257. Joint Percentage Frequency Distribution of 2-, 11- and 23-hour Range of 19-foot Wind Speed (mph) and of 5.5-foot Temperature ($^{\circ}\text{F}$). Total Period. January 1950-December 1964.

There seems to be little relationship between the range of temperature and the range of wind speed for any of the three intervals examined. The most frequent wind speed ranges in 2, 11 and 23 hours are 2.0-2.9, 6.0-6.9, 8.0-8.9 mph, respectively, and the most frequent temperature range category is 0-2 $^{\circ}\text{F}$ in two hours, 9-14 $^{\circ}\text{F}$ in eleven hours and 15-19 $^{\circ}\text{F}$ in twenty three hours.

Table 218. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

JANUARY 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<-16	0.01	0.05	0.09	0.05	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.01	0.05	0.48	0.28	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.26	0.65	0.55	0.24	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.07	0.47	1.22	1.34	0.46	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.11	0.91	2.56	1.00	0.84	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.29	0.73	2.20	2.62	1.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.19	0.92	2.47	3.35	1.08	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.24	1.45	3.66	3.41	1.65	0.37	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.31	1.68	4.24	4.78	2.11	0.35	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.47	2.13	5.18	6.21	3.22	0.35	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.38	1.50	4.98	6.50	3.34	0.40	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.05	0.50	2.12	2.88	1.44	0.17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.03	0.17	1.03	1.15	0.45	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.01	0.07	0.39	0.35	0.26	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50-54	0.01	0.01	0.07	0.28	0.26	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55-59	0.00	0.00	0.00	0.06	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60-64	0.00	0.00	0.00	0.00	0.02	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65-69	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70-74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISSING	0.00	0.00	0.01	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	2.17	10.92	31.37	35.71	16.84	2.11	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.18	100.00
CUMUL TOTAL	2.17	13.09	44.46	80.17	97.01	99.12	99.41	99.41	99.41	99.41	99.41	99.41	100.00		

NUMBER OF OBSERVATIONS = 11160

FEBRUARY 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<-16	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.01	0.10	0.10	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.05	0.55	0.33	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.03	0.24	0.95	0.77	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.05	0.27	1.04	1.14	0.54	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.15	0.52	1.13	1.14	0.70	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.15	0.66	2.22	1.72	0.92	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.28	1.19	2.82	2.74	1.26	0.12	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.53	1.81	4.77	5.04	2.49	0.23	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.31	1.77	5.60	6.75	3.54	0.51	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.28	1.74	7.45	9.04	4.08	0.64	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.13	0.75	2.71	3.73	1.87	0.37	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.06	0.27	1.17	1.78	1.23	0.13	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.00	0.09	0.35	0.76	0.56	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50-54	0.00	0.01	0.21	0.27	0.28	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55-59	0.01	0.01	0.04	0.11	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60-64	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65-69	0.00	0.00	0.00	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70-74	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
> 99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISSING	0.04	0.31	0.14	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	2.02	9.68	31.27	35.46	18.10	2.38	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.51	100.00
CUMUL TOTAL	2.02	11.70	42.97	78.43	96.53	98.91	99.19	99.19	99.19	99.19	99.19	99.19	100.00		

NUMBER OF OBSERVATIONS = 10176

Table 219. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

MARCH 1950-1954													
TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
-5- -1	0.00	0.03	0.10	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
0-4	0.00	0.03	0.17	0.13	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.39
5-9	0.03	0.22	0.38	0.44	0.13	0.03	0.00	0.00	0.00	0.00	0.00	1.23	1.85
10-14	0.06	0.38	0.84	0.80	0.26	0.06	0.00	0.00	0.00	0.00	0.00	2.40	4.26
15-19	0.16	0.70	1.46	1.61	0.78	0.39	0.07	0.00	0.00	0.00	0.00	5.20	9.45
20-24	0.23	0.91	3.32	2.68	1.79	0.54	0.08	0.00	0.00	0.00	0.01	9.56	19.01
25-29	0.44	1.90	5.29	4.72	2.72	0.62	0.09	0.00	0.00	0.00	0.00	15.78	34.79
30-34	0.48	2.23	7.06	9.77	4.94	1.20	0.15	0.00	0.00	0.00	0.00	25.83	60.63
35-39	0.17	1.14	4.21	5.88	3.60	0.68	0.07	0.00	0.00	0.00	0.00	15.75	76.38
40-44	0.06	0.66	2.46	3.39	1.87	0.36	0.11	0.00	0.00	0.00	0.00	8.92	85.30
45-49	0.05	0.48	1.57	2.52	1.34	0.22	0.03	0.00	0.00	0.00	0.00	6.21	91.51
50-54	0.04	0.26	0.75	1.77	0.98	0.30	0.03	0.00	0.00	0.00	0.00	4.12	95.63
55-59	0.01	0.05	0.25	0.84	0.66	0.24	0.02	0.00	0.00	0.00	0.00	2.08	97.71
60-64	0.00	0.04	0.13	0.23	0.31	0.12	0.09	0.00	0.00	0.00	0.00	0.92	98.63
65-69	0.00	0.00	0.04	0.14	0.23	0.08	0.01	0.01	0.00	0.00	0.00	0.52	99.15
70-74	0.00	0.00	0.03	0.05	0.05	0.07	0.02	0.00	0.00	0.00	0.00	0.22	99.37
75-79	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.04	99.41
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
MISSING	0.04	0.08	0.32	0.13	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.59	100.00
TOTAL	1.79	9.11	28.44	35.13	19.78	4.93	0.78	0.01	0.00	0.00	0.04	100.00	
CUMUL TOTAL	1.79	10.91	39.35	74.47	94.25	99.18	99.96	99.96	99.96	99.96	100.00		

NUMBER OF OBSERVATIONS = 11160

APRIL 1950-1964													
TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
15-19	0.00	0.02	0.12	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.20
20-24	0.06	0.25	0.43	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	1.11
25-29	0.16	0.66	1.35	0.85	0.41	0.11	0.06	0.00	0.00	0.00	0.00	3.59	4.70
30-34	0.17	0.97	3.97	2.99	2.24	0.69	0.01	0.00	0.00	0.00	0.00	11.05	15.75
35-39	0.27	1.23	4.16	4.55	2.66	0.79	0.01	0.00	0.00	0.00	0.19	13.85	29.60
40-44	0.27	1.45	4.69	5.61	2.84	0.81	0.03	0.00	0.00	0.00	0.15	15.84	45.44
45-49	0.19	1.19	4.48	4.96	2.82	0.51	0.08	0.00	0.00	0.00	0.06	14.30	59.74
50-54	0.17	1.00	3.77	4.67	2.01	0.25	0.06	0.00	0.00	0.00	0.00	11.92	71.66
55-59	0.09	0.94	2.78	3.58	1.69	0.30	0.03	0.00	0.00	0.00	0.00	9.40	81.06
60-64	0.06	0.40	1.66	2.79	1.54	0.34	0.06	0.00	0.00	0.00	0.00	6.84	87.90
65-69	0.02	0.20	0.94	2.09	1.50	0.17	0.04	0.00	0.00	0.00	0.00	4.95	92.85
70-74	0.01	0.06	0.47	1.07	1.06	0.28	0.01	0.00	0.00	0.00	0.00	2.95	95.81
75-79	0.00	0.02	0.20	0.56	0.55	0.19	0.01	0.00	0.00	0.00	0.00	1.53	97.33
80-84	0.00	0.00	0.02	0.08	0.33	0.07	0.02	0.00	0.00	0.00	0.00	0.53	97.86
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
MISSING	0.01	0.24	0.65	0.57	0.41	0.18	0.08	0.00	0.00	0.00	0.00	2.14	100.00
TOTAL	1.46	8.62	29.69	34.61	20.05	4.68	0.49	0.00	0.00	0.00	0.41	100.00	
CUMUL TOTAL	1.46	10.08	39.77	74.38	94.43	99.10	99.59	99.59	99.59	99.59	100.00		

NUMBER OF OBSERVATIONS = 10800

Table 220. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

MAY 1950-1964													
TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.02	0.17	0.56	0.22	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04
35-39	0.22	0.66	1.91	1.28	0.51	0.17	0.00	0.00	0.00	0.00	0.00	1.03	1.08
40-44	0.38	1.12	2.63	1.77	0.86	0.13	0.00	0.00	0.00	0.00	0.00	4.75	5.82
45-49	0.34	1.72	4.91	4.19	1.49	0.16	0.00	0.00	0.00	0.00	0.00	6.88	12.71
50-54	0.55	2.32	5.75	4.88	1.66	0.24	0.03	0.00	0.00	0.00	0.00	12.81	25.52
55-59	0.35	1.81	5.60	5.03	1.69	0.08	0.04	0.01	0.00	0.00	0.09	15.47	40.99
60-64	0.23	1.58	5.29	4.74	1.24	0.16	0.01	0.00	0.00	0.00	0.00	14.70	55.69
65-69	0.13	1.11	4.39	5.01	1.72	0.31	0.05	0.00	0.00	0.00	0.11	13.35	69.04
70-74	0.06	0.57	2.29	3.59	1.85	0.42	0.05	0.00	0.00	0.00	0.03	12.75	81.79
75-79	0.01	0.23	1.17	2.25	1.59	0.31	0.04	0.00	0.00	0.00	0.07	8.92	90.71
80-84	0.00	0.06	0.32	1.28	1.12	0.11	0.00	0.00	0.00	0.00	0.01	5.62	96.33
85-89	0.00	0.00	0.10	0.26	0.38	0.04	0.00	0.00	0.00	0.00	0.00	2.89	99.22
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78	100.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL	2.29	11.36	34.93	34.51	14.18	2.16	0.22	0.01	0.00	0.00	0.35	100.00	
CUMUL TOTAL	2.29	13.66	48.58	83.09	97.27	99.43	99.64	99.65	99.65	99.65	100.00		

NUMBER OF OBSERVATIONS = 11160

JUNE 1950-1964													
TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.05	0.38	0.27	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12
45-49	0.31	0.81	1.35	0.54	0.15	0.04	0.00	0.00	0.00	0.00	0.02	0.77	0.89
50-54	0.62	1.87	3.40	1.47	0.46	0.00	0.00	0.00	0.00	0.00	0.04	3.21	4.10
55-59	0.77	2.39	4.80	2.59	0.54	0.01	0.00	0.00	0.00	0.00	0.03	7.86	11.96
60-64	0.73	3.68	7.36	3.56	0.47	0.05	0.00	0.00	0.00	0.00	0.00	11.12	23.08
65-69	0.97	3.56	8.22	4.56	0.68	0.04	0.01	0.00	0.00	0.00	0.17	16.02	39.10
70-74	0.50	2.68	7.23	5.40	1.05	0.03	0.01	0.00	0.00	0.00	0.10	18.14	57.24
75-79	0.11	1.91	4.41	4.48	1.25	0.06	0.00	0.00	0.00	0.00	0.05	16.94	74.18
80-84	0.05	0.81	2.48	3.40	1.24	0.05	0.00	0.00	0.00	0.00	0.01	12.22	86.40
85-89	0.01	0.34	1.46	1.91	0.72	0.07	0.00	0.00	0.00	0.00	0.00	8.03	94.43
90-94	0.01	0.08	0.26	0.40	0.12	0.01	0.00	0.00	0.00	0.00	0.00	4.52	98.94
95-99	0.00	0.00	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.89	99.83
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	99.88
MISSING	0.00	0.02	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	100.00
TOTAL	4.13	18.56	41.40	28.42	6.71	0.34	0.03	0.00	0.00	0.00	0.41	100.00	
CUMUL TOTAL	4.13	22.69	64.09	92.51	99.22	99.56	99.59	99.59	99.59	99.59	100.00		

NUMBER OF OBSERVATIONS = 10800

Table 221. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

JULY 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.02	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50-54	0.22	0.49	0.89	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14
55-59	0.79	2.20	2.89	0.39	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.64	1.78
60-64	1.42	5.01	6.02	1.55	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	6.34	8.13
65-69	1.44	6.23	10.45	3.88	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.37	22.50
70-74	0.72	5.34	9.61	4.82	0.55	0.02	0.00	0.00	0.00	0.00	0.00	0.00	22.45	44.95
75-79	0.37	2.87	7.53	5.06	0.73	0.03	0.00	0.00	0.00	0.00	0.00	0.00	21.08	66.02
80-84	0.14	1.60	5.08	3.74	0.69	0.02	0.00	0.00	0.00	0.00	0.00	0.00	16.58	82.60
85-89	0.00	0.37	2.06	2.23	0.46	0.01	0.00	0.00	0.00	0.00	0.00	0.00	11.27	93.87
90-94	0.00	0.10	0.41	0.23	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.01	5.13	99.01
95-99	0.00	0.00	0.02	0.10	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	99.86
>99	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	99.99
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	100.00
TOTAL CUMUL	5.12	24.25	45.04	22.04	3.28	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL	5.12	29.36	74.40	96.44	99.72	99.80	99.81	99.81	99.81	99.81	99.81	100.00		

NUMBER OF OBSERVATIONS = 11160

AUGUST 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.08	0.23	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
50-54	0.56	1.16	1.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.48
55-59	0.96	3.40	3.74	0.67	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91	3.40
60-64	1.24	4.97	7.11	1.94	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.80	12.20
65-69	1.49	6.76	10.30	3.85	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.62	27.81
70-74	0.92	4.77	9.35	4.94	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.83	50.65
75-79	0.32	2.46	7.01	4.79	0.67	0.02	0.00	0.00	0.00	0.00	0.00	0.00	20.48	71.13
80-84	0.11	0.91	3.64	3.15	0.57	0.02	0.00	0.00	0.00	0.00	0.00	0.00	15.40	86.53
85-89	0.02	0.34	1.38	1.79	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.40	94.93
90-94	0.00	0.05	0.36	0.65	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.92	98.84
95-99	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	99.97
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL CUMUL	5.69	25.09	44.18	21.83	2.98	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL	5.69	30.78	74.96	96.78	99.77	99.80	99.81	99.81	99.81	99.81	99.81	100.00		

NUMBER OF OBSERVATIONS = 11160

Table 222. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

SEPTEMBER 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.10	0.40	0.41	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
40-44	0.26	1.02	1.68	0.13	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.95	1.02
45-49	0.62	2.20	3.08	0.52	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	3.15	4.17
50-54	0.89	3.46	5.84	1.78	0.40	0.07	0.00	0.00	0.00	0.00	0.00	0.00	6.61	10.78
55-59	1.17	3.79	6.00	3.37	0.90	0.11	0.00	0.00	0.00	0.00	0.00	0.00	12.44	23.22
60-64	0.89	4.60	8.44	4.70	0.66	0.05	0.00	0.00	0.00	0.00	0.00	0.00	15.33	38.56
65-69	0.55	3.06	7.31	4.56	0.75	0.09	0.01	0.00	0.00	0.00	0.01	0.00	19.34	57.90
70-74	0.19	1.76	5.33	4.44	0.94	0.06	0.00	0.00	0.00	0.00	0.06	0.00	16.38	74.28
75-79	0.13	0.77	2.06	2.82	0.87	0.07	0.00	0.00	0.00	0.00	0.01	0.00	12.71	86.99
80-84	0.07	0.26	1.11	1.09	0.78	0.06	0.00	0.00	0.00	0.00	0.02	0.00	3.40	97.15
85-89	0.00	0.08	0.47	0.98	0.47	0.05	0.01	0.00	0.00	0.00	0.00	0.00	2.06	99.21
90-94	0.00	0.02	0.17	0.35	0.18	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.72	99.94
95-99	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL	4.86	21.43	41.97	24.83	6.14	0.63	0.02	0.00	0.00	0.00	0.00	0.12	100.00	
CUMUL TOTAL	4.86	26.29	68.26	93.09	99.23	99.86	99.88	99.88	99.88	99.88	99.88	100.00		

NUMBER OF OBSERVATIONS = 10800

OCTOBER 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.01	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.07	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10
25-29	0.08	0.33	0.82	0.19	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.35
30-34	0.30	0.96	1.90	0.83	0.25	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.78
35-39	0.36	1.69	3.15	1.85	0.65	0.13	0.00	0.00	0.00	0.00	0.00	0.00	4.26	6.04
40-44	0.61	2.63	5.30	3.01	0.88	0.15	0.00	0.00	0.00	0.00	0.00	0.00	7.83	13.87
45-49	0.67	3.08	6.36	4.06	1.26	0.09	0.00	0.00	0.00	0.00	0.00	0.00	12.59	26.46
50-54	0.53	2.74	6.26	4.72	1.34	0.13	0.00	0.00	0.00	0.00	0.00	0.00	15.65	42.11
55-59	0.52	2.45	5.58	4.35	0.86	0.06	0.00	0.00	0.00	0.00	0.00	0.00	15.83	57.94
60-64	0.30	1.80	4.09	3.67	1.11	0.08	0.00	0.00	0.00	0.00	0.00	0.06	13.89	71.83
65-69	0.15	1.07	3.23	3.19	0.97	0.04	0.00	0.00	0.00	0.00	0.01	0.00	11.07	82.89
70-74	0.09	0.36	1.38	1.80	0.88	0.09	0.00	0.00	0.00	0.00	0.03	0.00	8.67	91.57
75-79	0.02	0.13	0.53	1.30	0.53	0.03	0.00	0.00	0.00	0.00	0.01	0.00	4.61	96.17
80-84	0.00	0.03	0.24	0.51	0.29	0.04	0.00	0.00	0.00	0.00	0.00	0.00	2.53	98.70
85-89	0.00	0.00	0.01	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	99.81
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	99.93
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93
MISSING	0.00	0.00	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93
TOTAL	3.65	17.35	39.13	29.61	9.08	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.07	100.00
CUMUL TOTAL	3.65	20.99	60.13	89.74	98.82	99.65	99.65	99.65	99.65	99.65	99.65	100.00		

NUMBER OF OBSERVATIONS = 11160

Table 223. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and 5.5-foot Temperature (°F)

NOVEMBER 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.06	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.01	0.05	0.13	0.18	0.17	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19
5-9	0.00	0.06	0.22	0.28	0.26	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.74
10-14	0.01	0.25	0.63	0.49	0.22	0.10	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.85	1.57
15-19	0.03	0.54	1.46	1.00	0.79	0.19	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.71	3.29
20-24	0.25	1.00	2.56	1.65	1.13	0.42	0.06	0.00	0.00	0.00	0.00	0.00	0.00	4.02	7.31
25-29	0.40	1.62	4.30	3.35	2.20	0.48	0.28	0.00	0.00	0.00	0.00	0.00	0.00	7.07	14.38
30-34	0.48	1.97	5.42	5.42	2.29	0.49	0.12	0.00	0.00	0.00	0.00	0.00	0.00	12.65	27.03
35-39	0.31	1.70	5.56	5.09	1.95	0.23	0.03	0.01	0.00	0.00	0.00	0.00	0.05	16.23	43.26
40-44	0.12	1.44	4.90	4.80	1.82	0.29	0.04	0.00	0.00	0.00	0.00	0.00	0.24	15.13	58.39
45-49	0.07	1.20	3.58	3.84	1.88	0.30	0.03	0.00	0.00	0.00	0.00	0.00	0.13	13.53	71.92
50-54	0.27	0.81	2.27	2.65	1.31	0.15	0.01	0.00	0.00	0.00	0.00	0.00	0.08	10.99	82.91
55-59	0.04	0.39	1.40	1.94	1.13	0.23	0.04	0.00	0.00	0.00	0.00	0.00	0.03	7.49	90.40
60-64	0.01	0.15	0.51	1.14	0.76	0.14	0.03	0.00	0.00	0.00	0.00	0.00	0.03	5.19	95.59
65-69	0.00	0.06	0.15	0.58	0.44	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	2.73	98.32
70-74	0.00	0.00	0.03	0.05	0.13	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.33	99.66
75-79	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	99.95
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	100.00
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL	1.99	11.31	3	32.47	16.49	3.23	0.69	0.01	0.00	0.00	0.00	0.00	0.00	0.00	100.00
CUMUL TOTAL	1.99	13.30	46.53	79.00	95.49	98.72	99.42	99.43	99.43	99.43	99.43	100.00	100.00	100.00	100.00

