by the author in his paper published in the 'Proceedings' in 1865, and was again noted and recorded by him in 1867; it has also been observed in the human subject by Professor Turner and others, and is considered by the former to be the representative of the *rectus thoracicus* of animals The author, however, is of opinion that the muscle figured by Cuvier as the *sterno-costal* in animals is a better fitting homology, and gives in this paper illustrations from his own dissections in animals in support of this view.

XI. "Results of the first year's performance of the Photographically Self-recording Meteorological Instruments at the Central Observatory of the British System of Meteorological Observations." By Lieut.-General Edward Sabine, R.A., President. Received June 17, 1869.

Before the Fellows of the Society disperse for the long vacation, I am desirous to bring under their notice the results of the first year's performance (January 1 to December 31, 1868) of the photographically self-recording meteorological instruments established at Kew, the Central Observatory of the British Meteorological System instituted by the Board of Trade and superintended by a Committee of Fellows of the Royal Society.

The photograms, with tabulations carefully prepared from them, are transmitted monthly by Mr. Stewart, the Superintendent of the Kew Observatory, to Mr. Scott, the Director of the Meteorological Office in London, where the results are computed and embodied in Tables, of the nature of those which are now presented.

The first of these Tables shows the *Diurnal Variation*, or the values of the phenomena at each of the 24 hours, on the mean of the year. It exhibits

1st. The Temperature.

2nd. The Elasticity of the Aqueous Vapour.

3rd. The Barometric Pressure.

4th. The Pressure of the Dry Air.

5th. The Humidity.

In meteorology and climatology much instruction may often be derived from tracing the modifying influences of diversities of situation; and I have thought that these Tables might be made more acceptable and interesting to the Society, and the subject be advantageously illustrated, by the addition of corresponding results for two other stations, which are very nearly in the same geographical latitude as Kew, but are very differently situated in other respects, being in the interior of the European and Asiatic continent—thoroughly continental therefore, and as such contrasted with our insular British stations. Nertchinsk and Barnaoul, both in Siberia, are two of the stations of the great Russian system of observatories, established by our late Foreign Member, Mr. A. T. Kupffer, and ably superintended by him for several years until his decease. I had been assured by M. Kupffer that I might thoroughly rely on the observations made at these two stations; and I have since acquired experimentally the fullest confirmation of this assurance in the case of Nertchinsk (as regards the *magnetical,* and inferentially therefore also as regards the *meteorological* observations), by the very delicate and sufficient test adverted to in page 238 of Art. VI. in the Phil. Trans. for 1864. Barnaoul is in lat. 53° 20′, corresponding with the rough average of the latitudes of our British stations generally, and is 400 feet above the sea. Nertchinsk differs only 10′ from the latitude of Kew, but has otherwise a marked feature of diversity in being at an elevation of 2230 feet, whilst Kew is only 34 feet above the sea-level. At Kew we have only as yet available the records of a single year, necessarily influenced by the natural irregularities which cause one year to differ from another. These irregularities are lessened, in the case of the Siberian stations, by combining in the present paper the results of two years of observation.

I may now proceed to the Table of the Diurnal Variations, and to a brief notice of the most salient features presented by the comparative view of the phenomena of the three stations as shown in that Table.

In discussing the diurnal variations of the meteorological elements, it is customary to commence with the *temperature,* regarding it as in a great degree the governing agent in regulating the phenomena of those other elements which are the subjects of the photographical registration. In the middle latitudes, with which alone we have at present to deal, the diurnal variation of the temperature is recognized as a single progression, having one ascending and one descending branch, the turning-points being a maximum at an early hour in the afternoon, and a minimum at a little before sunrise. We find this to be the order of the phenomena at the three stations under review, viz. a maximum between 2 and 3 hours, and a minimum between 16 and 17 hours (4 and 5 A.M.), the *range* between the extremes presenting, however, very marked differences, being 10°·7 (Fahr.) at Kew, 14°·0 at Barnaoul, and 17°·0 at Nertchinsk.

It has been the practice for the last thirty years, at the principal European observatories, to regard the elastic force of the aqueous vapour as an important meteorological element, and to employ it in the separation of the barometric pressure into its two constituents, viz. the pressure of the dry air, and the elasticity of the aqueous vapour mingled therein*. In conformity with this practice, we may take the *vapour tension* next in the order of succession. It was remarked by Bessel, in the Astron. Nach. for 1838 (No. 356), that "since the invention of Daniell's hygrometer and August's psychrometer, we possess the means of ascertaining at all times with ease and sufficient exactness the quantity of aqueous vapour contained in the

* In the publications of the British Colonial Observatories (1840–1847) this method was adopted in the meteorological reductions, being one of its earliest applications.

TABLE I. Diurnal Variation of the Meteorological Elements, at Kew in England, and at Nertchinsk and Barnaoul in Siberia.

