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DAILY JOURNAL

FOR

1870.

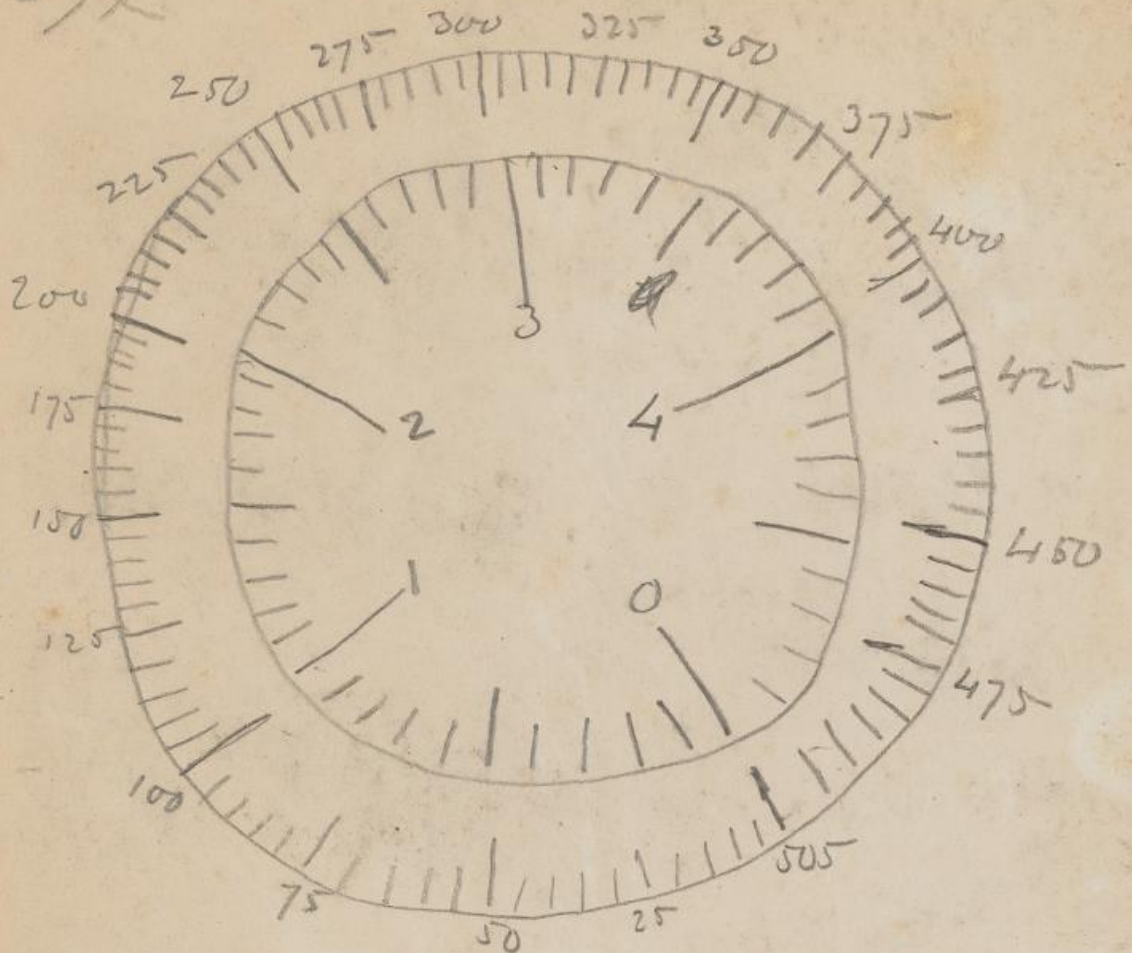
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mms

147x



Dial of anemometer

Casella 193

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VII D

Rhd

100 teeth: circuit formed once for each:
circuit formed once in 25 revolutions:
2500 revolutions in whole circle of dial:
50 revolutions to $\frac{1}{10}$ of a mile: 500 revolutions to the mile.



2500

Inner dial single miles divided into tenths: Outer dial 101 divisions each 5 miles.

$\frac{25}{500} = \frac{1}{20} = .05$

.05 of an hour = 180 seconds

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Daily Journal

FOR

1870.

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Published Annually,

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Counting-House Calendar for 1870.

	Sund.	Mond.	Tues.	Wedn.	Thurs.	Frid.	Satur.
JANUARY							1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					
FEBRUARY			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					
MARCH			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		
APRIL						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
MAY	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31				
JUNE				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		

	Sund.	Mond.	Tues.	Wedn.	Thurs.	Frid.	Satur.
JULY						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
AUGUST		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			
SEPTEMBER					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	
OCTOBER							1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					
NOVEMBER			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			
DECEMBER					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31

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SATURDAY, JANUARY 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					26.3		
10	30.304	64.8	33.5	31.5		0	9 st. haze
2					39.8		
4	30.270	67.1	39.1	35.9		NW 7	10 st.
9					36.7		

Min. 25.3
Solar Therm. 100.0
Max. 44.1

(39.5)

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SUNDAY, JANUARY 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.0		
10	29.843	70.5	41.7	41.5		13	10 min. raining
2					46.9		
4	29.598	71.6	50.4	50.2		11	10 min. raining
9					45.4		

Min. 32.6
Solar Therm. 57.3
Max. 56.7

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(57.3)

Rain most of Jan. 2

Some aurora noticed towards morning of Jan. 3 at Cambridge. It was observed at Salem by Gen. Walcott who describes it as rose colored with an indistinct arch and some streamers. (This aurora said by some to resemble, except that of April 19 1869

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MONDAY, JANUARY 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.599	65.7	40.6	34.3		12	0 cir.-st.
2							
4							
9					33.4		

Min. 36.1
Solar Therm.
Max. 45.8

Gauges examined at 11 A.M. Jan. 3
No. 1, 10½ ounces. No. 2, 29½ ounces. No. 3, 11⅝ ounces.

Some aurora early in the evening.

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TUESDAY, JANUARY 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					28.2		
10¼	29.750	68.2	31.0	28.0		8 est	0 cl.
2					35.0		
4	29.724	68.1	34.1	29.1		5 est.	1 cum. cl.
9					31.2		

Mijn. 25,5
Solar Therm. 100.2
Max. 35,5

48,3

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WEDNESDAY, JANUARY 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.0		
10	29.978	57.4	31.9	32.2		8 at.	10 st. cum. a little snow
2 1/6					32.4		
4	30.130	63.8	30.8	26.3		9 est.	2 cum. st. cum. st. air.
9					24.9		

Min. 26.2
Solar Therm. 95.4
Max. 33.5

(41.1)

Some aurora early in the evening.

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THURSDAY, JANUARY 6, 1870.

	13arom.	Att.	Dry	Wet	No.4	Wind	Clouds
7							
10	30.181	62.7	55.1	32.4		6 est.	8 st. air. cir.-cum.
2					44.4		
4	30.072	69.8	42.0	37.5		12 est.	9 st. air. cir.-cum.
9					39.8		

Min. 20.4
Solar Therm. 95.7
Max. 45.6

(43.0)

Rain in the evening, towards midnight

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FRIDAY, JANUARY 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.170	70.7	26.1	23.6		11 ct.	2 H cir-st. cum.
2					26.5		
4	30.131	68.4	24.7	20.4		13 ct.	9 ct. cir. cir-cum. cir-st.
9					20.4		

Min. 25.7
Solar Therm. 91.6
Max. 40.6

(29.0)

Gauges examined at 1 P.M.
No. 1, 7 1/4 ounces. No. 2, 14 ounces. No. 3, 4 3/4 ounces.

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SATURDAY, JANUARY 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					21.8		
10	30.203	61.2	25.7	22.7		0	10 ct.
2 1/4					27.3		
4	29.860	63.5	27.0	27.0		3	10 nim, snowing
9 1/6					21.3		

Min. 18.9
Solar Therm. 44.0
Max. 28.0

(29.0)

Snow spell of this day.
Cleared off before 10 P.M.
Distinct auroral arch afterwards
At midnight arch rather bright, uneven.
Sky decidedly black beneath it.
Some long streamers a little later

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SUNDAY, JANUARY 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					14.0		
10 1/4	30.282	60.6	18.9	16.4		13	0 cum.
2					18.8		
4 1/4	30.376	67.9	17.8	15.0		7 est.	8 St. cirr-st.
9					8.3		

Min. 13.2
Solar Therm. 102.2
Max. 21.6

26.8

Gauges examined in the afternoon
No. 1, 9 1/2 ounces. No. 2, 0 ounces. No. 3, 8 ounces
(Snow not come down from funnel of No. 2)
Depth of snow about 3 3/4 inches.
Water from 83 cubic inches of snow 3 1/2 ounces.

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MONDAY, JANUARY 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					16.7		
10	30.255	61.3	25.1 ×	23.6 ×		0	10 st.
2					31.4		
4	30.128	65.3	29.4	28.7		2	10 nim. snowing
9¼					28.8		

Min. 5.2
Solar Therm. 53.9
Max. 31.6 (31.4)

× At 10½

Snow most of the day

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TUESDAY, JANUARY 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					27.5		
10	30.306	63.5	34.1	32.1		2 est.	1 huge cir. st.
2					36.5		
4	30.434	72.5	34.5	32.0		2 est.	5 st, cir-st, cir-cir-cum,
9					25.9		

Min. 24.5
Solar Therm. 110.0 40.9
Max. 36.7

Snow averages 4 inches deep in all.
New snow about ½ an inch probably.
Gauges examined at noon.
No. 1, 4¼ ounces. No. 2, 9½ ounces. No. 3, 4½ ounces.
Water from 83. cubic inches of snow 6 ounces.

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WEDNESDAY, JANUARY 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.4		
10	30.156	62.5	38.9	38.2		.4	10 ct.
2					46.5		
4	29.910	63.4	46.0	42.5		8 est.	10 nim. raining
9					42.8		

Min. 23.3
Solar Therm. 94.8
Max. 47.4

(47.0)

Gauges No. 1 & No. 3 examined at 1½ P.M. for a little rain of this past night.
Each 2 ounces.

Rain in the afternoon.

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THURSDAY, JANUARY 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					37.5		
10	30.185	61.5	39.1	38.4		3 est.	10 St.
2					38.0		
4	29.957	60.6	35.8	35.6		10 est.	10 rain raining
9					21.8		

Min. 35.3
Solar Therm. 49.1 36.2
Max. 43.1

Gauges examined at 10 A.M.
No. 1, 1 ounce. No. 2, 23 ounces. No. 3, 0½ ounces.
Water in No. 2 partly from snow.

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FRIDAY, JANUARY 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					13.4		
10¼	30.700	57.8	13.4	13.6		4 est.	10 st. nim. snowing
2					14.6		
4	30.732	62.9	14.6	14.1		6 est.	10 st. nim. snowing
9					14.6		

Min. 12.0
Solar Therm. 57.5
Max. 21.9

(17.7)

Barometer at 12 M. 30.720 Att. 61.1

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SATURDAY, JANUARY 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.7		
10	30.298	56.6	19.7	20.0		2 st.	10 st. nimbus snowing a little
2					29.4		
4	30.113	67.1	30.3	30.3		0	10 fog
9					32.3		

Min. 12.6

Solar Therm. covered with ice. Could not be read

Max. 32.3

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SUNDAY, JANUARY 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.0		
10	30.132	66.1	39.5	35.2		E slt.	1 st.
2					40.2		
4	30.284	70.0	40.3	35.8		S slt.	1 st. cir.
9					32.5		

Min. 19.3
Solar Therm. 102.4
Max. 43.7

(67.0)

Gauges examined at 1 P.M. for water from rain & snow of last 3 days.
No. 1, 16 ounces. No. 2, 68½ ounces. No. 3, 22 ounces.

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MONDAY, JANUARY 17, 1870.

	Barom.	Att.	Dry	Wet.	No. 4	Wind	Clouds
7					32.7		
10	30.339	63.2	37.6	36.2		4 est.	10 st.
2					45.9		
4	30.121	66.2	48.5	48.5		8 est.	10 nim. raining
9					52.8		

Min. 27.0
Solar Therm. 66.8
Max. 53.5

(57.7)

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TUESDAY, JANUARY 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					46.0		
10	30,300	64.3	41.0	33.7		11	10 st.
2							
4½	30,405	70.9	38.4	31,6		6 est	5 st. ni. cu, mo.
9					32,9		

Min. 37.0
Solar Therm. 102.9
Max. 56.5

(39.3)

Gauges examined at 10½ A M for rain
of Jan. 17.
No. 1, 10 ounces. No. 2, 20½ ounces. No. 3, 7 ounces.

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WEDNESDAY, JANUARY 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					25.0		
10	30.632	58.5	26.8	22.9		Nest.	3 st. ci. cir.-st.
2					30.6		
4	30.581	72.8	32.0	26.1		2 est.	9 st. ci.-st. ci.
9							

Min. 24.1
Solar Therm. 100.0
Max.

(37.7)

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THURSDAY, JANUARY 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.3		
10	30.369	62			38	N. E.	1 St. cirr.
2					41.0		
4	30.201	71.7	40.7	34.8		3	3 St. cirr.
9					35.8		

Min. 26.7
Solar Therm. 105.7
Max. 41.6

(65.0)

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FRIDAY, JANUARY 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.5		
10	30.081	62.9	36.8	33.8		1st.	9 st. cir.-st
2					39.1		
4	30.167	65.9	35.2	29.0		1 Best.	0 cum. cir.-st
9					25.7		

Min. 29.7

Solar Therm. 103.2 (64.0)

Max. 41.4

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SATURDAY, JANUARY 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.4		
10	30.612	62.8				0	0 Stage
2					34.4		
4	30.534	65.8	33.8	29.6		1. at.	8 St. cirrost air
9					33.0		

Min. 21.4
Solar Therm. 95.3 (39.0)
Max. 35.1

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SUNDAY, JANUARY 23, 1870.

	Barom.	Att.	Dry	Wet	N.A	Wind	Clouds
7					47.3		
10 1/4	30.091	66.5	48.9	48.3		6 est.	10 nimb. raining
2					55.8		
4	29.951	67.0	64.7	51.7		7	4 st. cir-st. cirrocum.
9					49.1		

Min. 27.0
Solar Therm. 96.1
Max. 56.4

67.4

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MONDAY, JANUARY 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.5		
10	30.348	69.9	32.0	28.5		7 est.	10 st.
2					36.6		
4	30.338	70.8	34.1	29.8		6 est.	10 st. cir.-st.
9					32.4		

Min. 31.6.
Solar Therm. 91.2 (87.5)
Max. 49.5.

Gauges examined at 11 A.M. for rains of forenoon & evening, Jan. 23.

No. 1, 1½ ounces. No. 2, 7+ ounces. No. 3, 3 ounces.

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TUESDAY, JANUARY 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.7		
10	29.824	66.0	33.0	33.0		1 est	10 min. raining
2					34.4		
4	29.570	60.3	33.5	33.3		10 est	10 min. raining
9					34.2		

Min. 31.8
Solar Therm. 40.1
Max. 36.3

(34.4)

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WEDNESDAY, JANUARY 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.0		
10	29.937	63.5	38.3	35.3		9 wt.	1 cir. st. cu. large
2					46.8		
4	30.031	65.6	46.8	40.1		7 wt.	9 st. cu. & cir.
9					39.4		

Min. 32.1
Solar Therm. 108.2
Max. 47.9

(67.7)

Rain most of Jan. 25 till late at night. Gauges examined at noon Jan. 26 No. 1, 10 3/4 ounces. No. 2, 13 1/2 ounces. No. 3, 5 8 ounces.

