

September, 1964

U.D.C.: 551.553.6

Meteorological Office

CLIMATOLOGICAL MEMORANDUM No. 44

PERCENTAGE FREQUENCY OF SURFACE WIND SPEED AND DIRECTION AT

CASTLE ARCHDALE, CO. FERMANAGH

by

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INTRODUCTION

1. In the absence of anemograph records from any station in Co. Fermanagh, an analysis has been made of mean wind speeds related to direction recorded by Meteorological Office staff at the now closed airfield at Castle Archdale. The data used covers the eight years, 1949-1956 inclusive, and comprises "spot wind" observations (the mean over about five minutes) taken four times in the day, at 03h., 09h., 15h. and 21h. G.M.T. The cup-generator anemometer and indicating wind vane were at some 73 feet above ground level, but, due to obstructions, etc. the data were considered to be representative of the mean wind at the standard height of 33 feet above ground level.

2. The position of Castle Archdale by Irish National Grid Reference is iH(23) 175587, and the site is approximately 225 feet above the (new) Belfast mean sea level Ordnance Datum.

NOTES ON TABLES

3. Monthly tables of percentage frequency within 30° bands of direction from which the wind blew, with associated wind speeds in knot-bands linked to the "Beaufort" scale of wind force are given, together with a thirteenth table covering the year as a whole.

4. Total percentage frequency of direction, irrespective of speed, is given at the foot of each direction band. Total percentage frequency of speed, irrespective of direction, is given at the right-hand end of each speed range row. In computing these total percentage frequencies, attention was paid to the actual frequencies expressed as a percentage of the total number of occasions, and thus these totals are not the strict arithmetic total of the individual values given in the main part of the table.

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PERCENTAGE FREQUENCY

SPEED Kt.	350- 010°	020- 040°	050- 070°	080- 100°	110- 130°	140- 160°	170- 190°	200- 220°	230- 250°	260- 280°	290- 310°	320- 340°	*TOTAL
<u>JANUARY</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	10.29
1- 3	0.10	-	0.20	0.61	1.11	1.61	0.91	0.91	0.40	0.30	0.30	0.50	6.96
4- 6	0.10	0.40	0.30	0.30	1.01	4.54	2.82	0.81	1.11	0.61	1.21	1.61	14.83
7-10	0.71	0.50	0.71	0.71	2.62	5.55	3.43	3.02	2.92	2.92	3.43	1.92	28.42
11-16	0.91	0.40	0.81	0.61	1.92	2.82	2.42	3.43	3.73	3.33	2.72	1.51	24.61
17-21	0.30	-	-	0.10	-	0.81	0.71	0.91	1.92	2.42	1.51	0.61	9.28
22-27	0.20	-	-	-	-	0.71	0.10	0.30	0.71	1.01	0.81	-	3.83
28-33	-	-	-	-	-	-	-	-	0.30	0.30	0.40	-	1.01
34-40	-	-	-	-	-	-	-	-	0.20	0.40	-	0.20	.81
*TOTAL	2.32	1.31	2.02	2.32	6.66	16.05	10.39	9.38	11.30	11.30	10.39	6.35	

FEBRUARY

Calm	-	-	-	-	-	-	-	-	-	-	-	-	10.02
1- 3	0.45	0.67	0.22	0.89	2.23	1.78	1.02	0.33	0.22	0.89	1.11	0.45	10.24
4- 6	0.56	0.78	0.33	0.67	4.01	2.67	1.22	1.67	1.34	0.89	1.02	0.67	15.80
7-10	1.67	1.56	1.34	1.11	2.45	3.34	1.89	2.12	2.78	2.67	2.67	3.45	27.04
11-16	1.22	1.34	1.22	0.22	1.22	2.45	1.89	2.89	4.23	3.45	2.56	2.56	25.25
17-21	0.33	0.11	-	-	0.11	0.56	0.67	1.45	1.22	1.34	0.89	0.22	6.90
22-27	0.45	-	-	0.11	-	-	-	0.67	0.78	1.02	0.45	-	3.45
28-33	-	-	-	-	-	-	-	0.11	0.11	0.22	0.22	-	.67
34-40	-	-	-	-	-	-	-	0.11	0.11	0.33	-	-	.56
*TOTAL	4.67	4.45	3.12	3.00	10.02	10.80	6.68	9.35	10.80	10.80	8.91	7.35	

