

# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Forest of Glen Tana Alpine County of Aberdeen, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.

Height of Cistern of the Barometer above Mean Sea-Level\_\_\_\_\_feet, above Ground\_\_\_\_\_feet.

During the MONTH of January 1896

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, & feet above Ground.		Exposed Black Bulbs.		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 A.M.		P.M.		Sunshine.	9 h. A.M.						Temperature of Well, at depth of feet, No. _____	Temperature at 1 fathom, and Density.	9 A.M.	9 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.			9 h. A.M.	9 h. P.M.	Direction.	Force	Direction.	Force	9 h. A.M.	Velocity (0—6) and Direction.	Amount (0—10), and Species.	Direction.		Amount (0—10), and Species.										No. 3 inches.	No. 12 inches.	No. 22 inches.						
		* No.		No.		No.	No.	No.	No.																																				
		inches.	°	inches.	°	°	°	°	°	°	°	°	°			°	°	°	°	°	°	°	°	°	°		°										°	°	°	°	°	°	°	°	°
	1	29.84	49	29.81	52	46	30			36	33	45	43			S	2	H	1			10		10	2								1												
	2	29.80	50	29.93	45	50	38			44	43	35	34			H	1	H	1			10		0	1								2												
	3	30.01	40	30.17	37	47	29			33	33	27	25			H	1	N	1			10		0	1								4												
	4	30.23	39	30.20	40	36	19			32	30	32	31			N	1	H	1			10		0	2								5												
	5	30.33	41	30.41	42	40	20			30	29	29	28			S	1	N	1			0		0	3								6												
	6	30.48	39	30.50	43	42	19			27	26	39	38			N	1	N	1			0		10	2								7												
	7	30.55	45	30.11	46	45	18			37	37	39	37			NH	1	H	1			10		0	0								8												
	8	30.69	51	30.80	45	44	25			40	38	36	34			N	1	N	1			10		10	3								9												
	9	30.88	43	30.82	42	41	20			30	29	39	37			N	1	NH	2			10		10	2								10												
	10	30.70	45	30.70	47	42	20			40	38	41	40			N	1	N	1			10		10	3								11												
	11	30.58	46	30.48	45	43	18			39	19	28	27			NH	2	S	1			10		10	2								12												
	12	30.18	49	29.80	47	44	29			36	35	35	34			SH	1	H	1			10			3								13												
	13	29.66	46	29.50	46	48	35			33	32	33	31	0.20		N	2	N	1			10		10	1					Fall of Snow 2 <sup>nd</sup> Deep			14												
	14	29.50	44	29.59	40	31	20			30	30	35	32			N	1	N	1			10		10	2								15												
	15	29.82	42	29.26	46	40	17			32	31	38	36	0.22		N	2	N	3			10		10	0								16												
	16	29.53	45	29.69	47	39	15			30	29	47	44	0.20		N	3	N	2			10		10	0					Very stormy day with showers of sleet			17												
	17	29.60	48	29.70	53	50	25			50	46	50	48			NH	4	SH	4			10		10	3					Fall of Snow 1 <sup>st</sup> deep			18												
	18	29.69	52	29.72	54	45	42			49	44	35	33			H	4	H	3			10		10	4								19												
	19	29.70	52	29.72	44	37	30			39	35	33	32			SH	3	H	3			10		10	4								20												
	20	30.27	43	30.21	45	44	18			38	34	40	39			SH	3	H	2			10	SH	9	4								21												
	21	30.15	47	29.87	50	43	51			41	38	36	34			SH	2	H	2			10		10	5								22												
	22	29.98	47	30.12	44	49	25			32	32	26	24			H	2	H	1			0		0	4								23												
	23	30.13	41	30.09	55	37	13			18	16	37	35			S	1	S	1			0		10	4								24												
	24	29.10	58	29.64	46	33	12			43	40	39	37			NH	1	S	1			10		10	2								25												
	25	29.82	47	29.97	45	50	21			37	36	40	38	0.6		S	1	S	2			10		10	3								26												
	26	30.01	47	29.94	49	48	30			47	45	43	40	0.14		S	2	S	3			10		10	1								27												
	27	29.87	57	29.70	52	50	30			49	46	39	38	0.09		S	3	S	4			10		10	0					Very Heavy Gale			28												
	28	29.95	51	30.18	52	52	18			37	33	40	38			H	3	S	2			0		10	3								29												
	29	30.50	50	30.50	49	43	27			40	37	43	40			H	1	H	1			10		10	3								30												
	30	30.52	57	30.35	48	49	33			45	41	33	32			H	1	H	1			10		0	3								31												
	31	30.57	47	30.34	43	57	21			29	28	26	24			H	1	H	1			0		0	4																				
Sums.		1712	13	1711	13	11	12			13	15	15	14			54		57																											
		31	6	206	23	6	197	138	128			213	145	203	153	0.91																													
Means.		30.002	46.6	30.076	46.4	44.5	24.1			36.9	34.7	36.7	34.9			17.4		16.5																											
+ 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														

<b>BAROMETER,</b>	"corrected Mean" at 9 A.M., <i>minus</i> the Correction $\uparrow\uparrow$	}	30.053
	for Temp. (Col. 2), <i>30.102</i> $\downarrow$ 48		
<b>"Corrected Mean" of Barometer at 9 P.M.,</b>	<i>minus</i> the Correction $\uparrow\uparrow$	}	30.028
	for Temp. (Col. 4), <i>30.076</i> $\downarrow$ 48		
<b>Mean at Station, corrected, and at 32°,.....</b>			30.040
<b>Correction for height,</b>	feet above Mean Sea-level,.....	=	
<b>Mean, reduced to 32°, and Sea-level,.....</b>		=	
<b>Highest Reading, corrected for Index error, on the</b>	9 <sup>th</sup> ,.....	=	30.880
<b>Lowest Do. Do., on the</b>	15 <sup>th</sup> ,.....	=	29.260
<b>Difference, or Monthly Range,.....</b>		=	1.620

<b>S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the</b> 28 <b>th.,</b>	=	<u>52.0</u>
<b>Lowest in Month, corrected for Index errors, on the</b> 24 <b>th.,</b>	=	<u>12.0</u>
<b>Difference, or Monthly Range,</b>	=	<u>40.0</u>
<b>"Corrected Mean" of all the Highest, (Col. 5),</b>	=	<u>44.5</u>
<b>"Corrected Mean" of all the Lowest, (Col. 6),</b>	=	<u>24.1</u>
<b>Difference, or Mean Daily Range,</b>	=	<u>20.4</u>
<b>** Calculated Mean Temperature of Month,</b>	=	<u>34.3</u>
<b>S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the</b> 28 <b>th.,</b>		
<b>"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun,</b>	=	<u>52.0</u>
<b>Lowest at Night, Black Bulb (corrected for Index errors), on the</b> 24 <b>th.,</b>	=	<u>12.0</u>
<b>"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass,</b>	=	<u>24.1</u>
<b>Difference of above means or range ("exposed"),</b>	=	<u>20.4</u>

**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), ..... = 54.8

‡‡ Computed **Temperature of Dew-Point**, ..... = 32.0

‡‡ Do. **Elastic Force of Vapour**, ..... = 1.81

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

‡‡ **Relative Humidity** (Saturation = 100), ..... = 83

**RAIN** fell on 6 Days; Amount in Inches, ..... = 0.91

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calu or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	9	-	-	-	6	4	8	4		12A	
P.M.	4	-	-	-	7	1	13	1		185-	
Mean.	9	0	0	0	6	3	10	3	0	170	

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(Signed) Robt Warburton

Observations made and  
Return verified by



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 zootic disease prevails among cattle; and the Agricultural condition of the district generally.



## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Forest of Glen Tanar*, County of *Aberdeenshire*, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea *35* miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of *February* 189*6*.