Hours of Mean Time.	KEW. Lat. 51° 29′ N., long. 349° 42′ E.; height 34 feet. Year 1868.					NERTCHINSK. Lat. 51° 19′ N., long. 119° 36′ E.; height 2230 feet. Years 1858 and 1859.					BARNAOUL. Lat. 53° 20′ N., long. 53° 57′ E.; height 400 feet. Years 1858 and 1859.					Hours of Mean Time.
	Thermometer, Fahr.	Vapour.	Barometer.	Dry air.	Humidity.	Thermometer, Fahr.	Vapour.	Barometer.	Dry air.	Humidity.	Thermometer, Fahr.	Vapour.	Barometer.	Dry air.	Humidity.	
	°	in.	29 ins.+	29 ins.+		°	in.	27 ins.+	27 ins.+		°	in.	29 ins.+	29 ins.+		
0.	56·2	·304	1·019	·715	68	33·5	·188	·833	·645	68	41·6	·221	·585	·364	71	0.
1.	57·2	·304	1·010	·706	66	34·9	·190	·823	·633	67	42·6	·221	·582	·361	70	1.
2.	57·4	·300	1·005	·705	65	35·6	·190	·817	·627	65	42·8	·220	·579	·359	68	2.
3.	57·7	·302	0·998	·696	64	35·5	·185	·812	·627	64	42·6	·218	·579	·361	67	3.
4.	57·2	·300	0·999	·699	65	34·4	·184	·811	·627	63	41·9	·217	·580	·363	69	4.
5.	56·6	·294	1·000	·706	67	32·7	·179	·815	·636	63	40·8	·214	·580	·366	71	5.
6.	55·2	·294	1·005	·711	71	30·4	·177	·818	·641	66	39·3	·211	·581	·370	72	6.
7.	54·0	·294	1·014	·720	73	28·0	·175	·828	·653	69	37·6	·210	·581	·371	75	7.
8.	52·3	·303	1·018	·715	77	26·1	·169	·836	·667	72	35·9	·209	·582	·373	78	8.
9.	51·1	·294	1·022	·728	80	24·6	·163	·840	·677	74	34·5	·205	·583	·378	80	9.
10.	50·1	·290	1·025	·735	82	23·5	·157	·842	·685	75	33·4	·202	·583	·381	82	10.
11.	49·4	·290	1·024	·734	83	22·3	·155	·842	·687	76	32·4	·199	·582	·383	83	11.
12.	48·6	·292	1·025	·733	85	21·7	·151	·841	·690	76	31·0	·197	·580	·383	85	12.
13.	48·1	·292	1·021	·729	86	20·9	·149	·840	·691	77	30·7	·193	·579	·386	85	13.
14.	47·6	·290	1·019	·729	86	20·2	·146	·837	·691	78	30·1	·190	·577	·387	87	14.
15.	47·3	·288	1·015	·727	87	19·5	·144	·838	·694	79	29·3	·187	·577	·390	87	15.
16.	47·0	·286	1·015	·729	87	18·8	·142	·838	·696	79	28·8	·186	·576	·390	89	16.
17.	47·1	·288	1·011	·723	88	18·6	·144	·839	·695	80	29·0	·188	·577	·389	88	17.
18.	47·5	·294	1·012	·718	88	19·1	·150	·842	·692	80	30·0	·195	·580	·385	87	18.
19.	48·5	·298	1·020	·722	87	20·5	·158	·847	·689	79	31·3	·202	·583	·381	85	19.
20.	50·0	·302	1·025	·723	84	23·2	·170	·849	·679	77	32·9	·209	·586	·377	83	20.
21.	51·8	·316	1·026	·710	80	26·3	·178	·851	·673	75	35·6	·216	·589	·373	80	21.
22.	53·5	·314	1·023	·709	75	29·4	·184	·849	·665	73	38·2	·220	·591	·371	76	22.
23.	55·1	·314	1·021	·707	73	31·7	·188	·843	·655	70	40·0	·221	·590	·369	73	23.
Means	51·9	·298	30·016	29·718	78	26·3	·168	27·835	27·667	73	35·5	·206	29·582	29·376	78·7	Means

atmosphere." The most convenient mode of *photographic* investigation and record which presented itself, and was adopted at Kew, was by the employment of wet and dry thermometers; the difference between the two thermometers admits of exact measurement, and supplies the element which is desired, the accuracy of the record being occasionally tested by comparison with the results obtained by Regnault's "hygromètre à condensation"*. The gain of even two years of observation over a single year may be here at once seen by the greater regularity of the two years' record at the Siberian stations. Taking these therefore in the first instance, we find that at both stations the elasticity of the vapour presents a single progression, having maxima about noon, and minima at 16 hours (4 A.M.). The difference in the amount of vapour at the two stations is due, of course, to the greater altitude of Nertchinsk. At Kew the progression is not quite so regular as where two years are combined; the values at 21, 22, and 23 hours are high in comparison with the other hours, possibly owing to peculiarities in the weather of the particular year; in other respects the progression is similar to that at Nertchinsk and Barnaoul, and the time of minimum is identical at the three stations, viz. at 16 hours. The higher elasticity of the vapour at Kew, in comparison with the two Siberian stations, is, of course, due to the higher temperature at Kew†.

In the case of the *Barometer* there are slight indications at each of the three stations of the existence of a double progression; but in the middle latitudes a longer series of observation is clearly required to determine regular periods (if such there are) in a satisfactory manner. One conclusion is obvious, that in the latitudes of 51° and 53° the striking regularity and magnitude of the double period which prevail in the tropics do not subsist.

The minimum of the *dry air* coincides at the three stations, as nearly as may be, with the warmest hour of the day (2 or 3 hours). There is also, at each of the three stations, an approximate maximum at or near the coldest hour. At Barnaoul and Nertchinsk the progression between the hours of minimum and maximum is uninterrupted; at Kew it is obvious that a single year is not sufficient to justify conclusions in this respect.

Regarding the *Humidity*, the minimum, or dryest hour of the 24, is in all cases coincident with, or closely following upon, the warmest hour; and the hour of greatest humidity that of the lowest temperature. Kew

* There have been some few occasions in this, the first year at Kew, when the continuity of the trace from the wet thermometer failed, in consequence of the freezing of the water by which its ball was wetted, or owing to other causes. Arrangements have now been made to meet these difficulties in continuous registration.

† The Tables employed in the calculation of the values inserted in the columns of "Elastic Force of Vapour" and "Humidity" have been the well-known Russian Tables, 'Tables Psychrométriques et Barométriques à l'usage des Observatoires Météorologiques de l'Empire de Russie.' Very convenient Tables have also been published by the Smithsonian Institution, computed by Dr. Guyot. Two of the three stations of the present paper being Russian, it was deemed advisable to employ the Russian 'Tables Psychrométriques, &c.' for the reduction of the results in the present paper.

and Barnaoul have, on the mean, almost exactly the same degree of humidity, the greater amount of vapour at Kew being balanced, in its influence on the humidity, by the higher temperature. Nertchinsk is both the coldest and the driest.

So far as the purposes of the Meteorological Committee can yet be considered as settled, it is their intention to combine the results of every five years of observation into a Table of Diurnal Variations, similar to that which is now presented for Kew for a single year. A second period of five years will yield a second Table; and two such combined will form a ten-year Table, more satisfactory than either of its two component parts, but still open to correction by incorporation with subsequent periods of equal duration.

The other six observatories of the system established by the British Government, viz. Aberdeen, Armagh, Falmouth, Glasgow, Stonyhurst, and Valencia*, have received their instruments, which had been prepared and verified at the Central Observatory (Kew), where also those who were to work with them had received personal instruction in their use; and on the completion of these and all other needful arrangements, the six observatories commenced on July 1, 1868, a continuous record corresponding in all respects to that at Kew. The photograms and the tabulations prepared from them at the several observatories are transmitted monthly to Kew, where they undergo careful examination, and revision if required; and at the expiration of a second month they are sent, with the records prepared at Kew itself, to the Meteorological Office, where, under the direction of Mr. Scott, they are formed into Tables, and used for all meteorological purposes for which they may be available. The mode and extent in which the information thus obtained may be most suitably communicated to the public are not yet fully determined, but are receiving careful consideration.