NUMBER OF OBSERVATIONS = 10800

DECEMBER 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<-16	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04
-15- -11	0.01	0.07	0.31	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.53
-10- -6	0.02	0.21	0.53	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	1.59
-5- -1	0.13	0.45	1.16	0.93	0.30	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.99	4.59
0-4	0.04	0.47	1.37	1.48	0.45	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	3.88	8.47
5-9	0.11	0.68	2.20	1.43	0.42	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.96	13.43
10-14	0.19	1.03	2.59	1.84	0.65	0.14	0.01	0.00	0.00	0.00	0.00	0.00	0.01	6.46	19.89
15-19	0.41	1.62	3.06	3.46	1.31	0.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00	10.02	29.91
20-24	0.37	1.58	4.66	5.47	2.26	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.02	14.64	44.55
25-29	0.34	1.77	5.71	7.31	2.55	0.23	0.01	0.00	0.00	0.00	0.00	0.00	0.10	18.13	62.68
30-34	0.28	1.75	5.41	8.27	2.85	0.16	0.02	0.00	0.00	0.00	0.00	0.00	0.13	18.87	81.55
35-39	0.19	0.73	2.48	3.64	1.42	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.56	90.11
40-44	0.10	0.35	1.39	1.98	0.66	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51	94.61
45-49	0.03	0.19	0.57	0.99	0.56	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.83	97.45
50-54	0.02	0.11	0.17	0.64	0.49	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	98.93
55-59	0.01	0.02	0.11	0.13	0.33	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	99.65
60-64	0.00	0.00	0.02	0.01	0.04	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.09	99.74
65-69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
70-74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
MISSING	0.00	0.04	0.17	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
TOTAL	2.23	11.08	31.95	38.02	14.70	1.49	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.26	100.00
CUMUL TOTAL	2.23	13.31	45.26	83.28	97.97	99.46	99.53	99.54	99.54	99.54	99.54	100.00	100.00	100.00	100.00

NUMBER OF OBSERVATIONS = 11160

Table 224. Joint Percentage Frequency Distribution of 19-foot
Wind Speed (mph) and 5.5-foot Temperature (°F)

ALL YEARS 1950-1964

TEMPERATURE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<-16	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
-15- -11	0.00	0.01	0.08	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.17
-10- -6	0.00	0.04	0.15	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.48
-5- -1	0.02	0.10	0.29	0.26	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.77	1.25
0-4	0.02	0.14	0.44	0.40	0.17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	2.44
5-9	0.05	0.18	0.51	0.49	0.21	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	3.90
10-14	0.05	0.27	0.73	0.68	0.26	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.00	2.04	5.94
15-19	0.09	0.46	1.05	1.02	0.48	0.10	0.02	0.00	0.00	0.00	0.00	0.02	0.00	3.23	9.17
20-24	0.14	0.60	1.67	1.64	0.81	0.15	0.02	0.00	0.00	0.00	0.00	0.02	0.00	5.04	14.21
25-29	0.18	0.84	2.34	2.43	1.21	0.19	0.04	0.00	0.00	0.00	0.00	0.02	0.00	7.28	21.49
30-34	0.20	0.94	3.04	3.56	1.66	0.30	0.04	0.00	0.00	0.00	0.00	0.07	0.00	9.81	31.30
35-39	0.15	0.74	2.23	2.40	1.17	0.22	0.01	0.00	0.00	0.00	0.00	0.04	0.00	6.95	38.25
40-44	0.16	0.79	2.13	1.97	0.88	0.16	0.02	0.00	0.00	0.00	0.00	0.02	0.00	6.13	44.38
45-49	0.20	0.94	2.24	1.90	0.90	0.13	0.01	0.00	0.00	0.00	0.00	0.02	0.00	6.36	50.74
50-54	0.32	1.19	2.55	1.94	0.77	0.11	0.01	0.00	0.00	0.00	0.00	0.02	0.00	6.91	57.65
55-59	0.39	1.46	2.77	1.93	0.69	0.10	0.01	0.00	0.00	0.00	0.00	0.02	0.00	7.37	65.02
60-64	0.41	1.86	3.40	2.03	0.57	0.09	0.02	0.00	0.00	0.00	0.00	0.04	0.00	8.41	73.43
65-69	0.40	1.85	3.78	2.33	0.60	0.07	0.01	0.00	0.00	0.00	0.00	0.02	0.00	9.06	82.49
70-74	0.21	1.31	3.00	2.19	0.58	0.09	0.01	0.00	0.00	0.00	0.00	0.02	0.00	7.40	89.88
75-79	0.08	0.70	1.93	1.78	0.52	0.06	0.01	0.00	0.00	0.00	0.00	0.02	0.00	5.10	94.98
80-84	0.03	0.31	1.08	1.11	0.42	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.99	97.97
85-89	0.00	0.10	0.46	0.61	0.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	99.36
90-94	0.00	0.02	0.10	0.14	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	99.66
95-99	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	99.68
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.68
MISSING	0.01	0.06	0.11	0.07	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.32	100.00
TOTAL	3.13	14.93	36.08	31.03	12.32	1.90	0.24	0.00	0.00	0.00	0.00	0.37	100.00		
CUMUL TOTAL	3.13	18.06	54.14	85.17	97.49	99.39	99.63	99.63	99.63	99.63	99.63	100.00			

NUMBER OF OBSERVATIONS = 131496

Table 225. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

JANUARY 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL
	CALM	NE	E	SE	S	SW	W	NW	N MISSING			
<-16	0.01	0.00	0.00	0.00	0.00	0.05	0.12	0.06	0.04	0.00	0.28	0.28
-15- -11	0.00	0.00	0.00	0.00	0.00	0.17	0.60	0.15	0.01	0.00	0.93	1.21
-10- -6	0.00	0.00	0.00	0.00	0.02	0.37	0.93	0.34	0.04	0.01	1.71	2.92
-5- -1	0.04	0.04	0.01	0.01	0.08	0.60	1.46	0.82	0.52	0.06	3.64	6.56
0-4	0.08	0.03	0.04	0.09	0.54	0.67	2.31	1.36	1.20	0.04	6.35	12.91
5-9	0.19	0.10	0.10	0.19	0.34	0.82	2.74	1.36	0.99	0.10	6.93	19.84
10-14	0.14	0.15	0.14	0.35	0.80	1.44	2.10	1.81	1.21	0.06	8.21	28.05
15-19	0.19	0.74	0.77	0.74	1.29	1.51	2.25	1.92	1.42	0.04	10.87	38.92
20-24	0.20	1.20	0.97	0.95	1.37	1.87	2.61	2.14	2.18	0.08	13.57	52.48
25-29	0.26	1.63	1.44	1.45	2.25	2.56	3.02	2.28	2.70	0.09	17.68	70.16
30-34	0.37	2.32	0.86	1.60	2.78	3.04	2.60	1.21	2.29	0.34	17.41	87.57
35-39	0.05	0.62	0.38	0.80	1.95	1.68	0.88	0.25	0.46	0.11	7.18	94.75
40-44	0.03	0.13	0.20	0.37	0.84	0.75	0.27	0.11	0.14	0.01	2.84	97.59
45-49	0.01	0.00	0.01	0.15	0.43	0.41	0.12	0.00	0.00	0.00	1.13	98.72
50-54	0.00	0.00	0.00	0.04	0.33	0.30	0.05	0.00	0.02	0.01	0.75	99.47
55-59	0.00	0.00	0.00	0.00	0.06	0.14	0.04	0.00	0.00	0.00	0.24	99.71
60-64	0.00	0.00	0.00	0.00	0.09	0.01	0.00	0.00	0.00	0.00	0.10	99.81
65-69	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	99.82
70-74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.82
MISSING	0.00	0.00	0.00	0.01	0.00	0.01	0.16	0.00	0.00	0.00	0.18	100.00
TOTAL CUMUL	1.56	4.95	4.91	6.76	13.18	16.41	22.25	13.82	13.22	0.95	100.00	
TOTAL	1.56	8.51	13.42	20.18	33.36	49.77	72.02	85.83	99.05	100.00		

NUMBER OF OBSERVATIONS = 11160

FEBRUARY 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL
	CALM	NE	E	SE	S	SW	W	NW	N MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.03
-15- -11	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.07	0.01	0.00	0.22	0.25
-10- -6	0.00	0.00	0.01	0.00	0.00	0.08	0.42	0.44	0.05	0.00	1.00	1.25
-5- -1	0.00	0.00	0.00	0.01	0.10	0.15	1.00	0.69	0.27	0.01	2.22	3.47
0-4	0.01	0.01	0.00	0.01	0.13	0.20	1.27	1.06	0.38	0.01	3.08	6.54
5-9	0.10	0.04	0.09	0.09	0.31	0.25	1.39	0.96	0.45	0.01	3.69	10.23
10-14	0.11	0.37	0.53	0.29	0.36	0.42	1.44	1.30	0.93	0.03	5.80	16.03
15-19	0.17	0.57	0.70	0.64	0.58	0.59	1.62	1.85	1.82	0.06	8.59	24.62
20-24	0.25	1.79	1.76	0.85	1.40	1.46	2.60	2.19	2.65	0.01	14.97	39.58
25-29	0.19	2.43	2.70	0.98	2.00	2.32	3.08	2.29	2.48	0.16	18.62	58.21
30-34	0.18	2.59	2.56	1.75	2.54	3.95	4.03	2.37	3.47	0.36	23.79	82.00
35-39	0.05	0.87	0.72	1.00	1.65	1.77	2.02	0.70	0.73	0.06	9.57	91.57
40-44	0.03	0.15	0.32	0.52	1.11	1.21	0.84	0.29	0.16	0.02	4.65	96.22
45-49	0.00	0.07	0.04	0.34	0.66	0.42	0.26	0.11	0.02	0.01	1.93	98.14
50-54	0.00	0.07	0.02	0.19	0.25	0.16	0.05	0.04	0.03	0.00	0.80	98.94
55-59	0.01	0.00	0.00	0.05	0.14	0.22	0.01	0.01	0.01	0.00	0.44	99.38
60-64	0.00	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.00	0.00	0.09	99.47
65-69	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02	99.49
70-74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.49
MISSING	0.04	0.08	0.07	0.02	0.02	0.01	0.09	0.06	0.13	0.00	0.51	100.00
TOTAL CUMUL	1.12	9.04	9.51	6.75	11.27	13.35	20.20	14.43	13.58	0.74	100.00	
TOTAL	1.12	10.16	19.67	26.42	37.70	51.05	71.26	85.68	99.26	100.00		

NUMBER OF OBSERVATIONS = 10176

Table 226. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

MARCH 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.04	0.00	0.00	0.05	0.05
0-4	0.00	0.00	0.00	0.00	0.00	0.01	0.07	0.06	0.04	0.00	0.00	0.19	0.24
5-9	0.03	0.02	0.10	0.00	0.00	0.04	0.37	0.54	0.13	0.00	0.00	0.39	0.63
10-14	0.06	0.10	0.13	0.00	0.04	0.16	0.84	0.70	0.37	0.00	0.00	1.23	1.85
15-19	0.14	0.22	0.41	0.07	0.15	0.46	1.49	1.34	0.90	0.03	0.00	2.40	4.26
20-24	0.15	0.70	1.09	0.26	0.36	0.71	2.54	1.92	1.83	0.01	0.00	5.20	9.45
25-29	0.23	2.35	2.11	0.87	0.86	1.09	3.18	2.40	2.67	0.02	0.00	15.78	19.01
30-34	0.27	4.82	3.89	1.25	1.53	1.89	4.55	3.02	4.57	0.04	0.00	25.83	34.79
35-39	0.10	2.77	2.35	1.12	1.36	1.57	2.72	1.65	1.99	0.13	0.00	15.75	60.63
40-44	0.05	1.51	1.30	1.02	1.16	1.28	1.27	0.63	0.56	0.13	0.00	8.92	76.38
45-49	0.04	0.62	0.69	0.84	1.58	1.09	0.77	0.39	0.14	0.05	0.00	6.21	85.30
50-54	0.03	0.25	0.42	0.56	1.33	0.82	0.53	0.12	0.04	0.03	0.00	4.12	91.51
55-59	0.01	0.03	0.10	0.16	0.98	0.47	0.26	0.04	0.04	0.00	0.00	2.08	95.63
60-64	0.00	0.00	0.03	0.06	0.40	0.34	0.05	0.04	0.00	0.00	0.00	0.92	97.71
65-69	0.00	0.00	0.01	0.01	0.30	0.18	0.02	0.00	0.00	0.00	0.00	0.52	98.63
70-74	0.00	0.00	0.02	0.00	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.22	99.15
75-79	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.04	99.37
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.41
MISSING	0.04	0.03	0.01	0.00	0.00	0.01	0.35	0.11	0.04	0.01	0.00	0.59	99.41
TOTAL	1.15	13.41	12.65	6.23	10.13	10.32	19.15	13.13	13.40	0.44	0.00	100.00	100.00
CUMUL TOTAL	1.15	14.55	27.29	33.43	43.57	53.89	73.04	86.16	99.56	100.00	0.00	100.00	100.00

NUMBER OF OBSERVATIONS = 11160

APRIL 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01
15-19	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.00	0.06	0.00	0.00	0.19	0.20
20-24	0.02	0.03	0.08	0.09	0.03	0.06	0.19	0.26	0.15	0.01	0.00	0.91	1.11
25-29	0.13	0.31	0.20	0.19	0.15	0.17	0.94	0.82	0.68	0.01	0.00	3.59	4.70
30-34	0.12	1.86	1.19	0.31	0.18	0.59	2.33	2.22	2.18	0.07	0.00	11.05	15.75
35-39	0.21	2.56	1.90	0.52	0.40	1.03	2.52	2.27	2.20	0.25	0.00	13.85	29.60
40-44	0.17	3.32	2.80	0.97	0.95	1.35	2.60	2.05	1.41	0.22	0.00	15.84	45.44
45-49	0.11	2.10	2.74	1.07	1.56	1.79	2.17	1.31	1.15	0.30	0.00	14.30	59.74
50-54	0.14	1.58	1.97	1.24	1.54	1.63	1.69	1.21	0.79	0.13	0.00	11.92	71.66
55-59	0.06	0.77	0.99	1.36	1.71	2.13	1.19	0.67	0.43	0.10	0.00	9.40	81.06
60-64	0.04	0.44	0.53	0.81	1.55	1.99	0.90	0.34	0.12	0.13	0.00	6.84	87.90
65-69	0.02	0.24	0.20	0.42	1.22	1.71	0.73	0.25	0.05	0.11	0.00	4.95	92.85
70-74	0.01	0.06	0.05	0.31	0.71	1.18	0.34	0.19	0.06	0.06	0.00	2.95	95.81
75-79	0.00	0.12	0.04	0.05	0.35	0.70	0.08	0.08	0.06	0.05	0.00	1.53	97.33
80-84	0.00	0.01	0.01	0.00	0.13	0.37	0.00	0.00	0.01	0.00	0.00	0.53	97.86
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.86
MISSING	0.04	0.12	0.03	0.04	0.35	0.34	0.43	0.30	0.41	0.09	0.00	2.14	100.00
TOTAL	1.06	13.52	12.72	7.38	10.83	15.06	16.21	11.96	9.72	1.53	0.00	100.00	100.00
CUMUL TOTAL	1.06	14.57	27.30	34.68	45.51	60.57	76.79	88.75	98.47	100.00	0.00	100.00	100.00

NUMBER OF OBSERVATIONS = 10800

Table 227. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

MAY 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.02	0.00	0.04	0.04	0.04
30-34	0.00	0.11	0.01	0.00	0.03	0.04	0.33	0.14	0.38	0.00	1.03	1.08	1.08
35-39	0.09	1.14	0.20	0.08	0.08	0.11	0.83	0.51	1.70	0.01	4.75	5.82	5.82
40-44	0.29	2.29	0.79	0.29	0.13	0.40	0.82	0.50	1.37	0.00	6.88	12.71	12.71
45-49	0.24	4.01	2.10	0.75	0.41	0.89	1.34	0.96	2.08	0.04	12.81	25.52	25.52
50-54	0.33	3.90	2.58	1.28	0.82	1.54	1.94	1.27	1.69	0.11	15.47	40.99	40.99
55-59	0.14	2.99	2.54	1.23	1.65	1.80	1.80	1.06	1.22	0.26	14.70	55.69	55.69
60-64	0.20	1.39	1.66	1.58	2.36	2.12	1.84	1.13	0.73	0.35	13.35	69.04	69.04
65-69	0.07	0.83	0.94	1.54	3.15	2.76	1.94	0.78	0.45	0.28	12.75	81.79	81.79
70-74	0.04	0.32	0.45	0.82	2.32	2.58	1.49	0.47	0.17	0.26	8.92	90.71	90.71
75-79	0.00	0.07	0.10	0.40	1.87	2.03	0.73	0.29	0.08	0.04	5.62	96.33	96.33
80-84	0.00	0.03	0.08	0.16	0.70	1.34	0.46	0.08	0.04	0.01	2.89	99.22	99.22
85-89	0.00	0.00	0.00	0.01	0.12	0.49	0.13	0.02	0.01	0.00	0.78	100.00	100.00
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL	1.41	17.08	11.44	8.14	13.65	16.11	13.68	7.20	9.94	1.35	100.00		
CUMUL TOTAL	1.41	18.49	29.93	38.06	51.71	67.82	81.51	88.71	98.65	100.00			

