

1863	10 Air			Wind		Rain			
January	E.	A.	Bar	Hygr. ²	Dir.	Miles	Sq	R. ²	
1	44.1	46	29.242	44.4 43.8	SW ^W	350.5	0.200	0.213	o r N
2	37.2	41.4	29.156	37.3 36.5	SW ^W	212.	0.316	0.389	b. v h CK. CS RR=0389
3	35	36.8	29.192	34.9 33.9	SW	161.5	—	drop	o v h KS
4	35	39	28.910	35.8 34.8	SW	99.9	0.099	0.136	6 v CK snow on Derry hills
5	36.9	39	28.672	36.9 36	S ^W	136.5	—	0.002	o v h KS. Sawell v. S. gins white N over AB
6	33.4	35.8	28.788	33.9 32.9	S	16.0	—	drop	6 fog KS. K. A. fog in the lake luminous
7	37.9	39	29.028	37.9 36.9	NNW	85.	0.071	0.096	6 v h CS KS. C.
8	38.9	38.9	29.206	38.3 37.3	NE	67.0	open	0.191	6 v h r KN KS black at North
9	38.1	38.8	29.591	38.3 37.9	N E	111.4	0.022	0.041	o v h nizzle S
10	40	40	29.608	38.6 38.2	SE E	115.5	0.402	0.472	o v h K KS blackbird
11	36.1	39	29.700	36.1 35.8	SW	30	0.018	0.017	6 m CK clouds very high through
12	42.8	41	29.596	42.2 42.2	S	260.5	0.148	0.168	o rain
13	36.5	39	29.588	36.9 35.9	E S	86.5	0.025	0.087	o v m nizzle CS. S. thrushes
14	35.8	37.2	30.146	36.0 35.1	SSW	61	—	drop	6 v m C. CK. S. blackbird!
15	41.1	40	30.331	41.5 41	SW	38.0	—	—	log
16	40	40.5	30.260	40.3 40	WSW	2.8	—	2 drop	o v fog KS not so foggy as 15th birds of many kinds
17	39.8	40.8	29.974	40.1 39.1	SW	36.5	—	—	o v m S. K. cloud much higher S. gins v.
18	39	40	29.212	39.1 38.6	W S	188	0.113	0.296	6 v m: C. CK. S. mountains cloud hid
19	43.1	42	29.209	43.2 42.2	W ^N	284	0.006	0.122	6 v m. CK. KN AB very harsh. S. gins D hills
20	37.1	39.8	28.782	37.4 36.4	W	307	0.199	0.547	6 v m show N. K. C.
21	36.4	38.1	29.410	36.5 35.7	W S	170	0.214	0.431	6 v h CS. CK Spail yesterday very strong Halo
22	48	44.5	29.182	48.8 48	SSW	338.9	0.077	0.106	o rain
23	41.2	44	28.973	41.7 38.7	SSW	353.	0.101	0.235	6 v K N. singularly stormy forms
24	36.9	39.1	29.053	37.9 37.1	SW ^W	144.5	0.078	0.166	6 v q K. KS. Derry hills v
25	41	40	29.824	40.2 40.2	SW ^W	198.7	0.160	0.289	6 v h C CKS
26	47.5	44.2	29.519	47.2 46.2	S ^W	338.5	—	—	o r NS Bar heavy
27	39.1	42.3	29.970	39.2 36	W S	298.	—	0.116	6 h CS. C
28	38.7	41	30.087	39 36.5	S	141.0	trace	0.05	o m CS
29	48.5	47.5	29.241	48.7 45.6	SW	371.8	0.266	0.529	6 m KS CS NS Bar heavy
30	47.6	46.8	28.936	47.2 46.7	SW	301.5	0.020	0.063	o r NS. CS. a few K
31	37.5	43	29.342	37.6 36.2	NW ^N	87.5	0.101	0.217	6 v S. K. C. CS. S. gins almost visible blackbird
	39.49	40.78	29.409				2.636	4.954	
							21877		

1863	10 P.M.				Wind		Thermom		
January	E	A	Bar	Hygi	Dir.	Miles	Max	Min	
1	40.3	43.2	29.109	40.7	SSW	286	49.	40.	o v CS
2	33.9	40.5	29.220	34.1	SW	241.5	43	34	o v CK CS
3	35.2	38.8	28.960	35.6	NE	218.1	38	32	o v KS N raining {Hyg 35.6 34.6
4	38.2	40.2	28.739	38.4	S	181.0	41.	33.8	o v KS
5	30.7	38.5	28.694	37.8	NE	81.5	39.	31.	o v m K
6	33.7	37.	28.907	36.9	N	25.5	36.	24	o v fog at 10 ^h 30 ^m
7	37.4	39	29.000	37.3	NW	192.5	43.2	33	o v rain KS NS
8	39.2	40	29.561	38.7	NNE	191.	43	35	o v K. KS.C. slight Aurora stars bright
9	38.6	39.4	29.456	38.8	NE	104.6	42	33.5	o g thick smutt black
10	38.1	39.5	29.610	38.9	NE	92.	43	38	o gl black sky dark. faint white K all over
11	37.2	39.2	29.714	37.2	S	112.0	41	33	o v K CK
12	36.9	40.	29.654	37.2	SW	127.5	43.5	34.5	o gl rain
13	32.9	38.2	29.898	32.8	SW	76	39.8	33.5	o v h C. slight Aurora
14	40.2	39	30.276	40.2	SW	93.5	42.5	32	o smoky foggy
15	40.8	40.8	30.296	40.2	SW	12.2	44.5	38.5	o foggy smoky - obscure
16	40.2	41.	30.181	40.6	W	not marked	44.3	38	o foggy irregularly pleasant.
17	41.8	42.	29.290	41.2	SW	257	46	38	o murky
18	47	42.	29.044	47.5	W6N	244.5	49	35	o dark - trace of Aurora in NE and cloudy white
19	46	43.5	28.825	46.2	WSW	299.5	48	41	o dark luminous rack smrt
20	33.9	38.	29.195	34.2	W6S	322.	45	33	o v bank of cloud near horizon - and light
21	44.4	40.5	29.206	44.7	SSW	226.6	46.7	32.5	o very dark
22	49.3	46.8	29.024	49.8	SSW	347.	52	42	o 3 stars in z. K broken
23	35.7	39.8	29.212	35.9	S	326.	49	34.5	o v. bank of cloud all round and slight rack NW to SE
24	37.2	40.	29.491	37.6	SW	232.8	43.8	34.5	o v N. KN curious trace aurora at 11 ^h p.m.
25	44.2	43.	29.803	44.7	SSW	282.0	49.	35.5	o v K blustering
26	45.	48.5	29.320	45.4	WSW	328.5	54.2	43	o v bl. KS. CS Wreck
27	38.1	44	30.246	38.5	SW6S	163.0	46.2	37	o v. d. KS. N. Moon halo 45.990
28	46.5	45	29.520	46.2	SW	282.7	49	35	o v. d. q. KS
29	47.8	46.7	29.146	48.1	SSW	340.0	52	45	o v q K
30	41.1	44	28.950	41.6	SW	184.0	48.8	39.5	o v KS still & calm
31	38.8	42.	29.291	39.2	SSW	197.6	43	36.	o v KS
	39.69	41.29	29.412				44.82	36.14	
							44.98	35.65	

1863		10 A.M.		Wind			Rain		
February	E	A	Bar:	Hygi	Dir	Miles	Sq	R	
① 1	39	42.2	29.296	39 37	SW	235.9	0.051	0.124	6 v m. K NS bitter. Sg just visible
2	46.9	44.5	29.285	47.1 44.2	WSW	355	0.121	0.257	6 v m. Scud chaffinches
3	38.8	46	29.337	38.8 36.7	SWW	239.7	0.027	0.069	6 v K Se. Sg v or snowy. 2 some dry hills. bitter
4	46.7	43.2	29.606	46.7 46.2	SWW	250.5	0.040	0.124	or NS KN
5	44.7	43	29.816	44.7 42.8	SWWS	172.8	0.080	0.241	6 m v. CK. CS. S
6	49.2	47	29.958	49.2 47.2	WSW	225.5	—	—	or RS. S. outlines harsh (at hor) Jackson N. but Sg mo
7	48.4	45.8	29.947	48.4 42.7	W	206.5	0.025	0.065	a. v. d. KS
① 8	40	42	29.789	40 38	WSW	135.5	—	—	6 v h dr KCS — Sg. 8 D partly direct.
9	37.2	39.2	29.850	37.2 36.2	SW	229*	0.006	0.028	6 v m CS. KS. S.C. * this includes the 24 hours halo
10	44.7	43	29.750	44.7 43.4	SW	190.7	Trace	0.077	or (thick) NS
11	47	45	29.673	47 44.2	SSW	208.0	0.034	0.079	6 v. K.C. CK. Grey high - Sg. ge just visible
12	39.7	40.9	30.126	39.5 38	SW	146.0	0.077	0.114	6 v h S. CS
13	36.5	40	30.410	36.5 35.3	SSE	30.2	—	0.003	6 v h m S.C. CS curious fog in valleys & miles off no songs
14	40.1	41.1	30.322	40.1 38.5	E	66	—	0.004	6 v h RS - K. no birds
① 15	39.1	40.5	30.293	39.1 36.9	SELS	100	0.012	—	or h KS some birds
16	41	41	30.267	41 38.3	SSW	102	—	—	6 h C. CS
17	44.	42.4	30.164	44 42	SW	220	—	—	6 m. e. cs. KS. 9
18	45.7	44.8	30.170	45.7 43.2	SWW	150	0.135	0.138	o. m. rain
19	42.7	43.	30.230	42.7 42.7	SW	13	0.025	0.051	a. fog
20	45.	46.5	30.105	45 42.8	SE	—	—	—	6 v KS. CS
21	44.	42.	29.940	44 41	S	—	—	—	6 v KS.
① 22	41	41	30.440	41 40.8	SWW	127-0	0.150	0.161	6 m C. CS. KS
23	42	42	30.150	42 40.4	WbW	273.5	0.008	—	6 m, CS, KS
24	44.4	44	30.120	44.4 43.6	SSW	49-0	—	—	6 m KS uniform grey
25	44	44.2	30.100	44 42	SWWS	192.5	1 drop	0.015	6 m C CK CS
26	47.6	46	29.823	47.6 45.2	SWWS	324.3	Trace	0.042	6 m sm. NCS
27	49.9	48	29.756	49.9 47.8	SW	295.8	—	0.002	6 h v KS - S
28	47.5	45	29.841	47.5 45.6	S	161.5	—	0.062	o. v. KS. CS at 10 ^h 30
29									
	43.10	43.48	29.947				0.791	1.798	