Table II. (which occupies the next 5 or 6 pages) exhibits the *annual* variations at the three stations, analogous to the *diurnal* variations shown in Table I. It is obvious that such Tables cannot but assist greatly in studying the climatological phenomena in different localities; but a discussion of them would be premature until a wider observational basis is provided.

* It was the purpose of the Committee, approved by the Board of Trade, that there should have been an eighth meteorological station, viz. one in the north of Scotland. In the first estimate sent to the Treasury by the Board of Trade, the necessary cost of such a station was included; but on the receipt of a letter from the Treasury to the Board of Trade, June 5, 1867, stating that "in the estimates for the current year My Lords are aware that they have proposed a less sum than had been estimated for, and intend that the arrangements to be made by the Committee should be curtailed accordingly," the meteorological station in the north of Scotland was in consequence curtailed.

KEW.—Temperature, Fahrenheit.

Hours of mean time.	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.
	°	°	°	°	°	°	°	°	°	°	°	°
0.	39.6	47.0	48.6	53.6	63.7	68.0	72.4	68.9	65.6	53.0	45.1	48.4
1.	40.0	47.8	49.4	54.6	65.1	69.1	74.4	69.8	66.9	54.3	45.6	49.0
2.	40.1	48.0	49.8	54.8	65.6	69.6	75.0	69.6	67.3	54.5	45.9	49.1
3.	40.0	48.3	49.8	54.9	66.0	70.6	75.9	70.0	67.8	54.3	45.6	49.0
4.	39.6	47.5	49.3	54.7	65.7	70.4	76.5	69.7	66.9	53.4	44.7	48.0
5.	39.2	46.4	48.8	53.5	65.8	70.6	76.1	68.9	65.9	52.2	43.9	47.7
6.	39.0	44.9	47.3	52.4	63.8	70.0	74.6	67.2	63.3	50.6	43.1	46.8
7.	38.9	44.0	45.7	50.7	61.7	68.5	72.5	65.3	60.8	50.3	42.6	46.6
8.	38.7	43.3	45.0	48.9	58.3	64.8	69.2	63.3	59.3	48.2	42.1	46.4
9.	38.4	42.8	44.3	47.6	56.3	62.2	66.7	62.0	58.1	47.3	41.8	46.2
10.	38.2	42.3	43.5	46.6	54.6	60.0	64.8	60.9	56.9	46.3	41.1	46.0
11.	38.2	42.2	43.1	45.6	53.4	58.5	63.4	60.3	55.9	45.6	40.7	45.7
12.	37.9	41.9	42.2	44.7	51.8	57.0	62.0	59.4	55.0	45.0	40.6	45.3
13.	37.8	42.0	41.8	44.4	50.9	55.8	60.5	59.0	54.3	44.6	40.5	45.4
14.	37.8	41.9	41.0	44.1	50.1	54.6	59.3	58.5	53.8	44.3	40.5	45.3
15.	37.7	41.8	40.9	44.2	49.6	53.7	58.5	58.1	53.4	44.2	39.8	45.3
16.	37.6	41.8	40.6	43.7	49.2	52.9	57.9	57.5	53.1	44.2	40.0	45.2
17.	37.5	41.5	40.6	43.5	49.6	53.7	58.2	57.5	52.9	44.3	40.2	45.2
18.	37.3	41.2	40.0	43.7	51.5	55.8	59.8	58.3	53.1	44.2	40.1	45.2
19.	37.5	41.1	40.3	44.7	53.5	58.8	62.4	60.2	53.9	44.4	40.1	44.9
20.	37.9	41.3	41.8	46.9	56.2	60.9	64.8	62.5	56.4	45.8	40.6	45.1
21.	38.3	42.2	44.1	49.3	59.0	63.1	67.4	64.2	58.9	47.7	41.4	45.5
22.	38.9	43.9	46.1	50.7	61.4	64.8	69.9	65.8	61.5	49.7	42.6	46.5
23.	39.7	45.5	47.7	52.6	63.1	67.1	71.3	67.7	63.7	51.8	43.9	47.4
Means	38.6	43.8	44.7	48.8	57.7	62.5	67.2	63.5	59.4	48.3	42.2	46.5

NERTCHINSK.—

Hours of mean time.	January.	Feb.	March.	April.	May.	June.
	°	°	°	°	°	°
0.	−11.5	− 2.1	17.1	41.1	56.8	66.0
1.	−10.2	− 0.3	19.2	42.2	57.7	66.9
2.	−10.2	+ 0.5	20.8	42.5	58.5	67.6
3.	−11.2	+ 0.7	21.2	42.9	58.7	67.2
4.	−13.5	− 1.0	20.7	42.9	58.6	66.7
5.	−16.5	− 4.5	19.0	41.8	58.1	65.7
6.	−17.7	− 7.3	15.1	40.0	56.2	64.4
7.	−18.4	− 8.9	11.7	36.8	53.1	62.3
8.	−18.6	− 9.6	10.3	34.3	49.7	59.3
9.	−18.7	−10.1	9.2	32.7	46.9	56.2
10.	−19.3	−10.6	8.6	31.4	45.9	54.5
11.	−19.8	−11.3	7.8	30.2	42.3	53.1
12.	−20.1	−11.8	6.8	29.2	42.0	51.9
13.	−20.4	−12.6	6.0	28.6	40.8	51.0
14.	−20.8	−13.6	5.0	28.0	39.8	50.1
15.	−21.4	−14.3	3.8	27.2	38.9	49.3
16.	−21.9	−14.9	2.8	26.5	38.0	48.9
17.	−22.2	−15.5	1.9	26.2	38.4	49.7
18.	−22.6	−16.0	1.3	27.1	40.6	52.2
19.	−22.7	−16.4	3.1	29.8	43.7	54.6
20.	−22.6	−14.0	7.2	33.2	48.1	58.6
21.	−20.3	− 9.4	10.9	36.0	51.3	60.7
22.	−16.5	− 5.6	13.6	38.3	53.8	63.4
23.	−13.8	− 4.4	16.4	40.0	55.8	64.6
Means	−18.0	− 8.9	10.8	34.5	48.9	58.5

KEW.—Tension of Vapour.

