

## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Baroness Cottage* County of *Bute*, in Lat. *55° 49' 50"* Long. *5° 45'*, Distance from Sea *10* miles.Height of Cistern of the Barometer above Mean Sea-Level *116* feet, above Ground *3* feet.During the MONTH of *January* 188*8*.

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. 0-10.	GENERAL REMARKS.  As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Deposition 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 Balls. Sun-rays, Grass.		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 Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Readings of the H. Cap. Anemometer. No.	9 h. A.M.		Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.	Amount (0-10), and Species.						No.	No.	No.	No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 2), = *29.663* *29.634*  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = *29.669* *29.637*  
Mean at Station, corrected, and at 32°, = *29.636*  
Correction for height, *116* feet above Mean Sea-level, = *.127*  
Mean, reduced to 32°, and Sea-level, = *29.763*  
Highest Reading, corrected for Index error, on the *25*th, = *30.310*  
Lowest Do. Do., on the *6*th, = *29.130*  
Difference, or Monthly Range, = *1.180*

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the *27*th, = *51.0*  
Lowest in Month, corrected for Index errors, on the *9*th, = *22.5*  
Difference, or Monthly Range, = *28.5*  
"Corrected Mean" of all the Highest, (Col. 5), = *42.1*  
"Corrected Mean" of all the Lowest, (Col. 6), = *33.4*  
Difference, or Mean Daily Range, = *8.7*  
\*\* Calculated Mean Temperature of Month, = *37.7*

S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the *th*, =  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =  
Lowest at Night, Black Bulb (corrected for Index errors), on the *th*, =  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =  
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), = *35.4*  
Computed Temperature of Dew-Point, = *33.5*  
Do. Elastic Force of Vapour, = *.192*  
Do. Weight of Vapour in a Cubic Foot of Air, =  
Relative Humidity (Saturation = 100), = *88*  
RAIN fell on *22* Days; Amount in Inches, = *4.66*

WIND.		SUMMARY.									
Direction.	No.	NE	E	SE	S	SW	W	NW	Calms or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.	0	2	6	0	1	5	8	6	3		
P.M.	0	3	4	1	1	5	8	6	3		
Mean.	0	2	5	1	1	5	8	6	3	<i>0.9 = 0.81 lb</i>	

Observations made and  
Return verified by

*James Kay*

(Signed)

*James Kay*

*M.*















The Hours of Observation are of Greenwich Time.

Observations made and  
Return verified by



FOR TAKING METEOROLOGICAL OBSERVATIONS,  
WITH REMARKS ON THE USE OF INSTRUMENTS.

and as Barometres are liable to be deranged by the introduction of air into their tubes, on removal from place to place, or being roughly handled, it may be useful to Observers to know how the instrument may be expelled. First, close up the cistern by screwing the ivory peg tight, so as to prevent the escape of mercury; then screw up the pump, till the air is forced out of the tube; and having done this, slowly invert the instrument, place the top of it on a yielding substance, such as the foot, and gently tap on the cistern with the palm of the hand, so as to induce the air to ascend through the column to the cistern, whence it may escape. Since there is a weight of two atmospheres—the pressure of the mercury in Barometre, and the air outside—pressing on any air that may be introduced into the tube, it is usually a tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished, and the clear metallic sound of the mercury, when gently agitated against the top of the glass tube, will show when the whole of the air has been expelled. Care must be taken, when the tube is taken to screw down the cistern, not to screw down the float of the cistern, for the flow of air, and the instrument will flow out, and the instru-

In selecting instruments, the following points require attention :—The divisions of the vernier of Barometers in reference to their scales, and the perfect freedom of the Barometer from air ; the

If this be impracticable, from the ends of piers and rocks round the coast, where it is not influenced by currents sweeping along the coast, and as little 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 time of high

Sycamore  
Oak,  
Lime,  
Larch,  
Elm,  
Birch,  
Beech,  
Ash,  
Harden,

[illegible][illegible]

Have the goodness also to state any information you may be able to collect relative to the Crops of Grain, Hay, Potatoes, Turnips, Fruits, etc., whether plentiful, or in perfection; whether any have suffered from blight, disease, etc. Whether zoonotic disease prevails among cattle; and the Agricultural condition of the district generally.

and a beginning in all on the 1st of May. The  
land had been in a ploughed order, and as considerable  
breadth of potatoes have been planted, I have had  
one or "breeding" but they have ~~not~~ in general one  
downy.

*Scottish Meteorological Society,*

122 George Street,

EDINBURGH.



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AP 18



# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Baronell Cottage, County of Buteshire*, in Lat  $55^{\circ}49'50''$ , Long  $5^{\circ}4'5''$ , Distance from Sea  $10$  miles.

Height of Cistern of the Barometer above Mean Sea-Level  $116$  feet, above Ground  $3$  feet.

During the MONTH of *April* 188*2*.

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 Bulb. Sun/shade. in. on Cass.		Dry No.		Wet No.		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.	9 A.M.		P.M.		SUNSHINE  H.ours.	9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. No.	Min. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			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.					No. 12.	No. 22.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), =  $29.961$ .....  $0.058$  =  $29.903$   
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), =  $29.931$ .....  $0.051$  =  $29.880$   
 Mean at Station, corrected, and at 32', =  $29.892$   
 Correction for height,  $116$  feet above Mean Sea-level, =  $.127$   
 Mean, reduced to 32', and Sea-level, =  $30.019$   
 Highest Reading, corrected for Index error, on the 1<sup>st</sup>, =  $30.430$   
 Lowest Do. Do., on the 27<sup>th</sup>, =  $29.392$   
 Difference, or Monthly Range, =  $1.038$

S.R. THERMOMETER, (in shade, etc.) Highest in Month, (corrected for Index Errors), on the 11<sup>th</sup>, =  $66.5$   
 Lowest in Month, corrected for Index errors, on the 16<sup>th</sup>, =  $26.2$   
 Difference, or Monthly Range, =  $40.3$   
 "Corrected Mean" of all the Highest, (Col. 5), =  $54.4$   
 "Corrected Mean" of all the Lowest, (Col. 6), =  $36.0$   
 Difference, or Mean Daily Range, =  $18.4$   
 \* Calculated Mean Temperature of Month, =  $45.2$

S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 11<sup>th</sup>, =  $66.5$   
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =  $54.4$   
 Lowest at Night, Black Bulb (corrected for Index errors), on the 16<sup>th</sup>, =  $26.2$   
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =  $36.0$   
 Difference of above means or range ("exposed"), =  $18.4$

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), =  $43.3$   
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), =  $40.2$   
 Computed Temperature of Dew-Point, =  $36.5$   
 Do. Elastic Force of Vapour, =  $.216$   
 Do. Weight of Vapour in a Cubic Foot of Air, =  $.77$   
 Relative Humidity (Saturation = 100), =  $77$   
 RAIN fell on 18 Days; Amount in Inches, =  $1.860$

WIND.	SUMMARY.											Mean Force.	Mean Velocity in miles per day.
	Direction.	N	NE	E	SE	S	SW	W	NW	Calms or Variable.	Mean Force.		
A.M.		5	8	3	0	2	4	3	2	3	0.45		
P.M.		3	2	4	0	0	0	5	5	11	0.57		
Mean.		4	5	4	0	1	2	4	3	7	0.71	0.56	44

Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S.," and a number to be entered in the heading; or the Number and Initials of the Maker may be here given.  
 \* The Daily Range for Scotland is as yet unknown.  
 \* These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.  
 \* While the Daily Range is unknown, the Arithmetic Mean of Cols. 5 and 6 will be entered as the "Calculated Mean Temperature."  
 \* Any observations not taken under the Conditions specified in the Directions on the other side, or noted at the Top of each column, must be marked as such by the observer, in each Schedule. See over.

Observations made and Return verified by *James Hay*

(Signed) *James Hay*







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Barone Cottage, Pictou, Bute*, in Lat. *55° 49' 50"* Long. *5° 4' 5"*, Distance from Sea *10 1/2* miles.Height of Cistern of the Barometer above Mean Sea-Level *116* feet, above Ground *3* feet.During the MONTH of *May* 189 *2*.

