

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Lith, County of Edinburgh, in Lat. 55° 57' N, Long 3° 10' W, Distance from Sea half miles.Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.During the MONTH of January 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.		Dry No.		Wet No.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.							
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. in Sun rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Direction.	Force.	Direction.	Force.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.					No. 22 inches.
		* No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.					No.
		inches.	°	inches.	°																									
	1	30.210		30.334		50.6	38.7	40.2	37.3	41.2	38.5	43.9	41.4	0.02	WSW	2.0	WSW	2.0	2W: 3.6	0	0						Fine, sunny.	1		
	2	30.318		30.228		43.9	39.0	41.2	38.5	43.9	41.4	43.9	41.4	0.0	S	2.4	S	2.3	2W: 2.5	2.5	2.5						Fine; mostly sunny dur. forenoon. - A. at 9 fine.	2		
	3	30.052		29.916		47.6	40.6	40.7	38.0	47.6	40.6	40.7	38.0	0.0	S	1.0	S	1.5	2SW: 9.6	10.4	10.4						Fine; sunny at times till 11.30 a.m., then cloudy.	3		
	4	29.907		29.881		47.6	37.9	41.9	40.2	38.5	37.0	41.9	40.2	0.3	S	1.5	S	0.5	2SW: 7.5	0	0						Cloudy; li. sho. till 9.15 a.m., then sunny till 1.15 p.m., cloudy at 4 p.m.	4		
	5	29.855		29.832		41.7	36.3	38.7	36.9	38.7	37.3	38.7	36.9	0.0	SW	0.5	E	1.0	0	0	2Ely: 9.5	10.4	10.4					Fine; sunny at times; hazy - S. sho. at 4.45 fine.	5	
	6	29.769		29.878		42.6	36.1	42.6	40.6	42.6	41.0	42.6	40.6	0.0	SE	2.4	E	2.0	2SE: 10.4	10.4	10.4						Cloudy; fine.	6		
	7	29.903		30.036		42.7	38.8	42.0	40.3	40.5	39.1	42.0	40.3	0.6	SE	2.4	E	2.0	2SE: 10.4	10.4	10.4						Overcast; li. sho. at 10.15 a.m. after 10.15 a.m.	7		
	8	30.054		30.092		40.7	38.9	39.5	38.7	39.9	37.2	39.5	38.7	0.1	E	2.5	E	2.5	2SE: 10.4	10.4	10.4						Cloudy; li. sho. till 8 a.m., and at 6 p.m.	8		
	9	29.946		29.681		39.9	32.2	36.7	34.1	32.7	32.0	36.7	34.1	0.2	E	2.5	E	1.0	2SE: 10.4	15.5	2.0	10.4					Changeable; li. sho. of small h. at 9 a.m., S. sho. at 9.50 a.m.; sunny till 1.15 p.m.	9		
	10	29.629		29.704		35.8	29.8	33.0	32.9	34.6	33.9	33.0	32.9	0.1	SE	0.5	SE	0.5	1.5: 10.4	10.4	10.4						Cloudy, with short sunny inters. bet. 1 and 2 p.m.	10		
	11	29.742		29.751		38.7	32.1	33.6	33.1	37.8	37.7	33.6	33.1	0.0	SE	1.4	Calu	0	2.5	6.5	10.4	10.4					Cloudy; hazy; li. sho. at 5.30 p.m.	11		
	12	29.726		29.841		39.9	37.7	38.9	38.9	38.9	38.3	38.9	38.9	0.0	Calu	0	Calu	0	10.5	10.5	10.5						3.0 p.m. clear.	12		
	13	30.029		30.225		38.7	36.1	36.7	33.9	36.8	33.1	36.7	33.9	0.0	W	1.0	W	1.5	1.5: 10.4	10.4	10.4						Fine; sunny at times.	13		
	14	30.323		30.339		38.5	32.1	33.7	30.6	36.7	34.0	33.7	30.6	0.0	W	1.4	W	1.4	0	0	1.4: 5.0	10.4					Fine; hazy during day.	14		
	15	30.304		30.170		37.1	33.9	35.6	32.9	35.4	33.7	35.6	32.9	0.0	W	1.0	W	0.25	1.4: 7.5	10.4	10.4						Cloudy; li. sho. of 5.0 and h. at times.	15		
	16	30.051		30.075		36.7	31.2	33.9	32.1	32.0	30.9	33.9	32.1	0.0	W	1.0	W	0.25	1.4: 7.5	10.4	10.4						Fine; mostly cloudy; hazy - faint li. sho. at 9 fine.	16		
	17	30.150		30.106		32.8	29.3	31.7	28.9	29.8	27.9	31.7	28.9	0.0	SW	0.5	W	1.4	0.25	10.4	10.4						Fine; hazy; mostly sunny dur. afternoon.	17		
	18	30.108		30.160		37.6	34.8	37.5	35.1	37.7	34.0	37.5	35.1	0.0	W	1.4	W	1.5	0	0	1.4: 10.4	10.4					Fine; hazy; evening cloudy.	18		
	19	30.251		30.335		39.7	36.0	36.9	35.9	35.9	35.0	36.9	35.9	0.5	W	2.4	W	2.4	1.4: 10.4	10.4	10.4						Cloudy; a few li. sho. after 11 a.m.	19		
	20	30.405		30.362		39.7	35.9	32.7	30.2	38.1	35.3	32.7	30.2	0.8	W	2.4	W	2.25	2.0	8.0	1.5: 10.4	10.4					Changeable; stormy.	20		
	21	30.109		29.700		38.7	31.0	32.7	30.2	38.1	35.3	32.7	30.2	0.0	W	2.0	W	1.5	1.5: 10.4	10.4	1.5: 10.4	10.4					Cloudy; hazy.	21		
	22	29.766		29.971		38.7	29.1	34.4	32.1	33.1	29.9	34.4	32.1	0.4	W	2.4	W	2.5	2.4: 10.4	10.4	0	0					Variable; fog; li. sho. of S. h. at 5.0; sunny inters.; squally at times.	22		
	23	30.104		30.140		33.9	28.1	33.0	31.9	28.7	27.1	33.0	31.9	0.7	W	2.0	W	1.4	1.4: 8.0	0	0						Cloudy; S. sho. with h. at times till 2 p.m.; clear at 4 p.m.	23		
	24	29.803		29.469		38.8	26.6	33.1	30.9	38.8	36.9	33.1	30.9	0.0	W	1.5	W	1.5	1.5: 10.4	10.4	0	0					Fine; sunny at times.	24		
	25	29.429		29.474		38.8	23.9	28.5	26.7	24.0	22.3	28.5	26.7	0.1	W	1.5	W	2.4	1.4: 10.4	10.4	0	0					Frequent li. sho.; sunny inters. also.	25		
	26	29.555		29.663		33.8	24.0	28.7	25.8	29.1	26.3	28.7	25.8	0.0	W	1.5	W	2.0	1.4: 10.4	10.4	0	0					Fine; sunny inters. dur. afternoon.	26		
	27	29.918		30.118		38.2	28.9	37.3	34.2	35.7	32.0	37.3	34.2	0.0	W	2.0	W	1.5	1.4: 10.4	10.4	0	0					Fine; mostly sunny.	27		
	28	30.093		30.055		36.5	33.7	35.7	31.9	36.5	32.9	35.7	31.9	0.1	W	2.0	W	1.5	1.5: 8.0	1.5: 10.4	10.4						Li. elect. sho. early morning; day fine, sunny at times.	28		
	29	29.921		29.592		36.5	29.9	31.2	28.3	32.7	32.2	31.2	28.3	0.0	W	1.0	W	0.25	2.4: 10.4	10.4	10.4						Fine; cloudy; rather hazy.	29		
	30	29.356		29.277		33.7	30.7	31.8	31.8	33.7	33.7	31.8	31.8	0.28	Ely	0.5	Ely	0.25	1.5: 10.4	10.4	10.4						Overcast; constant light snow or sleet.	30		
	31	29.287		29.360		38.6	33.7	37.7	34.9	35.7	33.9	37.7	34.9	0.3	SW	2.0	W	2.25	2.4: 10.4	10.4	10.4						Fine; light sho. at 11.30 a.m.; mostly sunny during afternoon.	31		
	Sums.	928.103		927.765		1218.7	1021.9	1108.8	1046.5	1127.4	1019.7	1108.8	1046.5	0.72					172		179									
	Means.	29.939		29.928		39.3	33.0	35.8	33.8	36.4	34.5	35.8	33.8					5.5		5.7										
	+ Total Corrections for Instrumental Errors.																													
	+ Corrections for Diurnal Range.																													
	"Corrected Means."	29.939		29.928		39.3	33.0	35.8	33.8	36.4	35.0	35.8	33.8	0.72																
	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	

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.	p.	" rain.		
cu.	" cumulus.	h. r.	" heavy rain.		
cu.-s.	" cumulo-stratus.	c. h. r.	" continued heavy rain.		
d.	" dew.	s.	" stratus.		
f.	" fog.	so.	" sleet.		
fr.	" frost.	s.	" snow.		
h.-fr.	" hoar-frost.	so. ha.	" solar halo.		
h. d.	" haze.	sq.	" squall.		
h. d.	" heavy dew.	sqs.	" squalls.		
li.	" hail.	t.	" thunder.		
li. cl.	" light clouds.	t. s.	" thunder-storm.		
li. sh.	" light showers.	w.	" wind.		
lu. co.	" lunar corona.	g.	" gale of wind.		
lu. halo.	" lunar halo.				

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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \pm = 29.939
for Temp. (Col. 2), =
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \pm = 29.928
for Temp. (Col. 4), =
Mean at Station, corrected, and at 32°, = 29.854
Correction for height, feet above Mean Sea-Level, = 7.9
Mean, reduced to 32°, and Sea-Level, = 29.933
Highest Reading, corrected for Index error, on the 20 th, = 30.405
Lowest Do. Do., at 9 p.m. on the 30 th, = 29.277
Difference, or Monthly Range, = 1.128

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 10 th, = 50.6
Lowest in Month, corrected for Index errors, on the 26 th, = 23.9
Difference, or Monthly Range, = 26.7
"Corrected Mean" of all the Highest, (Col. 5), = 39.3
"Corrected Mean" of all the Lowest, (Col. 6), = 33.0
Difference, or Mean Daily Range, = 6.3
** Calculated Mean Temperature of Month, = 36.2

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), = 36.1
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 34.2
Computed Temperature of Dew-Point, = 31.4
Do. Elastic Force of Vapour, = 0.780 178
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 85.83
RAIN fell on 14 Days; Amount in Inches, = 0.72

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

Observations made and
Return verified by

(Signed) James Bolau & George Redpath.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Lath, County of Edinburgh, in Lat. 55° 59' N, Long 3° 10' W, Distance from Sea half mile.Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.During the MONTH of February 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.									
		Barometer.	Attached Ther- mometer	Barometer.	Attached Ther- mometer	Max.	Min.	Max. in Sun/shade	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Velocity (0-10), and Species.	Amount (0-10), and Species.	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.	No.				
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	
	1	29.368		29.394		36.5	34.7			34.9	33.1	35.7	34.9	0.00	NE	10	0.5		18	NE	10	0	0						Cloudy; fine; cloudless at 9 p.m.	1	S	
	2	29.323		29.565		36.2	33.9			36.2	35.1	34.7	32.9	0.01	E	2.0	1.5		18	SE	10	0	0						Fine; except E. chs. of S. el. between 11.15 a.m. and 1 p.m.	2	S	
	3	29.782		29.876		36.7	32.0			32.7	30.6	34.8	32.1	0.00	SE	1.0	1.0		2	SE	10	0	0						Fine; mostly sunny.	3		
	4	29.884		29.818		36.8	34.0			34.9	33.0	36.0	33.9	0.00	SE	1.5	2.0		18	SE	10	0	0						Cloudy.	4	⊕	
	5	29.627		29.558		38.6	34.6			35.7	34.7	36.6	35.9	0.01	SE	1.5	0.5		0.25	SE	10	0	0						Sh. of S. el. bet. 5 a.m. and 9 a.m.; day fine with sunny inter. dur. forenoon. - Fair	5	S	
	6	29.559		29.640		38.1	35.9			36.5	36.0	36.6	35.3	0.2	SE	1.0	0.5		2	SE	10	0	0						Overcast, E. r. at times.	6		
	7	29.922		30.107		38.5	35.9			36.4	35.7	36.8	35.6	0.00	Var.	0.25	0.25		17	SE	10	0	0						Cloudy.	7		
	8	30.029		29.745		44.9	35.7			40.7	38.7	40.7	39.1	0.2	S	2.0	0.25		2.5	SE	10	0	0						Fine; mostly sunny till about 2 p.m. - So. ha. at 9 a.m. noon; r. after 9 p.m.	8	⊕	
	9	29.635		29.871		46.8	40.5			45.0	43.2	40.9	37.4	1.1	W	2.5	0.25		2.5	SE	10	0	0						Rain; previous night; day fine, sunny at times.	9		
	10	30.048		30.093		42.6	36.9			37.9	35.7	40.2	37.1	0.00	W	2.0	0.5		2.7	W	10	0	0						Fine; cloudy, with sunny inter.; r. at 11 a.m. - So. ha. at 9 p.m.	10	⊕	
	11	30.122		30.196		40.2	32.9			33.2	31.7	34.8	32.7	0.00	W	0.5	0.0		0	W	10	0	0						Thick haze during day; evening clear.	11	⊕	
	12	30.198		30.067		35.8	29.2			31.7	31.3	31.8	30.9	0.00	W	0.5	0.0		0	W	10	0	0						Thick haze at times.	12		
	13	29.884		29.809		45.6	32.0			36.8	36.3	45.6	44.4	0.6	SE	0.25	1.5		2	SE	10	0	0						Thick haze, with drizz. sh. at times.	13		
	14	29.906		30.107		45.7	38.8			44.7	44.3	39.0	39.0	1.8	W	0.5	0.25		2	SE	10	0	0						Overcast; showers; thick fog at times.	14	⊕	
	15	30.304		30.432		45.8	38.0			39.8	39.8	45.8	44.0	0.2	W	0.5	1.5		2	SE	10	0	0						Fog chiefly, with short inter. of sunshine; evening much clearer.	15	⊕	
	16	30.416		30.388		49.7	43.9			44.7	42.0	44.2	44.7	0.00	W	2.4	2.0		2	SE	10	0	0						Fine; mostly cloudy. - So. ha. at 0.45 p.m.	16	⊕	
	17	30.356		30.174		47.6	43.4			45.8	43.5	44.8	44.0	0.00	W	2.0	2.0		2	SE	10	0	0						Fine; cloudy, with sunny intervals.	17		
	18	29.962		29.896		48.7	42.6			43.8	40.2	46.1	43.1	0.00	W	2.0	2.0		2	SE	10	0	0						Fine; sunny at times.	18		
	19	29.970		29.909		55.6	43.0			51.0	48.8	53.8	50.8	0.00	W	1.4	5.0	2.5	2.5	SE	10	0	0						Cloudy; very drizz. sh. about noon.	19		
	20	29.932		29.679		53.8	44.8			46.7	44.1	45.7	42.4	0.00	W	2.4	5.0	3.5	2.5	SE	10	0	0						Changeable; a few dr. sh.; sunny inter.; squally at 9 p.m.	20		
	21	30.140		30.318		48.3	40.2			43.4	39.0	45.9	44.1	0.00	W	2.5	1.0		2.5	SE	10	0	0						Fine; sunny till about 2.30 p.m., then cloudy.	21		
	22	30.347		30.432		52.7	45.9			50.6	47.7	49.1	47.2	0.00	W	2.0	2.0		2.4	SE	10	0	0						Fine; mostly cloudy.	22		
	23	30.258		30.289		53.6	45.7			49.6	46.8	45.7	43.9	0.3	W	3.0	2.3		2.5	SE	10	0	0						Cloudy, with sunny inter.; sq. at times; sh. after 4 p.m.	23		
	24	30.228		29.897		49.7	40.4			47.6	45.0	48.6	45.0	0.6	S	3.0	2.3		2.4	SE	10	0	0						Cloudy; sh. at times dur. afternoon; broke sh. after 4 p.m.	24		
	25	29.499		29.571		55.6	45.0			51.8	49.1	54.9	52.2	0.3	W	3.5	3.5		2.4	SE	10	0	0						Overcast; nearly com. r. after 9 a.m.; very squally.	25		
	26	29.698		29.856		56.7	44.8			56.6	52.0	44.8	42.0	1.2	W	2.4	2.3		2.4	SE	10	0	0						Changeable; fog. dr. sh. separated by sunny inter.; heavy sh. at 2.30 p.m.	26		
	27	30.102		30.142		44.8	38.9			41.5	38.9	40.1	38.0	0.3	W	2.4	2.0		0	W	10	0	0						Fine till about 1 p.m., then cloudy.	27		
	28	29.876		29.326		47.7	37.1			39.9	36.6	43.0	41.5	1.1	SE	2.0	1.0		18	SE	10	0	0						Fine, mostly sunny dur. forenoon; sh. after 1.20 p.m., com. r. after 4 p.m.; fair at 9 p.m.	28	⊕	
	29																															29
	30																															30
	31																															31
Sums.		838.375		838.146		1273.3	1080.7			1170.1	1111.9	1176.7	1118.0	1.14					188		202											
Means.																			6.7		7.1											
+ Total Corrections for Instrumental Errors.																																
+ Corrections for Diurnal Range.																																
"Corrected Means."		29.942		29.934		45.5	38.6			44.8	39.7	43.0	39.9	1.14																		
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
ci-cu.	cirro-cumulus.	n.	nimbus.
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. h.	solar halo.
h. d.	heavy dew.	sq.	squall.
h. l.	hall.	sq.	squalls.
l.	lightning.	t.	thunder.
li. cl.	light clouds.	t. s.	thunder-storm.
li. sh.	light showers.	v.	wind.
lu. co.	lunar corona.	g.	gale of wind.
lu. ha.	lunar halo.		