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.		P.M.								
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. in Sun's rays.	Min. on Grass.	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. 8 inches.	No. 12 inches.	No. 22 inches.					No. 8 inches.	No. 12 inches.	No. 22 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.
	1	30.42	46	30.31	44	50	18			35	34	43	40		H	1	SW	2		10		3							1				
	2	30.25	46	30.5	38	45	28			41	38	26	24		N	1	H	1		10		5							2				
	3	30.5	42	30.49	46	46	16			30	28	39	37		H	1	H	1		NE	5		4						3				
	4	30.28	44	30.15	48	46	10			38	35	48	46		H	1	H	4		10	SW	4							4				
	5	30.16	47	30.29	53	47	36			47	43	36	35		H	4	H	1		10		6							5				
	6	30.29	52	30.14	52	55	25			34	33	45	42		S	1	S	2		NE	9		10	5					6				
	7	30.03	53	29.89	54	53	24			47	43	49	48		SE	2	H	1		10		8							7				
	8	29.77	53	29.59	50	53	38			42	47	43	41		H	1	H	2		10		4							8				
	9	29.07	47	29.82	48	50	33			43	41	41	39		H	3	H	3		10		5							9				
	10	30.01	50	29.97	52	50	34			45	41	47	45		H	1	H	2		10		6							10				
	11	30.02	53	29.89	57	55	36			40	47	45	43		H	1	H	4		10		4							11				
	12	29.77	57	30.01	56	55	41			52	48	38	37		H	2	H	1		10		6							12				
	13	30.36	50	30.33	52	55	26			35	38	42	42		H	1	H	1		10		4							13				
	14	30.30	49	30.32	52	56	25			42	41	41	40		H	1	H	1		10		3							14				
	15	30.35	53	30.39	54	54	33			44	43	40	38		NH	1	H	1		10		4							15				
	16	30.44	52	30.48	51	50	34			43	43	39	37		SE	1	H	1		10		0							16				
	17	30.41	49	30.29	44	48	30			41	41	27	25		S	1	NE	1		10		1							17				
	18	30.15	41	30.0	42	30	14			23	23	25	23		H	1	H	1		NE	9		4							18			
	19	29.75	43	29.50	45	42	13			33	32	43	41		S	2	S	2		10		2							19				
	20	29.49	48	29.54	57	48	24			47	45	41	40	0.22	N	2	H	1		10		1							20				
	21	29.65	49	29.79	48	47	23			40	40	39	38	0.25	N	H	H	1		10		1							21				
	22	30.03	47	30.20	47	45	20			37	36	36	34		N	1	S	2		10		3							22				
	23	30.31	44	30.29	40	38	18			37	34	34	33		S	2	S	2		10		3							23				
	24	30.31	45	30.30	43	38	14			32	30	32	30		S	3	S	2		10		4							24				
	25	30.15	41	30.1	44	37	13			31	29	32	31		S	2	N	3		10		1							25				
	26	30.01	42	30.08	40	35	11			29	29	33	31		S	1	H	1		10		4							26				
	27	29.87	43	29.8	49	46	0.6			44	41	43	39		S	1	H	2		10		4							27				
	28	29.79	47	30.0	42	51	24			41	37	34	32		H	3	S	1		10		2							28				
	29	30.02	44	29.69	52	43	25			30	30	43	41	0.06	S	1	S	2		10		3							29				
	30																												30				
	31																												31				
Sums.		912	12	1214	10	12	13			274	215	254	202	0.53	hh		49																
Means.		30.068	47.6	30.072	47.9	47.2	24.2			39.4	37.4	38.8	37.0		152		167																
+ 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. denotes aurora. m. denotes meteor.  
ci. cirrus. ms. " meteor.  
ci-cu. cirro-cumulus. n. " nimbus.  
cl-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.  
hl. hail. sqs. " 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.

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), = \_\_\_\_\_  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  = \_\_\_\_\_  
for Temp. (Col. 4), = \_\_\_\_\_  
Mean at Station, corrected, and at 32°, = \_\_\_\_\_  
Correction for height, feet above Mean Sea-level, = \_\_\_\_\_  
Mean, reduced to 32°, and Sea-level, = \_\_\_\_\_  
Highest Reading, corrected for Index error, on the 2<sup>th</sup>, = *30.500*  
Lowest Do. Do., on the 20<sup>th</sup>, = *29.490*  
Difference, or Monthly Range, = *1.010*

\* 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.  
† Embracing corrections for both capillarity and Index Errors.  
‡ The Diurnal Range for Scotland is as yet unknown.  
§ Practically, though not absolutely a minus correction.  
|| These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.  
\*\* While the Diurnal 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.

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 14<sup>th</sup>, = *56.0*  
Lowest in Month, corrected for Index errors, on the 27<sup>th</sup>, = *6.0*  
Difference, or Monthly Range, = *50.0*  
"Corrected Mean" of all the Highest, (Col. 5), = *47.2*  
"Corrected Mean" of all the Lowest, (Col. 6), = *24.2*  
Difference, or Mean Daily Range, = *23.0*  
\*\* Calculated Mean Temperature of Month, = *35.2*  
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), = *39.1*  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = *37.2*  
† Computed Temperature of Dew-Point, = *34.8*  
† Do. Elastic Force of Vapour, = *2.02*  
† Do. Weight of Vapour in a Cubic Foot of Air, = \_\_\_\_\_  
† Relative Humidity (Saturation = 100), = *83*  
RAIN fell on 3 Days; Amount in Inches, = *0.53*

WIND.		SUMMARY.					
Direction.		N	NE	E	SE	S	SW
A.M.	4				2	9	13
P.M.	1	1	0	0	7	1	19
Mean.	2	1	0	1	8	1	16

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Observations made and  
Return verified by { \_\_\_\_\_

(Signed) *Robt Warburton*







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Forest of Glen Tanar, County of Aberdeen Shire*, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea *35* miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of *March* 189*6*.

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 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.  Hours.	9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Barometer. * No. _____	Attached Thermometer No. _____	Barometer. No. _____	Attached Thermometer No. _____	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.		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. _____																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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## 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.	haze.	so. ha.	solar halo.
h. d.	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 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  $\frac{1}{10}$  for Temp. (Col. 2),  $-0.5.0$  = *29.476*  
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{10}$  for Temp. (Col. 4),  $-0.5.3$  = *29.494*  
 Mean at Station, corrected, and at 32°, = *29.485*  
 Correction for height, feet above Mean Sea-level, = \_\_\_\_\_  
 Mean, reduced to 32°, and Sea level, = \_\_\_\_\_  
 Highest Reading, corrected for Index error, on the *12*th, = *30.060*  
 Lowest Do. Do., on the *3*th, = *28.320*  
 Difference, or Monthly Range, = *1.740*

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the *16*th, = *56.0*  
 Lowest in Month, corrected for Index errors, on the \_\_\_\_\_th, = \_\_\_\_\_  
 Difference, or Monthly Range, = \_\_\_\_\_  
 "Corrected Mean" of all the Highest, (Col. 5), = *47.1*  
 "Corrected Mean" of all the Lowest, (Col. 6), = \_\_\_\_\_  
 Difference, or Mean Daily Range, = \_\_\_\_\_  
 \*\* Calculated Mean Temperature of Month, = \_\_\_\_\_  
 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), = *37.0*  
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = *35.0*  
 †† Computed Temperature of Dew-Point, = *32.2*  
 †† Do. Elastic Force of Vapour, = *.182*  
 †† Do. Weight of Vapour in a Cubic Foot of Air, = \_\_\_\_\_  
 †† Relative Humidity (Saturation = 100), = *83*  
 RAIN fell on *7* Days; Amount in Inches, = *0.65*

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		1	1	-	-	6	3	18	2	0	1.77
P.M.		3	-	-	-	3	1	22	2	0	1.71
Mean.		2	1	0	0	4	2	20	2	0	1.74 = 3.0.3

Observations made and  
Return verified by

(Signed)

*Robert Warburton Glen Tanar*







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Glen Terna Aboyne*, County of *Aberdeenshire*, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea *35* miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of *April* 189 *6*.