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 Bolls. Sun or 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.		9 h. A.M.		9 h. P.M.							9 A.M.		P.M.				
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No.	Amount	Direction.	Force.	Direction.	Force.	9 h. A.M.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Direction.	Force.	No.						Amount	Direction.	Force.	No.	Amount	Direction.	Force.
		* No.	inches.	°	inches.	°	No.	No.	No.	No.	Dry bulb.	Wet bulb.	Dry bulb.		Wet bulb.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.						No.	No.	No.	No.	No.	No.	No.
	1	29.860	48	29.800	52	55.8	36.5			47	45	41.5	40		SSW	1	calm	-		4	-												1					
	2	29.932	54	30.030	52	66	36.5			54.8	47	47	43		ESE	1.5	ENE	1.5		-	9												2					
	3	30.010	52	29.970	49	58	37			48.5	41.6	43.5	38.5		NE	1	ENE	1.5		2	-												3					
	4	30.030	56	30.020	53	61.5	32			49.5	42.8	44	40.8		NNE	1.5	NE	1.5		1	-												4					
	5	30.020	53	30.100	52	61	34.5			49.8	45	44	39.5		SE	1.5	SE	1		2	-												5					
	6	30.230	53	30.140	52	55.8	32.8			50	43	41	39		SE	1.5	calm	-		1	-												6					
	7	29.980	51	29.990	52	54.5	39			48	44	46	43.5	022	WSW	1.5	W	1.5		10	8												7					
	8	30.040	55	30.050	52	59	41.5			49	45.2	47	44		SW	1.5	W	1.5		8	9												8					
	9	30.090	53	30.130	55	64.5	41			50.5	46.8	47	43		SW	1.5	calm	-		8	-												9					
	10	30.190	57	30.260	55	68.8	38			57.3	49.5	51.5	45.5		NE	1	E	1.5		-	-												10					
	11	30.370	57	30.370	56	66	38			51.8	46.5	50.8	45.5		NE	1	ENE	1.5		5	1													11				
	12	30.370	54	30.220	56	64	40.6			51.8	45.5	50.5	49	500	NE	1	calm	-		6	10												12					
	13	30.050	54	29.910	55	56	48.5			51.2	51	53	53	688	SE	1	calm	-		10	10												13					
	14	29.862	57	29.810	56	57.5	46			50.2	47.5	48	45	095	W	1	WSW	1.5		5	2												14					
	15	29.570	54	29.540	53	57.5	45.5			51.2	48.5	47	44	350	SW	1	SW	1		9	9												15					
	16	29.310	52	29.550	52	53.3	43.5			47	47	47.8	43.5	040	WSW	1	NNW	1.5		10	3												16					
	17	29.824	52	29.960	53	57.5	42.8			51.8	46.8	43	40.5	230	NNW	1	NNW	1.5		8	-												17					
	18	29.750	48	29.740	52	55	39.5			44.5	44.3	46.5	46.5	432	E	1	SW	1		10	9												18					
	19	29.810	52	29.680	52	56.8	40.8			50.5	46.5	50	49.8	390	W	1	WSW	1		3	10												19					
	20	29.570	52	29.920	52	53.8	42			50	48	42	39.8	028	WSW	1	NNW	1.5		10	1												20					
	21	29.840	49	29.830	49	52	38.3			45.5	43.5	41.2	38	008	SW	1	NNW	1		10	2												21					
	22	29.834	50	29.750	50	53.5	39.5			47.5	42.5	44.5	44	540	ENE	1	ENE	1.5		10	10												22					
	23	29.650	50	29.590	53	57.8	42.5			50	49.5	51.8	50.6	336	NE	1	S	1.5		8	10												23					
	24	29.544	55	29.700	56	63	48			53.5	51.8	48.2	46.8	578	SE	1	SW	1.5		9	2												24					
	25	29.570	52	29.650	53	57	45.5			51	50.6	48	47.5	686	E	1	WSW	1.5		10	1												25					
	26	29.770	54	29.714	57	64.2	45			51.5	51	54.3	52.5	330	SW	1	calm	-		10	10												26					
	27	29.714	52	29.840	59	65.6	50.5			54	53.5	53.5	51.5		SW	1	WSW	1.5		9	6												27					
	28	29.860	62	29.550	55	67.6	46			61.3	57	51.3	50.6	730	NE	1	ENE	1.5		5	10													28				
	29	29.570	54	29.670	53	56	48			50.8	49	51.5	50	132	SSW	1	WSW	1.5		10	9													29				
	30	29.484	53	29.830	56	59	47.8			52.2	51.3	52	50.8	040	ESE	1	S	2		10	2												30					
	31	29.720	57	29.600	60	66.6	50.5			59	56.3	54	53	030	SE	1	SE	1.5		9	10												31					
Suns.		16.15	12	17.12	12	17.10	15.10			12.10	15.10	12.10	13.10																									
Means.		29.862	53.3	29.868	53.5	59.6	41.9			51.0	47.7	47.8	45.4																									
+ Total Corrections for Instrumental Errors.																																						
+ Corrections for Diurnal Range.																																						
+ Corrected Means.																																						
No. of Columns.		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), = *29.795*  
Corrected Mean of Barometer at 9 P.M., minus the Correction  $\frac{1}{100}$  for Temp. (Col. 4), = *29.801*  
Mean at Station, corrected, and at 32', = *29.798*  
Correction for height, feet above Mean Sea-Level, = *127*  
Mean, reduced to 32', and Sea-level, = *29.925*  
Highest Reading, corrected for Index error, on the *11* th., = *30.370*  
Lowest Do. Do., on the *16* th., = *29.310*  
Difference, or Monthly Range, = *1.060*

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the *10* th., = *68.8*  
Lowest in Month, corrected for Index errors, on the *4* th., = *32.0*  
Difference, or Monthly Range, = *36.8*  
"Corrected Mean" of all the Highest, (Col. 5), = *59.6*  
"Corrected Mean" of all the Lowest, (Col. 6), = *41.9*  
Difference, or Mean Daily Range, = *17.7*  
\*\* Calculated Mean Temperature of Month, = *50.7*  
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the *10* th., = *68.8*  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = *68.8*  
Lowest at Night, Black Bulb (corrected for Index errors), on the *10* th., = *32.0*  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = *32.0*  
Difference of above means or range ("exposed"), = *36.8*

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = *49.4*  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = *46.5*  
Computed Temperature of Dew-Point, = *50.7*  
Do. Elastic Force of Vapour, = *1.060*  
Do. Weight of Vapour in a Cubic Foot of Air, = *1.060*  
Relative Humidity (Saturation = 100), = *100*  
RAIN fell on *20* Days; Amount in Inches, = *6.19*

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

Observations made and  
Return verified by*James May*

(Signed)

*James May*







one *Rothsley* County of *West* in Lat *55° 40' 50"* Long *5° 4' 5"*

Observations taken at Warren College, County of Warren

, in Lat. 55.49 50, Long. 5.4 3, Distance from Sea 10 7/10 miles

Height of Cistern of the Barometer above Mean Sea-Level 110 feet, above Ground 3 feet.

During the MONTH of June 1884.

The Hours of Observation are of Greenwich Time.

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\frac{+}{+}$	=	29.814
for Temp. (Col. 2), = 29.892.....-0.078		
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{+}{+}$	=	29.830
for Temp. (Col. 4), = 29.907.....-0.077		
Mean at Station, corrected, and at 32°, .....	=	29.822
Correction for height, 116 feet above Mean Sea-level, .....	=	.127
Mean, reduced to 32°, and Sea-level, .....	=	29.949
Highest Reading, corrected for Index error, on the 8 <sup>th</sup> , .....	=	30.350
Lowest Do. Do., on the 2 <sup>nd</sup> <sup>nd</sup> <sub>th</sub> , .....	=	29.314
Difference, or Monthly Range, .....	=	1.036

<b>S.-R. THERMOMETER, (in shade, etc.) Highest in Month,</b> (corrected for Index Errors), on the <u>9</u> th.....	=	<u>78.3</u>
<b>Lowest in Month,</b> corrected for Index errors, on the <u>13</u> th, .....	=	<u>38.8</u>
Difference, or <b>Monthly Range,</b> .....	=	<u>39.5</u>
"Corrected <b>Mean</b> " of all the <b>Highest,</b> (Col. 5), .....	=	<u>63.2</u>
"Corrected <b>Mean</b> " of all the <b>Lowest,</b> (Col. 6),.....	=	<u>45.8</u>
Difference, or <b>Mean Daily Range,</b> .....	=	<u>17.4</u>
** Calculated <b>Mean Temperature</b> of Month, .....	=	<u>54.5</u>
 <b>S.-R. THERMOMETER, Black Bulb in Sun, Highest,</b> (corrected for Index Errors), on the      th,.....		
"Corrected <b>Mean,</b> " (Col. 7), of <b>Black Bulb, Max. in Sun,</b> .....	=	
<b>Lowest at Night,</b> Black Bulb (corrected for Index errors), on the      th, .....	=	
"Corrected <b>Mean,</b> " (Col. 8), of <b>Black Bulb, Min.</b> on grass,.....	=	
Difference of above means or range ("exposed"), .....	=	

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), .....	=	<del>53.4</del> 53.4
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), .....	=	<del>56.4</del> 56.4
Computed Temperature of Dew-Point, .....	=	47.4
Do. Elastic Force of Vapour, .....	=	.327
Do. Weight of Vapour in a Cubic Foot of Air, .....	=	
Relative Humidity (Saturation 100), .....	=	80
RAIN fell on 16 Days; Amount in Inches, .....	=	3.992

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	5	3	1	6	2	2	3	2		
P.M.	2	1	1	1	1	6	8	2	3		
Mean.	2	3	2	1	3	4	8	5	2	0.7	= 0.49

Observations made and  
Return verified by

W.D.