1863	10 P M						Therm		
Feb 7	E	A	Bar:	Hygr	Dir	Miles	Max	Min	
① 1	39.9	41.5	29.419	^{40.1} 39.1	SW	220	44	36.5	o v KS slight halo
2	40.1	44	29.264	^{40.2} 38.2	S	288.3	46	39.5	b v K ^{thick white banks large} corona
3	34.3	41	29.656	^{34.8} 33.2	SW6S	245.0	39	33	o v K Halos of 45-90 glist
4	42.1	44.2	29.556	^{42.8} 39.5	W	402.2	50	33	b v K bluster
5	49	46	29.875	^{49.5} 48.5	SW6W	261.5	57.8	39	o v K S. ex black clouds.
6	46.7	46.8	29.859	^{46.8} 45.6	SW	298	53	46	o v. KS blowery hard but steady
7	37.6	44.2	29.871	^{37.8} 36.8	W6S	141.5	46	38	b v. S round horizon looks
① 8	33.3	42	29.891	^{32.8} 32.8	SW	x	43	33.5	b v. dusky KS slight Aurora * clock stop
9	42.6	42.5	29.724	^{42.9} 42.9	SW	232.3	45.2	32	b v dusky KS sky high soft much light no moon
10	43.9	43.4	29.848	^{44.2} 43.4	SW	137.5	49.8	39.5	o dusky - bland traces of aur
11	36.5	43.5	29.874	^{36.8} 36.7	SW	211.0	44.3	36.8	b v - CS auroral light
12	34.7	43	30.324	^{35.5} 34.5	SW	109	42.2	34	b v m auroral light
13	37.5	43	30.376	^{37.8} 36.2	E	136.5	44.3	30.5	b v m of thick refs all round horizon
14	37.2	42.2	30.224	^{37.2} 36	SE	133.5	42.5	35	b thick at horizon dash
① 15	39.1	42.5	30.272	^{39.1} 38.7	SE	137.5	44.1	34	b dash
16	38.4	44	30.225	^{38.7} 37.2	S	131	44.5	35	b. thin SW - g
17	46.4	45	30.140	^{46.8} 44.4	SW	260	50	37.5	b m. uniform grey cloud
18	40.3	44	30.205	^{40.7} 40.6	S.W	27	46.6	40	b m. HS.
19	39.6	44	30.208	^{40.1} 39.8	SW		49	37.5	b m. HS
20	40.3	45	30.020	^{40.3} 40.3	SW		51	33.5	b v KS
21	36	42	29.960	^{36.2} 36.2	SW	172.0	45.2	35	b m KS
① 22	42	41	30.190	^{42.3} 41.3	SW6W	311.0	49	31	o m KS
23	43.9	44.2	30.158	^{44.3} 43.2	W	67.0	49.6	41	o v KS
24	44.5	44.8	30.003	^{44.6} 42.9	S	143.0	48.9	41.8	b v KS (moon behind clouds)
25	44.1	45	30.003	^{44.6} 43.1	S	128.2	50	42	o v KS uniform grey (30)
26	48.8	47.1	29.833	^{48.1} 46.2	SW	305.0	51	44	o v KKS - wonderfully dark for age of moon
27	38.9	46.2	29.950	^{39.1} 38.8	SW	199	52	39	b v.
28	45.1	46	29.511	^{45.5} 43.8	S 1/2 E	287.5	51	36.5	o. K. v. CS. KS Halo
	40.89	43.86	29.945				47.05	36.7 1/4	
							47.25	36.93	

March 1863		10 A.M.		Wind			Rain		
		E	A	Bar:	Hygr	Dir Miles	Sq	R	
①	1	47.1	46.2	29.284	47.7 44.6	SSW 316	—	0.089	o.v.g.KS. CS
	2	50	47.5	29.318	50.3 47.9	S 255.5	—	0.022	o.v.g.KS
	3	53.9	50	29.317	51.4 50.9	SW 210	0.135	0.160	b.v.g.KS. CS
	4	48	47.2	29.333	48.1 46.5	SE 102.5	Drp. Dr	—	o.v.d.KS
	5	46.8	46.5	29.270	47.8 46.5	SSE 207.5	—	—	o.v.h.KS
	6	45.2	45	28.910	46.5 42.5	SE 199.	0.320	0.310	o.v.g.KS
	7	41	42.8	29.144	41.4 38.5	SW 215.5	0.172	0.231	o.v.m.KS. CS
①	8	37.3	41	29.393	37.9 36.3	NW 125	0.217	0.278	o.v.m.d.KS. N
	9	40	39.8	29.321	39.6 38.8	SSW 81.5	trace	—	o.v.m.CS. C. KS Halo
	10	41.2	40.8	29.119	41.1 36.6	E 109	—	—	b.v. CK. K
	11	38	39	29.143	37.2 36.1	EN 27	—	—	b.v.m
	12	38.1	41	28.884	38.5 37.2	ES 200	0.250	0.338	o.m.g.KS. N
	13	40.7	41.5	29.087	41 39.6	NE 129	0.160	0.236	o.v.m.g.KS
	14	42.2	41	29.026	42 40.3	SSE 113	0.009	0.012	o.v.m.KS
①	15	41.4	41	29.052	41.2 39.4	N 83	0.095	0.065	b.v.K. CK
	16	43.2	40.2	29.987	43.4 39.1	N 38	0.001	0.019	b.v.
	17	39	40	30.128	38.7 36.4	WSW 41	—	—	b.v.K. S
	18	42.8	42	29.840	40.8 39.8	WNW 133.5	0.225	0.244	b.v.KS. CS. g
	19	44.7	41.5	29.928	44.4 42.3	SW 93	Drp. 0.015	—	o.v.m. CK. S
	20	46.7	45.2	29.488	47.1 43.3	WS 277	—	0.038	b.v.g.v.KS. K. CS. N. in West
	21	50.2	44.4	29.974	50.2 46.5	S.W 126	—	0.047	b.v.S. CK. KS
①	22	51.7	48	30.056	51.9 49.6	SW 99	—	—	o.v. KS
	23	53.7	49.4	30.119	53.9 51.9	SW 149	—	—	o.v.g. CK. K. KS
	24	55	50	30.212	55.4 51.9	WSW 195	—	—	b.v.g.K. CK. C
	25	48.7	49	30.284	49 46	SW 145	—	—	o.v. KS
	26	51.7	49.2	30.124	52.2 47.2	WNW 211	—	Drp.	b.v.g.KS. CS. C. K
	27	51.4	47.8	30.177	52.1 47.3	WN 131	—	0.001	o.v.g.KS. CS.
	28	49.5	49.8	29.810	49.9 48.6	WS 281	0.009	0.045	o.v.m.v. KS
①	29	57.2	49	29.712	57.9 48.9	WN 223	—	0.017	b.v.KS. CS
	30	49.1	48	29.841	49.5 47.1	W 96	—	—	o.v.h.d. KS. N
	31	49.1	48	29.922	49.7 46.9	S 82	0.102	0.106	o.v.m.KS
		46.09	44.90	29.629			1.695	2.273	

1863	10 PM			Hyg: Wind			Therm		
March	E	A	Bar:	Hyg:	Dir	Miles	Max	Min	
0 1	44.1	46	29.430	44.5 42.9	SS.W	270	51.8	43	o. v. KS
2	48.8	49	29.306	48.8 48.8	SW	270	54.2	49	o. v. d. KS
3	48.3	49.1	29.344	48.8 47.1	S $\frac{1}{2}$ E	227	56	44	o. v. KS
4	43	47	29.316	42	SE	189	54.1	43	6. v. CS. KS
5	42.1	46	29.240	42.3 41.7	SSE	161	50	42	o. v. KS. N
6	41.9	46	28.793	42.2 41.7	SW	301.5	48.5	39	o. v. KS
7	33	41	29.150	33.3 32.9	SW	155	43	33	6. v. KS round horizon
0 8	34.4	41.5	29.485	33.7 33.1	WSW	133	42	33	o. g. KS?
9	34.2	42	29.162	34.2 32	ESE	92	40.2	30	6. g. S? the sky seems filmed with CS but *are visible
10	32.5	41	29.292	32.8 31.8	NE	125	42.8	32	6. m. g., no clouds visible but s faint
11	37.6	40.8	29.304	37.8 36.1	E $\frac{1}{2}$ S	100	45	28.5	o. g.
12	39.6	41.3	28.834	39.3 38.5	SE $\frac{1}{2}$ E	192	43	36	o. g.
13	33.2	41.2	29.284	33.6 32.2	SW	89	45	34	6. m
14	37.7	41	28.923	38 37.2	SW	114	43.9	34	o. g. d
0 15	37.2	42	29.623	37.1 36.2	N + V	98	43.9	34	6. g at horizon but no clouds
16	36.9	43	30.100	37.2 35.8	NW	64	44.5	33	6. v. KS. K. CK
17	37.9	43.2	29.907	38 35.7	SE 6 S	69	45.3	30.5	6. g. KS?
18	37.2	43	29.953	37 35.8	W 6 N	141.5	46.3	36	6 m At 8.25 PM
19	47.8	45	29.680	48.1 47.8	SW	191	50	32	10 o. g.
20	42	44.8	29.850	42.2 38.8	SW?	319	48	41	6. v
21	49.7	47.5	30.012	50 49.7	SSW	244	55	40	o. g. d
0 22	50.5	50	30.085	51 49.5	SW $\frac{1}{2}$ S	260	58.8	46	o. g.
23	49	50.2	30.164	49.7 47.8	SW	233	58	48	o. v. g
24	48.9	50.8	30.289	49.4 48	SW	140	56.9	46	o. v. KS. K
25	46.8	49	30.094	47.1 45	SW 6 S	190	51.9	46	6. v. KS. CK
26	43.4	49	30.306	43.9 40.2	W	146	54.8	43	6. v. KS. CK
27	49.1	50	29.941	49.8 48.1	WSW	231	55.9	39.5	o. v. g. KS
28	46.5	49	29.700	46.9 44.4	W 6 S	261	54.5	45.5	o. v. KS
0 29	46.8	49	29.796	47.1 43.5	W	186	54.2	45	o. v. KS
30	45	49	29.890	48.2 44.2	NW 6 N	46	55.5	40.5	o. v. KS. K. CK
31	45.8	48.2	29.890	46.1 42.9	S	152	56	44.5	o. v. KS
	42.29	45.66	29.648				49.64	38.97	