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.		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. Cap Anemometer No. _____	9 A.M.		P.M.				9 h. A.M.			Temperature of WELL at depth of feet, No. _____	Temperature at 1 fathoms, and Density.	9 A.M.	9 P.M.	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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Barometer. * No. _____	Attached Thermometer	Barometer. No. _____	Attached Thermometer	Max. No. _____	Min. No. _____	Max. in Sun's rays	Min. on Grass.	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 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.	" 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.	" 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.	sqs.	" 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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\ddagger$  = *29.880*  
for Temp. (Col. 2), = *29.940* - *60*.....  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  = *29.915*  
for Temp. (Col. 4), = *29.979* - *64*.....  
Mean at Station, corrected, and at 32', = *29.898*  
Correction for height, feet above Mean Sea-level, = .....  
Mean, reduced to 32', and Sea-level, = .....  
Highest Reading, corrected for Index error, on the *20*th, = *30.350*  
Lowest Do. Do., on the *28*th, = *29.470*  
Difference, or Monthly Range, = *0.880*

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the *22*th, = *67.0*  
Lowest in Month, corrected for Index errors, on the *th*, = *18.0*  
Difference, or Monthly Range, = *49.0*  
"Corrected Mean" of all the Highest, (Col. 5), = *55.0*  
"Corrected Mean" of all the Lowest, (Col. 6), = *29.4*  
Difference, or Mean Daily Range, = *25.6*  
\*\* Calculated Mean Temperature of Month, = *42.2*

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), = *44.8*  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = *42.2*  
# Computed Temperature of Dew-Point, = *39.1*  
# Do. Elastic Force of Vapour, = *239*  
# Do. Weight of Vapour in a Cubic Foot of Air, = .....  
# Relative Humidity (Saturation = 100), = *81*  
RAIN fell on *3* Days; Amount in Inches, = *1.61*

WIND.		SUMMARY.					
Direction.		N	NE	E	SE	S	SW
A.M.	6					1	154
P.M.	5					1	24
Mean.	6	00	01	02	20	1.85	

3.42

Observations made and {  
Return verified by {

(Signed) *Robt. Warburton*







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at The Forest of the Tana Major County of Aberdeenshire, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.  
 Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet. During the MONTH of May 189 6.  
 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.		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 A.M.		P.M.		SUNSHINE  Hours.	9 h. A.M.			Temperatures of Wet and dry bulb of Fest. No.	Temperatures at 1 fathom, and Density.	0—10.			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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Barometer. * No.	Attached Thermometer	Barometer. No.	Attached Thermometer	Max. No.	Min. No.	Max. in Sun's rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force	Direction.	Force		Velocity (0—6) and Species.	Amount (0—10), and Species.	Velocity (0—6) and Species.	Amount (0—10), and Species.		No. 3 inches.	No. 12 inches.				No. 22 inches.	9 A.M.			9 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\ddagger$  for Temp. (Col. 2), = \_\_\_\_\_  
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  for Temp. (Col. 4), = \_\_\_\_\_  
 Mean at Station, corrected, and at 32°, = \_\_\_\_\_  
 Correction for height, feet above Mean Sea-level, = \_\_\_\_\_  
 Mean, reduced to 32°, and Sea-level, = \_\_\_\_\_  
 Highest Reading, corrected for Index error, on the th, = \_\_\_\_\_  
 Lowest Do. Do., on the th, = \_\_\_\_\_  
 Difference, or Monthly Range, = \_\_\_\_\_

\* 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.  
 $\ddagger$  Embracing corrections for both capillarity and Index Errors.  
 $\ddagger$  The Diurnal Range for Scotland is as yet unknown.  
 $\ddagger$  These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.  
 \*\* While the Diurnal 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.

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

Lowest in Month, corrected for Index errors, on the th, = \_\_\_\_\_

Difference, or Monthly Range, = \_\_\_\_\_

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

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

Difference, or Mean Daily Range, = \_\_\_\_\_

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

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), = \_\_\_\_\_

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

†† Computed Temperature of Dew-Point, = \_\_\_\_\_

†† Do. Elastic Force of Vapour, = \_\_\_\_\_

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

†† Relative Humidity (Saturation = 100), = \_\_\_\_\_

RAIN fell on Days; Amount in Inches, = \_\_\_\_\_

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.	6					2	1	11	7		
P.M.	9					1	1	13	3		
Mean.											

Observations made and Return verified by \_\_\_\_\_

(Signed) Robt. Warburton







# SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Glen Tana Abryne, County of Aberdeenshire, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.

Height of Cistern of the Barometer above Mean Sea-Level\_\_\_\_\_feet, above Ground\_\_\_\_\_feet.

During the MONTH of June 189 6.

The Hours of Observation are of Greenwich Time.

[illegible]

Barometer, "corrected Mean" at 9 A.M., minus the Correction $\frac{+1}{4}$ for Temp. (Col. 2),	=	29.812
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{+1}{4}$ for Temp. (Col. 4),	=	813
Mean at Station, corrected, and at 32°,	=	29.812
Correction for height, feet above Mean Sea-level,	=	
Mean, reduced to 32°, and Sea-level,	=	
Highest Reading, corrected for Index error, on the	th,	= 30.190
Lowest Do.	Do., on the	th, = 29.390
Difference, or Monthly Range,		= 800

<b>S.-R. THERMOMETER, (in shade, etc.), Highest in Month,</b> (corrected for Index Errors), on the 16th.....	=	80.0
<b>Lowest in Month,</b> corrected for Index errors, on the      th, .....	=	_____
Difference, or <b>Monthly Range,</b> .....	=	_____
"Corrected <b>Mean</b> " of all the <b>Highest,</b> (Col. 5), .....	=	65.5
"Corrected <b>Mean</b> " of all the <b>Lowest,</b> (Col. 6),.....	=	_____
Difference, or <b>Mean Daily Range,</b> .....	=	_____
<b>** Calculated Mean Temperature</b> of Month, .....	=	_____
<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"), ....	=	_____

<b>HYGROMETER, Mean</b> (corrected) A.M. and P.M. Reading of <b>Dry Bulb</b> , (Cols. 9 and 11), .....	=	54.0
<b>Mean</b> (corrected) A.M. and P.M. Reading of <b>Wet Bulb</b> , (Cols. 10 and 12), .....	=	51.4
‡‡ Computed <b>Temperature of Dew-Point</b> , .....	=	48.9
‡‡ Do. <b>Elastic Force of Vapour</b> , .....	=	344
‡‡ Do. <b>Weight of Vapour in a Cubic Foot of Air</b> , .....	=	82
‡‡ <b>Relative Humidity</b> (Saturation = 100), .....	=	
<b>RAIN</b> fell on <b>10 Days</b> ; Amount in Inches, .....	=	2.15

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day.
A.M.	12	3	-	1	3	2	6	2	0	1.43	
P.M.	13	-	-	-	7	-	10	-	0	1.30	
Mean.	12	2	0	1	5	1	8	1	0	1.36	1.85