The Hours of Observation are of Greenwich Time.

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	3	5	0	3	5	5	6	0		
P.M.	2	2	6	0	2	5	8	3	3		
Mean.	1	4	6	0	2	5	7	4	2	0.55	0.56

Observations made and  
Return verified by

(Signed)



INSTRUCTIONS

FOR TAKING METEOROLOGICAL OBSERVATIONS,

WITH REMARKS ON THE USE OF INSTRUMENTS.

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure PERFECT 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 observations, it being found that differences between the Returns from two Stations, so very considerable as to render them altogether inappreciable, may arise from dissimilarity of position or shelter of instruments, different hours of observation, or even from the use of differently constructed instruments. It is therefore hoped, that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for the Monthly Returns an accuracy and uniformity commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, in future years, a comparative completeness among the several Returns, without which the Society's Reports must inevitably fall in achieving one of the main objects of Meteorological Observation.

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 columns of the Schedule. 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 roughly variations of atmospheric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological Observations that is not supplied with some means of adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating 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 of London. The Barometer originally constructed by Mr. Atwood of London, and usually called the Board of Trade Barometer, is its scale, and convenience of requiring no adjustment of the cistern to compensate the error that would otherwise arise from the fluctuations of the surface of mercury in the cistern. This is a very excellent Barometer for ordinary Observers, inasmuch as it is so easily adjusted, and the observation likely to arise in a few cases in setting the instrument to the zero point with the fixed scale when the light is not good. To know the accuracy with which these Barometers are made, it may be stated that the Society's Standard Barometer, particular care being given to make the compensating when atmospheric pressure was rising or falling very low, 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 coincidence 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 fire, and must not be hung against a wall heated by a fire. Inas much as 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 lowered it, must be brought into the plane of the eye, by and front of the index—usually the lower edge of the vernier, which must be carefully adjusted so as to form one straight line with those on its ivory frame, the surface of the mercury must be taken quickly, so as to prevent the heat from the observer's hands and person from affecting the mercury. The use of a lens will facilitate an accurate adjustment of the mercury. A mistake not unfrequently made by these 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 errors most frequently made in reading the Barometer are errors of 1.000 inch, 0.500 inch, and 0.050 inch; that is to say, instead of 29.365 inches, either of the following is sometimes set down—viz. 30.365 inches, 28.365 inches, or 29.865 inches or 29.815 inches. Experience having shown that even the very best Observers make these mistakes, particular attention is directed to the matter. When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a tight plug to the cistern, thus preventing the escape of the mercury. Then screw up the mercury not quite to the top of the tube, but to within a quarter of an inch of it, and take down the instrument; it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether this is the case if, on inclining the instrument, a sharp tap is produced when the mercury strikes the top of the tube. If a full tap is heard, there is air in the tube, which must be got rid of. If no tap is heard, As Barometers are liable to be deranged by the introduction of air into their tubes, on removal from places to place, or in being roughly handled, it may be useful to Observers to know how the ivory peg might be expelled. First close up the cistern by screwing the ivory peg tight, so as to prevent the escape of the mercury; then screw up the mercury to about half an inch from the top of the tube; and having slowly inverted the instrument, place the tap on the cistern with the substance, such as the ivory peg, in the air to ascend through the pain of the cistern, whence it may escape. Since there is the column of two atmospheres—the pressure of the mercury in the cistern and the air outside—pressing on any air that may be inside the tube, it is usually a tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished; and the clear metallic sound of the mercury, when gently struck against the top of the glass tube, will show when the whole of the air has been expelled. On hanging up the Barometer, care must be taken to screw down the mercury in the tube before untastening the float of the cistern, for, if this be not attended to, the mercury will flow out, and the instrument be seriously damaged.

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Louvre-boarded Box for protection to the weather, as shown in the past by repeated rain and greater depths, noting always the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima by Thermometers continuously immersed, be insisted 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 water, and the temperature of the water being noted. Mention what Test-Papers are used, Schönbein's or Moffat's, etc.

The Paper is affixed by a pin to a board in the Thermometer Box, and the indications 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 at the time of observation, in the following manner:—thus 3<sup>rd</sup> E., as an Ozone entry 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, but which are assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such contractions in general use is given at the foot of the column. Particular 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 Aurora Borealis, remarkable depressions, elevations, and fluctuations of Barometrical, 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 limited at above. When lefty 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 occupied, or ruled off for the purpose, from the column of Remarks.

Observations in Seasons, possess not only great scientific value, but are of considerable importance in connection with the season, the Agriculture, Horticulture, 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, to specified 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 repeating old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and to consider it necessary that they should have full power to reject any instrument which, on being submitted for comparison, does not afford him satisfaction. (By Order)

Edinburgh, December 1885.

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# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Barrow Cullaghs*, County of *Bute*

, in Lat.  $55^{\circ}49'50''$  Long.  $5^{\circ}4'5''$ , Distance from Sea  $0.4$  miles.

Height of Cistern of the Barometer above Mean Sea-Level  $116$  feet, above Ground  $3$  feet.

During the MONTH of *August* 188*2*

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. Read Daily, at 9 P.M.		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.	9 h. A.M.	P.M.	SUNSHINE.  H.ours.	9 h. A.M.								Temperature of Well at depth of 100 fms., 50 fms., 20 fms., and Surface.	Temperature of Air, Surface, and Dew- point.	9 A.M.	P.M.
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Aux.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force.	Direction.	Force.					Amount (0-10). and Species.	Amount (0-10). and Species.	No. 3 inches.									
		* No.	inches.	°	inches.	°	°	°	°	°	°	°	°	°	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.						No.	No.	No.	No.
1	29.956	62	30.112	64	70.2	53.8			60	56.5	56.3	54.2		0.60	NW	1.5	NNW	1.5														1			
2	30.100	62	30.088	63	66.6	52			58.8	55.8	56	54.2			WSW	1	NNW	1														2			
3	30.030	63	30.010	60	62.5	48.5			57	53	49.6	46			NNW	1	NW	1.5														3			
4	30.044	58	30.012	58	61.5	44.5			52.3	46	51	50			012	NW	1	NW	1.5													4			
5	29.832	58	29.680	58	62	50.3			57.3	54.5	54	52.5			190	SW	1.5	SW	1													5			
6	29.670	58	29.820	57	60.6	48.5			53.2	51.3	50.2	48			053	WSW	1.5	NNW	1													6			
7	29.906	57	29.840	58	64.2	43			54.6	50.2	50.3	50.3			360	NNW	1.5	calm														7			
8	29.730	56	29.890	55	56.6	48.5			51	49.2	50	48				NE	1.5	E	1.5													8			
9	30.040	58	30.150	58	64	40			57.5	51.3	49	47				NE	5	SW	1.5													9			
10	30.190	58	30.100	59	66.5	40			62.3	57.3	54	51			390	SW	5	calm														10			
11	29.980	58	29.980	58	62	52.5			57	56.5	55	54			090	SW	5	WSW	1													11			
12	29.854	58	29.616	60	65	52			60.5	56	55.5				1130	S	1	S	1													12			
13	29.430	60	29.390	60	66.5	52.5			58	57	54	53.5			480	SW	1	calm														13			
14	29.420	58	29.360	58	64	53			57.5	55.2	54.5	53.8			820	S	1.5	S	5													14			
15	29.542	59	29.790	59	65	51.5			56.3	53.8	55	52.5			010	SSW	1.5	SW	1.5													15			
16	29.906	60	29.880	62	66.2	51.8			60.5	57.2	54.3	53.3			085	SSW	5	calm														16			
17	29.942	60	29.962	61	65.5	49.8			58.5	55.5	51.5	49.6			095	NNW	5	calm														17			
18	29.814	57	29.646	57	56.2	48			53.2	52.8	53.5	53			500	NE	1	NE	5													18			
19	29.700	61	29.830	61	63.8	47.8			58.5	56	48.8	47.5				WSW	5	calm														19			
20	29.900	59	29.870	61	68.5	42.6			60.5	57	57.5				115	ESE	5	SE	1.5													20			
21	29.910	60	29.956	62	65.3	56.8			60	59.5	59.3	58.5			005	S	1	SSW	1.5													21			
22	29.920	60	29.840	62	66	55.5			59.3	59	56	55				SSW	1	calm														22			
23	29.770	62	29.774	65	73.5	53.8			68	63.5	59	57.5			085	ESE	5	calm														23			
24	29.710	63	29.690	62	67.5	53.5			62.5	56.2	54	52.5				SW		NNW	5													24			
25	29.670	60	29.720	60	64.5	49.8			55.5	51.5	54	51.5			058	W	5	W	5													25			
26	29.780	60	29.640	58	64	51			59	53.5	52.2	49.5			290	SW	1.5	S	1													26			
27	29.460	57	29.424	61	60	50			54	51.5	53	51			130	SW	1	W	1.5													27			
28	29.470	57	29.640	57	59.5	45			54.3	50.2	45.3	43.2				W	1.5	NNW	5													28			
29	29.632	54	29.410	52	57.5	38			52.6	49	49	48			2435	NE	1	NE	1.5													29			
30	29.230	53	29.150	58	61	48			53.3	53.3	56	56			640	NE	1	E	1.5													30			
31	29.260	58	29.550	56	60.5	51			55.2	53.3	51.5	49			215	NNW	1	NNW	1													31			
Sums.	23.798	1824	23.820	1810	15230				1548	1522	1522	15021			2245																				
Means.	29.767	57.7	29.768	57.3	63.8	49.1			57.3	54.6	53.3	51.7				1.0																			
+ Total Corrections for Instrumental Errors.																																			
+ Corrections for Diurnal Range.																																			
* 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.	aurora.	m.	meteors.		
ci.	cirrus.	ms.	meteor.		
ci-cu.	cirro-cumulus.	n.	nimbus.		
ci-s.	cirro-stratus.	h. r.	rain.		
cu.	cumulus.	h. r.	heavy rain.		
cu-s.	cumulo-stratus.	c. h. r.	continued heavy rain.		
d.	dew.	s.	stratus.		
f.	fog.	sq.	squall.		
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.	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

## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
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. d.	haze.	so. h.	solar halo.
h.	heavy dew.	sq.	squall.
h.	hail.	sq.	squalls.
l.	lightning.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
lu. co.	lunar coronae.	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  $\ddagger$  for Temp. (Col. 2), =  $29.767$   $\ddagger$  0.080... =  $29.687$

"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  for Temp. (Col. 4), =  $29.768$   $\ddagger$  0.082... =  $29.686$

Mean at Station, corrected, and at 32', =  $29.687$

Correction for height, 116 feet above Mean Sea-level, =  $1.127$

Mean, reduced to 32', and Sea-level, =  $29.814$

Highest Reading, corrected for Index error, on the 10 th., =  $30.190$

Lowest Do. Do., on the 30 th., =  $29.150$

Difference, or Monthly Range, =  $1.040$

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 23 th., =  $73.6$

Lowest in Month, corrected for Index errors, on the 25 th., =  $38.0$

Difference, or Monthly Range, =  $35.5$

"Corrected Mean" of all the Highest, (Col. 5), =  $63.8$

"Corrected Mean" of all the Lowest, (Col. 6), =  $49.1$

Difference, or Mean Daily Range, =  $14.7$

\*\* Calculated Mean Temperature of Month, =  $56.4$

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th., =

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

Lowest at Night, Black Bulb (corrected for Index errors), on the th., =

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

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

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), =  $55.3$

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), =  $53.2$

Computed Temperature of Dew-Point, =  $51.2$

Do. Elastic Force of Vapour, =  $378$

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

Relative Humidity (Saturation = 100), =  $87$

RAIN fell on 23 Days; Amount in Inches, =  $8.85$

WIND.		SUMMARY.					
Direction.		N	NE	E	SE	S	SW
A.M.		0	5	1	0	4	6
P.M.		0	2	2	1	4	3
Mean.		0	3	2	1	5	4

Observations made and  
Return verified by

*James L. Roy*

(Signed)

*James L. Roy*

*W.S.*

74.







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Barrow Cottage, County of

, in Lat 55.49 50 Long 5.4 5, Distance from Sea 10 0 miles

Height of Cistern of the Barometer above Mean Sea-Level 114 feet, above Ground 3 feet.

During the MONTH of *September*, 188*9*.

The Hours of Observation are of Greenwich Time.

BAROMETER, "corrected mean" at 9 A.M., minus the Correction for Temp. (Col. 2), =	29.738	0.67	29.671
"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), =	29.748	0.68	29.680
Mean at Station, corrected, and at 32', =			29.676
Correction for height, 116 feet above Mean Sea-level, =			-.127
Mean, reduced to 32', and Sea-level, =			29.803
Highest Reading, corrected for Index error, on the 22 th, =			30.284
Lowest Do. Do., on the 27 th, =			29.180
Difference, or Monthly Range, =			1.104

S.-R. THERMOMETER, (in shade, etc.):	Highest in Month, (corrected for Index Errors), on the 6 <sup>th</sup> ,	66.3
	Lowest in Month, corrected for Index errors, on the 30 <sup>th</sup> ,	39.0
	Difference, or <b>Monthly Range</b> ,	27.3
	"Corrected <b>Mean</b> " of all the Highest, (Col. 5),	57.7
	"Corrected <b>Mean</b> " of all the Lowest, (Col. 6),	44.9
	Difference, or <b>Mean Daily Range</b> ,	12.8
	** Calculated <b>Mean Temperature</b> of Month,	51.3
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 4 <sup>th</sup> ,		
	"Corrected <b>Mean</b> ," (Col. 7), of Black Bulb, <b>Max. in Sun</b> ,	
	<b>Lowest at Night</b> , Black Bulb (corrected for Index errors), on the 10 <sup>th</sup> ,	
	"Corrected <b>Mean</b> ," (Col. 8), of Black Bulb, <b>Min. on grass</b> ,	
	Difference of above means or range ("exposed"),	

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), .....	=	50.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), .....	=	48.6
Computed Temperature of Dew-Point, .....	=	46.4
Do. Elastic Force of Vapour, .....	=	316
Do. Weight of Vapour in a Cubic Foot of Air, .....	=	
Relative Humidity (Saturation 100), .....	=	86
RAIN fell on 25 Days; Amount in Inches, .....	=	6.592

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	2	2	1	6	8	1	3	0	1.2	
P.M.	1	2	1	0	5	4	8	1	8	0.8	
Mean.	1	2	1	1	5	6	8	2	4	1.0	1.00

Observations made and  
Return verified by







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Baron's Cottage, County of

, in Lat 55° 49' 50", Long. 5° 41' 0", Distance from Sea 10.4 miles.

Height of Cistern of the Barometer above Mean Sea-Level 110 feet, above Ground 3 feet.

During the MONTH of October 1889.

The Hours of Observation are of Greenwich Time.

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\frac{1}{11}$ for Temp. (Col. 2),	=	29.638.....048	=	29.590
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{11}$ for Temp. (Col. 4),	=	29.684.....049	=	29.535
Mean at Station, corrected, and at 32',	=		=	29.562
Correction for height, 116 feet above Mean Sea-level,	=		=	.127
Mean, reduced to 32', and Sea-level,	=		=	29.689
Highest Reading, corrected for Index error, on the 18 <sup>th</sup> ,	=		=	30.290
Lowest Do. Do., on the 9 <sup>th</sup> ,	=		=	28.852
Difference, or Monthly Range,	=		=	1.438

<b>8.3. THERMOMETER</b> (in shade, etc.), <b>Highest in Month</b> , (corrected for Index Errors), on the <b>28</b> th.....	= <b>57.5</b>
<b>Lowest in Month</b> , corrected for Index errors, on the <b>25</b> th, .....	= <b>25.5</b>
Difference, or <b>Monthly Range</b> , .....	= <b>32.0</b>
"Corrected <b>Mean</b> " of all the <b>Highest</b> , (Col. 5), .....	= <b>51.2</b>
"Corrected <b>Mean</b> " of all the <b>Lowest</b> , (Col. 6), .....	= <b>37.8</b>
Difference, or <b>Mean Daily Range</b> , .....	= <b>13.4</b>
** Calculated <b>Mean Temperature</b> of Month, .....	= <b>44.5</b>

<b>S.-R. THERMOMETER, Black Bulb in Sun, Highest,</b> (corrected for Index Errors), on the	th.....	=
"Corrected <b>Mean</b> ," (Col. 7), of <b>Black Bulb, Max. in Sun</b> , .....	=	
<b>Lowest at Night, Black Bulb</b> (corrected for Index errors), on the	th.....	=
"Corrected <b>Mean</b> ," (Col. 8), of <b>Black Bulb, Min. on grass</b> , .....	=	
Difference of above means or range ("exposed"), .....	=	

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), .....	=	43.1
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), .....	=	41.1
Computed Temperature of Dew-Point, .....	=	38.7
Do. Elastic Force of Vapour, .....	=	.235
Do. Weight of Vapour in a Cubic Foot of Air, .....	=	
Relative Humidity (Saturation = 100), .....	=	84
RAIN fell on 18 Days; Amount in Inches, .....	=	3.603

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	3	1	1	2	2	1	12	8		
P.M.	2	2	0	3	1	1	3	7	12		
Mean.	2	2	1	2	1	2	2	9	10	0.65	= 0.42

Observations made and  
Return verified by

(Signed)

7A







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Barone Cottage, Rochesay, But*, in Lat *55° 49' 50" N* Long *5° 4' 5" W*, Distance from Sea *0.4* miles.  
Height of Cistern of the Barometer above Mean Sea-Level *116* feet, above Ground *3* feet. During the MONTH of *November* 189*2*.