MARCH

Calm	-	-	-	-	-	-	-	-	-	-	-	-	11.90
1- 3	0.60	0.10	0.20	1.00	2.42	2.22	0.50	0.30	0.71	0.71	0.60	0.60	9.78
4- 6	0.30	0.30	0.81	1.71	3.32	3.02	1.12	0.60	0.91	1.12	0.81	0.60	14.61
7-10	1.92	1.21	0.81	3.83	6.15	6.05	2.12	2.12	2.12	2.72	1.51	1.51	32.05
11-16	1.41	1.21	1.31	1.41	3.83	2.22	1.21	1.21	1.61	3.02	2.22	1.12	21.78
17-21	0.50	-	0.50	0.40	0.40	0.30	0.10	1.21	0.81	1.81	0.91	0.20	7.16
22-27	0.10	0.10	-	-	-	-	-	0.50	0.40	0.61	0.40	0.10	2.22
28-33	0.10	0.10	-	-	-	-	-	-	0.10	0.10	-	-	.40
34-40	-	-	-	-	-	-	-	-	-	0.10	-	-	.10
*TOTAL	4.94	3.02	3.63	8.36	16.13	13.81	5.04	5.95	6.65	10.19	6.45	4.13	

*See Introduction para. 4.

PERCENTAGE FREQUENCY

SPEED Kt.	350- 010°	020- 040°	050- 070°	080- 100°	110- 130°	140- 160°	170- 190°	200- 220°	230- 250°	260- 280°	290- 310°	320- 340°	*TOTAL
<u>APRIL</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	8.54
1- 3	0.73	0.63	0.21	0.31	1.14	1.98	1.04	1.25	0.42	0.94	0.63	0.83	10.09
4- 6	1.46	0.73	0.42	1.35	2.81	2.08	1.56	1.14	0.73	1.25	1.46	0.83	15.82
7-10	2.39	0.73	1.14	1.67	2.50	3.33	2.60	3.33	3.13	3.23	3.13	1.98	29.16
11-16	1.67	0.73	0.31	0.42	0.94	1.35	1.56	2.81	3.44	4.38	4.27	2.29	24.10
17-21	0.73	0.10	-	-	0.21	0.21	0.21	0.73	1.77	2.39	1.67	0.31	8.23
22-27	0.10	0.10	-	-	-	0.21	0.10	0.10	0.42	0.52	0.73	0.21	2.50
28-33	0.31	0.10	-	-	-	-	-	-	0.21	0.73	0.10	-	1.46
34-40	-	-	-	-	-	-	-	-	0.10	-	-	-	.10
*TOTAL	7.39	3.12	2.08	3.75	7.61	9.16	7.08	9.37	10.22	13.44	11.99	6.45	

<u>MAY</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	8.47
1- 3	0.81	1.01	0.61	1.61	1.31	1.61	0.10	0.30	0.61	0.61	1.31	0.30	10.18
4- 6	1.71	1.51	1.71	1.71	3.33	2.42	1.01	0.40	0.91	0.71	1.41	0.71	17.54
7-10	2.52	2.12	1.21	3.23	3.43	3.63	1.92	1.61	1.11	2.42	4.23	2.02	29.42
11-16	1.71	1.31	1.01	1.51	1.92	1.81	1.21	1.41	2.92	2.82	3.33	2.42	23.39
17-21	0.81	0.40	0.30	0.20	0.20	0.20	0.30	0.81	1.01	1.92	1.01	0.81	7.97
22-27	0.40	-	-	-	0.10	0.10	0.10	0.10	0.10	0.40	0.30	0.40	2.02
28-33	0.20	-	-	-	-	-	-	-	0.10	0.40	-	0.10	.81
34-40	-	-	-	-	-	-	-	-	-	-	0.10	-	.10
*TOTAL	8.16	6.34	4.84	8.26	10.28	9.77	4.64	4.64	6.76	9.27	11.68	6.76	

<u>JUNE</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	9.28
1- 3	0.94	0.52	0.31	0.42	2.29	1.25	0.42	1.14	0.31	1.56	1.25	0.31	10.72
4- 6	1.25	1.04	0.63	2.38	3.33	1.98	1.88	1.25	0.73	1.77	1.87	1.14	19.27
7-10	2.92	1.25	0.94	1.35	3.02	1.98	1.88	3.13	2.60	4.58	4.68	2.29	30.61
11-16	1.46	0.42	-	1.04	0.83	0.83	1.14	3.02	2.50	5.63	4.90	2.19	24.07
17-21	0.42	-	-	0.10	-	-	0.10	0.52	0.21	1.25	1.25	0.63	4.48
22-27	-	-	-	-	-	-	-	0.42	0.10	0.52	0.21	0.21	1.46
28-33	-	-	-	-	-	-	-	-	-	0.10	-	-	.10
34-40	-	-	-	-	-	-	-	-	-	-	-	-	-
*TOTAL	6.98	3.23	1.87	5.32	9.47	6.04	5.42	9.48	6.46	15.41	14.16	6.77	

*See Introduction para. 4.