Auroral arch over clouds or very dark sky

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THURSDAY, JANUARY 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.8		
10	30.067	62.8	48.0	43.5		6 est.	0 in. in st.
2					57.0		
4							
9					38.7		

Min. 37.6

Solar Therm. 109.7 read at 10 h. A. 28 h/s (88.7)

Max. 53.7

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FRIDAY, JANUARY 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.5		
10	30.351	63.4	34.0	28.7		10	0 cir-st
2					36.6		
4	30.380	68.0	35.4	28.9		6	0 cir. cir-st.
9					28.7		

Min. 30.6
Solar Therm. 106.0 (71.0)
Max. 39.0

Auroral arch — not bright

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SATURDAY, JANUARY 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					31.3		
10	30.239	62.9	35.1	32.1		6 Ast.	10 at, cum. a little snow
2					33.9		
4	29.902	65.5	34.0	33.3		12	10 nim. snowing
9					33.2		

Min. 24.0
Solar Therm. 70.9
Max. 35.9

(33.9)

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SUNDAY, JANUARY 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.5		
10¼	29.849	64.0	34.2	32.0		5 est.	1 st. cum.
2					35.0		
4	29.950	6.8	34.3	32.0		2	9 st. cum.
9							
11					27.1		

Min. 31.9
Solar Therm. 123.7
Max. 35.2

(39.0)

Snow most of Jan 29 with rain in the evening & more snow afterwards.
Measures west of the Observatory at 1 P.M. Jan. 30 give 3, 3½, 4, 4, 4½, 4½, 4½, 5, 5½ inches.
Mean 4.28 inches.
Water from about 80¾ cubic inches of snow, 11 ounces Granger.
Nail, 31 ounces. No. 2, 104 ounces. No. 3, 31½ ounces
Some snow still in funnel of No. 2.
Around arches among clouds all the evening

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MONDAY, JANUARY 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.3		
10	30.120	58.2	22.8	22.4		8	10 21 min. snow
2					29.5		
4	30.000	62.3	30.4	29.8		8	10 snow
9					32.6		

Min. 21.4
Solar Therm. 40.9
Max. 32.6

(3575)

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TUESDAY, FEBRUARY 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.0		
10	29.657	61.5	24.8	24.3		9 est	10 nim. moving
2					33,2		
4	29.782	71.4	32.0	28.7		7 est.	8 st. cum.
9					18.9		

Min. 21.8
Solar Therm. 125.0 (47.0)
Max. 33.5

Snow ceased about 11 A.M.
Total depths at 2 P.M. 6, 6½, 8, 8½, 8½, 8½, 9 3/4 inches. Mean 8.09 inches
Loss amt. Jan. 30 4,28 " Since fallen 3.81 inches
New snow reduced to ¼ of its bulk by melting
Gauges No. 1 & 3. No. 2 left to snow to melt
No. 1, 31 ounces No. 3, 19 ounces.
Aurora: and some streamers.

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WEDNESDAY, FEBRUARY 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					9.0		
10	30.240	59.8	16.1	14.7		0	9 st. cir-st.
2							
4							
9					18.3		

Min. 7.4

Solar Therm. at 5½ 76.4

Max. 25.5

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THURSDAY, FEBRUARY 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.5		
10	30.249	62.0	21.1	20.6		5 est.	10 ct.
2					21.0		
4	30.269	59.9	19.2	19.0		11	10 ct.
9					15.7		

Min. 16.0
Mean Therm. 45.9
Max. 22.4

(24.0)

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FRIDAY, FEBRUARY 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					6.3		
10	30.586	56.8	10.0	9.0		10	3 ~~St.~~ a few snowflakes
2					17.3		
4	30.600	66.0	16.5	15.3		7	10 sts a little snow
9					13.5		

Min. 4.8
Solar Therm. 106.8 (28.0)
Max. 17.4

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SATURDAY, FEBRUARY 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					13.7		
10	30.128	52.9	17.9	16.6		12	10 st.
2					25.2		
4	30.339	67.6	24.3	23.0		7	10 st.
9					22.2		

Min. 8.9
Solar Therm. 64.0 (33.7)
Max. 25.9

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SUNDAY, FEBRUARY 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					19.4		
10	30.216	61.5	22.2	21.1		3	10 St.
2					28.9		
4	30.178	67.8	28.6	25.4		3	10 St.
9							
11					23.4		

Mean 12.3

Solar Therm. 51.3 (34.0)

Max. 28.9

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MONDAY, FEBRUARY 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					15.0		
10	30.266	63.9	23.9*	21.7		0	1 st. cum. haze
2					31.0		
4	30.262	68.0	30.3	26.3		1.0.	6 st. air-st
9					23.2		

Min. 14.3
Solar Therm. 105.0 (44.7)
Max. 31.3

*10½

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TUESDAY, FEBRUARY 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					21.0		
10	29.999	58.9	30.3	28.8		3	10 min. snowing
2					32.0		
4	29.560	65.6	32.1	32.0		14	10 min. snowing
9					31.3		

Min. 14.3
Solar Therm. (48.9) (36.0)
Max. 32.4

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WEDNESDAY, FEBRUARY 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					23.5		
10	29.276	60.0	27.8	25.6		15	8 St. cum.
2					28.1		
4	29.367	67.3	29.7	26.5		24	10 St. cums
9					27.6		

Min. 23.2
Solar Therm. 113.9
May. 31.7 (probably as last ent.)

44.0

New snow, seems to average
7 inches in depth
2.94 cubic inches of snow give 0.52 ounces of water

Gauges (P. No.)
No. 1, 7⅛ ounces. No. 2, 10½ ounces. No. 3, 16½ ounces.

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THURSDAY, FEBRUARY 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.4		
10	29.616	66.4	26.8	23.5		1/5	8 st. mot.
2					28.2		
4	29.623	61.1	28.1	24.9		1/6	10 st. mm
9					21.8		

Min. 22.1
Solar Therm. 126.3 (44.3)
Max. 29.6

Large halo round the moon

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FRIDAY, FEBRUARY 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					14.6		
10	30.051	58.5	19.0	16.5		14	0
2					25.1		
4	30.052	66.7	26.4	22.1		1	1 cir. st.
9		58.			22.9		

Min. 13.8
Solar Therm. 105.6
Max. 26.6 (63.4)

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SATURDAY, FEBRUARY 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					36.7		
10	29.587	64.8	40.5	39.5		5	10 St.
2					43.3		
4	29.533	66.9	43.8	37.9		6	3 St. cum-st.
9					32.0		

Min. 18.4
Solar Therm. 111.7
Max. 44.2

77.0

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SUNDAY, FEBRUARY 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					14.7		
10	30.029	60.2	20.9	17.9		24	0 cum.
2					22.7		
4	30.126	69.5	22.4	18.5		8	0 cir.-st.
9½					10.8		

Min. 19.6
Solar Therm. 98.1 (68.8)
Max. 32.4 (probably at last setting)

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MONDAY, FEBRUARY 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					10.3		
10	30.200	62.2	18.5	17.0		0	10 cl.
2					36.5		
4	29.960	66.5	36.3	34.0		9	10 cl.
9.25					38.3		

Min. 6.6

Solar Therm. 68.9 as set yesterday (40.0)

Max. 38.3

At 11 P.M. Therm. No. 4 39.2 Max. 39.2

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TUESDAY, FEBRUARY 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					42.0		
10	29.761	68.6	41.6	41.4		0	10 st. fog
2					45.9		
4	29.809	72.1	42.6	40.1		Calm	10 st. Snow com
9					33.6		

Min. 17.4
Solar Therm. 69.0
Max. 47.6

(427)

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WEDNESDAY, FEBRUARY 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					27.2		
10	30.136	62	28.0	25.3		10 mi.	0
2					31.9		
4	30.277	70.3	32.0	26.4		12	0
9					24.6		

Min. 26.4
Solar Therm. 102.7 (78.7)
Max. 33.9

At 11½ P.M. Bar. 30,500 Att. 66.3
Na 4 21.5

Rain Feb. 14 & 15 ending with about 1 inch of light snow in the night before Feb. 16

Gauges examined P.M.

No 1, 18 ounces. No. 2, 261 ounces. No. 3, 53½ ounces

Gauge No. 3 without cover measures 12 7/16 × 13 7/16 × 16½ inches inside.
Similar gauge with a cover ordered from Estes

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THURSDAY, FEBRUARY 17, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					14.5		
10	30.584	58.0	23.6	20.6		0	3 st. haze
2					34.3		
4	30.497	69.1	36.6	35.5		5 est.	4 st. in st.
9					32.0		

Mean 127
Solar Therm. 102.2 (69.7)
Max. 36.9

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FRIDAY, FEBRUARY 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					37.5		
10	29.944	59.3	42.3	41.8		4 4f	10 some rain
2							
4							
9	29.460	66.0			52.0		

Min. 23.0
Solar Therm.
Max. 52.0

At 11½ P.M. barom. 29.396 att. therm. 65.9

Rain most of the day

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SATURDAY, FEBRUARY 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					34.0		
10	29.532	67.2	36.2	35.2		7 ost.	10 st-.
2 1/4					35.4		
4	29.711.	69.4	32.5	27.1		12 st.	2 st cirost cirrum.
9					25.1		

Min. 36.0
Solar Therm. 101.6
Max. 55.4

(77.0)

Gauges examined at 2½ P.M.

Tel ant west No 2, 138 ounces. No. 3, 42 ounces

Meteors rather frequent about 8 P.M.
All from E. to W. One at 8h 5m starting close to Jupiter & running into Aries. One at 8h 32m across the 5 star in Cam. Maj.
Zodiacal light
Two near Jupiter at 8: afterwards broad & further north

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SUNDAY, FEBRUARY 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.2		
10	30.170	58.3	29.2	25.4		0	2 cir.-st. haze
2					36.4		
4	30.144	69.4	37.0	32.4		4 cst.	2 st. cir.-st.
9					34.7		

Min. 19.5
Solar Therm. 101.5 (78.5)
Max. 37.7

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MONDAY, FEBRUARY 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					20.0		
10	29.649	61.9	30.3	28.8	"	1 st.	10 st.
2			"		24.2		
4	29.669	65.6	20.2	18.0	"	20 est.	10 st.
9½					12.0		

Min. 28.4

Solar Therm. 96.0

Max. 38.0

(24.3)

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TUESDAY, FEBRUARY 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					8.3		
10	29.881	53.8	13.5	11.4		11 est.	0 cum.
2					18.6		
4	29.873	61.9	19.0	16.0		8 est.	5 cum.
9							
11					17.7		

Min. 6.9
Solar Therm. 94.9
Max. 20.5

(44.0)

Rain night of 20 — 21

Gauges P. M.

No. 2, 46½ ounces. No. 3 17½ ounces

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WEDNESDAY, FEBRUARY 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.856	62.4	22.8	19.0		4 est.	0 cirro-st. haze
2					32.9		
4	29.748	68.7	37.2	27.2		4 est.	1 st. haze
9					25.3		

Min. 13.7
Solar Therm. 101.4
Max. 35.4

(7 3.5)

A little aurora early in the evening.

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THURSDAY, FEBRUARY 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					21.4		
10	29.545	55.1	24.3	20.4		6 est.	10 St.
2							
4	29.470	65.2	28.6	23.8		Mst.	0 cir. St.
9					17.9		

Min. 20.5

Solar Therm. 103.4

Max. 30.9

(67.3)

+ At 4½

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FRIDAY, FEBRUARY 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					6.5		
10	29.581	59.7	11.0*	9.0		12 ost.	0 cum.
2					18.6		
4	29.568	68.0	19.1	15.6		13 ost.	0 cum. cu-st.
9					18.3		

Min. 5.8
Solar Therm. 91.1
Max. 19.8

(66.6)

* under fastening

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SATURDAY, FEBRUARY 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds.
7					15.2		
10	29.550	61.7	22.6	18.9		1 Est.	0 cum.
2							
~~4~~ 10½	29.633	71.9	29.4	25.1		5 est.	4 st. cirrost cum.
9					24.0		

Min. 10.0
Solar Therm. 98.0
Max. 30.6

(30.6)

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SUNDAY, FEBRUARY 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					16.5		
10	29.845	60.2	27.0	24.0		5 est.	10 ct. cum.
2					28.4		
4	29.760	69.0	28.9	26.2		9 est.	10 ct.
9 11					29.7		

Min. 17.3
Solar Therm. 77.8
Max. 31.0 (31.2)

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MONDAY, FEBRUARY 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.400	68.8	30.7	30.4		8 est.	10 min. snowing
2					33.1		
4	29.430	68.4	32.4	32.0		7 est	10 min. snowing
9					31.2		

Min. 26.8
Solar Therm. 61.2
Max. 32.5

(42.2)

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TUESDAY, MARCH 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.5		
10	29.569	65.8	35.6	35.5		1 est.	10 st.
2							
5 1/4 *	29.559	68.0	33.0	29.0		8 est.	10 st.
9					31.1		

Min. 30.0
Mean Therm. 105.1
Max. 36.9

(36.0 →

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WEDNESDAY, MARCH 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					21.3		
10	29.603	66.9	27.0	23.5		9 est	6 st. cir-st.
2					31.2		
4	29.623	72.1	30.9	26.4		7 est.	4 st. cum. cir-st Cirs-cum.
9					23.4		

Min. 20.7
Solar Thermom. 123.1
Max. 32.0

(77.2)

Evening of 2/.

Snow fell Feb. 28. March 1 cloudy. Snow found to be 3.4 inches deep March 2 at 2 P.M. (mean of 5 measures.) Cylinder of snow $1\frac{7}{8}$ inches in diameter and 3 inches long (8.283 cubic inches) gives $1\frac{1}{8}$ ounces of water. Gauge No. 2 left, as the snow has not come down.

New experimental gauges examined P.M. Gauge B is the old gauge No. 3 out of its box and with a funnel inside it to check evaporation. Surface exposed $12\frac{1}{4} \times 13\frac{5}{16}$ inches (161.55 sq. in.) This gauge gave 43.5 ounces water. Gauge C is made like B but has a cover with a round hole in the top 5 inches in diameter. There was nothing in this gauge.

Amount by B 0.147 inches : by measurement & reduction 0.27

Area of cylinder has 2.761 sq. in. | B Surface 161.55
C " 19.635

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THURSDAY, MARCH 3, 1870.