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 (0-10), and Species.	Amount (0-10), and Species.	Velocity (0-10), and Species.		Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.					No. 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.	
	1	29.790	43	29.764	47	47.2	32.8			36	35.8	43	41	0.05	calm	-	S	1.5		8		8									Calmer am & clear pm	1			
	2	29.550	42	29.344	45	47.	39			40.5	37.6	45	44	4.05	SE	1.5	SW	1.5		10		-									Dull am wet pm	2			
	3	29.294	48	29.540	49	53	43.5			48.3	45.8	47	45.5	5.00	SW	1.5	SSE	1.		9		8									Net am & clear pm	3			
AB	4	29.344	50	29.440	52	57	45.5			50.5	50	50.3	49	0.98	S	1.5	S	1.5		10		8										1/2 clear pm - fine	4		
	5	29.444	51	29.640	51	56	47.5			50	49	49	46	SSW	1.	WSW	1.5		9		3										" " blowy	5			
	6	29.750	49	29.920	48	53	38.5			43.2	42.5	38.5	38	calm	-	calm	-		9		-										" " "	6			
	7	30.060	48	30.020	49	50.6	36			44	43.5	45	43.5	3.22	calm	-	calm	-		10		10										Dull & hazy	7		
	8	29.920	51	29.870	52	51.8	44.5			47.5	47	49.5	48	7.80	S	1.5	SW	1.		10		10										" stormy & wet	8		
	9	29.840	52	29.940	50	51.3	37.5			50.5	50	37.5	37	0.60	SSW	1.5	calm	-		10		2										" damp & fine pm	9		
	10	29.964	47	29.946	49	51.8	36			43.5	43	44.5	43.5	0.60	SSW	1.5	S	1.5		6		3										1/2 clear fine	10		
	11	29.894	49	29.910	50	54	43			50	49	48.8	46.5	0.40	SSW	1.5	S	1.		5		10											1/2 " wet	11	
	12	29.810	49	29.824	49	50.5	45.3			46.5	45.3	48.5	47	4.12	SE	1.5	S	1.5		10		10												1/2 " pm blowy	12
	13	29.600	48	29.594	46	49.5	35.3			46	39	36.5	36	0.60	calm	-	calm	-		8		-												1/2 " fine	13
14	29.500	45	29.170	51	52.5	35			43	42	51	50.5	9.50	E	1.5	SE	2.		10		10												Dull am wet all day	14	
15	29.370	49	29.660	47	52.5	37.8			47.5	46.5	38.5	38	0.08	WSW	1.5	calm	-		8		3												Clear fine pm	15	
16	29.740	47	29.840	45	46	33			36	35.8	40	39		calm	-	calm	-		6		-												1/2 " am & 1/2 pm	16	
17	29.884	44	29.820	46	46.5	37			43.2	42.4	44	42.3	0.30	SSE	1.	SE	1.5		8		10												Dull hazy & dew	17	
18	29.746	46	29.640	44	45.8	40.5			42.4	41.5	41	38.5	0.75	E	1.5	E	1.5		10		10												" doubtful	18	
19	29.560	41	29.700	43	42.	36			38.2	35.8	40	39	0.33	RNE	1.5	calm	-		10		10												" hazy, Raw	19	
20	29.850	43	30.060	46	46.5	39.5			43	41.8	45	43		calm	-	ESE	1.		10		10												" "	20	
21	30.242	46	30.300	45	46.8	41.8			43.5	41.5	42.5	41		E	1.	E	1.		8		2												1/2 hazy & dry	21	
22	30.310	44	30.290	44	44	39			40	38.6	40	39		RNE	1.	E	1.		3		-													Heavy & c.	22
23	30.234	43	30.160	42	44	37			37.8	36	39.5	37.5		E	1.5	E	1.5		-		10													Dull hazy	23
24	30.090	42	30.112	42	41.5	37			40	38.2	39	37		NE	1.5	ESE	1.5		10		10													" Raw	24
25	30.100	42	30.000	43	44.5	38			40	38.2	40	39	1.040	E	1.	SE	1.		3		10													" as wet pm	25
26	29.780	45	30.070	46	47	39.5			42.5	41.5	43	42	1.20	NW	1.5	calm	-		10		8													" Light	26
27	30.130	47	30.164	50	52.2	42			48.5	47.5	51	48.5		SW	1.	W	1.		10		9													" & Raw	27
28	30.220	53	29.650	55	53.8	48.5			51	49	51.5	50	1.06	SW	1.5	SW	2-3		10		10													" stormy	28
29	29.740	47	29.644	45	53	34			42	37.6	35	33	3.72	WSW	2.	W	2.		6		5													1/2 clear blowy - clear shower	29
30	29.940	40	29.930	45	41.5	32			33	31.3	34	33.5	4.55	NW	1.5	NW	1.5		1		8													1/2 " "	30
31	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-		-		-													31
Sums.		16 13 5	14	15 12 3	15	12 9	7 8			10 6	15 10	13 6	14	4 8 5						23 7		19 5													
Means.		29.698	139.1	29.762	141.6	147.2	117.2			130.7	126.5	129.8	125.8	5.931						7.9		6.5													
+ Total Corrections for Instrumental Errors.		29.823	146.1	29.825	147.2	149.1	139.1			143.6	142.1	143.3	141.9							7.2															
+ Corrections for Diurnal Range.																																			
"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.	" cirrus.	ms.	" meteors.		
ci-cu.	" cirro-cumulus.	n.	" nimbus.		
cu.	" cumulus.	r.	" rain.		
cu-s.	" cumulo-stratus.	h. r.	" heavy rain.		
d.	" dew.	c. h. r.	" continued heavy rain.		
f.	" fog.	s.	" stratus.		
fr.	" frost.	sc.	" squall.		
h. fr.	" hoar-frost.	s.	" snow.		
h.	" haze.	so. h.	" solar halo.		
h. d.	" heavy dew.	sq.	" squall.		
hl.	" hail.	sgs.	" squalls.		
l.	" 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. halo.	" 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 with great force
1	Light air	3	Very fresh	6	Violent gale

## NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
cl.	cirrus.	ms.	meteors.
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.	hail.	sgs.	squalls.
l.	light.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	w.	wind.
li. co.	lunar corona.	g.	gale of wind.
li. 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  $\frac{1}{1000}$  for Temp. (Col. 2), = *29.776*  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{1000}$  for Temp. (Col. 4), = *29.776*  
Mean at Station, corrected, and at 32', = *29.776*  
Correction for height, *116* feet above Mean Sea-level, = *0.127*  
Mean, reduced to 32', and Sea-level, = *29.903*  
Highest Reading, corrected for Index error, on the *22* th, = *30.310*  
Lowest Do. Do., on the *14* th, = *29.170*  
Difference, or Monthly Range, = *1.140*

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the *4* th, = *54.0*  
Lowest in Month, corrected for Index errors, on the *30* th, = *32.0*  
Difference, or Monthly Range, = *22.0*  
"Corrected Mean" of all the Highest, (Col. 5), = *49.1*  
"Corrected Mean" of all the Lowest, (Col. 6), = *39.1*  
Difference, or Mean Daily Range, = *10.0*  
\*\* Calculated Mean Temperature of Month, = *44.1*  
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =  
Lowest at Night, Black Bulb (corrected for Index errors), on the th, =  
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =  
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = *43.4*  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = *42.0*  
† Computed Temperature of Dew-Point, = *40.3*  
† Do. Elastic Force of Vapour, = *25.1*  
† Do. Weight of Vapour in a Cubic Foot of Air, =  
† Relative Humidity (Saturation = 100), = *89*  
RAIN fell on *2* Days; Amount in Inches, = *5.936*

WIND.		SUMMARY.											
Direction.	N	NE	E	SE	S	SW	W	NW	Calms or Variable.	Mean Force.	Mean Velocity in miles per day.		
A.M.	0	1	7	2	7	3	2	2	6	0.7			
P.M.	0	0	6	3	6	3	3	1	8	0.8			
Mean.	0	1	6	3	6	3	3	1	7	0.75	= 0.56 <i>kt</i>		

Observations made and Return verified by

*James Kay*

(Signed)