1863	10 AM			Hygt.	Wind		Rain		
April	E	A	Bar	H	Dir	Miles	Squ	R	
1	50	48	29.788	50.2	SSE	197	—	—	o. v. m. q. K. S. CK
2	51.8	49.5	29.888	50.2	SW6W	147	—	—	6. v. K. CS. C
3	49.9	47	30.047	50.5	WSW	46	—	—	6. v. K
4	46.4	48.2	29.700	50.7	W $\frac{1}{2}$ N	199	0.002	0.122	6. v. K. CS
5	49.6	49.2	29.160	50.1	SW6S	362	0.080	0.165	o. v. h. r. q. KS a very heavy gale
6	46.5	45.1	29.124	50.9	SW	229	0.318	0.318	6. v. q. KS. CS. K greater cool
7	43.3	43	29.092	50.2	SW	344	0.068	0.046	6. v. K of 5 th gale
8	48.3	43.2	29.101	50.2	SSE	129	0.215	0.200	o. v. h. d. q. CS. KS
9	50	47.4	29.294	50.2	SW	221	0.055	0.098	6. v. q. K
10	51.1	46.	29.554	50.5	S $\frac{1}{2}$ W	158	—	—	o. v. CS C K Halo
11	49	47.	29.710	50.1	W $\frac{1}{2}$ N	65-0	—	—	6. v. K white H. visible!
12	52.3	46.	29.778	50.5	SE	30	—	—	6. v. C CS
13	55.5	49.	29.747	50.7	SSE	88.1	—	—	6. h. C. CS
14	53.7	50.8	29.650	50.5	SSE	80	—	—	o. v. K. KS CS
15	48.5	50.5	29.750	50.4	WSW	41	0.035	0.030	o. v. h. KS
16	49.9	50.	29.816	50.3	W $\frac{1}{2}$ S	141	0.165	0.216	o. v. KS * K
17	53.3	50.	29.920	50.2	SW6S	78	—	—	o. v. KS
18	46.9	49.	30.152	50.9	NW	61	0.015	0.055	6. v. K
19	52.9	48.8	29.711	50.6	SW6S	215	—	—	o. v. q. KS
20	50.4	46.8	29.597	50.9	SW	166	—	—	o. v. q. KS CS halo
21	49	47.2	29.345	50.2	SW	169	0.297	0.478	o. v. m. r. q. KS N
22	46	47.2	29.484	50.2	W $\frac{1}{2}$ N	197	0.201	0.422	6. v. K KS
23	47	48.5	29.668	50.2	WNW	120	0.144	0.155	6. v. q. K C KS New West
24	50.9	46.9	30.100	50.1	SW	128	0.007	0.012	o. v. q. KS
25	54.6	50.2	30.100	50.2	W $\frac{1}{2}$ S	157	—	—	o. v. KS
26	54.6	51.8	30.068	50.9	W	111	—	—	6. v. KSK
27	48.4	51.1	29.835	50.7	W $\frac{1}{2}$ N	199	0.688	0.011	6. v. d. q. KS CS N in E
28	47	48.8	29.656	50.5	WNW	182	0.055	0.052	6. v. q. K KS N in North
29	45.4	47.8	29.935	50.9	N6E	139	0.092	0.488	6. v. q. KS
30	48	48.8	30.134	50.5	N6W	50	—	—	o. v. KS
	49.64	48.09	29.740				1.431	2.568	

1863	10 P.M.			Hygt	Wind		Therm		
April	E	A	Bar ²	H	Dir	Miles	Max	Min	
1	47.1	49	29.756	47.7 45	S	195	55.2	44	o.v. CK.K
2	44	49.2	30.074	44.3 42.9	NW	97	55	44	o.v. d. KS
3	45.8	50	29.789	46.1 43.9	SW	217	55.1	36	o.v. r. KS
4	42.8	49.5	29.501	43 42	SSW	229	50.2	41	o.v. r. q KS. N
5	38.7	46.1	29.178	38.2 38.2	SSW	221	52	39	6.v. CS. KS
6	35	45	29.120	35 34.1	SW	—	51.8	34.5	6.v. slight Aurora streamer
7	34.7	44.1	29.248	34.8 34.5	SWWS	136	51	33	6.v. h slight Aurora
8	48.3	47.5	29.200	48.5 47.2	SW	212	55.9	33	o.v. g. with faint streamer
9	40.3	47.	29.524	40.8 37.7	S	247	54.5	41	6. Brilliant Auroral arch NW by N.
10	42.2	47.8	29.448	42.8 41.1	WSW	87.5	49.4	37	o.g.
11	40.	48.	29.808	40.4 39.0	W	45	55.3	41	6. h round horizon
12	45	50	29.730	45 42.8	SSSE	143.1	57.9	33	6.v. Ground horizon
13	46.7	52.2	29.732	47 45.1	S of E	172	58.5	39.5	6.v. CS KS
14	47.1	52.	29.663	47.6 45.9	SW	121	58.	44	o.gl. traces of aurora K?
15	46.2	51.	29.698	46.9 45.2	S	117	54.4	46	o.gl. f.
16	44.1	51.	29.943	44.8 43.8	SW	91	56.	45	6.gl. CS KS
17	41.1	50.2	30.090	41.2 37.8	NW	121	58.5	41	6.v.
18	42.3	50.	29.936	42.8 39	S	136	56.	34	6.v. KS
19	38.7	49.	29.724	38.9 38.8	SSW	175	58.8	39	6.v. slight Aurora
20	41.9	49.8	29.534	42.1 41.9	WSW	473	58.4	36	o.g. Bar = 29.534
21	45	49.2	29.247	45 43.3	WWS	302	54.	38	6.v. q KS. CS
22	42.8	49.2	29.708	43 41.1	W	126	54.8	41.5	6.v. KS. K
23	36.9	47	30.176	36.9 36.2	WSW	123	51	37.5	6.v.
24	44.6	51	30.126	50 47.9	WWS	164	58	36.5	o.v. g
25	50	53	30.112	50.6 45.5	WWS	163	58.6	48.5	o.v. KS
26	46.4	51.8	29.900	46.8 44.5	SW	180	61.2	47	6.v. K
27	42.9	51	29.772	43.1 40.6	WWS	263	52	42.5	6.v. dr KS CS
28	42.1	48	29.827	42.5 39.5	NW	192	51	38	6.v. KS
29	39.1	45.2	30.104	39.1 36.9	N	162	52	39	6.v. CS - C
30	45.8	50.2	30.114	45.8 44.8	SWWS	58	52	36	6.v. KS CS
	43.11	49.12	29.729				54.52	39.61	

1863	10 AM			Hygro	Wind		Rain		
May	E	A	Bar	H	Dir	Miles	Sq	R	
1	54.9	49.9	30.135	54.9 ₂	NW	54	—	0.003	o v KS
2	56	51.3	30.071	56.2 ₇	NW6W	34.8	0.063	0.086	o v KS
3	54.5	52	29.780	55.1 ₉	SW6W	105	—	—	o.v.g. KS
4	54.2	52.5	29.640	54.8 ₃	SW	165.5	—	—	o.v.g. KS
5	47.8	51.8	29.698	48.4 ₄	NW6W	180	0.030	0.165	6.v q K KS
6	54.1	50.5	29.627	54.7 ₃	SSW	124.5	0.124	0.150	6.v.h. KS
7	51.7	50.	30.084	51.8 ₈	WNW	61	0.025	0.066	6 v KS
8	57.1	54.8	30.091	57.1 ₁	SW6S	90	—	—	6.v.h. c
9	57.9	53.8	29.910	57.3 ₃	SW	97	—	—	o.v. KS
10	51.2	51.8	29.857	51.1 ₉	WNW	80	0.067	0.042	6 v KS N m NE
11	39.9	47.5	29.597	39.9 ₉	SSE	104	0.221	0.284	o m q r N
12	53	51	29.287	53.5 ₅	SW6W	185	0.140	0.718	o v KS CS
13	48.2	51	29.075	48.5 ₆	S	174	0.186	0.182	o v m r KSM
A24 14	54	52	29.476	54.3 ₃	SW6W	147	0.124	0.135	o.v. CS KS halo very vivid at 8.15
15	51.1	50.2	29.356	51.7 ₈	SSW	191	0.278	0.360	6.v KS NNE faint halo
16	54.8	50.1	29.450	54.4 ₄	SW6S	163	0.052	0.056	6.v q KSC; thunder (in South) at 12.20
17	50.5	49.9	29.549	50.4 ₄	N	49	0.212	0.163	o.v.d KS N m W
18	50.2	51.2	29.821	50.4 ₆	NE6N	53	0.012	0.013	6.v KS K
19	48.4	49.5	30.027	48.9 ₄	NE	157	—	—	6.v.g. K. CS? a grey film over the blue
20	46	47.6	30.082	46.8 ₁	NE6E	175	—	—	o v KS
21	46.9	49.	30.162	46.8 ₈	E NE	96	—	—	o v KS
22	50.	51.	30.031	50.7 ₇	E NE	91	—	—	6 v K C
23	52.	52.6	29.846	52.6 ₃	NE6E	42	—	—	6 v K CK
W24	53.3	51	29.817	53.9 ₉	NW	24.5	—	—	o v KS
25	55.8	54.8	29.952	55.6 ₆	N6W	13.5	—	—	6 v h K KS
26	53.1	52.5	30.027	53.2 ₂	NW6N	15	—	—	o v K KS
27	54.7	53	30.085	54.8 ₈	W6N	34.5	—	—	o v KS
28	61.2	55.5	30.064	61.6 ₆	WSW	113	—	—	6 v.g. KS CS small 2nd Hg. from W6N
29	60.9	57.5	29.981	60.9 ₉	WSW	168	—	—	o v d g KS
30	58	57.8	29.950	58.5 ₅	SW6W	112	0.124	0.102	o v m r KS N
31	61.8	57.8	30.078	61.4 ₄	SW	25.5	—	—	o.v. h KS
	53.00	52.35	29.820				1.658	2.525	