NUMBER OF OBSERVATIONS = 11160

JUNE 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.07	0.00	0.12	0.12	0.12
40-44	0.01	0.22	0.08	0.02	0.01	0.07	0.04	0.06	0.25	0.00	0.77	0.89	0.89
45-49	0.19	0.97	0.20	0.10	0.04	0.14	0.27	0.28	0.89	0.13	3.21	4.10	4.10
50-54	0.34	1.98	0.97	0.43	0.17	0.51	0.88	0.63	1.43	0.53	7.86	11.96	11.96
55-59	0.50	3.05	1.71	0.83	0.54	0.70	1.01	0.90	1.36	0.52	11.12	23.08	23.08
60-64	0.41	3.23	2.34	1.46	1.69	1.72	1.23	1.49	0.81	0.81	16.02	39.10	39.10
65-69	0.52	2.18	2.08	1.60	3.07	3.09	2.08	1.20	1.16	1.15	18.14	57.24	57.24
70-74	0.33	1.61	1.91	1.42	3.20	3.17	2.09	1.41	0.94	0.85	16.94	74.18	74.18
75-79	0.06	0.66	0.78	0.94	2.52	3.32	1.52	1.19	0.35	0.87	12.22	86.40	86.40
80-84	0.03	0.19	0.39	0.51	1.76	2.44	1.31	0.69	0.18	0.56	8.03	94.43	94.43
85-89	0.00	0.06	0.14	0.26	1.12	1.88	0.67	0.21	0.05	0.13	4.52	98.94	98.94
90-94	0.01	0.01	0.01	0.03	0.31	0.36	0.09	0.06	0.00	0.01	0.89	99.83	99.83
95-99	0.00	0.00	0.00	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.05	99.88	99.88
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88	99.88
MISSING	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	0.00	0.12	100.00	100.00
TOTAL	2.41	14.19	10.62	7.60	14.56	17.45	11.58	7.86	8.17	5.56	100.00		
CUMUL TOTAL	2.41	16.60	27.22	34.82	49.38	66.83	78.42	86.28	94.44	100.00			

NUMBER OF OBSERVATIONS = 10800

Table 228. Joint Percentage Frequency Distribution of 19-foot
Wind Direction and 5.5-foot Temperature (°F)

JULY 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15--11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10--6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5--1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50-54	0.19	0.08	0.03	0.04	0.04	0.05	0.01	0.05	0.06	0.00	0.14	0.14	0.14
55-59	0.57	0.95	0.56	0.27	0.25	0.58	0.99	0.70	1.45	0.02	6.34	8.13	8.13
60-64	1.02	3.09	1.85	1.00	1.01	1.35	1.62	1.14	2.16	0.13	14.37	22.50	22.50
65-69	0.92	4.24	2.59	1.93	2.95	3.26	2.72	1.57	2.14	0.13	22.45	44.95	44.95
70-74	0.57	3.09	2.36	1.69	3.06	4.28	2.36	1.70	1.62	0.33	21.08	66.02	66.02
75-79	0.29	1.39	1.75	1.20	2.80	3.59	2.63	1.48	1.05	0.40	16.58	82.60	82.60
80-84	0.12	0.82	1.08	0.82	1.98	2.78	1.93	0.98	0.49	0.29	11.27	93.87	93.87
85-89	0.00	0.08	0.39	0.41	0.94	2.14	0.74	0.27	0.09	0.06	5.13	99.01	99.01
90-94	0.00	0.00	0.08	0.16	0.11	0.34	0.09	0.04	0.00	0.04	0.85	99.86	99.86
95-99	0.00	0.00	0.00	0.00	0.00	0.11	0.03	0.00	0.00	0.00	0.13	99.99	99.99
>99	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	100.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CUMUL	3.70	13.74	10.68	7.52	13.14	18.50	13.39	8.28	9.65	1.41	100.00	100.00	100.00
TOTAL	3.70	17.44	28.12	35.64	48.77	67.28	80.66	88.94	98.59	100.00	100.00	100.00	100.00

NUMBER OF OBSERVATIONS = 11160

AUGUST 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15--11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10--6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5--1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35-39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40-44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45-49	0.05	0.02	0.04	0.01	0.02	0.07	0.04	0.11	0.09	0.00	0.46	0.48	0.48
50-54	0.34	0.29	0.19	0.12	0.12	0.24	0.29	0.50	0.82	0.01	2.91	3.40	3.40
55-59	0.58	0.97	0.81	0.70	0.52	0.74	0.99	1.01	2.47	0.00	8.80	12.20	12.20
60-64	0.93	2.90	1.76	1.08	1.32	1.73	1.39	1.16	3.23	0.13	15.62	27.81	27.81
65-69	1.06	3.61	2.90	1.97	3.16	3.36	2.47	1.59	2.51	0.17	22.83	50.65	50.65
70-74	0.79	2.28	1.76	1.66	3.53	4.50	2.29	1.69	1.59	0.40	20.48	71.13	71.13
75-79	0.26	1.48	1.31	1.38	2.63	3.75	2.36	1.11	0.84	0.28	15.40	86.53	86.53
80-84	0.09	0.40	0.39	0.57	1.62	2.68	1.35	0.71	0.37	0.21	8.40	94.93	94.93
85-89	0.02	0.06	0.08	0.22	0.65	1.69	0.77	0.25	0.06	0.11	3.92	98.84	98.84
90-94	0.00	0.02	0.03	0.06	0.07	0.70	0.22	0.01	0.02	0.00	1.13	99.97	99.97
95-99	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	100.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CUMUL	4.12	12.03	9.27	7.76	13.65	19.52	12.20	8.15	12.03	1.30	100.00	100.00	100.00
TOTAL	4.12	16.15	25.41	33.17	46.82	66.34	78.53	86.68	98.70	100.00	100.00	100.00	100.00

NUMBER OF OBSERVATIONS = 11160

Table 229. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

SEPTEMBER 1950-1964													
TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.00	0.06	0.06	0.06
35-39	0.04	0.06	0.08	0.07	0.10	0.06	0.18	0.20	0.17	0.00	0.95	0.95	1.02
40-44	0.12	0.10	0.22	0.26	0.09	0.41	0.68	0.75	0.51	0.01	3.15	4.17	4.17
45-49	0.44	0.39	0.46	0.58	0.33	0.78	1.10	0.94	1.48	0.10	6.61	10.78	10.78
50-54	0.68	1.23	1.31	1.28	0.76	1.27	1.47	1.69	2.69	0.06	12.44	23.22	23.22
55-59	0.62	2.27	1.78	1.18	1.63	1.46	1.48	2.06	2.76	0.10	15.33	38.56	38.56
60-64	0.47	3.35	2.41	1.59	2.72	1.46	1.48	2.06	2.76	0.10	15.33	38.56	38.56
65-69	0.31	2.01	1.93	1.61	3.31	2.46	2.10	1.86	2.15	0.22	19.34	57.90	57.90
70-74	0.15	1.13	1.07	1.09	3.36	3.02	1.38	0.88	0.47	0.16	12.71	86.99	86.99
75-79	0.07	0.30	0.41	0.40	1.82	2.07	1.16	0.35	0.09	0.08	6.76	93.75	93.75
80-84	0.04	0.04	0.09	0.22	1.06	1.32	0.51	0.06	0.04	0.02	3.40	97.15	97.15
85-89	0.00	0.02	0.03	0.08	0.50	1.05	0.31	0.04	0.00	0.05	2.06	99.21	99.21
90-94	0.00	0.01	0.00	0.00	0.19	0.36	0.11	0.04	0.00	0.01	0.72	99.94	99.94
95-99	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.00	0.00	0.00	0.06	100.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL	2.93	10.90	9.80	8.37	15.88	17.25	12.24	10.07	11.59	0.97	100.00		
CUMUL TOTAL	2.93	13.82	23.62	31.99	47.87	65.12	77.36	87.44	99.03	100.00			

NUMBER OF OBSERVATIONS = 10800

OCTOBER 1950-1964													
TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5-9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-19	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-24	0.00	0.01	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.10	0.10	0.10
25-29	0.05	0.04	0.00	0.03	0.02	0.16	0.52	0.39	0.22	0.00	1.43	1.43	1.48
30-34	0.11	0.10	0.21	0.19	0.26	0.49	1.08	1.07	0.74	0.01	4.26	6.04	6.04
35-39	0.27	0.30	0.29	0.44	0.38	1.28	1.34	2.02	1.53	0.00	7.83	13.87	13.87
40-44	0.40	1.10	0.82	0.91	0.86	1.51	1.98	2.36	2.62	0.03	12.59	26.46	26.46
45-49	0.40	1.64	1.45	1.16	1.70	2.15	1.77	2.16	3.12	0.08	15.65	42.11	42.11
50-54	0.28	2.18	1.41	1.51	2.64	2.64	1.53	1.47	1.97	0.20	15.83	57.94	57.94
55-59	0.29	1.45	1.44	1.37	2.77	2.59	1.62	1.10	1.14	0.12	13.89	71.83	71.83
60-64	0.17	1.05	0.71	1.08	2.58	2.93	1.17	0.62	0.67	0.08	11.07	82.89	82.89
65-69	0.12	0.64	0.52	0.91	2.34	2.56	0.79	0.38	0.35	0.08	8.67	91.57	91.57
70-74	0.06	0.07	0.19	0.43	1.45	1.86	0.35	0.13	0.03	0.04	4.61	96.17	96.17
75-79	0.02	0.02	0.02	0.12	0.87	1.06	0.22	0.15	0.03	0.03	2.53	98.70	98.70
80-84	0.00	0.00	0.00	0.04	0.44	0.56	0.05	0.01	0.00	0.01	1.11	99.81	99.81
85-89	0.00	0.00	0.00	0.01	0.03	0.08	0.00	0.00	0.00	0.00	0.12	99.93	99.93
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93	99.93
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93	99.93
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.93	99.93
MISSING	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.07	100.00	100.00
TOTAL	2.18	8.58	7.05	8.20	16.41	19.90	12.66	11.90	12.46	0.66	100.00		
CUMUL TOTAL	2.18	10.76	17.81	26.01	42.42	62.32	74.98	86.88	99.34	100.00			

NUMBER OF OBSERVATIONS = 11160

Table 230. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

NOVEMBER 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-15- -11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-10- -6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-5- -1	0.00	0.00	0.00	0.00	0.01	0.03	0.06	0.06	0.03	0.00	0.00	0.00	0.00
0-4	0.01	0.01	0.00	0.00	0.00	0.02	0.32	0.19	0.01	0.00	0.00	0.19	0.19
5-9	0.00	0.00	0.00	0.00	0.03	0.07	0.51	0.19	0.03	0.00	0.00	0.83	0.74
10-14	0.00	0.03	0.00	0.01	0.11	0.22	0.63	0.54	0.18	0.00	0.00	1.71	1.57
15-19	0.03	0.04	0.06	0.06	0.34	0.58	1.44	1.14	0.32	0.01	0.00	4.02	3.29
20-24	0.22	0.11	0.17	0.22	0.40	1.15	2.73	1.46	0.59	0.02	0.00	7.07	7.31
25-29	0.30	0.23	0.46	0.46	1.34	2.13	3.46	2.48	1.75	0.03	0.00	12.65	14.38
30-34	0.23	0.55	0.52	1.00	2.74	2.66	4.04	2.64	1.81	0.06	0.00	16.23	27.03
35-39	0.10	0.72	0.71	0.81	1.97	2.33	2.88	2.70	2.13	0.26	0.00	15.13	43.26
40-44	0.05	0.85	0.69	0.85	2.38	3.31	2.39	1.07	1.74	0.19	0.00	13.53	58.39
45-49	0.02	1.01	0.74	0.72	3.06	2.27	1.39	0.80	0.89	0.10	0.00	10.99	71.92
50-54	0.09	0.56	0.68	0.79	2.12	1.80	0.78	0.37	0.28	0.04	0.00	7.49	82.91
55-59	0.01	0.22	0.25	0.53	2.03	1.38	0.45	0.21	0.07	0.04	0.00	5.19	90.40
60-64	0.01	0.07	0.05	0.22	1.40	0.78	0.17	0.02	0.01	0.01	0.00	2.73	95.59
65-69	0.00	0.04	0.05	0.06	0.57	0.58	0.02	0.01	0.00	0.00	0.00	1.33	98.32
70-74	0.00	0.01	0.00	0.00	0.21	0.06	0.01	0.00	0.00	0.00	0.00	0.30	99.66
75-79	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	99.95
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL CUMUL	1.06	4.44	4.37	5.75	18.71	19.92	21.28	13.88	9.83	0.75	100.00		
TOTAL	1.06	5.51	9.88	15.63	34.34	54.26	75.54	89.42	99.25	100.00			

NUMBER OF OBSERVATIONS = 10800

DECEMBER 1950-1964

TEMPERATURE (°F)	WIND DIRECTION (8 POINTS)										TOTAL	CUMUL TOTAL	
	CALM	NE	E	SE	S	SW	W	NW	N MISSING				
<-16	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.00	0.00	0.04	0.04
-15- -11	0.00	0.00	0.00	0.00	0.02	0.10	0.30	0.07	0.00	0.00	0.00	0.48	0.53
-10- -6	0.00	0.01	0.00	0.00	0.03	0.14	0.63	0.25	0.01	0.00	0.00	1.07	1.59
-5- -1	0.00	0.00	0.01	0.03	0.13	0.47	1.62	0.65	0.09	0.00	0.00	2.99	4.59
0-4	0.02	0.02	0.02	0.09	0.11	0.60	1.55	1.25	0.22	0.00	0.00	3.88	8.47
5-9	0.06	0.06	0.13	0.17	0.34	0.80	1.67	1.25	0.48	0.00	0.00	4.96	13.43
10-14	0.13	0.20	0.20	0.24	0.53	0.93	1.66	1.61	0.95	0.01	0.00	6.46	19.89
15-19	0.32	0.36	0.54	0.93	1.08	1.51	2.22	1.94	1.09	0.03	0.00	10.02	29.91
20-24	0.25	0.51	0.87	0.99	2.00	2.63	3.41	2.39	1.48	0.11	0.00	14.64	44.55
25-29	0.27	1.30	1.39	1.42	1.67	3.13	3.75	2.39	2.51	0.30	0.00	18.13	62.68
30-34	0.25	1.07	1.70	1.31	2.82	3.92	3.88	1.94	1.81	0.16	0.00	18.87	81.55
35-39	0.09	0.69	0.67	0.50	1.82	2.21	1.41	0.36	0.76	0.04	0.00	8.56	90.11
40-44	0.06	0.31	0.30	0.47	1.19	1.45	0.48	0.13	0.11	0.00	0.00	4.51	94.61
45-49	0.01	0.05	0.05	0.22	0.96	1.09	0.36	0.04	0.04	0.00	0.00	2.83	97.45
50-54	0.00	0.00	0.00	0.17	0.94	0.29	0.06	0.01	0.01	0.01	0.00	1.49	98.93
55-59	0.00	0.00	0.00	0.13	0.41	0.16	0.02	0.00	0.00	0.00	0.00	0.72	99.65
60-64	0.00	0.00	0.00	0.02	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.09	99.74
65-69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
70-74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
75-79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
80-84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
85-89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
90-94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
95-99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.74
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.03	0.00	0.00	0.26	100.00
TOTAL CUMUL	1.47	4.58	5.87	6.68	14.09	19.49	23.09	14.49	9.60	0.65	100.00		
TOTAL	1.47	6.05	11.92	18.59	32.68	52.17	75.26	89.75	99.35	100.00			

NUMBER OF OBSERVATIONS = 11160

Table 231. Joint Percentage Frequency Distribution of 19-foot Wind Direction and 5.5-foot Temperature (°F)

TEMPERATURE (°F)	ALL YEARS 1950-1964										TOTAL	CUMUL TOTAL
	WIND DIRECTION (8 POINTS)											
	CALM	NE	E	SE	S	SW	W	NW	N MISSING			
<-16	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.03	0.03
-15- -11	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.02	0.00	0.00	0.14	0.17
-10- -6	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.08	0.01	0.00	0.32	0.48
-5- -1	0.00	0.00	0.00	0.00	0.03	0.11	0.35	0.19	0.08	0.01	0.77	1.25
0-4	0.01	0.01	0.00	0.02	0.06	0.13	0.46	0.34	0.15	0.00	1.18	2.44
5-9	0.03	0.02	0.03	0.04	0.08	0.17	0.55	0.36	0.17	0.01	1.47	3.90
10-14	0.04	0.07	0.08	0.07	0.15	0.27	0.55	0.49	0.30	0.01	2.04	5.94
15-19	0.07	0.16	0.20	0.20	0.29	0.39	0.77	0.68	0.46	0.01	3.23	9.17
20-24	0.09	0.36	0.41	0.28	0.46	0.66	1.18	0.86	0.73	0.02	5.04	14.21
25-29	0.12	0.68	0.68	0.45	0.68	0.96	1.49	1.08	1.08	0.05	7.28	21.49
30-34	0.13	1.11	0.90	0.61	1.07	1.37	1.89	1.21	1.43	0.09	9.81	31.30
35-39	0.08	0.81	0.61	0.44	0.81	1.04	1.22	0.89	0.98	0.07	6.95	38.25
40-44	0.10	0.84	0.63	0.47	0.72	0.97	0.94	0.66	0.74	0.05	6.13	44.38
45-49	0.13	0.91	0.71	0.50	0.89	0.93	0.80	0.60	0.83	0.07	6.36	50.74
50-54	0.20	1.01	0.80	0.64	0.92	0.94	0.80	0.64	0.86	0.09	6.91	57.65
55-59	0.23	1.06	0.85	0.65	1.06	1.03	0.83	0.65	0.92	0.10	7.37	65.02
60-64	0.27	1.30	0.95	0.75	1.27	1.30	0.91	0.63	0.89	0.15	8.41	73.43
65-69	0.25	1.16	0.94	0.84	1.68	1.72	1.05	0.58	0.66	0.17	9.06	82.49
70-74	0.17	0.72	0.65	0.62	1.50	1.74	0.86	0.54	0.41	0.17	7.40	89.88
75-79	0.06	0.34	0.37	0.38	1.08	1.39	0.73	0.39	0.21	0.15	5.10	94.98
80-84	0.02	0.12	0.17	0.20	0.64	0.96	0.47	0.21	0.09	0.09	2.99	97.97
85-89	0.00	0.02	0.05	0.08	0.28	0.61	0.22	0.07	0.02	0.03	1.38	99.36
90-94	0.00	0.00	0.01	0.02	0.06	0.15	0.04	0.01	0.00	0.00	0.30	99.66
95-99	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02	99.68
>99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.68
MISSING	0.01	0.02	0.01	0.01	0.04	0.03	0.09	0.05	0.05	0.01	0.32	100.00
TOTAL	2.02	10.72	9.07	7.26	13.80	16.96	16.48	11.24	11.09	1.35	100.00	
CUMUL TOTAL	2.02	12.74	21.81	29.07	42.87	59.83	76.31	87.55	98.65	100.00		

NUMBER OF OBSERVATIONS = 131496

Table 232. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and the 144- minus 5.5-foot Temperature Difference (°F)