TABLE FOR ESTIMATING FORCE OF WIND.

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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \pm = 29.942
for Temp. (Col. 2), = 29.934
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \pm = 29.934
for Temp. (Col. 4), = 29.934
Mean at Station, corrected, and at 32°, = 29.938
Correction for height, feet above Mean Sea-level, = 1.938
Mean, reduced to 32°, and Sea-level, = 29.938
Highest Reading, corrected for Index error, on the 28th, = 30.432
Lowest Do. Do., at 10 p.m. on the 28th, = 29.326
Difference, or Monthly Range, = 1.106

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 26th, = 56.7
Lowest in Month, corrected for Index errors, on the 13th, = 29.2
Difference, or Monthly Range, = 27.5
"Corrected Mean" of all the Highest, (Col. 5), = 45.5
"Corrected Mean" of all the Lowest, (Col. 6), = 38.6
Difference, or Mean Daily Range, = 6.9
** Calculated Mean Temperature of Month, = 42.0

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

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 41.9

Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 39.8

Computed Temperature of Dew-Point, = 37.2

Do. Elastic Force of Vapour, = 0.224

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

Relative Humidity (Saturation = 100), = 85

RAIN fell on 14 Days; Amount in Inches, = 1.14

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

Observations made and
Return verified by

(Signed) James Bolau & George Redpath

INSTRUCTIONS

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

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1835, was to secure uniformity in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different observations, it being found that differences between the Returns from two Stations, so very considerable as to render them quite incommensurate, may arise from dissimilarity in the position or quality of instruments, different hours of observation, or even from the use of differently constructed instruments. It is therefore hoped, that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for their Monthly Returns an accuracy and value commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, an entire comparableness among the several Returns, without which the Society's Reports must inevitably fail in achieving one of the main objects of Meteorological Observation.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only), as specified in the following remarks, or at the top of the column of the Schedule. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances, they are specially requested to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M.

Weather-glasses and Aneroids, though well suited to indicate Barometer, fitted for scientific purposes. No Barometer should be used for Meteorological Observation that is not supplied with some means of adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating surface of the mercury in the cistern.

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTIN'S Barometer, the arrangement consisting in applying pressure by means of a screw to the bottom of the cistern, which is made of flexible leather; thus raising or depressing the surface till it just meets the ivory point which forms the zero point of the fixed scale.

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

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

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

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

The errors most frequently made in reading the Barometer are errors of 1.000 inch, and 0.050 inch; that is to say, instead of 29.365 inches, either of the following is sometimes set down—viz. as 30.365 inches, 28.365 inches, or 29.815 inches. Experience having shown that even the very best Observers make these mistakes, particular attention is directed to the matter.

When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a tight plug to the cistern, thus preventing the escape of the mercury. Then screw up the mercury not quite to the top of the tube, but to within a quarter of an inch of it, and take down the instrument; it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether the space above the mercury in the tube is a complete vacuum; this is the case if, on inclining the instrument, a sharp tap is produced when the mercury strikes the top of the tube. If a dull tap is heard, there is air in the tube, which must be got rid of.

As Barometers are liable to be damaged by the introduction of air into their tubes, on removal from place to place, or in being roughly handled, it may be useful to Observers to know how the ivory may be expelled. First close up the cistern by screwing the ivory peg tight, so as to prevent the escape of mercury; then screw up the mercury to about half an inch from the top of the tube; and having slowly inverted the instrument, place the top of it on a yielding substance, such as the foot, and gently tap on the cistern with the palm of the hand, so as to induce the air to ascend through the column to the cistern, whence it may escape. Since there is the weight of two atmospheres—the pressure of the mercury in the Barometer, and the air outside—pressing on any air that may be inside the tube, it is usually a tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished; and the clear metallic sound of the mercury, when gently struck against the top of the glass tube, will show when the whole of the air has been expelled. On hanging up the Barometer, care must be taken to screw down the mercury in the tube before unfastening the float of the cistern, for, if this be not attended to, the mercury will flow out, and the instrument be seriously damaged.

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Louvre-boarded Box for Protection of Thermometers, painted white inside and outside, and firmly screwed to four stout posts, such a length that when 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 Minimum Thermometer. The Thermometer Box is to be placed over a plot of ground, and in a free open space to which the sun's rays have access during as much of the day as surrounding conditions enable the Observer to secure. The Thermometers are suspended cross-wise to the centre of the Box, and face the door, which should open to the north.

The Council regard the question of UNIFORMITY OF HEIGHT ABOVE GROUND, AND METHOD IN PROTECTING THE THERMOMETERS, 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 Omakes of places with each other as regards their most important features. It is recommended that these self-registering thermometers, and Stevenson's Minimum Thermometer, be placed in Stevenson's Louvre-boarded Box, and Stevenson's Minimum Thermometer, be placed in Stevenson's Louvre-boarded Box, and Stevenson's Minimum Thermometer, be placed in Stevenson's Louvre-boarded Box.

Fortunately, Spirit Thermometers may be easily set right by any one, when the column of spirit changes to separate. Let the Thermometer be taken in the hand by the end farthest 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 standing 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. Head should be detached slowly and cautiously to the top 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 end of the tube slowly down towards a minute flame from a gas-burner; or, if gas be not at hand, a piece of heated metal will serve instead.

The bulbs of the Thermometers for registering the greatest heat during night, have a black coating, which may easily be made, or mented, by the application of a mixture of lampblack and printer's ink. They are placed in shallow blackened boxes, whose sides protect the bulbs from the wind. The Maximum must be freely exposed to the sun, and the Minimum should rest on wooden supports a few inches from the surface of the grass, 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 dissipation. Black-balls enclosed in glass jackets may also be used, being indeed preferable to the above. It must, however, be added, that the whole subject of the observation of Solar and Terrestrial Radiation is not yet in a sufficiently advanced state to warrant the exclusive recommendation of any one of these methods.

The Hygrometer in use at the Society's Stations consists of two Thermometers usually, but not necessarily, mounted on one frame. As apparently slight deviations from 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 frame to which they are attached; the frame must be such as will bring the tubes forward by an inch from any board on which it may be suspended; the water-cup must be covered, and altogether placed to the side, and a little below the level of the wet bulb, but in no case under the bulb; the muslin must be of medium fineness, and fastened at the neck of the bulb by the cotton, which also supplies it with water. It must be seen to by the Observer that the muslin is always clean and moist, and the water pure. In frosty weather, observation is a matter of much delicacy, and must be made with great care. The bulb must be moistened by immersion from 15 to 30 minutes before the hour of observation. From the film of ice thus formed evaporation will proceed as from the moist cloth in ordinary circumstances.

In reading the Thermometer great care must be taken to bring the eye exactly opposite the tip of the index or the column of mercury. The reading ought to be taken to tenths of a degree, and noted in decimals. Thus the Thermometer will be read—39.9, 40.0, or 40.1; or again, 40.4, 40.5, 40.6, according as it indicates a little under, an exact coincidence with, or a little over 40, or 40.5, respectively. 80 and 40.4, and 40.5, more or less, must be registered 40.2, 40.3, and 40.6, or 40.8 respectively. In reading Kuttner's Minimum Thermometer, the indication of that and of the index which is next the surface of the spirit is alone noted. On opening the Thermometer Box, the Dry and Wet Bulb Thermometers are to be first, and rapidly, read, inasmuch as they are readily affected by heat from the person of the Observer.

The Hygrometer is read at 9 A.M. and 9 P.M. The Self-Registering Thermometers are read at 9 P.M. only, as in the hour of observing, including the greatest and least degrees of temperature in the 24 hours preceding. It is not a matter of indifference when 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 3d are those of a series of phenomena commencing at 9 P.M. on the 2d, and extending till 9 P.M. on the 3d.

No instrument ought to be used for Meteorological purposes till it has been carefully tested by comparison with a standard Thermometer. When such Thermometers 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 indifference when 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 3d are those of a series of phenomena commencing at 9 P.M. on the 2d, and extending till 9 P.M. on the 3d.

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

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

The Council would recommend the Hemispherical Cup Anemometer, a self-registering instrument which shows the amount of Wind that passes it per day; from which also the mean Velocity of the Wind at the time of observation may be ascertained. For indicating the Force of the Wind at any particular hour of observation, the Pressure Anemometer recently brought under the notice of the Society by Mr. I. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Edinburgh, are recommended as likely to secure uniformity in making observations on the Force of the Wind.

Many causes conspire to produce anomalies in Rain Returns, arising, partly from the difficulty of obtaining a perfectly unobjectionable situation for observation, and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope or terrace, but on a level piece of ground, in an open situation as the Observer can secure for it. As it is often difficult to obtain a position as free and unobstructed by surrounding objects as is desirable, care should be taken to place it at some distance from shrubs, trees, buildings, or other obstructions, at least as many feet from their base as they are in height. The more important directions towards which it is most desirable to have a free exposure, are, in the order of their importance, S.W., N.E., S.E., S., and W. The rain gauge must be perfectly level, and fixed so that it will remain level in all weathers, and be at a height of one foot above ground, over grass. In such gauges as Fleming's, which are furnished with a measuring-rod attached to a float, the rod ought to be fixed down, and the float rise to its height only at the time the instrument is read; it being found that a stem projecting above the rim of the gauge seriously interferes with the proper measurement of the Rain-fall. When a measuring-glass is used, care should be taken to hold it quite perpendicular. The Rain Gauge ought to be read daily at 9 A.M., and the reading entered in the Returns of the previous day. If the Gauge is read once a month, the reading is to be made on the first of the month, and the amount entered for the previous month. Snow-falls may, for convenience, be registered in the rain columns, under the following conditions:—When a Snow-slower occurs, it should be noted in the Remarks, and the letter S annexed to the depth of water received in Gauge. No drift of the snow must be measured in some open place where the depth is observed, and registered in addition to, and as a check upon, the indications of the Rain Gauge. For wind, rain, and snow, as indicated in every column, the Observer cannot be too careful to register observations only; and nothing that partakes of the nature of deduction or inference.

Convenient abbreviations for the nomenclature of Clouds will be found on the other side. The amount of Cloud ought to be estimated from the greater or less obscuration of the sky overhead (i.e. within 20° or 30° of the zenith). The strata of Clouds that appear near the horizon are viewed obliquely; and thus, being unable to judge of their amount, we ought not to take them into account in the Clouds' column, though their appearance and changes may be noted among the Remarks. The amount of Cloud is entered from a scale of 0 to 10; thus, when the sky overhead is free from Clouds it is entered 0, when half-covered by Clouds, 5, wholly covered, 10, and so on.

Observations of the Clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in the following manner:—Thus, in the column Velocity and Direction, 9, S. W. will indicate that the upper strata of Clouds travel with an extreme velocity from S. W., and those in the lower regions from W., with one-third the speed of the former. Again, in the second Cloud column, an entry of 2, cu. st. will indicate that the higher regions are covered to the amount of 4-tenths with stratus Clouds; and that the sky is further obscured to the extent of 2-tenths by lower Clouds of the cumulo stratus kind.

Remarks on peculiar Clouds, accompanied with drawings, will assist materially in the development of a more exact nomenclature of Clouds, as well as throw light on the electrical, and other of the more obscure phenomena of Meteorology. The approximate number of hours in which objects in the sun's rays cast shadows, should be entered in the proper column.

As the germination and growth of crops and plants generally depend greatly on the temperature of the soil,—its underground amount and constancy,—the Council recommend that Thermometers be placed in the soil, at different depths, and especially when the Vane is stationary, and when the wind is feeble, reference may be made to the direction of smoke, etc., in well-exposed situations. Careful observations are recommended to be made on the changes in the direction of the wind; and during storms, extra observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, is likely to give highly valuable and important results, particularly in connection with the system of thickly-planted Stations over a limited district round Edinburgh called STORM STATIONS, in the course of being established by the Society for the systematic investigation of the relation of the force of the wind to BAROMETRIC GRADIENTS, and other points connected with storms.

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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 and greater depths, not always the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima by Thermometers continuously immersed, be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool. The Temperature of the water at the bottom of Wells ought, when practicable, to be taken, both the depth of the temperature well and of the water being noted.

Mention what Test-Papers are used, Schombert's or Moffat's, etc. The Paper is affixed by a pin to a board in the Thermometer Box, and the indications registered at 9 A.M. and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind at the time of observation, in the following manner:—thus 32°, as an Ozone entry in the schedule will indicate that the Ozone paper is tinted as 3 on the scale, that the wind is from the N. W., and that its force on the scale 0—5 4, or blowing fresh.