1863

10 P.M.

Hygro

Wind

Thermo

May

E

A

Bar

H

Dir

miles

Max

Min

1	49	50.5	30.140	49.2	N $\frac{1}{2}$ E	39.0	58.4	46	6 v CK. C. KS
2	48.2	53	29.980	47.7	N $\frac{1}{2}$ E	65	62	46	2 h — KS Bar = 29.981
3	49.8	53.2	29.717	48.1	W	120.5	58	46.5	0 v KS
4	50	53	29.498	48.2	SW	179	59	48.5	0 v. KS
5	40	47.7	29.798	48.3	SW	99.5	54.1	40	6 v KS
6	48.6	53	29.826	48.7	NW	166	60.6	39	6 v. KS
7	47.1	53.2	30.166	48.8	SW	29	59	40	6 v. KS CS
8	48.3	56	30.000	48.9	SW 6 S	144	62	41	6 v. S
9	48.2	52.8	29.850	47.3	W 6 S	70	58.2	44	6 v. KS CS
10	42.8	51.8	29.881	47.4	SW	96	54	40	6 v. KS CS
11	52	51.5	29.232	47.5	SW	266	55	40	0 g.
12	49.2	52	29.205	47.6	SW	188	57	44.5	0 m N KN
13	45.5	51.2	29.328	47.7	SW 6 W	164	53	45	6 v KN
14	46.1	51	29.324	47.8	SW	177	55.8	42	6 v CS
15	46.1	52	29.412	47.9	SW 6 S	185	55	43.5	6 v KS CS
16	46.1	52	29.479	48.0	S	156	56.4	42.5	6 v KS
17	46.1	51	29.668	48.1	N	40	56.8	44	6 v KS
18	42	51	29.940	48.2	N E	100	55.2	42	6 v. KS at horizon
19	42.6	49.8	30.056	48.3	N E	217	54	38	6 v CK K at horizon Hys = $\frac{42.9}{38.4}$
20	42.6	50.1	30.138	48.4	NE 6 E	145	52	39	6 v S
21	42.3	50	30.119	48.5	NE 6 W	113	49	37.5	6 v KS
22	44.4	50.8	29.914	48.6	N 6 W	90.5	55.5	41.8	6 v KS CS
23	43	49	29.836	48.7	NNW	70.5	55	43	6 v K - S
24	46.2	52	29.855	48.8	N 6 W	62.5	61	36.5	6 v K. CK C
25	45.3	54	29.985	48.9	SW	35	55	42.5	6 v K. C
26	50.2	54.2	30.061	49.0	NNW	37.5	58	46.5	0 v K. S
27	52.7	56	30.069	49.1	SW	91	62.8	48.5	0 v KS
28	56.	58.5	30.032	49.2	SW 6 W	113	64	52	0 v q KS CS
29	55	58	30.032	49.3	W 6 S	70	67	55.8	0 v KS
30	54.7	58	30.041	49.4	NW 6 W	86	62.4	54	0 v KS
31	55.1	57.2	30.018	49.5	S	84	63.2	53	0 v KS

47.33 52.70 29.826

57.53 43.76

{ 50.8
54.9

1863	10 AM			Wind		Rain			
June	E	A	Bar	Hg	Dir	Miles	Sq	Q	
1	68.6	59.4	29.960	69.1	SSW	85	0.145	0.132	0 v. h KS CS halo rather bright
2	62.6	62.5	29.782	64.2	SE	135	0.052	0.025	6 v. q K CK
3	55	58.5	29.784	63.5	W	77	0.145	0.141	0 v m r KS
4	52.8	56.	29.769	63.1	WSW	89	0.142	0.127	0 v. r KS N in SE
5	53.4	55	29.570	54.5	SE ½ E	66	0.038	0.018	0 v. d. KS CS heavy showers of rain
6	56.9	55.5	29.215	56.9	WNW	56	0.114	0.110	6 v. KS C showery of rain
7	61	56.2	29.194	56.4	NW	9.5	0.265	0.232	6 v KS RC
8	57.1	55.2	29.265	57.2	NW 6 N	16	0.289	0.262	6 v. KS CS N in south west TRR
9	56.2	54.8	29.420	56.3	SW	25	0.286	0.252	6 v KS S. K.
10	55.4	54.5	29.432	54.8	WNW	15	0.308	0.266	6 v. K. C. ^{to R}
11	56.8	55	29.274	57.2	NW	18.5	0.266	0.282	6 v K KS C. CK. CS in SW 2
12	59.2	55.1	29.479	57.3	N 6 E	44	0.087	0.080	6 v K KS. CK. CS slight aurora last night
13	55.4	54.2	29.668	57.7	NNW	14.5	—	—	6 v KS
14	63.5	56.5	29.657	64.8	SW ½ S	113.5	0.115	0.110	0 v KS slight dust (at 63.5) night at 11.50
15	58.7	59.	29.770	59	SW	96.5	—	—	0 v. m. d. KS. cloud scarcely visible
16	60.9	58.	29.605	61.7	S	68	0.160	0.130	0 v KS much brightness (auroral) 11 to 1 ½ last night
17	62	57.2	29.637	62.3	SW 6 W	80	0.743	0.660	6 v. K. K.
18	61.5	57.6	29.685	61.3	NW ½ W	15.5	—	—	0 v m CK K heavy mist at 7 AM
19	56.1	59	29.620	57.7	NE	52	—	—	0 v m KS. cloud scarcely vis ^{at} 56.7
20	61.3	58.2	29.733	61.6	WNW	5.5	—	—	6 v K
21	62	61	29.603	63.1	S	104	0.022	0.026	6 v q KS
22	59.7	59	29.570	60.6	SSE	105	0.176	0.190	0 v. m. d. KS
23	59.9	58	29.771	60.1	SW 6 S	206.5	0.157	0.185	6 v. q. d. KS. K. N in south west
24	60.7	58	29.839	61.2	SSW	103	0.090	0.096	6 v. KS. K
25	62.1	57.8	29.954	62.1	W ½ S	83	0.010	0.026	6 v K
26	54.7	57.	29.719	55.3	S	128	0.080	0.077	6 v? m r q KS N
27	58.1	58	29.586	58.3	SW 1 W	180	0.004	0.007	6 v q KS K N in SW
28	56.5	57.2	29.598	54.2	SW	168	0.012	0.025	0 m r N KS
29	58.1	57.5	29.756	54.5	SW ½ S	71	0.156	0.135	6 v KS K
30	62.2	56.5	29.993	54.1	WSW	30	0.295	0.146	6 v K CK
	58.95	57.25	29.627	55.7			4.160	3.740	

1863	10 P.M.			W & D	Wind		Thermometers			
June	E	A	Bar	Hg	D	M	Max	Min		
1	60.9	62	29.910	61.8	S	113	73.4	55	o.v.d	KS
2	55.9	60.5	29.721	56.8	SSW	148	68.	56	o.v.	KS
3	48.4	58	29.845	49.2	W	64	63	50	o.v.d	CS KS
4	46.2	57.2	29.834	46.9	WSW	103	61	47.5	o.v.	KS
5	50.8	55.5	29.329	51.2	WSW	78	57.4	42	o.v.	KS
6	51.1	57	29.241	51.5	NNW	28	62.4	48	o.v.	KS CS
7	49.9	57	29.210	50	N	35	61	50	o.v.r	KS N
8	46.4	56	29.370	47	NNW	21	57.2	47	o.v.	KS
9	44	50	29.420	44.7	SSW	93	59.2	44	o.v.	KS. K hail at 5 th P.M.
10	46.9	56.4	29.347	46.9	N	43	62.2	41.5	o.v.r	KS
11	49	55	29.365	49.2	W6N	57	57.5	41.5	o.v.d	ENS
12	48.3	56	29.606	48.2	NW	70.5	61.1	49	o.v.	CK in W & K & SE
13	53.7	57	29.712	54.2	S	42	63	43.5	o.v.	KS S K
14	55.8	60	29.766	55.8	SW	127.5	69.4	50	o.v.	KS K
15	55.7	58.2	29.720	55.8	S ¹ / ₂ W	65	64.2	55	o.v.	KS K Aurora at 11 P.M. Thunderstorm?
16	57.1	57	29.544	57.3	SW	85	62	51.5	o.v.	KS CS highly electric rain today.
17	55.4	60	29.712	56.1	WSW	81	67	50.5	o.v.	KS
18	54.7	60.5	29.610	55.8	NE	33	67	49	o.v.	CK S K
19	53.8	60	29.454	54.7	N	22	64	54	o.v.m	CK K
20	57.1	61.5	29.751	58	SWW	69	70.2	49.5	o.v.	K. KS
21	54.5	60	29.747	53.3	SW	108	65	54.5	o.v.	bank of haze in north
22	51.8	57.8	29.636	52.5	SW	291.5	66.2	51	o.v.	
23	52	59	29.847	52.8	SW & S	147	67	51	o.v.	S in North at Horizon
24	51.8	60	29.878	52.4	SW	12.5	67.8	50	o.v.	K at North horizon
25	50.8	61	29.984	51.6	S	69	68	47.5	o.v.	KS 29.981
26	55.8	59	29.625	56.5	SW	188	66	49.8	o.v.	KS K
27	51.2	58	29.521	52.1	SW	184	64	50.5	o.v.	KS CS
28	53.1	58.4	29.695	53.9	W6S	95	64.2	50	o.v.d	KS Aurora?
29	51.8	58	29.891	51.7	NW	32	65	50	o.v.	KS This is cleared band of horizon
30	55.9	60	30.020	56.5	SSW	99	66	45.5	o.v.	KS
	52.09	58.20	29.650				64.18	48.96		

1863	10 A.M.				Wind		Rain		
July	E	A	Bar	H	Dir	Miles	Sq	R	
1	60.	59	29.928	60.8	SE	133	—	—	o v q KS CK
2	62.5	60.8	29.664	61.9	NW & N	85	0.120	0.107	o v CS K KS C
3	58.1	59.2	30.075	58.8	NW	42	0.016	0.017	o v CK RS
4	59.4	59.	30.148	59.9	N & S	23	—	—	o v K KS
5	61.	59.8	30.174	61.4	E & S	6	—	—	o v CK K
6	64.8	61.	29.953	61.9	E & N	89	—	—	o v m q C. K CK
7	62.2	61.5	29.806	63.	S	299	0.058	0.054	o v KS
8	62.	62.2	30.007	62.9	W & N	91	0.008	0.013	o v KS singularly clear
9	66.2	63.5	30.103	66.8	SW	86	—	—	6 h
10	63.9	63.2	30.228	64.5	SW & S	64	—	—	o v h KS
11	68.	65.	30.298	68.5	NNW	9	—	—	o v m KS
12	60.1	64.	30.358	61.	N & E	39	—	—	o v KS
13	60.2	60.8	30.402	60.8	NNW	37	—	—	6 v covered with haze
14	59.	60.5	30.334	59.2	NW	18	—	—	o v KS
15	64.8	62.5	30.160	64.9	W & N	40	—	—	6 v h one small streak of C
16	61.	62.8	30.130	61.2	NE	37	—	—	6 v h K
17	57.7	60.	29.941	57.9	W & N	24	—	—	o v K RS
18	58.9	59	29.759	57.1	W & N	79	0.008	0.022	6 v K. KS
19	54.2	58	29.817	54.6	NW & N	35	—	—	o v KS K
20	57.8	56.6	29.674	57.7	N & W	31	0.026	0.032	6 v K KS
21	56.1	55.5	29.604	56.2	N & E	29	—	—	6 v K C
22	56.6	56.5	29.500	57.	NW & N	63	—	—	6 v HS. CS
23	55.2	56.	29.744	55.5	NW & W	56	drop	drop	o v HS
24	61.5	59.	29.850	61.	WSW	107.5	—	—	o v HS
25	58.3	59.5	29.787	58.	N & E	69.5	—	—	o v H. HS
26	57.7	56.	30.021	57.4	NW & W	26	—	—	6 v H
27	65.	61	30.022	60.8	NW	5.5	0.010	0.015	o m. HS
28	64	61.3	29.927	64.	W & NW	21.5	—	—	o v HS
29	57.7	59.	29.977	58.	NW & N	25.	—	—	o v HS
30	60.8	58.6	30.065	61.	N	14	—	—	6 v K
31	65.5	58.8	30.059	65.9	S	34	—	—	6 v h C. K
	58.97	59.99	29.984				0.246	0.260	

299 miles in the 24 hours
 singularly clear (withward A.M. S. Westward P.M.)