	Barom.	Att. Dry	Wet	No. 4	Wind	Clouds
7				18.7		
10	29.942	60.4	20.9	18.1	16 ct.	2 ct. cu.-st.
2				26.1		
4	30.004	68.8	26.4	22.2	13 ct.	0
9				19.7		

Min. 18.2
Solar Therm. 105.8
Max. 26.9

(71.4)

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FRIDAY, MARCH 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					13.0		
10	30.215	64.6	20.0	17.5		3 est.	10 ct.
2					30.0		
4	30.083	67.2	28.8	25.3		2 est.	10 ct.
9					25.8		

Min. 11.8

Solar Therm. 71.3 as set yesterday (37.5)

Max. 32.0

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SATURDAY, MARCH 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.3		
10	30.054	60.3	25.0	23.7		8 est.	10 ct. snow. snowing
2					31.0		
4	30.067	66.2	30.0	25.8		1 est.	10 ct.
9					27.1		

Mean Solar Therm. 17.4
6 9.1
Max. 31.2

(38.5)

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SUNDAY, MARCH 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.7		
10	30.174	65.2	26.0	23.5		4 est.	1 st. cirr-st haze
2					35.6		
4	30.100	72.3	34.8	32.0		1 est.	10 st. cum.
9					28.0		

Min. 16.5
Solar Therm. 108.7
Mean 36.0

(50.2)

Gauges B & C examined at 11 A.M.
B had no cover on funnel. C both.
B $0\frac{1}{2}$ ounces. C nothing measurable: not over $0\frac{1}{50}$ ounces.

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MONDAY, MARCH 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					28.0		
10	29.898	71.1	29.9	29.4		8 ct.	10 min. snowing
2					29.9		
4	29.800	66.1	29.0	28.2		10 ct.	10 min. snowing
9					27.1		

Mean. 25.2
Solar Therm. at 6 (73.8) (25.0)
Max. 32.0

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TUESDAY, MARCH 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					17.8		
10	29.864	64.4	25.6	23.0		6 est.	6 st. cir-st.
2					31,8		
4	29.882	71.9	31,8	27.3		5 est.	10 st. cum
9					25,3		

Min. 17.5
Solar Therm. 119.0
Max. 33.4

(55.4)

4 inches of snow in cylinder & 2.76 sq. in. opening give 1 1 ounce Water. 4 11.04
Gauge C with cover & funnel caught nothing.
Gauge B no cover no funnel 21½ ounces.

3.8 inches of new snow by mean of 6 measures

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WEDNESDAY, MARCH 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.5		
10	29.961	66.0	28.9	25.4		6 est.	0 cir-st.
2							
4							
5	29.942	71.0	31.7	26.2		6 est	0 cum.
9					26.1		
1							

Min. 17.1
Solar Therm. 115.3
Max. 33.4

(50.6)

Aurora late in the evening
Irregular arch and some streamers
Some red color in the upper part
Examined with spectroscope by J. W.
at 11h 15m. Nothing but usual green line.

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THURSDAY, MARCH 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.7		
10	29.969	57.3	29.7	25.2		5 wt.	1 ci.-st.
2					34.7		
4	29.831	65.1	33.3	32.0		4 wt.	10 st.
9					30.4		

Min. 19.8
Solar Therm 111.5 (42.8)
Mean. 35.2

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FRIDAY, MARCH 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					15.3		
10	30.067	60.6	21.1	17.6		5 ct.	1 cir.-st.
2					30.3		
4	29.955	63.5	27.0	22.7		9 ct.	10 ct.
9							
11					20.9		

Min. 14.8
Solar Therm. 91.7
Max. 30.3 (31.1)

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SATURDAY, MARCH 12, 1870.

	Barom.	Att.	Dry.	Wet	No. 4	Wind	Clouds
7					18.4		
10	30.037	55.8	21.5	19.6		9 est.	10 st.
2					23.3		
4	29.998	64.2	23.6	22.4		8 est.	10 st. nim. snowing
9			—		24.7		

Min. 15.7
Solar Therm. 44.6
Mean. 24.7

(27.8)

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SUNDAY, MARCH 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					24.5		
10	29.459	63°	26.3	26.0		14 est.	10 nim. snowing
2					26.6		
4	29.356	70.4	27.1	27.1		18 est.	10 nim. snowing
9					22.2		

Mean. 20.8
Solar Therm 58.6 (32.0)
Max. 27.2

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MONDAY, MARCH 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Winds	Clouds
7							
10	29.882	65.1	31.2	26.2		S wt.	S. st. cir-st.
2					36.0		
4	29.934	70.6	38.8	32.0		Haze	S cir. cir-st.
9					30.6		

Min. 20.9
Solar Therm. 132.2
Mean 39.2

(79.9)

Depth of new Snow.

12 in. $2\frac{3}{4} \times 5\frac{1}{16}$ in. = $1\frac{1}{2}$ oz. water = 14.49 cu. in.

10	$101\frac{1}{2}$	2.76
$10\frac{1}{2}$		.69
10	10.15 mean	13.80
$10\frac{1}{4}$		
$10\frac{1}{4}$		
$10\frac{1}{4}$		
$11\frac{1}{2}$		
$9\frac{1}{2}$		
$11\frac{1}{2}$		

RM { Gauge B 44½ ounces (no cover on Gauge) / Gauge C 16 ounces. (both)

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TUESDAY, MARCH 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					21.0		
~~7~~ 11	30.189	63.6	37.2	32.0		0	0
2					41.1		
4	30.192	70.7	38.8	34.3		2 est.	0
9.							

Mean 18.6
Solar Therm. 115.7
Max. (82.2)

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WEDNESDAY, MARCH 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					34.3		
10							
12 2/3	29.729	61.8	37.0	34.0		10 est.	10 st.
2					37.6		
5 3/4	29.491	63.6	33.5	33.1		25 est.	10 min mowing
9					33.5		

Mean. 21.9
Solar Therm. 81.0 see yesterday (33.1)
Max. 41.4 (yesterday's maximum)

68 ounces water taken from No. 2 at 8 3/4 P.M. Much is left.

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THURSDAY, MARCH 17, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.0		
10	29.331	60.1	26.2	24.2		3 est.	10 st.
2					30.6		
4	29.340	64.7	28.0	25.5		1 st.	8 st.
9					26.0		

Min. 20.6
Solar Therm. 113.7
Max. 34.3

(46.3)

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FRIDAY, MARCH 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					26.0		
10	29.648	65.5	31.2	29.5		1 Bft.	10 nim. morning
2					33.9		
4	29.808	67.2	34.6	32.1		8 Bft.	10 St.
9 1/4					33.5		

Min. 25.0
Solar Therm. 80.8
Max. 35.0

(51.0)

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SATURDAY, MARCH 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.3		
10	30.080	62.1	31.3	26.8		11 est.	0
2					38.9		
4 11/4	30.073	69.8	39.6	35.6		4 est.	0
9					31.6		

Min. 21.2
Solar Therm. 125.8 (at 5 3/4) — 42.8
Max. 40.3

A little auroral light.

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SUNDAY, MARCH 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.084	63.4	35.2	29.8		3 est.	0 ar-st.
2					45.7		
4	30.009	65.1	48.5	39.2		1 est	2 cir-st,
9					38.3		

Min. 2-1.3
Solar Therm. 117.3
Max. 48.0

(89.1)

At 4 P. M. Gauge B 80 & C 22½ ounces
new snow of 17th & 18th could not be
distinguished from old snow sufficiently
for measurement

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MONDAY, MARCH 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.6		
10	29.838	63	41.0	40.0		1 est.	10 St.
2					47.7		
4	29.750	68.3	47.0	44.0		0	10 St.
9							
11½					40,1		

Min. 34.4
Solar Therm. 89.1 (as set yesterday) (57.9)
Max. 48.3

49 omnes from No. 2 at 4 P.M. Ice left,

Some auroral light all the evening. Clearer sky in the N. about 11½ P.M. than before. The aurora then showed an arch and streamers, a very red one towards the E.

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TUESDAY, MARCH 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.0		
10	29.872	66.4	43.5	39.0		5 est.	3 cir.-cum. st. cir.-st.
2					48.1		
4	29.840	70.9	45.0	39.0		8 est.	1 st. cir.-st.
9					36.2		

Min. 34.8
Solar Therm. 120.4
Max. 49.0

(89.9)

12½ ounces from No. 2 at 10 A.M. Ice left.
13 " " " " 4 P.M. " "
7½ " " " " 9 " " "
" " " " 13 " Ice all gone

Some unusual high brown clouds at 9 P.M. and later

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WEDNESDAY, MARCH 23, 1870.

	Barom.	Att.	Dry	Wet	Hoar	Wind	Clouds
1					34.6		
10	29.849	66.7	38.9	33.8		12 st.	10 st. cum. cum.-st.
2					38.6		
4	29.865	68.0	36.0	31.2		10 st.	10 st. cum.
9					30.7		

Min. 32.5
Solar Therm. 102.3
Max. 40.0

(52.7)

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THURSDAY, MARCH 24, 1870.

	Barom.	Att. Dry	Wet	N.A	Wind	Clouds
7				26.7		
10	30.091	62.7	29.9	25.1	15 est.	1/ st. ci. st
2				31.7		
4	30.126	68.0	31.0	24.9	17 est.	0
9				23.9		

Min. 26.5
Solar Therm. 106.4
Max. 32.2

(75.8)

Auroral arch: low at 9 P.M.

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FRIDAY, MARCH 25, 1870.

	Barom.	Att. Dry	Wet	No. 4	Wind	Clouds
7				22.3		
10	30.361	60.0	24.7	20.6	Nest.	0
2				31.3		
4	30.380	68.1	31.2	27.3	6 est.	0
9 1/4				27.1		

Min: 17.1
Solar Therm. 104.0 (75.0)
Max: 33.9

Low auroral arch
A slight appearance of streamers

1870phae.proj..369

SATURDAY, MARCH 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					22.6		
10	30.586	64.0	31.3	27.8		3 est.	1 cir-st. cum,
2					36.9		
4	30.532	68.1	34.0	32.0		6 est.	4 cum. ch.
9					32.2		

Min. 19.1
Solar Therm. 119.1
Max. 39.0

(62.9)

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SUNDAY, MARCH 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					29.3		
10	30.286	60.8	35.7	33.0		12 ct.	10 ct.
2					35.7		
4	30.085	67.7	35.2	34.8		16 ct.	10 nim. snowing
9					36.2		

Min. 31.2
Polar Therm. 65.0
Max. 36.4

37.0

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MONDAY, MARCH 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.492	65.6	49.0	39.9		3 cot.	10 min. fog raining
2					44.1		
4	29.533	67.4	44.3	43.9		0	10 at. fog
9					38.8		

Min. 34.3
Solar Therm. 73.4
Max. 44.9

(57.9)

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TUESDAY, MARCH 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					35.4		
10	29.820	63.2	38.1	37.6		5 est.	10 st.
2					38.4		
4	29.900	64.8	40.6	38.4		5 est.	10 st.
9		E. N.			39.0		

Min. 34.5
Solar Therm. 59.7
Max. 41.2

E. S. E. (46.0)

1870phae.proj, 369

WEDNESDAY, MARCH 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.2		
10	30.216	66.3	42.7	39.0		West.	10 st.
2					44.4		
4	30.243	65.7	44.8	39.2		7 st.	10 st.
9					42.3		

Min. Polar Therm. 37.7 66.9 (55.8)
Max. 45.3

Sky becoming clear late in the evening; afterwards aurora. Irregular shape with quick flashes; after midnight regular arch, rising by degrees higher in the sky.

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THURSDAY, MARCH 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.8		
10	30.336	62.8	41.0	37.0		6 est.	0 cirr. cum.
2 3/4					43.9		
4	30.301	67.4	43.2	38.7		5 est, 0 cirr. cum.	
9					34.2		

Min. 34.9
Solar Therm. 110.8
Max. 44.7

(83.9)

At 10 A. M.
No. 2 150½ ounces & a little lost.
B 129 ounces C 114¾ ounces
(Rain of 27 – 30)

Aurora in the evening: arch rather irregular & low; no extra arms at first: at 10½ some long, wide, steady streamers.

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FRIDAY, APRIL 1, 1870.

	Barom.	Attd	Dry	Wet	No. 4	Wind	Clouds
7					34.5		
10	30.317	59.6	46.0	40.4		6 est.	1 air-st.
2					46.7		
4	30.325	74.7	44.8	36.2		5 est.	3 cir. cir.-st.
9					36.4		

Min. 31.6
Solar Therm. 114.2
Max. 48.1

(76.3)

A little around light.

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SATURDAY, APRIL 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					34.7		
10	30.162	66.3	43.6	37.6		Just.	8 cir. cir-st.
2					45.1		
4	30.059	69.3	44.0	39.9		10 ust.	6 cir. st. cir-st.
9					37.7		
Min.		32.0					
Solar Therm.		116.1					81.9
Max.		46.0					

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SUNDAY, APRIL 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.0		
10	29.931	69.6	39.2	35.7		West.	10 Str.
1½					37.0		
2½					36.2		
4	29.898	66.4	34.5	33.9		13 St.	10 nim. threatening
9					32.8		

Mean. 35.7

Mean Therm. 33.9

Max. 40.2

(38.7)

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MONDAY, APRIL 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Cloud
7							
10	29.817	62.9	34.6	34.2		9 est.	10 st.
2					35.4		
4	29.696	66.5	35.1	34.9		16 est.	10 rain. raining
9					34.8		

Min. 32.0
Solar Therm. 48.1
Max. 35.7

(37.6)

109½ ounces withdrawn from No. 2 at 7¾ P. M.

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TUESDAY, APRIL 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.5		
10	29.826	64.2	41.1	37.6		6 est.	10 St.
2					42.1		
4	29.899	69.3	40.8	37.0		5 est.	10 St. cum.
9½					35.8		

Mean. 314.2

Solar Therm. Max. 43.6 117.7 52.8

11 A.M.

B blown out C 96 ounces

No. 2 62½ ounces

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WEDNESDAY, APRIL 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					37.5		
10	29.870	62.5	34.0	33.9		3 est.	10 nim. moving
2					37.0		
4	29.839	64.1	37.0	36.3		6 wt.	10 st.
~~8~~ 11 3/4					35.2		

Min. 33.2
Solar Therm. 56.0
Max. 37.7

(43.4)

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THURSDAY, APRIL 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.0		
10	29.950	65.0	42.2	40.4		1 st.	10 st. cum-st.
2 1/6					49.3		
4	29.962	69.0	48.3	42.5		2 st.	10 st. cum.
9 3/4					43.8		

Min. 38.8
Solar Therm. 125.9 (55.8)
Max. 50.0

10 A. M.
A 88 1/2 B 66 1/2 C 46 ommers.

Cleared off late in the evening.
A little auroral light about 11 1/2 P. M.

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FRIDAY, APRIL 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.7		
10	30.055	60.7	52.1	44.6		5 st.	1 cir-cum. cu-st.
2							
4	30.061	69.3	50.1	43.7		4 st.	1 st. cum.
9					43.4		

Min. 34.9
Solar Therm. 134.7 (92.0)
Max. 59.0

Part of an auroral arch & streamer at midnight.

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SATURDAY, APRIL 9, 1870.

	Barom.	Attr.	Dry	Wet	No. 4	Wind	Clouds
7					38.5		
10	30.052	64.7	55.0	47.0		0	0 cir-st.
2					62.3		
4	30.111	75.2	62.3	47.8		Lt.	0 cir-st.
9					51.9		

Min. 36.0
Solar Therm. 127.1 (105.6)
Max. 63.4

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SUNDAY, APRIL 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.2		
10	30.277	69.0	53.0	43.5		3 est.	0 cir.-st.
2					55.6		
4	30.250	74.0	52.5	41.7		5 est.	4 cir.-st.
9					42.2		

Min. 36.3
Solar Therm. 122.3
Max. 56.5

(93.9)

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MONDAY, APRIL 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.130	62.7	50.0	43.9		5 est.	10 st.
2					51.4		
4	29.952	63.8	44.9	44.2		9 est.	10 nim. raining
9					44.0		

Min. 34.0
Solar Therm. 93.7 w ct (49.7)
Max. 52.6

A at 7½ P.M. 45¼ omnes.