*James Kay*

*W.D.*



# INSTRUCTIONS

## WITH REMARKS ON THE USE OF INSTRUMENTS.

# FOR TAKING METEOROLOGICAL OBSERVATIONS,

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1856, was to secure PERFECT 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, so that the differences between the Returns from two Stations, may be fairly compared, and the results of the observations, may be used as a basis for the construction of a general picture of the state of the atmosphere, and the progress of the seasons. It is the object of the Society to secure this uniformity, and to this end it has issued the following Instructions, which are intended to be followed by all its members, and by all those who are engaged in the study of the subject.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), and as specified in the following remarks, or at the top of the nearest hour, if it is not possible to observe at the precise hour. 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 roughly variations of atmospheric pressure, are not fitted for Meteorological purposes. No Barometer should be used for adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating 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. Alder of London, and usually called the Board of Trade Barometer, has the same error, and requires to be adjusted by Mr. Alder's method. The scales are not true inches, but so much shorter, as to compensate the error of the ivory point. This is a very serious error, and it is impossible to make any use of the Barometer, unless it is adjusted by Mr. Alder's method. 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 as a number of the Society's Stations, by which the coincidence 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 a 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 and iron parts, is at a uniform temperature, and that the mercury is at the same temperature, and that the atmosphere is at the same temperature. The best position is that which is least liable to sudden changes of temperature. In taking an observation, the observer should be careful to note the following points:—The thermometer should be hung vertically, and the bulb should be at least an inch free from the scales and frame to which they are attached; the frame must be such as will bring the tubes forward by an inch from any board on which it may be suspended; the water must be covered, and altogether placed to the side, and a little below the level of the wet bulb, but in no case under the bulb; the bulb must be of medium fineness, and fastened at the neck of the bulb by the cotton, which also supplies it with water. It must be seen to by the Observer that the mullin is always clean and moist, and the water pure. In frosty weather, observation is a matter of much delicacy, and must be made with great care. The bulb must be moistened by immersion from 15 to 30 minutes before the hour of observation. From the film of ice thus formed evaporation will proceed as from the moist cloth in ordinary circumstances.