PERCENTAGE FREQUENCY

SPEED Kt.	350- 010°	020- 040°	050- 070°	080- 100°	110- 130°	140- 160°	170- 190°	200- 220°	230- 250°	260- 280°	290- 310°	320- 340°	*TOTAL
<u>JULY</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	10.48
1- 3	0.91	0.50	0.50	0.81	1.21	1.31	0.71	0.10	0.40	0.91	1.21	0.20	8.78
4- 6	1.41	1.51	0.40	0.50	1.92	1.92	1.21	1.41	0.61	1.21	1.21	0.40	13.70
7-10	1.92	1.81	1.01	1.31	2.42	1.92	0.91	2.72	3.63	6.75	5.44	1.92	31.78
11-16	0.71	0.30	0.30	0.20	0.50	1.41	1.31	1.31	3.43	9.78	4.74	2.02	26.00
17-21	-	0.10	-	-	-	-	-	0.40	0.30	4.94	2.02	0.40	8.16
22-27	-	-	-	-	-	-	-	-	-	0.61	0.30	0.10	1.01
28-33	-	-	-	-	-	-	-	-	-	0.10	-	-	0.10
34-40	-	-	-	-	-	-	-	-	-	-	-	-	-
*TOTAL	4.94	4.23	2.20	2.82	6.05	6.56	4.14	5.95	8.37	24.30	14.92	5.04	

AUGUST

Calm	-	-	-	-	-	-	-	-	-	-	-	-	11.59
1- 3	0.91	0.40	0.20	0.91	2.02	1.71	1.11	0.50	0.50	0.81	1.21	0.30	10.58
4- 6	1.31	0.71	0.50	0.91	2.22	2.82	2.32	1.01	2.22	1.61	1.51	1.11	18.25
7-10	2.62	1.71	0.40	0.30	2.82	2.22	1.61	4.03	3.94	3.83	5.04	2.12	30.62
11-16	1.31	0.50	0.10	0.20	1.01	1.41	0.91	3.33	3.53	4.44	3.73	2.12	22.60
17-21	0.20	-	-	-	-	0.10	0.10	0.61	0.50	2.02	1.01	0.50	5.04
22-27	-	-	-	-	-	-	-	0.10	0.40	0.50	0.20	-	1.21
28-33	-	-	-	-	-	-	-	-	-	0.10	-	-	.10
34-40	-	-	-	-	-	-	-	-	-	-	-	-	-
*TOTAL	6.35	3.33	1.21	2.32	8.07	8.27	6.05	9.58	11.09	13.31	12.70	6.15	

SEPTEMBER

Calm	-	-	-	-	-	-	-	-	-	-	-	-	8.33
1- 3	0.42	0.10	0.42	0.73	1.98	1.87	0.94	0.52	0.52	0.42	0.10	0.31	8.33
4- 6	0.63	0.83	1.35	0.52	2.29	2.92	2.19	1.04	0.63	0.73	0.83	0.73	14.68
7-10	1.46	1.77	1.04	1.25	3.65	4.06	3.02	3.23	3.13	2.50	2.19	1.46	28.76
11-16	0.83	1.04	0.63	0.52	1.77	1.87	1.35	4.48	3.75	5.11	3.96	1.04	26.39
17-21	-	0.10	-	-	0.10	0.31	0.21	0.73	1.46	3.54	2.50	0.31	9.26
22-27	-	-	-	-	0.10	0.21	-	0.31	0.63	0.94	1.04	0.31	3.54
28-33	-	-	-	-	-	-	-	-	0.21	0.31	0.21	-	.73
34-40	-	-	-	-	-	-	-	-	-	-	-	-	-
41-47	-	-	-	-	-	-	-	-	-	-	-	-	-
48-55	-	-	-	-	-	-	-	-	-	0.10	-	-	-
*TOTAL	3.34	3.85	3.44	3.02	9.89	11.24	7.71	10.31	10.33	13.65	10.83	4.16	

*See Introduction para. 4.

PERCENTAGE FREQUENCY

SPEED Kt.	350- 010°	020- 040°	050- 070°	080- 100°	110- 130°	140- 160°	170- 190°	200- 220°	230- 250°	260- 280°	290- 310°	320- 340°	*TOTAL
<u>OCTOBER</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	9.38
1- 3	0.10	0.40	-	0.30	1.92	2.52	1.11	0.30	0.20	0.61	0.50	0.30	8.26
4- 6	0.61	0.50	0.61	0.91	3.43	3.94	1.61	2.22	1.51	1.11	0.30	0.30	17.05
7-10	0.61	0.71	0.91	1.11	4.13	5.14	3.23	3.43	2.52	1.51	2.92	2.22	28.42
11-16	0.81	0.30	0.10	0.40	2.42	3.43	2.52	5.14	4.44	3.33	23.2	1.92	27.12
17-21	0.40	0.10	-	0.10	0.61	0.40	0.50	1.51	1.31	1.11	0.91	0.50	7.46
22-27	0.10	0.20	-	-	-	0.20	0.10	0.30	0.30	0.30	0.20	0.10	1.81
28-33	-	-	-	-	-	-	-	0.20	0.10	-	-	-	.30
34-40	-	-	0.10	-	-	-	-	0.10	-	-	-	-	.20
*TOTAL	2.62	2.22	1.72	2.82	12.50	15.62	9.07	13.20	10.38	7.96	7.16	5.34	