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TUESDAY, APRIL 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					44.0		
10	29.578	59.6	47.0	45.2		8 est.	10 st.
2					52.2		
4	29.601	65.8	52.4	46.4		11 est.	10 st. a little rain.
9					50.1		

Min. 42.2
Solar Therm. 69.3 (57.7)
Max. 55.6

A 31 B 77 C 30 ounces at noon

A little rain in the afternoon but not enough to wet the gauges.

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WEDNESDAY, APRIL 13, 1870.

	Barom.	Attr.	Dry	Wet	No. 4	Wind	Clouds
7					40.2		
10	29.923	54.8	47.7	37.7		13 ct.	0
2					55.1		
4	29.958	64.2	56.8	44.0		6 ct.	5 cir. cir-st.
9					50.3		

Min. 38.2
Solar Therm. 121.9 (94.7)
Max. 57.3

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THURSDAY, APRIL 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.6		
10	30.043	51.9	64.9	53.4		1 st.	4 cir.-st. haze
2					73,5		
4	29.947	69.0	71.0	58.7		5 st.	2 cir.-st. haze
9					58.0		

Mean. 38.7
Solar Therm. 137.0 (107.3)
Max. 74.1

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FRIDAY, APRIL 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					50.0		
10	30.199	65.3	50.1	45.1		12 ct.	8 cum. Large
2					46.0		
4	30.334	66.1	40.6	36.9		12 ct 10 st. cum.	
~~9~~ 11					38.2		

Min. 49.4
Solar Therm. 109.0
Max. 58.3

(53.2)

Cloudy most of the day growing clearer late in the evening as the moon rose higher.

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SATURDAY, APRIL 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.5		
10	30.512	58.7	38.8	34.7		5 ext.	7 st. cum.
2					39.5		
4	30.456	61.6	37.8	34.5		5 ext.	10 st.
9					36.9		

Min. 34.2
Solar Therm. 112.0
May. 41.4

47.6

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SUNDAY, APRIL 17, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.7		
10	30.285	63.3	39.7	38.9		4 est.	10 ct,
2					41.1		
4	30.172	66.0	41.0	40.4		4 est.	10 nim. fog fine rain
9					39.3		

Min. 36.1
Solar Therm. 63.2 (49.0)
Max. 42.0

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MONDAY, APRIL 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.950	66.1	43.1	43.0		9 est.	10 nim. fog fine rain
2					42.8		
4	29.830	64.7	42.2	42.0		14 est	10 st. nim. fog: a little rain
9					42.4		

Min. 38.6
Solar Therm. 58.7
Max. 44.5

44.6

Took 53½ ounces from A at 5¼ P.M.

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TUESDAY, APRIL 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					43.4		
10	29.722	63.4	44.0	43.5		2 ut.	10 ut.
2					49.7		
4	29.704	66.3	43.2	40.7		7 at.	10 Ats.
9					39.6		

Min. 41.4
Solar Therm. 94.3
Max. 49.7

(5 0.4

A found overflowed at 9½ A.M.
149 ounces in bottle,

B 186 C 102½ ounces at 7½ P.M.

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WEDNESDAY, APRIL 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					37.8		
10	29.701	60.7	42.6	39.9		4 ust.	10 st.
2					46.9		
4	29.758	65.5	43.4	40.9		4 ust. E	10 st.
9					39.5		

Min, 36.2
Solar Therm, 115.1 (49.1)
Max. 48.0

A at 9½ P.M. 20½ ounces.

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THURSDAY, APRIL 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.7		
10	29.850	69.4	43.1	42.4		0	10 st.
2.					46.4		
4	29.807	68.3	46.0	44.0*		1 st.	10 st.
9					41.9		

Min. 37.2
Solar Therm. 93.1 (56.8)
Max. 49.3

* At 4¼ P.M.

A 14½ B 50 C 12 ounces at 4½ P.M.

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FRIDAY, APRIL 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					40.2		
10	29.987	65.8	47.7	44.3		2 et.	10 st. cum.-st.
2					56.3		
4	29.978	69.3	55.0	48.3		1 et. E.	10 st. cum.
9					49.3		

Min. 39.0
Solar Therm. 131.0
Max. 56.3

(68.9)

A 34 B 27 3/4 C 21 1/2 ounces at 10 1/4 AM

9

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SATURDAY, APRIL 23, 1870.

	Barom.	Att.	Dry	Wet	Solar	Wind	Clouds
7					48.0		
10	30.109	60.3	58.4	48.4		0	3 cum. cir.st cir.-cum. cir.
2 1/3					52.0		
4							
9					48.7		

Maximum 43.8
Solar Therm.
Max. 61.1

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SUNDAY, APRIL 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					40.8		
10	30.070	56.4	63.7	54.2		7 est.	0 cir. st. haze
2					71.3		
4	29.974	69.6	68.7	57.2		7 est.	6 cum. st, cir.-st.
9					56.8		

Min. 40.7
Solary Therm. 128.6 (87.2)
Max. 72.4

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MONNDAY, APRIL 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.001	62.7	43.1	42.4		6 est.	10 min. raining
2					49.9		
4	30.049	64.1	54.4	44.4		10 est. NNW	5 cum. str.
9					47.0		

Min. 12.6
Solar Therm. 108.2
Max. 57.1

(84.7)

A 14 B 2 ½ C 3 ¾ ounces at 3 ½ P.M.

Faint auroral light at 9 P.M. somewhat brighter afterwards, but hardly visible at midnight.

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TUESDAY, APRIL 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.3		
10	30.148	58.9	58.3	47.8		4 st. S.W.	2 st. cir.-st.
2					64.5		
4	30.052	66.7	65.0	48.0		6 st. W.	2 cir.-st.
9					55.3		

Min. 36.6
Solar Thrm. 126.8
Max. 66.4

(107.6)

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WEDNESDAY, APRIL 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					51.0		
10	30.190	63.7	64.4	51.2		3 ext. S W	7 cir. st. (thin)
2					73.9		
4	29.979	72.9	73.3	56.8		5 ext. S. W.	1 cir. st. haze
9					58.1		

Min. 44.7
Solar Therm. 133.2 (112.7)
Max. 75.4

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THURSDAY, APRIL 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					51.4		
10	29.869	61.9	70.4	62.8		S W	6 haze cir-St. cir.-cum.
2					78.0		
4	29.770.	70.4	71.2	63.9		6 W	8 haze St.
9					62.4		

Min. 50.7
Solar Therm. 130.0 (86.2)
Max. 78.5

Afternoon & Evening: Thunder repeatedly at a distance 5½ to 6 P.M. Smart thunder-shower, thunder rather distant at 7 P.M. afterwards gentle rain

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FRIDAY, APRIL 29, 1870.

	Barom.	Attc.	Dry	Wet	No. 4	Wind	Clouds
7					50.3		
10	30.051	59.5	53.2	43.0		5 est. NW	9 st. cir. th. cir. cum.
2					57.2		
4	30.009	63.4	57.2	47.5		1 est. N.E.	10 st. cir. st.
9					48.2		

Min. 46.7
Solar Therm. 111.9 (91.0)
Max. 62.3

A 70½ B 37½ C 14½ ounces at 2¾ P.M.

Some appearance of aurora about 11¼ P.M. Clouds in the N.

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SATURDAY, APRIL 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					43.2		
10	30.063	58.4	55.3	47.8		1 est. N. E.	0 haze st. cum.
2					55.4		
4	29.987	66.3	56.0	46.9		4 est E.	5 cum. st. ai.
9					49.4		

Min. 38.1
Solar Therm. 120.9
Max. 61.2

85.3

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SUNDAY, MAY 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					45.0		
10	29.810	60.9	58.9	47.6		8 mt. N.W.	7 cum.
2					58.3		
4	29.958	62.2	57.0	45.3		14 mt. N.W.	5 cum.
9 1/2					50.0		

Min. 42.8
Solar Therm. 126.0
Max. 59.4

(700)

Low auroral arch, rather faint: brighter towards midnight.

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MONDAY, MAY 2, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					43.5		
10	30.252	61.8	57.3	43.0		9 wt.	0 cir-st.
2							
4	30.268	67.1	64.8	48.6		5 wt.	0 cir-st.
9					52.6		

Min. 42.2
Solar Therm. 126.6 (111.0)
Max. 65.9

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TUESDAY, MAY 3, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					47.5		
10	30.099	59.7	66.3	52.7		6 est.	0 cir. st large
2					71.8		
4	29.949	68.2	66.3	52.7		10 est.	9 cirst cu
9					54.9		

Mean. Therm. 42.8
Solar Therm. 128.6
Max. 72.2

(8555)

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WEDNESDAY, MAY 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					52.3		
10	29.550	61.3	64.3	54.8		Nwt S.	10 st.
2					76.2		
4	29.516	69.3				12 st.	10 cumst haze
9					48.8		

Min. Therm. 42.7
Solar Therm. 132.5 (101.6)
Max. 78.4

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THURSDAY, MAY 5, 1870.

	Baron.	Att.	Dry	Wet	Nad	Wind	Clouds
7							
10	29.950	57.5	51.6	43.0		2 str N.E.	0 cum st
2					61.4		
4	29.832	64.3	64.2	49.7		6 est N.W.	1 cum
9					53.9		
Min.		38.1					
Solar Therm.		121.8					(96.5)
Max.		64.9					

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FRIDAY, MAY 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					43.5		
10	29.749	75	58,6	45,6		5 str.	1 cir. cir-str.
2					65,1		
4	29.587	65,5	63,2	51,7		4 est. N.N.E	8 str. cir-str.
9					47,2		

Min. 41.6
Solar Therm. 124.2 (93.0)
Max. 65.9

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SATURDAY, MAY. 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					43.8		
10	29.509	58.4	53.6	48.3		4 calm	10 A.
2							
4							
9							

Min. 41.6
Solar Therm. 105° A 9 9 M 8th (78)
Max. 54.8 reach May 8 9 A M

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SUNDAY, MAY 8, 1870.

	Barom.	Att.	Dry	Wet	Nor	Wind	Clouds
7							
~~10~~ 9	29.724	63.2	52.0	50.3	52.2	West	10
2							
4							
9							

Min. 45.0
Solar Therm. 88.5 (49)
Max. 54.8

No B 2½ of orange
No C a few drops covered one

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MONDAY, MAY 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
~~10~~ 9	29.778	62.	44.2	43.8	44.2	14	10 raining
2							
4							
9							

Mjr. 44.0
Polar Therm. 59.
Max. 45.6

(48)

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TUESDAY, MAY 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1							
9	30.005	57.0	42.8	42.0	42.8		10
10							
2							
3	30.020	56	45.8	43.7	45.8	10	10
4							
9							

Min. 41.2
Solar Therm. 61.5 (49)
Max. 46.5

Rain of Sunday & Monday & Sat
No A 36 1/4 oz on shed for A
No B 15 1/4 open gauge
C 8 1/2 covered

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WEDNESDAY, MAY 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7	~~29~~				41.3		
9	29 954	56	43.0	422	43.0	6	10 raining
10							
2							
4							
9							

Min. 42.2
Solar Therm. —
Max. —

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THURSDAY, MAY 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					41.5		
10	29.782	53.5	54	50.	55	15	7 cum
2							
4							
9							

Min. 39
Solar Therm. 124
Max. 64.8
Rain of Tuesday & Wednesday

A 98
B 80 1/2
C 10 1/4

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FRIDAY, MAY 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					50.0		
10	29.845-	56.3	59.2	51.8	49.3	4	.3 cum
2							
4							
9			52	47			

Min. 45.0
Solar Therm. 127.5
Max. 66

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SATURDAY, MAY 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					49.7		
10	29.884	57	58.8	50.2	56.9	4	1 Cir cum
2							
4	29.877	62.2	56.5	52.7	56.5	0	10
9					56.9		

Mean. 42.3
Solar Therm. 131.5
Max. 63.0

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SUNDAY, MAY 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.0		
10	29.880	63.6	74.4	59.4		11	4 cir.-st. haze
2					82.8		
4	28.501	72.2	81.6	63.0		10	1 cir.-st. haze
9					71.1		

Min. 57.7
Polar Therm. 136.2
Max. 83.2

(117.6)

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MONDAY, MAY 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.902	69.4	70.3	61.3		5	2 haze
2					66.7		
4	29.874	68.3	59.4	52.9		8	5 cir.-st., cir. haze.
9		R.H.			50.8		

Min. 59.1
Solar Therm. 127.8
Max. 71.7 yesterday's setting (100.0 perhaps)

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TUESDAY, MAY 17, 1870.

	Barom.	Attd.	Dry	Wet	Nad	Wind	Clouds
7					49.7		
10	30.092	61.1	52.9	45.9		6	10 st.
2					55.4		
4	30.150	63.9	53.7	47.7		7	0 cum. haze
9					46.9		

Min. 47.3
Solar Therm. 116.6 (99.8)
Max. 57.9

A little auroral light suspected about 11½ P.M. The moon had risen.

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WEDNESDAY, MAY 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					50.2		
10	30.267	57.1	64.6	52.6		7	3 cir. st. haze cir.
2							
4							
4½	30.227	65.0	67.8	52.8		10	5 cir. st. haze cir.
9					52.3		

Mijo. 39.9
Solar Therm. 129.0
Max. 71.0

100.8

Same appearance after morning as last night. Light confined to the usual region of aurora, lasting only a short time.

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THURSDAY, MAY 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					55.2		
10	30.207	59.0	67.2	56.7		12	0 haze
2					74.4		
4	30.109	69.4	73.3	60.0		13	1 cir.-st. haze
9					63.0		

Min. 47.1
Solar Therm. 128.0 105.8
Max. 75.2

Lightning without thunder late in the evening. Clouds growing thick.

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FRIDAY, MAY 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					65.3		
10	30.116	67.7	68.8	64.7		4	10+ cum.
2					78.2		
4	30.036	72.0	79.2	65.2		6	5 cum., cir.-cum. haze
9					67.9		

Min., 61.7
Solar Therm., 135.7
Max., 80.3

(116.8)

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SATURDAY, MAY 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					55.4		
10	30.193	65.7	66.4	55.2		7	6 haze
2 1/6					62.1		
4	30.050	67.7	58.0	51.6		7	10 ct. haze
9					57.9		

Mean. 51.1
Solar Therm. 116.5 last setting (62.0)
Max. 62.9

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SUNDAY, MAY 22, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					52.0		
10	30.138	60.4	58.7	49.0		4	2 haze cum. in.-st.
2					63.8		
4	30.118	66.4	63.2	49.2		15	0 haze in.-st.
9					52.3		

Min. 45.6
Solar Therm. 128.7 (101.0)
Max. 64.4

Rain yesterday evening.
Gauge A 9½ B 0. C 0 Rained at 4 P.M.