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

The Remarks column is unavoidably too narrow. Some of the most valuable Observations that can be taken are those for which no rules can be given nor hours assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as are in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to Prevalent Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Aurora 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, attaining their maximum, and ending as well as such Notes on Storms as have been hinted at above. When lofty hills are in the vicinity of a Station, the Heights of Clouds and of the Snow-line in winter should be recorded. By the use of abbreviations, the state of the weather at 9 A.M. and 9 P.M. should be registered, either in two columns, otherwise occupied, or ruled off for the purpose, from the column of Remarks.

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

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

(By Order)
BIRMINGHAM, December 1891.

FOREST TREES.	Alder,	Ash,	Beech,	Birch,	Elm,	Larch,	Lime,	Oak,	Sycamore or Plane,
In flower.									
Leaf first appears.									
Leaf falls.									
Divested of leaves.									
Divested of fruit.									
First in blossom.									
First in fruit.									
First in generally.									
SHRUBS, ETC.	Barley,	Bere or Bigg,	Oats,	Wheat,	Beans,	Pease,	Potatoes,	Turnips,	Rye Grass,
Red flowering Currant,									
Rhododendron Ponticum,									
Whin,									
APPLS.									
Curlew,									
House-Swallow,									
Lapwing,									
Plover,									
Sand-Martin,									
Swallow,									
Rail or Corn Crane,									
CHICKEN,									
Curlew,									
House-Swallow,									
Lapwing,									
Plover,									
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SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55° 57' N, Long. 3° 10' W, Distance from Sea half miles.Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.During the MONTH of April 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.		SELF-REGISTERING THERMOMETERS.				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.		9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.									
		Barometer.	Attached Ther- mometer	Barometer.	Attached Ther- mometer	Max. No.	Min. No.	Max. in Sun, rays on Grass.	Min. on Grass.	Dry bulb.	Wet bulb.		Dry bulb.	Wet bulb.	No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Velocity (0-6) and Direction.	Amount (0-10), and Species.	Velocity (0-6) and Direction.					Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.	No. 22 inches.	
		* No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°	No.	°			
		inches.	°	inches.	°																											
	1	29.257		29.500		42.0	29.7			38.7	34.8	35.7	32.3	0.12	11.1	1.0	11	1.5	1.5	11.6	4.6	1.5	11.6	2.5					Changeable; heavy S. sh. till 5.30 a.m., brisk S. sh. at times after 3 p.m.	1	S	
	2	29.712		29.768		41.7	31.1			36.9	32.2	34.6	32.0	0.0	11.1	1.0	6.4	0.5	1.1	3.6	2.6	9.8						Fine; sunny at times; very clear.	2			
	3	29.673		29.593		41.1	29.1			39.5	35.0	34.8	33.2	0.0	5.6	2.5	6.1	2.0	2.5	5.6	6.6	1.5	2.8					Morning, thick S. sh.; day fine, mostly sunny; S. sh. at 5.20 p.m.	3	h		
	4	29.723		29.971		42.8	33.8			38.6	34.7	34.7	33.9	0.2	6.1	2.0	11.6	0.5	1.5	6.1	1.0	1.1	4.5					Cloudy till noon, then mostly sunny; heavy S. sh. at 8.45 p.m.; very clear.	4	S		
	5	30.080		29.929		43.7	30.1			42.1	36.9	34.7	32.1	0.1	6	1.4	5.6	0.5	2.5	5.6	2.0	0						Fine; mostly sunny; very clear.	5			
	6	29.776		29.695		46.2	30.1			41.9	36.8	34.7	38.0	0.1	5.6	1.5	5.6	0.25	0.25	5.6	7.0							Morning, thick S. sh.; day mostly sunny till noon, then cloudy; S. sh. at 5.20 p.m.	6	h		
	7	29.718		30.000		45.0	34.4			40.9	38.2	39.1	39.0	0.4	5.6	1.5	7.0	0.25	1.5	10.0	1.0	3.5						Cloudy, with sunny inters. till noon; freq. S. sh. after 11.50 a.m.	7			
	8	30.048		29.954		52.5	33.5			36.2	36.0	40.0	37.2	0.1	6.1	2.0	5.6	0.5	2	10.0	0	0						Morning, thick S. sh.; fine, sunny after 11 a.m.	8	h		
	9	29.858		29.895		49.5	38.7			46.4	43.7	42.7	40.4	0.3	5.6	1.5	11	1.0	1.5	10.8	1.5	11.6	9.0					Cloudy; showery after 3 p.m.	9			
	10	30.153		30.221		52.9	37.1			45.7	44.0	44.9	39.1	0.0	11.1	1.0	11	1.5	1.4	2.6	0.25	5.6	9.0					Fine; mostly sunny; air very dry at times dur. day.	10			
	11	29.984		29.680		50.5	35.3			47.6	44.3	44.0	41.0	0.0	5	2.0	5.6	2.0	1.5	10.0	1.5	11.6	10.0					Cloudy; S. sh. at 6 p.m.	11			
	12	29.654		29.729		54.7	39.9			47.6	44.1	46.7	45.0	0.1	5	1.5	5	1.5	1.5	10.0	1.5	11.6	10.0					Mostly cloudy; a few S. sh. at 9 p.m.	12			
	13	29.708		29.308		54.5	43.1			46.6	43.9	44.7	47.0	0.1	5.6	1.5	5.6	2.3	2.5	10.0	1.5	11.6	10.0					Cloudy; S. sh. at 6 p.m.	13			
	14	29.310		29.622		50.5	37.2			44.9	39.0	38.9	36.2	0.18	11.1	2.0	11	2.0	1.5	10.0	1.5	11.6	10.0					Changeable; brisk S. sh. from midday; S. sh. at 10.15 a.m., S. sh. at 1.15 p.m.; sunny inters.	14	S		
	15	29.849		29.870		51.7	36.9			44.6	40.4	44.0	41.0	0.3	11	2.5	5.6	2.3	2.5	10.0	1.5	11.6	10.0					Mostly sunny; heavy S. sh. mixed with S. sh. at 3.20 p.m. - S. sh. at 9 p.m.	15	h		
	16	29.625		29.804		50.8	43.0			45.9	42.3	44.1	40.2	0.9	11	2.5	11	2.0	2.5	10.0	1.5	11.6	10.0					S. sh. with S. sh. at 5.30 a.m., S. sh. at 11 a.m., then fine.	16			
	17	29.683		29.550		50.5	40.7			46.7	42.4	42.3	40.1	0.5	11	2.0	11	2.0	2.5	10.0	1.5	11.6	10.0					Cloudy; S. sh. at 11.45 a.m. and 1.45 p.m.; sunny inters. after 3 p.m.	17			
	18	29.829		29.932		56.7	38.8			48.1	43.0	46.6	42.2	0.0	11	2.0	11	2.0	2.5	10.0	1.5	11.6	10.0					Fine; sunny; air very dry at times dur. day.	18			
	19	29.735		29.509		50.5	42.0			47.5	43.0	43.1	42.0	0.9	11	1.5	5.6	0.5	2.5	10.0	1.5	11.6	10.0					Cloudy; S. sh. at 1 p.m., S. sh. at 4 p.m. - End trace of S. sh. at 9.30 a.m.	19	S		
	20	29.562		29.678		48.5	41.5			43.7	41.3	42.8	43.0	0.5	11	1.0	5.6	0	1.4	10.0	1.5	11.6	10.0					Cloudy, with sunny inters.; rather hazy.	20			
	21	29.878		30.090		46.7	39.9			45.5	43.0	40.9	39.0	0.0	6	2.0	5.6	1.0	2.5	10.0	1.5	11.6	10.0					Fine; cloudy till 1 p.m., then sunny; very clear.	21			
	22	30.760		30.363		47.6	35.9			45.7	42.8	41.3	39.1	0.0	6	2.0	5.6	2.0	2.5	10.0	1.5	11.6	10.0					Fine; mostly sunny.	22			
	23	30.244		30.200		45.7	40.0			43.2	40.6	41.5	38.0	0.0	6	1.5	6	1.5	2.5	10.0	1.5	11.6	10.0					Cloudy; drizzle S. sh. at 7.30 a.m.	23			
	24	30.172		30.113		46.1	37.2			44.4	40.8	41.7	40.3	0.0	6.1	2.0	5.6	1.5	2.5	10.0	1.5	11.6	10.0					Fine; mostly sunny; very clear.	24			
	25	30.010		29.907		49.5	37.1			46.4	43.0	43.1	41.9	0.0	6.1	1.5	6	1.5	1.5	10.0	1.5	11.6	10.0					Fine; mostly sunny till 3 p.m. - S. sh. at 9.15 p.m.	25	+		
	26	29.977		30.088		50.7	40.4			48.7	44.8	42.9	42.1	0.0	6.1	1.5	6	1.5	1.5	10.0	1.5	11.6	10.0					Fine; sunny after 8.45 a.m.	26			
	27	30.070		29.974		44.7	41.4			41.5	41.2	44.7	44.1	0.9	6	1.4	6	0.25	2.5	10.0	1.5	11.6	10.0					Overcast; S. sh. at times after 8.45 a.m.	27			
	28	29.979		29.988		55.0	39.9			50.0	48.5	48.4	45.0	0.1	11.1	1.0	11	1.4	2.5	10.0	1.5	11.6	10.0					Cloudy, with short sunny inters.; thick S. sh. at times.	28			
	29	29.855		29.634		56.1	42.2			51.9	46.7	47.9	44.9	0.1	11.1	2.5	5.6	2.3	2.5	10.0	1.5	11.6	10.0					Mostly cloudy; S. sh. at times after 4 p.m. - S. sh. at 8 a.m.	29	+		
	30	29.548		29.698		54.7	42.7			46.9	42.1	43.0	41.5	0.6	11	1.5	11	0.25	2.5	10.0	1.5	11.6	10.0					Fine; mostly sunny; brisk S. sh. of S. sh. at 6.10 p.m.	30	h		
	31																														31	
Sums.		894.983		895.263		1473.1122				1331.3122		1029.5119		1.02																		
Means.																																
+ Total Corrections for Instrumental Errors.																																
+ Corrections for Diurnal Range.																																
"Corrected Means."		29.833		29.842		49.1374				44.4407		42.0397		1.02																		
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

NOTATION USED IN GENERAL REMARKS.					
a.	denotes aurora.	m.	denotes meteor.		
ci.	" cirrus.	ms.	" meteors.		
ci.-cu.	" cirro-cumulus.	n.	" nimbus.		
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. h.	" 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	Fresh.	2.	Fresh breeze.	5	Blowing a gale.
1.	Light air.	3.	Very fresh.	6	Violent gale.

NOTATION USED IN GENERAL REMARKS.

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

TABLE FOR ESTIMATING FORCE OF WIND.

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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), = 29.833"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 29.842Mean at Station, corrected, and at 32°, = 29.782
Correction for height, feet above Mean Sea-level, = 5.5Mean, reduced to 32°, and Sea-level, = 29.837Highest Reading, corrected for Index error, on the 22nd, = 30.363Lowest Do. Do. at 8 a.m. on the 1st, = 29.256Difference, or Monthly Range, = 1.107S.-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 18th, = 56.7Lowest in Month, corrected for Index errors, on the 3rd, = 29.1Difference, or Monthly Range, = 27.6"Corrected Mean" of all the Highest, (Col. 5), = 49.1"Corrected Mean" of all the Lowest, (Col. 6), = 37.4Difference, or Mean Daily Range, = 11.7** Calculated Mean Temperature of Month, = 43.2S.-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 18th, = 56.7"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 49.1Lowest at Night, Black Bulb (corrected for Index errors), on the 1st, = 29.1"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 37.4Difference of above means or range ("exposed"), = 11.7HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 43.2Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 40.2Computed Temperature of Dew-Point, = 36.6Do. Elastic Force of Vapour, = 0.217Do. Weight of Vapour in a Cubic Foot of Air, = 78Relative Humidity (Saturation = 100), = 78