1863	10 P.M.			Day	Wind		Thermometers		
July	E	A	Bar	H	D.	M	Max	Min	
1	56	59	29.685	56.7	SS E	206	65.4	53	5 v d KS CS
2	56.5	61	29.953	55.1	NW W	88	69	53.5	4 v CK K KS
3	53.8	60.2	30.128	54.3	NW	40	65.1	53.5	0 v KS
4	55.	60.	30.161	53.9	SW W	38	64.1	53	0 v CK K
5	52.2	59	30.116	53.	SE E	47	67.1	53	6 v
6	60	63	29.836	58.8	S W		71.4	47.5	4 v. K
7	59	63.2	29.856	58.2	SW	95	73	56	0 v KS K CK
8	57.7	63	30.104	58.3	W SW	32	68	57.5	6 v m K. aurora & the suns bright in twilight
9	60.7	66	30.134	58.2	SSW	97	75	56	0 v h. CK. C.K. s
10	61.2	66.4	30.275	58.1	SW	59	75	55	6 v. C CS slight aur' streaks
11	59.	66.5	30.333	57.9	N E E	47	75	56	0 v KS
12	50.2	62.	30.400	50.4	N	76	67	51	0 v KS
13	52.5	64.	30.405	52.2	N E	55	69	49	0 v sky covered with uniform haze
14	56.2	64.2	30.256	52.1	W	42	73	49	0 v sky covered with uniform brown haze
15	56.	65.	30.136	54.3	W	51	75	54	4 v KS distant faint lightning NE
16	49.2	63.5	30.054	49.2	W	39	67	51.5	6 v K
17	48.8	61	29.804	46.2	NW	71	62.8	45	5 v KS K CS
18	47.	60	29.862	47.9	NW	59	62.8	47.5	6 v S all round horizon
19	48.2	57.2	29.762	48.5	N.W	36	59	43.5	6 v KS
20	44.9	57.5	29.654	45.4	N.W	51	62.4	46	60 bank of haze in horizon
21	50.9	58.5	29.121	51.2	N	110.5	59.6	41.5	0 v. KS
22	52.3	58.5	29.580	52.7	W S	73.	64	47.	0 v. KS
23	50.2	58.	29.900	50.2	W S	70.5	62	49	6 v. KS
24	56.	61.	29.803	55.	SW	101.	65	51	0 v. KS
25	45.4	59.5	29.940	48.	N	47.5	64.5	51	6 v. S. round Horizon
26	58.	62.	30.055	58.8	N	29.5	70.	44	9/4 m. KS. CK. CS
27	60.3	62.5	29.977	61.3	S.W	23.	70.2	58	0 m. dense KS
28	54.5	60.5	29.940	54.5	N E E	58.5	73.5	56.5	6 v. KS
29	53.6	61.	30.035	52.3	NW W	35.5	64	48.5	6 v. KS
30	53.2	61.2	30.088	53.2	SE	32	66.8	46	6 v C.K.
31	56.5	62.4	30.000	53.8	N E	138.5	71	45	6 v K KS C
	54.13	61.38	29.992				67.53	50.50	

1863	10 A.M.				Wind		Rain		
August	E	A	Bar.	Hyg.	Dir.	Miles	Sq.	R.	
1	63 9	61	29.874	62.8 57.7	SE	110.	—	—	h CK KS
2	65	62.2	29.748	66 59.6	SE	86	0.036	0.021	h? v. h. q C' KS K
3	66	62	29.659	66.3 59.3	SW	143	0.069	0.080	h v KS K
4	62 5	62	29.650	63.1 57.1	SW S	64	0.080	0.076	h v C K
5	58 5	61	29.556	57	SW S	107	0.010	0.013	h v. h. r. KS
6	64	61.6	29.572	64.3 58.3	SW	48	0.514	0.400	h v. K C
7	68	64	29.664	62.3 55.3	SW S	148	0.273	0.266	h v KS K
8	62 6	65.2	29.586	64.2 57.2	SW	185	0.266	0.361	h v r q KS N heavy rain 8 A.M.
9	64.1	62.8	29.862	64.8 59.8	WSW	139	—	—	h v CK K
10	59	61.5	29.824	59.5 52.5	S W	73	0.038	0.027	h. d KS N
11	60	60	29.877	60.7 53.2	NW	64	0.015	0.032	h v K
12	63 9	59.5	29.922	63.9 56.8	W S	37	—	—	h v C S. K
13	59 6	60.8	29.865	60.4 57.4	E	19	0.488	0.164	h v KS K
14	63 2	61.2	29.754	64.5 60.1	S E	91	—	—	h v? h q KS CK
15	64.2	62.5	29.249	63.2 63.2	S	224	0.423	0.515	h v q r KS
16	61.4	61	29.367	62.1 61.5	SW	185	0.168	0.064	h v q KS C
17	58 5	59	29.497	58.2 55.5	W N	108	0.150	0.166	h v KS CK C
18	55	57.4	29.748	57.8 55.5	NW W	92	0.021	0.020	h v q KS N in NW
19	58 2	58	29.666	59.1 58.3	NW W	87	0.020	0.006	h v q KS K
20	58	56.2	29.957	58.8 52.7	NW	68	0.001	—	h v KS N in N
21	58 4	56.8	29.996	58.8 54.8	SW	47	—	—	h v d KS
22	61 9	59	29.801	62.2 56.2	NW	57	—	—	h v KS
23	64	59.5	29.604	64.2 58.2	SSW	50	—	—	h v K CK
24	59 1	58	29.500	59.2 54.3	SW	94.9	0.256	0.224	h v K KS
25	61	57	29.262	61.8 58.8	SW	61.0	0.054	0.082	h v. K KS CK C (thunder th 11 A.M.)
26	58 3	54.9	29.283	58.7 52.7	W	24.5	0.025	0.021	h v K Knock laid vis: NW
27	57 5	56.2	29.214	57.9 51.9	N. NE	125	0.325	0.403	h r slightly lighter NW
28	57 2	54.8	29.464	57.6 50.2	N. NE	57.7	0.533	0.553	h (h) d KNS
29	53 8	54	29.512	54.3 50.3	W	107.5	—	0.002	h v drops K. Non Zenith. CK
30	56 5	53.2	29.708	56.6 51.4	NW	20.2	—	—	h v C. CK. S. K. KS
31	54.2	53 2	29.761	53.6 51.3	N. W	16.2	0.017	0.013	h v K. N
	60.18	59.21	29.645				3.482	3.509	

miles
107.5 in 24 hours

1863

10 P.M.

Wind

Thermometers

Augst

E

A

Bar:

H

Dir:

Miles

Max

Min

1	58.7	63.5	29.796	59.6 58.9	SE	112	69.3	53-	o.v. KS
2	59.1	63.	29.645	60.5 58.5	SE	213	69	56.6	o.v.g.r KS
3	55.9	61.2	29.678	58.8 57.2	S	114	69	54.	o.g.r KS? very dark
4	55.2	63-	29.619	58.5 53.5	SW	99	70.8	50.5	K
5	54.2	61-	29.533	57.8 54.8	SWIS	87	65.8	54	2.v. KS aurora streamer over sky
6	60.9	62.2	29.572	61.4 61.2	SW	67	69	54	o.r. gloom
7	65.8	67.2	29.688	67.2 64.4	SW	229	73	61	o.v. g KS
8	56.4	62.5	29.708	57.6 58.1	SW	251	69.9	56.5	6 v KS
9	57.3	63.2	29.860	57.7 57.8	WNW	70	69.8	56-	o.v. g KS
10	58.	62.5	29.695	57.8 57.2	SW	98	66	57	o.g.v. KS glimmer of distant light
11	52.6	61.2	29.954	57.2 57.1	SSW	64	64.2	52.8	6 v KS. K no meteor visible
12	54.7	61.2	29.862	58.1 58.1	SSW	45	67.4	48.2	o.g. r
13	54.6	61-	29.883	58.2 52-	E	57	65.4	53-	o.g. KS
14	59.3	61-	29.464	59.1 59.1	SE	269	67	50.4	o.g. r
15	59.	62.5	29.412	59- 59-	SW	249	69	59	o.v. KS
16	50.2	59-	29.425	59.9 58.9	SWIS	168	65	50.5	6 v KS
17	51.4	58.2	29.644	51.9 50.1	WN	140	61	50.5	o.v. KS
18	51.1	57	29.808	51.8 49.9	WIS	89	60.8	50	o.g.r KS
19	49.9	57.2	29.821	50.9 49.9	WIS	126	62.2	50.5	6.v. KS Auroral streamer
20	49.5	57-	30.054	50- 48.4	WN	72	62.9	48.	6 v g KS
21	57-	58.5	29.900	57.9 57.6	SW	66	63.4	47	o.g. KS?
22	55.9	60-	29.762	56.6 54.6	SW	25	66.6	56.5	o.v. KS
23	49.9	60.	29.582	50.6 50	SW	74.5	68	50.5	6 v
24	49.5	56.5	29.458	50.1 49.1	SW	128.1	63	49	6 v C CS CK
25	47.2	53.5	29.208	47.7 47.5	W	48.5	64.5	47.7	6 v C - Kathorion
26	51.4	58-	29.233	50.5 50.5	NIS	43.5	63	45	o.v. at North horizon slight Aurora?
27	50	55	29.376	50.5 49.1	N	44.8	55.8	50	o.v.-d
28	48.4	54	29.481	48.7 47.1	NW	-	54.5	48.5	6 v KS Full moon
29	45.4	55.2	29.652	46.2 45.1	WIS	51.5	67	45	6 m one flick of Arno 8 horz?
30	49.3	56.2	29.718	49.5 48.2	N	22.6	62.8	42.5	6 v CK. bank of dark south horz
31	45.3	53.3	29.866	45.9 44.6	WIS	73.8	60.9	42.7	6 v CK K
	52.65	59.51	29.633				65.13	50.86	