JANUARY 1952-1964													
TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.01	0.18	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29
-2.9--2.0	0.14	1.94	1.20	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.00	3.37	3.66
-1.9--1.0	0.66	6.35	5.98	0.89	0.16	0.01	0.03	0.03	0.01	0.01	0.01	14.12	17.78
-0.9--0.0	0.54	8.85	21.67	7.46	1.79	0.42	0.50	0.27	0.20	0.01	0.01	42.65	60.43
0.1-1.0	0.16	0.79	4.05	4.11	2.15	0.85	0.50	0.39	0.33	0.22	0.22	13.62	74.05
1.1-2.0	0.03	0.12	0.53	1.43	1.78	1.04	0.90	0.65	0.40	0.17	0.17	7.05	81.10
2.1-3.0	0.03	0.02	0.09	0.19	0.50	0.56	0.68	0.51	0.33	0.06	0.06	2.97	84.07
3.1-4.0	0.01	0.03	0.08	0.18	0.39	0.58	0.48	0.57	0.35	0.18	0.18	2.84	86.91
4.1-6.0	0.05	0.05	0.12	0.06	0.24	0.23	0.52	0.52	0.57	0.23	0.23	2.58	89.50
6.1-8.0	0.01	0.01	0.04	0.01	0.02	0.03	0.13	0.19	0.28	0.12	0.12	0.85	90.34
>8.0	0.04	0.04	0.03	0.02	0.02	0.03	0.07	0.07	0.13	0.09	0.09	0.56	90.90
MISSING	0.17	1.75	3.64	1.44	0.67	0.22	0.38	0.28	0.33	0.23	0.23	9.10	100.00
TOTAL CUMUL TOTAL	1.85	20.13	37.53	15.84	7.74	3.98	4.26	3.47	2.94	2.25	100.00		
NUMBER OF OBSERVATIONS = 9672													

FEBRUARY 1952-1964													
TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.06	0.60	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84
-2.9--2.0	0.32	3.67	1.36	0.07	0.03	0.00	0.02	0.01	0.00	0.01	0.01	5.67	6.51
-1.9--1.0	0.59	6.85	4.69	0.37	0.07	0.00	0.01	0.01	0.02	0.02	0.02	13.07	19.58
-0.9--0.0	0.97	8.94	22.63	6.70	1.51	0.35	0.19	0.12	0.15	0.15	0.15	43.17	62.75
0.1-1.0	0.20	0.43	3.36	4.79	2.12	0.91	0.71	0.33	0.27	0.51	0.51	13.63	76.38
1.1-2.0	0.05	0.11	0.28	1.35	1.79	1.20	1.05	0.65	0.43	0.42	0.42	7.33	83.71
2.1-3.0	0.02	0.02	0.01	0.20	0.78	0.78	1.01	0.55	0.27	0.25	0.25	3.91	87.61
3.1-4.0	0.03	0.02	0.06	0.10	0.43	0.46	0.67	0.50	0.37	0.15	0.15	2.80	90.41
4.1-6.0	0.09	0.05	0.07	0.17	0.31	0.41	0.44	0.42	0.36	0.43	0.43	2.74	93.15
6.1-8.0	0.03	0.03	0.03	0.08	0.07	0.15	0.06	0.18	0.20	0.16	0.16	1.00	94.15
>8.0	0.01	0.02	0.06	0.00	0.08	0.09	0.07	0.14	0.12	0.14	0.14	0.72	94.87
MISSING	0.05	0.96	2.24	0.88	0.35	0.18	0.14	0.07	0.08	0.18	0.18	5.13	100.00
TOTAL CUMUL TOTAL	2.42	21.72	34.96	14.72	7.53	4.53	4.37	2.98	2.29	4.48	100.00		
NUMBER OF OBSERVATIONS = 8832													

MARCH 1952-1964													
TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.25	1.97	0.55	0.08	0.01	0.00	0.01	0.00	0.00	0.00	0.00	2.87	2.87
-2.9--2.0	0.49	5.46	2.41	0.09	0.04	0.01	0.00	0.00	0.00	0.02	0.00	8.52	11.39
-1.9--1.0	0.43	6.35	5.43	0.53	0.13	0.02	0.01	0.01	0.00	0.06	0.06	12.98	24.37
-0.9--0.0	0.17	6.54	18.18	5.39	0.93	0.29	0.28	0.12	0.09	0.20	0.20	32.19	56.56
0.1-1.0	0.02	0.88	3.86	4.09	1.81	0.55	0.54	0.25	0.24	0.17	0.17	12.40	68.95
1.1-2.0	0.04	0.29	0.74	1.74	2.05	1.02	0.80	0.48	0.41	0.26	0.26	7.83	76.78
2.1-3.0	0.05	0.05	0.11	0.58	0.88	0.93	0.97	0.65	0.49	0.26	0.26	4.97	81.75
3.1-4.0	0.05	0.00	0.09	0.23	0.47	0.66	0.65	0.59	0.30	0.18	0.18	3.22	84.97
4.1-6.0	0.05	0.04	0.07	0.20	0.43	0.52	0.54	0.62	0.47	0.21	0.21	3.14	88.11
6.1-8.0	0.01	0.03	0.06	0.08	0.14	0.22	0.10	0.18	0.19	0.16	0.16	1.17	89.28
>8.0	0.02	0.02	0.02	0.02	0.07	0.04	0.09	0.16	0.18	0.07	0.07	0.69	89.97
MISSING	0.21	2.47	4.30	1.63	0.41	0.18	0.26	0.20	0.19	0.19	0.19	10.03	100.00
TOTAL CUMUL TOTAL	1.79	24.11	35.83	14.66	7.38	4.44	4.25	3.25	2.56	1.74	100.00		
NUMBER OF OBSERVATIONS = 9672													

APRIL 1952-1964													
TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.13	4.74	1.45	0.14	0.06	0.01	0.01	0.01	0.01	0.00	0.00	6.57	6.57
-2.9--2.0	0.50	6.11	2.91	0.22	0.05	0.03	0.03	0.01	0.01	0.00	0.00	9.88	16.45
-1.9--1.0	0.54	6.36	4.50	0.57	0.04	0.00	0.00	0.02	0.01	0.06	0.06	12.10	28.56
-0.9--0.0	0.49	5.42	12.90	3.10	0.61	0.19	0.12	0.06	0.04	0.46	0.46	23.39	51.94
0.1-1.0	0.06	0.78	4.26	3.42	1.12	0.43	0.28	0.18	0.10	0.07	0.07	10.71	62.65
1.1-2.0	0.00	0.11	1.06	2.22	1.47	0.75	0.61	0.32	0.30	0.12	0.12	6.96	69.60
2.1-3.0	0.00	0.09	0.21	0.75	0.85	0.74	0.64	0.40	0.28	0.12	0.12	4.07	73.68
3.1-4.0	0.01	0.02	0.05	0.33	0.66	0.74	0.85	0.49	0.28	0.18	0.18	3.62	77.30
4.1-6.0	0.05	0.02	0.06	0.20	0.53	0.69	0.80	0.90	0.47	0.16	0.16	3.90	81.20
6.1-8.0	0.03	0.03	0.09	0.16	0.19	0.26	0.43	0.35	0.37	0.18	0.18	2.09	83.29
>8.0	0.10	0.07	0.07	0.12	0.19	0.19	0.31	0.20	0.25	0.21	0.21	1.72	85.01
MISSING	0.22	3.53	5.82	2.47	0.88	0.63	0.58	0.40	0.35	0.12	0.12	14.99	100.00
TOTAL CUMUL TOTAL	2.15	27.28	33.39	13.70	6.68	4.66	4.66	3.34	2.47	1.69	100.00		
NUMBER OF OBSERVATIONS = 9360													

Table 233. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and the 144- minus 5.5-foot Temperature Difference (°F)

MAY 1952-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.17	2.15	0.81	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.06	3.25	3.25
-2.9--2.0	0.41	5.98	4.03	0.25	0.07	0.02	0.01	0.01	0.02	0.02	0.07	10.88	14.12
-1.9--1.0	0.42	6.70	5.68	0.74	0.14	0.05	0.02	0.01	0.03	0.03	0.16	13.96	28.08
-0.9-0.0	0.22	3.98	10.02	3.04	0.92	0.25	0.20	0.16	0.12	0.32	0.32	19.22	47.30
0.1-1.0	0.04	0.56	4.62	3.49	1.13	0.43	0.29	0.20	0.12	0.21	0.21	11.09	58.40
1.1-2.0	0.02	0.08	1.35	2.33	1.87	0.95	0.58	0.36	0.36	0.13	0.13	8.04	66.44
2.1-3.0	0.01	0.01	0.21	0.69	1.13	0.74	0.67	0.47	0.41	0.12	0.12	4.47	70.91
3.1-4.0	0.00	0.04	0.06	0.30	0.60	0.61	0.75	0.57	0.63	0.16	0.16	3.72	74.63
4.1-6.0	0.04	0.05	0.05	0.11	0.65	0.61	0.95	0.91	0.79	0.32	0.32	4.49	79.11
6.1-8.0	0.03	0.03	0.01	0.07	0.13	0.29	0.56	0.39	0.48	0.28	0.28	2.27	81.39
>8.0	0.09	0.02	0.06	0.07	0.11	0.16	0.21	0.31	0.36	0.43	0.43	1.84	83.23
MISSING	0.26	2.95	6.23	2.94	1.38	0.81	0.62	0.62	0.62	0.36	0.61	16.77	100.00
TOTAL CUMUL TOTAL	1.72	22.56	33.14	14.09	8.15	4.92	4.86	4.00	3.69	2.87	100.00		

NUMBER OF OBSERVATIONS = 9672

JUNE 1952-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.10	2.20	1.26	0.16	0.06	0.03	0.01	0.02	0.03	0.02	0.02	3.90	3.90
-2.9--2.0	0.79	5.85	4.72	0.85	0.25	0.07	0.07	0.02	0.04	0.06	0.06	12.75	16.65
-1.9--1.0	0.60	6.12	6.05	1.04	0.41	0.07	0.15	0.06	0.04	0.11	0.11	14.65	31.29
-0.9-0.0	0.22	3.64	7.69	3.44	1.20	0.34	0.19	0.09	0.09	0.24	0.24	17.14	48.43
0.1-1.0	0.04	0.56	2.98	3.40	1.54	0.62	0.54	0.40	0.21	0.17	0.17	10.46	58.89
1.1-2.0	0.04	0.15	0.97	2.30	2.24	1.03	0.95	0.54	0.41	0.19	0.19	8.82	67.71
2.1-3.0	0.00	0.05	0.22	0.90	1.10	1.10	0.95	0.85	0.56	0.20	0.20	5.94	73.65
3.1-4.0	0.02	0.03	0.06	0.33	0.78	0.80	1.13	1.09	0.98	0.37	0.37	5.61	79.26
4.1-6.0	0.02	0.03	0.10	0.12	0.66	0.61	1.30	1.50	1.41	0.43	0.43	6.18	85.44
6.1-8.0	0.02	0.04	0.03	0.10	0.20	0.31	0.61	0.62	0.73	0.60	0.60	3.26	88.70
>8.0	0.09	0.07	0.05	0.13	0.24	0.17	0.44	0.56	0.99	0.83	0.83	3.57	92.26
MISSING	0.17	0.99	2.41	1.61	0.89	0.37	0.53	0.24	0.28	0.24	0.24	7.74	100.00
TOTAL CUMUL TOTAL	2.12	19.75	26.56	14.37	9.56	5.53	6.89	5.98	5.77	3.46	100.00		

NUMBER OF OBSERVATIONS = 9360

JULY 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.30	2.08	1.14	0.10	0.04	0.00	0.01	0.00	0.01	0.01	0.01	3.69	3.69
-2.9--2.0	1.00	6.05	4.00	0.45	0.23	0.01	0.02	0.02	0.03	0.05	0.05	11.86	15.54
-1.9--1.0	0.73	5.69	5.78	0.94	0.36	0.07	0.02	0.05	0.05	0.12	0.12	13.80	29.34
-0.9-0.0	0.31	3.04	6.77	3.46	1.51	0.36	0.34	0.21	0.09	0.27	0.27	16.34	45.68
0.1-1.0	0.03	0.41	2.21	2.89	1.73	0.83	0.65	0.57	0.30	0.17	0.17	9.78	55.46
1.1-2.0	0.04	0.07	0.53	1.44	2.05	1.29	1.15	0.72	0.75	0.34	0.34	8.37	63.83
2.1-3.0	0.02	0.03	0.11	0.31	0.74	0.75	1.12	0.87	0.67	0.19	0.19	4.81	68.64
3.1-4.0	0.02	0.02	0.05	0.15	0.62	0.73	1.17	1.05	1.01	0.42	0.42	5.24	73.89
4.1-6.0	0.02	0.02	0.07	0.18	0.52	0.68	1.20	1.66	1.75	0.81	0.81	6.90	80.79
6.1-8.0	0.06	0.02	0.03	0.09	0.20	0.33	0.64	0.79	0.84	0.82	0.82	3.80	84.59
>8.0	0.09	0.08	0.19	0.10	0.22	0.22	0.28	0.39	0.86	1.06	1.06	3.49	88.08
MISSING	0.26	1.26	2.52	2.56	1.25	0.64	0.67	0.73	0.60	1.42	1.42	11.92	100.00
TOTAL CUMUL TOTAL	2.86	18.77	23.40	12.66	9.47	5.89	7.28	7.06	6.95	5.66	100.00		

NUMBER OF OBSERVATIONS = 10416

AUGUST 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL	
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING			
≤-3.0	0.26	2.35	1.04	0.09	0.03	0.00	0.04	0.01	0.00	0.00	0.00	3.81	3.81
-2.9--2.0	0.65	6.57	3.81	0.32	0.12	0.01	0.03	0.04	0.05	0.06	0.06	11.66	15.47
-1.9--1.0	0.76	5.89	5.66	0.90	0.54	0.03	0.07	0.13	0.04	0.10	0.10	14.12	29.59
-0.9-0.0	0.39	3.29	6.82	3.48	1.40	0.50	0.41	0.21	0.12	0.41	0.41	17.03	46.62
0.1-1.0	0.11	0.47	1.85	3.03	1.73	0.93	0.85	0.54	0.47	0.26	0.26	10.24	56.86
1.1-2.0	0.05	0.11	0.47	1.32	1.69	1.48	1.50	1.18	1.07	0.44	0.44	9.30	66.17
2.1-3.0	0.05	0.05	0.07	0.28	0.91	1.13	1.27	1.09	1.14	0.36	0.36	6.35	72.51
3.1-4.0	0.03	0.03	0.10	0.16	0.60	0.81	1.40	1.40	1.25	0.37	0.37	6.14	78.66
4.1-6.0	0.03	0.09	0.12	0.16	0.47	0.51	1.27	1.85	1.97	1.21	1.21	7.67	86.33
6.1-8.0	0.06	0.05	0.09	0.11	0.31	0.24	0.55	0.67	1.22	0.90	0.90	4.19	90.51
>8.0	0.12	0.11	0.09	0.05	0.26	0.18	0.32	0.39	0.72	1.14	1.14	3.38	93.89
MISSING	0.15	0.89	1.41	0.96	0.75	0.32	0.50	0.48	0.37	0.27	0.27	6.11	100.00
TOTAL CUMUL TOTAL	2.66	19.89	21.51	10.86	8.80	6.13	8.20	8.01	8.41	5.52	100.00		

NUMBER OF OBSERVATIONS = 10416

Table 234. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and the 144- minus 5.5-foot Temperature Difference (°F)

SEPTEMBER 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
≤-3.0	0.23	1.98	1.28	0.08	0.03	0.00	0.00	0.01	0.02	0.00	3.63	3.63
-2.9--2.0	0.51	4.91	3.86	0.30	0.10	0.04	0.06	0.01	0.01	0.02	9.81	13.44
-1.9--1.0	0.52	4.97	6.22	1.00	0.35	0.04	0.08	0.09	0.05	0.07	13.38	26.83
-0.9-0.0	0.14	2.17	7.88	4.06	1.42	0.56	0.35	0.31	0.30	0.27	17.44	44.27
0.1-1.0	0.02	0.24	3.11	3.96	1.74	0.80	0.81	0.56	0.43	0.18	11.84	56.10
1.1-2.0	0.00	0.02	0.45	1.49	1.99	1.17	1.32	0.64	0.66	0.21	7.96	64.06
2.1-3.0	0.00	0.01	0.09	0.37	0.97	0.94	1.28	1.11	0.88	0.16	5.81	69.87
3.1-4.0	0.01	0.01	0.03	0.11	0.65	0.78	1.60	1.40	1.25	0.29	6.13	76.00
4.1-6.0	0.02	0.03	0.02	0.10	0.48	0.73	1.54	2.26	2.04	0.77	8.00	84.00
6.1-8.0	0.04	0.03	0.03	0.05	0.25	0.32	0.73	1.16	1.59	0.76	4.96	88.96
>8.0	0.12	0.11	0.04	0.13	0.21	0.21	0.44	0.60	1.10	1.32	4.27	93.22
MISSING	0.14	0.62	2.22	1.42	0.61	0.35	0.47	0.48	0.38	0.11	6.78	100.00
TOTAL	1.74	15.10	25.22	13.06	8.79	5.94	8.67	8.62	8.71	4.16	100.00	
CUMUL TOTAL	1.74	16.84	42.05	55.11	63.90	69.84	78.51	87.13	95.84	100.00		

NUMBER OF OBSERVATIONS = 10080

OCTOBER 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
≤-3.0	0.10	1.32	1.03	0.06	0.01	0.00	0.00	0.00	0.00	0.00	2.51	2.51
-2.9--2.0	0.27	3.88	3.00	0.24	0.06	0.02	0.00	0.00	0.01	0.01	7.49	9.99
-1.9--1.0	0.48	4.57	5.44	0.69	0.27	0.05	0.02	0.04	0.09	0.10	11.74	21.74
-0.9-0.0	0.22	2.68	10.73	4.74	1.53	0.30	0.17	0.15	0.26	0.28	21.06	42.80
0.1-1.0	0.02	0.25	3.41	4.13	1.91	0.73	0.59	0.34	0.21	0.10	11.67	54.47
1.1-2.0	0.03	0.03	0.66	2.34	2.57	1.34	1.06	0.67	0.44	0.15	9.30	63.78
2.1-3.0	0.04	0.00	0.02	0.52	1.34	1.09	1.02	0.87	0.68	0.17	5.76	69.54
3.1-4.0	0.00	0.01	0.05	0.26	0.67	1.07	1.41	1.15	0.89	0.18	5.69	75.23
4.1-6.0	0.02	0.03	0.06	0.09	0.78	1.05	1.60	1.60	1.29	0.45	6.96	82.19
6.1-8.0	0.05	0.02	0.04	0.08	0.20	0.35	0.67	1.02	1.18	0.58	4.18	86.37
>8.0	0.08	0.07	0.08	0.14	0.22	0.31	0.59	0.93	1.53	0.93	4.87	91.23
MISSING	0.09	0.92	3.71	2.21	0.58	0.25	0.20	0.28	0.34	0.20	8.77	100.00
TOTAL	1.38	13.77	28.23	15.50	10.14	6.55	7.33	7.06	6.91	3.15	100.00	
CUMUL TOTAL	1.38	15.15	43.38	58.87	69.01	75.56	82.88	89.94	96.85	100.00		