Observations made and  
Return verified by

(Signed) 1181- WUWUWUWUWU







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Glentana Aboyne, County of Aberdeenshire, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.  
Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet. During the MONTH of July 1896.  
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 hours in which it fell.	Amount in inches.	9 h. A.M.		9 h. P.M.		9 h. A.M.		P.M.		9 h. A.M.								
		Barometer. * No.	Attached Thermometer.	Barometer. No.	Attached Thermometer.	Max. No.	Min. No.	Max. in Sunrays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.			Direction.	Force.	Direction.	Force.	No. of the H. Cup Anemometer.	Velocity (0-9).	Amount (0-10).	Velocity (0-9).	Amount (0-10).	No. 3 inches.	No. 12 inches.					No. 22 inches.	
																																9 h. A.M.
		inches.		inches.																												
	1	29.94	59	29.92	57	63	27			52	47	45	42	N	9	N	2			10		10		5						1		
	2	29.95	59	29.79	56	57	30			49	43	53	50	N	2	S	1			10		10		9						2		
	3	29.79	60	29.59	59	64	21			56	53	51	49	NE	2	S	2			0.7	10		10		5					3		
	4	29.68	60	29.17	65	69	32			54	50	47	46	H	2	N	2			10		11		8						4		
	5	30.00	67	30.01	61	61	32			54	49	59	56	N	3	S	1			10		10		7						5		
	6	29.91	60	29.90	59	69	37			62	57	54	53	S	1	N	1			0.6	10		10		6					6		
	7	29.98	62	29.99	58	69	35			52	51	47	45	N	1	S	1			0.15	10		10		0					7		
	8	29.95	60	29.81	63	53	31			51	49	55	54	S	1	S	1			10		10		1						8		
	9	29.80	61	29.81	59	59	34			54	53	47	45	SD	S	1	N	2			10		10		0					9		
	10	30.10	61	30.19	58	60	29			54	50	56	54	N	2	SH	1			10		10		9						10		
	11	30.24	61	30.10	57	66	25			58	53	59	57	H	1	H	1			SE	2		10		8					11		
	12	30.19	60	30.11	58	10	27			60	58	58	53	N	1	H	1			EN	2		6		10					12		
	13	30.17	62	29.98	59	76	24			63	58	58	53	NE	1	SH	2			10		10		3						13		
	14	29.96	64	29.85	60	59	35			63	61	62	59	SH	1	S	1			10		10		2						14		
	15	30.10	63	30.10	62	67	42			60	52	57	51	NE	2	H	1			SE	5		10		5					15		
	16	30.28	60	30.20	61	49	35			52	49	60	55	N	1	H	1			10		NE	2		9					16		
	17	30.31	58	30.15	60	49	35			53	51	67	64	NE	1	H	1			10		SH	6		10					17		
	18	30.18	62	30.01	58	54	49			63	60	60	58	H	1	H	1			10		10		9						18		
	19	29.89	60	29.89	63	73	46			60	58	59	57	S	1	SH	1			10		10		6						19		
	20	29.90	65	29.78	60	68	52			60	57	56	55	S	1	SH	1			10		10		7						20		
	21	29.90	64	29.75	59	74	40			60	58	50	49	0.40	NE	1	S	1			10		10		0						21	
	22	29.80	61	29.78	57	60	34			52	52	53	54	0.80	S	1	S	2			10		10		2						22	
	23	29.85	55	29.79	57	60	24			54	49	46	45	0.06	H	2	H	2			10		10		5						23	
	24	29.88	55	29.89	52	61	21			47	46	45	43	0.24	H	1	H	1			10		10		-						24	
	25	29.96	53	29.61	58	57	23			46	45	58	53	1.65	N	1	S	3			10		10		-						25	
	26	29.55	61	29.59	60	61	30			60	57	53	50	0.15	S	2	H	2			10		10		6						26	
	27	29.81	59	29.80	53	63	34			50	47	50	46	N	2	N	1			10		10		7						27		
	28	30.11	58	29.99	59	58	29			54	47	53	50	H	1	H	1			-		10		9						28		
	29	29.94	60	29.81	59	67	30			55	52	50	48	S	1	S	1			10		10		5						29		
	30	29.46	61	30.06	60	61	35			52	51	50	49	0.25	NE	1	N	1			10		10		8						30	
	31	30.15	58	30.03	57	63	31			53	50	54	57	0.05	N	1	N	1			10		10		9						31	
Sums.		1913	9	1715	10	72	4			9	14	14	14	3.88						279		244		170								
Means.		29.976		29.54		623325				553	520	539	515	135						9.0		9.5										
+ 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	

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\frac{1}{2}$  = 29.890  
for Temp. (Col. 2), = 0.46  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{2}$  = 29.807  
for Temp. (Col. 4), = 0.81  
Mean at Station, corrected, and at 32°, = 29.848  
Correction for height, feet above Mean Sea-level, = \_\_\_\_\_  
Mean, reduced to 32°, and Sea-level, = \_\_\_\_\_  
Highest Reading, corrected for Index error, on the 16th, = 30.29  
Lowest Do. Do., on the 17th, = 29.17  
Difference, or Monthly Range, = 1.12

\* 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.  
† Enlarging corrections for both capillarity and Index Errors.  
‡ The Diurnal Range for Scotland is as yet unknown.  
§ Practically, though not absolutely a minus correction.  
|| These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.  
\*\* While the Diurnal Range is unknown, the Arithmetic Mean of Cols. 9 and 10 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.

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 13th, = 76.0  
Lowest in Month, corrected for Index errors, on the 11th, = \_\_\_\_\_  
Difference, or Monthly Range, = \_\_\_\_\_  
"Corrected Mean" of all the Highest, (Col. 5), = 62.3  
"Corrected Mean" of all the Lowest, (Col. 6), = \_\_\_\_\_  
Difference, or Mean Daily Range, = \_\_\_\_\_  
\*\* Calculated Mean Temperature of Month, = \_\_\_\_\_  
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 11th, = \_\_\_\_\_  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = \_\_\_\_\_  
Lowest at Night, Black Bulb (corrected for Index errors), on the 11th, = \_\_\_\_\_  
"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), = 50.6  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 50.8  
† Computed Temperature of Dew-Point, = 49.1  
† Do. Elastic Force of Vapour, = 0.350  
† Do. Weight of Vapour in a Cubic Foot of Air, = 0.82  
† Relative Humidity (Saturation = 100), = \_\_\_\_\_  
RAIN fell on 9 Days; Amount in Inches, = 3.88

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		10	6	0	0	8	1	6	0	0	1.35
P.M.		9	0	0	0	10	4	8	0	0	1.32
Mean.		9	3	0	0	9	3	7	0	0	1.34 = 1.80

Observations made and  
Return verified by

(Signed) Robt Warburton







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Forest of Glen Terna, Aberdeenshire*, County of *Aberdeenshire*, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea *35* miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of *August* 189 *6*.