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MONDAY, MAY 23, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					50.2		
10	30.174	58.0	64.0	52.8		5	7 st. cir.-st.
2					69.9		
4	30.059	66.2	64.0	53.9		5	10 st.
9					58.3		

Min. 40.0
Solar Therm. 136.5
Max. 70.2

66.7

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TUESDAY, MAY 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					56.3		
10	29.923	61.9	64.8	61.7		5	10 Cu.
2					52.5		
4	29.879	62.5	51.7	50.0		4	Nimb. rain
9					48.4		

Min. 55.3
Solar Therm. 111.3
Max. 64.8

(52.4)

Gauge A 2¼ B 1 C 0 ounces at 10 P.M.

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WEDNESDAY, MAY 25, 1870.

	Barom.	Att.	Dry	Wet.	Rain	Wind	Clouds
7					48.4		
10	29.849	57.8	57.3	55.1		2	9 st. fog.
2					61.2		
4	29.827	64.7	62.3	57.3		5	4 cum. st.
9					55.8		

Mean. 45.9
Solary Therm. 130.9
Max. 64.7

(110.9)

Rain in previous day and night.
Gauge A 27 B 10½ C 1 ounces at 1 P.M.

Auroral arch at 9 P.M.
brightest in the N.W.

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THURSDAY, MAY 26, 1870.

	Barom.	Att.	Dry	Wet	Na4	Wind	Clouds
7					57.0		
10	29.953	62.7	65.5	56.5		5 est.	6 cum. dist. cir.
2					61.6		
4	29.980	64.9	60.1	54.9		6 est.	8 cirst. & cu. cir.
9					52.8		

Mean 45.9
Solar Therm. 135.1 - (82.9)
Max. 63.0

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FRIDAY, MAY 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					50.8		
10	30.131	59.9	53.2	48.0		12	10 st. cum.
2							
4	30.108	63.1	53.4	49.0		11	10 st. cir-cum cum.
9					48.6		

Min. 48.4
Solar Therm. 103.6
Max. 56.3

(72.2)

Perhaps some auroral light among clouds in the N. at 9 P.M.

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SATURDAY, MAY 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					47.6		
10	29.926	56.6	47.2 wet	46.9		11	10 rain.
2					49.1		
4	29.987	62.8	48.9	48.4		15	10 rain
9					51.7		

Min. 46.3
Solar Therm. 72.6 probably on 27th (53.5)
Max. 51.7

A 34 omnes at 5½ P.M.

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SUNDAY, MAY 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.978	63.3	61.7	54.2		4	9 st. cir-st cir.-cum.
2					64.9		
4	30.000	69.7	64.9	57.9		2	10 st. (thin)
9	10⅓				57.0		

Min. 46.8
Solar Therm. 142.9
Max. 68.2

(83.4)

A 21, B 37, C 41 ounces at 10 A.M.
A few drops of rain at 3½ P.M.; gauges not wet.

Perhaps some auroral light later in the evening.

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MONDAY, MAY 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.181	64.0	68.8	63.4		4	8 cum. st.
2					68.3		
4	30.223	70.0	65.7	60.2		4	3 st. in-st
9					58.3		

Min. 50.9
Solar Therm. 141.9
Max. 71.6

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TUESDAY, MAY 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					54.7		
10	30.378	63.4	59.5	57.3		5	10 St.
~~3~~ 3¼					63.3		
4	30.334	68.1	63.5	59.0		5	10 St.
9							

Min. 52.4
Solar Therm. 126.0
Max.

(76.5)

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WEDNESDAY, JUNE 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					55.0		
10							
11½	30.150	65.7	71.8	66.1		4 est.	10 st.
2					74.9		
4	30.056	70.9	75.8	66.8		5 est.	7 cum st. cir. cum cir. st cir.
9					65.6		

Min. 52.4
Solar Therm. 140.0
Max. 76.6

(16.24)

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THURSDAY, JUNE 2, 1870.

	Barom.	Attr	Dry	Wet	No. 4	Wind	Clouds
7					55.4		
10	29.992	68.6	76.2	67.0		2 est	1 cir. th. cir.
2					81.4		
4	29.983	78.0	79.2	69.3		6 est	6 cumu. cir. st
9					65.2		

Min. 60.1
Solar Therm. 151.2
Max. 81.7

(104.7)

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FRIDAY, JUNE 3, 1870.

	Baromr	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.5		
10	30.101	66.4	63.8	60.4		1 st.	3 st. haze
2					64.6		
4	30.100	70.4	65.3	60.1		5 st.	1 haze in st
9					58.1		

Min. 53.2
Solar Therm. 132.6
Max. 69.2

(102.6)

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SATURDAY, JUNE 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.0		
10	30.110	69.4	77.7	72.2		3 est.	1 st. cir.-st. cum.
2					81.0		
4	30.164	78.6	80.5	71.0		4 est.	1 cum. large
9					68.1		

Min. 56.8
Solar Therm. 149.6 (109.7)
Max. 83.7

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SUNDAY, JUNE 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					65.2		
10	30.077	71.2	76.2	70.7		5 est.	10 ct. cum.
2							
2½					76.3		
4	30.024	77.0	81.0	72.5		8 est.	5 cum-st. cum. ct.
9					71.3		

Min. 61.8
Solar Therm. 134.3
Max. 82.0

(111.0)

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MONDAY, JUNE 6, 1870.

	Barom.	Att.	Dry	Wet.	No. 4	Wind	Clouds
7							
10	30.042	73.6	74.3	69.9		4 est.	10 cum.-st. st. cir.-cum.
2 1/3					66.7		
4	30.027	77.2	75.2	71.4		1 est.	10 st. cir.-cum. cum.-st.
9					65.2		

Mean. 66.2
Polar Therm. 145.0 (93.1)
Max. 77.6

Showers in middle of day
Gauge A 10 B 0½ C 0 ounces at 3h¼ P.M.

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TUESDAY, JUNE 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					62.7		
10	30.100	72.1	67.7	66.9		0	10 ct. fog.
2					69.0		
4	30.063	72.5	62.6	62.0		2 ct.	10 ct. min. fog (a little rain)
9					62.1		

Min. 61.9
Solar Therm. 98.7
Max. 71.5

(68.8)

Rain much of the day.
At 9½ P.M. gauge A 19 B 9 C 0 ounces
C a little damp only in places.

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WEDNESDAY, JUNE 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					61.3		
10	30.022	68.2	64.3	62.9		1 st	10 st.
2					67.3		
4	30.009	70.4	66.2	63.9		5 st.	10 st.
9					63.5		

Min. 59.2
Solar Therm. 100.8 (78.0)
Max. 69.8

Rain previous night
At 10 3/4 A.M. gauge A 1 1/2 B 0 1/2 ounces C about 6 drops.

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THURSDAY, JUNE 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.2		
10	30.040	67.3	63.6	59.6		1 str.	10 str. cum.
2¼					65.4		
4	30.014	68.1	62.3	57.8		9	10 str. cum.
9					57.2		

Min. 57.0
Solar Therm. 136.0 (85.0)
Max. 67.0

Gauge A 1½ ounces 6 P.M. from a little rain afternoon of June 8. None in B & C.

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FRIDAY, JUNE 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					51·5		
10	30.056	62.3	×53.6	×52.8		10	10 min. raining
2					53.6		
4	30.040	63.4	53.0	52.0		7	10 min. fine rain
9					51.0		

Min. 50.3
Solar Therm. 90.2
Max. 55.7

(61.2)

× At 10½

Rain at intervals

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SATURDAY, JUNE 11, 1870.

	Barom.	Att.	Dry	Wet	Nat	Wind	Clouds
7					50.5		
10	30.049	61.7	57.6	51.3		7	10 nimbus raining
2					53.8		
4	30.016	67.5	56.4	54.9		7	10 St.
9					53.1		

Min. 50.2
Mag. Therm. 75.0 (68.3)
Max. 57.0

Rain at intervals.

At 4¼ P.M. gauge A 38½ B 26 C 1 ounce

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SUNDAY, JUNE 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					532		
10	30.126	68.9	64.5	62.3		1	10 st.
2					74.0		
4	30.123	76.6	71.2	65.2		6	4 cumi in ort
9					636		

Max. 51.2
Solar Therm. 135.0 (101.3)
Max. 76.6

A little rain in night previous.

A 1½ B 0½ C 0 ounces.

Perhaps a little auroral light behind clouds in the north about 9 2/3 P.M.
Plainer a little later: disappeared with the clouds by 11 P.M.

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MONDAY, JUNE 13, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					57.3		
10	30.298	73.0	74.6	66.1		3	9 cir.-cum. st.
2							
4							
9					70.0		

Min. 56.9
Solar Therm. 146.7 at 10 A.M. June 14 88.8
Max. 80.2

At 10½ A.M. A 0+ rain B about 10 drops C nothing

Rain in the afternoon & evening

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TUESDAY, JUNE 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.0		
10	30.020	71.7	73.0	69.3		6	10 st.
2					76.1		
4	29.943	74.5	77.0	72.5		7	10 st. cumost. cum. cirrocum. cirrost.
9					67.7		

Mean. 66.7
Solar Therm. 110.1
Max. 78.1

(96.2)

At 9¾ A.M. A 65 B 42 C 4½ ounces
Rain in the forenoon
At 2 P.M. A 7 B 3 4½ C 0½ ounces

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WEDNESDAY, JUNE 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.7		
10	29.952	72.0	78.4	69.5		5	1 cir-str cum.
2					80.4		
4	29.932	77.7	80.6	69.7		10	1 cum. cir-str.
9					70.8		

Min: 62.0
Solar Thrm. 144.7
Max. 82.8

(97.4)

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THURSDAY, JUNE 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					69.0		
10	29.953	73.2	77.4	72.3		1	10 st.
2							
4							
9							

Min. 63.5
Solar Therm. 143.
Max. 82.8

(82)

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FRIDAY, JUNE 17, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					69.0		
10	29.936	72.	71.	66.8	72.0		10
2							
4							
9							

Min. 65.8
Solar Therm. 118.2 at 2 2h (118.2)
Max. 78.2

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SATURDAY, JUNE 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.5		
10	29.935	70	78	67	78.8	West	3
2							
4							
9			77.5	68.9	77.8		0

Min. 62.0

Solar Therm 125.3

Max. 88.3

167

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SUNDAY, JUNE 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
					63.5		
7 8½	30.132	69.5	63.7	59.0	64	13	5-
10							
2							
4							
9							

Min. 61.3
Solar Therm. 127
Max. 77 at 21h = temp of open air

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MONDAY, JUNE 20, 1870.

	Barom.	Att.	Day	Wet	No. 4	Wind	Clouds
7							
10	29.885	72.2	79.8	73.2	80.8	5	4 cir-cum
2							
4							
9					66.0		

Min. 63.
Solar Therm.
Max. 86.7

Gauge B with new cover by Clark.
Thunder showers in the afternoon:
hail in Boston, not Cambridge

At 8½ P.M., A 5½ B 5 C 7½ ounces
Kiernan's boy & 20 others struck by lightning on Main St. near Ellery. Many cellars in Boston submerged. One of the most terrific storms ever known in these parts

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TUESDAY, JUNE 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.4		
10	29.870	68.6	66.2	56.0		14	0 cum. str.
2							
4	29.937	70.4	63.1	52.3		23	4 cum.
9					55.4		

Mean. 60.1
Solar Therm. 151.5 (probably June 20) 90.8
Max. 67.9.

At 10¼ A.M. A 58 B 5½ ○ 20 minutes

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WEDNESDAY, JUNE 22, 1870.

	Barom.	Att.	Dry	Wet.	No. 4	Wind	Clouds
7					56.5		
10	30.078	63.1	62.8	52.3		W 7	0 cir-st. cum.
2					66.7		
4	30.040	68.1	69.5	56.3		W 12	1 st. cir-st. cir-cum-cum.
11					69.9		

Min. 51.3
Solar Therm. 136.9 (had been disturbed and the reading may be incorrect)
Max. 71.3

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THURSDAY, JUNE 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					62.5		
10	30.109	65.3	67.0	60.4		3 est.	10 st.
0 5/6					73.9		
2 1 1/2					76.4		
4							
5 1/6	30.060	71.4	74.5	69.0		1 est.	10 st. cum.
9					71.9		

Mean. 56.3
Solar Therm. 131.1
Max. 77.6

(60.47)

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FRIDAY, JUNE 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					71.2		
10	30.107	72.2	82.2	73.3		1 est.	0 haze
2					90.0		
4	30.052	83.2	88.9	75.7		3 est.	0 cum. haze
9 1/6					78.3		

Min. 63.2
Solar Therm. 148.8
Max. 90.3

(108.5)

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SATURDAY, JUNE 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					75.4		
10	30.033	85.0	86.0	74.4	86.6	5 WNW.	0 Hazy.
2					92.5		
4	29.977	91.2				5	3 cum. str. haze.
9					82.1		

Min. Solar Therm. 53.0
Max. 93.2

Moderate thunder shower about 11 P. Mo. & later

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SUNDAY, JUNE 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.102	76.1	64.3	62.0		7	10 st.
2					60.4		
4	30.124	74.1	60.6	59.4			10 st.
9					60.1		

Min. 64.3
Solar Therm. 125.2 as set (65.2)
Max. 82.0 as set

At 10 ½ A.M. gauge A 12½ B 1½ C 0½ ounces.
Rain from the N.E. at the middle of the day.
At 4 P.M. gauge ~~A~~ B 2 C 1¾ ounces.
A not examined

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MONDAY, JUNE 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					62.3		
10	30.100	68.9	66.2	63.0	66.6	3	10 st.
2 1/3					73.9		
4	29.940	73.6	69.7	64.4		5 str.	2 large cir. st.
9					68.9		

Min. 59.9
Polar Therm. 135.6 (107.0)
Max. 76.4

Gauges examined at 10½ A. M.
A 20 Drops
B a few drops
C nothing

Thunder Shower 11 P. M.

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TUESDAY, JUNE 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					72.7		
10	29.851	74.5	85.2	77.7		Calm	2 cir-st haze
2 1/2					87.7		
4	29.834	88.2	88.2	75.2		2 calm	5 st-st cum.
9					79.2		

Min. 65.0
Solar Therm. 147.9 (117.0)
Max. 90.0

At 10 1/4 A.M. gauge A 29 1/2 B 3 C 5 1/2 ounces.

Thunder shower 11 1/2 P.M.

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WEDNESDAY, JUNE 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					72.5		
10	29.940	77	76.1	63.5	76.6	3½	3 lt.
2					77.2		
4	29.888	78.3	77.4	65.0		2	2 lt. cir. st.
9					69.2		

Min. 67.0
Solar Therm. 139.4 (124.2)
Max. 78.8

At 9 A.M. garage A39 B3¾ C 5 ounces

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THURSDAY, JUNE 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					72.3		
10	29.781	74.6	78.5	72.0	79.3	1.	cino-st
2					87.1		
4	29.672	82.8	86.9	75.1		6 est.	5 st cir-st cum.
9					79.1		

Min. 63.5
Solar Therm. 149.5 (128.3)
Max. 87.8

A little rain about sunset
Thunder shower about 11 P.M.

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FRIDAY, JULY 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.5		
10	29.832	69.2	58.0	56.0	58.3	3	10 Cumulo-st-
2					66.1		
4	29.899	70.6	68.9	62.8		4	9 cir-st. 1 st. haze
9					61.2		

Min. 57.5
Solar Therm. 129.0
Max. 78.9

(101.2)

At 12½ P.M. Gauge A 8 3 B 8 C 8 ounces.