<u>NOVEMBER</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	10.10
1- 3	0.73	0.42	0.31	0.73	3.02	1.25	0.42	0.63	0.21	0.42	0.52	0.42	9.07
4- 6	0.83	1.04	0.42	0.63	1.77	3.96	2.71	0.83	0.94	0.73	1.14	1.35	16.35
7-10	1.25	1.25	0.63	0.83	1.77	5.52	2.60	3.44	2.71	1.87	2.71	2.40	26.98
11-16	0.63	0.42	0.73	0.73	1.98	2.81	1.77	2.81	5.52	2.50	3.44	2.18	25.50
17-21	0.31	0.10	-	0.31	0.21	0.42	0.21	0.63	1.04	2.29	1.14	0.21	6.88
22-27	-	-	-	0.10	0.21	-	0.10	0.31	0.31	1.56	1.04	0.10	3.75
28-33	-	-	-	-	-	-	-	-	0.10	0.63	-	-	.73
34-40	-	-	-	-	-	-	-	-	0.10	0.21	0.31	-	.63
*TOTAL	3.75	3.23	2.08	3.33	8.96	13.96	7.81	8.65	10.93	10.21	10.31	6.66	

<u>DECEMBER</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	7.97
1- 3	0.10	0.20	0.40	0.61	1.41	1.41	0.50	0.50	0.10	0.20	0.50	0.30	6.04
4- 6	0.20	0.40	0.30	0.40	1.82	3.53	2.22	1.11	0.50	0.71	0.71	0.50	12.40
7-10	0.81	0.81	1.01	1.21	3.02	6.56	3.23	3.43	2.82	1.82	3.02	1.31	29.05
11-16	0.71	0.61	0.30	0.20	1.41	3.23	2.52	4.64	4.84	3.33	2.82	1.31	25.91
17-21	0.20	0.20	0.10	-	0.30	0.30	0.40	1.71	2.52	2.42	2.02	0.71	10.89
22-27	0.20	0.10	-	-	-	-	0.10	0.50	0.81	1.01	1.71	0.10	4.53
28-33	0.10	-	-	-	-	-	-	-	0.30	0.81	0.50	-	1.71
34-40	-	0.20	-	-	-	-	-	0.10	0.20	0.61	0.40	-	1.51
*TOTAL	2.32	2.52	2.12	24.2	7.96	15.02	8.77	11.99	12.09	10.89	11.69	4.23	

*See Introduction para. 4.

PERCENTAGE FREQUENCY

SPEED Kt.	350- 010°	020- 040°	050- 070°	080- 100°	110- 130°	140- 160°	170- 190°	200- 220°	230- 250°	260- 280°	290- 310°	320- 340°	*TOTAL
<u>WHOLE YEAR</u>													
Calm	-	-	-	-	-	-	-	-	-	-	-	-	9.71
1- 3	0.54	0.43	0.33	0.80	1.87	1.65	0.71	0.52	0.38	0.69	0.79	0.36	9.07
4- 6	0.87	0.81	0.65	1.00	2.60	2.99	1.84	1.10	1.01	1.03	1.12	0.83	15.85
7-10	1.73	1.28	0.92	1.50	3.18	4.12	2.37	2.98	2.77	3.08	3.42	2.04	29.40
11-16	1.12	0.71	0.54	0.63	1.65	2.13	1.64	3.04	3.65	4.26	3.42	1.90	24.70
17-21	0.35	0.10	0.08	0.10	0.17	0.30	0.29	0.93	1.17	2.29	1.41	0.45	7.65
22-27	0.13	0.04	-	0.02	0.03	0.12	0.05	0.30	0.41	0.74	0.62	0.14	2.60
28-33	0.06	0.02	-	-	-	-	-	0.03	0.13	0.32	0.12	0.01	0.68
34-40	-	0.02	0.01	-	-	-	-	0.03	0.06	0.14	0.07	0.02	0.33
41-47	-	-	-	-	-	-	-	-	-	-	-	-	-
48-55	-	-	-	-	-	-	-	-	-	0.01	-	-	0.01
*TOTAL	4.80	3.41	2.53	4.05	9.50	11.31	6.90	8.93	9.60	12.56	10.96	5.74	

*See Introduction para. 4.