Hours of mean time.	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
0.	.204	.228	.224	.254	.358	.354	.404	.430	.382	.286	.238	.282
1.	.206	.226	.226	.256	.360	.360	.408	.428	.388	.284	.231	.280
2.	.204	.222	.226	.252	.350	.366	.390	.426	.386	.280	.226	.280
3.	.204	.218	.228	.250	.350	.360	.400	.426	.384	.284	.233	.286
4.	.214	.218	.226	.252	.346	.362	.394	.410	.394	.296	.224	.276
5.	.210	.214	.230	.248	.354	.366	.404	.420	.376	.300	.224	.274
6.	.212	.216	.234	.254	.340	.366	.414	.426	.392	.294	.224	.274
7.	.216	.218	.230	.250	.342	.376	.422	.420	.384	.276	.224	.274
8.	.206	.214	.232	.256	.338	.370	.416	.424	.389	.290	.222	.272
9.	.208	.220	.234	.258	.342	.374	.414	.420	.384	.280	.220	.272
10.	.202	.220	.226	.248	.338	.372	.408	.420	.382	.274	.218	.266
11.	.200	.220	.228	.248	.332	.370	.408	.422	.374	.272	.214	.264
12.	.198	.220	.226	.248	.328	.362	.396	.418	.370	.270	.212	.260
13.	.198	.218	.222	.254	.322	.374	.394	.430	.360	.264	.212	.260
14.	.198	.220	.222	.250	.320	.356	.389	.422	.360	.262	.212	.256
15.	.194	.218	.224	.246	.312	.348	.387	.422	.356	.262	.216	.256
16.	.192	.216	.220	.252	.308	.342	.390	.418	.356	.262	.218	.256
17.	.196	.220	.224	.252	.316	.352	.386	.418	.354	.266	.214	.256
18.	.200	.218	.228	.248	.330	.360	.402	.424	.354	.278	.214	.256
19.	.200	.218	.230	.258	.352	.362	.416	.434	.372	.278	.222	.262
20.	.200	.232	.242	.260	.354	.362	.428	.434	.382	.289	.212	.260
21.	.206	.238	.226	.264	.358	.356	.436	.428	.418	.296	.220	.262
22.	.204	.230	.228	.256	.354	.350	.432	.430	.396	.292	.230	.270
23.	.214	.260	.228	.258	.366	.364	.418	.438	.402	.294	.244	.276
Means	.204	.223	.228	.253	.341	.362	.407	.424	.379	.280	.222	.268

NERTCHINSK.—

Hours of mean time.	January.	Feb.	March.	April.	May.	June.
	in.	in.	in.	in.	in.	in.
0.	.027	.041	.078	.141	.197	.354
1.	.029	.043	.081	.139	.194	.353
2.	.029	.044	.084	.141	.193	.355
3.	.027	.039	.087	.136	.194	.348
4.	.023	.039	.083	.137	.187	.364
5.	.019	.035	.077	.135	.185	.348
6.	.018	.029	.070	.136	.183	.342
7.	.018	.028	.062	.133	.185	.352
8.	.018	.028	.060	.125	.185	.345
9.	.017	.027	.060	.125	.178	.326
10.	.017	.027	.058	.122	.174	.312
11.	.017	.025	.057	.120	.172	.307
12.	.016	.025	.055	.116	.171	.302
13.	.017	.024	.056	.117	.167	.296
14.	.017	.023	.053	.115	.163	.292
15.	.016	.022	.052	.113	.163	.287
16.	.016	.022	.050	.111	.161	.288
17.	.015	.020	.048	.112	.167	.296
18.	.015	.021	.048	.116	.176	.318
19.	.015	.020	.052	.125	.186	.332
20.	.016	.024	.062	.130	.191	.348
21.	.017	.029	.069	.135	.199	.357
22.	.022	.038	.073	.138	.200	.361
23.	.024	.039	.077	.139	.201	.357
Means	.019	.030	.065	.127	.182	.331

