

# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Haddo House, County of Aberdeen, in Lat. 57°24', Long. 2°14', Distance from Sea 12 miles.  
Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.

During the MONTH of January 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE.	THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		9 h. A.M.		9 h. P.M.		Protected in Shade, & feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			No. of Days in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No. _____	9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		Barometer. No. _____	Attached Thermometer. No. _____	Barometer. No. _____	Attached Thermometer. No. _____	Max. No. _____	Min. No. _____	Max. in Sunrays No. _____	Min. on Grass. No. _____	Dry bulb. No. _____	Wet bulb. No. _____	Dry bulb. No. _____	Wet bulb. No. _____				Direction.	Force	Direction.	Force		Velocity (0-6) and Direction.		Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.					Hours.	No. 3 inches.	No. 12 inches.	No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
ci-cu.	cirro-cumulus.	n.	nebula.
ci-s.	cirro-stratus.	r.	rain.
cu.	cumulus.	h. r.	heavy rain.
cu-s.	cumulo-stratus.	c. h. r.	continued heavy rain.
d.	dew.	s.	stratus.
f.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h.	haze.	s. ha.	solar halo.
h. d.	heavy dew.	sq.	squall.
h. l.	hail.	sq.	squalls.
li.	lightning.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
lu. co.	lunar corona.	g.	gale of wind.
lu. ha.	lunar halo.		

## TABLE FOR ESTIMATING FORCE OF WIND.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2	Fresh breeze	5	Blowing a gale
1	Light air	3	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = 29.661  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = 29.676  
Mean at Station, corrected, and at 32°, = 29.668  
Corrected for height, feet above Mean Sea-level, = 202  
Mean, reduced to 32°, and Sea-level, = 29.876  
Highest Reading, corrected for Index error, on the 6th, = 30.150  
Lowest Do. Do., on the 27th, = 28.404  
Difference, or Monthly Range, = 1.746

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 21st, = 51.0  
Lowest in Month, corrected for Index errors, on the 10th, = 23.0  
Difference, or Monthly Range, = 28.0  
"Corrected Mean" of all the Highest, (Col. 5), = 41.7  
"Corrected Mean" of all the Lowest, (Col. 6), = 31.5  
Difference, or Mean Daily Range, = 10.2  
\*\* Calculated Mean Temperature of Month, = 36.6  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 11th, = 51.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 41.4  
Lowest at Night, Black Bulb (corrected for Index errors), on the 28th, = 18.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 28.6  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 35.6  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 34.6  
Computed Temperature of Dew-Point, = 33.2  
Do. Elastic Force of Vapour, = .191  
Do. Weight of Vapour in a Cubic Foot of Air, =   
Relative Humidity (Saturation = 100), = 91  
RAIN fell on 16 Days; Amount in Inches, = 1.74

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	1	1	4	11	3	5	5	0	
P.M.		3	0	0	6	4	7	5	6	0	
Mean.		2	1	1	5	7	5	5	5	0	

Observations made and Return verified by John Forrest

(Signed)







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Acad's House, County of Aberdeen, in Lat. 57° 24', Long. 2° 14', Distance from Sea 12 miles.

Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 8 feet.

During the MONTH of February 1901.

The Hours of Observation are of Greenwich Time.

[illegible]

BAROMETER, "corrected Mean" at 9 A.M., <i>minus</i> the Correction $\left\{ \begin{array}{l} \text{for Temp. (Col. 2),} = 29.835 \end{array} \right\}$	=	29.818
"Corrected Mean" of Barometer at 9 P.M., <i>minus</i> the Correction $\left\{ \begin{array}{l} \text{for Temp. (Col. 4),} = 29.834 \end{array} \right\}$	=	29.817
Mean at Station, corrected, and at 32°.....	=	29.818
Correction for height, feet above Mean Sea-level.....	=	204
Mean, reduced to 32°, and Sea-level, .....	=	30.022
Highest Reading, corrected for Index error, on the 15 th, .....	=	30.922
Lowest Do. Do., on the 27 th, .....	=	28.924
Difference, or Monthly Range, .....	=	1.318

<b>S.-R. THERMOMETER, (in shade, etc.), Highest in Month,</b> (corrected for Index Errors), on the 16th,.....	=	45.0
<b>Lowest in Month,</b> corrected for Index errors, on the        th, .....	=	9.0
Difference, or <b>Monthly Range,</b> .....	=	36.0
"Corrected <b>Mean</b> " of all the Highest, (Col. 5), .....	=	38.5
"Corrected <b>Mean</b> " of all the Lowest, (Col. 6),.....	=	29.3
Difference, or <b>Mean Daily Range,</b> .....	=	9.2
** Calculated <b>Mean Temperature</b> of Month, .....	=	33.9
<b>S.-R. THERMOMETER, Black Bulb in Sun, Highest,</b> (corrected for Index Errors), on the 15th,.....	=	51.0
"Corrected <b>Mean,</b> " (Col. 7), of Black Bulb, <b>Max. in Sun,</b> .....	=	43.7
<b>Lowest at Night,</b> Black Bulb (corrected for Index errors), on the 14th, .....	=	7.0
"Corrected <b>Mean,</b> " (Col. 8), of Black Bulb, <b>Min.</b> on grass,.....	=	26.4
Difference of above means or range ("exposed"), .....	=	

<b>HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb,</b> (Cols. 9 and 11), .....	=	33.5
<b>Mean (corrected) A.M. and P.M. Reading of Wet Bulb,</b> (Cols. 10 and 12), .....	=	32.7
<b>Computed Temperature of Dew-Point,</b> .....	=	31.3
<b>Do. Elastic Force of Vapour,</b> .....	=	.176
<b>Do. Weight of Vapour in a Cubic Foot of Air,</b> .....	=	
<b>Relative Humidity (Saturation = 100),</b> .....	=	91
<b>RAIN</b> fell on <u>23</u> Days; Amount in Inches, .....	=	3.56

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.	2	1	-	1	1	-	8	15	—	—	—
P.M.	4	1	1	1	1	2	4	12	—	—	—
Mean.	3	1	1	1	1	1	6	14	0	—	—

Observations made and  
Return verified by

(Signed) \_\_\_\_\_



INSTRUCTIONS

FOR TAKING METEOROLOGICAL

OBSERVATIONS,

WITH REMARKS ON THE USE OF INSTRUMENTS.

ONE of the chief objects of the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure PRACTICE and uniformity in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different Stations, and to enable the Society to compare the results of its own observations with those of other Stations. It is therefore hoped, that those who kindly furnish reports to the Society will, by the use of differently constructed instruments, be enabled to obtain accurate and reliable results, and to secure uniformity in the system of observation. The use of differently constructed instruments, however, is not recommended, as it would tend to create confusion, and to prevent the Society from obtaining accurate and reliable results. The use of the same instruments at all Stations is recommended, as it will enable the Society to compare the results of its own observations with those of other Stations, and to obtain accurate and reliable results.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), as specified in the following remarks, or at the top of the hour, if the time of day is not known. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances, they are specially requested to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M. Weather-Glasses and Aneroids, though well suited to indicate rough variations of atmospheric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological observation that is not supplied with some means of adjustment or compensation which will secure the height of the mercury in the tube is accurately measured from the level of the surface of the mercury in the cistern.

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTIN'S Barometer, the arrangement consisting in applying pressure by means of a screw to the bottom of the cistern, which is made of flexible leather, thus raising or depressing the surface till it just meets the ivory point which forms the zero point of the fixed scale. The Barometer originally constructed by Mr. Aitken of London, and usually called the Board of Trade Barometer, has the great convenience of requiring no adjustment of the cistern. Its scale-inches are not true inches, but so much shorter as to compensate the error that would otherwise arise from the fluctuations of the surface of the mercury in the cistern. This is an excellent Barometer for ordinary Observers, inasmuch as it entirely eliminates the error of observation likely to arise in not a few cases in setting the instrument to the zero point of the fixed scale when the light is not good. To slow the accuracy with which these Barometers are made, it may be stated, that one was compared, during a whole year, with the Society's Standard Barometer; particular care being given to make the comparison, when atmospheric pressure was rising or falling very rapidly, with the result that none of the readings differed from those of the Standard more than 0.003 inch.

A modification of Fortin's Barometer is used at a number of the Society's Stations, by which the inconvenience of the zero point with the surface of the mercury is indicated by a little ivory float, whose stem passes freely through the lid and case of the cistern. When the index-line on this little piston-rod is brought, by the adjusting screw, to form one straight line with those on its ivory frame, the surface of the mercury is then at the exact height from which the scale is graduated. In taking an observation, this preliminary setting must be made with scrupulous accuracy; as a slight error here will vitiate the readings from the vernier.

It is absolutely necessary that the Barometer which is to be used shall have been compared with a Standard Barometer. The Barometer should be suspended in as good a light as can be secured, and to facilitate the reading, a piece of white paper may be put behind the tube. It must be hung truly perpendicular, and exposed to neither the sun's direct rays nor the heat of the fire, and must not be hung against a wall heated by a fire. The object being to secure that the whole instrument, including the brass fittings, the contained mercury, and the attached Thermometer, shall be, when read, at one uniform temperature, it is evident that the best position is that which is least liable to sudden changes of temperature.

In taking an Observation, the Attached Thermometer is first noted: the tube must then be gently tapped, and the cistern adjusted carefully made. The eye, by raising and lowering it, must be brought into the plane of the back and front of the cistern, so that the lower edge of the vernier, which must be carefully adjusted so as to form exactly a tangent to the convex surface of the mercury in the tube. Observations must be taken quickly, so as to prevent heat from the observers' hands and person from affecting the mercury. The use of a lens will facilitate an accurate adjustment and reading of the Barometer. A mistake not infrequently made by those beginning to observe, consisting in setting the edge of the vernier to the level of the clear surface of the mercury which is in direct contact with the glass tube, must be carefully avoided.