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 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. Max. in Sun's rays Min. on 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.		9 h. A.M.												
		No.	Thermometer	No.	Thermometer	No.	No.	No.	No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.	No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	9 h. A.M.	Amount (0-10), and Species.	9 h. P.M.	Amount (0-10), and Species.		No.	3 inches.	No.					12 inches.	No.	22 inches.
		* No.	inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°		°	°	°					°	°	°
	1	30.04	58	30.20	59	61	34			50	48	50	48			N	1	NW	2		10	10	5								1			
	2	30.08	62	30.04	56	57	32			52	50	47	45			NW	1	H	1		10	10	5								2			
	3	29.98	60	29.91	61	62	25			53	48	48	47			H	1	N	1		10	10	3								3			
	4	29.99	59	30.01	58	57	29			50	46	47	45			N	2	NW	1		10	10	5								4			
	5	30.15	58	30.09	59	61	29			50	46	48	46			N	2	N	1		10	10	8								5			
	6	30.16	60	30.01	61	61	32			54	50	50	48			N	1	N	1		10	10	5								6			
	7	30.07	59	30.00	58	64	30			52	49	50	49			NW	1	N	1		10	10	3								7			
	8	30.18	60	30.14	57	58	34			51	50	47	46			N	1	N	2		10	10	1								8			
	9	30.19	52	30.21	53	57	31			49	45	46	44			N	2	N	1		10	10	1								9			
	10	30.29	51	30.13	60	49	19			45	43	49	48			N	1	N	1		11	11	7								10			
	11	30.12	64	30.12	57	67	28			60	57	58	50			NW	2	N	1		10	10	9								11			
	12	30.17	61	29.94	60	68	34			57	52	53	50			SE	1	H	1		10	10	7								12			
	13	29.91	63	24.81	60	66	38			59	54	54	52			W	1	H	1		10	10	5								13			
	14	29.74	59	24.79	61	64	32			53	49	50	49			H	1	H	1		NE	7	10	4								14		
	15	29.97	60	30.07	53	59	35			52	50	45	43			N	3	NW	1		10	10	3								15			
	16	30.07	50	30.07	52	58	30			47	46	40	38			N	1	N	1		10	10	4								16			
	17	30.02	49	29.79	58	57	27			45	44	49	47			SE	1	H	2		SE	7	10	8								17		
	18	29.83	60	29.74	59	61	29			56	51	50	49			SE	2	H	1		E	1	10	9								18		
	19	29.78	60	29.85	62	65	27			46	45	49	47			H	1	H	1		SE	8	8									19		
	20	29.86	59	29.70	61	63	30			47	47	55	53			SE	1	H	1		10	10	6									20		
	21	29.75	59	29.77	60	62	31			52	49	53	51			H	1	H	1		10	10	8									21		
	22	29.84	58	29.99	61	60	30			55	53	50	48			H	1	NW	1		10	10	8									22		
	23	29.99	60	29.98	63	66	38			56	52	57	55			N	1	S	1		10	10	9									23		
	24	29.71	61	29.61	59	65	35			51	51	50	45			SE	1	H	1		10	10	8									24		
	25	29.61	57	29.50	58	66	28			52	47	46	42			SE	1	N	1		SE	9	6									25		
	26	29.50	51	29.71	60	58	17			44	42	50	48			N	1	N	1		10	10	7									26		
	27	29.95	57	29.99	55	58	27			48	46	40	37			N	2	N	1		10	10	8									27		
	28	30.11	53	29.79	60	54	28			48	47	52	49			W	1	S	1		10	10	6									28		
	29	29.71	63	29.69	59	63	29			63	47	50	51			S	1	S	4		10	10	4									29		
	30	29.55	60	29.71	59	68	37			57	52	43	40			SE	4	N	1		10	10	8									30		
	31	29.95	58	29.99	60	62	27			45	44	47	46			SE	1	S	1		10	10	6									31		
Sums.		1616	11	1613	12	14				12	11	11	16			1					3		18											
Means.		29.32	246	28.15	254	27				46	270	277	216			0.99					772		168											
+ Total Corrections for Instru- mental Errors.																																		
+ Correc- tions for Diurnal Range.																																		
"Cor- rected 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. cu. " 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. se. " 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. " squall.  
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.

Estimated Force, 0-6.	Common Designation.	Estimated Force, 6-8.	Common Designation.	Estimated Force, 8-10.	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  $\pm$  = *29.867*  
for Temp. (Col. 2), = *29.910*.....  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\pm$  = *29.828*  
for Temp. (Col. 4), = *29.805*.....  
Mean at Station, corrected, and at 32°, ..... = *29.848*  
Correction for height, feet above Mean Sea-level, ..... =  
Mean, reduced to 32°, and Sea-level, ..... =  
Highest Reading, corrected for Index error, on the 10 th, ..... = *30.290*  
Lowest Do. Do., on the 15 th, ..... = *29.500*  
Difference, or Monthly Range, ..... = *0.790*

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 11 th, ..... = *67.0*  
Lowest in Month, corrected for Index errors, on the 11 th, ..... =  
Difference, or Monthly Range, ..... =  
"Corrected Mean" of all the Highest, (Col. 5), ..... = *60.9*  
"Corrected Mean" of all the Lowest, (Col. 6), ..... =  
Difference, or Mean Daily Range, ..... =  
\*\* Calculated Mean Temperature of Month, ..... =  
S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 11 th, ..... =  
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, ..... =  
Lowest at Night, Black Bulb (corrected for Index errors), on the 11 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), ..... = *50.2*  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), ..... = *47.8*  
†† Computed Temperature of Dew-Point, ..... = *45.3*  
†† Do. Elastic Force of Vapour, ..... = *30.2*  
†† Do. Weight of Vapour in a Cubic Foot of Air, ..... =  
†† Relative Humidity (Saturation = 100), ..... = *84*  
RAIN fell on 5 Days; Amount in Inches, ..... = *0.99*

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		12	0	0	3	3	1	9	3	0	1.32
P.M.		13	0	0	0	4	0	10	4	0	1.20
Mean.		12	0	0	2	3	1	9	4	0	1.26

Observations made and  
Return verified by

(Signed) *Robt. W. Parbury* Glen Terna







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Forest of Glontana Wood County of Aberdeenshire, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of September 1896.

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.		Days of Month.								
		9 h. A.M.		9 h. P.M.		Protected in Shade, 4 feet above Ground.		Exposed Black Bulbs. Max. in Sun's rays. Min. on 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.			9 h. A.M.		9 h. P.M.			As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc.										
		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.	No.	Direction.	Force.	Direction.	Force.	Readings of the H. Cup Anemometer. 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. 3 inches.		No. 12 inches.	No. 22 inches.	Temperature of Well at depth of feet. No.	Temperature at 1 fathom, and Density.	0-10.	9 A.M.	9 P.M.	Mention the hour at which Storms, including Thunder and Lightning, began and ended.
		* 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	29.71	59	29.79	60	59	34			53	50	19	47	0.42	N	1	N	1	N			10	10	1											1				
	2	30.02	58	29.81	57	58	33			55	55	5	49	0.25	N	1	S	2			11	10	—											2					
	3	29.79	61	29.79	58	58	40			58	57	5	48		N	1	N	1			10	10	6											3					
	4	29.88	58	29.90	60	60	36			56	53	4	46		H	1	H	2			10	11	2											4					
	5	29.94	60	29.99	57	59	34			47	45	4	43		SH	1	N	1			10	10	4											5					
	6	30.02	60	30.10	59	65	28			46	44	5	53		N	1	N	2			10	10	5											6					
	7	30.14	56	30.08	58	57	30			58	57	5	56		S	1	SH	1			10	10	6											7					
	8	30.06	60	29.91	61	55	50			58	57	5	55		S	1	S	1			10	10	7											8					
	9	29.88	60	29.72	61	58	33			53	58	5	56		H	1	H	1			10	10	4											9					
	10	29.68	62	30.03	58	57	57			53	55	5	54	0.10	NE	1	N	1			10	10	6											10					
	11	30.06	60	29.78	61	55	50			58	57	5	53	0.20	S	1	NE	1			10	10	—											11					
	12	29.67	62	29.68	60	64	34			53	52	5	49	0.15	N	1	N	1			10	10	2											12					
	13	29.37	63	29.29	59	62	32			54	53	4	43		N	1	N	1			10	—	7											13					
	14	29.25	57	29.72	63	60	28			43	43	4	39	0.17	N	1	H	2			10	10	—											14					
	15	29.79	62	29.57	58	61	36			54	53	5	48		S	1	S	1			10	—	7											15					
	16	29.58	59	29.6	57	59	32			57	47	4	47		S	1	H	3			10	—	6											16					
	17	29.72	59	29.14	55	58	29			50	45	4	42	0.20	H	2	S	4			—	10	3											17					
	18	29.45	57	29.01	60	60	31			49	44	4	45		SH	3	H	2			NE	6	—	—										18					
	19	29.40	58	29.5	57	58	27			50	47	4	43	0.50	H	4	H	2			—	—	4											19					
	20	29.62	55	29.72	53	56	26			46	44	4	39		N	2	N	1			10	—	4											20					
	21	29.73	52	29.57	56	59	16			36	35	4	40		H	1	S	1			—	10	6											21					
	22	29.34	54	28.88	57	52	19			42	42	4	47	0.47	S	1	SH	2			10	10	2											22					
	23	29.05	59	29.43	52	52	38			50	48	4	46	0.07	N	3	SH	2			10	10	—											23					
	24	29.61	54	29.42	50	51	23			46	42	4	46		H	2	H	1			NE	4	10	6										24					
	25	29.12	56	29.39	52	54	28			45	45	4	43	0.40	NE	1	N	1			10	10	—											25					
	26	29.63	49	29.49	56	48	17			34	33	4	38		S	1	N	1			10	10	6											26					
	27	29.29	47	29.34	52	53	18			50	49	3	37	0.44	S	2	SH	2			10	34	9	4										27					
	28	29.34	51	29.69	55	60	23			43	40	3	38		H	2	H	1			SE	6	—	6										28					
	29	29.85	53	29.99	50	53	20			38	37	3	35		S	1	S	1			10	10	3											29					
	30	30.28	52	30.17	61	52	20			43	42	3	37		S	1	S	2			10	—	4											30					
	31																																		31				
Sums.		1414	12	1674	14					13	13	15	17	3								1																	
Means.		29.69	57.2	29.65	57.2					49.1	47.5	47.1	45.4	3.37							8.5		7.3																
+ 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.	denotes aurora.	m.	denotes meteor.						
ci.	cirrus.	ms.	meteors.						
ci.-cu.	circo-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. la.	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.	aurora.	m.	meteor.
ci.	cirrus.	ms.	meteors.
ci-cu.	cirro-cumulus.	n.	nimbus.
cu.	cumulus.	r.	rain.
cu-s.	cumulo-stratus.	c. h. r.	heavy rain.
d.	dew.	s.	stratus.
f.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h. fr.	hoar-frost.	s.	snow.
h.	haze.	so. h.	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. h.	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  $\frac{1}{10}$  for Temp. (Col. 2),  $29.690 - 0.075 = 29.615$