1863

Sept					Wind		Rain		
	E	A	Bar	H	Dir	Miles	Sq	Rd	
♂ 1	56.4	53.6	29.767	56.8 53.8	SWLS	88 7	—	—	ovm KS
2	55.3	54.	29.350	55.7 54.3	SSW	112.5	0.150	0.205	6. v. C. H.
3	57.8	54.2	29.401	58.2 53.8	S	113	0.030	0.033	6. v. C. S. H. S
4	56.9	53.6	29.583	57.2 54.4	WtN	26	0.252	0.192	6. m. H. H. S
5	53.7	53.3	29.440	54.2 51.3	WtNW	96	0.340	0.323	o. m. H. S. n.
○ 6	54.3	52.	29.589	54.5 50.5	SWtW	99	0.035	0.022	o. m. e. C. S. H. H. S Halo ○
7	53.3	53.	29.370	54.5 49.	WtN	152	0.355	0.400	6. v. C. H. q
8	53.3	53.	29.596	53.6 51.2	SW	107	0.070	0.074	o. v. C. S. H. S. q
9	54.4	52.	29.585	54.4 50.	WtN	76	0.070	0.065	6. v. C. S. H. S
10	52.7	51.5	29.820	53.2 48.2	WtNW	43	---	---	6. v. H. H. S
11	55.2	53.	30.047	58.5 50.6	W	62.5	---	---	6. v. H. H. S
12	53.2	53.3	29.943	53.6 51.9	SWtW	119.	0.055	0.055	o. v. H. S
○ 13	55.5	53.	30.093	55.9 54.3	WSW	74	0.050	0.055	6. m. H. S
14	54.9	54.	30.159	55.3 52.4	SW	71	---	---	o. m. H. S} * Clock stopp'd 20 ^m after winding
15	56.3	54.5	29.829	56.9 53.5	SWtW	267 *	---	---	o. m. H. S
16	53.	53.	29.825	53.6 49.2	WtS	116.5	---	0.007	o. v. C. S. H. H. S
17	56.1	53.8	29.794	56.2 53.1	SWLS	102.5	---	---	o. v. KS
18	58	56.	29.730	58.5 55.2	SWLS	175.5	---	---	o v KS
x 19	46.3	55.	29.226	46.3 46.2	WSW	212	0.571	0.546	o m r
○ 20	53	51.2	29.130	53.1 49.1	SW	154	0.120	0.020	6 v q K CS C AND Corona ○ 10.40
21	51 8	52.	28.916	52.2 47.9	NWtW	150	0.188	0.202	6 v K. C.
x 22	48	51.	28.666	47.7 47.1	NWtW	108	0.150	0.135	o v m r KS. N.
23	50.6	52.	28.960	50.2 47.9	NtW	42	0.771	0.756	6 v KS KCK //
24	52 2	52	29.147	51.5 48.7	NE	48	0.046	0.032	6 v h K. C.
25	53 3	52.5	29.504	53.7 49.1	NW	28	0.006	0.009	6 v K. C a remarkable corona 10 ^{at 11.30}
○ 26	51.3	50.3	29.850	51.4 50.4	WSW	75	0.005	0.006	6 v K. C
○ 27	52 7	52.5	29.480	52.9 49.3	SSW	277	0.034	0.096	o v m q. r. KS. N
28	49.2	48.	29.473	49.6 45.6	SWtS	99	0.360	0.413	6 v C. S. K
29	52.8	49.8	29.600	52.2 49.2	SW	149	0.219	0.157	6 v q K KS
30	50.	50.2	29.408	50.4 48	S	116	0.028	0.032	o v h KS S CS
	53.08	52.94	29.508			3359,	3.905	3.825	

1863	10 P.M.				Wind		Thermometers		
Sept.	E	A	Bar	H	Dir	Miles	Max	Min	
♂ 1	53.7	55.2	29.450	54.3 53.8	SW	197	58.4	44.	o. rain
2	50.	55.	29.314	50.4 48.4	S	157	60.2	47	6. v. H. g
3	54.	50.4	29.520	50.8 49	SE	111	61.2	48	8. v. H. Thunder at 1.40 & 6.30
4	49.3	55.3	29.543	49.5 49.	SW	46	62	46.	9. v. H.S.
5	44.6	54.5	29.595	46.8 44.9	W	96.5	59.7	44.9	1. v. H.S.
① 6	52.5	53.5	29.093	52.7 52.5	S	158.5	56.	42.	o. m. rain
7	47.8	54	29.580	48.3 45.3	W	158.	58.2	48.5	6. v. H. n. g
8	49.7	53.5	29.499	50.2 49.7	SW	159	56.2	45.	6. v. c.s. H.S. - Aurora in N.
9	48.7	54.	29.653	49.4 47.2	SW	87	59.2	45	o. v. c.s. H.S. large stars seen faintly
10	47.1	54	29.972	47.8 46.2	W & S	66	61.	44	6. v. c. c.s. H.S.
11	50.6	54	30.000	51.2 49.	WSW	73.5	60	47.5	o. v. H.S.
12	52.8	55	29.933	53.4 53.	W	131.5	60	49.	o. v. rain
① 13	52.6	54.6	30.159	53.1 51.1	W	79	59.8	47	o. m. H.S.
14	51.7	55.	30.032	52.3 50.3	SW	*	61.2	52.	6. v. c. H.S. * Clock stop'd 20 qts. winding
15	49.4	54.5	29.825	50.3 48.3	SW & W	96	61.4	50.	o. v. H.S.
16	48.9	53.2	29.850	49.3 47.8	SW & W	118	59	47.5	o. v. KS
17	55.4	56.	29.738	56.6 52.6	SW	200	65.1	48	o. g
18	55.1	57.	29.560	57.2 55.2	SW & S	166	64.5	53.5	o. g. r
19	43.2	51.	29.165	43.9 42.	SW	224	60.	43.	6. v
① 20	45.4	52.	29.000	45.8 45.	SW & W	171	57.	43	6. v KS Corona P. O 10.45 till
21	47.3	52.	28.776	47.7 45.9	W & N	113	57	44	6. v KS. CS
22	45.7	51.	28.877	45.9 44.	W & NW	99	57	45	6. v KS
23	45.5	51.	29.050	45.8 45.5	NNW	46	57	43.5	o. v KS R
24	42.5	51.	29.301	42.9 42.5	N	52	57	43	6. m Thunder heard 6 P.M. J.E
25	43.8	51.2	29.685	44.1 43.8	W & S	57	57.5	42	6. v K Corona at 11.30 a.m.
26	49.	51.5	29.818	49.4 48.	SSW	136	58.	42.5	o. v KS & C Held 3 at 7 P.m.
① 27	43.9	51.	29.396	44.2 43.6	SW	167	55	44.5	6. v S KS C
28	42.4	49.	29.608	42.3 42.1	SW	146	54	37.8	6. v S Violent hail at 1.40 pm
29	48.7	51	29.589	49.2 47.2	SW	235	58	42	o. v KS CS
30	51.4	51.8	28.920	51.9 51.4	E	194	56	46.5	o. v r KS N
	48.82	53.07	29.517			374.0	58.94	45.34	

1863	10 A.M.				Wind		Rain		
Oct.	E	A	Bar	H	Dir	Miles	Sq	Rd	
1	50.9	52.	29.092	50.9	NW ¹ W	39	0.930	0.021	o v m r KS
2	54.8	52.5	29.400	50.5	WSW	124	0.032	0.036	8. v KCRS
3	52.8	51.2	29.486	50.9	SW ¹ W	50	0. —	0.012	0. m. d KS CS
4	49.	49.	29.642	49.2	SW ¹ W	62	0.026	0.010	8 v q K CK
5	47.3	47.9	29.638	47.4	SW	104	0.086	0.068	6 v CK S
6	43.5	45.	29.696	43.4	S ¹ E	77	0.026	0.023	6 v C
7	46.1	48.	29.637	46.7	NE	132	0.002	0.005	0 r h CS KS
8	49.7	48.9	29.616	48.8	NNE	120	0.082	0.108	0 v h KS
9	55.9	51.	29.372	53.3	SE	108	0.403	0.573	6 v KS CK
10	52.3	51.	29.176	52.2	ESE	186	0.278	0.266	6 v KS CK
11	52.	51.	29.087	52.2	E.	45	0.436	0.457	0 m r KS N
12	52.3	51.	29.056	52.9	SE	154	0.428	0.437	6 v q KC
13	56.	57.2	28.973	56.3	E S	170	0.257	0.215	6 v q KS K
14	55.1	52.	29.100	55.9	SE	135	0.018	0.007	6 v q. K. S. C.
15	54.	52.	29.308	54.4	SSE	127	0.062	0.069	6 v KS CS C
16	51.1	51.	29.490	51.2	W S	97	0.012	0. —	6 v K CK C
17	50.9	50.5	29.720	51.1	SW	115	0.190	0.191	6 v C S
18	55.2	53.	29.514	53.8	SW	176	0.090	0.000	0 v KS CS
19	48.8	51.	29.706	49.1	SW	60	0.450	0.445	0 v? m S
20	47.6	49.	29.882	48.1	SW	82	0.171	0.148	6 v Some patches of S
21	49.7	49.5	29.954	49.8	SW ¹ W	35	—	—	0 v h CS C
22	48.8	48.	29.975	43.7	SSW	15	0.096	0.095	6? m C CK
23	41.6	45.8	30.094	43.7	W S	16	0.008	0.013	f. trees at N scarce vis ^o Smoke from SW
24	51.5	49.	29.954	41.4	S.	75	—	—	0 v? m KS
25	52.4	50.1	29.748	49.7	SSE	157	—	—	0. h (v?) KS CK
26	48.2	49.5	29.894	48.5	E	34.8	0.065	0.078	0 v KS - Sh. 1/2 seen
27	48.2	49.	29.740	48.5	SW	20	0.174	0.179	6 v CS. C. S bright halo
28	44.1	50.	29.435	44.2	NW	52	0.356	0.348	6 v CK S
29	45.7	46.4	28.412	44.6	SSE	170	0.213	0.213	0 m q. r KS N
30	41.1	48.5	28.792	41.1	SW ¹ S	208	0.246	0.447	6 v q trace of C from S to P.M. sheet
31	44.2	44.3	28.910	44.3	SW	379	0.530	0.800	0 v q dr KS. letting in SW
	49.70	49.62	29.468			3329.8	5.667	6.364	

6 new pen

at 10+20'

Time on gross at 7 1/2 A.M.

at 9.30 A.M. fragments of
hill a remnant of round
trees at N scarce vis^o Smoke from SW