The error most frequently made in reading the Barometer is, errors of 0.001 inch, and 0.002 inch. The Barometer is to be read, instead of 29.345 inches, that of the following inches and 0.001 inch—29.345 inches, or 29.346 inches, or 29.347 inches, or 29.348 inches, or 29.349 inches, or 29.350 inches, or 29.351 inches, or 29.352 inches, or 29.353 inches, or 29.354 inches, or 29.355 inches, or 29.356 inches, or 29.357 inches, or 29.358 inches, or 29.359 inches, or 29.360 inches, or 29.361 inches, or 29.362 inches, or 29.363 inches, or 29.364 inches, or 29.365 inches, or 29.366 inches, or 29.367 inches, or 29.368 inches, or 29.369 inches, or 29.370 inches, or 29.371 inches, or 29.372 inches, or 29.373 inches, or 29.374 inches, or 29.375 inches, or 29.376 inches, or 29.377 inches, or 29.378 inches, or 29.379 inches, or 29.380 inches, or 29.381 inches, or 29.382 inches, or 29.383 inches, or 29.384 inches, or 29.385 inches, or 29.386 inches, or 29.387 inches, or 29.388 inches, or 29.389 inches, or 29.390 inches, or 29.391 inches, or 29.392 inches, or 29.393 inches, or 29.394 inches, or 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inches, or 29.895 inches, or 29.896 inches, or 29.897 inches, or 29.898 inches, or 29.899 inches, or 29.900 inches, or 29.901 inches, or 29.902 inches, or 29.903 inches, or 29.904 inches, or 29.905 inches, or 29.906 inches, or 29.907 inches, or 29.908 inches, or 29.909 inches, or 29.910 inches, or 29.911 inches, or 29.912 inches, or 29.913 inches, or 29.914 inches, or 29.915 inches, or 29.916 inches, or 29.917 inches, or 29.918 inches, or 29.919 inches, or 29.920 inches, or 29.921 inches, or 29.922 inches, or 29.923 inches, or 29.924 inches, or 29.925 inches, or 29.926 inches, or 29.927 inches, or 29.928 inches, or 29.929 inches, or 29.930 inches, or 29.931 inches, or 29.932 inches, or 29.933 inches, or 29.934 inches, or 29.935 inches, or 29.936 inches, or 29.937 inches, or 29.938 inches, or 29.939 inches, or 29.940 inches, or 29.941 inches, or 29.942 inches, or 29.943 inches, or 29.944 inches, or 29.945 inches, or 29.946 inches, or 29.947 inches, or 29.948 inches, or 29.949 inches, or 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30.172 inches, or 30.173 inches, or 30.174 inches, or 30.175 inches, or 30.176 inches, or 30.177 inches, or 30.178 inches, or 30.179 inches, or 30.180 inches, or 30.181 inches, or 30.182 inches, or 30.183 inches, or 30.184 inches, or 30.185 inches, or 30.186 inches, or 30.187 inches, or 30.188 inches, or 30.189 inches, or 30.190 inches, or 30.191 inches, or 30.192 inches, or 30.193 inches, or 30.194 inches, or 30.195 inches, or 30.196 inches, or 30.197 inches, or 30.198 inches, or 30.199 inches, or 30.200 inches, or 30.201 inches, or 30.202 inches, or 30.203 inches, or 30.204 inches, or 30.205 inches, or 30.206 inches, or 30.207 inches, or 30.208 inches, or 30.209 inches, or 30.210 inches, or 30.211 inches, or 30.212 inches, or 30.213 inches, or 30.214 inches, or 30.215 inches, or 30.216 inches, or 30.217 inches, or 30.218 inches, or 30.219 inches, or 30.220 inches, or 30.221 inches, or 30.222 inches, or 30.223 inches, or 30.224 inches, or 30.225 inches, or 30.226 inches, or 30.227 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30.394 inches, or 30.395 inches, or 30.396 inches, or 30.397 inches, or 30.398 inches, or 30.399 inches, or 30.400 inches, or 30.401 inches, or 30.402 inches, or 30.403 inches, or 30.404 inches, or 30.405 inches, or 30.406 inches, or 30.407 inches, or 30.408 inches, or 30.409 inches, or 30.410 inches, or 30.411 inches, or 30.412 inches, or 30.413 inches, or 30.414 inches, or 30.415 inches, or 30.416 inches, or 30.417 inches, or 30.418 inches, or 30.419 inches, or 30.420 inches, or 30.421 inches, or 30.422 inches, or 30.423 inches, or 30.424 inches, or 30



## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Haddo House, County of Aberdeen, in Lat. 57° 24' Long. 2° 14', Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of March 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																
		9 h. A.M.		9 h. P.M.		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			No. of days in which it fell.	Amount in inches.	9 h. A.M.	9 h. P.M.	Readings of the H. Cup Anemometer. No. _____	9 A.M.		P.M.		9 h. A.M.							Temperature of Well and soil of foot, No. _____	Temperature of air, surface, and density.	0—10.													
		Barometer. * No. _____	Attached Ther- mometer	Barometer. No. _____	Attached Ther- mometer	Max. No. _____	Min. No. _____	Max. in Sun's rays No. _____	Min. on Grass. No. _____	Dry bulb. No. _____	Wet bulb. No. _____	Dry bulb. No. _____	Wet bulb. No. _____							Direction.	Force	Direction.	Force	Velocity (0—6) and Direction.	Amount (0—10), and Species.	Velocity (0—6) and Direction.							Amount (0—10), and Species.	No. 3 inches.	No. 12 inches.	No. 22 inches.	9 A.M.	9 P.M.								
																																							9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.	
																																							inches.	°	inches.	°	°	°	°	°
1	28.824	37	28.648	39	40	27	39	23	37	35	39	39	+	S.E.	S.E.							34	36	36				1																		
2	28.752	40	28.564	40	45	33	53	31	37	36	40	39	+	S.E.	S.E.							35	36	36				2																		
3	28.734	40	29.032	37	48	32	78	28	38	37	35	34		W	W							37	37	36				3																		
4	29.172	38	29.116	41	41	28	50	24	38	36	40	39	+	S.E.	S.E.							33	37	37				4																		
5	28.608	46	28.724	39	49	36	54	30	46	44	36	35	+	N.W.	N.W.							40	37	37				5																		
6	28.736	41	28.602	38	48	34	60	29	40	37	34	34		S.W.	W							36	37	37				6																		
7	28.678	39	29.434	41	46	33	52	29	38	37	41	39	+	?	N.E.							36	37	37				7																		
8	29.816	41	29.978	38	45	34	52	31	42	40	35	34	+	N	N.W.							38	37	37				8																		
9	29.882	40	29.826	43	47	39	62	27	41	39	41	40		S.W.	W							35	37	37				9																		
10	29.804	48	29.684	43	58	38	75	34	52	49	40	38	17	W.	W							41	39	38				10																		
11	29.544	45	29.502	42	50	32	57	28	46	44	39	38		S.W.	N.W.							40	39	38				11																		
12	29.600	43	29.644	42	54	35	70	30	45	43	40	39		S	W							39	40	39				12																		
13	29.738	43	29.776	42	57	32	69	28	48	45	41	40		S	S							39	40	39				13																		
14	29.806	43	29.812	41	42	37	42	37	39	37	39	37		S	S.E.							40	40	39				14																		
15	29.752	40	29.656	40	43	36	55	36	37	35	38	38	+	S.E.	S.E.							39	40	39				15																		
16	29.592	41	29.604	40	42	36	46	35	39	39	38	38	+	E	N.E.							39	40	39				16																		
17	29.628	40	29.636	39	41	35	44	32	39	38	35	33	13	N.W.	N.E.							39	40	39				17																		
18	29.628	39	29.602	38	42	30	53	27	38	36	36	35	+	N.E.	N.E.							37	39	39				18																		
19	29.622	38	29.684	35	40	31	45	28	37	35	32	31		N.E.	N							37	39	39				19																		
20	29.742	38	29.814	38	44	32	68	30	37	36	37	36	+	N.E.	N.E.							37	39	39				20																		
21	29.934	39	29.960	36	42	32	62	29	38	37	32	32	+	N.E.	N.E.							38	39	39				21																		
22	30.096	41	30.188	37	43	31	64	28	42	40	34	34	+	N.W.	N.W.							38	39	39				22																		
23	30.242	42	30.154	39	46	32	56	30	43	40	38	37	+	N.W.	N.W.							39	39	39				23																		
24	29.884	41	29.878	33	44	28	40	26	41	37	28	27	14	W	N							39	39	39				24																		
25	29.754	32	29.768	30	33	20	37	16	30	29	27	27	+	N	N							36	39	39				25																		
26	29.588	31	29.484	29	53	21	34	23	28	28	27	27	+	N	N							35	38	39				26																		
27	29.384	30	29.382	29	33	24	50	20	27	27	25	25	+	N.W.	N.W.							34	37	39				27																		
28	29.318	31	29.458	25	36	19	70	15	33	32	19	19	+	N.W.	N.E.							34	37	39				28																		
29	29.368	27	29.182	32	33	6	58	3	29	28	31	31	+	W.	S							34	37	38				29																		
30	28.722	33	28.482	35	39	30	45	26	32	32	34	34	+	E	S.E.							34	37	38				30																		
31	28.544	37	28.628	35	43	32	57	28	37	36	33	32	2.27	S	S.W.							35	37	37				31																		
Sums.	13492		13902																			17	19	18																						
Means.	912.542	1204	912.972	1156	1366	945	1697	841	1194	1144	1084	1061	3.33									1147	1184	1182																						
+ Total Corrections for Instrumental Errors.	29.435	38.8	29.448	37.2	44.1	30.5	54.7	27.1	38.5	36.9	35.0	34.2	21	3.33								370	382	381																						
+ Corrections for Diurnal Range.	+120		+120																																											
"Corrected Means."																																														
No. of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30																

## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	" "	ms.	" "
ci-cu.	" "	n.	" "
ci-s.	" "	r.	" "
cu.	" "	h. r.	" "
cu-s.	" "	c. h. r.	" "
d.	" "	s.	" "
f.	" "	sc.	" "
fr.	" "	s.	" "
h. fr.	" "	s.	" "
h.	" "	so. ha.	" "
h. d.	" "	sq.	" "
hl.	" "	sq.	" "
l.	" "	sq.	" "
li. cl.	" "	t.	" "
li. sh.	" "	t. s.	" "
lu. co.	" "	w.	" "
lu. ha.	" "	g.	" "

## TABLE FOR ESTIMATING FORCE OF WIND.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2	Fresh breeze	5	Blowing a gale
1	Light air	3	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\pm$  = 29.527  
for Temp. (Col. 2), = 29.527  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\pm$  = 29.546  
for Temp. (Col. 4), = 29.546  
Mean at Station, corrected, and at 32°, = 29.537  
Correction for height, feet above Mean Sea-level, = 203  
Mean, reduced to 32°, and Sea-level, = 29.740  
Highest Reading, corrected for Index error, on the 23th, = 30.242  
Lowest Do. Do., on the 30th, = 28.482  
Difference, or Monthly Range, = 1.760

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 13th, = 57.0  
Lowest in Month, corrected for Index errors, on the 29th, = 6.0  
Difference, or Monthly Range, = 51.0  
"Corrected Mean" of all the Highest, (Col. 5), = 44.1  
"Corrected Mean" of all the Lowest, (Col. 6), = 30.5  
Difference, or Mean Daily Range, = 13.6  
\*\* Calculated Mean Temperature of Month, = 37.3  
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 3th, = 78.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 54.7  
Lowest at Night, Black Bulb (corrected for Index errors), on the 3th, = 3.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 27.1  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 36.8  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 35.6  
Computed Temperature of Dew-Point, = 34.0  
Do. Elastic Force of Vapour, = 19.5  
Do. Weight of Vapour in a Cubic Foot of Air, = 90  
Relative Humidity (Saturation = 100), = 90  
RAIN fell on 31 Days; Amount in Inches, = 3.33

WIND.		SUMMARY.				
Direction.		N	NE	E	SE	S
A.M.		3	4	3	4	4
P.M.		4	7	6	2	1
Mean.		4	5	2	5	3

Observations made and  
Return verified byJohn Forster

(Signed)







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Adams House, County of Aberdeen, in Lat. 57° 4', Long. 2° 14', Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of April 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			Temperature of Well at depth of feet, No.	SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.											
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs. Sun's rays Grass.		9 h. A.M.		9 h. P.M.			Readings of the H. Cup Anemometer.		9 A.M.		P.M.		9 h. A.M.																					
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of Revolutions in which it fell.	Direction.	Force.	Direction.	Force.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.		Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.						No. 22 inches.										
		* No.	inches.	No.	inches.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.						No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
		1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20		21	22	23						24	25	26	27	28	29	30	31			

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = 29.495  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = 29.552  
Mean at Station, corrected, and at 32°, = 29.524  
Correction for height, feet above Mean Sea-level, = 198  
Mean, reduced to 32°, and Sea-level, = 29.722  
Highest Reading, corrected for Index error, on the 26th, = 29.988  
Lowest Do. Do. on the th, = 28.702  
Difference, or Monthly Range, = 1.286

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 4th, = 68.0  
Lowest in Month, corrected for Index errors, on the 2th, = 26.0  
Difference, or Monthly Range, = 42.0  
"Corrected Mean" of all the Highest, (Col. 5), = 52.0  
"Corrected Mean" of all the Lowest, (Col. 6), = 35.0  
Difference, or Mean Daily Range, = 17.0  
\*\* Calculated Mean Temperature of Month, = 43.5  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, = 87.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 66.8  
Lowest at Night, Black Bulb (corrected for Index errors), on the 6th, = 22.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 31.3  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 43.2  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 41.2  
†† Computed Temperature of Dew-Point, = 38.8  
†† Do. Elastic Force of Vapour, = .236  
†† Do. Weight of Vapour in a Cubic Foot of Air, =  
†† Relative Humidity (Saturation = 100), = 85  
RAIN fell on 10 Days; Amount in Inches, = 1.81

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	1	1	3	6	10	14	4				
P.M.		1	2	9	1	6	4	7			
Mean.	1	1	3	7	5	4	4	5	0		

Observations made and  
Return verified byJohn Forrest

(Signed)







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Nadder House, County of Aberdeen, in Lat. 57°24', Long. 2°14', Distance from Sea 12 miles.

Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.

During the MONTH of May 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs. Sun/rays Grass.		9 h. A.M.		9 h. P.M.			No. of hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer. No.	Velocity (0-10), and Direction.		Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.					9 h. A.M.			Temperature of Well, at 10 fms. of test, No.	Temperature at 1 fathoms, and Density.	0-10.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Barometer. * No.	Attached Thermometer.	Barometer. No.	Attached Thermometer.	Max. No.	Min. No.	Max. in No.	Min. on No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.				Direction.	Force.	Direction.	Force.											No. 1 inches.	No. 2 inches.	No. 3 inches.			9 A.M.	9 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = 29.928  
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = 29.922  
 Mean at Station, corrected, and at 32°, = 29.925  
 Correction for height, feet above Mean Sea-level, = 198  
 Mean, reduced to 32°, and Sea-level, = 30.123  
 Highest Reading, corrected for Index error, on the 13th, = 30.316  
 Lowest Do. Do., on the 7th, = 29.060  
 Difference, or Monthly Range, = 1.266

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 14th, = 67.0  
 Lowest in Month, corrected for Index errors, on the 16th, = 30.0  
 Difference, or Monthly Range, = 37.0  
 "Corrected Mean" of all the Highest, (Col. 5), = 57.4  
 "Corrected Mean" of all the Lowest, (Col. 6), = 39.7  
 Difference, or Mean Daily Range, = 17.7  
 \*\* Calculated Mean Temperature of Month, = 48.6  
 S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 14th, = 94.0  
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 69.4  
 Lowest at Night, Black Bulb (corrected for Index errors), on the 16th, = 27.0  
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 37.4  
 Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 49.2  
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 46.3  
 # Computed Temperature of Dew-Point, = 43.2  
 # Do. Elastic Force of Vapour, = .281  
 # Do. Weight of Vapour in a Cubic Foot of Air, =   
 # Relative Humidity (Saturation = 100), = 80  
 RAIN fell on 9 Days; Amount in Inches, = 2.01

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		5	-	2	10	4	2	1	7	-	
P.M.		3	7	6	5	4	2	-	4	-	
Mean.		4	4	4	7	4	2	1	5	0	

Observations made and Return verified by

Solomon Dore

(Signed)







Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.

During the MONTH of June 1901

The Hours of Observation are of Greenwich Time.

<b>BAROMETER,</b>	"corrected Mean" at 9 A.M., minus the Correction ++	=	29.720
	for Temp. (Col. 2), = .....	-0.08	
<b>"Corrected Mean"</b>	of Barometer at 9 P.M., minus the Correction ++	=	29.750
	for Temp. (Col. 4), = .....	+0.69	
<b>Mean at Station, corrected, and at 32°.....</b>		=	29.735
<b>Correction for height,</b>	feet above Mean Sea-level,.....	=	198
<b>Mean, reduced to 32°, and Sea-level, .....</b>		=	29.933
<b>Highest Reading, corrected for Index error, on the</b>	26 th,.....	=	30.108 (-)
<b>Lowest Do.</b>	Do., on the 13th,.....	=	28.932
<b>Difference, or Monthly Range, .....</b>		=	1.158

<b>HYGROMETER, Mean</b> (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), .....	=	53.6
<b>Mean</b> (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), .....	=	50.4
## <b>Computed Temperature of Dew-Point</b> , .....	=	47.3
## <b>Do. Elastic Force of Vapour</b> , .....	=	1.325
## <b>Do. Weight of Vapour in a Cubic Foot of Air</b> , .....	=	+
## <b>Relative Humidity</b> (Saturation = 100), .....	=	78
<b>RAIN</b> fell on 16 Days; Amount in Inches, .....	=	2.07

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.	0	0	1	3	7	4	3	12	0		
P.M.	4	1	2	7	3	4	1	8	0		
Mean.	2	1	1	5	5	4	2	10	0		

Observations made and  
Return verified by

(Signed)