"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\frac{1}{10}$  for Temp. (Col. 4),  $29.655 - 0.075 = 29.580$

Mean at Station, corrected, and at 32°,  $29.615 + 29.580 = 29.5975$

Correction for height, feet above Mean Sea-level,  $35 \times 0.0012 = 0.042$

Mean, reduced to 32°, and Sea-level,  $29.5975 - 0.042 = 29.5555$

Highest Reading, corrected for Index error, on the 31<sup>st</sup> th.,  $30.280$

Lowest Do. Do., on the 21<sup>st</sup> th.,  $29.050$

Difference, or Monthly Range,  $30.280 - 29.050 = 1.230$

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 6<sup>th</sup>,  $65.0$

Lowest in Month, corrected for Index errors, on the 11<sup>th</sup>,  $58.0$

Difference, or Monthly Range,  $65.0 - 58.0 = 7.0$

"Corrected Mean" of all the Highest, (Col. 5),  $58.0$

"Corrected Mean" of all the Lowest, (Col. 6),  $58.0$

Difference, or Mean Daily Range,  $58.0 - 58.0 = 0.0$

\*\* Calculated Mean Temperature of Month,  $58.0$

S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 11<sup>th</sup>,  $65.0$

"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun,  $65.0$

Lowest at Night, Black Bulb (corrected for Index errors), on the 11<sup>th</sup>,  $58.0$

"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass,  $58.0$

Difference of above means or range ("exposed"),  $65.0 - 58.0 = 7.0$

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11),  $48.1$

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12),  $46.4$

†† Computed Temperature of Dew-Point,  $44.5$

†† Do. Elastic Force of Vapour,  $29.5$

†† Do. Weight of Vapour in a Cubic Foot of Air,  $88$

†† Relative Humidity (Saturation = 100),  $88$

RAIN fell on 12 Days; Amount in Inches,  $3.37$

WIND.		SUMMARY.					
Direction.		N	NE	E	SE	S	SW
A.M.		8	1	2	10	2	7
P.M.		11	1	—	7	3	8
Mean.		9	1	0	8	3	8

 $= 2.10$ 

Observations made and  
Return verified by

(Signed)

Robt. Warburton







## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at *Forest of Glen Tuna, Aberdeenshire*, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.

Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet.

During the MONTH of October 189 6.

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 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. Hours.	9 h. A.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		Barometer. * No.	Attached Ther- mometer	Barometer. No.	Attached Ther- mometer	Max. No.	Min. No.	Max. in Sun's rays.	Min. on Grass.	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. 8 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.	" nimbus.
cl-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.	" 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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\ddagger$  = 29.640  
for Temp. (Col. 2), = 29.699.....59....."Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  = 29.642  
for Temp. (Col. 4), = 29.705.....63.....Mean at Station, corrected, and at 32°, = 29.641

Correction for height, feet above Mean Sea-Level, = \_\_\_\_\_

Mean, reduced to 32°, and Sea-level, = \_\_\_\_\_

Highest Reading, corrected for Index error, on the 14th, = 30.540Lowest Do. Do., on the 5th, = 28.950Difference, or Monthly Range, = 1.690S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 2th, = 67.0

Lowest in Month, corrected for Index errors, on the \_\_\_\_\_ th, = \_\_\_\_\_

Difference, or Monthly Range, = \_\_\_\_\_

"Corrected Mean" of all the Highest, (Col. 5), = 47.7

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

Difference, or Mean Daily Range, = \_\_\_\_\_

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

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), = 39.1Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 37.3Computed Temperature of Dew-Point, = 35.0Do. Elastic Force of Vapour, = 204

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

Relative Humidity (Saturation = 100), = 83RAIN fell on 14 Days; Amount in Inches, = 3.50

WIND.	SUMMARY.									
	Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.
A.M.	16	1				1	5	5	1	155
P.M.	15					2	1	1	2	155
Mean.	15	1	0	0	0	2	3	9	1	155

240

Observations made and  
Return verified by

(Signed)

Robt Warburton Glen Tana











# TAKING METEOROLOGICAL

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometer, be kept in Stevenson's Louvre-boarded Box for Thermometers, painted white inside and outside, and Thermometers screwed to four stout posts, also painted white, firmly fixed in the ground. The posts must be of such a length that the Thermometers are hung in position the Bulbs of the Minimum Thermometer, and of the Dry and Wet Bulb Thermometers will be exactly at the same height of FOUR FEET above the ground, the Maximum Thermometer being hung immediately above the Minimum Thermometer. The thermometer box is to be placed over a plot of grass, and in a free exposure to which the sun's rays do not incessantly strike, so much of the day as surrounding conditions permit, the Thermometer door, which should open on cross-laths in the centre of the Box, toward the question of UNIFORMITY OF HEIGHT OF BOX, and SECTION IN PITCHING THE THERMOMETERS, and in their position, and in the position of the Thermometer, as vital in every system of Meteorological Observation, since without it Observations made at different Stations are incomparable, thus rendering it impossible to compare the Climates of places with each other as regards their most important features.

our observations made at different Stations are incompatible, rendering it impossible to compare the Climates of Places with each other as regards their most important features.

Professor Phillips, and Negretti and Zambra's Maximum Thermometers, and Negretti's Minimum Thermometer, and Salt-Registering and Rutherford's Minimum Thermometer, are recommended. It is recommended that these Thermometers be graduated on the glass stem. The Minimum Thermometer is liable to two derangements—viz. the occurrence of spirit breaking, and part of the spirit distilling by high temperature and lodging at the top of the tube. This derangement is of occasional occurrence with protected Thermometers, but of frequent occurrence with exposed Thermometers. Hence a systematic examination of Minimum Thermometers ought to be a regular part of the work carried on by each Observer.