In reading the thermometer great care must be taken to bring the eye exactly opposite the tip of the index or the tip of the column of mercury. The reading ought to be taken to tenths of a degree, and noted in decimals. Thus the thermometer will be read—39.3, 40.0, or 40.1; on again, 40.4, 40.5, 40.6, according as it indicates a little under, at, or above 40°; and 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9, 68.0, 68.1, 68.2, 68.3, 68.4, 68.5, 68.6, 68.7, 68.8, 68.9, 69.0, 69.1, 69.2, 69.3, 69.4, 69.5, 69.6, 69.7, 69.8, 69.9, 70.0, 70.1, 70.2, 70.3, 70.4, 70.5, 70.6, 70.7, 70.8, 70.9, 71.0, 71.1, 71.2, 71.3, 71.4, 71.5, 71.6, 71.7, 71.8, 71.9, 72.0, 72.1, 72.2, 72.3, 72.4, 72.5, 72.6, 72.7, 72.8, 72.9, 73.0, 73.1, 73.2, 73.3, 73.4, 73.5, 73.6, 73.7, 73.8, 73.9, 74.0, 74.1, 74.2, 74.3, 74.4, 74.5, 74.6, 74.7, 74.8, 74.9, 75.0, 75.1, 75.2, 75.3, 75.4, 75.5, 75.6, 75.7, 75.8, 75.9, 76.0, 76.1, 76.2, 76.3, 76.4, 76.5, 76.6, 76.7, 76.8, 76.9, 77.0, 77.1, 77.2, 77.3, 77.4, 77.5, 77.6, 77.7, 77.8, 77.9, 78.0, 78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.7, 78.8, 78.9, 79.0, 79.1, 79.2, 79.3, 79.4, 79.5, 79.6, 79.7, 79.8, 79.9, 80.0, 80.1, 80.2, 80.3, 80.4, 80.5, 80.6, 80.7, 80.8, 80.9, 81.0, 81.1, 81.2, 81.3, 81.4, 81.5, 81.6, 81.7, 81.8, 81.9, 82.0, 82.1, 82.2, 82.3, 82.4, 82.5, 82.6, 82.7, 82.8, 82.9, 83.0, 83.1, 83.2, 83.3, 83.4, 83.5, 83.6, 83.7, 83.8, 83.9, 84.0, 84.1, 84.2, 84.3, 84.4, 84.5, 84.6, 84.7, 84.8, 84.9, 85.0, 85.1, 85.2, 85.3, 85.4, 85.5, 85.6, 85.7, 85.8, 85.9, 86.0, 86.1, 86.2, 86.3, 86.4, 86.5, 86.6, 86.7, 86.8, 86.9, 87.0, 87.1, 87.2, 87.3, 87.4, 87.5, 87.6, 87.7, 87.8, 87.9, 88.0, 88.1, 88.2, 88.3, 88.4, 88.5, 88.6, 88.7, 88.8, 88.9, 89.0, 89.1, 89.2, 89.3, 89.4, 89.5, 89.6, 89.7, 89.8, 89.9, 90.0, 90.1, 90.2, 90.3, 90.4, 90.5, 90.6, 90.7, 90.8, 90.9, 91.0, 91.1, 91.2, 91.3, 91.4, 91.5, 91.6, 91.7, 91.8, 91.9, 92.0, 92.1, 92.2, 92.3, 92.4, 92.5, 92.6, 92.7, 92.8, 92.9, 93.0, 93.1, 93.2, 93.3, 93.4, 93.5, 93.6, 93.7, 93.8, 93.9, 94.0, 94.1, 94.2, 94.3, 94.4, 94.5, 94.6, 94.7, 94.8, 94.9, 95.0, 95.1, 95.2, 95.3, 95.4, 95.5, 95.6, 95.7, 95.8, 95.9, 96.0, 96.1, 96.2, 96.3, 96.4, 96.5, 96.6, 96.7, 96.8, 96.9, 97.0, 97.1, 97.2, 97.3, 97.4, 97.5, 97.6, 97.7, 97.8, 97.9, 98.0, 98.1, 98.2, 98.3, 98.4, 98.5, 98.6, 98.7, 98.8, 98.9, 99.0, 99.1, 99.2, 99.3, 99.4, 99.5, 99.6, 99.7, 99.8, 99.9, 100.0, 100.1, 100.2, 100.3, 100.4, 100.5, 100.6, 100.7, 100.8, 100.9, 101.0, 101.1, 101.2, 101.3, 101.4, 101.5, 101.6, 101.7, 101.8, 101.9, 102.0, 102.1, 102.2, 102.3, 102.4, 102.5, 102.6, 102.7, 102.8, 102.9, 103.0, 103.1, 103.2, 103.3, 103.4, 103.5, 103.6, 103.7, 103.8, 103.9, 104.0, 104.1, 104.2, 104.3, 104.4, 104.5, 104.6, 104.7, 104.8, 104.9, 105.0, 105.1, 105.2, 105.3, 105.4, 105.5, 105.6, 105.7, 105.8, 105.9, 106.0, 106.1, 106.2, 106.3, 106.4, 106.5, 106.6, 106.7, 106.8, 106.9, 107.0, 107.1, 107.2, 107.3, 107.4, 107.5, 107.6, 107.7, 107.8, 107.9, 108.0, 108.1, 108.2, 108.3, 108.4, 108.5, 108.6, 108.7, 108.8, 108.9, 109.0, 109.1, 109.2, 109.3, 109.4, 109.5, 109.6, 109.7, 109.8, 109.9, 110.0, 110.1, 110.2, 110.3, 110.4, 110.5, 110.6, 110.7, 110.8, 110.9, 111.0, 111.1, 111.2, 111.3, 111.4, 111.5, 111.6, 111.7, 111.8, 111.9, 112.0, 112.1, 112.2, 112.3, 112.4, 112.5, 112.6, 112.7, 112.8, 112.9, 113.0, 113.1, 113.2, 113.3, 113.4, 113.5, 113.6, 113.7, 113.8, 113.9, 114.0, 114.1, 114.2, 114.3, 114.4, 114.5, 114.6, 114.7, 114.8, 114.9, 115.0, 115.1, 115.2, 115.3, 115.4, 115.5, 115.6, 115.7, 115.8, 115.9, 116.0, 116.1, 116.2, 116.3, 116.4, 116.5, 116.6, 116.7, 116.8, 116.9, 117.0, 117.1, 117.2, 117.3, 117.4, 117.5, 117.6, 117.7, 117.8, 117.9, 118.0, 118.1, 118.2, 118.3, 118.4, 118.5, 118.6, 118.7, 118.8, 118.9, 119.0, 119.1, 119.2, 119.3, 119.4, 119.5, 119.6, 119.7, 119.8, 119.9, 120.0, 120.1, 120.2, 120.3, 120.4, 120.5, 120.6, 120.7, 120.8, 120.9, 121.0, 121.1, 121.2, 121.3, 121.4, 121.5, 121.6, 121.7, 121.8, 121.9, 122.0, 122.1, 122.2, 122.3, 122.4, 122.5, 122.6, 122.7, 122.8, 122.9, 123.0, 123.1, 123.2, 123.3, 123.4, 123.5, 123.6, 123.7, 123.8, 123.9, 124.0, 124.1, 124.2, 124.3, 124.4, 124.5, 124.6, 124.7, 124.8, 124.9, 125.0, 125.1, 125.2, 125.3, 125.4, 125.5, 125.6, 125.7, 125.8, 125.9, 126.0, 126.1, 126.2, 126.3, 126.4, 126.5, 126.6, 126.7, 126.8, 126.9, 127.0, 127.1, 127.2, 127.3, 127.4, 127.5, 127.6, 127.7, 127.8, 127.9, 128.0, 128.1, 128.2, 128.3, 128.4, 128.5, 128.6, 128.7, 128.8, 128.9, 129.0, 129.1, 129.2, 129.3, 129.4, 129.5, 129.6, 129.7, 129.8, 129.9, 130.0, 130.1, 130.2, 130.3, 130.4, 130.5, 130.6, 130.7, 130.8, 130.9, 131.0, 131.1, 131.2, 131.3, 131.4, 131.5, 131.6, 131.7, 131.8, 131.9, 132.0, 132.1, 132.2, 132.3, 132.4, 132.5, 132.6, 132.7, 132.8, 132.9, 133.0, 133.1, 133.2, 133.3, 133.4, 133.5, 133.6, 133.7, 133.8, 133.9, 134.0, 134.1, 134.2, 134.3, 134.4, 134.5, 134.6, 134.7, 134.8, 134.9, 135.0, 135.1, 135.2, 135.3, 135.4, 135.5, 135.6, 135.7, 135.8, 135.9, 136.0, 136.1, 136.2, 136.3, 136.4, 136.5, 136.6, 136.7, 136.8, 136.9, 137.0, 137.1, 137.2, 137.3, 137.4, 137.5, 137.6, 137.7, 137.8, 137.9, 138.0, 138.1, 138.2, 138.3, 138.4, 138.5, 138.6, 138.7, 138.8, 138.9, 139.0, 139.1, 139.2, 139.3, 139.4, 139.5, 139.6, 139.7, 139.8, 139.9, 140.0, 140.1, 140.2, 140.3, 140.4, 140.5, 140.6, 140.7, 140.8, 140.9, 141.0, 141.1, 141.2, 141.3, 141.4, 141.5, 141.6, 141.7, 141.8, 141.9, 142.0, 142.1, 142.2, 142.3, 142.4, 142.5, 142.6, 142.7, 142.8, 142.9, 143.0, 143.1, 143.2, 143.3, 143.4, 143.5, 143.6, 143.7, 143.8, 143.9, 144.0, 144.1, 144.2, 144.3, 144.4, 144.5, 144.6, 144.7, 144.8, 144.9, 145.0, 145.1, 145.2, 145.3, 145.4, 145.5, 145.6, 145.7, 145.8, 145.9, 146.0, 146.1, 146.2, 146.3, 146.4, 146.5, 146.6, 146.7, 146.8, 146.9, 147.0, 147.1, 147.2, 147.3, 147.4, 147.5, 147.6, 147.7, 147.8, 147.9, 148.0, 148.1, 148.2, 148.3, 148.4, 148.5, 148.6, 148.7, 148.8, 148.9, 149.0, 149.1, 149.2, 149.3, 149.4, 149.5, 149.6, 149.7, 149.8, 149.9, 150.0, 150.1, 150.2, 150.3, 150.4, 150.5, 150.6, 150.7, 150.8, 150.9, 151.0, 151.1, 151.2, 151.3, 151.4, 151.5, 151.6, 151.7, 151.8, 151.9, 152.0, 152.1, 152.2, 152.3, 152.4, 152.5, 152.6, 152.7, 152.8, 152.9, 153.0, 153.1, 153.2, 153.3, 153.4, 153.5, 153.6, 153.7, 153.8, 153.9, 154.0, 154.1, 154.2, 154.3, 154.4, 154.5, 154.6, 154.7, 154.8, 154.9, 155.0, 155.1, 155.2, 155.3, 155.4, 155.5, 155.6, 155.7, 155.8, 155.9, 156.0, 156.1, 156.2, 156.3, 156.4, 156.5, 156.6, 156.7, 156.8, 156.9, 157.0, 157.1, 157.2, 157.3, 157.4, 157.5, 157.6, 157.7, 157.8, 157.9, 158.0, 158.1, 158.2, 158.3, 158.4, 158.5, 158.6, 158.7, 158.8, 158.9, 159.0, 159.1, 159.2, 159.3, 159.4, 159.5, 159.6, 159.7, 159.8, 159.9, 160.0, 160.1, 160.2, 160.3, 160.4, 160.5, 160.6, 160.7, 160.8, 160.9, 161.0, 161.1, 161.2, 161.3, 161.4, 161.5, 161.6, 161.7, 161.8, 161.9, 162.0, 162.1, 162.2, 162.3, 162.4, 162.5, 162.6, 162.7, 162.8, 162.9, 163.0, 163.1, 163.2, 163.3, 163.4, 163.5, 163.6, 163.7, 163.8, 163.9, 164.0, 164.1, 164.2, 164.3, 164.4, 164.5, 164.6, 164.7, 164.8, 164.9, 165.0, 165.1, 165.2, 165.3, 165.4, 165.5, 165.6, 165.7, 165.8, 165.9, 166.0, 166.1, 166.2, 166.3, 166.4, 166.5, 166.6, 166.7, 166.8, 166.9, 167.0, 167.1, 167.2, 167.3, 167.4, 167.5, 167.6, 167.7, 167.8, 167.9, 168.0, 168.1, 168.2, 168.3, 168.4, 168.5, 168.6, 168.7, 168.8, 168.9, 169.0, 169.1, 169.2, 169.3, 169.4, 169.5, 169.6, 169.7, 169.8, 169.9, 170.0, 170.1, 170.2, 170.3, 170.4, 170.5, 170.6, 170.7, 170.8, 170.9, 171.0, 171.1, 171.2, 171.3, 171.4, 171.5, 171.6, 171.7, 171.8, 171.9, 172.0, 172.1, 172.2, 172.3, 172.4, 172.5, 172.6, 172.7, 172.8, 172.9, 173.0, 173.1, 173.2, 173.3, 173.4, 173.5, 173.6, 173.7, 173.8, 173.9, 174.0, 174.1, 174.2, 174.3, 174.4, 174.5, 174.6, 174.7, 174.8, 174.9, 175.0, 175.1, 175.2, 175.3, 175.4, 175.5, 175.6, 175.7, 175.8, 175.9, 176.0, 176.1, 176.2, 176.3, 176.4, 176.5, 176.6, 176.7, 176.8, 176.9, 177.0, 177.1, 177.2, 177.3, 177.4, 177.5, 177.6, 177.7, 177.8, 177.9, 178.0, 178.1, 178.2, 178.3, 178.4, 178.5, 178.6, 178.7, 178.8, 178.9, 179.0, 179.1, 179.2, 179.3, 179.4, 179.5, 179.6, 179.7, 179.8, 179.9, 180.0, 180.1, 180.2, 180.3, 180.4, 180.5, 180.6, 180.7, 180.8, 180.9, 181.0, 181.1, 181.2, 181.3, 181.4, 181.5, 181.6, 181.7, 181.8, 181.9, 182.0, 182.1, 182.2, 182.3, 182.4, 182.5, 182.6, 182.7, 182.8, 182.9, 183.0, 183.1, 183.2, 183.3, 183.4, 183.5, 183.6, 183.7, 183.8, 183.9, 184.0, 184.1, 184.2, 184.3, 184.4, 184.5, 184.6, 184.7, 184.8, 184.9, 185.0, 185.1, 185.2, 185.3, 185.4, 185.5, 185.6, 185.7, 185.8, 185.9, 186.0, 186.1, 186.2, 186.3, 186.4, 186.5, 186.6, 186.7, 186.8, 186.9, 187.0, 187.1, 187.2, 187.3, 187.4, 187.5, 187.6, 187.7, 187.8, 187.9, 188.0, 188.1, 188.2, 188.3, 188.4, 188.5, 188.6, 188.7, 188.8, 188.9, 189.0, 189.1, 189.2, 189.3, 189.4, 189.5, 189.6, 189.7, 189.8, 189.9, 190.0, 190.1, 190.2, 190.3, 190.4, 190.5, 190.6, 190.7, 190.8, 190.9, 191.0, 191.1, 191.2, 191.3, 191.4, 191.5, 191.6, 191.7, 191.8, 191.9, 192.0, 192.1, 192.2, 192.3, 192.4, 192.5, 192.6, 192.7, 192.8, 192.9, 193.0, 193.1, 193.2, 193.3, 193.4, 193.5, 193.6, 193.7, 193.8, 193.9, 194.0, 194.1, 194.2, 194.3, 194.4, 194.5, 194.6, 194.7, 194.8, 194.9, 195.0, 195.1, 195.2, 195.3, 195.4, 195.5, 195.6, 195.7, 195.8, 195.9, 196.0, 196.1, 196.2, 196.3, 196.4, 196.5, 196.6, 196.7, 196.8, 196.9, 197.0, 197.1, 197.2, 197.3, 197.4, 197.5, 197.6, 197.7, 197.8, 197.9, 198.0, 198.1, 198.2, 198.3, 198.4, 198.5, 198.6, 198.7, 198.8, 198.9, 199.0, 199.1, 199.2, 199.3, 199.4, 199.5, 199.6, 199.7, 199.8, 199.9, 200.0, 200.1, 200.2, 200.3, 200.4, 200.5, 200.6, 200.7, 200.8, 200.9, 201.0, 201.1, 201.2, 201.3, 201.4, 201.5, 201.6, 201.7, 201.8, 201.9, 202.0, 202.1, 202.2, 202.3, 202.4, 202.5, 202.6, 202.7, 202.8, 202.9, 203.0, 203.1, 203.2, 203.3, 203.4, 203.5, 203.6, 203.7, 203.8, 203.9, 204.0, 204.1, 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# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Barone Cottage, County of Bute, in Lat. 55° 49' 50" Long. 5° 45' 5" Distance from Sea 804 miles.  
 Height of Cistern of the Barometer above Mean Sea-Level 116 feet, above Ground 3 feet. During the MONTH of December 1892.  
 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.	Days of Month.								
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs. Max. in Sun. Min. on Grass.		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.						Temperature of Wells at depth of feet, No.		Temperature of Air, Surface, and Dew.		0-10.			
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. No.	Min. No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	No.	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.	8 inches.	No.	12 inches.	No.	22 inches.	9 A.M.	9 P.M.
		* No.		No.		No.	No.	No.	No.																													
	1	29.710	41	29.850	38	37.2	27			34	33.5	27.2	26.5		0.12	NE	5	NW	5			9	-											1				
	2	30.032	36	29.850	35	32	24.5			25	24.5	30	28.2		2.12	calm	-	E	5			-	9											2				
	3	29.340	39	29.230	38	42.5	29.5			40.5	40	32	31.5		2.00	SW	5	NW	1			10	9											3				
	4	29.424	35	29.520	36	33.8	26.6			29	28	29.5	27.5		0.50	NW	1	NW				2	5											4				
	5	29.540	34	29.570	35	37.5	26			27	26	34.8	34		-	NW	5	NW	1			1	3											5				
	6	29.630	37	29.910	37	41	32.3			38.2	35.8	35	32		-	NW	2	N	1			2	1											6				
	7	30.100	36	30.190	40	38.2	30.5			30.5	30.2	35.5	35		0.05	calm	-	calm	-			8	8											7				
	8	30.095	36	29.990	38	38	28			33.5	33.3	35	34.5		5.10	calm	-	E	5			10	10											8				
	9	29.850	37	29.950	37	37.5	28.5			32	31.8	29	28.5		0.70	NW	5	N	5			5	-											9				
	10	29.720	36	29.722	47	46	27.8			36.2	36	43	42.5		6.40	S	5	W	1			10	2											10				
	11	29.050	42	29.210	42	44.6	37			40.5	40.5	41.3	41.3		3.80	W	5	NW	2			10	10											11				
	12	29.300	41	29.500	42	42.8	35			37.5	37.5	36.5	36.5		0.08	NW	1	NW	1			3	2											12				
	13	29.830	38	29.846	39	40.5	31.8			35.5	35.3	38	37.5		8.40	NW	5	SW	5			-	10											13				
	14	29.610	43	29.780	44	48.8	37.5			45	45	44.5	44.5		1.05	W	5	W	1			10	2											14				
	15	29.714	46	29.960	46	47	42.6			45	45	45	44.5		0.25	WSW	1	WSW	1.5			10	-											15				
	16	29.990	44	29.800	49	51.6	38.6			43.5	43.5	51	50.5		1.08	S	1.5	SW	1			10	10											16				
	17	29.924	48	29.890	49	52.3	46.5			47.5	46.5	54.5	48.8		1.26	WSW	1.5	SE	1			6	10											17				
	18	29.880	50	29.936	49	53.5	45.5			48.2	44.5	54.5	44		0.70	SW	1	WSW	1.5			9	3											18				
	19	29.924	49	29.930	50	48.5	44.8			46.8	45	45.5	45.5		1.40	calm	-	calm	-			10	10											19				
	20	29.950	48	29.974	44	48	37.5			42	41.3	39	38		0.20	ENE	5	ENE	1			10	10											20				
	21	29.960	44	29.964	47	42.5	38			41.2	40	42	41		0.82	SE	5	calm	-			10	10											21				
	22	29.952	46	29.954	42	40.5	37.5			39	38	38	36.5		-	E	5	NE	5			4	2											22				
	23	30.000	39	29.946	39	39	32			34.8	34.2	32.5	29.5		-	E	5	SE	1.5			-	2											23				
	24	29.870	36	29.810	36	34.8	28			29	26.5	29.5	27		-	E	1	ENE	5			1	-											24				
	25	29.804	32	29.940	34	36.2	24.5			28.2	26	25.2	24		-	NE	1	calm	-			6	-											25				
	26	30.030	26	30.064	32	32.5	23			25	23.5	26	25.2		-	calm	-	calm	-			-	10											26				
	27	30.124	32	30.160	36	33	24.8			31	30.5	31	30.5		-	calm	-	calm	-			10	10											27				
	28	30.070	34	29.930	38	39	28.5			30.5	30	26.5	35		0.13	calm	-	calm	-			5	1											28				
	29	29.750	39	29.660	39	42.5	35.3			39.2	38	39	38		-	calm	-	SE	5			10	9											29				
	30	29.660	38	29.684	38	41.3	34			36	33.5	34	31.8		-	SE	5	NE	1			10	9											30				
	31	29.750	36	29.850	41	37	29.5			33.5	33	33	33.3		-	SE	1	SE	1.5			10	10											31				
Sums.		7112	16	2154	7	1510	1811			157	129	126	1510		64																							
Means.		24.578	121.8	24.726	125.7	128.21	1012.6			1123.8	1095.2	1137.5	1103.1		3616		18.5		22.0																			
+ Total Corrections for Instrumental Errors.		29.793	39.3	29.798	40.5	41.4	32.7			36.2	35.3	36.7	35.6				0.6		0.7																			
+ Corrections for Diurnal Range.																	0.6		0.6																			
"Corrected Means."																																						
No. of Columns.		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-cn.	cirro-cumulus.	n.	nimbis.						
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.	snow.	snow.						
h.	haze.	so. ha.	solar halo.						
h. d.	heavy dew.	sq.	squall.						
hl.	hail.	sqs.	squalls.						
l.	lightning.	t.	thunder.						
li. cl.	light clouds.	t. s.	thunder-storm.						
li. sh.	light showers.	w.	wind.						
li. co.	light crown.	g.	gale of wind.						
li. ha.	light 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 gale
1	Light air	2.5	Very fresh	6	Violent gale