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Gaddo House, County of Aberdeen, in Lat. 57° 24', Long. 2° 14', Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of July 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.		WIND.				CLOUDS.				THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS:  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.			
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.		9 h. A.M.		9 h. P.M.										
		Barometer.	Attached Ther- mometer	Barometer.	Attached Ther- mometer	Max.	Min.	Max. in Sun-rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of drops in which it fell.	Amount in inches.	Direction.	Force	Direction.	Force	Velocity (0-10), and Species.	Amount (0-10), and Species.	Velocity (0-10), and Species.	Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.	No. 23 inches.	Temperature of Well at depth of feet, No.					Temperature at 1 fathom, and Density.	9 A.M.	9 P.M.
		* No.	inches.	* No.	inches.	No.	No.	No.	No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.																					
	1	29.854	58	29.772	54	57	50	73	49	55	52	51	50			E	1.2							60	59	57					1			
	2	29.724	56	29.712	54	59	47	86	48	55	52	51	50			N	E							59	59	58					2			
	3	29.690	55	29.696	54	64	47	80	45	53	52	50	49			N.E	5.2							59	60	58					3			
	4	29.718	55	29.750	55	67	46	83	44	55	54	51	50			S.E	5.2							60	60	58					4			
	5	29.754	61	29.888	57	68	49	78	47	63	60	53	52			N.W	N							63	61	59					5			
	6	29.922	56	29.972	54	59	50	66	43	55	50	50	49			N.W	E							60	61	59					6			
	7	29.936	60	29.968	60	73	42	88	38	62	57	57	55			S	SE							61	61	59					7			
	8	30.002	71	29.928	64	81	54	99	48	76	65	60	58			S	S.E							66	61	59					8			
	9	29.860	70	29.766	62	71	52	85	46	69	63	58	55			S	S.E							66	63	60					9			
	10	29.840	67	29.858	62	70	53	84	50	66	62	58	56			N	S.E							65	63	60					10			
	11	29.856	66	29.788	63	75	52	91	54	66	62	59	56			S.E	S.E							66	64	61					11			
	12	29.914	61	29.904	58	68	52	89	46	59	56	52	50			W	S.E							63	64	61					12			
	13	29.904	63	29.886	61	68	44	90	39	60	52	58	54			N.W	N.E							62	62	61					13			
	14	29.854	66	29.724	61	67	54	61	47	64	56	56	54			E	S							63	62	61					14			
	15	29.632	61	29.776	58	68	55	88	49	60	58	54	53	+		S	N.W							62	63	61					15			
	16	29.806	63	29.752	63	70	42	85	39	62	57	61	56			S	S							61	62	61					16			
	17	29.844	70	29.932	67	78	57	96	53	73	65	65	63			S	SE							67	63	61					17			
	18	29.946	74	29.936	68	82	63	97	58	75	69	64	62			S	N.W							69	65	61					18			
	19	29.866	67	29.948	62	68	56	84	53	66	62	58	56	+		S.E	S.E							68	66	62					19			
	20	29.944	62	29.856	63	70	55	81	54	60	59	60	58			S.E	S.E							64	65	63					20			
	21	29.712	70	29.600	65	75	55	90	50	70	65	62	61	30		S.E	S.E							67	64	63					21			
	22	29.584	65	29.594	64	71	60	82	59	64	62	60	59			N.E	N.W							67	65	63					22			
	23	29.492	64	29.482	59	60	55	63	54	60	58	55	55	+		N.W	S.E							65	65	63					23			
	24	29.452	59	29.536	56	58	53	61	53	57	59	53	53	+		N.E	S.E							62	63	62					24			
	25	29.464	58	29.404	56	58	50	59	50	54	53	53	53	+		N.W	N.W							63	62	62					25			
	26	29.560	63	29.632	61	68	46	82	45	64	62	60	59	+		N.E	N							62	62	61					26			
	27	29.684	62	29.726	59	58	49	75	50	63	63	59	54	+		N.W	N.W							62	62	61					27			
	28	29.688	58	29.692	59	67	53	75	51	57	56	56	55	1.48		N.W	S.E							62	62	61					28			
	29	29.718	68	29.774	64	77	48	94	45	70	65	63	61			N	N							63	62	61					29			
	30	29.812	70	30.008	59	76	54	93	48	71	66	64	62			S	N.E							66	64	62					30			
	31	29.988	64	29.926	64	75	50	85	44	65	61	63	58			N.W	W							65	64	62					31			
Sums.		923.020	1963	923.186	1866	2126	1593	2543	1502	1949	1833	1764	1706											1968	1939	1881								
Means.		29.474		29.780		68.5	51.3	82	48.4	62.8	59.1	56.9	55.9	7	1.78									63.4	62.5	60.6								
+ Total Corrections for Instrumental Errors.		+120		+120																														
+ Corrections for Diurnal Range.		29.864		29.900																														
"Corrected Means."																																		
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  = 29.801  
for Temp. (Col. 2), = 0.93  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  = 29.813  
for Temp. (Col. 4), = 0.83  
Mean at Station, corrected, and at 32°, = 29.818  
Correction for height, feet above Mean Sea-level, = 196  
Mean, reduced to 32°, and Sea-level, = 30.014  
Highest Reading, corrected for Index error, on the 30th, = 30.008  
Lowest Do. Do., on the 1st, = 29.404  
Difference, or Monthly Range, = 0.604

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 18th, = 82.0  
Lowest in Month, corrected for Index errors, on the 7th, = 42.0  
Difference, or Monthly Range, = 40.0  
"Corrected Mean" of all the Highest, (Col. 5), = 68.5  
"Corrected Mean" of all the Lowest, (Col. 6), = 51.3  
Difference, or Mean Daily Range, = 17.2  
\*\* Calculated Mean Temperature of Month, = 59.9  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 8th, = 99.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 82.0  
Lowest at Night, Black Bulb (corrected for Index errors), on the 7th, = 38.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 44.0  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 59.9  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 57.0  
Computed Temperature of Dew-Point, = 54.5  
Do. Elastic Force of Vapour, = 424  
Do. Weight of Vapour in a Cubic Foot of Air, =   
Relative Humidity (Saturation = 100), = 83  
RAIN fell on 7 Days; Amount in Inches, = 1.48

WIND.		SUMMARY.				
Direction.		N	NE	E	SE	S
A.M.		3	4	2	5	8
P.M.		3	3	2	15	2
Mean.		3	3	2	10	5

Observations made and  
Return verified by

John Forrest

(Signed)







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Naddo House, County of Aberdeen, in Lat. 57°24', Long. 2°14', Distance from Sea 12 miles.

Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.

During the MONTH of August 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.			
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.			9 h. A.M.									
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sunrays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer.	9 h. A.M.	Velocity (0-6) and Direction.	Amount (0-10), and Species.		Velocity (0-6) and Direction.	Amount (0-10), and Species.	No.					No.	No.	
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.					No.	No.	No.
		inches.	°	inches.	°	°	°	°	°	°	°	°	°		°	°	°	°	°	°	°	°		°	°	°					°	°	°
	1	29.810	64	29.804	57	72	52	87	48	69	54	52	51		N.W.									65	64	62				1			
	2	29.846	59	29.902	58	67	50	83	45	60	56	53	50		N.W.									64	64	62				2			
	3	29.878	59	29.558	60	61	51	67	45	56	54	58	53	+	S.W.									61	63	62				3			
	4	29.436	62	29.424	57	64	51	80	47	60	57	54	51	+	N.W.									59	61	61				4			
	5	29.550	61	29.540	57	60	47	73	42	59	52	52	49		N.W.									58	61	61				5			
	6	29.448	57	29.498	56	62	47	71	43	56	52	52	50	+	S.E.									58	60	60				6			
	7	29.488	56	29.476	57	64	50	74	49	55	55	58	56	+	S.									57	60	60				7			
	8	29.574	59	29.606	58	68	55	73	49	58	57	53	54	+	W.									61	61	60				8			
	9	29.616	58	29.528	62	71	48	80	44	58	57	61	58	+	S.E.									59	61	60				9			
	10	29.501	62	29.568	60	70	50	81	47	61	60	59	59	+	S.W.									58	61	60				10			
	11	29.474	64	29.676	58	69	54	85	48	60	56	54	53	2.08	S.									62	62	60				11			
	12	29.688	60	29.604	57	59	52	70	46	58	56	55	54	+	S.E.									60	60	60				12			
	13	29.718	62	29.678	58	68	52	82	46	60	58	55	54		S.E.									60	61	60				13			
	14	29.786	60	29.584	59	63	53	78	48	59	58	57	56	+	S.E.									60	61	60				14			
	15	29.532	60	29.538	60	46	55	77	53	57	57	59	57	+	S.E.									61	61	60				15			
	16	29.658	63	29.742	57	64	52	82	49	64	54	53	52	+	W.									60	61	60				16			
	17	29.824	61	29.678	58	66	43	80	39	61	54	56	56	+	S.									58	61	60				17			
	18	29.742	58	29.916	56	59	51	70	46	57	56	51	50	7.5	S.									59	61	60				18			
	19	30.136	58	30.184	52	58	48	73	41	57	53	49	48	+	N.W.									58	60	60				19			
	20	30.182	60	30.188	54	67	39	82	35	62	56	50	49		N.									56	59	60				20			
	21	30.078	60	30.048	58	67	39	80	35	56	55	55	54		S.E.									56	59	60				21			
	22	29.468	62	30.024	58	70	45	85	39	60	57	54	53		N.W.									57	59	60				22			
	23	30.086	67	30.044	56	60	51	71	46	56	51	53	52		N.W.									58	59	59				23			
	24	29.962	60	29.800	60	60	51	81	50	58	56	58	56		S.W.									58	59	59				24			
	25	29.454	67	29.184	62	73	52	88	46	68	61	58	56		S.									60	60	59				25			
	26	29.009	56	29.126	52	59	47	57	44	52	51	50	48	+	N.W.									61	61	60				26			
	27	29.162	53	29.232	49	56	48	69	44	50	47	49	49	+	N.									54	59	59				27			
	28	29.250	49	29.364	49	56	43	57	42	47	45	46	43	+	N.W.									52	57	58				28			
	29	29.488	54	29.546	53	59	45	72	41	54	48	53	52		N.W.									53	56	57				29			
	30	29.456	59	29.624	50	68	46	80	40	61	58	46	45	+	S.									57	57	57				30			
	31	29.718	55	29.756	48	57	40	72	34	53	49	43	42	1.67	N.W.									53	57	57				31			
	Sums.	16.55		15.16		11	1			13	16	14	14	12										14	10	7							
	Means.	29.845	59.5	29.922	57.4	1746	1327	2340	1371	1759	1700	1659	1612	4.6										17.3	18.6	18.5							
	+ Total Corrections for Instrumental Errors.	+1.20		+1.20																													
	+ Corrections for Diurnal Range.																																
	"Corrected Means."	29.780		29.770																													
	No. of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