RAIN fell on 19 Days; Amount in Inches

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55° 57' N, Long. 3° 10' W, Distance from Sea half mile.
Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet. During the MONTH of May 1897.
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.			9 h. A.M.		9 h. P.M.		9 A.M.		9 P.M.		9 h. A.M.									
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max. No.	Min. No.	Max. No.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Velocity (0-10) and Direction.	Amount (0-10) and Direction.	Amount (0-10) and Direction.	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.
		inches.	°	inches.	°																											
	1	29.821		29.676		54.2	38.6			48.6	43.4	50.6	45.1	0.00	W	1.4	W	2.0	20.0	16.0	20.0	10.5								Time; mostly sunny dur. forenoon. - So. ha. at 5.40 pm.	1	
	2	29.534		29.598		54.9	43.7	*		49.1	44.0	43.7	40.0	0.2	WSW	2.2	W	2.5	20.0	10.0	20.0	7.0								Brick. sh. at 5.30 am.; day fine, sunny at times aft. 9 am.	2	
	3	29.666		29.890		49.5	39.4			45.9	41.1	39.7	37.0	0.6	W	2.0	W	1.5	15.0	6.0	0	0								Time; sunny at times; a few pass. sh.	3	
	4	29.940		29.599		52.5	37.1			45.1	40.3	45.9	43.0	0.3	WSW	2.4	WSW	2.5	20.0	10.0	20.0	10.0								Cloudy; a few pass. sh. after 2.30 pm.	4	
	5	29.612		29.795		51.5	41.1	*		48.8	43.2	44.1	38.4	0.9	W	2.5	W	2.4	20.0	7.0	0	0								Silly, with fog sh. till 6.30 am.; day fine, except sh. at 9 am. & 11.45 am.	5	
	6	29.938		30.009		53.7	37.8			48.6	44.8	43.5	41.0	0.2	W	1.5	W	1.0	10.0	9.0	10.0	8.0								Time; sunny at times; pass. sh. at 11.45 am.; heavy sh. at 6.0 pm.	6	
	7	30.031		29.957		48.7	38.0			45.5	42.0	47.8	45.2	0.0	E	1.0	E	0.5	20.0	10.0	20.0	10.0								Time; mostly sunny; evening cloudy. - So. ha. at noon.	7	
	8	29.756		29.895		56.5	45.7	*		54.1	51.5	45.7	40.0	0.0	W	1.5	W	2.5	20.0	10.0	20.0	10.0								Cloudy; sunny intro. dur. afternoon; a few sh. - So. ha. at 1.30 pm.	8	
	9	30.042		30.183		56.7	44.4			50.3	43.0	46.7	41.2	0.0	W	2.4	W	1.4	20.0	10.0	20.0	10.0								Time; mostly sunny	9	
	10	29.968		29.926		55.7	39.0	*		49.6	43.0	39.0	34.1	0.0	W	2.4	W	2.0	20.0	10.0	20.0	10.0								Time; mostly sunny; pass. sh. of h. & v. at 4.53 pm.	10	
	11	29.902		30.053		49.1	36.5			45.8	40.0	40.7	34.9	0.0	W	2.5	W	2.4	20.0	10.0	20.0	10.0								Time; cloudy with occas. sunny intro. dur. forenoon.	11	
	12	30.123		30.255		46.7	37.6			42.0	36.0	41.8	36.3	0.0	W	2.0	W	1.5	15.0	9.0	15.0	10.0								Cloudy; fine.	12	
	13	30.288		30.132		53.9	36.9			46.7	39.2	48.9	44.4	0.0	W	1.4	W	1.5	15.0	10.0	20.0	10.0								Time; mostly sunny. - So. ha. at 9.15 am.	13	
	14	30.138		30.270		55.7	44.9			50.6	48.5	51.9	49.8	1.2	W	1.5	SW	0.5	15.0	10.0	15.0	10.0								Cloudy; sh. till about 10 am.	14	
	15	30.394		30.475		59.6	49.7	*		53.6	48.9	49.7	46.3	0.0	Var.	0.5	Calu.	0	15.0	10.0	15.0	10.0								Time; cloudy.	15	
	16	30.523		30.483		59.2	46.2	*		54.6	50.1	46.7	45.0	0.0	SE	0.5	SE	0.5	0	0	0	0								Time; sunny; almost cloudless.	16	
	17	30.425		30.425		58.7	44.0			56.4	48.8	47.6	45.8	0.0	E	1.5	SE	1.4	0	0	0	0								Time; bright sunshine; nearly cloudless.	17	
	18	30.448		30.432		52.8	44.7	*		46.1	43.9	44.7	42.5	0.0	E	2.4	SE	2.0	20.0	10.0	20.0	10.0								Time; cloudy till abt. 10.15 am. then sunny.	18	
	19	30.379		30.313		51.7	43.1			45.9	42.2	43.8	41.4	0.0	E	2.0	SE	2.0	20.0	10.0	20.0	10.0								Time; bright sunshine after 10.45 am.	19	
	20	30.262		30.213		52.8	42.6			44.7	42.2	43.8	43.8	0.0	E	2.0	SE	2.0	20.0	10.0	20.0	10.0								Time; mostly sunny bet. 9.45 am. & 4 pm.; very damp at 9 pm.	20	
	21	30.196		30.072		55.6	41.9			44.5	43.7	46.3	45.0	0.0	E	1.6	SE	2.0	20.0	10.0	20.0	10.0								Time; cloudy till abt. 10.30 am. & 4 pm.; then sunny.	21	
	22	30.027		29.982		52.7	41.2			46.8	44.5	44.8	43.0	0.0	E	1.6	E	1.0	20.0	10.0	20.0	10.0								Time; bright sunshine after 2 pm.	22	
	23	29.983		30.060		58.7	43.1			52.1	46.1	45.0	43.0	0.0	E	1.6	E	1.5	20.0	10.0	20.0	10.0								Time; sunny, nearly cloudless dur. day; evening cloudy.	23	
	24	30.056		29.917		53.9	43.9			47.7	43.5	47.9	44.3	0.0	E	1.5	E	1.0	15.0	10.0	15.0	10.0								Time; mostly sunny aft. 10.45 am. - Fair So. ha. at 6.10 pm.	24	
	25	29.746		29.569		49.3	45.3			48.6	45.9	45.8	45.0	0.8	W	1.4	SE	0.5	15.0	10.0	15.0	10.0								Cloudy; drizz. sh. at times aft. 6.30 am. & 11.45 am. dur. afternoon.	25	
	26	29.389		29.393		54.7	43.2			48.6	46.1	48.7	43.5	0.3	W	1.4	SE	0.5	15.0	10.0	15.0	10.0								Cloudy; a few night. brk. sh. bet. 11.30 am. noon; sunny intro. aft. 4 pm.	26	
	27	29.442		29.444		52.3	40.7	*		50.7	48.8	46.9	46.9	0.5	E	2.0	SE	1.5	15.0	10.0	20.0	10.0								Cloudy; with sunny intro. dur. forenoon; sh. aft. 4.20 pm. So. ha. at 5.40 pm.	27	
	28	29.449		29.237		47.9	45.4	*		46.8	46.5	47.6	47.4	0.4	E	2.0	Calu.	0	20.0	10.0	15.0	10.0								Time; thick f. at end about noon; conct. v. after 10.40 pm.	28	
	29	29.248		29.435		59.9	43.0			55.0	48.3	52.7	47.9	0.5	SE	2.5	SE	2.3	20.0	10.0	20.0	10.0								Time; mostly sunny.	29	
	30	29.600		29.789		62.7	50.0			54.6	49.7	56.6	51.2	0.0	E	2.2	SE	0.5	20.0	10.0	20.0	10.0								Time; sunny at times. - So. ha. at 4.10 pm.	30	
	31	29.859		30.074		69.0	50.0			58.5	52.7	50.6	49.2	0.7	SE	1.0	Var.	0.5	15.0	10.0	15.0	10.0								Sh. early morning; day fine, mostly sunny.	31	
	Sums.	928.195		928.501		1691.3	1312.7			1526.2	1385.9	1436.2	1341.6	1.29		8	51.5	3.8		22.3	19.3											
	Means.																															
	+ Total Corrections for Instrumental Errors.																															
	+ Corrections for Diurnal Range.																															
	+ Corrected Means.	29.942		29.952		54.6	42.3			49.2	44.8	46.3	43.3	1.29																		
	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 \pm = 29.942
for Temp. (Col. 2), =
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \pm = 29.952
for Temp. (Col. 4), =
Mean at Station, corrected, and at 32°, = 29.892
Correction for height, feet above Mean Sea-level, = 55
Mean, reduced to 32°, and Sea-level, = 29.947
Highest Reading, corrected for Index error, on the 16 th, = 30.525 523
Lowest Do. Do. at 7 am. on the 29 th, = 29.205 245
Difference, or Monthly Range, = 1.320 1.275

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 31st, = 69.0
Lowest in Month, corrected for Index errors, on the 11 th, = 36.5
Difference, or Monthly Range, = 32.5
"Corrected Mean" of all the Highest, (Col. 5), = 54.6
"Corrected Mean" of all the Lowest, (Col. 6), = 42.3
Difference, or Mean Daily Range, = 12.3
** Calculated Mean Temperature of Month, = 48.4

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

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 47.7
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 44.0
† Computed Temperature of Dew-Point, = 39.9
† Do. Elastic Force of Vapour, = 0.846
† Do. Weight of Vapour in a Cubic Foot of Air, =
† Relative Humidity (Saturation = 100), = 75
RAIN fell on 13 Days; Amount in Inches, = 1.29

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calu. or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	2	1	1	1	3		12		1	7.66	
P.M.	1	1	8	3	1	2	10	2	3	7.22	
Mean.	2	1	9	2	2	1	11	1	2	7.44	

Observations made and
Return verified by

(Signed) James Polans & George Redpath.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Luth, County of Edinburgh, in Lat 55°59'N, Long 3°10'W, Distance from Sea half miles.Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.During the MONTH of June 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.									
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		Direction.	Force.	Direction.	Force.	Velocity (0-10), and Species.	Velocity (0-30), and Species.	No.	No.	No.									
		* No.	inches.	* No.	inches.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.								
	1	30.113	30.044	55.948.0	55.948.0	54.0	51.8	49.6	48.8	0.00	E	2.0	E 1/2 S 2/4	15.3	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	1			
	2	30.108	30.217	55.747.8	55.747.8	52.6	50.8	47.8	47.8	0.0	E	2.5	E 1/2 S 2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	2		
	3	30.272	30.243	50.647.1	50.647.1	47.9	47.7	47.6	47.0	0.1	E	2.0	E 1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	3		
	4	30.200	30.153	60.746.9	60.746.9	53.1	50.8	54.0	52.8	0.0	E 1/2 S 1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	4	
	5	30.142	30.122	69.050.7	69.050.7	66.9	61.8	50.7	50.6	0.0	Var.	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	5	
	6	30.103	30.159	54.247.7	54.247.7	52.1	51.8	47.7	47.2	0.4	E	1.0	E 1/2 S 2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	6	
	7	30.206	30.199	50.044.1	50.044.1	47.6	45.0	45.8	42.3	0.4	E	1.5	E 1.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7	
	8	30.128	29.991	51.838.4	51.838.4	47.5	43.2	46.8	43.0	0.0	E	2.0	E 2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8	
	9	29.912	30.001	55.846.0	55.846.0	51.7	46.0	47.6	44.0	0.0	E	2.0	S 1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9	
	10	30.116	30.147	62.039.9	62.039.9	53.6	47.9	58.5	49.9	0.0	N 1/2 E 1.0	S 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10	
	11	30.139	30.112	69.353.0	69.353.0	57.7	53.7	61.5	57.1	1.6	N 1/2 S 1.0	S 1.5	1.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11	
	12	30.162	30.171	72.356.9	72.356.9	67.4	60.6	63.7	59.8	0.0	N 1/2 S 2.0	S 1.0	2.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	12	
	13	30.110	29.988	68.056.6	68.056.6	62.7	60.8	56.6	55.9	0.34	S 1.0	S 1.0	0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	13	
	14	29.848	30.035	62.753.4	62.753.4	58.0	56.8	53.7	49.8	0.5	N 1.0	N 2.0	2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14	
	15	30.094	29.925	55.746.6	55.746.6	55.7	48.3	49.6	48.1	0.6	N 1.0	N 2.0	2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	15	
	16	29.961	29.587	52.744.9	52.744.9	52.0	51.7	48.8	45.0	1.0	N 1.0	N 2.0	2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	16	
	17	29.644	29.664	60.743.1	60.743.1	54.8	48.1	48.7	45.0	0.1	N 2.0	N 1.5	1.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	17	
	18	29.459	29.671	49.344.0	49.344.0	47.0	45.3	47.7	45.5	0.2	E 1/2 S 2.0	N 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	18	
	19	29.923	29.724	58.642.9	58.642.9	50.6	44.9	45.2	44.0	0.5	N 1.0	N 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	19	
	20	29.779	29.918	50.643.2	50.643.2	45.4	45.0	49.6	48.0	0.4	E 1/2 S 2.0	S 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20	
	21	29.800	29.975	64.748.8	64.748.8	61.5	57.1	56.3	51.8	0.7	N 2.0	N 1.5	1.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	21	
	22	30.048	30.069	69.152.9	69.152.9	57.2	53.9	58.5	55.9	0.4	E 1.0	S 1.0	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22	
	23	30.028	29.939	70.854.0	70.854.0	61.0	58.3	62.5	59.8	0.8	E 1.0	Calcu 0	0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	23	
	24	30.029	30.102	63.750.0	63.750.0	51.7	49.8	52.0	48.8	0.8	E 2.0	S 1.0	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	24	
	25	30.094	30.028	65.944.5	65.944.5	60.3	55.0	57.7	55.1	0.0	E 2.0	S 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	25	
	26	30.058	30.046	64.954.0	64.954.0	56.6	54.8	55.2	53.8	0.0	N 1.0	S 1.0	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	26	
	27	30.060	30.052	66.552.6	66.552.6	64.5	58.8	52.6	51.2	0.0	E 1.5	E 1/2 S 2.0	2.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	27	
	28	30.021	30.023	54.951.6	54.951.6	54.6	52.9	53.6	53.1	0.2	E 2.0	N 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	28	
	29	29.982	29.977	59.753.0	59.753.0	55.6	54.9	54.8	54.4	0.3	E 1/2 S 1.0	Calcu 0	0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	29	
	30	30.022	30.079	62.253.6	62.253.6	59.8	58.6	53.6	53.0	0.0	E 1.0	N 1.0	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	30	
	31																														31	
Sums.		899.866	900.351	1806.0456.0	1806.0456.0	1661.15	1015.800	1508.5	397	14.5	2.5																					
Means.																																
+ Total Corrections for Instrumental Errors.																																
+ Corrections for Diurnal Range.																																
"Corrected Means."		29.996	30.012	60.248.5	60.248.5	55.4	52.3	52.7	50.3	3.97																						
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 for Temp. (Col. 2) = 29.996
"Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4) = 30.012
Mean at Station, corrected, and at 32° = 7
Correction for height, feet above Mean Sea-level = 50.004
Mean, reduced to 32°, and Sea-level = 30.272
Highest Reading, corrected for Index error, on the 3rd = 29.261
Lowest Do. Do. at 9 a.m. on the 16th = 29.261
Difference, or Monthly Range, = 1.010

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 12th = 72.3
Lowest in Month, corrected for Index errors, on the 8th = 38.4
Difference, or Monthly Range, = 33.9
"Corrected Mean" of all the Highest, (Col. 5), = 60.2
"Corrected Mean" of all the Lowest, (Col. 6), = 48.5
Difference, or Mean Daily Range, = 11.7
** Calculated Mean Temperature of Month, = 54.4
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 12th = 72.3
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 60.2
Lowest at Night, Black Bulb (corrected for Index errors), on the 8th = 38.4
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 48.5
Difference of above means or range ("exposed"), = 11.7

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 54.0
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 51.3
†† Computed Temperature of Dew-Point, = 48.7
†† Do. Elastic Force of Vapour, = 0.344
†† Do. Weight of Vapour in a Cubic Foot of Air, = 8.2
†† Relative Humidity (Saturation = 100), = 82
RAIN fell on 18 Days; Amount in Inches, = 3.97

WIND.		SUMMARY.					
Direction.	N	NE	E	SE	S	SW	W
A.M.	1	2	1	1	1	1	1
P.M.	1	2	1	1	1	1	1
Mean.	1	2	1	1	1	1	1

Observations made and
Return verified by

(Signed)

James Colman & George Redpath

INSTRUCTIONS

FOR TAKING

WITH REMARKS ON THE USE OF INSTRUMENTS.

FOR TAKING METEOROLOGICAL

OBSERVATIONS.

WITH REMARKS ON THE USE OF INSTRUMENTS.

OBSERVATIONS,

IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

IN CONNECTION WITH THE PERIODICAL RETURN OF THE SEASONS.

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure uniformity in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different observations, it being found that differences between the Returns from two Stations, so very considerable as to render them quite incompatible, may arise from dissimilarity in the position or shelter of instruments, different hours of observation, or even from the use of differently constructed instruments. It is therefore hoped that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for their Monthly Returns an accuracy and value commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, an entire comprehensiveness among the several Returns, without which the Society's Reports must inevitably fail in achieving one of the main objects of Meteorological Observation.

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

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTY'S Barometer; the arrangement consisting in applying pressure by means of a screw to the bottom of the cistern, which is made of flexible leather, thus raising or depressing the surface till it just meets the ivory point which forms the zero point of the fixed scale.

The Barometer originally constructed by Mr. ADIE of London, and usually called the Board of Trade Barometer, has the great convenience of requiring no adjustment of the cistern. Its scale inches are not true inches, but so much shorter as to compensate the error that would otherwise arise from the fluctuations of the surface of mercury in the cistern. This is an excellent Barometer for ordinary Observers, inasmuch as it entirely eliminates the error of observation likely to arise in a not a few cases in setting the instrument to the zero point of the fixed scale when the light is not good. To show the accuracy with which these Barometers are made, it may be stated, that one was compared during a whole year with the Society's Standard Barometer, particularly being given or falling very rapidly with the result that the error of the readings differed from those of the Standard more than 0.003 inch.

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

It is absolutely necessary that the Barometer which is to be used shall have been compared with a Standard Barometer.

The Barometer should be reading in as good a light as can be secured, and to facilitate the reading a piece of white paper may be put behind the tube. It must be hung truly perpendicular, and exposed to neither the sun's direct rays, nor the heat of a fire, and must not be hung against a wall heated by a fire. The object being to secure that while instrument, including the brass fittings, the cistern, and the attached thermometer, shall be, when read, at one uniform temperature, it is evident that the best position is that which is least liable to sudden changes of temperature. In taking an observation, the Attached Thermometer is first noted; this is to be done then by gently tapping, and the cistern-adjustment is fully made. The 5°s, by raising and lowering it, must be brought into the place of the index, and of the index, usually the outer edge of the vernier, which must be carefully adjusted so as to form exactly a tangent to the convex surface of the mercury in the tube. Observations must be taken quickly, so as to prevent heat from the observer's hand, or person, from affecting the mercury. The use of a lens will facilitate an accurate adjustment of the Barometer. A mistake is not unfrequently made by those beginning to observe, considering, setting the edge of the vernier to the top of the glass surface of the cistern, which is in direct contact with the glass, and must be carefully collared.