Weight of bottle with water from gauge A 8 lb. 9 oz.
" " " after emptying 3 8½
" " water 5 0½

Temperature 63½

Gauge C removed and used to hold bottle receiving water from Gauge A so as to save water in case of overflow.
Old case of Windell gauge also removed.

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SATURDAY, JULY 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					59.8		
10	30.082	67.3	68.8	58.2	69.0	5-	Hazy
2					74.2		
4	30.080	73.6	70.5	60.1		4	9 st. in.-st. in. haze
9					64.3		

Min. of 54.0
Solar Therm. 140.3 (92.0)
Max. 75.2

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SUNDAY, JULY 3, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					62.2		
10	30.054	67.9	64.8	58.5		6	10 +
2					65.2		
4	30.020	69.0	64.9	57.8		5	10 +
9					61.6		

Min. 57.0
Polar Therm. 101.0
Max. 67.0

73.7

Showers in forenoon
At 2 P.M. A $1\frac{1}{4}$ B $0\frac{1}{10}$ ounces.

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MONDAY, JULY 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					61.3		
10	30.050	66.7	69.2	58.2		2	2 uniform haze
2 1/6					68.9		
4	30.044	71.7	68.2	62.6		4	0 cum. cir, th haze
9					62.2		

Min. 53.7
Solar Therm 131.0 111.2
Max. 72.4 column of mercury broken & could not be set lower than 64.

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TUESDAY, JULY 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					60.7		
10	30.520†	67.1	67.0	61.5	66.9	2 -	10 haze
2					70.9		
4	29.998	70.2	71.5	65.7		4	3 cum. str.
~~9~~10					62.6		

Min. 59.5
Solar Therm. 127.3 115.0
Max. 74.0

† Corr for 30,050 ?

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WEDNESDAY, JULY 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.3		
10	30.031	71.0	80.7	73.4	81.0	1	2St-
2					85.3		
4	30.022	81.3	81.0	74.3		6	10St. cumst.
9					72.8		

Min. 60.5
Solar Therm. 151.0
Max. 86.9

(90.6)

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THURSDAY, JULY 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.7		
10	29.960	73.5	77.4	72.1	78.0	3.	10 Cum-
2					82.9		
4	29.870	78.6	77.9	72.9		11	10 St.
9					72.2		

Min. 64.0
Polar Therm. 142.9 (90.4)
Max. 84.1

$27\frac{1}{4}$ $17\frac{1}{2}$ $9\frac{3}{4}$ $12\frac{3}{4}$ $8\frac{3}{4}$ 6 4

Rain in the evening

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FRIDAY, JULY 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					70.5		
10							
2					67.1		
4	29.838	70.7	69.5	67.3		5	10 St.
9					65.9		

Min. Solar Therm. 93.0
Max. 72.6

Rain in the forenoon.

At 4¼ P.M. gauge A 100 B 9 ¾ ounces

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SATURDAY, JULY 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.5		
10	29.800	69.1	72.0	64.0	72.0	10.	1 cum.
2					76.3		
4	30021	74.5	76.2	60.8		13	1 cum.
9					66.0		

Min. 61.0

Solar Therm. 139.5 (119.9)

Max. 77.5

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SUNDAY, JULY 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.0		
10	30.126	70.2	76.8	67.5	77.1	9.	Clear (haze)
2					82.7		
4	30.100	78.3	81.2	67.7	[illegible]	8	1 cum. haze
9					72.0		

Min. 59.0
Solar Therm. 140.2
Max. 82.6

(118.6)

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MONDAY, JULY 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					71.3		
10	30.112	73.2	80.1	71.0	80.9	2.	Clear
2					86.9		
4	30060	81.9	84.4	69.3		5	5 Cumulus in the sun.
9					70.4		

Minr. 64.0
Solar Therm. 147.0 (129.0)
Max. 86.8

3 9 3/4 4 6 3/4
3 8 1/2
14 1/4

Rain at 6 A.M.

At. 4 P.M. A 14 1/4 B 10 mm.

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TUESDAY, JULY 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.7		
10	29.926	74.3	74.3	71.0	74.5	13-	10 Cum-Str
2					82.3		
4	29.849	79.9	80.9	75.0		19"	10 Cum-Str
9					75.0		

Min. 67.8
Solar Therm. 112.7
Max. 83.0

92.3

Rain in the evening

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WEDNESDAY, JULY 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					72.8		
10	29.922	76.9	79.4	70.0	79.9	11 NNW	Cumu-
2					83.2		
4	29.902	82.0	83.0	68.0		4	2 cum.
9					73.6		

Min. 69.
Solar Therm. 142.8 (121.0)
Max. 84.2

At 10½ A.M. A 6¼ B 0¾ ounces

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THURSDAY, JULY 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					73.2		
10	29.850	77.9	83.6	74.9	84.1	S.S.	clear.
2					87.8		
4	29.800	84.3	84.2	71.7		7	9 Lt. cir.-cumm cum.
9					73.8		

Mean 66.5
Solar Therm. 141.3
Max. 87.7

(92.9)

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FRIDAY, JULY 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.0		
10	29.967	78.5	75.6	63.6	75.9	5. N.W.	1 cum. cir. s
2					81.4		
4							
4 3/4	29.982	81.0	80.7	67.1		5	2 cum. cir. s cir.
9					72.0		

Min. 63.0
Solar Therm. 115.7
Max. 81.9

(99.3)

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SATURDAY, JULY 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.2		
10	30.073	74.2	78.1	65.5	78.5	1.	1 cum-st-
2					82.1		
4	30.038	81.0	76.2	65.0		5	6 cir. st. cir.-cum. haze
9					75.0		

Min. 60.5
Solar Therm. 144.8
Max. 82.1

(108.2)

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SUNDAY, JULY 17, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					78.3		
10	29.896	82.4	86.1	74.4	86.8	SW	2 cumul
2					84.9		
4	29.857	88.8	90.4	74.4		9	1 cum. air
9					77.8		

Min. 60.7
Solar Therm. 148.7 (128.8)
Max. 92.0

Rain with distant thunder
previous night.

At 11½ A.M. A 14 B 1¼ omnes.

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MONDAY, JULY 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					73.7		
10	29.932	78.8	83.4	72.1	84.0	5. W	6 Cum-st
2					90.4		
4	29.882	87.3	86.7	74.7		4	9 St cir-st cum cir-cum
9					77.7		5

Min. 68.0
Solar Therm. 152.3 (112.0)
Max. 90.4 c.08

Auroral light diffused early in the evening: at 10 P.M. arch pretty well marked over clouds, with steady streamers not extensive: clouds rising & aurora disappearing: mostly gone at 11 P.M.

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TUESDAY, JULY 19, 1870.

	Barom.	Att.	Dry	Wet	Nod	Wind	Clouds
7					74.2		
10	30.014	77.9	78.1	67.8	78.5	S-NNE.	light cum
2					72.3		
2½							
4	30.060	79.0	71.9	65.1			1 cir. cir.-st. cum. haze
9½					65.2		

Min. of Solar Therm. 136.8 (115.8)
Max. 80.3

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WEDNESDAY, JULY 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.0		
10	30.164	73.11	67.2	63.2	67.1	3. E.	10 st.
2					73.4		
4	30.066	76.9	76.4	68.7		5 est.	1 ir. cum. / cir-st. haze
9					73.8		

Min. 63.0
Solar Therm. 142.1
Max. 78.9

(119.7)

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THURSDAY, JULY 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					74.2		
10	29.936	77.4	80.	74.3	80.9	11–8	10 cumu-
2					88.1		
4	29.938	85.6	88.7	72.5		8	2 cumu. cir. cir.-st.
9					77.6		

Min. 63.
Polar Therm. 147.7
Max. 89.0

(130.5)

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FRIDAY, JULY 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					70.6		
10	30.190	74.0	73.4	62.1	73.6	8.	Clear
2							
4	30.167	77.2	74.3	60.0	75.5	17	0
9					66.0		

Min. 63.2
Solar Therm. 135.9 (116.8)
Max. 77.7

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SATURDAY, JULY 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					69.3		
10	30.092	72.7	81.2	73.0	81.0	4.	5 cum-st
2					89.6		
4	30.040	82.4	89.7	76.4		17	1 cir-st, cum.
9					80.8		

Min. 60.5
Solar Therm. 145.1 (130.2)
Max. 90.8

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SUNDAY, JULY 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					75.2		
10	30.080	81.3	87.7	77.0		S.	0
2					92.3		
4	29.972	88.6	89.5	77.0		W.	Cirrus cum. cir.
9					80.0		

Min. 73.6
Solar Therm. 148.7 (119.8)
Max. 92.6

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WEDNESDAY, JULY 27, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					66.2		
10	30.054	72.4	67.3	57.5	67.4	14	2 cirst.
2							
4	30.050	76.0	72.0	59.4	72.0	4	4 st.
9					65.5		

Min. 57.2
Polar Therm. 33.6
Max. 73.2

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THURSDAY, JULY 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.5		
10	30.035	71.5	78.0	63.8	78.6	8	6 Cum-st
2					81.1		
4	29.967	78.7	78.5	63.0	79.0	6	3 Cir.
9	~~29.940~~						

Min. 61.0 S.W.
Polar Therm. 145.0
Max. 84.1

Shower this P.M. - about 5 o'clock -
amt. of rain not measured -

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FRIDAY, JULY 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					74·3		
10	29.922	78.0	82.6	76.0	82.9	S	Cumul
2							
4	29.854	84.9	87.0	74.6	86.0		Cumu.
9							

Min. 65.5
Solar Therm. 143.0
Max. 90.0

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SATURDAY, JULY 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.4		
10.30	29.944	74.3	76.0	64.4	75.6	S.	1 cirri
2							
4	29.978	80.6	81.2	65.2	81.6	W	4 cum
9							

Min. ~~60.5~~ 65.0
Solar Therm. 147.0
Max. 82.3

Shower last night. wt. of rain in gauge 3/4 Oz.

Aurora, not at night: seen from steamer between Portland & Boston.

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SUNDAY, JULY 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					65.0		
10	30.147	72.3	77.6	62.3		3	0 cum.
2					83.4		
4							
9 1/6					69.4		

Min. 59.4
Solar Therm.
Max. 83.5

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MONDAY, AUGUST 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.016	74.1	81.0	66.4	81.0	5 est.	9/10 cum
2					86.3		
4	29.962	83.7	86.2	68.7		5 est.	5 st. cum. cir.-st.
9					75.3		

Min. 61.5
Polar Therm. 147.9
Max. 86.9

(124.2)

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TUESDAY, AUGUST 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					74.8		
10	29.880	78.5	81.9	~~90~~ 80.8	82.3	8 ~~lbs.~~	~~0~~ cum
2					88.3		
4	29.864	85.8	86.4	67.4		6 est.	1 cum. cirst. cir.
9							

Mean. 69.0
Polar therm. 147.7 (126.7)
Max. 89.2

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WEDNESDAY, AUGUST 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.7		
10	30.024	73.0	78.0	64.0	78.1	1	3 haze. 5 st.
2					77.9		
4	29.98	78.2	76.6	61.1		5 est.	6 st cirrost. cir.
9					72.2		

Min. ~~60~~ 57.0

Solar Therm. 140.4

Max. 81.0

(120.1)

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THURSDAY, AUGUST 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					77.3		
10	29.898	79.8	84.3	75.9	84.6	3	.10 cum
2					88.8		
4	29.835	82.5	74.7	74.5		0	10 ~~cum~~ st. cum st. Cum nim raining
9					73.2		

Min. 70.0
Solar Therm. 137.1
Max. 69.3

(74.5)

3 8½
2 7½

Moderate thunder showers 4 to 6½ P.M.
Gauges examined at 7¼ P.M.
A 3 7½ B 3¼ ounces

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FRIDAY, AUGUST 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.8		
10 1/4	29.780	74.1	79.1	68.6		8	0 cum. cir.-st.
2					86.0		
4	29.740 Aver. 29.750	81.4	85.6	66.6		12	1 cum.
9					74.3		

Min. 64.8
Solar Therm. 147.7 (130.1)
Max. 87.2

A few drops of rain later than yesterday's measurement.
About 20 drops in Gauge A this morning.

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SATURDAY, AUGUST 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.2		
10	29.936	74.9	80.0	66.1	80.0	2	Hazy
2 1/2					79.9		
4	29.963	80.9	78.5	65.5		W 7	1 hazy cum
9 1/3					72.4		

Min. of Solar Therm. 62.5 145.0

Max. 85.0

(118.3)

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SUNDAY, AUGUST 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					69.5		
10	30.066	77.0	86.0	74.0		6	1 cir.-st. haze
2					92.2		
4	30.059	86.1	90.0	75.1		7	9 cum. st. cir.-st.
9					76.5		

Min. 67.5

Solar Therm. 152.2 107.8

Max. 93.5

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MONDAY, AUGUST 8, 1870.

	Barom.	Att.	Dry	Wet	Nor.	Wind	Clouds
7							
10¼	30.200	76.6	85.0	70.8		6	1 cir-st. cir-cum.
2					90.8		
4	30.126	84.3	88.1	72.2		11	7 cir-st.
9					74.6		

Min. 63.0
Solar Therm. 147.4 (134.4)
Max. 91.1

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TUESDAY, AUGUST 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					75.0		
10	30.140	79.2	84.9	76.0	85.0	9	4 cum
2					90.7		
4	30.070	87.9	91.2	77.4		7 est.	5 cum. cir.-st.
9					79.2		

Min. 70.0
Solar Therm. 152.5 (132.9)
Max. 91.9

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WEDNESDAY, AUGUST 10, 1870.

	Barom.	Att.	Dry	Wet	Nosy	Wind	Clouds
7					79.3		
10	30.120	61.8	83.0	75.0	83.1	3	8 cumost-cú-
0 55 Pm	30.144	81.8					
1.04	30.140				77.0		
1.20	30.109						
4	30.100	84.5	82.9	77.0		3 sh.	10 st. cumst.
9					76.4		

Min. 73.5
Solar Therm. 161.7 (117.9)
Max. 91.9 (perhaps not set yesterday?)

9 3 2½ 8½

Thunder shower 12½ to 1¼ P.M.
Gauges examined at 2 P.M.
A 89¾ B 8½ ounces

A few drops fell later in the day.

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THURSDAY, AUGUST 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					73.2		
10	30.181 -	79.1	77.7	75.0	78.0	3 -	10 st.
2					79.5		
4	30.150	81.2	79.0	73.0		2 est	9 st. cum.-st cir.-st cum.
9					72.1		

Min. 71.5
Solar Therm. 131.6 (102.2)
Max. 81.6

Slight showers early.

At 11 A.M. A 5½ B 0½ ounces.

about 9h 37m a brilliant bolide fell from near the pole to near the horizon. Its light seemed to flash out fitfully, and change from white to crimson. Could only see it through trees.