NOTATION USED IN GENERAL REMARKS.					
a.	denotes aurora.	m.	denotes meteor.		
ci.	" cirrus.	ms.	" meteors.		
ci-cu.	" cirro-cunulus.	n.	" nimbus.		
ci-s.	" cirro-stratus.	r.	" rain.		
cu.	" cumulus.	h. r.	" heavy rain.		
cu-s.	" cumulo-stratus.	c. h. r.	" continued heavy rain.		
d.	" dew.	s.	" squalls.		
f.	" fog.	sc.	" stratus.		
fr.	" frost.	s.	" sleet.		
h-fr.	" hoar-frost.	s.	" snow.		
h.	" haze.	so. ha.	" solar halo.		
h. d.	" heavy dew.	sq.	" squall.		
hl.	" hail.	sq.	" squalls.		
l.	" lightning.	t.	" thunder.		
li. cl.	" light clouds.	t. s.	" thunder-storm.		
li. sh.	" light showers.	v.	" wind.		
lu. co.	" lunar corona.	g.	" gale of wind.		
lu. ha.	" lunar halo.				

TABLE FOR ESTIMATING FORCE OF WIND.					
Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2.	Fresh breeze	5	Blowing a gale
1.	Light air	3.	Very fresh	6	Violent gale

## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	mesocyclone.
ci-cu.	cirro-cumulus.	n.	nimbus.
ci-s.	cirro-stratus.	r.	rain.
cu.	cumulus.	h. r.	heavy rain.
cu-s.	cumulo-stratus.	c. h. r.	continued heavy rain.
d.	dew.	s.	stratus.
f.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h. fr.	hoar-frost.	s.	snow.
h.	haze.	so. ha.	solar halo.
h. d.	heavy dew.	sq.	squall.
h. l.	hail.	sq.	squalls.
l.	lightning.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
lu. co.	lunar corona.	s.	gale of wind.
lu. ha.	lunar halo.		

## TABLE FOR ESTIMATING FORCE OF WIND.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2	Fresh breeze	5	Blowing a gale
1	Light air	3	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = 29.780  
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = 29.688  
 Mean at Station, corrected, and at 32°, = 29.694  
 Correction for height, feet above Mean Sea-level, = 1.98  
 Mean, reduced to 32°, and Sea-level, = 29.892  
 Highest Reading, corrected for Index error, on the 20th, = 30.308  
 Lowest Do. Do., on the 16th, = 29.229  
 Difference, or Monthly Range, = 1.079

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 25th, = 73.0  
 Lowest in Month, corrected for Index errors, on the 10th, = 39.0  
 Difference, or Monthly Range, = 34.0  
 "Corrected Mean" of all the Highest, (Col. 5), = 63.7  
 "Corrected Mean" of all the Lowest, (Col. 6), = 48.6  
 Difference, or Mean Daily Range, = 15.1  
 \*\* Calculated Mean Temperature of Month, = 56.2  
 S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 25th, = 88.0  
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 75.5  
 Lowest at Night, Black Bulb (corrected for Index errors), on the 31st, = 34.0  
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 44.2  
 Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 55.8  
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 53.2  
 \*\* Computed Temperature of Dew-Point, = 50.8  
 \*\* Do. Elastic Force of Vapour, = .373  
 \*\* Do. Weight of Vapour in a Cubic Foot of Air, =   
 \*\* Relative Humidity (Saturation = 100), = 83  
 RAIN fell on 18 Days; Amount in Inches, = 4.60

WIND.	SUMMARY.									
	Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.
A.M.		2	-	-	7	6	3	2	11	-
P.M.		1	-	1	7	2	5	6	9	-
Mean.		1	0	1	7	4	4	4	10	0

Observations made and  
Return verified by

John Forrest

(Signed)







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Faddo House, County of Abdeen, in Lat. 57° 24', Long. 2° 14', Distance from Sea 12 miles.

Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.

During the MONTH of September 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE. Hours.	THERMOMETERS under Ground.				SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		9 h. A.M.		9 h. P.M.		Protected in Shade, &c., above Ground.		Exposed Black Bulbs. Sun's rays		Dry No.		Wet No.			9 h. A.M.		9 h. P.M.		Readings of the H. Cup Anemometer.		9 A.M.			P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		Barometer. * No.	Attached Thermometer	Barometer. No.	Attached Thermometer	Max. No.	Min. No.	Max. in Sun's rays No.	Min. on Grass. No.	Dry bulb. No.	Wet bulb. No.	Dry bulb. No.	Wet bulb. No.		No. of days in which it fell.	Amount in inches. No.	Direction.	Force	Direction.	Force	9 h. A.M.	Velocity (0—6) and Direction.		Amount (0—10), and Species.	Velocity (0—6) and Direction.	Amount (0—10), and Species.	No. 3 inches.					No. 12 inches.	No. 22 inches.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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BAROMETER, "corrected Mean" at 9 A.M., <i>minus</i> the Correction $\left\{ \begin{array}{l} + \\ - \end{array} \right\}$	=	29.656
for Temp. (Col. 2), =	70	
<hr/>		
"Corrected Mean" of Barometer at 9 P.M., <i>minus</i> the Correction $\left\{ \begin{array}{l} + \\ - \end{array} \right\}$	=	29.669
for Temp. (Col. 4), =	66	
<hr/>		
Mean at Station, corrected, and at 32°,.....	=	29.663
Correction for height, feet above Mean Sea-level,.....	=	197
Mean, reduced to 32°, and Sea-level, .....	=	29.860
Highest Reading, corrected for Index error, on the 3 <sup>th</sup> ,.....	=	30.008
Lowest Do. Do., on the 10 <sup>th</sup> ,.....	=	29.012
Difference, or Monthly Range, .....	=	0.996

<b>S.-R. THERMOMETER, (in shade, etc.), Highest in Month,</b> (corrected for Index Errors), on the 4 <sup>th</sup> .....	=	66.0
<b>Lowest in Month,</b> corrected for Index errors, on the 2 <sup>th</sup> , .....	=	37.0
Difference, or <b>Monthly Range,</b> .....	=	29.0
"Corrected <b>Mean</b> " of all the <b>Highest,</b> (Col. 5), .....	=	59.6
"Corrected <b>Mean</b> " of all the <b>Lowest,</b> (Col. 6),.....	=	46.9
Difference, or <b>Mean Daily Range,</b> .....	=	12.7
** Calculated <b>Mean Temperature</b> of Month, .....	=	53.2
<b>S.-R. THERMOMETER, Black Bulb in Sun, Highest,</b> (corrected for Index Errors), on the 10 <sup>th</sup> .....	=	86.0
"Corrected <b>Mean,</b> " (Col. 7), of <b>Black Bulb, Max. in Sun,</b> .....	=	71.4
<b>Lowest at Night,</b> Black Bulb (corrected for Index errors), on the 2 <sup>th</sup> , .....	=	31.0
"Corrected <b>Mean,</b> " (Col. 8), of <b>Black Bulb, Min.</b> on grass,.....	=	40.3
Difference of above means or range ("exposed"), .....	=	

<b>HYGROMETER, Mean</b> (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), .....	=	53.4
<b>Mean</b> (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), .....	=	52.0
‡ Computed <b>Temperature of Dew-Point</b> , .....	=	50.6
‡ Do. <b>Elastic Force of Vapour</b> , .....	=	.368
‡ Do. <b>Weight of Vapour in a Cubic Foot of Air</b> , .....	=	
‡ <b>Relative Humidity</b> (Saturation = 100), .....	=	90
<b>RAIN</b> fell on 15 Days; Amount in Inches, .....	=	1.32

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	-	3	2	13	3	1	4	4	-		
P.M.	-	-	-	12	3	8	2	5	-		
Mean.	0	2	2	12	3	4	3	5	0	-	

Observations made and  
Return verified by

(Signed) \_\_\_\_\_







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Adelphi House, County of Aberdeen, in Lat. 57° 24', Long. 2° 14', Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of October 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevailing Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		9 h. A.M.		9 h. P.M.		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs. Sun-rays on Grass.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		Barometer. No.	Attached Thermometer	Barometer. No.	Attached Thermometer	Max. No.	Min. No.	Max. in Sun-rays No.	Min. on Grass. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Direction.	Force	Direction.	Force	Readings of the H. Cup Anemometer. No.	9 h. A.M.	Velocity (0-5) and Species.					Amount (0-10), and Species.	Velocity (0-5) and Direction.	Amount (0-10), and Species.	No.	No.	No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	" "	ms.	" "
ci.-cu.	" "	n.	" "
ci.-s.	" "	r.	" "
cu.	" "	h. r.	" "
cu.-s.	" "	c. h. r.	" "
d.	" "	s.	" "
f.	" "	sc.	" "
fr.	" "	s.	" "
h.-fr.	" "	s.	" "
h.	" "	so. ha.	" "
h. d.	" "	sq.	" "
hl.	" "	sq.	" "
l.	" "	t.	" "
h. cl.	" "	t. s.	" "
h. sh.	" "	w.	" "
h. co.	" "	s.	" "
lu. ha.	" "		" "