(at 8.30' Bar = 28.672
at 9.2' (Bar = 28.587)

legging in SW

11.8 H
14.499

1863	10 P.M.			Wind			Thermometers			
Oct	E	A	Bar	Hyg.	Dir	Miles	Max	Min		
1	44	50.5	29.360	46.3 44.2	SW	92	56	44.5	0 v	KS
2	48.1	51.5	29.470	48.6 46.1	SW	126	57	45	0 v	KS
3	48.1	51.2	29.534	48.5 48.1	SWW	80	55.6	48	0 - g	KS ?
4	41.9	48.5	29.654	42.3 40.9	SSW	186	56.8	40.	6 ₁₀ v	
5	35.6	45.5	29.766	36.8 35.8	W 1 S	56	53.	36	6 ₁₀ h at horizon	
6	46.	48.	29.566	46.1 41.9	E	168	49.9	32	0 g	
7	46.8	48.5	29.681	46.8 42.1	NE 1 X	204	51.9	44.5	0. g. r	
8	52.	50.	29.460	51.7	NE	165	55.	46	0. g. r	
9	48.2	50.2	29.260	48.7 48.	SE	62	57.	48	0. g. r	
10	49.3	51.	29.318	49.8 49.1	SSE	174	58.	44	6 ₁ g	KS ?
11	45.2	49.8	29.241	45.8 44.4	ESE	137	55.3	44.5	6 ₂ v	S near hor ^{stream} Aur - no arch
12	49.5	51.	28.892	48.2	E 1 S	265	56.8	44.5	6 ₁ g r	KS gloomy at horizon
13	49.7	52.	29.029	49.9 49.	E	143	59.4	48.5	6 ₁ v	S Aurora bright arch faint stream
14	51.1	53.	29.228	52.	S	203	59.	49.	6 ₁ v	S KS aurora behind clouds
15	49.9	53	29.314	50.3 49.8	SW	80	59.	47.9	0 g r	
16	47.8	52.	29.482	47.9 47.9	SW	106	56.2	44.5	6 ₂ g	KS 3 - clear at 3 th
17	50	52	29.634	50.5 48.9	S	201	57.	43.5	0 v g	KS
18	48.2	52.2	29.512	48.5 46.4	WSW	80	58.8	48.5	0. g. r	
19	46.	50.6	29.714	46.4 46.1	SW	34	53.5	44.5	0 g	
20	45	51.	29.976	45.3 43.5	SSE	61	55.	41.	0 v	KS K CK
21	46.8	50.	29.904	47. 46.2	NE	23	54.5	43.5	0 v g	KS ! very dark
22	39.	48.	30.040	39.4 39.2	SW	32	53.	37.	6 ₁ v h	Ground horizon
23	42.8	48.	30.044	43. 43.	WSW	3	50.6	37.	6 ₁ mf	CK moonlight
24	50.5	49.7	29.796	51.2 48.5	S	122.7	55.3	42.8	0 v	KS
25	50.4	50.6	29.812	50.9 49.2	SW	104.5	55.	49.5	0 v	smooth pale grey uncharactered
26	48.7	50	29.784	48.9 46.	W 1 S	76.	55	44.5	0. v. r	
27	45.5	49.2	29.512	45.8 45.8	SW	20.	53	44	0. m. r	
28	39.	46.	29.350	39.3 37.9	SW	102.	50.2	38	0 v	CS S halo round &
29	36.9	44.	28.909	37. 35.4	W 1 S	847.	49.9	36	0. v r	KS. N
30	38.1	42.2	28.771	38.3 37.	SSW	278.	46.	34.	0 v g	KS
31	37.	44.	29.162	37.1 36.9	SWW	119.	50	37	6 v	CS C
	45.78	49.43	29.522			2948.	54.35	42.60		

1863	10 AM				Wind		Rain		
No ^o .	E	A	Bar	H _g	Dir	Miles	Sq ^r	Rd	
1	43 -	43 -	29.200	43.2	WSW	114.	0.020	0.020	6 v KS C
2	42 1	43.6	29.015	42.3	NW	181.	0.096	0.004	6 v q CK K.S
3	44.7	43 -	29.221	44.9	S	153.	0.045	0.052	0 v m q KS W
4	52 -	50	29.501	52.8	WSW	184.	0.118	0.290	0 v q S KS
5	45 -	45.9	29.940	45.9	SW	82.	0.095	0.172	0 m r SW
6	34 -	41 -	30.288	35.5	WN	31.	0.020	0.006	6 m C CK S
7	49.7	45.2	29.930	49.9	SW	75.	0.415	0.372	0 v m d KS
8	47.9	47 -	29.736	48.1	WN	156.	0.069	0.109	6 v KS C K N in North
9	36.7	42 -	30.176	36.7	SW	30.	0.005	—	6 m C
10	42.6	44.2	29.576	42.2	WN	155.	0.263	0.432	0 v q r KS N
11	39.3	42 -	29.264	39.8	WS	97.	0.057	0.060	6 v K
12	41 -	42	29.810	41.9	SW	78.	0.020	0.028	6 v m CK K
13	49.9	46.3	29.919	50.2	SWW	151.	0.013	0.030	0 v q S
14	51.3	49	29.909	51.9	SWS	247.	0. —	0. —	0 v d q KS
15	50.5	49 -	29.854	51.9	SSW	173.	0.005	0.020	0 v KS
16	51.2	51 -	29.774	51.2	SW	236.	—	—	0 v m d KS
17	46.3	49.5	29.741	46.8	SSW	133.	0.298	0.509	0 v m CK KS S
18	49.7	49.2	29.720	49.2	S ¹ / ₂ W	207.	0.008	0.025	0 v q KS
19	52.2	51 -	29.792	52.7	S ¹ / ₂ W	257.	0.015	0.037	0 v q KS C K Bar heaving
20	53.7	52 -	29.621	53.7	S	271.	—	—	0 v q S.C.K. KS. Bar heaving
21	51.5	51 -	29.168	52.2	SESS	247.	0.160	0.210	0 v r S. KS. N
22	44.3	46.2	29.860	44.6	SW	217.	0.970	1.120	6 v q KS. N.
23	45.2	47.5	29.471	45.5	S ¹ / ₂ W	127.	0.015	0.020	0 v m S
24	41.	47.	29.555	41.7	SW	35.	0.158	0.178	dense fog
25	48.8	49.	29.377	48.5	S ¹ / ₂ W	279.	0.163	0.194	0 m. rain
26	54.2	50.2	29.812	54.5	SSW	259.	—	—	0 m. rain
27	52	50.	29.902	52.8	S ¹ / ₂ E	234.	0.030	0.028	6 m. c. KS
28	49.7	49.5	29.932	50.5	S ¹ / ₂ W	244.	—	—	0 v. KS. q
29	46.7	48.	29.995	46.4	S ¹ / ₂ E	148.	—	—	0 v. KS
30	41.8	44.2	29.822	42.2	SS ¹ / ₂ E	107.5	—	—	0 m KS
	46.60	46.95	29.679			4902 ^r	3.058	4.016	

1863	10 P.M.				Wind		Thermometers			
Noon	E	A	Bar	H	Dir	Miles	Mo	Min		
1	40 -	43.5	28.810	40.1 38.7	NE	139.	46.9	34.5	0 v g	KS
2	36.1	43 -	29.430	36.3 34.2	W	164	48.2	36 -	1/10 v	
3	52.2	48.2	29.244	52.5 52.2	SW	279	55 -	34	0 g q.	
4	42 -	46.8	29.837	42.6 41.7	W 1/2 S	120	56 -	41.8	0 g	
5	34 -	44 -	30.186	34.7 33.8	W 1/2 N	57	49.3	34.5	6. v	CS near horz aurora
6	41.9	44 -	30.108	42 - 41.4	SW	46	46 -	30.5	0 g. d	
7	49 -	47 -	29.796	49.2 49 -	SW	134	54 -	41 -	0 g. r	
8	38.6	45.2	30.074	38.4 37.9	N	250	52.6	38 -	6 v	slight aurora
9	40.2	43.5	29.745	40.2 40 -	SSW	158	46 -	32 -	0 g. r	
10	37.1	43	29.320	37.3 36.9	SSW	138	46 -	37 -	6.8 v	KS round horizon
11	38.	43.5	29.466	38.2 37.9	WSW	106	47 -	33.5	6. v	KS
12	44.8	44	29.870	44 - 43.9	SW	147	47 -	33 -	0 g	
13	49.4	47.8	29.906	49.9 48.6	SW	200	55	43	0 g	
14	50.7	49	29.931	50.7 50.8	SW	178	55 -	48.	0 g ⁿ	
15	52.6	51	29.776	52.8 52.8	SW	222	57.	47	0 g ⁿ q	
16	50.7	51	29.650	50.9 50.9	SSW	159	56.5	50	0 g ⁿ r	
17	49.3	50.2	29.742	49.9 48.9	S 1/2 W	190	55 -	44.5	0 v	KS
18	51.8	51	29.694	52.2 50.7	S	305	54.5	47	0 v q	KS
19	47.8	50.5	29.736	48.7 48.8	S 1/2 E	252	56	47	6. v. g. CK. C. S	
20	51.7	52 -	29.445	52.1 51.4	S 1/2 E	242	56	45	0 v q r	KS. N
21	43.3	47.5	29.126	43.3 42.7	WSW	263.	56.8	42.5	6. v q	KS violent rain & W at 4 PM
22	45.7	47	29.402	46 45.2	SW 1/2 S	164.	48.5	41	6. v q	KS
23	48.	48.	29.456	48.4 47.5	SW	187.5	51.	44.	0. v. KS, rain	
24	48.3	48	29.398	48.6 47.8	S	151.	51.5	40.5	6. v. c. H. KS. g.	Bar. rising
25	46.4	47	29.766	47 46	S	238.	55.2	45	6. v CKS	
26	51.3	50	29.656	51.5 50	SE	178.	58	45	6. v KS. g	
27	50.7	51.	29.928	51.2 49.8	S	214.	55.8	50.2	0. m. KS. g.	
28	49	46.4	29.962	49.2 47.2	S 1/2 E	150.	55	47	0. m KS	
29	42.	46.5	29.963	42.3 40.4	S 1/2 E	63.	52.5	42	6. v. KS. = 6. v. KS	
30	46.5	46	29.587	46.8 44.7	SSW	169.	48.	36	0. v. KS. g	Bar. rising
	45.65	47.27	29.673			5267.5	52.18	40.88		