NUMBER OF OBSERVATIONS = 10416

NOVEMBER 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
≤-3.0	0.00	0.62	0.30	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.95	0.95
-2.9--2.0	0.16	3.36	2.18	0.31	0.09	0.02	0.01	0.00	0.01	0.01	6.15	7.10
-1.9--1.0	0.30	4.65	5.95	0.63	0.15	0.05	0.04	0.02	0.01	0.24	12.04	19.15
-0.9-0.0	0.14	4.08	18.79	6.15	1.67	0.36	0.30	0.26	0.19	0.58	32.61	51.76
0.1-1.0	0.04	0.45	3.99	5.27	2.16	0.69	0.48	0.36	0.21	0.42	14.06	65.81
1.1-2.0	0.03	0.10	0.40	1.90	2.24	1.43	1.07	0.67	0.45	0.28	8.57	74.38
2.1-3.0	0.00	0.01	0.08	0.55	1.23	1.14	0.96	0.67	0.41	0.22	5.27	79.65
3.1-4.0	0.01	0.01	0.02	0.21	0.65	0.77	1.13	0.85	0.52	0.20	4.38	84.03
4.1-6.0	0.01	0.05	0.04	0.18	0.36	0.63	1.11	1.19	0.61	0.30	4.47	88.50
6.1-8.0	0.01	0.03	0.02	0.07	0.22	0.23	0.46	0.40	0.25	0.12	1.80	90.30
>8.0	0.06	0.07	0.01	0.14	0.12	0.11	0.21	0.23	0.25	0.17	1.36	91.66
MISSING	0.02	0.74	4.35	1.91	0.68	0.24	0.10	0.10	0.10	0.10	8.34	100.00
TOTAL	0.77	14.17	36.12	17.34	9.59	5.67	5.86	4.75	2.99	2.73	100.00	
CUMUL TOTAL	0.77	14.94	51.06	68.40	78.00	83.67	89.53	94.29	97.27	100.00		

NUMBER OF OBSERVATIONS = 10080

DECEMBER 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
≤-3.0	0.00	0.07	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12
-2.9--2.0	0.14	1.83	1.46	0.03	0.03	0.01	0.00	0.00	0.00	0.08	3.58	3.71
-1.9--1.0	0.41	5.14	5.08	0.59	0.04	0.00	0.00	0.01	0.03	0.06	11.35	15.05
-0.9-0.0	0.45	6.48	21.65	8.51	1.99	0.42	0.31	0.31	0.21	0.93	41.25	56.31
0.1-1.0	0.02	0.55	3.79	4.93	2.23	0.99	0.80	0.40	0.22	0.30	14.23	70.54
1.1-2.0	0.05	0.08	0.49	1.56	2.01	1.29	0.96	0.58	0.33	0.23	7.57	78.10
2.1-3.0	0.03	0.04	0.09	0.24	0.62	0.59	0.62	0.48	0.32	0.12	3.15	81.25
3.1-4.0	0.02	0.01	0.13	0.11	0.33	0.32	0.58	0.39	0.27	0.16	2.31	83.56
4.1-6.0	0.03	0.06	0.06	0.09	0.26	0.31	0.38	0.60	0.36	0.24	2.39	85.95
6.1-8.0	0.03	0.06	0.04	0.05	0.04	0.08	0.14	0.21	0.27	0.13	1.05	87.00
>8.0	0.03	0.03	0.05	0.04	0.12	0.08	0.12	0.07	0.25	0.15	0.93	87.93
MISSING	0.21	1.64	4.79	2.12	1.02	0.45	0.40	0.31	0.54	0.59	12.07	100.00
TOTAL	1.42	15.98	37.68	18.26	8.67	4.52	4.32	3.36	2.79	3.00	100.00	
CUMUL TOTAL	1.42	17.40	55.08	73.34	82.01	86.53	90.85	94.21	97.00	100.00		

NUMBER OF OBSERVATIONS = 10416

Table 235. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and 144- minus 5.5-foot Temperature Difference (°F)

ALL YEARS 1951-1964

TEMPERATURE DIFFERENCE (°F)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
≤-3.0	0.133	1.678	0.767	0.064	0.024	0.003	0.007	0.004	0.006	0.008	2.695	2.695
-2.9--2.0	0.449	4.630	2.923	0.265	0.052	0.021	0.021	0.010	0.017	0.045	8.474	11.169
-1.9--1.0	0.537	5.775	5.548	0.745	0.224	0.033	0.037	0.041	0.032	0.124	13.096	24.265
-0.9--0.0	0.349	4.862	13.704	4.960	1.380	0.363	0.281	0.192	0.155	0.541	26.788	51.053
0.1-1.0	0.062	0.525	3.442	3.956	1.784	0.733	0.596	0.378	0.261	0.229	11.967	63.020
1.1-2.0	0.031	0.104	0.657	1.782	1.986	1.172	1.002	0.628	0.506	0.245	8.113	71.133
2.1-3.0	0.021	0.031	0.108	0.460	0.923	0.877	0.937	0.717	0.544	0.187	4.805	75.938
3.1-4.0	0.018	0.019	0.066	0.204	0.572	0.697	0.994	0.846	0.683	0.238	4.338	80.277
4.1-6.0	0.035	0.043	0.069	0.138	0.475	0.584	0.981	1.185	1.022	0.470	5.002	85.279
6.1-8.0	0.032	0.032	0.042	0.078	0.166	0.233	0.429	0.521	0.644	0.408	2.585	87.864
>8.0	0.071	0.061	0.063	0.080	0.156	0.150	0.264	0.341	0.573	0.557	2.318	90.182
MISSING	0.162	1.545	3.629	1.854	0.752	0.387	0.405	0.351	0.331	0.361	9.818	100.000
TOTAL	1.90	19.31	31.02	14.59	8.57	5.25	5.95	5.22	4.77	3.41	100.00	
CUMUL TOTAL	1.90	21.21	52.23	66.81	75.39	80.64	86.60	91.81	96.59	100.00		

NUMBER OF OBSERVATIONS = 118392

Table 236. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 144- minus 5.5-foot Temperature Difference (°F)

JANUARY 1952-1964

TEMPERATURE DIFFERENCE (°F)	WIND SPEED (MPH)										TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46 MISSING			
≤-3.0	0.00	0.00	0.05	0.10	0.07	0.06	0.00	0.00	0.00	0.00	0.00	0.29	0.29
-2.9--2.0	0.03	0.04	0.42	1.01	1.20	0.60	0.06	0.00	0.00	0.00	0.00	3.37	3.66
-1.9--1.0	0.16	0.58	2.47	4.68	4.40	1.49	0.28	0.06	0.00	0.00	0.00	14.12	17.78
-0.9--0.0	0.50	1.11	4.89	12.60	14.63	6.77	1.50	0.23	0.00	0.00	0.00	42.65	60.43
0.1-1.0	0.10	0.34	1.30	3.95	5.79	1.76	0.34	0.01	0.00	0.00	0.02	13.62	74.05
1.1-2.0	0.04	0.07	0.72	2.98	2.77	0.42	0.03	0.00	0.00	0.00	0.01	7.05	81.10
2.1-3.0	0.05	0.04	0.28	1.51	1.04	0.02	0.00	0.00	0.00	0.00	0.01	2.97	84.07
3.1-4.0	0.04	0.05	0.34	1.49	0.89	0.00	0.00	0.00	0.00	0.00	0.03	2.84	86.91
4.1-6.0	0.05	0.09	0.38	1.24	0.70	0.03	0.04	0.01	0.00	0.00	0.03	2.58	89.50
6.1-8.0	0.03	0.04	0.19	0.44	0.13	0.01	0.00	0.00	0.00	0.00	0.00	0.85	90.34
>8.0	0.04	0.07	0.16	0.23	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.56	90.90
MISSING	0.08	0.27	1.28	2.80	2.76	1.35	0.37	0.10	0.00	0.00	0.07	9.10	100.00
TOTAL CUMUL TOTAL	1.14	2.71	12.49	33.04	34.46	12.52	2.63	0.41	0.00	0.00	0.60	100.00	
TOTAL	1.14	3.85	16.34	49.38	83.84	96.36	98.99	99.40	99.40	99.40	100.00		

NUMBER OF OBSERVATIONS = 9672

FEBRUARY 1952-1964

TEMPERATURE DIFFERENCE (°F)	WIND SPEED (MPH)										TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46 MISSING			
≤-3.0	0.00	0.03	0.08	0.31	0.28	0.12	0.00	0.00	0.00	0.00	0.01	0.84	0.84
-2.9--2.0	0.02	0.26	0.72	1.72	1.78	0.82	0.14	0.02	0.00	0.00	0.19	5.67	6.51
-1.9--1.0	0.06	0.57	1.88	3.52	4.61	1.96	0.55	0.09	0.03	0.00	0.42	13.07	19.58
-0.9--0.0	0.25	0.86	4.28	12.27	15.04	7.24	1.85	0.28	0.05	0.00	1.06	43.17	62.75
0.1-1.0	0.06	0.27	1.26	4.46	5.23	1.74	0.32	0.01	0.00	0.00	0.28	13.63	76.38
1.1-2.0	0.02	0.18	0.91	3.36	2.43	0.15	0.01	0.01	0.00	0.00	0.25	7.33	83.71
2.1-3.0	0.08	0.07	0.33	2.17	1.17	0.03	0.00	0.00	0.00	0.00	0.06	3.91	87.61
3.1-4.0	0.09	0.03	0.50	1.19	0.97	0.01	0.00	0.00	0.00	0.00	0.00	2.80	90.41
4.1-6.0	0.12	0.22	0.69	0.93	0.74	0.02	0.00	0.00	0.00	0.00	0.02	2.74	93.15
6.1-8.0	0.08	0.08	0.24	0.43	0.16	0.00	0.00	0.00	0.00	0.00	0.01	1.00	94.15
>8.0	0.00	0.08	0.27	0.25	0.08	0.01	0.00	0.00	0.00	0.00	0.03	0.72	94.87
MISSING	0.16	0.11	0.59	1.73	1.63	0.79	0.07	0.00	0.00	0.00	0.05	5.13	100.00
TOTAL CUMUL TOTAL	0.94	2.76	11.74	32.35	33.51	12.87	2.93	0.42	0.08	0.00	2.39	100.00	
TOTAL	0.94	3.70	15.44	47.79	81.31	94.18	97.11	97.53	97.61	97.61	100.00		

NUMBER OF OBSERVATIONS = 8832

MARCH 1952-1964

TEMPERATURE DIFFERENCE (°F)	WIND SPEED (MPH)										TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46 MISSING			
≤-3.0	0.00	0.06	0.39	0.86	0.93	0.47	0.14	0.02	0.00	0.00	0.00	2.87	2.87
-2.9--2.0	0.00	0.29	1.23	3.03	2.69	0.95	0.25	0.05	0.03	0.00	0.00	8.52	11.39
-1.9--1.0	0.06	0.49	1.88	3.73	4.14	1.80	0.72	0.10	0.04	0.00	0.01	12.98	24.37
-0.9--0.0	0.09	0.28	2.48	9.13	10.43	6.13	2.80	0.59	0.19	0.01	0.05	32.19	56.56
0.1-1.0	0.03	0.13	1.18	4.18	4.51	1.79	0.43	0.08	0.01	0.00	0.05	12.40	68.95
1.1-2.0	0.07	0.19	0.99	3.40	2.44	0.65	0.08	0.00	0.00	0.00	0.00	7.83	76.78
2.1-3.0	0.10	0.16	0.71	2.64	1.31	0.05	0.00	0.00	0.00	0.00	0.00	4.97	81.75
3.1-4.0	0.07	0.06	0.39	1.70	0.95	0.04	0.00	0.00	0.00	0.00	0.00	3.22	84.97
4.1-6.0	0.06	0.14	0.67	1.48	0.79	0.00	0.00	0.00	0.00	0.00	0.00	3.16	88.11
6.1-8.0	0.01	0.06	0.41	0.57	0.11	0.00	0.00	0.00	0.00	0.00	0.00	1.17	89.28
>8.0	0.03	0.07	0.20	0.29	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.69	89.97
MISSING	0.03	0.30	0.75	3.03	3.49	1.69	0.57	0.13	0.03	0.00	0.00	10.03	100.00
TOTAL CUMUL TOTAL	0.57	2.23	11.30	34.03	31.90	13.56	5.00	0.98	0.30	0.01	0.11	100.00	
TOTAL	0.57	2.80	14.10	48.13	80.02	93.59	98.59	99.58	99.88	99.89	100.00		

NUMBER OF OBSERVATIONS = 9672

APRIL 1952-1964

TEMPERATURE DIFFERENCE (°F)	WIND SPEED (MPH)										TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46 MISSING			
≤-3.0	0.00	0.04	0.60	1.73	2.60	1.20	0.33	0.07	0.00	0.00	0.00	6.57	6.57
-2.9--2.0	0.02	0.22	1.34	2.83	3.32	1.50	0.51	0.13	0.01	0.00	0.00	9.88	16.45
-1.9--1.0	0.11	0.47	1.39	3.56	3.72	1.98	0.80	0.07	0.01	0.00	0.00	12.10	28.56
-0.9--0.0	0.11	0.37	1.53	6.18	8.13	4.82	1.76	0.48	0.01	0.00	0.00	23.39	51.94
0.1-1.0	0.03	0.22	0.77	3.15	4.38	1.79	0.33	0.02	0.00	0.00	0.00	10.71	62.65
1.1-2.0	0.04	0.07	0.65	2.80	2.72	0.64	0.02	0.00	0.00	0.00	0.00	6.96	69.60
2.1-3.0	0.00	0.05	0.56	2.03	1.26	0.15	0.02	0.00	0.00	0.00	0.00	4.07	73.68
3.1-4.0	0.03	0.06	0.36	1.82	1.27	0.07	0.00	0.00	0.00	0.00	0.00	3.62	77.30
4.1-6.0	0.04	0.10	0.50	1.86	1.35	0.05	0.00	0.00	0.00	0.00	0.00	3.90	81.20
6.1-8.0	0.07	0.11	0.32	0.96	0.61	0.02	0.00	0.00	0.00	0.00	0.00	2.09	83.29
>8.0	0.09	0.15	0.52	0.64	0.30	0.02	0.00	0.00	0.00	0.00	0.00	1.72	85.01
MISSING	0.05	0.40	1.77	4.82	4.67	2.36	0.73	0.14	0.01	0.00	0.04	14.99	100.00
TOTAL CUMUL TOTAL	0.60	2.28	10.31	32.37	34.33	14.60	4.51	0.92	0.04	0.00	0.04	100.00	
TOTAL	0.60	2.87	13.18	45.56	79.88	94.49	99.00	99.91	99.96	99.96	100.00		

NUMBER OF OBSERVATIONS = 9360

Table 239. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 144- minus 5.5-foot Temperature Difference (°F)

ALL YEARS 1951-1964														
TEMPERATURE DIFFERENCE (°F)	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
≤-3.0	0.003	0.063	0.443	0.966	0.867	0.285	0.057	0.009	0.000	0.000	0.000	0.003	2.695	2.695
-2.9--2.0	0.035	0.374	1.726	3.083	2.309	0.738	0.155	0.024	0.003	0.000	0.000	0.026	8.474	11.169
-1.9--1.0	0.095	0.783	2.670	4.428	3.382	1.276	0.345	0.057	0.007	0.000	0.000	0.055	13.096	24.265
-0.9-0.0	0.189	0.731	3.123	8.588	8.668	3.907	1.136	0.228	0.034	0.002	0.000	0.182	26.788	51.053
0.1-1.0	0.050	0.208	1.117	4.274	4.607	1.409	0.226	0.024	0.003	0.000	0.000	0.051	11.967	63.020
1.1-2.0	0.044	0.151	0.945	3.797	2.721	0.392	0.030	0.002	0.000	0.000	0.000	0.030	8.113	71.133
2.1-3.0	0.041	0.080	0.577	2.733	1.308	0.056	0.002	0.000	0.000	0.000	0.000	0.009	4.805	75.938
3.1-4.0	0.039	0.096	0.543	2.536	1.087	0.029	0.000	0.000	0.000	0.000	0.000	0.008	4.338	80.277
4.1-6.0	0.062	0.179	0.829	2.762	1.122	0.023	0.003	0.001	0.000	0.000	0.000	0.022	5.002	85.279
6.1-8.0	0.059	0.149	0.579	1.332	0.448	0.006	0.000	0.000	0.000	0.000	0.000	0.013	2.585	87.864
>8.0	0.104	0.233	0.768	0.966	0.236	0.007	0.000	0.000	0.000	0.000	0.000	0.004	2.318	90.182
MISSING	0.081	0.349	1.285	3.496	2.971	1.104	0.299	0.054	0.007	0.000	0.000	0.172	9.818	100.000
TOTAL	0.80	3.40	14.60	38.96	29.72	9.23	2.25	0.40	0.05	0.00	0.58	100.00		
CUMUL TOTAL	0.80	4.20	18.80	57.76	87.49	96.72	98.97	99.37	99.42	99.42	100.00			

NUMBER OF OBSERVATIONS = 118392

Table 240. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 150/19-foot Wind Speed Ratio

JANUARY 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<1.0	0.48	0.62	0.49	0.16	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78	1.78
1.0-1.2	0.04	0.64	3.67	7.21	5.62	2.25	0.24	0.03	0.00	0.00	0.00	0.00	0.00	19.70	21.48
1.3-1.5	0.00	0.50	2.35	8.43	14.39	8.85	2.32	0.56	0.04	0.00	0.00	0.00	0.00	37.45	58.92
1.6-1.8	0.00	0.04	1.27	5.12	7.89	1.52	0.30	0.01	0.00	0.00	0.00	0.00	0.00	16.15	75.07
1.9-2.1	0.00	0.13	1.15	3.31	2.84	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.69	82.76
2.2-2.4	0.00	0.00	0.46	2.18	1.36	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.04	86.80
2.5-2.9	0.00	0.01	0.53	2.24	1.35	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.18	90.98
3.0-3.9	0.00	0.13	0.78	1.77	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39	94.36
≥4.0	0.00	0.13	0.95	1.58	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.89	97.25
MISSING	0.51	0.49	0.65	0.42	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	2.75	100.00
TOTAL CUMUL TOTAL	1.03	2.70	12.31	32.41	34.43	12.97	2.87	0.59	0.04	0.00	0.00	0.00	0.65	100.00	

NUMBER OF OBSERVATIONS = 11160

FEBRUARY 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<1.0	0.28	0.76	0.77	0.29	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17	2.17
1.0-1.2	0.15	0.73	3.45	6.91	6.65	2.34	0.44	0.04	0.00	0.00	0.00	0.00	0.00	20.71	22.88
1.3-1.5	0.00	0.22	1.82	8.17	13.31	8.56	2.38	0.39	0.07	0.00	0.00	0.00	0.00	34.91	57.78
1.6-1.8	0.00	0.06	0.92	4.78	7.13	1.99	0.33	0.01	0.00	0.00	0.00	0.00	0.00	15.22	73.01
1.9-2.1	0.01	0.16	0.92	3.54	2.84	0.29	0.04	0.00	0.00	0.00	0.00	0.00	0.00	7.80	80.81
2.2-2.4	0.00	0.01	0.52	2.27	1.47	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.33	85.14
2.5-2.9	0.00	0.02	0.53	2.31	1.42	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.29	89.44
3.0-3.9	0.00	0.18	0.78	1.57	0.47	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	3.00	92.43
≥4.0	0.02	0.16	0.78	1.37	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	94.88
MISSING	0.42	0.59	0.72	0.27	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	5.12	100.00
TOTAL CUMUL TOTAL	0.87	2.87	11.20	31.47	33.51	13.24	3.21	0.44	0.07	0.00	0.00	0.00	3.12	100.00	