Fortunately, Spirit Thermometers may be easily set right by any one, when the column of spirit chances to separate. Let the thermometer be taken in the hand by the end furthest from the bulb, raised above the head, and then forcibly swung down towards the feet; the object being on the principle of centrifugal force, to send down the detached portion of spirit till it unites with the column. A few throws, or swinging strokes, will generally be sufficient for the purpose; after which the Thermometer should be placed in a slanting position, to allow the rest of the spirit still adhering to the sides of the tube to drain down to the column. But another method must be adopted, if the portion of spirit in the top of the tube be small. Heat should be applied slowly and cautiously to the top end of the tube where the detached portion of spirit is, so that, which, being turned into vapour by the heat, will condense on the surface of the marbled column of spirit. Care must be taken that the heat is not applied too quickly; for, if this be done, the tube will break and the instrument be destroyed. The best way to apply the requisite amount of heat is by bringing the end of the tube slowly down towards a minute flame from a gas-burner; or, if gas be at hand, a piece of heated metal will serve instead.

sufficient for the purpose; after which the Thermometer should be placed in a slanting position, to allow the rest of the spirit still ad-hering to the sides of the tube to drain down to the column. But another method may be adopted, if the portion of spirit in the top of the tube be small. Heat should be applied slowly and cautiously to the top end of the tube where the detached portion of spirit is, which, being turned into vapour by the heat, will condense on the surface of the unbroken column of spirit. Care must be taken that the heat is not applied too quickly; for, if this be done, the tube will break and the instrument be destroyed. The best way to apply the requisite amount of heat is by bringing the tube very slowly down towards a piece of heated metal, or by gas being slowly down towards a heated flame, or by a spirit-lamp. The bulb of the Thermometers for registering the greatest heat from the sun's rays, and the least, from radiation during night, have a black coating, which may easily be made, or mended, by the application of a mixture of lampblack and primer's ink. They are placed in shallow blackened boxes, whose sides protect the bulbs from the wind. The Maximum should be freely exposed to the sun, and the Minimum should rest on wooden supports a few inches from the surface of the glass, in an open situation. Snow must not be allowed to cover either of these Thermometers; nor the sun's heat to affect the Minimum Thermometer by distillation. Black-bulbs enclosed in glass jackets may also be used, being indelible to the

above. It must, however, be added, that the violet, yet in a sufficient observation of Solar and Terrestrial Radiation is not, in a sufficiently advanced state to warrant the exclusive recommendation of any one of these methods, at the present time.

The Hygrothermometer of the Society's Stations consists of two Thermometers usually, but not necessarily, mounted together, on one frame. As apparently slight deviations from the approved form of this apparatus seriously vitiates the Hygrometrical Observations, Observers are specially requested to attend to the following conditions:—The bulbs must hang down by at least an inch free from the scales and to which they are attached; the frame must be such as will hang by a single cord, or by an iron from any support, and be so constructed, that the water, which may be used, and altogether placed to the side, and a little below the level of the vat, but in no case under the bulb; the basin 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 by the Observer that the supply 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 for 15 or 20 minutes in water, and must be dried by immersion in a cloth, thus formed evaporation will be observed. The moist cloth in ordinary circumstances will

In reading the Thermometre, care must be taken to bring the eye exactly opposite the tip of the index, and the column of mercury. The reading ought to be taken to tenths of a degree, and noted in decimals. Thus, if the Thermometer will be read— $39^{\circ} \cdot 9$ ,  $40^{\circ} \cdot 0$ , or  $40^{\circ} \cdot 1$ ; or again,  $40^{\circ} \cdot 4$ ,  $40^{\circ} \cdot 5$ ,  $40^{\circ} \cdot 6$ , according as it indicates a little under, an exact coincidence with, or a little over  $40^{\circ}$ , or  $40^{\circ} \cdot 1$ , respectively. So also  $40^{\circ} \cdot 1$  may be read  $40^{\circ} \cdot 1$ ,  $40^{\circ} \cdot 2$ , or  $40^{\circ} \cdot 3$ , or  $40^{\circ} \cdot 4$ , or  $40^{\circ} \cdot 5$ , or  $40^{\circ} \cdot 6$ , or  $40^{\circ} \cdot 7$ , or  $40^{\circ} \cdot 8$ , or  $40^{\circ} \cdot 9$ , according as the index is next to, or between, or between and over, the line which is next to the surface of the spirit is alone noted. On opening the Thermometer Box, the Dry and Wet Bulb Thermometers are to be first, and then rapidly read, inasmuch as they are readily affected by heat and cold, the person of the Observer.

40°), and 40° more or less, must be registered 10° 25' minimum, 40° 47', or 40° 8' respectively. In reading Rudinfort's Minimum Thermometer, the indication of flat end of the index is the first to be read, and the surface of the spirit is alone noted. On opening the Thermometer Box, the Dry and Wet Bulb Thermometers to be first read, and rapidly, read, inasmuch as they are readily affected by heat from the person of the observer. The Self-Registering Thermometer of the Society should be read at 9 p.m. only, as in-crease of temperature during the greatest and least degrees of temperature of observing.

The indications of the Self-Registering Thermometers are read, since in winter at least, the extremes may occur at any hour; and it is necessary to refer their occurrence to their proper meteorological day. In the Society's schedules, the indications registered on the 31 are those of a series of phenomena commencing at 9 p.m. on the 31 and extending till 9 p.m. on the 31.

indifference when the Self-registering Thermometers are used, and, in winter at least, the extremes may occur at any hour; and it is necessary to test the Self-registers, for their proper meteorological use, by the use of the Self-registers, the indications registered on the 24th and the 25th of a series of phenomena commencing at 9 p.m. on the 24th, and extending till 9 p.m. on the 34th.

No instrument ought to be used for Meteorological purposes till it has been carefully tested by comparison with **Thermometers**. When such Thermometers, as are not graduated on the stem, but merely on an attached scale, undergo repairs, they are very liable to be moved from their position on the Scale, and ought never afterwards to be used without being re-tested. The Self-registering, especially the Minimum Thermometers, ought frequently to be compared with the dry bulb of the Hygrometer. The freezing-point of each Thermometer, marked by a scratch on the tube, ought to be tested once a year, in snow or melting ice.

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

water, in cases where the observations cannot be taken daily, the observation may be made on the 5th, 15th, and 25th of each month. When convenient, extra Sea Observations might be taken for other days, and greater depths, noting always the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the Maximum and Minimum by Thermometers continuously immersed be instituted at points along the coast, by the method proposed by Mr. F. 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 being noted. Mention what Test-Papers are used, Schönböhm's or Mohr's, etc. Ozone. 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 *sw*, as an Ozone entry in the schedule will indicate that the Ozone paper is fixed as 9 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.

**Remarks.** 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 into every advantage of, and a list of such 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, and to the appearance of the clouds, the colour of the sky, &c. Remarks ought to be made on the occurrence of Meteors, &c.

valent. Diseases, differences in character, colour, velocity, and direction, between the Lower and Upper Strata of clouds; the Colour of the Sky, &c. Remarks ought to be made on the occurrence of Meteors, Aurors Boreales, remarkable depressions, elevations, and fluctuations of the Barometer, Thunder-Storms, and remarkable falls of Snow, Hail, or Rain, the Hour of Storms of Wind commencing, abating their maximum, and ending, as well as such Notes on Storms as have been mentioned 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 observations, the state of the weather at 9 A.M. and P.M. should be registered, either in two columns, one for up-land, and the other for low-land, or in one column, with the word "up-land," or "low-land," or "ruined," or "ruled off for the purpose, from the column. Remarks on Observations in connection with the Periodic Return of the Seasons, possesses not only great scientific value, but also considerable importance in connection with the Agriculture and Horticulture of the Country. The observations should therefore be made, and the result of them be entered in the form of the following Table.

**Seasons.**

Unpublished Statistics may fairly represent the whole of Scotland, and observations ought to be confined to individual trees and shrubs; to particular species of birds, and, in the case of crops, to specific years. The annual crops should be noted, and the result of the observations from year to year on a selected piece of ground or farm, entered in the following Table, published yearly in the Society's journal, to indicate the species of plants and animals to which special attention is more particularly directed.

Observations ought to be confined to individual trees and shrubs, and to particular species of birds, and, in the case of crops, to specified portions thereof. The observations should be made at the same time, and the reports returned 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 should be particularly directed.