1863	10 A.M.				Wind		Rain		
Dec ^r	E	A	Bar	H	Dir	Miles	Sq	R.	
1	47	48.	29.075	47.2	StW	381	0.220	0.278	o. m. rain
2	37.8	43.	29.026	38.2	WNW	54	0.340	0.330	o. v. es. HS. Snow on Deer Mountains
3	35.	42.	29.045	35.2	WbN	360	0.190	0.300	o. v. es. HS. Snow, wind = 250
4	42.8	41.	29.916	43.2	SSW	199	0.020	0.052	o. m. es. HS. g
5	46.8	47.5	29.511	46.5	SW	386	0.130	0.344	6. m. HS. n. g
6	42.4	42.3	29.843	42.6	S.W	190	0.030	0.043	6. v. es. HS. g
7	49.3	47.	29.820	49.5	S.W	319	0.010	0.023	6. v. es. HS. g - Bar. heaving
8	43.7	48.	29.565	43.2	WbN	398	0.140	0.306	o. m. rain
9	39.	43.	29.776	39.	S.W	109	0.150	0.145	6. v. es. HS
10	44.	44.2	29.828	44.1	SW	211	0.008	0.005	6. v. g. GS - CK HS trace of halo
11	49.	47	29.831	49.	WSW	479.	0.109	0.200	o. v. m. r. g. HS. 479 space for 24
12	57.9	48	29.918	52.4	WbS.	213.	0.002	0.018	o. v. g. HS
13	48.7	47.3	30.182	49.	SW	108.	—	—	o. v. h. HS
14	49.	48.6	30.221	49.2	SW & S.	80.	—	—	o. v. HS
15	47.1	48.4	30.027	47.9	SW & S	151.	0.011	0.050	o. v. HS. K
16	38.1	44.8	29.543	38.2	WSW	309.	0.062	0.103	6. v. g. HS. GS. Nallround Hgn
17	40.9	44.	30.082	40.7	NW & S	143.	0.108	0.150	6. v. HS. S. CS. N. M. Thrush sings
18	42.5	43.	30.282	42.7	SW	122.	0.001	trace	o. v. m. S? (122)
19	43.6	45	30.316	43.9	WSW	95.	—	—	o. v. m. d. HS
20	45.8	45.2	30.004	46.1	SW	185.	—	—	6. v. g. K. GS. HS. Bar heaving
21	38.4	42.8	29.915	38.9	SW	88	0.040	0.106	o. v. m. HS. K
22	38.2	42.8	29.965	38.4	NW	206.7	not measured	0.007	6. v. HS. GS. CS. S
23	48.4	44.5	29.832	48.5	W	105.5	0.029	0.094	6. v. m. HS. CS
24	46.5	45.1	29.975	46.6	SW	208.8	0.005	0.011	6. v. m. HS. CS
25	46.2	45.	29.752	46.3	SW	282.2	—	—	o. v. g. HS. Silverpallen minty
26	43.8	44.3	29.649	43.8	SW & W	229.0	0.039	0.121	o. v. HS. GS. CS. Sawell vry Sh. g. mvs
27	34.3	40.7	29.905	34.3	SWW	87.7	foggy	0.074	6. v. 6. CS. Sh. vry Sawell mvs. Thrush
28	40.4	44.4	29.821	40.3	SSE	112	0.127	0.106	o. m. HS. HS. Thrush
29	45.3	45.	29.704	45.3	W	125.2	0.226	0.283	6. v. K. HS. GS. very thick at 3 hrs. Thrush
30	36.4	41.8	29.968	36.2	SW	86.	0.022	0.016	6. m. clear to 5 P. but with all mvs
31	42.1	42.	29.433	42.1	ESE	102.3	—	—	o. thick g. HS
	43.38	44.70	29.800			6021.4	1.920	3.162	
							2.021		

1863		10. P. M.				Wind		Thermometers		
Dec ^r		E	A	Bar	H	Dir	Miles	Max	Min	
31	1	39.4	45.	29.134	40. 39.	SW	145	50.2	39.	b. c. s. Hs
	2	36.8	44.	29.028	37. 35.2	SW	165	44.	35	o. m. Hs
	3	32.5	39.	29.400	35. 32	SW	203	44	30	6m
	4	47	45.	29.650	47.2 43.5	SW	373	49	31	Sheet Lightning in W S. P. M.
	5	38	43.	29.400	38.2 37	SW	195	53	34	o m. Hs g
0	6	45.	46.	29.840	45. 44	SW	324	48.8	33.	6. v. c. s. Hs. g; lightning at 10. P. M.
	7	47.8	48.	29.714	46.8 46.4	SW	383	51.8	44	6. v. c. s. Hs. g (at 8.40 P. M. Bar = 29.535 (J. E.)
	8	40.3	45.	29.680	40.4 40.2	SW	85	51.3	40.4	it rose 0.015 while the wind laced 7.5 miles
	9	46.2	45.	29.764	41.4 40.4	SW	204	46.1	36	6 v Hs
	10	47-	45.8	29.917	47.2 44.5	W S	-	50	40	o g q
	11	49.3	48	29.888	49.9 48.3	SW	243	54.1	44	o g q
	12	45.4	48	30.114	45.9 44-1	W	137	54-	44.8	6 g an opening at NW in gloom one star & aur
0	13	48.4	48.9	30.222	48.9 46.8	SW	110	54.2	44.5	o g
	14	47.2	49-	30.150	47.7 47.1	SW	101	52.9	46-	o g
	15	46.2	48.5	29.656	46.5 44.3	SSW	196	51	45	o v q Hs
	16	41.9	44.2	29.670	42.2 40.0	NW	211	50	36.2	o v q Hs
	17	35.4	43.8	30.272	36 35	W S	70	45.8	35	6 v Hs
	18	45.1	45-	30.312	45.5 45.2	W	105	49	35	o v Hs GS
	19	43.1	46.5	30.221	43.4 42.5	WSW	115	48.8	41.5	6 v Hs
0	20	36.9	45.5	30.026	37.1 36.8	W	182	49.8	37-	6 v
	21	45.2	44-	29.677	45.6 43.6	W S	193-	47.7	33	o v Hs
	22	38.5	41	29.976	38.9 37	SW	260.5	49	35.9	o v Hs
	23	47	45	29.893	47.4 46.2	W	147.7	51.8	36	6 v Hs H
	24	45.3	45.6	29.900	45.3 43.6	SW	148.2	50	44	o v d Hs
♀	25	44.5	46.8	29.693	44.7 44.3	W	84.8	50.9	43.5	o v d Hs
	26	40.6	45.2	29.618	40.4 38.2	W	134.1	50.6	40.6	o v q Hs Hs
0	27	33.2	40.1	30.020	38.9 37.2	E S N	54.6	51.	32	o v Hs
	28	48	44.2	29.710	48 47.5	SW W	191.5	51.3	33.1	o v q d Hs
	29	39.9	44.1	29.898	40 39.2	W	119.	52	39.5	6 v GS
	30	36.9	42-	29.731	36.9 36.2	E S E	28.	44.5	33.5	6 v Hs
4	31	39	42-	29.512	36.2 34.9	E S E	209.	44.1	36.5	o g all gloom
		42.32	44.92	29.822			5317.4	49.57	37.85	
								49.70	38.03	

Let a = the amount of rain in a year or any number of years & b the days on which rain fell during the same period, then $\frac{a}{b}$ is the minimum quantity that should fall on any particular day, to constitute what Dr. Robinson proposes calling a rainy day

1842	$\frac{a}{b} = \frac{34,800}{191} = 0.182$
1843	$34,310 \div 183 = 0.187$
1844	$30,487 \div 180 = 0.169$
1845	$41,232 \div 189 = 0.218$
1846	$37,967 \div 186 = 0.204$
1847	$32,256 \div 210 = 0.154$
1848	$39,313 \div 221 = 0.178$
1849	$37,048 \div 233 = 0.159$
1850	$35,134 \div 238 = 0.148$
1851	$33,133 \div 237 = 0.140$
1852	$49,250 \div 235 = 0.209$
1853	$31,719 \div 223 = 0.142$
1854	$38,732 \div 238 = 0.163$
1855	$25,175 \div 197 = 0.128$
1856	$25,917 \div 206 = 0.125$
1857	$33,604 \div 235 = 0.143$
1858	$32,019 \div 192 = 0.167$
1859	$34,526 \div 223 = 0.155$
1860	$36,345 \div 226 = 0.161$
1861	$42,005 \div 208 = 0.202$
1862	$42,115 \div 240 = 0.175$
1863	$38,004 \div 243 = 0.157$

$$\frac{5,666}{22} = 0.167$$

1863	10 A.M.			10 P.M.			Rain		Thermometer	
	E	A	Bar	E	A	Bar	Square on Lawn	Globe on Roof	Max	Min
Jan 9	39.49	40.78	29.436	39.69	41.29	29.446	2.636	4.954	54.2	24.0
Feb.	43.10	43.48	29.966	40.89	43.86	29.961	0.791	1.798	53.0	30.5
March	46.09	44.90	29.643	42.29	45.66	29.629	1.695	2.273	58.8	28.5
April	49.64	48.09	29.745	43.11	49.12	29.732	1.431	2.568	61.2	33.0
May	53.00	52.35	29.815	47.33	52.70	29.819	1.658	2.525	67.0	36.5
June	58.95	57.25	29.608	52.09	58.20	29.629	4.160	3.740	70.2	41.5
July	58.97	59.99	29.957	54.13	61.38	29.963	0.246	0.260	75.0	41.5
August	60.18	59.21	29.621	53.65	59.51	29.607	3.482	3.509	73.0	42.5
Sept ^r	53.08	52.94	29.500	48.82	53.07	29.509	3.905	3.835	65.1	37.8
October	49.70	49.62	29.470	45.78	49.43	29.524	5.667	6.364	59.4	32.
Nov ^r	46.60	46.95	29.687	45.65	47.27	29.680	3.058	4.016	58.	30.5
Dec ^r	43.38	44.70	29.814	42.32	44.92	29.836	2.021	3.162	54.2	30.
Summer	55.65	55.23	29.662	50.30	56.72	29.675	19.118	20.233		
Winter	44.72	44.82	29.715	42.33	45.35	29.714	11.632	18.771		
Year	50.19	50.02	29.689	46.31	50.54	29.695	30.750	39.004		
	Rain	Mean								
	Days	Ther.	Bar							
Jan 9	24	39.54	29.441							
Feb	19	42.00	29.964							
March	19	44.85	29.636							
April	16	46.38	29.739							
May	15	50.17	29.817							
June	25	55.52	29.619							
July	7	56.55	29.960							
Aug ^t	22	56.97	29.614							
Sept ^r	23	50.95	29.505							
Oct ^r	27	47.74	29.497							
Nov ^r	22	46.13	29.683							
Dec ^r	24	42.85	29.825							
	243									

Mean Temperature of Year = 48.27

Maximum - 9.10.15 July 75.0

Minimum - 6th Jan 24.0

Mean Barometer. = 29.688

Max - 13th Feb = 30.410

Min - 29th Oct = 28.412