## TABLE FOR ESTIMATING FORCE OF WIND.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.	Estimated Force, 0-6.	Common Designation.
0	Calm	1.5	Light breeze	4	Blowing hard
0.5	Very light air	2	Fresh breeze	5	Blowing a gale
1	Light air	3	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), = 29.571  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 29.580  
Mean at Station, corrected, and at 32°, = 29.576  
Correction for height, feet above Mean Sea-level, = 2.20  
Mean, reduced to 32°, and Sea-level, = 29.796  
Highest Reading, corrected for Index error, on the 7th, = 30.342  
Lowest Do. Do., on the 8th, = 28.742  
Difference, or Monthly Range, = 1.550

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 27th, = 60.0  
Lowest in Month, corrected for Index errors, on the 24th, = 25.0  
Difference, or Monthly Range, = 35.0  
"Corrected Mean" of all the Highest, (Col. 5), = 57.5  
"Corrected Mean" of all the Lowest, (Col. 6), = 37.5  
Difference, or Mean Daily Range, = 14.0  
\*\* Calculated Mean Temperature of Month, = 44.5  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 20th, = 70.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 57.4  
Lowest at Night, Black Bulb (corrected for Index errors), on the 24th, = 21.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 33.4  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 43.7  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 42.7  
† Computed Temperature of Dew-Point, = 41.6  
† Do. Elastic Force of Vapour, = .262  
† Do. Weight of Vapour in a Cubic Foot of Air, =  
† Relative Humidity (Saturation = 100), = 92  
RAIN fell on 19 Days; Amount in Inches, = 3.19

WIND.		SUMMARY.							
Direction.		N	NE	E	SE	S	SW	W	NW
A.M.		2	1	-	3	12	3	7	3
P.M.		1	1	-	6	5	7	6	5
Mean.		2	1	0	5	8	5	6	4

Observations made and  
Return verified byJohn Torrance

(Signed)







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Kanalo House, County of Abertree, in Lat. 57° 24' Long. 2° 14' Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of November 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.												
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.																		
		Barometer.	Attached Thermometer	Barometer.	Attached Thermometer	Max.	Min.	Max. in Sun-rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of flashes in which it fell.	Amount in inches.	Direction.	Force	Direction.	Force	Readings of the H. Cup Anemometer.	9 h. A.M.	Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.					Amount (0-10), and Species.	SUNSHINE.  Hours.	No.	3 inches.	No.	12 inches.	No.	22 inches.	Temperature of WELL at depth of feet, No.	Temperature at 1 fathom, and Density.	9 A.M.	9 P.M.
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.					No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°			
	1	30.242	45	30.172	44	49	36	50	29	44	43	43	42		S.E.		S.E.										41	45	46								1				
	2	30.120	42	30.102	45	50	39	53	30	43	42	43	43		S.E.		S.E.										40	44	46								2				
	3	30.122	42	30.020	42	50	35	52	29	40	39	40	40		S.E.		S.E.										40	43	45								3				
	4	29.986	37	29.972	46	42	30	44	25	33	33	31	31		S		S										39	43	45								4				
	5	29.992	34	29.976	38	48	29	51	25	33	33	36	36		W		S.W.										37	43	45								5				
	6	29.906	47	29.826	47	53	41	56	36	47	46	47	45	+	W		N.W.										38	43	45								6				
	7	29.858	46	29.704	46	48	42	50	36	45	44	46	44		W		W										44	44	45								7				
	8	29.698	49	29.686	48	50	45	52	42	50	47	47	46	+	N.W.		N.W.										45	44	45								8				
	9	29.702	45	29.528	47	47	40	46	38	42	42	47	46	+	S.W.		S.W.										43	44	45								9				
	10	29.436	45	29.346	44	50	42	53	36	44	43	43	42		W		N.W.										44	44	45								10				
	11	29.310	45	29.328	42	45	38	47	34	45	43	41	41	+	N.W.		N.E.										43	44	45								11				
	12	29.328	41	29.252	40	40	35	41	31	39	37	39	36	+	N.E.		N.E.										40	43	44								12				
	13	29.314	38	29.326	35	41	32	47	26	36	35	32	32	+	N.E.		N.E.										37	42	44								13				
	14	29.232	33	29.144	33	40	25	43	26	31	30	30	30	+	W		N.W.										36	42	44								14				
	15	29.176	30	29.448	32	33	20	40	13	27	26	31	31		N.W.		N.W.										36	41	43								15				
	16	29.554	31	29.688	34	35	21	42	16	30	28	33	32		N.W.		N.W.										35	40	42								16				
	17	29.706	38	29.644	41	42	36	48	33	39	38	44	39	+	W		N.W.										37	39	42								17				
	18	29.564	42	29.368	35	51	38	50	36	51	50	50	48	+	S.E.		S.W.										39	39	42								18				
	19	29.152	44	29.230	41	50	38	50	35	47	46	40	38	+	S.W.		N.W.										42	40	42								19				
	20	29.334	39	29.338	39	40	35	41	31	37	37	37	36	+	N.W.		S.E.										39	41	42								20				
	21	29.262	38	29.566	35	38	30	39	26	36	35	31	31	+	N.E.		N										40	40	42								21				
	22	29.740	35	30.038	34	37	29	43	23	32	31	32	32	+	W		W										36	39	41								22				
	23	30.196	29	30.224	29	32	25	42	14	26	25	26	26		W		W										34	39	41								23				
	24	30.128	24	30.056	34	34	18	39	11	19	18	34	32		W		S.W.										33	38	41								24				
	25	30.220	37	30.224	38	43	33	46	29	39	38	38	38		W		S.W.										33	38	40								25				
	26	30.206	40	30.192	41	47	36	49	32	40	40	42	41		W		S.W.										35	37	40								26				
	27	30.036	44	29.872	42	46	36	46	30	45	42	40	39	+	N.W.		N										38	39	40								27				
	28	30.028	38	30.086	39	39	36	39	31	35	35	38	36		N.W.		N.W.										37	39	40								28				
	29	30.004	42	29.926	42	45	35	43	30	43	41	41	40	+	N.W.		N.W.										37	39	41								29				
	30	29.772	45	29.568	48	50	41	50	35	47	46	50	47		S.W.		S.W.										37	39	41								30				
	31																																					31			
Sums.		22324		21790		115	1016	187	868	1168	1132	272	240														253	35													
		892324	1183	891860	1201	1314	1016	1447	868	1156	1125	172	140															1159	124	1289											
Means.		29.743	39.5	29.726	40.0	43.8	33.9	48.2	28.9	38.9	37.7	39.1	38.0														383	41.2	43.0												
+ Total Corrections for Instru- mental Errors.		+120		+120		x.5	x.5	46.2		x.5	x.5	x.5	x.6																												
+ Corrections for Diurnal Range.																																									
"Cor- rected Means."		29.863		29.846																																					
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
																														TABLE FOR ESTIMATING FORCE OF WIND.											
Estimated Force, 0-6.		Common Designation.		Estimated Force, 0-6.		Common Designation.		Estimated Force, 0-6.		Common Designation.																															
0	0.5	Calm		1.5		4		5		6																															
0.5	1	Very light air		2		Light breeze		5		6																															
1		Light air		3		Fresh breeze																																			
						Very fresh																																			

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\ddagger$  = 29.833  
for Temp. (Col. 2), = 30.1

"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  = 29.815  
for Temp. (Col. 4), = 30.1

Mean at Station, corrected, and at 32°, = 29.824  
Correction for height, feet above Mean Sea-level, = 20.2

Mean, reduced to 32°, and Sea-level, = 30.026

Highest Reading, corrected for Index error, on the 1<sup>st</sup> th, = 30.242

Lowest Do. Do., on the 14<sup>th</sup>, = 29.144

Difference, or Monthly Range, = 1.098

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 6<sup>th</sup>, = 53.0

Lowest in Month, corrected for Index errors, on the 11<sup>th</sup>, = 18.0

Difference, or Monthly Range, = 35.0

"Corrected Mean" of all the Highest, (Col. 5), = 44.3

"Corrected Mean" of all the Lowest, (Col. 6), = 34.4

Difference, or Mean Daily Range, = 9.9

\*\* Calculated Mean Temperature of Month, = 39.4

S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 6<sup>th</sup>, = 56.0

"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 46.2

Lowest at Night, Black Bulb (corrected for Index errors), on the 11<sup>th</sup>, = 11.0

"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 28.7

Difference of above means or range ("exposed"), = 35.5

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 39.0

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 37.8

†† Computed Temperature of Dew-Point, = 36.2

†† Do. Elastic Force of Vapour, = .214

†† Do. Weight of Vapour in a Cubic Foot of Air, = 90

†† Relative Humidity (Saturation = 100), = 90

RAIN fell on 15 Days; Amount in Inches, = 2.54

WIND.	SUMMARY.									
	Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.
A.M.		2	3	-	4	1	3	9	8	-
P.M.		3	3	-	4	1	7	2	10	-
Mean.		3	3	0	4	1	5	5	9	0

Observations made and  
Return verified byJohn Forrest

(Signed)



# OBSERVATIONS,

correct numbering of the scale every instrument, the rejection of Thermometers the frameworks of which are not likely to stand exposure to the weather, as shown in the past by repeated and annoying breakages of Thermometers of similar construction; and as regards Maximum Thermometers, either Negretti and Zamboni's or Phillips's, whether they will act at the highest temperatures they may be required to register. By the laws of the Society, Members and Observers have a right to have their instruments compared by the Secretary, and to give care should be bestowed on the Observations of the instruments.