The thermometer, which must be directly collared, is in errors of 1.000 inch, 0.500 inch, and 0.250 inch; that is to say, instead of 29.365 inches, either the following is sometimes found: viz. as 29.365 inches, 29.365 inches, 29.365 inches, or 29.815 inches. Experience shows that even the best Observers make these mistakes, having adjustable surfaces has to be removed. When a Barometer, having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a tight plug to the cistern, thus preventing the escape of the mercury. Then screw up the ivory peg first to the top of the tube, but, with a quarter of an inch, and take down the instrument, it should then be collared with the cistern uppermost. Before setting the Barometer, first, must be ascertained whether this is the case, by inclining the instrument, a sharp tap is produced when the mercury strikes the top of the tube. If dull tap is heard, there is air in the tube, which must be got rid of.

As Barometers are liable to be damaged by the introduction of air into them, it is, on coming from place to place, or in being roughly handled, it is very essential to observe, how the ivory peg might be expelled. First close up the cistern by screwing the ivory peg right, so as to prevent the escape of mercury; then screw up the mercury to about an inch from the top of the tube, and holding slowly inverted the instrument, place the top of it, tube, and holding substance, as the cork, and gently tap on the cistern with the palm of the hand, so as to induce the air to escape through the joint to the cistern, whence it may escape. Since there is no weight of two atmospheres the pressure of the mercury in the Barometer, the air is actually tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished, and the mercurial surface of the mercury, when gently struck against the top of the glass tube, will show from the side of the air has been expelled. On hanging up the Barometer, care must be taken to screw down the ivory peg in the tube before unscrewing the top of the glass, for, if this be not attended to, the mercury will flow out, and the instrument be seriously damaged.

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Louver-boarded Box for exposure to the weather, as was in the past by repeated and annoying breakages of Thermometers, either Negretti and Zamboni's, or Phillips's Maximum Thermometers, and the highest temperatures they may be exposed to register. By the laws of the Society, Members and Observers have right to have their instruments used, and by the Secretary, and loading with him regarding the use of instruments.

Very great care should be bestowed on the use of instruments, and wind, and force, is so essential to the observations that a discussion of many of the more important problems of the science. A Wind-Vane ought to be elevated at least 12 feet above surrounding objects. When it indicates incessantly, the wind is especially when the Vane is stationary; and when the wind is feeble, reference may be made to the direction of smoke, etc., in well-exposed situations. Careful observations are recommended to be made on the changes in the direction of the wind; and during storms, extra observations at every hour of Greenwich time. Such a system of simultaneous observation, pursued at different Stations, is likely to give highly valuable and important results, particularly in connection with the system of thickly-planted Stations over a limited district round Edinburgh called SPIRIT STATIONS, in the course of being established by the Society for the systematic investigation of the relation of the force of the wind to the occurrence of GRADES, and other points connected with storms.

The Council would recommend the Hemispherical Cup Anemometer, a self-registering instrument which shows the amount of wind that passes it per day; from which also the mean Velocity per day, and at the time of observation may be ascertained. No indication of the Force of the Wind at any particular hour of observation, the Pressure Anemometer recently brought under the notice of the Society by Mr. T. Stevenson, the Honorary Secretary, and Mr. R. Ballingall, the Society's Observer at Edinburgh, are recommended as likely to secure uniformity in making observations on the Force of the Wind.

Many causes combine to produce an error in Rain Returns, arising partly from the difficulty of obtaining a perfectly unobjectionable situation for observation, and partly from the defective nature of the instruments used. The Rain Gauge should not be placed on a slope of a fence, but on a level piece of ground, in as open a situation as possible, and as free and unobstructed by surrounding objects as is desirable. The gauge must be perfectly level, and fixed so that it will remain level in all weathers, and be at least eight or ten feet above ground level. In such gauges as the King's, which are furnished with a measuring rod attached to the float, ought to be fixed down, and the float rise to its height only at the time the instrument is read, it being found that a spring projecting above the rim of the Rain Gauge seriously interferes with the operation of the float. The Rain Gauge, when a measuring glass is used, care should be taken to hold it quite perpendicular. The Rain Gauge ought to be read daily at 9 A.M., and the reading entered in the Return of the previous day. If the Gauge is read at a month, the reading is to be made on the first of the month, and the amount entered for the previous month.

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

Convenient abbreviations for the nomenclature of Clouds will be found on the other side. The amount of Cloud ought to be estimated from the greater or less obscuration of the sky overhead (i.e. within 20° or 30° of the zenith). The strata of Clouds that appear near the horizon are viewed obliquely; and thus, being unable to judge of their amount, we ought not to take them into account in the Clouds' column, though their appearance and changes may be noted among the Remarks. The amount of Cloud is entered from a scale of 0 to 10; thus, when the sky over Clouds is wholly covered, 10, and so on. Observations of the Clouds are made at 9 A.M. and at sunset, as illustrating the condition and currents of the upper and lower regions of the atmosphere. The entries in the schedule are to be made in the following manner.—Thus, in the column Velocity and Direction, S, S.W. will indicate that the upper strata of Clouds travel with extreme velocity from S.W., and those in the lower regions from W., with one-third the speed of the former. Again, in the second Cloud column, an entry of 2, east, will indicate that the higher regions are covered to the amount of 4-tenths with stratus Clouds; and that the sky is further obscured to the extent of 2-tenths by lower Clouds of the cumulo stratus kind.

Remarks on peculiar Clouds accompanied with drawings, will assist materially in the development of a more exact nomenclature of Clouds, as well as throw light on the electrical, and other of the more obscure phenomena of Meteorology. The approximate number of Hours in which objects in the sun's rays cast shadows, should be entered in the proper column.

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

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

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 and greater depths, noting always the Temperature of the Air, and the Hour of Observation. It is also very desirable that observations on the daily Maxima and Minima by Thermometers continuously immersed, be instituted at points along the coast, by the method proposed by Mr. T. Stevenson, and already commenced at Peterhead and Liverpool.

The Temperature of the water at the bottom of Wells ought, when practicable, to be taken, both the depth of the water, and the temperature of the water being noted.

Mention what Test-Papers are used, Schönbien's or Moffat's, etc. The Paper is affixed by a pin to a board in the Thermometer Box, and the indications registered at 9 A.M. and 9 P.M. It is desired that these indications be registered in connection with the force and direction of the wind at the time of observation, in the following manner:—thus 3°-5°, as an Ozone entry in the schedule will indicate that the Ozone paper is tinted as 3 on the scale, that the wind is from the N.W., and that its force on the scale 0-5 is 4, or blowing fresh.

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

The Remarks column is unavoidably too narrow. Some of the most valuable Observations that can be taken are assigned. The use of contractions ought, therefore, to be taken every advantage of, and a list of such as are in general use is given at the foot of the column. Besides special and extraordinary Observations, great prominence ought to be given in this column to Prevailing Diseases, differences in character, colour, velocity, and direction between the Lower and Upper Strata of clouds, the Colour of the Sky, etc. Remarks ought to be made on the occurrence of Meteors, Auroræ Boreales, remarkable depressions, elevations, and fluctuations of the Barometer, Thunder-Storms, and remarkable Snow, Hail, or Rain, the Hour of Storms or Wind commencing, attaining their maximum, and ending, as well as such Notes on Storms as have been limited at above. When lofty hills are in the vicinity of a Station, the Height of Clouds and of the Snow-line in winter should be recorded. By the use of abbreviations, the state of the weather at 9 A.M. and 9 P.M. should be registered, either in two columns, otherwise unoccupied, or ruled off for the purpose, from the column of Remarks.

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

The Council recommend Observers, before purchasing new instruments, and in repeating old ones, to communicate with the Meteorological Secretary, in order that every instrument may be examined and improved before being used; and 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)
EDINBURGH, December 1891.

FOREST TREES.	PRUITTS.	MIGRATORY BIRDS.
Alder,	Apple,	Cuckoo,
Aspen,	Black Currant,	Crow,
Beech,	Cherry,	House-Swallow,
Birch,	Corn,	Lapwing,
Elm,	Gooseberry,	Plover,
Larch,	Holly,	Sand-Blatth,
Oak,	Laburnum,	Starling,
Swampy or Plane,	Mezeon,	Swan,
	Mountain Ash or Rowan,	Rail or Corn Crake,
	Red Flowering Currant,	
	Rhododendron Ponticum,	
	Whin,	

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 any have suffered from blight, disease, etc., Whether Epizootic disease prevails among cattle, and the Agricultural condition of the district generally.

To the SECRETARY

Scottish Meteorological Society,

122 George Street,

EDINBURGH.

BOOK POST.



SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Latitude 55° 41' N, Longitude 3° 10' W, Distance from Sea half mile.
Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet. During the MONTH of July 1897.
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.			9 h. A.M.		9 h. P.M.		9 A.M.		P.M.		9 h. A.M.				9 A.M. 9 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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BAROMETER, "corrected Mean" at 9 A.M., minus the Correction \pm = 29.951
for Temp. (Col. 2), = 29.951
"Corrected Mean" of Barometer at 9 P.M., minus the Correction \pm = 29.951
for Temp. (Col. 4), = 29.951
Mean at Station, corrected, and at 32°, = 29.897
Correction for height, feet above Mean Sea-level, = 5.4
Mean, reduced to 32°, and Sea-level, = 29.951
Highest Reading, corrected for Index error, on the 11 th., = 30.369
Lowest Do. Do., at 5 p.m. on the 5 th., = 29.375
Difference, or Monthly Range, = 0.994

S-R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 15 th., = 80° 3'
Lowest in Month, corrected for Index errors, on the 8 th., = 43° 0'
Difference, or Monthly Range, = 37° 3'
"Corrected Mean" of all the Highest, (Col. 5), = 67° 0'
"Corrected Mean" of all the Lowest, (Col. 6), = 52° 0'
Difference, or Mean Daily Range, = 15° 0'
** Calculated Mean Temperature of Month, = 59° 5'
S-R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 15 th., = 80° 3'
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 67° 0'
Lowest at Night, Black Bulb (corrected for Index errors), on the 8 th., = 43° 0'
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 52° 0'
Difference of above means or range ("exposed"), = 37° 3'

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 58° 2'
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 54° 5'
Computed Temperature of Dew-Point, = 51° 2'
Do. Elastic Force of Vapour, = 0.377
Do. Weight of Vapour in a Cubic Foot of Air, = 78
Relative Humidity (Saturation = 100), = 78
RAIN fell on 12 Days; Amount in Inches, = 2.29

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.		4	6	1		2	17		1	152	
P.M.	1	2	8	1	2	2	11		3	138	
Mean.	1	3	7	1	1	2	14	0	2	145	

(Signed) James Polans & George Redpath

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55° 59' N, Long. 3° 10' W, Distance from Sea half mile.
Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet. During the MONTH of August 1897.
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.		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 Ther- mometer	Barometer.	Attached Ther- mometer	Max.	Min.	Max. in Sun/rays	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	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.					No.	No.
		* No.	°	No.	°	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.					No.	No.
		inches.	°	inches.	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°					
	1	30.125		30.094		68.9	55.3			58.5	56.8	57.5	56.8	0.00	11.6	1.0	Wly	0.25	15.7	10.0	0	0						1				
	2	30.112		30.117		74.0	54.9			61.4	58.8	59.5	57.8	0.00	5.6	0.25	Wly	1.0	15.7	10.0	0	0						2				
	3	30.262		30.181		64.8	56.8			62.5	57.8	58.5	57.8	0.00	6.0	0.5	Wly	1.2	15.7	10.0	0	0						3				
	4	30.111		29.929		69.1	56.3			58.0	57.5	62.4	61.3	0.92	Calu	0	Calu	0	15.7	10.0	0	0						4				
	5	29.808		29.669		72.5	57.8			69.9	66.4	63.7	62.0	2.27	6.0	0.25	Calu	0	15.7	10.0	0	0						5				
	6	29.576		29.621		72.9	60.3			66.5	63.3	63.5	59.2	0.60	8.8	0.5	S	1.5	15.7	10.0	0	0						6				
	7	29.504		29.744		72.2	58.8			64.0	60.6	60.6	56.8	0.03	11.6	0.5	SW	1.0	15.7	10.0	0	0						7				
	8	29.667		29.654		68.9	53.8			61.5	58.8	58.4	57.3	0.00	11.6	1.0	SE	0.25	15.7	10.0	0	0						8				
	9	29.734		29.819		74.4	53.3			57.9	53.9	60.5	58.1	0.00	11.6	1.5	W	1.0	15.7	10.0	0	0						9				
	10	29.871		29.851		69.1	57.3			60.3	55.8	57.5	56.3	0.07	11.6	0.25	Var.	0.25	15.7	10.0	0	0						10				
	11	29.759		29.774		67.1	56.0			59.7	57.6	56.8	56.8	1.12	5.6	0.25	SW	1.0	15.7	10.0	0	0						11				
	12	29.844		29.937		69.9	56.0			59.5	56.8	59.5	55.8	0.06	11.6	0.5	W	1.1	15.7	10.0	0	0						12				
	13	29.846		29.684		60.7	53.3			58.5	56.9	57.5	57.8	0.42	5.6	0.5	SW	1.0	15.7	10.0	0	0						13				
	14	29.706		29.701		67.8	54.0			60.7	56.3	56.8	53.8	0.11	11.6	2.0	SW	1.5	15.7	10.0	0	0						14				
	15	29.686		29.645		64.7	53.0			61.5	55.8	56.8	55.8	0.19	11.6	2.0	SW	0.5	15.7	10.0	0	0						15				
	16	29.680		29.650		65.9	51.9			60.4	55.6	57.5	53.8	0.03	11.6	2.0	SW	2.0	15.7	10.0	0	0						16				
	17	29.318		29.457		67.0	54.8			62.3	57.7	57.0	54.0	0.07	11.6	3.0	W	2.5	15.7	10.0	0	0						17				
	18	29.562		29.652		66.4	53.0			60.5	54.9	55.5	51.6	0.00	11.6	2.0	W	1.5	15.7	10.0	0	0						18				
	19	29.649		29.618		64.6	50.0			57.3	51.9	54.9	51.1	0.00	11.6	2.0	S	2.2	15.7	10.0	0	0						19				
	20	29.323		29.268		67.9	54.8			59.5	55.0	57.5	57.3	0.10	5.6	1.0	SW	1.0	15.7	10.0	0	0						20				
	21	29.267		29.274		64.0	54.1			58.7	53.7	54.5	52.8	0.32	11.6	2.4	Calu	0	15.7	10.0	0	0						21				
	22	29.419		29.483		65.9	51.7			57.5	52.5	56.9	55.2	0.00	11.6	2.0	W	1.0	15.7	10.0	0	0						22				
	23	29.576		29.636		64.1	54.7			57.5	54.6	54.7	51.7	0.00	11.6	2.0	SE	0.5	15.7	10.0	0	0						23				
	24	29.639		29.740		64.5	50.3			57.0	53.8	57.5	56.1	0.00	5.6	1.0	E	1.5	15.7	10.0	0	0						24				
	25	29.768		29.770		63.6	56.0			58.3	57.8	56.4	55.8	0.07	5.6	1.5	SW	1.0	15.7	10.0	0	0						25				
	26	29.682		29.536		69.2	52.0			60.7	57.8	58.5	57.3	0.08	5.6	1.5	SE	2.0	15.7	10.0	0	0						26				
	27	29.588		29.665		69.0	51.3			60.7	56.3	57.6	53.8	0.00	11.6	1.0	W	2.0	15.7	10.0	0	0						27				
	28	29.713		29.754		64.8	51.8			60.5	55.3	58.0	54.1	0.05	11.6	0.5	S	1.5	15.7	10.0	0	0						28				
	29	29.775		29.483		65.2	51.8			57.3	54.8	57.5	54.8	0.05	5.6	1.0	SE	2.0	15.7	10.0	0	0						29				
	30	29.352		29.428		62.9	56.0			58.1	53.2	57.6	53.2	0.01	5.6	2.5	SW	2.5	15.7	10.0	0	0						30				
	31	29.454		29.508		64.7	50.8			57.7	53.8	57.5	53.8	0.00	11.6	0.5	SW	0.5	15.7	10.0	0	0						31				
	Sums.	920.565		920.462		2086.7682				1864.4	1756.8	1802.6	1729.8	4.57	335																	
	Means.																															
	+ Total Corrections for Instrumental Errors.																															
	† Corrections for Diurnal Range.																															
	"Corrected Means."	29.696		29.692		67.3	54.3			60.1	56.7	58.2	55.8	4.57																		
	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.
cl.	cirrus.	ms.	meteors.
cl.-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. 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 for Temp. (Col. 2), = 29.696
“Corrected Mean” of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 29.692
Mean at Station, corrected, and at 32°, = 69.4
Correction for height, feet above Mean Sea-level, = 50
Mean, reduced to 32°, and Sea-level, = 29.694
Highest Reading, corrected for Index error, on the 5th, = 30.271
Lowest Do. Do., at 11 p.m. on the 20th, = 29.211
Difference, or Monthly Range, = 1.060