The Council recommend Observers, before purchasing new instruments, to consult the Secretary, in order that every instrument may be selected 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.

Erbsauner, December 1891.

[illegible]

	CHOSES.	
Above	Sowing or Planting.	
		Barley,
		Bere or Higg,
		Oats, . . .
		Wheat,
		Beans,
		Pease,
		Potatoes, . . .
		Turnips, . . .
		Rye Grass, . . .

[illegible][illegible]

BOOK POST.

*orological Society,*  
122 George Street,  
ED.

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[illegible]

Blossom,		Pink Mice	MILK-TORE.
generally,			
Cuckoo,			
Curlew,			
Horse-swail,			
Lapwing,			
Sand Martin,			
Starling,			
Swain,			
Rail or Corn,			

Use in	FRUITS.
Apple,	Strawberry,
Black Currant,	Plum,
Cherry,	Pear,
Gean,	Peach,
Gooseberry,	

Barberry,	.....
Bourne or Elder,	.....
Broom,	.....
Hazel,	.....
Hawthorn,	.....
Holly,	.....
Laburnum,	.....
Lilac,	.....
Mezerion,	.....
Mountain Ash or Rowan,	.....
Red Flowering Currant,	.....
Rhododendron Ponticum,	.....
Whin,	.....

1000

*To the SECRETARY*

OBSERVATIONS IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

[illegible]

A. B.



## SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Forest of Glen Tana, County of Aberdeenshire, in Lat. \_\_\_\_\_, Long. \_\_\_\_\_, Distance from Sea 35 miles.  
Height of Cistern of the Barometer above Mean Sea-Level \_\_\_\_\_ feet, above Ground \_\_\_\_\_ feet. During the MONTH of December 1898.  
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. in Sun's rays.	Min. on Grass.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Direction.	Force.	Direction.	Force.	Velocity (0-10), and Direction.	Amount (0-10), and Species.	Velocity (0-10), and Direction.		Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.					No. 22 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.
	1	30.08	42	30.21	45	42	21			11	10	39	38		H	1	S	3		SE	9	10	2							1	
	2	29.78	53	29.59	58	42	34			41	40	45	44	0.20	S	2	S	2		10	10									2	
	3	29.49	56	29.30	50	45	39			43	42	41	41	0.50	H	3	S	1		10	10									3	
	4	29.30	53	29.31	57	39	27			39	39	35	34		H	1	S	3		10	10									4	
	5	29.06	55	30.51	54	44	34			34	32	40	39	1.80	S	3	S	2		10	10	1								5	
	6	30.40	56	30.40	35	44	35			38	37	36	35	0.30	S	2	S	2		10	10									6	
	7	29.13	53	29.39	56	42	31			34	34	36	34	0.10	N	1	N	1		10	10									7	
	8	29.50	54	29.57	54	40	27			30	30	43	41		N	1	S	1			10	4								8	
	9	29.66	52	29.73	56	43	27			40	39	42	41		S	1	S	1		10	10									9	
	10	29.79	55	29.62	50	44	37			41	40	43	41	0.15	S	1	S	2		10	10									10	
	11	29.71	57	29.79	57	43	39			42	42	29	28	0.34	S	2	SH	2		10		3								11	
	12	29.70	49	29.50	50	47	25			54	52	33	32		H	1	H	1		10		2								12	
	13	29.59	50	29.49	38	40	31			38	37	38	37	0.25	S	1	H	1		10	10									13	
	14	29.52	51	29.62	50	40	32			36	35	32	30		H	1	H	1		10	10	2								14	
	15	29.72	47	29.65	45	38	21			26	24	30	27		SE	1	H	1		SE	8	2								15	
	16	29.65	46	29.60	49	36	20			34	32	34	33	0.25	H	1	H	2		10		3									16
	17	29.61	47	29.63	46	36	28			32	34	35	33	0.17	N	2	N	2		10											17
	18	29.72	50	29.79	49	40	30			36	34	37	35		N	2	N	1		10	10									18	
	19	29.95	52	30.17	57	39	23			38	37	40	39		SE	2	SH	1				2								19	
	20	30.31	49	30.21	50	37	25			30	29	34	33		N	1	N	1		10	10									20	
	21	30.31	49	30.21	50	34	23			33	33	35	34	0.25	N	2	N	1		10	10										21
	22	30.00	47	30.00	48	35	23			33	33	29	28	0.35	NE	1	N	1		10											22
	23	30.18	46	30.10	46	35	0.17			21	20	27	26		N	1	S	2		10		1								23	
	24	29.75	49	29.42	46	41	0.12			40	38	40	38		S	3	S	1		10	10									24	
	25	29.88	48	29.71	50	42	27			32	30	45	43		S	1	S	2		10	10	2								25	
	26	29.71	57	30.02	52	30	31			48	46	38	37	0.29	SH	2	S	3		10	10									26	
	27	29.85	51	30.03	52	34	32			36	34	39	37		SH	1	H	1				3								27	
	28	29.87	50	30.01	52	40	27			30	30	33	31		NH	1	H	1		10		2								28	
	29	30.01	50	29.69	54	40	23			39	36	39	38		SH	2	S	2		10	10									29	
	30	29.66	58	29.38	58	37	36			40	40	44	42		S	1	H	1		10	10	3								30	
	31	29.59	58	29.38	53	32	38			42	39	40	39		H	1	H	2		SE	8	2								31	
Sums.		2348	24	2383	39	57				160	125	219	178	4.95		146	48			275		34									
Means.		29.757	50.8	29.769	51.3	41.8				35.2	34.0	37.1	35.7			1.48	1.55		*												
+ 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.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
ci.-cu.	cirro-cumulus.	h.	hail.
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. la.	snow.
h.	haze.	so. la.	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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction  $\ddagger$  for Temp. (Col. 2), = \_\_\_\_\_  
"Corrected Mean" of Barometer at 9 P.M., minus the Correction  $\ddagger$  for Temp. (Col. 4), = \_\_\_\_\_  
Mean at Station, corrected, and at 32', = \_\_\_\_\_  
Correction for height, feet above Mean Sea-level, = \_\_\_\_\_  
Mean, reduced to 32', and Sea-level, = \_\_\_\_\_  
Highest Reading, corrected for Index error, on the 6 th, = 30.400  
Lowest Do. Do., on the th, = \_\_\_\_\_  
Difference, or Monthly Range, = \_\_\_\_\_

\* 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.  
† Embracing corrections for both capillarity and Index Errors.  
‡ The Diurnal Range for Scotland is as yet unknown.  
§ Practically, though not absolutely a minus correction.  
|| These "Hygrometrical Deductions" are calculated from Glaisher's Hygrometrical Tables, Second Edition only.  
\*\* While the Diurnal Range is unknown, the Arithmetical 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.

S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 31 th, = 52.0  
Lowest in Month, corrected for Index errors, on the th, = \_\_\_\_\_  
Difference, or Monthly Range, = \_\_\_\_\_  
"Corrected Mean" of all the Highest, (Col. 5), = 41.8  
"Corrected Mean" of all the Lowest, (Col. 6), = \_\_\_\_\_  
Difference, or Mean Daily Range, = \_\_\_\_\_  
\*\* Calculated Mean Temperature of Month, = \_\_\_\_\_  
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), = 36.2  
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 34.8  
‡ Computed Temperature of Dew-Point, = 32.7  
‡ Do. Elastic Force of Vapour, = 1.87  
‡ Do. Weight of Vapour in a Cubic Foot of Air, = \_\_\_\_\_  
‡ Relative Humidity (Saturation = 100), = 88  
RAIN fell on 13 Days; Amount in Inches, = 4.95

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		7	1		2	10	3	7	1		148
P.M.		5				13	2	11			153
Mean.		6	1	0	1	11	3	9	0	0	152

2.31

Observations made and  
Return verified by \_\_\_\_\_

(Signed) Robert Warburton