Wind, the accuracy of which, both as regards Direction and Force, is so essential towards the right discussion of many of the more important problems of the science.

A Wind-Vane ought to be elevated at least 12 feet above surrounding objects. When it oscillates necessarily the mean direction should be taken. In all cases but especially when the Vane is stationary, and when the wind is feeble, reference may be made to the direction of smoke, etc., in well-exposed situations. Careful observations are recommended to be made on the changes in the direction of the wind, and during storms, exact observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, is likely to give highly valuable and important results, particularly in connection with the system of thickly-planted Stations over a limited district round Edinburgh called STORM STATIONS, in course of being established by the Society for the systematic investigation of the relation of the force of the wind to BAROMETRIC GRADIENTS, and other points connected with storms.

The Council would recommend the Hemispherical Cup Anemometer, —a self-registering instrument which shows the amount of Wind that passes it per day; from which it also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the Force of the Wind at any particular hour of observation, the Pressure Anemometers recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Exhulbars, are recommended as likely to secure uniformity in making observations on the Force of the Wind.

Many causes conspire to produce anomalies in Rain Returns, arising partly from the difficulty of obtaining a perfectly unobstructed situation for observation, and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, in as open a situation as the Observer can secure for it. As it is often difficult to obtain a position as free and unobstructed by surrounding objects as is desirable, care should be taken to place it at some distance from shrubs, trees, buildings, or other obstructions, at least as many feet from their base as they are in height. The more important directions, towards which it is most desirable to have a free exposure, are, in the order of their importance, S.W., N.E., S.E., and W. The rim of the gauge must be perfectly level, and fixed so that it will remain level in all weathers, and be at a height of one foot above ground, over grass. In such gauges as Fleming's, which are furnished with a measuring-rod attached to a float, the rod ought to be fixed down, and the float rise to the height only at the time the instrument is read; it being found that a stem projecting above the rim of the gauge seriously interferes with the proper measurement of the Rain-fall. When a measuring-glass is used, care should be taken to hold it quite perpendicular. The Rain Gauge ought to be read daily at 9 A.M., and the reading entered in the Returns of the previous day. If the Gauge is read once a month, the reading is to be made on the first of the month, and the amount entered for the previous month.

Snow-falls may, for convenience, be registered in the rain columns, under the following conditions:—When a Snow-storm occurs, it should be noted in the "Remarks," and the letter S should be noted in the "Remarks." The depth of the snow must be measured in some open place where no drift is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind, rain, and snow, as indicated in every column, the Observer cannot be too careful to register observations only; and nothing that partakes of the nature

observation may be ascertained. For indicating the Force of the Wind at any particular hour of observation, the Pressure of the Air is measured by means of a barometer, and the direction by an Anemometer recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Exhallab, are recommended as likely to secure uniformity in making observations on the Force of the Wind.

Many causes conspire to produce anomalies in Rain Returns, arising partly from the difficulty of obtaining a perfectly unobstructed situation for observations used, and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, nor in open a situation as the Observer can secure for it. As it is often difficult to obtain a position as free and unobstructed by surrounding objects as is desirable, care should be taken to place it at some distance from shrubs, trees, buildings, or other obstructions, at least as many feet from their base as they are in height. The more important directions, towards which it is most desirable to have a free exposure, are, in the order of their importance, S.W., N.E., S.E., and W. The rim of the gauge must be perfectly level, and fixed so that it will remain level in all weathers, and be at a height of one foot above ground, over grass. In such gauges as Flemings, which are furnished with a measuring-rod attached to a float, the rod ought to be fixed down, and the float rise to the height only at the time the instrument is read; it being feared that a stem projecting above the rim of the gauge seriously interferes with the proper measurement of the Rain-fall. When a measuring-glass is used, care should be taken to hold it quite perpendicular. The Rain Gauge ought to be read daily at 9 A.M., and the reading entered in the Returns of the previous day. If the Gauge is read once a month, the reading is to be made on the first of the month, and the amount entered for the previous month.

Snow-falls may, for convenience, be registered in the rain columns, under the following conditions—When a Snow-storm occurs, it should be noted in the Remarks column, and the letter S affixed to the depth of water received in Gauge. The depth of the snow must be measured in some open place where no drift is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind, rain, and snow, as indicated in every column, the Observer cannot be too careful to register observations only; and nothing that partakes of the nature

under the following conditions:—When a *Snow-shower* occurs, it should be noted in the 'Remarks', and the letter S affixed to the depth of water received in Gauge. The depth of the snow must be measured in some open place where no drift is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind rain, and snow, as indicated in every column, the Observer cannot be too careful to register observations only; and nothing that partakes of the nature of deduction or inference.

Convenient abbreviations for the nomenclature of Clouds will be found on the other side. The amount of Cloud ought to be estimated from the greater or less obscuration of the sky overhead (i.e. within 20° or 30° of the horizon). The strata of clouds that appear near a horizon are termed *low*; and, thus being near the eye, they are more likely to be mistaken for them here, in the Clouds' column, though their appearance and changes may be noted among the Remarks. The amount of Cloud is estimated from a scale of 0 to 10; thus, when the sky overhead is free from Clouds it is entered 0; when half-covered by Clouds, 5, wholly covered, 10, and so on.

Observations of the Clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in

the following manner:—Thus, in the column Velocity and Direction 6, S. W.  $\frac{2}{2}$  will indicate that the upper strata of Clouds travel with an extreme velocity from S. W., and those in the lower regions from W., with one-third the speed of the former. Again, in the second Cloud column, an entry of  $\frac{4}{2}$  St. will indicate that the higher regions are covered to the amount of 4-tenths with stratus Clouds ; and that the sky is further obscured to the extent of 2-tenths by lower Clouds of the cumulo stratus kind.

Remarks on peculiar Clouds, accompanied with drawings, will assist materially in the development of a more exact nomenclature of Clouds, as well as throw light on the electrical, and other of the more obscure phenomena of Meteorology.

The approximate number of Hours in which objects in the sun's rays cast shadows, should be entered in the proper column under sunshines.

As the germination and growth of crops and plants generally depend greatly on the temperature of the soil,—this is a point of great amount and consistency.—the Council recommend that the following observations in this interesting department be made at 9 A.M., by Thermometers permanently fixed in the soil, bulbs being sunk to depths of 3, 12, and 22 inches, and the stems above ground protected from the sun's rays, and fitted with sloping tin collars, to prevent rain-water being conveyed to the bulbs by the stems or wooden frames.

A knowledge of the Temperature of the Sea is not only in itself, but in its relations to that of our climate, a most important branch of Meteorology. The Council therefore recommend that the Temperature of the Sea be carefully taken by a properly constructed apparatus, from boats, or, if this be impracticable, from the ends of piers and rocks round the coast, where it is not influenced by that of river water, and as this is influenced as possible by currents sweeping along the coast, and thus acquiring the temperature of the land, either greatly heated by the sun or cooled by nocturnal radiation. At or near the mouth of high

water, in cases where the observations cannot be taken daily, the observation may be made on the 5th, 10th, and 25th of each month. When convenient, extra Sea Observations might be taken for the purpose of ascertaining the temperature of the Air, and the depth, and greater depths, notwithstanding the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima of Thermometers continuously immersed, be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool.

The Temperature of the water at the bottom of Wells ought, when practicable, to be taken, both the depth of the Temperature Well and of the water lying near it.

Mention what Test-Papers are used, Solenoid's or Moffat's, etc.

Ozone. The Paper is affixed by pin to a board in the Thermometer Box, and the instrument is registered at 9 A.M. and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind, and the observation, in the following manner:—thus g.s.w., as at Ozone early in the schedule, will indicate that the Ozone paper is tinted as 3 on the scale, that the wind is from the N.W., and that its force on the scale 0—5 is 4, or blowing fresh.

Too much importance cannot be attached to the electric condition of the atmosphere in connection with terrestrial magnetism, barometrical, thermometrical, and meteorological phenomena generally. A proper Electrometer is in truth, necessary to every complete meteorological observatory.

The Remarks column is unavoidably too narrow. Some of the most valuable Observations that can be taken are those for which no rules can be given nor hours assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as are in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to prevalent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Auroræ Boreales, remarkable depressions, elevations, and fluctuations of the Barometre, Thunder-Storms, and remarkable falls of Snow, Hail, or Rain, the Hour of Storms of Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been hinted at above. When lofty hills are in the vicinity of a Station, the Height of Clouds and of the Snow line in winter should be recorded.

By the use of abbreviations, the state of the weather at 9 A.M. and 9 P.M. should be registered, either in two columns, otherwise unoccupied, or ruled off for the purpose, from the column of 'Remarks.'

Observations in connection with the Periodic Return of the Seasons, possess not only great scientific value, but connection with are of considerable importance in connection with the Periodic Return of the Seasons, and Natural History. The Council would direct the special attention of Observers to the registration of such phenomena, so that the published Summaries may fairly represent the whole of Scotland. Observations ought to be confined to individual trees and shrubs; to particular species of birds, and, in the case of crops, and shrubs; sorts reared from year to year on a selected piece of ground or farm. The Annual Table, published yearly in the Society's Journal, will indicate the species of plants and animals to which special attention is more particularly directed.

The Council recommend Observers, before purchasing new instruments, and in repairing old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and they consider it necessary that he should have full power to reject any instrument which, on being presented for comparison, does not afford him satisfaction.