Temperature, Fahrenheit.						BARNAOUL.—Temperature, Fahrenheit.												
July.	August.	Sept.	October.	Nov.	Dec.	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Hours of mean time.
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
72·3	70·2	56·7	37·0	12·9	−14·3	8·1	8·8	22·5	48·1	60·6	71·1	75·0	70·7	55·1	43·5	28·8	6·9	0.
73·4	71·6	58·2	38·9	14·2	−13·0	8·8	10·3	24·2	48·9	61·8	72·0	75·8	71·2	55·9	44·6	29·4	7·5	1.
73·9	72·1	59·2	39·5	14·6	−12·4	9·0	10·5	25·2	49·5	62·1	72·1	76·1	71·1	56·2	44·8	29·4	7·5	2.
74·0	71·8	60·6	39·5	14·0	−13·4	8·4	10·4	25·6	49·8	62·1	71·6	74·8	71·2	56·1	44·9	29·2	6·9	3.
73·5	71·6	59·2	38·1	12·0	−15·9	6·9	9·5	25·1	49·6	61·8	71·5	75·5	71·0	55·3	44·0	27·8	6·0	4.
72·0	70·2	57·7	35·7	9·7	−18·2	5·9	7·9	23·5	48·5	61·1	70·8	73·8	69·8	53·9	41·8	26·8	5·5	5.
70·6	68·0	54·2	32·2	8·0	−19·0	5·1	6·7	21·0	46·3	59·4	69·6	72·2	67·8	51·9	40·8	26·0	5·1	6.
67·9	64·4	49·6	29·9	7·2	−19·7	4·4	5·6	19·2	43·6	57·0	67·9	70·1	65·0	49·7	39·2	25·4	4·6	7.
64·7	60·8	47·4	28·2	6·8	−20·5	3·8	4·5	17·8	41·7	53·7	64·8	67·5	62·2	47·8	38·1	25·0	4·1	8.
61·8	58·2	45·4	27·3	6·5	−20·8	2·9	3·5	16·3	40·2	51·6	61·9	65·1	60·1	46·6	37·0	24·7	3·5	9.
59·4	56·8	44·6	26·5	6·0	−21·2	2·7	3·0	15·4	38·8	49·8	59·8	63·2	58·5	45·6	36·0	24·5	3·2	10.
57·8	55·6	43·7	25·6	5·2	−21·6	2·2	2·3	14·2	37·9	48·2	58·1	61·6	57·2	44·8	35·3	24·2	3·1	11.
57·0	54·1	42·9	25·2	4·8	−21·9	1·9	1·6	13·2	37·0	46·8	56·8	60·2	56·1	44·0	34·6	24·1	2·9	12.
56·2	53·1	41·7	24·4	4·2	−22·1	1·7	1·0	12·1	35·7	45·3	55·4	59·0	55·2	43·1	33·9	23·9	2·6	13.
55·4	52·1	41·1	23·8	3·6	−22·2	1·7	0·5	11·1	34·9	44·2	54·3	58·3	54·3	42·6	33·5	23·5	2·3	14.
54·6	51·4	40·1	22·8	3·3	−22·4	1·7	−0·1	10·0	34·1	43·2	53·1	57·1	53·2	41·9	32·7	23·0	2·3	15.
54·0	50·6	39·4	22·0	3·1	−22·6	1·6	−0·7	9·1	33·6	42·2	52·5	56·5	52·5	41·2	32·3	22·8	2·2	16.
55·0	50·3	38·8	21·1	2·5	−22·9	1·6	−0·9	8·3	33·4	44·2	54·4	57·8	52·4	40·6	31·8	22·4	2·2	17.
56·9	51·4	38·8	20·7	2·0	−23·4	1·7	−1·1	8·0	35·4	47·5	57·5	60·7	53·7	40·7	31·8	22·1	2·2	18.
59·5	53·9	40·4	20·9	1·9	−23·2	1·7	−1·3	9·1	37·3	50·0	60·5	63·5	56·1	42·7	32·1	21·8	1·5	19.
63·5	58·4	44·7	23·8	2·2	−23·2	1·4	−0·9	11·2	39·8	53·0	63·1	66·1	58·8	45·0	33·9	22·2	1·4	20.
66·5	62·3	48·2	27·6	4·2	−22·2	2·5	1·4	15·7	43·0	56·1	66·3	69·4	62·8	48·2	36·2	23·5	1·7	21.
68·8	65·3	52·4	31·2	7·5	−18·9	4·4	4·4	19·2	45·6	58·3	68·7	72·1	66·2	51·0	39·1	26·2	3·1	22.
71·1	68·2	53·9	34·1	10·0	−15·9	6·5	7·2	21·4	47·3	59·6	70·0	72·8	68·9	53·6	41·1	26·9	4·6	23.
64·2	60·9	48·3	29·0	6·9	−19·6	4·0	3·9	16·6	41·7	53·3	63·5	66·8	61·9	48·1	37·6	25·2	3·9	Means

Tension of Vapour.						BARNAOUL.—Tension of Vapour.												
in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
·481	·436	·275	·132	·073	·024	·070	·074	·113	·181	·244	·389	·477	·425	·272	·191	·140	·071	0.
·474	·448	·275	·141	·074	·027	·073	·076	·118	·182	·243	·387	·482	·419	·275	·192	·137	·072	1.
·471	·441	·277	·142	·074	·025	·073	·076	·120	·182	·240	·386	·479	·412	·273	·188	·134	·072	2.
·464	·430	·266	·141	·072	·023	·070	·076	·122	·178	·243	·390	·476	·407	·272	·186	·133	·071	3.
·461	·424	·266	·137	·065	·019	·065	·073	·120	·178	·238	·390	·474	·406	·269	·185	·131	·068	4.
·455	·424	·260	·132	·059	·018	·064	·068	·114	·178	·240	·384	·473	·402	·264	·180	·128	·067	5.
·459	·427	·261	·125	·054	·017	·062	·066	·105	·175	·236	·381	·472	·410	·263	·176	·126	·066	6.
·461	·421	·252	·118	·052	·016	·061	·063	·099	·175	·242	·389	·471	·407	·259	·169	·124	·065	7.
·449	·399	·243	·114	·051	·015	·060	·062	·095	·171	·238	·390	·475	·403	·253	·169	·124	·064	8.
·422	·379	·238	·112	·051	·016	·059	·060	·091	·170	·235	·382	·470	·397	·248	·166	·125	·062	9.
·406	·367	·233	·108	·051	·016	·058	·059	·090	·166	·234	·378	·461	·388	·243	·164	·124	·062	10.
·393	·359	·228	·110	·050	·014	·057	·058	·086	·165	·231	·369	·453	·380	·242	·163	·124	·062	11.
·385	·347	·222	·107	·049	·015	·057	·058	·084	·164	·230	·362	·443	·375	·239	·160	·124	·062	12.
·385	·340	·222	·106	·048	·015	·057	·057	·083	·161	·228	·353	·431	·368	·238	·158	·123	·062	13.
·380	·335	·216	·102	·046	·014	·058	·055	·080	·159	·224	·344	·425	·363	·235	·156	·122	·062	14.
·372	·331	·209	·100	·045	·014	·058	·053	·078	·158	·219	·336	·418	·356	·231	·154	·122	·061	15.
·369	·327	·205	·100	·046	·015	·058	·054	·077	·157	·220	·334	·416	·352	·226	·153	·122	·061	16.
·384	·327	·203	·096	·043	·015	·059	·054	·075	·160	·230	·347	·424	·353	·225	·152	·120	·061	17.
·403	·340	·205	·093	·044	·014	·059	·054	·075	·164	·246	·371	·451	·366	·225	·150	·119	·061	18.
·433	·367	·216	·098	·044	·014	·059	·054	·077	·172	·256	·385	·475	·380	·235	·152	·119	·060	19.
·459	·405	·240	·107	·046	·013	·060	·054	·086	·180	·262	·399	·486	·400	·245	·158	·120	·060	20.
·467	·430	·249	·114	·051	·016	·061	·059	·095	·182	·262	·401	·492	·417	·263	·168	·124	·061	21.
·477	·445	·259	·125	·059	·019	·064	·065	·103	·183	·259	·407	·490	·431	·267	·178	·130	·063	22.
·482	·449	·268	·129	·065	·022	·067	·071	·109	·182	·250	·400	·488	·424	·271	·186	·133	·066	23.
·433	·392	·241	·116	·055	·017	·062	·062	·096	·172	·240	·377	·463	·393	·251	·169	·126	·064	Means