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 9th, = 74.4
Lowest in Month, corrected for Index errors, on the 19th, = 50.0
Difference, or Monthly Range, = 24.4
“Corrected Mean” of all the Highest, (Col. 5), = 67.3
“Corrected Mean” of all the Lowest, (Col. 6), = 54.3
Difference, or Mean Daily Range, = 13.0
** Calculated Mean Temperature of Month, = 60.8

S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 9th, = 74.4
“Corrected Mean,” (Col. 7), of Black Bulb, Max. in Sun, = 67.3
Lowest at Night, Black Bulb (corrected for Index errors), on the 19th, = 50.0
“Corrected Mean,” (Col. 8), of Black Bulb, Min. on grass, = 54.3
Difference of above means or range (“exposed”), = 24.4

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 59.1
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 56.2
†† Computed Temperature of Dew-Point, = 53.6
†† Do. Elastic Force of Vapour, = 0.412
†† Do. Weight of Vapour in a Cubic Foot of Air, = 8.2
†† Relative Humidity (Saturation = 100), = 82
RAIN fell on 19 Days; Amount in Inches, = 4.57

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	1	1	4	5	3	2	13	1	1	1.08	
P.M.	1	3	3	4	7	6	0	4	1	1.16	
Mean.	1	2	4	4	4	4	9	1	2	1.12	

Observations made and
Return verified by

(Signed) James Bolau & George Redpath.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat 55° 59' N, Long 3° 10' W, Distance from Sea half miles.
 Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet. During the MONTH of September 1897.
 The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		9 P.M.			9 h. A.M.								
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	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.					No.	No.
		* No.	inches.	No.	inches.	No.	No.	No.	No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No.	No.	Direction.	Force.	Direction.	Force.	9 h. A.M.	Direction.		Amount (0-6) and Species.	Amount (0-10), and Species.	No.					inches.	No.
		1	29.539	29.365	64.1	52.3	60.5	56.0	56.6	55.1	0.06	Var. 0.25	E	1.0	11.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		2	29.327	29.598	58.6	52.3	54.4	53.0	52.8	49.6	0.27	11.1	1.5	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		3	29.782	29.693	57.7	44.9	47.6	44.5	46.7	43.8	0.21	11.0	0.5	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		4	29.753	29.847	59.3	41.7	50.4	44.8	50.6	46.9	0.19	11.0	2.0	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		5	29.622	29.546	57.5	45.5	47.1	46.9	51.9	50.0	0.20	11.0	0.5	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		6	29.583	29.875	63.6	48.9	54.4	50.8	51.4	47.5	0.12	11.0	1.5	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		7	30.032	29.984	58.7	43.7	50.1	45.2	49.9	46.9	0.00	11.0	1.0	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		8	29.983	29.987	58.9	42.7	49.8	46.4	47.6	43.8	0.02	11.0	1.0	Var. 0.25	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		9	30.138	30.285	60.4	44.9	52.0	47.2	49.6	45.9	0.01	11.0	1.5	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		10	30.403	30.439	58.7	41.9	52.8	48.6	46.5	44.0	0.00	11.0	0.5	W	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		11	30.450	30.404	62.4	40.4	50.6	47.3	50.1	47.8	0.00	11.0	0.5	W	0.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		12	30.428	30.483	66.1	43.2	54.8	51.8	58.3	56.0	0.00	11.0	1.5	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		13	30.539	30.541	71.1	57.0	61.8	58.8	57.5	56.8	0.02	11.0	1.0	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		14	30.493	30.396	63.7	55.5	62.6	58.7	56.6	53.6	0.03	11.0	1.0	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		15	30.261	30.116	60.1	51.8	53.5	50.5	56.8	55.0	0.04	11.0	2.0	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		16	30.071	29.707	60.0	48.9	55.6	50.6	50.1	47.9	0.01	11.0	2.4	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		17	29.563	29.629	58.5	44.9	53.0	46.9	45.7	44.0	0.07	11.0	2.0	Var. 0.25	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		18	29.692	29.759	57.7	41.4	49.6	44.0	46.7	43.0	0.00	11.0	1.2	W	1.15	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
		19	29.839	29.928	61.4	41.3	49.1	44.4	46.7	44.2	0.00	11.0	1.5	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		20	29.849	29.661	62.7	44.9	55.9	51.5	52.6	49.1	0.00	11.0	1.5	W	1.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	
		21	29.508	29.698	60.5	49.2	58.5	51.8	49.7	45.9	0.08	11.0	2.5	W	2.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
		22	29.612	29.508	54.7	48.8	53.6	50.6	48.8	47.1	0.12	11.0	2.4	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		23	29.436	29.323	60.9	46.9	55.6	51.6	57.0	53.9	0.07	11.0	2.4	W	2.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	
		24	29.433	29.637	58.7	46.7	58.5	54.1	49.7	46.9	0.09	11.0	2.0	W	2.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
		25	29.921	29.892	60.5	47.0	54.6	49.0	55.1	50.8	0.00	11.0	2.5	W	2.3	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	
		26	29.763	30.021	60.8	49.6	56.7	52.6	49.6	46.9	0.00	11.0	3.35	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		27	30.176	30.178	61.7	46.9	53.0	50.0	54.7	51.0	0.00	11.0	1.5	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		28	30.062	29.935	60.8	47.9	56.5	53.6	54.7	52.8	0.00	11.0	1.0	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		29	29.781	29.681	59.9	51.1	57.5	56.6	52.0	50.0	0.17	11.0	1.4	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		30	29.759	29.856	62.7	44.0	51.4	44.9	49.8	44.8	0.01	11.0	1.0	W	1.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
		31																														
Sums.		896.758	896.971	1827.4	1409.2	1622.5	1507.6	1544.4	1464.2	1.79																						
Means.																																
+ Total Corrections for Instrumental Errors.																																
+ Corrections for Diurnal Range.																																
"Corrected Means."		29.892	29.899	60.947	0	54.1	50.3	51.5	48.8	1.79																						
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

NOTATION USED IN GENERAL REMARKS.					
a.	denotes aurora.	m.	denotes meteor.		
ci.	" cirrus.	ms.	" meteors.		
ci.-cu.	" cirro-cumulus.	n.	" nimbus.		
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.	sq. 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	Fresh breeze	2	Fresh breeze	5	Blowing hard
1	Light air	2.5	Very fresh	6	Violent gale

NOTATION USED IN GENERAL REMARKS.

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

TABLE FOR ESTIMATING FORCE OF WIND.

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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction for Temp. (Col. 2), = 29.892
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4), = 29.899
 Mean at Station, corrected, and at 32°, = 29.841
 Correction for height, feet above Mean Sea-level, = 55
 Mean, reduced to 32°, and Sea-level, = 29.896
 Highest Reading, corrected for Index error, on the 13th, = 30.544
 Lowest Do. Do., at 3 p.m. on the 29th, = 29.253
 Difference, or Monthly Range, = 1.291

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 13th, = 71.1
 Lowest in Month, corrected for Index errors, on the 19th, = 41.3
 Difference, or Monthly Range, = 29.8
 "Corrected Mean" of all the Highest, (Col. 5), = 60.9
 "Corrected Mean" of all the Lowest, (Col. 6), = 47.0
 Difference, or Mean Daily Range, = 13.9
 ** Calculated Mean Temperature of Month, = 53.9

S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 13th, = 71.1
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, = 60.9
 Lowest at Night, Black Bulb (corrected for Index errors), on the 19th, = 41.3
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, = 47.0
 Difference of above means or range ("exposed"), = 29.8

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 52.8

INSTRUCTIONS

FOR TAKING METEOROLOGICAL OBSERVATIONS,

WITH REMARKS ON THE USE OF INSTRUMENTS.

ONE of the chief objects that the SCOTTISH METEOROLOGICAL SOCIETY proposed to itself when the Society was established in 1855, was to secure uniformity in the system of observation pursued at all its Stations. Uniformity in the observations is absolutely necessary to justify the publication of Monthly Results from different Observations; it being found that differences between the Returns from two Stations, so very considerable as to render them quite incomparable, may arise from dissimilarity in the position or the use of differently constructed instruments. It is therefore hoped, that those who kindly furnish Reports to the Society will, by a scrupulous attention to the following Directions, secure for their Monthly Returns an accuracy and value commensurate with the labour and pains involved in making them; and, for the Tables published by the Society, an entire comparableness among the several Returns, without which the Society's Reports must inevitably fail in achieving one of the main objects of Meteorological Observation.

The Council recommend that Observations be made precisely at 9 A.M. and 9 P.M. (Greenwich or Railway Time only),

as specified in the following remarks, or at the top of the column of the Schedule. It is hoped that the utmost punctuality in the time of reading the instruments will be observed. Observers, in some few cases, may find this impossible; in such instances, they are specially requested to mark opposite every reading the time at which it was taken, if not at 9 A.M. or 9 P.M.

Weather-Glasses and Aneroids, though well suited to indicate roughly variations of atmospheric pressure, are not fitted for scientific purposes. No Barometer should be used for Meteorological Observation that is not supplied with some means of adjustment or compensation which will secure that the height of the mercury in the tube is accurately measured from the fluctuating surface of the mercury in the cistern.

The Barometer in which the error arising from the fluctuating surface of the mercury in the cistern is entirely got rid of is FORTIN'S Barometer, the arrangement consisting in applying pressure by means of a screw to the bottom of the cistern, which is made of flexible leather, thus raising or depressing the surface till it just meets the ivory point which forms the zero point of the fixed scale.

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

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

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

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

The errors most frequently made in reading the Barometer are errors of 1.000 inch, 0.500 inch, and 0.250 inch; that is to say, instead of 29.365 inches, either of the following is sometimes set down—viz. as 30.365 inches, 28.365 inches, or 29.815 inches. Experience having shown that even the very best Observers make these mistakes, particular attention is directed to the matter.

When a Barometer having adjustable surfaces has to be removed from its fastenings, the ivory peg must first be screwed so as to form a tight plug to the cistern, thus preventing the escape of the mercury. Then saw up the mercury not quite to the top of the tube, but to within a quarter of an inch of it, and take down the instrument; it should then be carried with the cistern uppermost. Before suspending the Barometer for use, it must be ascertained whether the space above the mercury in the tube is a complete vacuum; this is the case if, on inclining the instrument, a sharp tap is produced when the mercury strikes the top of the tube. If a dull tap is heard, there is air in the tube, which must be got rid of.

As Barometers are liable to be deranged by the introduction of air into their tubes, on removal from place to place, or in being roughly handled, it may be useful to Observers to know how the air may be expelled. First close up the cistern by screwing the ivory peg tight, so as to prevent the escape of mercury; then screw up the mercury to about half an inch from the top of the tube; and having slowly inverted the instrument, place the top of it on a yielding substance, such as the foot, and gently tap on the cistern with the palm of the hand, so as to induce the air to ascend through the column to the cistern, whence it may escape. Since there is the weight of two atmospheres—the pressure of the mercury in the Barometer, and the air outside—pressing on any air that may be inside the tube, it is usually a tedious operation to get it wholly expelled. After repeated trials, however, it is generally accomplished; and the clear metallic sound of the mercury, when gently struck against the top of the glass tube, will show when the whole of the air has been expelled. On hanging up the Barometer, care must be taken to screw down the mercury in the tube before unscrewing the float of the cistern, for, if this be not attended to, the mercury will flow out, and the instrument be seriously damaged.

The Council of the Society recommend that the Self-Registering Thermometers, and the Dry and Wet Bulb Hygrometers, be kept in Stevenson's Lath-worked Box, or in a similar case, and that the boxes be painted white inside and outside, and secured to four stout posts, each a length of three feet, fixed in the ground. The posts must be such a length that, when the Thermometers are 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 open space to which the sun's rays have access, turning as much as may be as surrounding objects, so as to enable the Observer to secure the Thermometers are suspended on cross-pieces in the centre of the Box, and the door, which should open to the north.

The Council regard the question of TEMPERATURE, and HEIGHT ABOVE GROUND, and MINIMUM THERMOMETERS, as vital in every system of Meteorological Observation, since without accurate observations of these elements, the observations of the other elements are rendered of little value. It is recommended that these observations be made at least twice a day, viz. at 9 A.M. and 9 P.M. Minimum Thermometer is liable to two derangements—viz. the column of spirit breaking, and part of the spirit discharging by high temperature and lodging at the top of the tube. This derangement is of occasional occurrence with self-registering 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 farthest 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 standing 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, 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; or, 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 not at hand, a piece of heated metal will serve instead.

But, of the Thermometers for registering the greatest heat during night, have a black coating, which may easily be made, or mended, by the application of a mixture of lampblack and printer's ink. They are placed in small blackened boxes, whose sides protect the bulbs from the sun. The Maximum must be freely exposed to the sun, and the Minimum should rest on wooden supports a few inches from the surface of the grass, 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 dissipation. Black-bulbs enclosed in glass jackets may also be used, being indeed preferable to the above. It must, however, be added, that the whole subject of the observation of Solar and Terrestrial Radiation is not yet in a sufficiently advanced state to warrant the exclusive recommendation of any one of these methods.