(By Order)

A. B.

ENGINEER,

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

FOREST TREES.	In Flower.	Leaf Buds.	First Appear.	In Leaf.	Decayed Leaves.	GEOPS mentioning variety.	Planting.	Soiling or above Ground.	Appearing.	In Flower.	In Bar.	First Cut.
Alder,						Barley,						
Asp,						Bare or Bigg,						
Beech,						Oats,						
Birch,						Wheat,						
Elm,						Beans,						
Larch,						Pease,						
Oak,						Potatoes,						
Sycamore or Plane,						Turnips,						
						Rye Grass,						

SHRUBS, ETC.		FRUITS.		MIGRATORY BIRDS.	
First in Blossom.	Barberry, . . . . .	Apple, . . . . .	Black Currant, . . . . .	Cherry, . . . . .	Cuckoo, . . . . .
	Broom, . . . . .		Gean, . . . . .		House-Swallow, . . . . .
	Hazel, . . . . .		Gooseberry, . . . . .		Lapwing, . . . . .
	Hawthorn, . . . . .		Holly, . . . . .		Plover, . . . . .
	Laburnum, . . . . .		Pear, . . . . .		Sand Martin, . . . . .
	Lilac, . . . . .		Plum, . . . . .		Starling, . . . . .
	Mountain Ash or Rowan, . . . . .		Strawberry, . . . . .		Swan, . . . . .
	Myzerum, . . . . .				Swan, . . . . .
	Red Flowering Currant, . . . . .				Swan, . . . . .
	Rhododendron Ponticum, . . . . .				Swan, . . . . .
	Whin, . . . . .				Swan, . . . . .
First in Blossom.	Barberry, . . . . .	Apple, . . . . .	Black Currant, . . . . .	Cherry, . . . . .	Cuckoo, . . . . .
	Broom, . . . . .		Gean, . . . . .		House-Swallow, . . . . .
	Hazel, . . . . .		Gooseberry, . . . . .		Lapwing, . . . . .
	Hawthorn, . . . . .		Holly, . . . . .		Plover, . . . . .
	Laburnum, . . . . .		Pear, . . . . .		Sand Martin, . . . . .
	Lilac, . . . . .		Plum, . . . . .		Starling, . . . . .
	Mountain Ash or Rowan, . . . . .		Strawberry, . . . . .		Swan, . . . . .
	Myzerum, . . . . .				Swan, . . . . .
	Red Flowering Currant, . . . . .				Swan, . . . . .
	Rhododendron Ponticum, . . . . .				Swan, . . . . .
	Whin, . . . . .				Swan, . . . . .

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Turnips, Fruits, &c., whether plentiful, or in perfection; whether any have suffered from blight, disease, &c. Whether the Agricul- tural condition of the district generally.

SECRETARY



## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Haddo House, County of Aberdeen, in Lat. 57° 24', Long. 2° 14', Distance from Sea 12 miles.Height of Cistern of the Barometer above Mean Sea-Level 180 feet, above Ground 3 feet.During the MONTH of December 1901.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE.	THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.  Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.					
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.			9 h. A.M.											
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of hours in which it fell.	Direction.	Force.	Direction.	Force.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	No.	3 inches.	No.	12 inches.	No.	22 inches.			Temperature of WELL at depth of feet, No.	Temperature at 1 fathom, and Density.	9 A.M.	9 P.M.	
		* No.		No.		No.	No.	No.	No.															Hours.											
		Inches.	°	Inches.	°	°	°	°	°	°	°	°	°	°																					
	1	29.734	42	29.632	45	50	37	50	41	41	40	45	44	+	S		S.W								40	40	40	40	40	40		1			
	2	29.496	43	29.538	42	50	39	49	32	42	39	41	40	+	W		N.W								39	40	40					2			
	3	29.732	42	29.468	35	42	29	44	25	40	39	38	29		N.W		W								39	40	40					3			
	4	29.892	37	29.742	41	45	28	48	23	36	35	41	40		S.W		S.W								35	39	40					4			
	5	29.474	41	29.424	40	46	36	47	32	41	40	37	37	+	S.W		S.W								38	38	40					5			
	6	29.446	39	29.152	47	52	32	51	26	38	37	49	46		S.W		S.W								35	38	40					6			
	7	29.192	41	29.194	37	49	32	46	25	39	38	34	33		W		S.W								38	39	40					7			
	8	28.842	37	28.720	35	41	31	41	24	34	33	32	31	+	S.W		S.W								35	38	39					8			
	9	28.682	34	28.812	32	33	29	37	24	32	31	29	29	+	N.W		N.W								34	37	38					9			
	10	28.958	32	29.020	34	34	29	38	22	30	29	33	33	+	W		N.W								33	37	38					10			
	11	29.164	34	29.332	35	36	31	40	26	34	33	33	33	+	N.W		W								33	37	38					11			
	12	29.334	32	29.328	29	33	24	35	20	29	28	27	27	+	N.W		N.W								33	36	38					12			
	13	29.448	34	29.492	35	36	26	36	23	34	33	36	35	+	N.E		N.E								33	36	38					13			
	14	29.584	34	29.640	32	37	28	43	26	33	32	29	29	+	N.E		N.E								33	36	38					14			
	15	29.456	31	29.178	30	32	26	42	19	29	29	26	26	+	N.W		S.W								33	36	38					15			
	16	29.252	25	29.354	27	26	20	29	12	21	20	25	25		W		W								33	36	38					16			
	17	28.944	36	28.834	29	38	23	32	19	36	34	27	26	+	S.W		N.W								33	35	37					17			
	18	28.724	35	28.816	34	35	25	35	23	33	32	33	33	+	N.E		N.E								33	35	37					18			
	19	28.972	34	29.274	35	36	30	37	28	35	35	35	34	+	N.E		N.E								32	34	37					19			
	20	29.348	35	29.450	35	38	32	38	28	37	36	34	34	+	N.E		N.E								33	34	37					20			
	21	29.284	37	29.194	36	38	33	37	30	37	37	34	34	+	N.E		S.E								33	34	37					21			
	22	29.122	35	29.186	35	38	33	37	30	34	34	33	33	+	N		S.E								33	35	37					22			
	23	29.124	35	28.768	36	38	31	38	28	35	35	35	35	+	S		S.E								33	35	37					23			
	24	28.460	38	28.340	37	40	35	38	31	38	37	35	35	+	S.E		S								34	35	37					24			
	25	28.424	35	28.482	36	36	31	36	26	33	33	34	34	+	N.W		N.E								34	35	37					25			
	26	28.516	36	28.710	37	37	34	37	31	36	35	36	35	+	N.W		N.W								34	35	37					26			
	27	28.986	36	29.018	33	37	31	39	25	34	33	32	30	+	N.W		N.W								34	35	36					27			
	28	29.066	30	28.800	37	37	24	37	19	26	26	37	37	+	S.E		S.E								32	35	36					28			
	29	28.676	36	28.592	37	39	35	40	29	35	35	36	35		W		W								33	34	36					29			
	30	28.694	40	28.788	41	43	30	43	30	39	38	42	41	+	S		S.W								33	34	36					30			
	31	28.888	41	29.168	37	45	35	45	35	42	40	37	36	2.01	S.W		S.W								34	34	36					31			
Sums.		14 1813		15 1511		15 1719		16 1057		16 1067		16 1067													12										
		902.484	1119	904.080	1116	1217	935	1248	816	1283	1067	1067	1048												1062	1123	1173								
Means.		3.914		4.266		7.87		13.3		13.3		13.3													13.3										
+ Total Corrections for Instrumental Errors.		29.179	36	29.138	36	39.3	30.0	40.2	26.3	34.9	34.4	34.2	33.8	23	4.21										34.2	36.2	37.8								
+ Corrections for Diurnal Range.		4.120		4.120		39.3	30.0																												
"Corrected Means."		29.239		29.258		39.8	30.8			35.4	34.5	35.2	34.3																						
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = 29.219  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = 29.238  
Mean at Station, corrected, and at 32°, = 29.229  
Correction for height, feet above Mean Sea-level, = 196  
Mean, reduced to 32°, and Sea-level, = 29.445  
Highest Reading, corrected for Index error, on the 3<sup>rd</sup> th, = 29.968  
Lowest Do. Do., on the 24<sup>th</sup> th, = 28.340  
Difference, or Monthly Range, = 1.628

S.-R. THERMOMETER, (in shade, etc.) Highest in Month, (corrected for Index Errors), on the 6<sup>th</sup> th, = 52.0  
Lowest in Month, corrected for Index errors, on the 16<sup>th</sup> th, = 20.0  
Difference, or Monthly Range, = 32.0  
"Corrected Mean" of all the Highest, (Col. 5), = 39.8  
"Corrected Mean" of all the Lowest, (Col. 6), = 30.8  
Difference, or Mean Daily Range, = 9.0  
\*\* Calculated Mean Temperature of Month, = 35.8  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 6<sup>th</sup> th, = 51.0  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 40.2  
Lowest at Night, Black Bulb (corrected for Index errors), on the 16<sup>th</sup> th, = 12.0  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 26.3  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 35.3  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 34.4  
Computed Temperature of Dew-Point, = 33.0  
Do. Elastic Force of Vapour, = 1.89  
Do. Weight of Vapour in a Cubic Foot of Air, = 92  
Relative Humidity (Saturation = 100), = 92  
RAIN fell on 23 Days; Amount in Inches, = 4.21

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	6	0	2	3	6	5	8	0	
P.M.		0	6	0	4	1	9	4	7	0	
Mean.		1	6	0	3	2	7	5	7	0	

Observations made and  
Return verified by

John Forrest

(Signed)



A. B.