	KEW.—Atmospheric Pressure at 62° Fahr.												NERTCHINSK.—				
Hours of mean time.	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	January.	Feb.	March.	April.	May.
	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+
0.	·986	1·212	1·061	1·018	1·067	1·207	1·098	·965	·917	1·028	1·070	·605	·977	·992	1·021	·760	·654
1.	·967	1·202	1·056	1·013	1·061	1·198	1·086	·961	·908	1·021	1·062	·586	·969	·980	1·014	·751	·644
2.	·976	1·196	1·051	1·009	1·053	1·194	1·079	·948	·900	1·012	1·058	·583	·965	·972	1·004	·740	·633
3.	·956	1·194	1·046	1·001	1·047	1·188	1·067	·944	·891	1·005	1·057	·583	·973	·972	·997	·734	·626
4.	·963	1·195	1·046	·997	1·043	1·180	1·075	·941	·887	1·009	1·059	·591	·981	·975	·995	·728	·619
5.	·958	1·193	1·045	·998	1·042	1·178	1·081	·939	·889	1·015	1·069	·597	·990	·983	·997	·730	·617
6.	·960	1·191	1·052	·999	1·045	1·180	1·088	·942	·897	1·024	1·080	·603	·993	·992	1·004	·734	·623
7.	·964	1·208	1·061	1·032	1·051	1·184	1·092	·948	·907	1·028	1·084	·605	·997	·998	1·013	·746	·631
8.	·971	1·209	1·066	1·016	1·059	1·192	1·104	·961	·919	1·035	1·081	·605	·999	1·002	1·023	·758	·646
9.	·975	1·209	1·066	1·021	1·071	1·205	1·121	·968	·913	1·038	1·075	·606	·999	1·002	1·026	·766	·661
10.	·975	1·207	1·068	1·022	1·076	1·211	1·124	·974	·915	1·040	1·082	·609	·998	1·000	1·027	·764	·669
11.	·976	1·212	1·061	1·020	1·079	1·214	1·128	·972	·901	1·037	1·071	·621	·993	·998	1·024	·764	·672
12.	·972	1·208	1·065	1·031	1·079	1·216	1·129	·976	·898	1·037	1·069	·623	·987	·997	1·026	·768	·672
13.	·969	1·205	1·061	1·009	1·079	1·214	1·132	·971	·896	1·037	1·061	·619	·983	·992	1·027	·763	·672
14.	·970	1·206	1·057	1·003	1·074	1·213	1·128	·968	·892	1·032	1·061	·622	·985	·991	1·024	·760	·671
15.	·969	1·199	1·048	·998	1·069	1·212	1·125	·961	·886	1·026	1·052	·619	·988	·988	1·024	·758	·671
16.	·967	1·201	1·046	·993	1·069	1·213	1·126	·959	·882	1·027	1·049	·617	·984	·987	1·026	·758	·671
17.	·959	1·202	1·048	·991	1·072	1·216	1·128	·958	·871	1·031	1·046	·612	·979	·984	1·029	·763	·675
18.	·955	1·205	1·059	·994	1·077	1·222	1·132	·963	·839	1·034	1·048	·613	·979	·985	1·033	·765	·681
19.	·955	1·209	1·066	1·004	1·082	1·227	1·137	·967	·882	1·044	1·052	·612	·985	·990	1·044	·769	·685
20.	·960	1·222	1·075	1·010	1·083	1·231	1·137	·965	·885	1·054	1·061	·617	·990	·997	1·049	·769	·687
21.	·970	1·229	1·078	1·012	1·077	1·229	1·130	·964	·887	1·057	1·063	·622	·996	·997	1·049	·765	·681
22.	·970	1·236	1·082	1·009	1·036	1·225	1·104	·966	·889	1·055	1·073	·626	·997	·996	1·048	·762	·686
23.	·946	1·239	1·084	1·012	1·066	1·210	1·104	·970	·884	1·053	1·063	·617	·992	·991	1·041	·756	·670
Means	·966	1·208	1·061	1·008	1·065	1·207	1·111	·960	·895	1·032	1·064	·609	·987	·990	1·024	·755	·659

	KEW.—Pressure of Dry Air at 62° Fahr.												NERTCHINSK.—				
	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+
0.	·782	·984	·837	·764	·709	·853	·694	·535	·535	·742	·832	·323	·949	·950	·946	·619	·457
1.	·761	·976	·830	·757	·701	·838	·678	·533	·520	·737	·832	·306	·940	·937	·933	·611	·449
2.	·772	·974	·825	·757	·703	·828	·689	·522	·514	·732	·832	·303	·936	·929	·919	·599	·440
3.	·752	·976	·818	·751	·689	·828	·667	·514	·507	·721	·825	·297	·946	·933	·910	·597	·431
4.	·759	·977	·820	·745	·697	·818	·681	·531	·493	·713	·835	·315	·958	·935	·911	·592	·433
5.	·748	·979	·815	·750	·688	·812	·677	·519	·513	·715	·845	·321	·970	·949	·920	·595	·433
6.	·748	·975	·828	·745	·705	·814	·674	·516	·505	·730	·856	·329	·974	·961	·934	·597	·440
7.	·748	·990	·831	·782	·709	·808	·670	·528	·523	·752	·860	·331	·977	·971	·951	·613	·444
8.	·765	·995	·834	·760	·731	·822	·688	·537	·521	·745	·859	·333	·982	·974	·963	·633	·461
9.	·767	·989	·832	·763	·729	·831	·707	·548	·529	·758	·855	·334	·982	·974	·965	·640	·483
10.	·773	·987	·842	·774	·738	·839	·716	·554	·533	·766	·864	·343	·980	·974	·969	·642	·494
11.	·776	·992	·833	·772	·747	·844	·720	·550	·527	·765	·857	·347	·975	·972	·968	·645	·500
12.	·774	·988	·839	·783	·751	·854	·733	·558	·528	·767	·857	·363	·971	·971	·970	·651	·500
13.	·771	·987	·839	·755	·755	·840	·738	·541	·536	·773	·849	·359	·966	·969	·971	·645	·505
14.	·772	·986	·835	·753	·754	·857	·730	·546	·522	·770	·849	·366	·968	·967	·971	·645	·508
15.	·775	·981	·824	·752	·767	·864	·729	·539	·530	·764	·836	·363	·971	·966	·972	·645	·507
16.	·775	·985	·826	·741	·761	·871	·736	·541	·531	·765	·831	·361	·968	·965	·976	·646	·510
17.	·763	·982	·824	·739	·756	·864	·742	·540	·517	·765	·832	·356	·964	·964	·980	·652	·508
18.	·745	·987	·831	·746	·747	·862	·730	·539	·485	·756	·834	·357	·964	·965	·986	·648	·506
19.	·755	·991	·836	·746	·730	·865	·721	·533	·510	·766	·830	·350	·970	·968	1·017	·644	·499
20.	·760	·990	·833	·750	·729	·869	·709	·531	·503	·765	·849	·357	·974	·974	·986	·639	·496
21.	·764	·991	·852	·748	·719	·873	·694	·536	·469	·761	·843	·360	·979	·968	·981	·630	·482
22.	·766	1·006	·854	·753	·682	·875	·672	·536	·493	·763	·843	·356	·975	·957	·975	·624	·476
23.	·732	·979	·856	·754	·700	·846	·686	·532	·482	·759	·819	·341	·967	·952	·963	·616	·469
Means	·762	·986	·833	·756	·725	·845	·703	·536	·516	·752	·842	·341	·967	·960	·960	·628	·476