The Hygrometer in use at the Society's Stations consists of two Dry and Wet bulb Hygrometers usually, but not necessarily, mounted on a single frame. As apparently slight deviations from 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 frame to which they are attached; the frame must be such as will bring the tubes forward by an inch from any board on which it may be suspended; the water-cup must be covered, and altogether placed to the side, and a little below the level of the wet bulb, but in no case under the bulb; the muslin must be of medium fineness, and fastened at the neck of the bulb by the cotton, which also supplies it with water. It must be seen to by the Observer that the muslin is always clean and moist, and the water pure. In frosty weather, observation a matter of much delicacy, and must be made with great care. The bulb must be moistened by immersion from 15 to 30 minutes before the hour of observation. From the flannel tea thus formed evaporation will proceed as from the moist cloth in ordinary circumstances.

In reading the Thermometer great care must be taken to bring the eye exactly opposite the tip of the index of the column of mercury. The reading ought to be taken to tenths of a degree, and noted in minutes. Thus the Thermometer will be read 39.3, 40.6, or 40.7; or again, 40.4, 40.9, 40.6, according as it indicates, as exact coincidence with, or a little over 40, or 40.5, or 40.4, or 40.3, or 40.2, or 40.1, or 40.0, or 39.9, or 39.8, or 39.7, or 39.6, or 39.5, or 39.4, or 39.3, or 39.2, or 39.1, or 39.0, or 38.9, or 38.8, or 38.7, or 38.6, or 38.5, or 38.4, or 38.3, or 38.2, or 38.1, or 38.0, or 37.9, or 37.8, or 37.7, or 37.6, or 37.5, or 37.4, or 37.3, or 37.2, or 37.1, or 37.0, or 36.9, or 36.8, or 36.7, or 36.6, or 36.5, or 36.4, or 36.3, or 36.2, or 36.1, or 36.0, or 35.9, or 35.8, or 35.7, or 35.6, or 35.5, or 35.4, or 35.3, or 35.2, or 35.1, or 35.0, or 34.9, or 34.8, or 34.7, or 34.6, or 34.5, or 34.4, or 34.3, or 34.2, or 34.1, or 34.0, or 33.9, or 33.8, or 33.7, or 33.6, or 33.5, or 33.4, or 33.3, or 33.2, or 33.1, or 33.0, or 32.9, or 32.8, or 32.7, or 32.6, or 32.5, or 32.4, or 32.3, or 32.2, or 32.1, or 32.0, or 31.9, or 31.8, or 31.7, or 31.6, or 31.5, or 31.4, or 31.3, or 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SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55°59'N, Long. 3°10'W, Distance from Sea half mile.Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.During the MONTH of October 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.			9 h. A.M.		9 h. P.M.		9 A.M.		9 P.M.		9 h. A.M.									
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max. in Sun's rays.	Min. on Grass.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Amount in inches.	Direction.	Force.	Direction.	Force.	Velocity (0-10), and Direction.	Amount (0-10), and Direction.	Velocity (0-10), and Direction.	Amount (0-10), and Direction.	No.					No.	No.	
		* No.		No.		No.	No.	No.	No.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No.	No.	Direction.	Force.	Direction.	Force.	9 h. A.M.	0-10, and Direction.	0-10, and Direction.	0-10, and Direction.	3 inches.					12 inches.	22 inches.	
		inches.	°	inches.	°	°	°	°	°	°	°	°																				
	1	30.044		30.134		57.7	43.1			50.3	48.5	50.9	50.0	0.00	W	1.0	Var.	0.25	W	1.0	8	10	10	10	10	10	10	10	10	Cloudy, with short imps. of sunshine about noon; hazy.	1	
	2	30.134		30.044		58.6	46.9			51.6	49.8	54.0	52.8	0.00	Var.	1.0	SW	0.5	W	1.0	10	10	10	10	10	10	10	10	10	Cloudy; hazy; sh. at 4.40 p.m.	2	
	3	30.146		30.285		60.0	46.2			51.6	48.0	48.8	45.8	0.00	W	2.0	W	1.0	W	1.0	10	10	10	10	10	10	10	10	10	Clear, sunny.	3	
	4	30.462		30.438		57.6	42.8			45.4	43.3	48.4	46.0	0.00	SE	0.5	SE	0.5	W	1.0	10	10	10	10	10	10	10	10	10	Clear, sunny.	4	
	5	30.353		30.247		58.7	44.0			52.6	48.0	54.1	49.3	0.00	SW	1.5	W	0.5	W	1.0	10	10	10	10	10	10	10	10	10	Clear, sunny.	5	
	6	30.357		30.316		55.5	46.2			47.6	46.7	46.6	44.2	0.00	E	0.5	W	0.25	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	6
	7	30.250		30.132		57.4	44.1			50.9	49.0	54.4	50.8	0.00	W	2.0	W	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	7
	8	29.909		29.994		55.7	46.7			53.8	50.0	46.7	43.9	0.00	W	2.0	W	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	8
	9	30.073		30.047		53.4	44.0			48.9	45.5	50.6	47.7	0.00	W	1.4	W	2.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	9
	10	29.794		29.645		57.7	49.5			54.7	51.3	49.5	46.9	0.01	SW	2.4	W	2.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	10
	11	29.740		29.857		53.4	43.9			50.6	46.2	44.1	40.9	0.00	W	2.0	W	1.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	11
	12	29.911		29.855		47.9	38.1			42.7	38.1	40.7	37.4	0.00	W	2.0	W	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	12
	13	29.796		29.803		47.6	34.0			40.0	36.3	39.6	36.1	0.00	W	2.0	W	0.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	13
	14	29.759		29.644		43.7	31.3			38.6	36.7	38.7	38.2	0.14	W	1.0	E	1.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	14
	15	29.433		29.321		52.7	38.1			46.2	45.9	51.6	44.8	0.65	E	2.5	W	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	15
	16	29.228		29.605		57.9	48.9			56.7	52.5	53.7	50.6	0.20	SW	3.0	SW	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	16
	17	29.558		29.564		65.1	53.0			60.5	58.0	58.6	53.8	2.0	S	2.5	SW	2.3	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	17
	18	29.738		29.993		59.6	53.6			55.4	51.3	55.7	52.1	0.00	W	1.3	SW	2.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	18
	19	30.128		30.306		57.4	48.9			51.8	49.5	52.6	50.6	0.00	W	1.5	SW	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	19
	20	30.439		30.517		60.2	51.1			55.5	52.1	51.1	48.6	0.01	W	1.0	SW	0.25	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	20
	21	30.572		30.588		58.7	43.0			47.9	46.1	49.0	47.8	0.00	W	0.5	Calu	0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	21
	22	30.581		30.497		53.4	43.3			44.7	44.0	47.0	47.0	0.00	SE	0.25	Calu	0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	22
	23	30.414		30.345		49.7	40.1			43.1	42.9	48.0	46.2	0.00	SE	2.0	E	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	23
	24	30.394		30.392		50.7	39.9			48.1	46.7	48.9	46.0	0.00	SE	1.5	E	1.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	24
	25	30.350		30.258		51.2	44.0			46.7	45.2	45.7	44.1	0.00	E	1.4	E	1.0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	25
	26	30.285		30.349		48.2	37.2			40.6	40.2	43.7	43.5	0.00	Var.	1.25	SW	0.25	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	26
	27	30.301		30.219		50.6	39.1			46.0	46.0	47.6	47.2	0.00	E	0.25	Var.	0.25	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	27
	28	30.213		30.146		49.7	44.2			46.0	46.0	46.9	46.9	0.02	SW	0.25	Calu	0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	28
	29	30.082		30.007		48.7	44.6			44.9	44.1	46.9	46.8	0.01	SW	0.25	Calu	0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	29
	30	30.056		30.235		52.2	44.4			46.1	45.9	51.8	51.0	0.02	E	1.0	Calu	0	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	30
	31	30.392		30.395		52.0	49.0			50.8	50.5	49.0	49.0	0.05	SW	1.5	SW	1.5	W	1.0	10	10	10	10	10	10	10	10	10	10	Clear, sunny.	31
	Sums.	322.890		333.178		1682.9	1360.2			1509.3	1445.1	1514.9	1451.0	1.13																		
	Means.																															
	+ Total Corrections for Instrumental Errors.																															
	+ Corrections for Diurnal Range.																															
	"Corrected Means."	30.096		30.102		54.3	43.9			48.7	46.6	48.9	43.6	1.13																		
	No. of Column.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

NOTATION USED IN GENERAL REMARKS.

a.	denotes aurora.	m.	denotes meteor.
ci.	cirrus.	ms.	meteors.
ci-cu.	cirro-cumulus.	n.	nebula.
ci-s.	cirro-stratus.	r.	rain.
cu.	cumulus.	h. r.	heavy rain.
cu-s.	cumulo-stratus.	c. h. r.	continued heavy rain.
d.	dew.	s.	stratus.
f.	fog.	sc.	scud.
fr.	frost.	s.	sleet.
h-fr.	hoar-frost.	s.	snow.
h.	haze.	so. h.	solar halo.
h. d.	heavy dew.	sq.	squall.
hl.	halo.	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 $\frac{1}{1000}$ for Temp. (Col. 2) = 30.096
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{1000}$ for Temp. (Col. 4) = 30.102
Mean at Station, corrected, and at 32° = 30.044
Correction for height, feet above Mean Sea-level, = 50
Mean, reduced to 32°, and Sea-level, = 30.099
Highest Reading, corrected for Index error, on the 21st, = 30.588
Lowest Do. Do., at 8 a.m. on the 16th, = 29.209
Difference, or Monthly Range, = 1.379

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 17th, = 65.1
Lowest in Month, corrected for Index errors, on the 14th, = 31.3
Difference, or Monthly Range, = 33.8
"Corrected Mean" of all the Highest, (Col. 5), = 54.3
"Corrected Mean" of all the Lowest, (Col. 6), = 43.9
Difference, or Mean Daily Range, = 10.4
** Calculated Mean Temperature of Month, = 49.1
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb (corrected for Index errors), on the th, =
"Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 48.8
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 45.1
Computed Temperature of Dew-Point, = 41.1
Do. Elastic Force of Vapour, = 0.259
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 75
RAIN fell on 10 Days; Amount in Inches, = 1.13

WIND.		SUMMARY.			
Direction.	N	NE	E	SE	S
A.M.	-	1	8	3	2
P.M.	-	2	4	1	2
Mean.	0	2	6	2	2

Observations made and
Return verified by

(Signed) James Polson & George Redpath.

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55° 59' N, Long. 3° 10' W, Distance from Sea half mile.
Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet. During the MONTH of November 1897.
The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS.				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.		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-rays.	Min. on Grass.	Max. in Sun-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. 12 inches.	No. 22 inches.					No. 32 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.
		inches.	°	inches.	°	°	°	°	°	°	°	°																			
	1	30.408		30.447		51.1	41.5			44.9	44.7	47.6	47.3	0.01	E	1.0	NE	1.0	15th. 3.4	10th. 10.5								1			
	2	30.444		30.386		48.5	39.5			40.9	40.3	46.9	45.1	0.0	SE	1.4	E	1.0	10th. 10.5	10th. 10.5								2			
	3	30.396		30.377		47.5	40.9	*		44.7	43.0	43.7	43.0	0.0	SE	1.4	SE	1.0	0	0	10th. 10.5							3			
	4	30.338		30.309		47.2	42.9			46.5	45.7	45.4	43.4	0.0	E	1.4	SE	0.25	1.5	SE	10th. 10.5							4			
	5	30.358		30.445		46.7	44.9			45.5	45.2	46.7	43.8	0.0	W	1.0	W	0.25	1.5	SE	10th. 10.5							5			
	6	30.476		30.413		48.4	44.9			46.4	44.9	47.6	45.0	0.7	NE	1.5	NE	2.0	1.5	SE	10th. 10.5							6			
	7	30.383		30.233		49.3	46.2			48.0	46.8	47.6	46.4	0.3	E	1.3	E	1.5	2.6	SE	10th. 10.5							7			
	8	30.169		30.232		52.5	46.9			50.1	48.4	49.7	48.4	0.5	SE	1.4	SE	1.5	2.5	SE	10th. 10.5							8			
	9	30.332		30.324		53.2	46.1			47.3	46.9	48.6	47.4	0.0	E	1.0	E	0.25	1.5	SE	10th. 10.5							9			
	10	30.245		30.163		53.7	45.0			49.8	44.8	51.6	51.8	0.7	SE	1.0	Calu	0	1.4	SE	10th. 10.5							10			
	11	30.137		29.947		53.6	48.8			49.7	44.0	53.6	50.8	0.0	SE	0.25	S	1.2	1.5	SE	10th. 10.5							11			
	12	29.496		29.302		58.7	53.0			55.8	52.8	58.5	55.0	1.7	S	2.5	S	2.2	2.0	SE	10th. 10.5							12			
	13	29.288		29.487		58.5	49.8	*		54.4	51.5	51.1	48.2	1.9	W	2.0	SW	1.0	2.0	SE	10th. 10.5							13			
	14	29.520		29.874		51.7	37.7	*		47.4	46.9	37.7	34.9	6.2	Var.	0.25	NE	2.3	1.5	SE	10th. 10.5							14			
	15	30.172		30.390		37.7	32.6			34.4	30.9	32.8	30.9	0.0	W	1.4	Var.	0.25	1.5	SE	10th. 10.5							15			
	16	30.261		29.906		44.1	31.5			36.9	33.9	44.1	44.4	0.0	S	2.0	S	2.2	2.0	SE	10th. 10.5							16			
	17	29.769		29.808		56.1	44.0			55.6	53.0	52.6	49.8	0.6	W	1.5	W	2.0	2.0	SE	10th. 10.5							17			
	18	29.945		30.111		52.6	46.9	*		47.4	44.3	48.6	45.6	0.0	W	2.4	W	2.0	2.0	SE	10th. 10.5							18			
	19	30.124		30.252		54.8	47.9			52.4	50.0	53.6	50.8	0.0	W	3.0	W	2.3	2.0	SE	10th. 10.5							19			
	20	30.512		30.609		54.3	52.0			52.0	49.7	53.3	50.8	0.0	W	1.5	W	1.0	1.5	SE	10th. 10.5							20			
	21	30.595		30.571		53.7	47.8	*		51.5	49.7	48.4	45.9	0.0	W	1.5	W	1.5	2.0	SE	10th. 10.5							21			
	22	30.582		30.500		50.1	46.9	*		49.0	46.1	46.9	44.3	0.0	W	2.0	SW	1.5	2.0	SE	10th. 10.5							22			
	23	30.441		30.520		53.1	42.7	*		48.6	46.9	42.7	42.0	0.5	W	2.0	E	1.3	1.5	SE	10th. 10.5							23			
	24	30.431		30.260		43.0	41.7			42.1	41.5	43.0	43.4	1.2	SE	1.4	SE	0.8	1.5	SE	10th. 10.5							24			
	25	30.348		30.399		43.1	39.0	*		41.9	41.0	43.0	40.1	0.2	E	1.5	S	0.25	2.0	SE	10th. 10.5							25			
	26	30.114		30.069		48.8	42.0			48.3	45.8	48.9	43.3	0.0	W	2.4	W	1.5	2.0	SE	10th. 10.5							26			
	27	29.754		29.716		48.5	41.7	*		47.6	45.1	47.7	39.0	0.2	W	2.0	W	2.2	2.0	SE	10th. 10.5							27			
	28	29.109		28.808		44.4	37.0	*		43.9	41.0	37.7	36.4	0.3	SW	2.3	W	2.4	3.5	SE	10th. 10.5							28			
	29	29.582		29.724		40.6	35.4	*		37.7	34.7	35.8	33.3	0.3	W	2.5	SW	1.5	2.0	SE	10th. 10.5							29			
	30	29.302		29.213		46.3	35.8	*		42.7	40.0	36.7	35.1	0.2	W	2.0	W	0.5	2.0	SE	10th. 10.5							30			
	31																											31			
Sums.		903.034		902.795		1489.8	1273.2			1403.7	1347.4	1362.1	1320.9	183					203		217										
Means.		30.																	6.8		7.2										
+ Total Corrections for Instrumental Errors.																															
+ Corrections for Diurnal Range.																															
"Corrected Means."		30.101		30.093		49.7	43.1			46.8	44.9	46.1	44.0	1.83																	
No. of Column.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

NOTATION USED IN GENERAL REMARKS.					
a.	denotes aurora.	m.	denotes meteor.		
ci.	" cirrus.	ms.	" meteors.		
ci.-cu.	" cirro-cumulus.	n.	" nimbus.		
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.		
hl.	" hail.	sq.s.	" squalls.		
l.	" lightning.	t.	" thunder.		
l. cl.	" light clouds.	t. s.	" thunder-storm.		
li. sh.	" light showers.	w.	" wind.		
lu. co.	" lunar corona.	g.	" gale of wind.		
lu. ha.	" lunar halo.				