NUMBER OF OBSERVATIONS = 10176

MARCH 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<1.0	0.25	0.53	0.60	0.21	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.61
1.0-1.2	0.03	0.46	3.18	8.12	7.63	2.94	1.05	0.09	0.02	0.00	0.00	0.00	0.00	23.50	25.12
1.3-1.5	0.00	0.22	1.55	7.94	13.23	9.08	4.13	0.83	0.23	0.01	0.00	0.00	0.00	37.22	62.34
1.6-1.8	0.00	0.06	1.16	4.84	6.18	2.02	0.47	0.13	0.02	0.00	0.00	0.00	0.00	14.87	77.21
1.9-2.1	0.00	0.11	0.79	3.58	2.22	0.43	0.02	0.00	0.00	0.00	0.00	0.00	0.00	7.15	84.36
2.2-2.4	0.00	0.01	0.56	2.34	1.21	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.28	88.65
2.5-2.9	0.00	0.02	0.41	2.45	1.10	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	4.02	92.67
3.0-3.9	0.00	0.12	0.78	1.59	0.49	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.98	95.65
≥4.0	0.00	0.05	0.93	1.34	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.43	98.08
MISSING	0.34	0.52	0.65	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.92	100.00
TOTAL CUMUL TOTAL	0.62	2.10	10.61	32.51	32.17	14.68	5.70	1.05	0.27	0.07	0.00	0.00	0.30	100.00	

NUMBER OF OBSERVATIONS = 11160

APRIL 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL		
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING				
<1.0	0.33	0.76	0.70	0.29	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17	2.17
1.0-1.2	0.03	0.58	3.29	8.84	8.97	4.15	0.93	0.08	0.00	0.00	0.00	0.00	0.00	26.87	29.04
1.3-1.5	0.00	0.21	1.70	7.00	12.60	8.79	3.21	0.78	0.06	0.00	0.00	0.00	0.00	33.86	62.90
1.6-1.8	0.00	0.02	0.99	4.74	6.15	1.44	0.48	0.08	0.00	0.00	0.00	0.00	0.00	13.91	76.81
1.9-2.1	0.00	0.13	0.60	3.04	2.57	0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	6.78	83.58
2.2-2.4	0.00	0.02	0.56	2.53	1.24	0.19	0.02	0.00	0.00	0.00	0.00	0.00	0.00	4.56	88.14
2.5-2.9	0.00	0.01	0.33	2.51	1.61	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.54	92.68
3.0-3.9	0.00	0.11	0.71	1.62	0.81	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.28	95.95
≥4.0	0.01	0.07	0.84	1.31	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	98.34
MISSING	0.22	0.36	0.53	0.16	0.18	0.10	0.06	0.00	0.00	0.00	0.00	0.00	0.06	1.66	100.00
TOTAL CUMUL TOTAL	0.59	2.28	10.27	32.04	34.35	14.63	4.78	0.94	0.06	0.00	0.00	0.00	0.06	100.00	

NUMBER OF OBSERVATIONS = 10800

Table 242. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 150/19-foot Wind Speed Ratio

SEPTEMBER 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<1.0	0.25	0.75	0.49	0.17	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.67	1.67
1.0-1.2	0.05	0.87	4.32	6.41	2.49	0.22	0.06	0.00	0.00	0.00	0.00	14.61	16.28
1.3-1.5	0.00	0.40	2.66	8.19	9.15	3.50	0.77	0.13	0.00	0.00	0.00	24.79	41.06
1.6-1.8	0.00	0.09	1.44	5.62	5.11	0.93	0.11	0.03	0.00	0.00	0.00	13.33	54.40
1.9-2.1	0.01	0.23	1.16	4.43	2.76	0.29	0.01	0.00	0.00	0.00	0.00	8.88	63.28
2.2-2.4	0.00	0.06	0.65	3.44	1.89	0.06	0.00	0.00	0.00	0.00	0.00	6.09	69.37
2.5-2.9	0.00	0.06	0.80	5.17	2.49	0.05	0.00	0.00	0.00	0.00	0.00	8.76	78.13
3.0-3.9	0.01	0.19	1.41	5.17	2.03	0.00	0.00	0.00	0.00	0.00	0.00	8.80	86.93
≥4.0	0.01	0.27	1.56	6.26	0.88	0.00	0.00	0.00	0.00	0.00	0.00	8.97	95.90
MISSING	0.40	0.90	1.88	0.92	0.01	0.00	0.00	0.00	0.00	0.00	0.00	4.10	100.00
TOTAL	0.72	3.81	16.36	45.75	27.21	5.04	0.94	0.16	0.00	0.00	0.00	100.00	
CUMUL TOTAL	0.72	4.54	20.90	66.65	93.86	98.90	99.84	100.00	100.00	100.00	100.00		

NUMBER OF OBSERVATIONS = 10800

OCTOBER 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<1.0	0.23	0.70	0.33	0.04	0.04	0.03	0.00	0.00	0.00	0.00	0.00	1.37	1.37
1.0-1.2	0.00	0.84	3.05	5.30	3.46	0.53	0.05	0.00	0.00	0.00	0.00	13.23	14.61
1.3-1.5	0.00	0.37	2.23	7.95	10.98	5.04	1.11	0.04	0.00	0.00	0.00	27.72	42.33
1.6-1.8	0.00	0.05	1.18	4.75	7.73	1.50	0.20	0.03	0.00	0.00	0.00	15.44	57.77
1.9-2.1	0.00	0.18	1.16	4.78	3.56	0.46	0.00	0.00	0.00	0.00	0.00	10.13	67.90
2.2-2.4	0.00	0.00	0.65	3.46	2.65	0.10	0.00	0.00	0.00	0.00	0.00	6.85	74.76
2.5-2.9	0.00	0.01	0.52	4.35	2.49	0.10	0.00	0.00	0.00	0.00	0.00	7.46	82.22
3.0-3.9	0.01	0.16	1.17	3.92	2.09	0.06	0.00	0.00	0.00	0.00	0.00	7.42	89.64
≥4.0	0.01	0.31	1.27	4.53	0.84	0.03	0.00	0.00	0.00	0.00	0.00	6.99	96.63
MISSING	0.40	0.68	1.20	0.63	0.04	0.00	0.00	0.00	0.00	0.00	0.42	3.37	100.00
TOTAL	0.65	3.31	12.76	39.71	33.87	7.84	1.36	0.07	0.00	0.00	0.42	100.00	
CUMUL TOTAL	0.65	3.96	16.72	56.43	90.30	98.15	99.51	99.58	99.58	99.58	100.00		

NUMBER OF OBSERVATIONS = 11160

NOVEMBER 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<1.0	0.19	0.36	0.14	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.75
1.0-1.2	0.03	0.52	2.91	4.88	3.84	1.45	0.29	0.07	0.00	0.00	0.00	13.99	14.74
1.3-1.5	0.00	0.31	1.75	7.50	12.81	9.37	3.70	0.99	0.17	0.00	0.00	36.60	51.34
1.6-1.8	0.00	0.13	1.18	5.05	8.18	2.14	0.44	0.15	0.01	0.01	0.00	17.27	68.61
1.9-2.1	0.00	0.23	1.13	4.21	3.27	0.77	0.03	0.01	0.00	0.00	0.00	9.65	78.26
2.2-2.4	0.00	0.06	0.55	2.96	1.95	0.16	0.01	0.00	0.00	0.00	0.00	5.69	83.95
2.5-2.9	0.01	0.03	0.52	3.28	1.90	0.05	0.00	0.00	0.00	0.00	0.00	5.78	89.73
3.0-3.9	0.00	0.14	0.90	2.30	1.31	0.02	0.00	0.00	0.00	0.00	0.00	4.63	94.39
≥4.0	0.00	0.17	0.79	1.69	0.33	0.00	0.00	0.00	0.00	0.00	0.00	2.98	97.37
MISSING	0.40	0.57	0.51	0.38	0.29	0.00	0.00	0.00	0.00	0.00	0.48	2.63	100.00
TOTAL	0.62	2.52	10.36	32.31	33.89	13.95	4.46	1.22	0.18	0.01	0.48	100.00	
CUMUL TOTAL	0.62	3.14	13.50	45.81	79.69	93.65	98.11	99.33	99.51	99.52	100.00		

NUMBER OF OBSERVATIONS = 10800

DECEMBER 1950-1964

150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING		
<1.0	0.32	0.56	0.38	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.33	1.33
1.0-1.2	0.02	0.77	3.08	5.47	4.87	1.16	0.21	0.02	0.00	0.00	0.00	15.60	16.93
1.3-1.5	0.00	0.31	2.36	8.98	15.05	8.66	1.74	0.22	0.02	0.00	0.00	37.34	54.27
1.6-1.8	0.00	0.07	1.30	5.19	8.83	2.57	0.36	0.03	0.00	0.00	0.00	18.34	72.61
1.9-2.1	0.00	0.22	1.06	3.71	3.22	0.57	0.02	0.00	0.00	0.00	0.00	8.80	81.41
2.2-2.4	0.00	0.05	0.51	2.35	1.73	0.12	0.00	0.00	0.00	0.00	0.00	4.76	86.16
2.5-2.9	0.00	0.02	0.41	2.45	1.51	0.03	0.00	0.00	0.00	0.00	0.00	4.42	90.58
3.0-3.9	0.00	0.19	0.76	1.81	0.62	0.04	0.01	0.00	0.00	0.00	0.00	3.42	94.01
≥4.0	0.00	0.20	0.90	1.61	0.27	0.02	0.00	0.00	0.00	0.00	0.00	2.99	97.00
MISSING	0.59	0.63	0.48	0.11	0.01	0.01	0.00	0.00	0.00	0.00	1.17	3.00	100.00
TOTAL	0.93	3.03	11.24	31.70	36.15	13.17	2.33	0.26	0.02	0.00	1.17	100.00	
CUMUL TOTAL	0.93	3.96	15.20	46.90	83.05	96.22	98.55	98.81	98.83	98.83	100.00		

NUMBER OF OBSERVATIONS = 11160

Table 243. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and 150/19-foot Wind Speed Ratio

ALL YEARS 1950-1964														
150/19 WIND SPEED RATIO	WIND SPEED (MPH)											TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46	MISSING			
<1.0	0.30	0.72	0.57	0.19	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.82	1.82
1.0-1.2	0.03	0.86	4.03	7.20	4.83	1.45	0.30	0.03	0.00	0.00	0.00	0.00	18.74	20.56
1.3-1.5	0.00	0.40	2.46	8.35	11.40	6.15	1.87	0.37	0.05	0.00	0.00	0.00	31.05	51.62
1.6-1.8	0.00	0.07	1.29	5.31	6.43	1.43	0.26	0.04	0.00	0.00	0.00	0.00	14.83	66.45
1.9-2.1	0.00	0.21	1.17	4.19	2.67	0.37	0.02	0.00	0.00	0.00	0.00	0.00	8.63	75.08
2.2-2.4	0.00	0.02	0.64	3.03	1.54	0.09	0.01	0.00	0.00	0.00	0.00	0.00	5.34	80.42
2.5-2.9	0.00	0.02	0.59	3.61	1.69	0.05	0.00	0.00	0.00	0.00	0.00	0.00	5.96	86.38
3.0-3.9	0.00	0.17	1.14	2.91	1.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	5.27	91.65
≥4.0	0.01	0.17	1.24	3.09	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.84	96.49
MISSING	0.43	0.69	1.15	0.47	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.69	3.51	100.00
TOTAL	0.78	3.34	14.28	38.33	30.02	9.57	2.47	0.44	0.06	0.00	0.00	0.69	100.00	
CUMUL TOTAL	0.78	4.12	18.41	56.74	86.76	96.33	98.80	99.24	99.30	99.31	100.00			

NUMBER OF OBSERVATIONS = 131496

Table 250. Joint Percentage Frequency Distribution of 19- and 150-foot Wind Direction and 144- minus 5.5-foot Temperature Difference (°F). July 1951-1964. Number of Observations, 10,416

19 FOOT LEVEL. Table with columns: WIND DIRECTION 36 POINTS, 144-5.5 FOOT TEMPERATURE DIFFERENCE (°F) (sub-columns: -3.0, -2.9, -1.9, -0.9, 0.1, 1.1, 2.1, 3.1, 4.1, 6.1, >8.0 MISSING), TOTAL, CUMUL TOTAL. Rows include CALM, 1-36, MISSING, and TOTAL CUMUL TOTAL.

150 FOOT LEVEL. Table with columns: WIND DIRECTION 36 POINTS, 144-5.5 FOOT TEMPERATURE DIFFERENCE (°F) (sub-columns: -3.0, -2.9, -1.9, -0.9, 0.1, 1.1, 2.1, 3.1, 4.1, 6.1, >8.0 MISSING), TOTAL, CUMUL TOTAL. Rows include CALM, 1-36, MISSING, and TOTAL CUMUL TOTAL.

Table 254. Joint Percentage Frequency Distribution of 19- and 150-foot Wind Direction and 144- minus 5.5-foot Temperature Difference (°F). November 1951-1964. Number of Observations, 10,080

19 FOOT LEVEL. Table with columns for Wind Direction (36 points) and Temperature Difference (144-5.5 foot), and rows for wind directions 1-36, CALM, MISSING, and TOTAL. Includes CUMUL TOTAL.

150 FOOT LEVEL. Table with columns for Wind Direction (36 points) and Temperature Difference (144-5.5 foot), and rows for wind directions 1-36, CALM, MISSING, and TOTAL. Includes CUMUL TOTAL.

Section 2.2

Relationship between Wind Speed, Wind Direction,
Net Radiation Flux and Solar Radiation

Tables 258 through 264. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST. Monthly and Total Period. September 1950-December 1964.

During periods of bright sunshine the lower atmosphere is heated by the ground surface and convection ensues. This vertically moving air transports momentum downward in the lower atmosphere. Therefore, small wind speed differences between the 150- and 19-foot levels are expected during periods of bright sunshine. The bivariate distributions in these tables corroborate this.

Table 265. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST. Total Period. September 1950-December 1964.

This table shows no apparent relation between wind speed and solar radiation.

Table 266. Joint Percentage Frequency Distribution of Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys and 19-foot Wind Direction during the Hours 0400-2000 CST. Total Periods. September 1950-December 1964.

There seems to be little relationship between wind direction and solar radiation.

Table 267. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and Hourly Amounts of Net Radiation on a Horizontal Surface in Tenths of Langleys. Total Period. June 1956-December 1964.

On clear nights one commonly observes strong negative net radiation associated with light winds. By definition negative net radiation refers to a flux from ground to sky. The relative high percentage frequency of occurrence of this characteristic weather regime is shown in this table.

Table 268. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Net Radiation on a Horizontal Surface in Tenths of Langleys. Total Period. June 1956-December 1964

As is expected, negative net radiation is associated with high wind speed ratios and positive net radiation is associated with low wind speed ratios.

Table 258. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

JANUARY 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.34	4.00	14.25	7.67	4.08	2.48	2.64	1.98	1.57	1.41	40.42	40.42
1-5	0.22	2.93	8.95	3.98	1.68	0.73	0.72	0.60	0.46	0.58	20.85	61.26
6-10	0.20	2.20	3.32	0.92	0.27	0.11	0.05	0.05	0.07	0.14	7.33	68.60
11-15	0.24	2.11	2.89	0.62	0.15	0.05	0.01	0.03	0.03	0.08	6.22	74.82
16-20	0.27	1.88	1.80	0.41	0.11	0.03	0.05	0.01	0.03	0.09	4.69	79.51
21-25	0.20	1.86	1.72	0.24	0.05	0.00	0.00	0.00	0.00	0.01	4.09	83.60
26-30	0.19	2.10	1.60	0.20	0.04	0.01	0.00	0.03	0.00	0.04	4.22	87.82
31-35	0.14	1.94	1.06	0.14	0.00	0.00	0.00	0.00	0.01	0.03	3.31	91.12
36-40	0.12	1.79	1.08	0.11	0.00	0.00	0.01	0.00	0.00	0.01	3.13	94.25
41-45	0.24	1.97	0.94	0.03	0.03	0.00	0.01	0.00	0.00	0.03	3.24	97.49
46-50	0.08	0.96	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.65	99.15
51-55	0.04	0.37	0.18	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.61	99.76
56-60	0.00	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	99.86
61-65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.86
66-70	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	99.88
71-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
76-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
81-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
86-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.88
MISSING	0.00	0.05	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.12	100.00
TOTAL CUMUL TOTAL	2.29	24.25	38.41	14.38	6.41	3.42	3.51	2.70	2.17	2.47	100.00	
TOTAL	2.29	26.54	64.95	79.33	85.74	89.16	92.67	95.36	97.53	100.00		

NUMBER OF OBSERVATIONS = 7378

FEBRUARY 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.52	2.81	11.97	7.58	4.20	2.53	2.09	1.62	1.52	1.84	36.68	36.68
1-5	0.46	2.38	7.04	2.99	1.02	0.64	0.59	0.37	0.30	0.70	16.49	53.16
6-10	0.22	2.26	3.95	0.98	0.34	0.09	0.09	0.07	0.01	0.30	8.32	61.48
11-15	0.16	1.95	2.99	0.55	0.13	0.03	0.03	0.03	0.04	0.19	6.11	67.59
16-20	0.15	2.08	2.33	0.43	0.04	0.00	0.00	0.00	0.04	0.16	5.21	72.80
21-25	0.12	1.98	1.84	0.21	0.04	0.01	0.01	0.00	0.03	0.10	4.35	77.15
26-30	0.19	2.06	1.43	0.16	0.04	0.00	0.01	0.01	0.00	0.18	4.10	81.25
31-35	0.16	1.47	1.02	0.09	0.03	0.00	0.00	0.00	0.00	0.09	2.87	84.12
36-40	0.07	1.62	0.89	0.06	0.00	0.00	0.01	0.01	0.00	0.06	2.73	86.85
41-45	0.18	1.80	0.92	0.04	0.00	0.00	0.00	0.00	0.00	0.09	3.03	89.88
46-50	0.12	1.92	0.68	0.03	0.01	0.00	0.00	0.00	0.00	0.06	2.82	92.71
51-55	0.06	1.69	0.80	0.09	0.01	0.00	0.00	0.00	0.00	0.09	2.75	95.45
56-60	0.12	1.62	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.39	97.85
61-65	0.07	1.04	0.42	0.01	0.00	0.00	0.00	0.00	0.00	0.01	1.56	99.41
66-70	0.04	0.34	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.46	99.87
71-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
76-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
81-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
86-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.87
MISSING	0.00	0.03	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.13	100.00
TOTAL CUMUL TOTAL	2.66	27.04	37.00	13.25	5.90	3.30	2.85	2.12	1.92	3.97	100.00	
TOTAL	2.66	29.69	66.70	79.95	85.84	89.14	91.99	94.12	96.03	100.00		