Atmospheric Pressure.

June.	July.	August.	Sept.	October.	Nov.	Dec.
ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+
·635	·680	·748	·825	·890	·885	·925
·624	·671	·737	·827	·878	·877	·910
·615	·662	·728	·829	·871	·874	·916
·611	·654	·719	·798	·867	·875	·920
·609	·651	·716	·793	·869	·871	·927
·608	·652	·717	·795	·867	·886	·934
·614	·657	·721	·801	·873	·881	·937
·620	·673	·727	·813	·883	·894	·943
·631	·675	·740	·823	·888	·899	·944
·642	·686	·748	·830	·890	·900	·942
·644	·693	·751	·831	·893	·897	·942
·648	·695	·752	·834	·891	·896	·941
·647	·692	·753	·833	·891	·892	·936
·644	·693	·754	·836	·889	·887	·931
·643	·694	·754	·837	·889	·871	·929
·643	·696	·757	·838	·885	·887	·929
·644	·697	·759	·843	·884	·885	·924
·645	·702	·756	·847	·886	·884	·919
·651	·707	·766	·852	·880	·885	·919
·655	·708	·773	·858	·884	·890	·922
·655	·708	·771	·860	·888	·894	·928
·650	·705	·769	·859	·901	·901	·931
·644	·700	·766	·858	·898	·905	·935
·639	·693	·757	·849	·895	·902	·932
·636	·685	·747	·832	·885	·888	·930

BARNAOUL.—Atmospheric Pressure.

January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Hours o mean time.
ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	
·802	·862	·820	·677	·441	·306	·198	·266	·453	·640	·665	·899	0.
·803	·859	·816	·671	·432	·302	·194	·264	·450	·633	·663	·894	1.
·805	·857	·811	·666	·426	·294	·191	·261	·450	·630	·663	·894	2.
·810	·859	·807	·663	·422	·292	·189	·261	·450	·628	·666	·897	3.
·814	·859	·807	·661	·418	·289	·185	·262	·449	·632	·677	·899	4.
·818	·860	·806	·659	·413	·291	·185	·262	·449	·635	·680	·901	5.
·816	·860	·805	·655	·413	·291	·187	·263	·450	·642	·687	·903	6.
·817	·858	·805	·653	·414	·290	·192	·264	·451	·647	·683	·904	7.
·817	·858	·806	·654	·416	·291	·193	·262	·451	·650	·681	·902	8.
·815	·857	·806	·657	·419	·291	·198	·265	·453	·655	·675	·900	9.
·813	·853	·803	·657	·420	·293	·201	·267	·452	·657	·673	·900	10.
·811	·851	·803	·657	·422	·295	·203	·266	·452	·657	·669	·899	11.
·806	·845	·802	·657	·419	·293	·204	·265	·451	·655	·663	·898	12.
·804	·842	·803	·660	·418	·293	·205	·264	·451	·653	·658	·897	13.
·801	·841	·797	·659	·418	·293	·203	·262	·448	·650	·655	·895	14.
·800	·840	·796	·661	·418	·293	·203	·263	·447	·649	·654	·895	15.
·796	·839	·797	·662	·420	·296	·203	·263	·447	·650	·651	·894	16.
·793	·838	·802	·662	·424	·297	·206	·265	·447	·650	·649	·894	17.
·790	·841	·805	·668	·426	·302	·211	·269	·450	·651	·651	·896	18.
·791	·842	·810	·670	·431	·307	·215	·274	·453	·652	·652	·900	19.
·795	·848	·813	·671	·436	·306	·215	·277	·462	·655	·657	·905	20.
·800	·853	·814	·674	·437	·304	·215	·277	·468	·657	·659	·910	21.
·806	·857	·819	·670	·437	·303	·212	·277	·467	·658	·662	·914	22.
·807	·852	·819	·678	·438	·299	·212	·276	·464	·652	·663	·914	23.
·805	·851	·807	·663	·424	·296	·201	·266	·453	·648	·665	·900	Means

Pressure of Dry Air.

June.	July.	August.	Sept.	October.	Nov.	Dec.
ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+	ins. 27+
·280	·199	·312	·550	·758	·813	·900
·270	·197	·289	·551	·736	·807	·883
·260	·191	·287	·554	·729	·800	·890
·263	·191	·289	·531	·727	·803	·898
·244	·189	·292	·527	·730	·806	·908
·261	·198	·293	·535	·739	·826	·915
·272	·197	·294	·540	·748	·826	·920
·268	·212	·307	·561	.764	·842	·927
·285	·225	·340	·580	·774	·848	·928
·316	·265	·368	·592	·778	·848	·927
·332	·287	·384	·598	·784	·847	·926
·341	·301	·393	·605	·782	·845	·925
·345	·307	·406	·612	·784	·842	·921
·348	·309	·413	·613	·785	·841	·916
·351	·314	·419	·621	·785	·845	·915
·356	·322	·426	·629	·786	·842	·914
·356	·329	·433	·638	·784	·840	·909
·349	·318	·428	·643	·790	·840	·904
·333	·304	·426	·647	·786	·841	·905
·323	·274	·406	·642	·786	·845	·908
·312	·250	·366	·620	·781	·849	·914
·293	·237	·338	·611	·786	·849	·915
·287	·224	·322	·598	·774	·846	·916
·282	·210	·308	·581	·764	·837	·910
·305	·252	·356	·591	·768	·834	·912

BARNAOUL.—Pressure of Dry Air.