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\uparrow\uparrow$  = 29.764  
 for Temp. (Col. 2), = 24.793.....0.029.  
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\uparrow\uparrow$  = 29.766  
 for Temp. (Col. 4), = 29.798.....0.032.  
 Mean at Station, corrected, and at 32°, = 29.765  
 Correction for height, 116 feet above Mean Sea-level, = .127  
 Mean, reduced to 32°, and Sea-level, = 29.892  
 Highest Reading, corrected for Index error, on the 7 th, = 30.190  
 Lowest Do. Do., on the 11 th, = 29.050  
 Difference, or Monthly Range, = 1.140

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 18 th, = 53.5  
 Lowest in Month, corrected for Index errors, on the 26 th, = 23.0  
 Difference, or Monthly Range, = 30.5  
 "Corrected Mean" of all the Highest, (Col. 5), = 4.4  
 "Corrected Mean" of all the Lowest, (Col. 6), = 32.7  
 Difference, or Mean Daily Range, = 8.7  
 \*\* Calculated Mean Temperature of Month, = 37.0  
 S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =  
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =  
 Lowest at Night, Black Bulb (corrected for Index errors), on the th, =  
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =  
 Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 36.4  
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 35.4  
 \*\* Computed Temperature of Dew-Point, = 34.0  
 \*\* Do. Elastic Force of Vapour, = .196  
 \*\* Do. Weight of Vapour in a Cubic Foot of Air, =  
 \*\* Relative Humidity (Saturation = 100), = 91  
 RAIN fell on 20 Days; Amount in Inches, = 3.62

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		0	3	5	1	2	2	4	6	8	0.6
P.M.		2	2	4	2	2	2	4	5	8	0.7
Mean.		1	3	4	2	2	2	4	5	8	0.65 = 0.42

Observations made and Return verified by

James Hay

(Signed)

James Hay

W.S.