NUMBER OF OBSERVATIONS = 6732

Table 259. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

MARCH 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.15	2.37	9.79	6.59	3.04	1.94	2.20	1.63	1.31	0.69	29.70	29.70
1-5	0.07	2.56	7.97	3.52	1.31	0.65	0.60	0.41	0.27	0.34	17.70	47.40
6-10	0.03	2.06	3.82	0.95	0.37	0.11	0.05	0.04	0.05	0.07	7.55	54.95
11-15	0.09	1.76	2.55	0.65	0.19	0.04	0.05	0.00	0.00	0.05	5.39	60.34
16-20	0.19	2.24	2.48	0.39	0.05	0.01	0.03	0.00	0.00	0.05	5.45	65.79
21-25	0.08	1.86	1.65	0.10	0.03	0.04	0.03	0.03	0.00	0.03	3.93	69.72
26-30	0.07	1.79	1.41	0.07	0.01	0.01	0.00	0.00	0.01	0.05	3.43	73.15
31-35	0.16	1.68	1.03	0.07	0.03	0.00	0.00	0.00	0.00	0.04	3.01	76.16
36-40	0.11	1.88	1.46	0.08	0.04	0.00	0.00	0.00	0.01	0.03	3.62	79.78
41-45	0.18	1.75	1.06	0.03	0.03	0.00	0.00	0.00	0.00	0.00	3.04	82.81
46-50	0.19	1.65	0.76	0.03	0.01	0.00	0.00	0.00	0.00	0.00	2.64	85.46
51-55	0.12	1.55	0.77	0.11	0.00	0.00	0.00	0.00	0.00	0.04	2.59	88.05
56-60	0.16	2.01	1.03	0.01	0.03	0.00	0.00	0.00	0.00	0.00	3.24	91.28
61-65	0.15	1.56	0.89	0.03	0.00	0.00	0.00	0.00	0.00	0.01	2.64	93.93
66-70	0.08	1.63	0.88	0.04	0.00	0.00	0.00	0.00	0.00	0.04	2.67	96.60
71-75	0.18	1.18	0.60	0.03	0.00	0.00	0.00	0.00	0.00	0.01	1.99	98.59
76-80	0.04	0.60	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	99.63
81-85	0.03	0.14	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	99.86
86-90	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	99.91
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.91
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.91
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.91
MISSING	0.00	0.00	0.07	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.09	100.00
TOTAL CUMUL	2.07	30.27	38.72	12.79	5.14	2.81	2.97	2.10	1.67	1.46	100.00	
TOTAL	2.07	32.34	71.06	83.86	88.99	91.80	94.77	96.87	98.54	100.00		

NUMBER OF OBSERVATIONS = 7378

APRIL 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.17	2.04	6.85	4.83	2.34	1.78	1.72	1.20	0.94	0.48	22.35	22.35
1-5	0.10	2.34	6.75	3.19	1.32	0.74	0.88	0.57	0.39	0.41	16.69	39.05
6-10	0.07	2.04	3.94	1.01	0.29	0.13	0.04	0.11	0.06	0.13	7.82	46.86
11-15	0.14	2.06	3.10	0.66	0.17	0.08	0.01	0.01	0.00	0.08	6.32	53.18
16-20	0.03	2.17	2.34	0.43	0.08	0.03	0.01	0.01	0.01	0.01	5.14	58.32
21-25	0.24	1.89	2.02	0.18	0.03	0.00	0.01	0.00	0.00	0.01	4.38	62.70
26-30	0.11	2.02	1.48	0.15	0.03	0.01	0.00	0.00	0.01	0.01	3.84	66.54
31-35	0.17	2.02	1.48	0.11	0.01	0.00	0.00	0.00	0.00	0.01	3.81	70.35
36-40	0.21	1.86	0.97	0.04	0.00	0.00	0.01	0.00	0.00	0.00	3.10	73.45
41-45	0.13	1.85	0.99	0.03	0.00	0.00	0.00	0.00	0.00	0.00	3.00	76.44
46-50	0.10	1.68	0.90	0.08	0.00	0.00	0.00	0.00	0.00	0.00	2.76	79.20
51-55	0.08	1.74	0.97	0.07	0.00	0.00	0.00	0.00	0.00	0.01	2.87	82.07
56-60	0.10	1.75	0.83	0.04	0.01	0.00	0.00	0.00	0.00	0.01	2.75	84.82
61-65	0.13	1.74	0.71	0.06	0.00	0.00	0.00	0.00	0.00	0.01	2.65	87.46
66-70	0.13	1.92	0.74	0.06	0.01	0.00	0.00	0.00	0.00	0.01	2.87	90.34
71-75	0.15	1.96	0.71	0.15	0.01	0.00	0.00	0.01	0.00	0.03	3.04	93.38
76-80	0.17	2.20	0.67	0.00	0.01	0.00	0.00	0.00	0.00	0.00	3.05	96.43
81-85	0.20	1.09	0.59	0.06	0.00	0.00	0.00	0.00	0.00	0.00	1.93	98.36
86-90	0.07	0.42	0.13	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.63	98.99
91-95	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	99.01
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.01
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.01
MISSING	0.01	0.31	0.48	0.07	0.04	0.01	0.03	0.01	0.03	0.00	0.99	100.00
TOTAL CUMUL	2.49	35.11	36.64	11.23	4.38	2.79	2.73	1.95	1.44	1.23	100.00	
TOTAL	2.49	37.61	74.24	85.48	89.86	92.65	95.38	97.32	98.77	100.00		

NUMBER OF OBSERVATIONS = 7140

Table 260. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

MAY 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.07	0.76	3.48	3.31	2.28	1.30	1.31	1.27	0.96	0.57	15.32	15.32
1-5	0.14	1.22	4.23	3.12	1.67	0.89	0.84	0.50	0.60	0.42	13.62	28.94
6-10	0.05	1.42	3.13	1.40	0.53	0.27	0.22	0.15	0.20	0.28	7.66	36.60
11-15	0.07	1.25	2.36	0.83	0.28	0.14	0.07	0.05	0.05	0.14	5.23	41.83
16-20	0.07	1.37	2.59	0.77	0.19	0.09	0.00	0.03	0.03	0.15	5.70	47.11
21-25	0.09	1.72	2.30	0.47	0.09	0.01	0.03	0.04	0.00	0.08	4.85	51.97
26-30	0.15	1.37	1.88	0.31	0.04	0.03	0.00	0.01	0.00	0.08	3.88	55.84
31-35	0.03	1.34	1.90	0.28	0.03	0.00	0.00	0.01	0.00	0.07	3.66	59.50
36-40	0.11	1.46	1.69	0.19	0.00	0.00	0.00	0.01	0.00	0.08	3.55	63.05
41-45	0.16	1.71	1.42	0.09	0.01	0.01	0.00	0.01	0.00	0.07	3.48	66.54
46-50	0.12	1.37	1.14	0.16	0.01	0.03	0.00	0.00	0.00	0.05	2.89	69.42
51-55	0.08	1.50	1.57	0.08	0.00	0.00	0.01	0.00	0.00	0.08	3.33	72.76
56-60	0.08	1.52	1.31	0.07	0.04	0.00	0.00	0.00	0.00	0.04	3.06	75.82
61-65	0.12	1.75	1.36	0.11	0.00	0.00	0.00	0.00	0.00	0.04	3.39	79.21
66-70	0.14	1.79	1.44	0.07	0.00	0.00	0.00	0.00	0.01	0.07	3.51	82.72
71-75	0.16	1.61	1.22	0.11	0.08	0.00	0.01	0.01	0.04	0.01	3.27	85.99
76-80	0.19	1.90	1.31	0.11	0.01	0.00	0.00	0.00	0.00	0.03	3.55	89.54
81-85	0.12	1.80	1.18	0.09	0.01	0.03	0.00	0.00	0.01	0.03	3.28	92.82
86-90	0.07	0.77	0.66	0.04	0.04	0.00	0.00	0.00	0.01	0.04	1.64	94.46
91-95	0.01	0.37	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.47	94.93
96-100	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	94.96
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.96
MISSING	0.12	1.06	1.63	0.75	0.60	0.35	0.26	0.09	0.09	0.09	5.04	100.00
TOTAL	2.16	29.06	37.91	12.39	5.92	3.16	2.75	2.20	2.02	2.44	100.00	
CUMUL TOTAL	2.16	31.21	69.12	81.51	87.44	90.59	93.35	95.54	97.56	100.00		

NUMBER OF OBSERVATIONS = 7378

JUNE 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.04	0.38	1.50	1.93	1.40	1.09	1.46	0.92	1.11	0.66	10.49	10.49
1-5	0.11	0.70	2.49	2.87	2.20	1.16	1.41	1.44	1.54	0.78	14.72	25.21
6-10	0.06	0.74	2.18	2.10	1.33	0.52	0.48	0.53	0.43	0.28	8.66	33.87
11-15	0.08	0.88	1.33	0.87	0.41	0.11	0.21	0.14	0.10	0.11	4.24	38.11
16-20	0.08	0.88	1.39	0.80	0.34	0.13	0.10	0.07	0.04	0.10	3.92	42.03
21-25	0.14	1.19	2.02	1.61	0.39	0.13	0.07	0.03	0.03	0.06	5.06	47.09
26-30	0.20	1.71	2.02	0.49	0.24	0.01	0.00	0.00	0.01	0.07	4.75	51.83
31-35	0.22	1.22	1.32	0.31	0.20	0.03	0.03	0.01	0.01	0.01	3.36	55.20
36-40	0.14	1.01	1.76	0.48	0.18	0.01	0.01	0.00	0.00	0.03	3.63	58.82
41-45	0.14	1.97	1.92	0.48	0.15	0.00	0.01	0.00	0.00	0.00	4.68	63.50
46-50	0.10	1.60	1.68	0.21	0.08	0.00	0.01	0.00	0.00	0.06	3.74	67.24
51-55	0.13	1.43	1.82	0.25	0.07	0.01	0.03	0.00	0.00	0.00	3.74	70.98
56-60	0.15	1.95	1.93	0.36	0.11	0.01	0.03	0.03	0.01	0.01	4.61	75.59
61-65	0.22	2.04	1.54	0.24	0.01	0.03	0.03	0.00	0.00	0.06	4.17	79.76
66-70	0.21	1.88	1.71	0.34	0.06	0.00	0.01	0.01	0.01	0.03	4.26	84.02
71-75	0.24	2.07	1.90	0.21	0.06	0.03	0.00	0.03	0.00	0.01	4.55	88.57
76-80	0.34	2.24	1.85	0.27	0.10	0.01	0.03	0.00	0.00	0.03	4.86	93.43
81-85	0.14	1.78	1.36	0.22	0.08	0.00	0.00	0.03	0.01	0.01	3.64	97.07
86-90	0.08	0.84	0.77	0.06	0.04	0.01	0.01	0.00	0.00	0.01	1.83	98.91
91-95	0.01	0.17	0.14	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.35	99.26
96-100	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	99.30
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.30
MISSING	0.01	0.18	0.35	0.08	0.01	0.00	0.00	0.01	0.03	0.01	0.70	100.00
TOTAL	2.87	26.86	33.01	13.59	7.48	3.31	3.94	3.26	3.35	2.34	100.00	
CUMUL TOTAL	2.87	29.73	62.75	76.33	83.81	87.11	91.05	94.31	97.66	100.00		

NUMBER OF OBSERVATIONS = 7140

Table 261. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

JULY 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.07	0.30	1.27	1.88	1.88	1.52	1.59	1.79	1.72	1.17	13.19	13.19
1-5	0.11	0.54	2.17	2.58	1.92	1.06	1.86	1.40	1.34	1.18	14.15	27.34
6-10	0.04	0.65	2.09	1.53	1.29	0.58	0.60	0.62	0.61	0.41	8.42	35.75
11-15	0.15	0.75	1.26	0.66	0.23	0.14	0.08	0.05	0.08	0.09	3.50	39.25
16-20	0.05	1.17	1.80	1.10	0.47	0.18	0.09	0.11	0.03	0.16	5.16	44.42
21-25	0.24	1.50	2.10	0.88	0.47	0.04	0.08	0.12	0.05	0.16	5.67	50.08
26-30	0.12	1.26	1.44	0.45	0.18	0.09	0.01	0.01	0.01	0.05	3.63	53.71
31-35	0.15	1.36	1.27	0.49	0.11	0.03	0.03	0.00	0.01	0.05	3.50	57.21
36-40	0.18	1.80	1.72	0.39	0.20	0.01	0.00	0.03	0.00	0.05	4.40	61.62
41-45	0.26	1.87	1.83	0.50	0.05	0.01	0.00	0.00	0.00	0.07	4.59	66.21
46-50	0.18	1.31	1.27	0.35	0.03	0.01	0.01	0.01	0.01	0.05	3.25	69.46
51-55	0.27	1.75	1.68	0.26	0.11	0.00	0.00	0.01	0.01	0.04	4.12	73.58
56-60	0.39	1.92	1.80	0.41	0.16	0.00	0.00	0.00	0.00	0.07	4.76	78.34
61-65	0.24	1.86	1.69	0.18	0.03	0.01	0.00	0.00	0.00	0.09	4.11	82.45
66-70	0.37	1.76	1.42	0.23	0.05	0.00	0.00	0.04	0.01	0.05	3.94	86.39
71-75	0.46	2.22	1.59	0.26	0.18	0.00	0.00	0.00	0.00	0.07	4.77	91.16
76-80	0.23	1.80	1.63	0.18	0.07	0.00	0.03	0.00	0.00	0.08	4.01	95.17
81-85	0.23	1.53	1.34	0.16	0.01	0.00	0.01	0.01	0.00	0.08	3.39	98.56
86-90	0.04	0.52	0.35	0.08	0.01	0.00	0.00	0.00	0.00	0.05	1.06	99.62
91-95	0.00	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.70
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.70
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.70
MISSING	0.00	0.04	0.04	0.07	0.09	0.03	0.01	0.00	0.01	0.00	0.30	100.00
TOTAL CUMUL TOTAL	3.78	25.97	29.80	12.63	7.56	3.71	4.40	4.20	3.92	4.01	100.00	
TOTAL	3.78	29.75	59.56	72.19	79.75	83.46	87.87	92.07	95.99	100.00		

NUMBER OF OBSERVATIONS = 7378

AUGUST 1951-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.15	0.38	1.67	2.47	2.30	1.78	2.53	2.48	2.93	1.55	16.23	16.23
1-5	0.14	0.53	2.06	2.39	1.69	1.27	1.69	1.68	1.86	1.23	14.54	32.77
6-10	0.09	0.52	1.33	0.81	0.50	0.35	0.41	0.24	0.30	0.41	4.96	37.73
11-15	0.11	1.07	1.75	1.06	0.72	0.31	0.33	0.26	0.20	0.18	5.98	43.71
16-20	0.19	1.27	1.86	0.76	0.53	0.16	0.18	0.09	0.05	0.14	5.23	48.94
21-25	0.08	1.17	1.41	0.57	0.30	0.03	0.04	0.07	0.04	0.05	3.75	52.70
26-30	0.14	1.42	1.64	0.50	0.18	0.08	0.03	0.07	0.01	0.00	4.07	56.76
31-35	0.22	1.88	1.92	0.28	0.18	0.01	0.03	0.03	0.01	0.03	4.59	61.36
36-40	0.24	1.88	1.73	0.30	0.12	0.03	0.05	0.00	0.01	0.05	4.43	65.79
41-45	0.19	1.53	1.36	0.23	0.11	0.00	0.01	0.01	0.00	0.00	3.44	69.23
46-50	0.27	2.30	1.36	0.20	0.08	0.03	0.00	0.03	0.00	0.01	4.28	73.52
51-55	0.22	2.03	1.80	0.16	0.05	0.01	0.01	0.03	0.00	0.03	4.35	77.87
56-60	0.38	2.20	1.46	0.22	0.07	0.00	0.01	0.00	0.01	0.01	4.36	82.23
61-65	0.23	2.37	1.34	0.20	0.05	0.00	0.01	0.01	0.00	0.01	4.24	86.47
66-70	0.24	2.52	1.59	0.23	0.09	0.00	0.01	0.01	0.00	0.03	4.72	91.19
71-75	0.22	2.22	1.30	0.22	0.15	0.01	0.03	0.03	0.00	0.03	4.20	95.39
76-80	0.14	1.42	1.19	0.12	0.04	0.00	0.01	0.00	0.01	0.01	2.95	98.35
81-85	0.11	0.53	0.53	0.05	0.04	0.00	0.03	0.00	0.01	0.00	1.30	99.65
86-90	0.01	0.05	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	99.84
91-95	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	99.86
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.86
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.86
MISSING	0.00	0.03	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.08	0.14	100.00
TOTAL CUMUL TOTAL	3.36	27.37	27.42	10.78	7.21	4.09	5.44	5.03	5.46	3.85	100.00	
TOTAL	3.36	30.73	58.15	68.92	76.13	80.22	85.66	90.69	96.15	100.00		

NUMBER OF OBSERVATIONS = 7378

Table 262. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

SEPTEMBER 1950-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.13	0.33	2.58	3.44	3.03	2.14	3.53	3.71	3.91	1.59	24.39	24.39
1-5	0.08	0.37	2.60	2.65	1.92	1.20	1.59	1.58	1.90	0.64	14.54	38.93
6-10	0.08	0.41	2.05	1.37	0.76	0.50	0.38	0.47	0.44	0.21	6.67	45.59
11-15	0.04	0.80	1.93	1.29	0.58	0.31	0.25	0.18	0.14	0.20	5.63	51.23
16-20	0.03	0.85	1.66	0.68	0.27	0.09	0.18	0.07	0.05	0.12	4.00	55.23
21-25	0.17	1.07	1.99	0.73	0.16	0.01	0.04	0.08	0.01	0.03	4.29	59.52
26-30	0.25	1.27	2.12	0.48	0.16	0.01	0.04	0.00	0.01	0.04	4.38	63.90
31-35	0.16	1.16	1.63	0.46	0.13	0.00	0.03	0.01	0.01	0.03	3.62	67.52
36-40	0.12	1.37	1.74	0.27	0.10	0.01	0.03	0.01	0.00	0.01	3.67	71.19
41-45	0.14	1.65	1.93	0.13	0.05	0.00	0.03	0.03	0.00	0.03	3.99	75.18
46-50	0.14	1.65	1.75	0.24	0.10	0.04	0.03	0.00	0.00	0.03	3.97	79.15
51-55	0.13	1.57	1.69	0.30	0.05	0.00	0.00	0.00	0.00	0.00	3.74	82.89
56-60	0.13	1.83	1.78	0.25	0.04	0.01	0.03	0.04	0.00	0.00	4.10	86.99
61-65	0.29	2.29	1.63	0.21	0.07	0.01	0.01	0.00	0.01	0.01	4.54	91.53
66-70	0.16	1.76	1.78	0.31	0.03	0.01	0.01	0.00	0.01	0.00	4.08	95.61
71-75	0.13	1.37	1.33	0.14	0.01	0.00	0.01	0.00	0.01	0.00	3.02	98.63
76-80	0.03	0.38	0.65	0.07	0.07	0.00	0.00	0.00	0.00	0.00	1.19	99.82
81-85	0.00	0.07	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.13	99.95
86-90	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	99.96
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.96
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.96
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.96
MISSING	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.04	100.00
TOTAL CUMUL TOTAL	2.20	20.20	30.92	12.95	7.54	4.37	6.18	6.18	6.54	2.93	100.00	
	2.20	22.39	53.31	66.26	73.80	78.17	84.35	90.54	97.07	100.00		