January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Hours o mean time.
ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	ins. 28+	ins. 28+	ins. 28+	ins. 29+	ins. 29+	ins. 29+	ins. 29+	
·732	·788	·707	·495	·197	·917	·721	·841	·180	·449	·526	·828	0.
·730	·783	·698	·489	·189	·915	·711	·845	·175	·442	·526	·821	1.
·732	·781	·691	·485	·186	·908	·712	·849	·178	·441	·528	·822	2.
·740	·783	·685	·484	·179	·902	·713	·854	·178	·443	·533	·827	3.
·749	·786	·687	·483	·180	·898	·711	·856	·180	·447	·547	·830	4.
·754	·792	·692	·480	·173	·907	·713	·860	·183	·456	·552	·834	5.
·754	·794	·700	·481	·177	·910	·715	·853	·187	·465	·561	·837	6.
·756	·795	·705	·478	·172	·901	·721	·857	·192	·478	·559	·839	7.
·757	·796	·712	·483	·178	·901	·718	·859	·198	·482	·557	·838	8.
·756	·797	·714	·488	·183	·909	·728	·869	·205	·489	·550	·837	9.
·755	·794	·714	·490	·187	·915	·745	·878	·209	·493	·549	·838	10.
·754	·793	·717	·492	·191	·926	·750	·886	·210	·495	·546	·836	11.
·749	·787	·720	·494	·189	·931	·761	·891	·211	·496	·539	·836	12.
·747	·785	·721	·499	·190	·940	·774	·896	·214	·495	·536	·835	13.
·743	·786	·716	·499	·194	·949	·779	·899	·213	·494	·533	·833	14.
·742	·787	·718	·503	·198	·957	·784	·907	·216	·494	·533	·833	15.
·738	·785	·721	·504	·200	·962	·788	·911	·220	·497	·529	·833	16.
·734	·784	·727	·503	·193	·950	·782	·912	·222	·498	·529	·833	17.
·732	·787	·730	·504	·181	·931	·759	·903	·225	·492	·532	·835	18.
·731	·789	·732	·498	·175	·922	·741	·893	·218	·499	·532	·840	19.
·736	·794	·728	·490	·174	·907	·728	·878	·217	·497	·537	·845	20
·739	·794	·718	·492	·175	·902	·724	·859	·205	·488	·535	·849	21.
·742	·792	·717	·497	·178	·897	·722	·847	·199	·480	·531	·851	22.
·738	·781	·710	·496	·187	·888	·724	·852	·193	·466	·530	·848	23.
·743	·789	·712	·492	·184	·919	·738	·873	·201	·478	·539	·836	Means

	KEW.—Humidity of the Air.												NERTCHINSK.—					
Hours of mean time.	January.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	January.	Feb.	March.	April.	May.	June.
0.	85	72	66	63	63	53	52	62	62	72	80	84	91	89	73	56	39	57
1.	85	69	65	61	60	52	49	61	60	69	77	81	91	87	71	53	41	56
2.	83	67	64	60	57	52	47	61	59	68	74	81	89	86	70	53	41	55
3.	83	66	64	59	57	50	46	60	58	69	74	83	88	85	69	51	40	54
4.	89	67	65	60	56	50	45	58	61	74	76	84	84	83	68	51	39	56
5.	89	68	68	61	57	50	47	62	60	77	80	84	82	82	68	48	36	58
6.	91	73	75	66	59	51	50	65	69	81	81	87	82	81	68	56	42	59
7.	93	76	75	69	63	55	54	69	75	78	82	87	82	81	69	61	48	64
8.	89	78	79	75	69	62	60	75	79	88	84	87	82	82	70	64	52	70
9.	91	81	81	80	77	68	65	77	81	87	84	88	82	82	72	67	55	73
10.	88	82	81	79	81	74	69	80	84	88	85	87	84	82	72	68	59	74
11.	88	82	83	82	83	77	72	82	85	90	85	87	84	81	72	69	61	75
12.	88	84	85	85	86	79	74	84	88	91	85	87	84	81	73	71	64	79
13.	88	82	85	88	88	83	77	88	87	91	85	87	86	81	73	71	65	80
14.	88	84	87	88	89	85	78	88	88	91	85	87	85	82	75	73	66	81
15.	86	84	87	86	89	86	81	89	88	91	89	87	86	82	75	74	68	82
16.	86	82	87	90	89	87	83	91	90	91	89	87	86	81	76	74	66	83
17.	88	85	89	90	91	87	82	91	90	93	87	87	84	82	76	76	71	83
18.	90	85	93	88	88	82	80	89	88	96	87	87	84	82	76	75	70	81
19.	90	85	93	88	87	75	75	85	91	96	91	90	86	84	78	74	64	78
20.	88	91	97	82	80	69	72	78	85	94	85	88	88	88	81	69	58	73
21.	90	90	80	76	74	64	67	74	86	90	85	87	87	89	81	63	54	68
22	87	81	74	71	66	59	61	70	75	84	85	87	89	90	78	59	50	64
23.	89	87	70	67	65	57	56	67	70	77	86	85	89	90	74	57	47	60
Means	88	79	79	76	74	67	64	75	78	84	83	86	86	84	73	64	54	69

XII. "On the Connexion between oppositely disposed Currents of Air and the Weather subsequently experienced in the British Islands." By Robert H. Scott, M.A., Director of the Meteorological Office. Communicated by the President. Received June 17, 1869.

In the number of the 'Proceedings of the Meteorological Society' for February 1869, there is a paper by Mr. Charles Meldrum, of the Mauritius, on the connexion between the rotation of the wind in the Southern Indian Ocean and the positions of oppositely directed air-currents. In this paper the author expresses his opinion that the tropical hurricanes of the Southern Indian Ocean *invariably* originate between two opposite streams of air.

More than a year previous to the appearance of Mr. Meldrum's paper my own attention had been drawn to the occurrence in these islands of some remarkable storms, which appeared to be connected with the previous existence at the earth's surface of the two wind-currents, polar and equatorial, in close proximity to each other.

The first occasion on which this was noticed by me was on January 22,