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FRIDAY, AUGUST 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					74.0		
10.15	30.110	77.0	80.8	75.1	81.0	3 -	10 cumst
2					86.1		
4	29.980	83.1	84.3	76.9		9 est.	7 cirst. cum.
9					75.4		

Min. 70.0
Solar Therm. 146.0 (176.4)
Max. 87.0

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1870phae.proj.0369

SATURDAY, AUGUST 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					70.5		
10	30.040	76.1	80.9	70.1	80.8	5-	3cl. 1 hazy
2					84.9		
4	29.994	82.1	81.8	71.0		5 est.	10 st. cir.-cum.
9					74.2		

Min. 66.
Solar Therm. 142.9
Max. 86.0

(99.3)

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SUNDAY, AUGUST 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.7		
10	29.992	68.2	63.9	59.2		4 est.	9 st. cir.-cum., cir.-st. cum.
2					70.7		
4	29.952	72.9	71.7	61.3		0 ut.	2 cir. cir.-st.
9 1/6					63.6		

Min. 57.6
Solar Therm. 130.0 (118.7)
Max. 74.6

(Casella gauge set up Friday)

Rain previous night.

At 11¾ A.M. A 25½ B 2½ C 2½ ounces
B 0.215 C 0.220 inches
A by Casella measuring glass 2.24 = 0.21952 inches

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MONDAY, AUGUST 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.040	68.2	71.0	60.1		10 -	Cirri
2					75.2		
4	30.016	76.2	75.7	59.7		5 est.	2 cum.
9					65.1		

Min. 58.5
Solar Therm. 143.9 (122.1)
Max. 76.1

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TUESDAY, AUGUST 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					57.2		
10	29.982	69.4	70.3	59.7	70.0	S est.	Clear
2 1/6					71.0		
4	29.924	73.3	69.7	61.8		4	0 haze
9 1/4					60.7		

Min. 53.5
Solar Therm. 135.0 (116.2)
Max. 73.0

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WEDNESDAY, AUGUST 17, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.7		
10	29.878	70.0	77.5	64.0		9	0
2					81.9		
4	29.850	78.4	80.0	64.6		8	0 cumi. cir.-st.
9					69.0		

Mean 59.3

Solar Therm. 142.8

Max. 82.9

(121.2)

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THURSDAY, AUGUST 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.6		
10	29.938	74.3	80.1	68.5	80.0	15 miles	Slight haze
2					87.7		
4	29.938	85.5	88.1	70.7		10.	2 cum.
9					77.0		

Min. 64.5
Solar Therm. 144.0
Max. 86.9

122.9

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FRIDAY, AUGUST 19, 1870.

	Baromr.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					68.7		
10	30.080	76.3	81.7	71.2	81.8	0	Clear
2					77.3		
4	30.034	80.2	78.3	69.8		2	1 cym. haze
9					76.0		

Mean. 1650
Solar Therm. 137.3
Max. 84.3

(115.6)

Aurora: archy about 9 P.M. wide steady sky lighter than ground below: afterwards broken into flashing clouds extending to zenith.
At midnight — not very extensive, but flashing as high as α Cygni at times

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SATURDAY, AUGUST 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					71.6		
10	29.971	77.1	84.5	74.8	85.0	Calm	7 cum-st -
2					87.1		
4	29.938	82.2	74.7	73.7		1	10 st. cum-st cir.-st
9							

Min. 66.5
Solar Therm. 157.0 (85.7)
Max. 91.5

Showers 2 to 4 P.M. with thunder

A $28\frac{1}{2}$ B $2\frac{3}{4}$ C $2\frac{3}{4}$ ounces } at 4 P.M.
B 0.23 C 0.25 inches }

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SUNDAY, AUGUST 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.5		
10	30.212	71.4	69.6	57.4	69.6	16 mean.	7 st.
2							
4	30.200	74.4	70.0	57.0	70.1	5 st	5 cir st.
9							

Min. 160-
Solar Therm. 136.0
Max. 72.5

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MONDAY, AUGUST 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	~~29.220~~ 29.220	66.8	69.7	59.2	69.5	5 east	1 cir Cum
2 2 1/4					71.9		
4	30.164	74.4	68.1	56.8		6 east	1 cir-st. haze cirro. cu.
9 1/6					62.1		

Min. 53.8
Solar Therm. 136.4 ..... (104.7)
Max. 73.4

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TUESDAY, AUGUST 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					61.2		
10	30.120	67.5	72.0	60.4	71.9	4 est.	9 st.
2					75.8		
4	30.022	76.0	77.2	62.2		5 est.	8 uniform Lay
9					69.3		

Min. 57.5
Solar Therm. 139.8 (95.2)
Max. 78.0

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WEDNESDAY, AUGUST 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					62.0		
10	30.072	69.9	71.0	58.0		5 var.	Clear.
2					72.3		
4	30.046	74.6	69.2	58.2		6 est.	0 st. cir.-st.
9					63.9		

Min. 58.5
Solar Therm. 137.2 (100.3)
Max. 73.9

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THURSDAY, AUGUST 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.2		
10	24.936	70.1	75.3	69.5		0 to 3 var-	10 cum st.
2					84.6		
4	29.852	79.3	83.8	76.1		6 est.	6 cum. large
9					75.4		

Min. 63.5
Solar Therm. 140.5 (107.0)
Max. 86.4

A few drops of rain about sunrise.

Three gauges at 10 3/4 A.M. had altogether 0.03 inches by the Casella glass. This would be about 0.002 inches of rain

Rain beginning 8 P.M. with some thunder and lightning.

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FRIDAY, AUGUST 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					67.5		
10	30.016	73.0	70.5	57.3		15 est. W.	Clear, with some haze
2					71.4		
4	30.108	73.9	70.2	54.0		14 est.	0 cir. St.
~~9~~ 10		[illegible]			57.1		

Min. 66.5
Solar Therm. 143.0 (117.3)
Max. 75.5

At 7 3/4 A.M. { A 39 B 3 3/4 C 3 5/8 ounces
B — C

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SATURDAY, AUGUST 27, 1870.

	Baron.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					48.0		
10	30.380	64.0	64.0	51.3		4 est.	clear
2					65.7		
4	30.289	69.8	67.0	55.3		6	0 haze
9	30.261	66.4			57.4		

Min. 46.5
Solar Thermr 133.7 (113.7)
Max. 67.5

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SUNDAY, AUGUST 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					57.6		
10	30.199	64.4	69.3	57.9		8	7 cl. cu-cum. haze
2					77.3		
4	30.100	72.8	73.3	61.3		3 est	10 cl.
9	30.065	70.4			54.9		

Min. 50.9.
Solar Therm. 137.2 (86.6)
Max. 77.6

Perhaps some auroral light among clouds, in the north about 10½ P.M.

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MONDAY, AUGUST 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.952	71.0	72.6	67.9		Sest.	Cumst.
2					77.8		
4	29.859	74.8	73.6	70.1		1 st.	10 st. cir.-cum
9					72.5		
10½	29.818	75.6					

Min. 63.5
Solar Therm 112.1
Max. 78.0

(80.9)

Showers about noon

At 5 P.M. A 8½ B 0¾ C 1 ounces
2 B. 0¼ C .08 inches

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TUESDAY, AUGUST 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					72.3		
10	29.848	74.3	78.0	67.0		10 est	cirst cum 2
2 1/2					78.8		
4	29.884	78.2	77.8	62.3		9	8 st. cir. cir. st.
9					66.6		

Min. 70.0
Solar Therm. 145.0 (106.7)
Max. 80.0

Shower about 7 A.M.

At 10½ A.M. A 0¼ ounces. (3 divisions of Caselle's glass)
B a very few drops C about ⅓ of 1 division of glass.

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WEDNESDAY, AUGUST 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.4		
10	30.046	68.9	72.0	59.0		4½	3 st cir.
2							
3					79.2		
4	30.003	76.3	78.3	61.6		5	9 st. cir. cim. cir.
9	30.036	64.7			68.1		

Min. 55.0
Solar Therm. 145.1 (104.0)
Max. 80.4

Aurora 9½ P.M. and later: low down.

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THURSDAY, SEPTEMBER 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.7		
10	30.063	70.1	77.9	64.7		Fresh.	Clear
2					82.4		
4	30.029	79.9	83.0	66.9		5	0 cum. cir-st.
9¼	30.050	76.3			66.4		haze

Min. 58.0
Solar Therm. 145.6 (120.0)
Max. 83.3

2 bright meteors
1st at 10h 7m P.M. about equal to Altair: from near β Trianguli; passing between α & δ Persei nearer to α
2d at 10h 53m, in Camelop. same direction as first: as bright as Capella.

Aurora at 11 P.M. not conspicuous.

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FRIDAY, SEPTEMBER 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds	
7					64.0			
10	30.050	70.8	75.0	64.5		2 est	10	
2					75.3			
4	29.992	77.2	71.8	66.2		"3	9	cir.-cum. N.
9	29.999	73.5			65.0			

Min. 58.5
Solar Therm. 142.9
Max. 79.9

(870)

Theo. on transit circle pier at 10 a.m. E. 71.5 W 72.0

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SATURDAY, SEPTEMBER 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					65.7		
10	29.930	71.9	68.3	67.0		1st	10 cumul-
2					68.8		
4							
4¼	29.802	72.9	66.7	66.0		7	10 st.
9	29.700	70.5			65.3		

Min. 64,0
Solar Therm. 97.1 (71.9)
Max. 72.7

Rain previous night.

At 11 A.M. A $1\frac{1}{2}$ B $\frac{1}{16}$ C $\frac{1}{16}$ ounces
B .003 C .005 inches

A 12.7 divisions = 0.012 inches
1 division = 0.115 ounces

Rain 12 & 2 P.M.

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SUNDAY, SEPTEMBER 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					71.3		
10	29.696	73.0	77.3	69.3		4	4 cum.
2					84.2		
4	29.693	81.3	82.9	69.2		8	4 cum. cum.-st. cir.-st. cir.-cum.
9	29.766	76.2			70.7		

Min. 63.8
Solar Therm. 145.0 (118.2)
Max. 84.9

At 10¼ P.M. A 9¾ B 0¾ C 1 ounces
B 0.065 C 0.080 inches

Loose cumuli from the W. in the evening.

Some appearance of aurora, probably only moonlight on bank of haze.

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MONDAY, SEPTEMBER 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.928	67.0	70.0	59.0		11	3 cum.
2					74.1		
4	29.968	73.6	72.5	57.1		1/10	5 cum.
9	30.053	71.7			61.7		

Min. 57.5
Solar Therm. 146.2 (113.9)
Max. 75.0

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TUESDAY, SEPTEMBER 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					56.4		
10	30.150	65.7	65.4	57.0		18 mean	4 cir st.
2							
4							
9	30.284	66.5			58.2		

Min. 57.0
Solar Therm.
Max. 71.5

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WEDNESDAY, SEPTEMBER 7, 1870.

	Baron.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					52.7		
10	30.256	63.2	65,1	50,9		11 —	3 st -
2					72.4		
4	30213	69.9	73.0	53.6		9	0 cum cirrost.
9	30,314	68.9			56.9.		

Min. 47.0
Solar Therm. 146.6 (112.3)
Max. 73.6

Distinct aurora about midnight.
One rather long streamer in N.W.

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THURSDAY, SEPTEMBER 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					50.0		
10	30.488	63.1	62.4	55.0		1–6	7 cum.
2					63.2		
4	30.463	70.0	61.2	53.9		N.W.	0 cum. cir.
9	30.440	64.0			53.6		

Min. 46.0
Solar Therm. 138.0 (96.3)
Max. 65.8

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FRIDAY, SEPTEMBER 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					53.3		
10	30.320	62.2	66.9	58.0		West	0 –
2					74.0		
4	30.194	71.3	73.2	61.4		" 8	0 haze
9	30.168	68.3			57.3		

Min. 47.0
Solar Therm. 138.3 (105.0)
Max. 75.1

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SATURDAY, SEPTEMBER 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.6		
10	29.982	64.3	69.6	63.0		Fast	7 cum
2 12/3					~~63.8~~		
4							
9							

Min. 57.5

Solar Therm. 128.6

Max. 73.0

A few drops of rain 1 to 2 P.M.

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SUNDAY, SEPTEMBER 11, 1870.

	Barom.	Att.	Dry	Wet	Nosy	Wind	Clouds
7					48.7		
10½	30.100	61.0	59.3	48.4		12 sw	0-
2					64.0		
4	30.750	65.4	64.2	58.2	64.0	15	0
9	30.25	60°			50		

Min. 44.5
Polar Therm. 115
Max. 65.6

N.

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MONDAY, SEPTEMBER 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					48.3		
10	30.276	57.0	58.3	47.1		East	0
2					65.7		
4	30.223	66.1	67.6	50.8		10	0 cir.-st.
9	30.292	65.4			55.2		

Min. 42.5
Solar Therm. 134.6 (105.0)
Max. 68.1

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TUESDAY, SEPTEMBER 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					45.2		
10 11,30	30.330	60.5	68.2	54,3		1st	0
2					73.6		
4	30.273	71.1	75.6	55.5		W	0 cir.-st. haze
9	30.298	67.4			59.7		

Min. 42.0
Solar Therm. 139.2 (110.6)
Max. 75.8

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WEDNESDAY, SEPTEMBER 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					53.5		
10	30.324	64.1	72.5	59.0		4 est	0 - slight haze
2					76.1		
4	30.266	73.2	70.8	57.9		"	1 haze cir.-st.
9	30.256	70.3			60.8		

Min. 42.5
Solar Therm. 140.0
Max. 75.8

(96.2)

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THURSDAY, SEPTEMBER 15, 1870.

	Barom.	Att.	Dry	Wet	Nak	Wind	Clouds
7					63.8		
10.30	30.158	64.0	75.1	61.0		West	0
2					81.3		
4	30.061	74.7	80.4	61.5		5	3 large cirrus
9	30.096	72.9			65.6		

Min. 42.0
Solar Therm. 144.3 (112.2)
Max. 82.3

A slight auroral light at 9 P.M. barely enough for green line in spectroscope.

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FRIDAY, SEPTEMBER 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.0		
10	30.129	70.1	75.0	65.6		3 est	4 st.
2					76.7		
4	30.189	75.0	67.7	60.3		9	9 st. in N.
9	30.290	71.8			58.9		

Min. 61-0
Solar Therm. 142.6 (81.8)
Max. 79.9

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SATURDAY, SEPTEMBER 17, 1870.

	Baron.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					56.5		
10	30.308	65.2	67.3	56.3		West	10 cirrost
2					58.1		
4	30.257	66.3	58.4	57.1		W 5	10 st, nim. fog (raining
9	30.184	66.3			56.8		

Min. 55.0
Solar Therm. 83.3 (62.8)
Max. 59.3

Rain at intervals after 10 A.M. and perhaps some during night previous.

At 5 P.M. gauge A 15 B $1\frac{1}{4}$ C $1\frac{3}{8}$ ans as
B 0.125 C 0.130 inches

A little rain later

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SUNDAY, SEPTEMBER 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					59.0		
10	29.871	64.8	63.5	59.3	"	20	10 st.
~~2~~ 1½					70.9		
~~4~~ 6	29.832	68.3	69.7	55.4		W/4	8 st. cum.
9	29.922	66.8			64.4		

Min. 54.9
Solar Therm. 110.7
Max. 73.2

(67.2)

At 6 P.M. A 0½ ounces B 0 C a few drops
A 4 division of glass C 0⅓ divisions.

At 9¼ P.M. distinct double auroral arch: arches close together, lower much the brighter, sky dark below it, not between the arches. Arches soon mingled and a few streamers later. Little left at 2 A.M.