NUMBER OF OBSERVATIONS = 7650

OCTOBER 1950-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.16	0.59	5.05	6.44	4.39	3.43	4.09	3.82	3.54	1.38	32.89	32.89
1-5	0.09	0.73	4.67	3.06	2.09	1.33	1.30	1.16	1.13	0.86	16.42	49.31
6-10	0.09	0.85	2.62	1.29	0.61	0.30	0.23	0.14	0.16	0.19	6.48	55.79
11-15	0.14	0.86	2.43	0.67	0.23	0.09	0.06	0.06	0.06	0.10	4.71	60.49
16-20	0.08	1.39	2.35	0.87	0.33	0.03	0.00	0.06	0.04	0.09	5.24	65.73
21-25	0.09	1.25	1.66	0.40	0.16	0.04	0.01	0.00	0.03	0.05	3.69	69.42
26-30	0.16	1.25	1.33	0.32	0.09	0.03	0.00	0.00	0.03	0.08	3.78	73.21
31-35	0.18	1.29	1.94	0.28	0.05	0.00	0.00	0.00	0.00	0.08	3.81	77.01
36-40	0.11	1.63	1.57	0.16	0.03	0.00	0.00	0.00	0.00	0.01	3.52	80.53
41-45	0.11	1.56	1.86	0.24	0.06	0.01	0.03	0.00	0.00	0.01	3.88	84.41
46-50	0.16	1.64	2.11	0.16	0.05	0.00	0.00	0.00	0.00	0.01	4.15	88.56
51-55	0.15	1.99	2.14	0.22	0.05	0.00	0.00	0.01	0.00	0.06	4.62	93.18
56-60	0.14	1.57	1.28	0.16	0.05	0.00	0.00	0.00	0.00	0.04	3.24	96.42
61-65	0.08	0.72	0.87	0.05	0.03	0.00	0.00	0.00	0.00	0.01	1.76	98.18
66-70	0.05	0.35	0.30	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.75	98.92
71-75	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	98.95
76-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
81-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
86-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	98.95
MISSING	0.00	0.28	0.23	0.18	0.08	0.09	0.04	0.10	0.05	0.01	1.05	100.00
TOTAL CUMUL TOTAL	1.80	17.98	32.92	14.52	8.30	5.34	5.76	5.36	5.03	3.00	100.00	
	1.80	19.77	52.69	67.21	75.51	80.85	86.60	91.97	97.00	100.00		

NUMBER OF OBSERVATIONS = 7905

Table 263. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

NOVEMBER 1950-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.09	1.46	12.47	8.01	5.14	3.29	3.28	2.75	1.76	1.28	39.54	39.54
1-5	0.10	1.96	8.69	3.75	1.69	1.08	0.99	0.75	0.63	0.50	20.14	59.69
6-10	0.04	1.66	4.04	1.30	0.54	0.22	0.27	0.10	0.08	0.20	8.51	68.20
11-15	0.09	1.41	2.93	0.65	0.24	0.07	0.04	0.01	0.01	0.09	5.54	73.74
16-20	0.04	1.69	2.20	0.31	0.12	0.03	0.01	0.00	0.00	0.09	4.48	78.22
21-25	0.09	1.66	2.10	0.29	0.05	0.00	0.00	0.00	0.00	0.10	4.30	82.52
26-30	0.07	1.58	1.62	0.10	0.03	0.00	0.01	0.00	0.00	0.04	3.45	85.97
31-35	0.12	1.93	1.48	0.07	0.05	0.00	0.01	0.00	0.00	0.05	3.73	89.70
36-40	0.12	1.93	1.57	0.16	0.03	0.00	0.01	0.00	0.00	0.05	3.86	93.56
41-45	0.04	1.75	1.29	0.13	0.01	0.00	0.00	0.00	0.00	0.03	3.25	96.81
46-50	0.10	1.05	0.98	0.07	0.00	0.00	0.00	0.00	0.00	0.04	2.24	99.05
51-55	0.03	0.22	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	99.58
56-60	0.00	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	99.71
61-65	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	99.73
66-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
71-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
76-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
81-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
86-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.73
MISSING	0.00	0.05	0.14	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.27	100.00
TOTAL CUMUL	0.93	18.47	39.83	14.97	7.91	4.69	4.63	3.62	2.48	2.47	100.00	
TOTAL	0.93	19.40	59.23	74.20	82.10	86.80	91.42	95.05	97.53	100.00		

NUMBER OF OBSERVATIONS = 7650

DECEMBER 1950-1964

SOLAR RADIATION (LANGLEYS)	150/19-FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.30	2.78	13.36	9.08	5.02	2.59	2.68	2.06	1.71	1.48	41.08	41.08
1-5	0.15	2.93	10.22	4.25	1.87	0.95	0.70	0.58	0.63	0.89	23.18	64.25
6-10	0.19	2.13	4.20	1.23	0.35	0.18	0.11	0.05	0.10	0.25	8.79	73.04
11-15	0.19	1.86	3.02	0.53	0.10	0.01	0.01	0.03	0.01	0.06	5.83	78.87
16-20	0.13	1.97	2.06	0.30	0.09	0.00	0.01	0.03	0.03	0.08	4.69	83.57
21-25	0.11	1.76	1.83	0.29	0.04	0.03	0.00	0.00	0.03	0.05	4.14	87.70
26-30	0.18	1.64	1.43	0.11	0.03	0.00	0.00	0.00	0.00	0.05	3.45	91.16
31-35	0.14	1.82	1.32	0.15	0.03	0.01	0.00	0.00	0.00	0.06	3.54	94.70
36-40	0.13	1.56	1.33	0.10	0.03	0.00	0.00	0.00	0.00	0.08	3.54	94.70
41-45	0.05	0.86	0.70	0.05	0.00	0.00	0.00	0.00	0.00	0.03	3.16	97.86
46-50	0.05	0.25	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.05	1.71	99.57
51-55	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	99.97
56-60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	100.00
61-65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
66-70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
71-75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
76-80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
81-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
86-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
91-95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
MISSING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
TOTAL CUMUL	1.62	19.60	39.56	16.12	7.55	3.77	3.52	2.75	2.50	3.02	100.00	
TOTAL	1.62	21.21	60.77	76.89	84.44	88.21	91.73	94.47	96.98	100.00		

NUMBER OF OBSERVATIONS = 7905

Table 264. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Solar Radiation on a Horizontal Surface in Langleys during the Hours 0400-2000 CST

SOLAR RADIATION (LANGLEYS)	ALL YEARS 1950-1964										TOTAL	CUMUL TOTAL
	150/19-FOOT WIND SPEED RATIO											
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥4.0	MISSING		
0	0.18	1.51	7.03	5.29	3.28	2.17	2.45	2.13	1.94	1.18	27.16	27.16
1-5	0.14	1.59	5.67	3.20	1.71	0.98	1.10	0.92	0.93	0.71	16.97	44.12
6-10	0.10	1.40	3.05	1.25	0.60	0.28	0.24	0.22	0.21	0.24	7.59	51.71
11-15	0.13	1.39	2.38	0.75	0.29	0.12	0.10	0.07	0.06	0.11	5.39	57.10
16-20	0.11	1.58	2.07	0.61	0.22	0.06	0.06	0.04	0.03	0.10	4.87	61.97
21-25	0.14	1.57	1.89	0.46	0.15	0.03	0.03	0.03	0.02	0.06	4.37	66.34
26-30	0.15	1.62	1.66	0.28	0.09	0.02	0.01	0.01	0.01	0.06	3.91	70.25
31-35	0.15	1.59	1.45	0.23	0.07	0.01	0.01	0.01	0.01	0.05	3.57	73.82
36-40	0.14	1.65	1.47	0.20	0.06	0.01	0.01	0.01	0.00	0.04	3.57	77.39
41-45	0.15	1.68	1.35	0.17	0.04	0.00	0.01	0.00	0.00	0.03	3.44	80.83
46-50	0.13	1.44	1.11	0.13	0.03	0.01	0.00	0.00	0.00	0.03	2.89	83.72
51-55	0.11	1.31	1.14	0.13	0.03	0.00	0.00	0.00	0.00	0.03	2.76	86.48
56-60	0.14	1.36	1.00	0.13	0.04	0.00	0.01	0.01	0.00	0.02	2.71	89.19
61-65	0.13	1.27	0.87	0.09	0.02	0.00	0.00	0.00	0.00	0.02	2.40	91.60
66-70	0.12	1.15	0.82	0.11	0.02	0.00	0.00	0.00	0.00	0.02	2.25	93.85
71-75	0.13	1.04	0.72	0.09	0.04	0.00	0.00	0.01	0.00	0.01	2.05	95.90
76-80	0.09	0.86	0.63	0.06	0.02	0.00	0.01	0.00	0.00	0.01	1.70	97.60
81-85	0.07	0.57	0.42	0.05	0.01	0.00	0.00	0.00	0.00	0.01	1.14	98.74
86-90	0.02	0.21	0.17	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.44	99.18
91-95	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	99.26
96-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	99.26
>100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.26
MISSING	0.01	0.17	0.25	0.11	0.07	0.04	0.03	0.02	0.02	0.02	0.74	100.00
TOTAL CUMUL TOTAL	2.34	25.02	35.18	13.33	6.81	3.75	4.08	3.49	3.24	2.76	100.00	

NUMBER OF OBSERVATIONS = 89012

Table 267. Joint Percentage Frequency Distribution of 19-foot Wind Speed (mph) and Hourly Amounts of Net Radiation on a Horizontal Surface in Tenths of Langleys. June 1956-December 1964. Number of Observations, 75,264

NET RADIATION IN TENTHS OF LANGLEYS	WIND SPEED (MPH)										TOTAL	CUMUL TOTAL	
	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	39-46	>46 MISSING			
≤-75	0.012	0.149	1.339	1.117	0.302	0.041	0.000	0.000	0.000	0.000	0.000	2.960	2.960
-74- -50	0.477	2.809	7.478	3.344	0.795	0.050	0.005	0.000	0.000	0.000	0.000	14.971	17.932
-49- -25	1.186	4.547	6.574	2.931	0.845	0.112	0.008	0.000	0.000	0.000	0.000	16.236	34.168
-24- 0	0.894	2.987	5.975	4.695	1.783	0.270	0.036	0.000	0.000	0.000	0.000	16.675	50.842
1-9	0.060	0.243	0.434	0.408	0.159	0.028	0.004	0.000	0.000	0.000	0.004	1.341	52.183
10-19	0.048	0.244	0.659	0.662	0.234	0.040	0.003	0.000	0.000	0.000	0.000	1.889	54.072
20-29	0.028	0.113	0.333	0.375	0.151	0.021	0.001	0.000	0.000	0.000	0.000	1.026	55.098
30-39	0.035	0.214	0.538	0.618	0.247	0.029	0.003	0.000	0.000	0.000	0.000	1.687	56.785
40-49	0.024	0.118	0.429	0.419	0.157	0.016	0.001	0.000	0.000	0.000	0.000	1.165	57.951
50-59	0.019	0.085	0.399	0.474	0.244	0.019	0.005	0.000	0.000	0.000	0.000	1.245	59.196
60-79	0.031	0.256	0.784	0.925	0.343	0.045	0.005	0.000	0.000	0.000	0.000	2.390	61.586
80-99	0.024	0.191	0.695	0.806	0.316	0.036	0.005	0.000	0.000	0.000	0.001	2.074	63.660
100-149	0.036	0.379	1.272	1.653	0.779	0.093	0.007	0.000	0.000	0.000	0.000	4.224	67.884
150-199	0.013	0.227	1.063	1.406	0.644	0.082	0.012	0.000	0.000	0.000	0.000	3.451	71.334
200-299	0.019	0.371	1.580	2.216	0.981	0.130	0.016	0.001	0.000	0.000	0.000	5.323	76.657
300-399	0.007	0.300	1.298	1.755	0.795	0.137	0.020	0.000	0.000	0.000	0.000	4.315	80.972
400-499	0.003	0.225	1.111	1.468	0.644	0.090	0.009	0.000	0.000	0.000	0.000	3.555	84.528
500-599	0.000	0.157	0.729	1.024	0.445	0.048	0.000	0.000	0.000	0.000	0.000	2.406	86.934
600-799	0.000	0.044	0.206	0.271	0.134	0.011	0.000	0.000	0.000	0.000	0.000	0.666	87.600
≥ 800	0.001	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.005	87.605
MISSING	0.298	1.574	4.058	4.116	1.956	0.308	0.028	0.000	0.000	0.000	0.000	12.395	100.000
TOTAL CUMUL	3.213	15.233	36.954	30.687	11.955	1.606	0.169	0.001	0.000	0.000	0.000	100.000	
TOTAL	3.213	18.446	55.400	86.086	98.042	99.648	99.817	99.818	99.818	99.818	100.000		

Table 268. Joint Percentage Frequency Distribution of 150/19-foot Wind Speed Ratio and Hourly Amounts of Net Radiation on a Horizontal Surface in Tenths of Langleys. June 1956-December 1964. Number of Observations, 75,264

NET RADIATION IN TENTHS OF LANGLEYS	150/19 FOOT WIND SPEED RATIO										TOTAL	CUMUL TOTAL
	<1.0	1.0-1.2	1.3-1.5	1.6-1.8	1.9-2.1	2.2-2.4	2.5-2.9	3.0-3.9	≥ 4.0	MISSING		
≤-75	0.008	0.031	0.602	0.838	0.578	0.419	0.290	0.138	0.032	0.025	2.960	2.960
-74- -50	0.062	0.153	1.762	2.809	2.458	2.293	2.139	1.706	1.113	0.476	14.971	17.932
-49- -25	0.143	0.357	2.570	2.741	2.132	1.695	1.970	1.946	1.798	0.882	16.236	34.168
-24- 0	0.146	1.305	6.145	3.452	1.560	0.849	0.922	0.725	0.797	0.773	16.675	50.842
1-9	0.025	0.161	0.554	0.238	0.105	0.048	0.056	0.049	0.047	0.058	1.341	52.183
10-19	0.029	0.324	0.850	0.333	0.105	0.056	0.044	0.043	0.053	0.052	1.889	54.072
20-29	0.028	0.240	0.498	0.120	0.037	0.017	0.009	0.015	0.021	0.029	1.026	55.098
30-39	0.037	0.375	0.808	0.238	0.070	0.037	0.036	0.025	0.021	0.035	1.687	56.785
40-49	0.025	0.300	0.521	0.171	0.058	0.024	0.017	0.016	0.012	0.020	1.165	57.951
50-59	0.033	0.345	0.654	0.133	0.028	0.015	0.009	0.007	0.005	0.016	1.245	59.196
60-79	0.078	0.707	1.060	0.322	0.098	0.028	0.015	0.021	0.015	0.047	2.390	61.586
80-99	0.043	0.638	1.062	0.189	0.057	0.021	0.013	0.013	0.009	0.029	2.074	63.660
100-149	0.147	1.551	2.006	0.333	0.076	0.019	0.019	0.011	0.016	0.047	4.224	67.884
150-199	0.126	1.346	1.670	0.221	0.050	0.007	0.008	0.004	0.004	0.015	3.451	71.334
200-299	0.248	2.229	2.446	0.262	0.069	0.009	0.016	0.011	0.004	0.028	5.323	76.657
300-399	0.203	1.796	2.046	0.177	0.048	0.007	0.011	0.005	0.007	0.016	4.315	80.972
400-499	0.189	1.592	1.588	0.121	0.033	0.004	0.005	0.004	0.009	0.011	3.555	84.528
500-599	0.166	1.058	1.004	0.105	0.031	0.004	0.013	0.009	0.005	0.011	2.406	86.934
600-799	0.065	0.256	0.280	0.040	0.011	0.005	0.001	0.001	0.001	0.004	0.666	87.600
≥ 800	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.005	87.605
MISSING	0.233	1.581	5.046	2.607	0.999	0.445	0.442	0.353	0.375	0.314	12.395	100.000
TOTAL CUMUL	2.037	16.345	33.177	15.459	8.604	6.002	6.036	5.103	4.350	2.887	100.000	
TOTAL	2.037	18.382	51.559	67.017	75.622	81.623	87.659	92.763	97.113	100.000		

Section 2.3

Relationships Involving Precipitation

Tables 269 through 275. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and Wind Directions during Hours of Precipitation. Monthly and Total Period. January 1950-December 1964.

Hours of precipitation include those measuring a trace. Precipitation apparently may occur when the wind is blowing from any direction with no pronounced maximum frequency of wind direction associated with precipitation. However, a comparison of Tables 276 through 288 shows that winds with an easterly component occur more frequently during precipitation. The higher percentage frequency of winds exceeding 12 mph no doubt is due to the effect of intense lows, associated with stormy conditions.

Tables 276 through 288. Joint Percentage Frequency Distribution of 150-foot Wind Speed (mph) and Wind Direction during Hours of No Precipitation and Stability as Indicated. Monthly and Total Period. July 1951-December 1964.

Stable conditions for these tables are defined as those under which the temperature is constant or increasing with height. Unstable conditions are defined as those under which the temperature is decreasing with height. Comparing these tables, it is evident that calm conditions are more frequent under stable conditions and also that northerly winds are most frequent under unstable conditions. There is a substantially greater number of cases with speeds exceeding 24 mph under unstable conditions. This results from the pronounced mixing which occurs with high wind speeds that tends to make the temperature variation with height take on the adiabatic or neutral lapse rate.

Tables 289 through 292. Joint Percentage Frequency Distribution of Hourly Precipitation Amounts in Inches and 150/19-foot Wind Speed Ratio. Monthly and Total Period. January 1950-December 1964.

During periods of precipitation, near neutral conditions often prevail and the lower atmospheric layer is well mixed. These tables show that the values of the wind speed ratio corresponding to those of neutral conditions (ratio = 1.35) are most prevalent.

Tables 293 through 299. Joint Percentage Frequency Distribution of Hourly Precipitation Amounts in Inches and 5.5-foot Temperature (°F). Monthly and Total Period. January 1950-December 1964.

An examination of the temperature distribution during all hours of precipitation shown in Table 299 shows a bimodal frequency distribution, with the maxima occurring in the 30-34°F and 65-69°F class intervals. Table 244, which gives the frequency distribution of temperature for all hours also indicates bimodality in the temperature distribution; however, the maximum in the 30-34°F class under precipitation conditions is relatively larger. This maximum is associated with the change of state in the freezing, melting or sublimation of water.

The frequency of precipitation when the temperature is above 75°F or below 10°F is exceedingly low. When the hourly temperature was less than 30°F, the maximum amount of precipitation recorded in an hour was in the 0.10- to 0.49-inch interval.