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

BAROMETER, "corrected Mean" at 9 A.M., minus the Correction $\frac{1}{100}$ = 30.101
for Temp. (Col. 2),
"Corrected Mean" of Barometer at 9 P.M., minus the Correction $\frac{1}{100}$ = 30.093
for Temp. (Col. 4),
Mean at Station, corrected, and at 32°, = 30.042
Correction for height, feet above Mean Sea-level, = 0.55
Mean, reduced to 32°, and Sea-level, = 30.097
Highest Reading, corrected for Index error, on the 20th, = 30.609
Lowest Do. Do., at 7.30 p.m. on the 28th, = 28.746
Difference, or Monthly Range, = 1.863

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 13th, = 58° 7
Lowest in Month, corrected for Index errors, on the 16th, = 31.5
Difference, or Monthly Range, = 27.2
"Corrected Mean" of all the Highest, (Col. 5), = 49.7
"Corrected Mean" of all the Lowest, (Col. 6), = 43.1
Difference, or Mean Daily Range, = 6.6
** Calculated Mean Temperature of Month, = 46.4
S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the 13th, =
"Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
Lowest at Night, Black Bulb (corrected for Index errors), on the 16th, =
"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), = 46° 4
Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 44° 4
Computed Temperature of Dew-Point, = 43.2
Do. Elastic Force of Vapour, = 0.269
Do. Weight of Vapour in a Cubic Foot of Air, =
Relative Humidity (Saturation = 100), = 86
RAIN fell on 16 Days; Amount in Inches, = 1.83

WIND.		SUMMARY.									
Direction.	N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.	Mean Velocity in miles per day
A.M.	-	1	7	3	3	2	11	2	1	1.63	
P.M.	2	2	4	3	4	7	6	-	2	1.36	
Mean.	1	2	5	3	4	4	8	1	2	1.50	

* Each instrument tested at the Office in Edinburgh bears the stamp "S.M.S.," and a number to be entered in the Remarks; 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.
§ 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.

Observations made and
Return verified by

(Signed) James Polans George Redpath

SCOTTISH METEOROLOGICAL SOCIETY.

Observations taken at Leith, County of Edinburgh, in Lat. 55° 59' N, Long. 3° 10' W, Distance from Sea half miles.

Height of Cistern of the Barometer above Mean Sea-Level fifty feet, above Ground five feet.

During the MONTH of December 1897.

The Hours of Observation are of Greenwich Time.

ELECTRICITY.	Days of Month.	BAROMETER.				SELF-REGISTERING THERMOMETERS. Read Daily, at 9 P.M.				HYGROMETER.				Rain.	WIND.				CLOUDS.				SUNSHINE.	THERMOMETERS under Ground.			SEA.	OZONE.	GENERAL REMARKS. As to occurrence of Thunder, Lightning, Storms, Hail, Meteors, Remarkable Depression or Elevation of Barometer, Prevalent Diseases, etc. Mention the hour at which Storms, including Thunder and Lightning, began and ended.	Days of Month.					
		9 h. A.M.		9 h. P.M.		Protected in Shade 4 feet above Ground.		Exposed Black Bulbs.		9 h. A.M.		9 h. P.M.			9 h. A.M.		9 h. P.M.		9 A.M.		9 P.M.			9 h. A.M.							9 A.M.		9 P.M.		
		Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	Max.	Min.	Max.	Min.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.		No. of hours in which it fell.	Direction.	Force.	Direction.	Force.	Velocity (0-9) and Species.	Amount (0-10), and Species.	Velocity (0-9) and Species.		Amount (0-10), and Species.	No. 3 inches.	No. 12 inches.					No. 22 inches.	Temperature of Well at depth of feet, No.	Temperature at 1 fathom, and Density.	9 A.M.	9 P.M.
		* No.	inches.	No.	inches.	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.		No.	No.	No.					No.	No.	No.	No.	No.
	1	29.442		29.962		40.0	33.6			35.7	34.9	38.7	34.6	0.06	N	2.0	NNE	2.5	24.1	NNE	1.0	0	0							Fine, except brief sho. of dr. & about 9 a.m.; thick h. fr. in the morning.	1				
	2	30.274		30.401		41.5	35.7			34.7	36.9	35.7	33.2	0.1	NW	2.0	SW	0.5	17.6	NW	2.5	0	0							Fine, sunny; evening hazy.	2				
	3	30.276		30.008		41.9	31.0			31.8	31.0	40.3	38.3	0.0	Var.	0.25	S	1.5	14.6	SE	1.0	100	100							Cloudy; hazy; li. sho. after 4.30 p.m.	3				
	4	30.015		30.067		43.2	40.1			41.2	40.2	43.2	41.4	0.1	N	1.0	ENE	1.5	17.6	N	1.0	10	10							Cloudy; brief r. at times dur. first night.	4				
	5	30.018		29.870		48.0	37.9			40.4	39.7	47.6	45.0	0.1	SE	0.5	WSW	2.0	24.4	SE	0.5	10	10							Cloudy, with sunny int.; dr. forenoon; brief R. pass. dr. at 9 a.m.	5				
	6	29.713		29.665		47.6	39.2			45.2	42.1	41.1	38.4	0.9	W	2.0	WSW	2.5	3.5	14.1	SE	3.0	10	10							Changeable; fine, mostly sunny till 1.15 p.m.; brief h. dr. at 1.30 p.m.; r. at 1.45 p.m.; squally.	6			
	7	29.516		29.010		53.7	38.9			46.2	43.0	46.7	44.0	1.3	SW	3.5	WSW	2.0	3.5	15.1	SE	3.0	10	10							Overcast; frequent brief h. dr. very squally.	7			
	8	28.947		28.651		46.7	33.8			35.6	33.4	41.1	39.1	2.2	W	2.0	WSW	2.5	3.5	15.1	SE	3.0	10	10							Changeable; fog, heavy sho. of dr. with dr. r. at times aft. 4 p.m.; dr. h. at 6 p.m.	8			
	9	28.904		29.167		44.7	40.0			41.9	39.6	41.2	39.0	0.6	W	2.5	WSW	2.5	3.5	15.1	SE	3.0	10	10							Equally; showers previous night; day fine, sunny.	9			
	10	29.216		28.926		41.2	38.9			39.7	38.0	39.8	39.2	0.1	SE	1.0	ENE	1.4	14.1	SE	1.0	10	10								Cloudy; li. sho. after 5 p.m.	10			
	11	29.196		29.485		42.7	38.7			39.7	38.1	38.7	36.0	0.4	W	1.5	W	2.0	14.1	SE	1.0	10	10								Sho. previous night; day fine, mostly sunny.	11			
	12	29.593		29.604		38.7	32.4			35.8	34.9	32.4	31.9	0.0	W	1.0	Calu	0	14.1	SE	1.0	10	10								Fine, cloudy; hazy; cloudless at 9 p.m.	12			
	13	29.378		29.270		43.6	31.0			37.7	36.1	42.1	41.0	0.0	SE	1.4	SE	1.5	14.1	SE	1.0	10	10								Cloudy; a few slight showers.	13			
	14	29.254		29.309		48.0	38.9			39.5	37.0	39.7	38.0	0.2	S	2.0	SE	1.4	14.1	SE	1.0	10	10								Mostly cloudy; dr. at 3 a.m., and between 1 and 2 p.m.	14			
	15	29.188		29.587		45.7	39.1			41.8	40.4	44.1	41.0	0.7	S	1.4	WSW	2.0	24.4	SE	1.0	10	10								Cloudy; a few dr. sho.; thick h. at times; cloudless at 4 p.m.	15			
	16	29.408		29.538		54.7	39.9			46.8	45.9	53.6	48.8	1.0	S	1.5	SW	2.3	14.1	SE	1.0	10	10								Cloudy, with short int. of sunshine; showers till 8 a.m.	16			
	17	29.809		30.022		53.6	48.7			50.5	45.9	49.6	46.9	0.0	WSW	2.0	WSW	2.0	24.4	SE	1.0	10	10								Fine; mostly sunny.	17			
	18	30.233		30.390		49.6	36.1			42.8	42.0	36.1	35.9	0.0	W	1.0	Calu	0	14.1	SE	1.0	10	10								Fine, sunny; hazy; evening thick fog. (low).	18			
	19	30.442		30.457		38.9	32.7			32.7	32.3	38.4	37.1	0.1	SE	0.5	SE	0.5	14.1	SE	1.0	10	10								Fine, sunny; thick hoar frost in the morning.	19			
	20	30.496		30.550		41.7	37.9			40.9	38.2	41.4	40.0	0.0	SE	1.0	E	1.5	14.1	SE	1.0	10	10								Cloudy; fine.	20			
	21	30.615		30.649		41.7	33.0			34.4	33.4	33.0	32.0	0.0	SE	1.0	SE	0.25	14.1	SE	1.0	10	10								Fine, sunny; cloudless.	21			
	22	30.644		30.584		33.7	27.9			28.7	28.2	29.7	29.0	0.0	W	0.5	W	0.25	14.1	SE	1.0	10	10								Fog.	22			
	23	30.526		30.428		31.7	26.6			30.9	29.9	28.8	28.8	0.0	W	1.0	Calu	0	14.1	SE	1.0	10	10								Thick fog; drizzle.	23			
	24	30.318		30.213		35.5	28.8			32.8	32.1	33.7	32.9	0.0	W	0.5	W	0.25	14.1	SE	1.0	10	10								Thick fog.	24			
	25	30.152		30.183		47.3	32.0			39.0	37.4	46.5	45.0	0.1	NW	1.0	WSW	1.5	14.1	SE	1.0	10	10								Cloudy; short int. of sunshine bet. 2 and 3 p.m.	25			
	26	30.012		29.649		53.7	41.3			47.0	45.0	53.7	49.8	0.2	S	2.0	WSW	2.5	3.5	14.1	SE	1.0	10	10								Cloudy; squally at times after 1 p.m.; li. sho. after 5 p.m.	26		
	27	29.505		29.428		55.6	44.0			44.9	44.8	48.3	45.4	0.3	NNE	1.0	WSW	1.3	14.1	SE	1.0	10	10								Cloudy; brief r. at times till 11.30 a.m.; multi. sho. at intervals later.	27			
	28	29.503		29.404		48.3	39.9			43.9	41.2	41.4	39.2	0.4	E	1.0	WSW	2.3	14.1	SE	1.0	10	10								Fine, except dr. at 10 a.m.; dr. 5.30 p.m.; sunny at times.	28			
	29	29.026		28.996		52.7	39.0			41.9	41.5	51.7	48.8	0.3	Var.	0.25	SW	2.0	14.1	SE	1.0	10	10								Overcast; frequent brief r. till 4.30 p.m.	29			
	30	28.704		28.889		53.6	43.3			46.7	41.7	44.8	40.3	1.3	S	3.5	SW	2.5	3.5	14.1	SE	1.0	10	10								Squally; brief dr. till 6 a.m.; a few light dr. dur. day; mostly sunny.	30		
	31	28.816		29.022		45.3	41.1			41.9	40.0	44.4	42.3	0.5	WSW	2.4	WSW	1.0	14.1	SE	1.0	10	10								Cloudy; showers till 7.30 a.m.	31			
Sums.		921.138		921.383		1404.8	1141.4			123.7	115.4	912.8	1193.4	2.10																					
Means.		29.714		29.719		45.3	36.8			39.9	38.5	44.5	39.8	2.10																					
+ Total Corrections for Instrumental Errors.																																			
+ Corrections for Diurnal Range.																																			
"Corrected Means."		29.714		29.719		45.3	36.8			39.9	38.5	44.5	39.8	2.10																					
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 for Temp. (Col. 2) = 29.714
 "Corrected Mean" of Barometer at 9 P.M., minus the Correction for Temp. (Col. 4) = 29.719
 Mean at Station, corrected, and at 32° = 29.660
 Correction for height, feet above Mean Sea-level, = 56
 Mean, reduced to 32°, and Sea-level, = 29.716
 Highest Reading, corrected for Index error, on the 21st, = 30.651
 Lowest Do. Do., at 5 p.m. on the 30th, = 28.675
 Difference, or Monthly Range, = 1.976

S.R. THERMOMETER, (in shade, etc.), Highest in Month, (corrected for Index Errors), on the 27th, = 55.6
 Lowest in Month, corrected for Index errors, on the 23rd, = 26.6
 Difference, or Monthly Range, = 29.0
 "Corrected Mean" of all the Highest, (Col. 5), = 45.3
 "Corrected Mean" of all the Lowest, (Col. 6), = 36.8
 Difference, or Mean Daily Range, = 8.5
 ** Calculated Mean Temperature of Month, = 41.0
 S.R. THERMOMETER, Black Bulb in Sun, Highest, (corrected for Index Errors), on the th, =
 "Corrected Mean," (Col. 7), of Black Bulb, Max. in Sun, =
 Lowest at Night, Black Bulb (corrected for Index errors), on the th, =
 "Corrected Mean," (Col. 8), of Black Bulb, Min. on grass, =
 Difference of above means or range ("exposed"), =

HYGROMETER, Mean (corrected) A.M. and P.M. Reading of Dry Bulb, (Cols. 9 and 11), = 40.7
 Mean (corrected) A.M. and P.M. Reading of Wet Bulb, (Cols. 10 and 12), = 39.1
 ** Computed Temperature of Dew-Point, = 37.1
 ** Do. Elastic Force of Vapour, = 22.0
 ** Do. Weight of Vapour in a Cubic Foot of Air, =
 ** Relative Humidity (Saturation = 100), = 87
 RAIN fell on 21 Days; Amount in Inches, = 2.10

WIND.		SUMMARY.									
Direction.		N	NE	E	SE	S	SW	W	NW	Calm or Variable.	Mean Force.
A.M.		3	1	2	3	6	2	10	2	2	1.39
P.M.		0	2	2	3	1	9	10	1	3	1.57
Mean.		2	2	2	3	3	5	10	2	2	1.48

Observations made and Return verified by

(Signed) James Bolau & George Redpath.