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MONDAY, SEPTEMBER 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.186	61.3	61.0	46.0		13 –	0 –
2.					64.4		
4	30.183	67.3	61.8	50.8		4	0 cir.-st. haze
9	30.210	64.7			51.1		

Min. 47.5
Solar Therm. 136.8 (94.8)
Max. 65.6

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TUESDAY, SEPTEMBER 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					45.7		
10	30.266	59.0	66.0	54.4		5	0
2					74.7		
4	30.296	69.7	70.7	56.0		8	1 cir-st. haze
9	30.394	67.0			56.9		

Min. 43.0
Solar Therm. 139.7 (100.2)
Max. 74.6 Set at 12 P.M. 52.8
West East
64.0 64.1

Moderate, aurora at midnight; low arch, steady streamers.

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WEDNESDAY, SEPTEMBER 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					44.3		
10	30.488	60.3	63.4	53.7		5	0
2					65.0		
4	30.425	67.8	64.5	57.8		" 6	0 Large
~~9~~ 11	30.420	67.0			54.2	5	

Min. 42.0
Polar Therm. 130.0 91.5
Max.

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THURSDAY, SEPTEMBER 22, 1870.

	Baron.	Att.	Dry	Wet	Hum.	Wind	Clouds
7					52.3		
10	~~30~~.350	61.8	64.9	58.5		4 st	0 –
2					▽60		
4	30.25–	▽20	▽40	64.5	▽45	8	1 Cir.
9	30.230	704			59.5		

Min. 50.0
Solar Therm. 138.4 103.7
Max. ▽5.1 at 4

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FRIDAY, SEPTEMBER 23, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					53.7		
10	30.072	62.1	71.7	60.0		6 ESE	3 St
2					81.0		
4	30.015	77.3	81.0	62.8		6	9 St. Cirr.
9	30.034	73.6			70.1		

Min. 52.3
Solar Therm. 142.0 (107.7)
Max. 81.9

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SATURDAY, SEPTEMBER 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					65.0		
10	30.020	70.1	71.0	65.6		1	10 cum st
2					72.2		
4	29.957	73.3	71.9	64.3		3	10 st cum.
9	29.972	72.0			66.5		

Min. 64.0
Solar Therm. 127.5 (78.5)
Max. 74.0

A little rain previous night.

At 2½ P.M. A 4½ B 0 ¼ C 0 ⅜ inches.
A 38 divisions; B 0.030 C 0.035 inches

Aurora behind clouds at 9 P.M, probably bright and extensive.

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1870phae.proj.:369

SUNDAY, SEPTEMBER 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					56.5		
10	29.95	70.0	70.8	65.7		0	10 Rain
2					78.4		
4	29.97	74.0	77.5	76.8		10	10 Rain
9 10 3/4	30.08	60 80			60.6		

Min. Solar Therm. 51.5

Max. 79.8

A little rain previous night.

At noon A 1 1/4 Bounces 11 divisions of glass,
B 0.01 C 0.01 inches

Heavy thundery shower about 3 P.M.
Some showers later, ending about 5 P.M.

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1870phae.proj.369

MONDAY, SEPTEMBER 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.200	66.1	64.7	56.9		4 est.	2 st.
2					67.5		
4	30.156	70.9	67.2	55.7		1 est.	7 st. cir. cir.-str. cum.
9	30.164	66.3			59.0		

Min. 53.0
Solar Therm 138.9 (88.2)
Max. 78.1

At 10¼ A.M. gauge A 69 B 6½ C 7 ounces,
B 0.585 C 0.615 inches

Aurora very extensive, about 10 P.M. reaching 40° beyond zenith from east to west: streamers steady: crimson clouds, color deep, not very bright. Mostly gone at midnight

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TUESDAY, SEPTEMBER 27, 1870.

	Barom.	Att.	Dry	Wet	Nord	Wind	Clouds
7					52.7		
10	30.110	63.5	66.7	59.8		1-	9 st.
2					72		
4	30.038	70.7	71.6	58.2		10	9 st. in-cum, cir-st. in.
9	30.073	70.2			61.8		

Min. 57.5
Polar Therm. 138.4 - (81.4)
Max. 73.7

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1870phae.proj.1369

WEDNESDAY, SEPTEMBER 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					54.0		
10	30.182	65.2	62.0	56.8		6 ENE	7 cirr
2					62.4		
4	30.140	63.5	60.1	53.6		5	1 cir-st large
9	30.164	66.3			53.7		

Min. 53.0
Solar Therm. 132.7
Max. 64.8

(7.7.6)

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1870phae.proj..369

THURSDAY, SEPTEMBER 29, 1870.

	Barom.	Att.	Dry	Wet	Nos	Wind	Clouds
7					57.8		
10	30.223	63.5	64.0	59.0.		0 –	9 cum st.
2					62.7		
4	30.250	66.3				2 est.	10 st. cir. cum.
9	30.250	65.			64.5		
Min.		53.0					
Solar Therm.		101.9			62.2		
Max.		66.8					

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1870phae.proj...169

FRIDAY, SEPTEMBER 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					57.4		
10	30.302	62.6	59.0	56.1		2 est	10 Cumst
2					57.6		
4	30.160	63.3	58.4	57.8		8	10 nim. raining
9	29.975	63.2			60.3		

Min. 56.5
Polar Therm. 68.2 (59.0)
Max. 67.2

Rain afternoon and evening.

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1870phae.proj...369

SATURDAY, OCTOBER 1, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.0		
10	29.768	64.9	67.4	65.1		West	8 Cum
2					74.0		
4							
9	29.980	69.8			60.9		

Min. 56.5
Solar Therm.
Max. 75.1

2 2¼ .95
3 4¼
0
3¼ .94
2 3½
16¼
56½

At $10\frac{3}{4}$ P.M. A $107\frac{1}{4}$ B $10\frac{1}{2}$ C $10\frac{3}{4}$ cumas.
B 0.940 C 0.950 indus

A little rain in the evening.

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1870phae_proj_0369

SUNDAY, OCTOBER 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.7		
10	30.190	64.2	64.6	57.6		3	5 ai. cirrost cum. haze
~~2~~ 3					63.7		
4	30.188	69.4	62.3	57.3		3	7 ai.-cu. ai.-st. ai. st.
9	30.184	69.7			57.8		

Min. 53.0
Solar Therm. 129.5 79.0
Max. 66.8

At 10¼ A.M. A 0.75 ounces 7½ div.
B.008 C .010 inches

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1870phae.proj..369

MONDAY, OCTOBER 3, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					57.5		
10	29.990	63.8	58.4	54.9		10 east	10 -
2					56.1		
4	29.779	62.9	53.9	54.7		11	10 min. raining
9	29.724	62.3			54.5		

Min. 56.5.
Polar Therm Max. 59.8 79.0 west (56.8)

Rain most of the day

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1870phae_proj_369

TUESDAY, OCTOBER 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					54.2		
10	29.808	59.7	57.0	53.8		west	10 Cum
2					63.1		
4	29.822	64.4	64.3	57.7		1	Cirst. in. Sk.
9	29.900	63.1	57.0		57.6		

Min. 49.0
Solar Therm. 121.6 ×
May. 63.6

(61.0)

162 78 deg.
87

172
97 68
7 7/8

At 11 A.M. A 86 B 7 7/8 C 8 7/8 ounces
B 68 C 78 divisions.

172 3/4
86

× At 5

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WEDNESDAY, OCTOBER 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.3		
10	30.043	63.4	62.7	58.4		3 est.	10 cum
2					64.7		
4	30.066	66.2	60.0	56.5		1:8.	10 st.
9	30.187	64.4			55.1		

Mean. 55.
Polar Therm. 114.2 (63.7)
Max. 65.3

A few drops of rain previous night
At 2 P.M. A 1.6 B 0.4 C 0.4 divisions of glass

Rain in the evening

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1870phae.proj.369

THURSDAY, OCTOBER 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					51.8		
10	30.348	60.3	53.2	50.0		15 est	10 Cumm
2					52.9		
4	30.380	65.5	51.5	45.2		NW	9 cumm. St.
9	30.422	62.3			48.2		

Min. 51.0
Solar Therm. 82.6
Max. 55.2

(60.5)

At 11 A M. A $48\frac{1}{4}$ B $4\frac{3}{4}$ C $4\frac{7}{8}$ ounces
B 42 C 43 div.

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1870phae.proj . 369

FRIDAY, OCTOBER 7, 1870.

	Barom.	Att.	Dry	Wet	Na4	Wind	Clouds
7					40.0		
10	30.370	54.7	51.4	46.0		12-	3 cum
2					52.8		
4	30.315	57.9	52.2	42.4		16	10 st. cir.-st.
9	30.286	57.5			43.5		

Min. 40.0
Solar Therm. 112.2
Max. 53.0

(57.2)

At 1 P.M. A $0\frac{1}{16}$ inches $1\frac{1}{2}$ div.
B & C nothing measurable.

From a few drops of rain Oct. 6 and perhaps early Oct. 7

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1870phae.proj..369

SATURDAY, OCTOBER 8, 1870.

	Barom.	Att:	Dry	Wet	No. 4	Wind	Clouds
7					40.8		
10	30.256	56.5	58.0	47.3	57.0		0
2							
4							
9							

Min. 38.9

Solar Therm.
Max.

10 A M E D 54.6
W D 54.4

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1870phae.proj..369

SUNDAY, OCTOBER 9, 1870.

	Barom.	Att.	Dry	Wet	Noon	Wind	Clouds
7					41.0		
10	30.170	61.0	62.5	52.4		12	2 Cum
2					64.0		
4	30.185	64.5	57.1	51.0		3	1 Cum
9	30.176	65.1			54.6	~~1~~	

Min. 37.0
Solar Therm. 110
Max. 65.8

NW. 3

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1870phae.proj..369

MONDAY, OCTOBER 10, 1870.

	Baron.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10,30	30.217	63.1	62.4	58.0		0	0
2							
4							
9	30.125	64.8			65.2	7.1	1 Cum

Min. 44.
Solar Therm. 120
Max. 68.8

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1870phae.proj..369

TUESDAY, OCTOBER 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					52.3		
10							
2					68.9		
4	29.960	66.6	65.2	57.9		W 7	10 St.
9	29.942	66.2			61.0		

Mag. Solar Therm. 132.8
Max. 69.8

(67.8)

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WEDNESDAY, OCTOBER 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					63.0		
10	29.770	65.4	68.0	65.0		8	10 Stratus (raining)
2					63.8		
4	29.626	66.4	65.7	63.1		2	10 nim. St. (raining)
9½	29.696	67.0			58.9		

Mean 48.5

Solar Therm. 105.9

Max. 69.2

(66.7)

Rain prevails night & through the day at this.

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1870phae.proj..869

THURSDAY, OCTOBER 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					55.7		
10	29.699	63.3	63.2	60.7		1	10 ct cirrocum.
2					64.9		
4	29.675	66.3	64.1	56.7		3 S.W.	9 st. cu-st
9							
10	29.775	64.1			50.4		

Min. 57.7

Solar Therm. 123.8 (71.0)

Max. 66.8

Att & A.M. A 31½ B 2¾ C 2¾ inches
B 24 C 25 divisions

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1870phae.proj...369

Oct. 14, 1870

Aurora seen by E. P. Austin a few minutes after 6 P. M. color brilliant red, seen in the east only, twilight hindering view towards the west: At 6½ seen by A. S. H. & Mcla. No white light: all light red clouds in an irregular arch from horizon to horizon through α Persei & η Ursæ Maj: At 7 red replaced by white light except in N. W. between η Ursæ Maj. & α Bootis: Aurora in usual form, several arches, variable streamers above; still higher, diffused light through Zenith from E. to W. Little change till 7¾: then bright red in N. E.; and after 8 P. M. very brilliant red mixed with white patches, in the usual ring near the zenith: centre about α Pegasi: streamers rapidly extending into the south: At 8¼ a remarkable & narrow dark channel from centre towards N. W.

clouds

some yellow & pink streamers, some red: most bright green.

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1870phae.proj..369.

FRIDAY, OCTOBER 14, 1870.

	Barom.	Att.	Dry	Wet	Nr 4	Wind	Clouds
7					44.0		
10	29.908	56.6	56.2	49.9		5 SW	0
2					62.4		
4	29.950	64.1	62.2	51.7		5 SW	1 aurora arc
9	30.065	62.7			50.5		

Min. 43.4
Polar Therm. 24.3 (68.7)
Max. 63.1

Sky lighter than usual under arches in the north.
Some aurora left at midnight: a little red light.
Aurora: beginning from 6½ to 6¾ P.M. with unusually bright red clouds (no white visible) in an irregular shifting arch through ζ Persei & γ Tau. Maj. Rath ... of a lighter tint than usual in auroras: ... down replaced by an ordinary aurora with several arches sky light beyond its zenith as far as ζ Aquilae with streamers below. Red light rather persistent ... N.W. ... ends of the columns.

At 8½ ... bright ... extended ... the aurora, now fully ... in ... with a large oval ... Zenith. The most ... part of the aurora ... more or ... of the sky ... given the time it ... started and faded. The green ... soon ... Its ... remained ... light. The ... part of the ... a ray ... ζ Persei at 9½ ... started E.P.A. Most ... Flame ... and ... of ... disappeared almost ... and ... to base ... Its ... became ... green ... but ... more ... the red ... and ... of ... columns.

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1870phae.proj..369

SATURDAY, OCTOBER 15, 1870.

	Barom.	Att.	Dry	Wet	Nos	Wind	Clouds
7					41.7		
10	30.208	56.4	55.3	51.0		2 SW	0
2					64.0		
4	30.191	64.8	64.2	53.2		6 SW	0
9	30.258	63.8			54.8		

Min. 40.5
Polar Therm. 125.5 (-73.8)
Max. 65.3

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1870phae.proj.0369

SUNDAY, OCTOBER 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					47.5		
10	30.369	68.8	61.5	56.2		1 SW	0 cir-st. haze
2							
3					70.7		
4	30.300	67.4	68.7	59.2		7	0
9	30.332	66.5			57.6	S.E.	

Max. 46.8
Solar Therm. 130.2 (80.0)
Max. 71.5

Poey's nomenclature for clouds (proposed in a paper contributed to the semi-annual session of the Nat. Acad. of Sciences, Washington,) for which see "Nature" No. 45, for Sept. 8, 1870, will be adopted here henceforward, as it is more intelligible than that hitherto in use, and can easily be converted into Howard's by any one who has a distinct idea of the latter. It is briefly as follows:

First type Cirrus } Ice clouds
Derivatives { Cirro-stratus, Cirro-cumulus, Pallio-cirrus } Snow-clouds

Second type Cumulus
Derivatives { Pallio-cumulus, Fracto-cumulus } Vesicular clouds of aqueous vapor

(It may be well to use the word Cumulo-cirrus for clouds occasionally, but not often, occurring with us, where a small cumulus have a cirrus tails beneath them.) These names may be abbreviated by using the first consonant of each except cirrus & cumulus in which the second should be used — thus: Cs; Cs Cm Pc: Cl; Cm Fm: Cl.

Poey's proposed English names are Curl-cloud, Thread-cloud, Curdled-cloud, Sheet-cloud, Mount-cloud, Rain-cloud, Wind-cloud, (Storm-cloud, Tail-cloud)

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MONDAY, OCTOBER 17, 1870.

	Barom.	Att.	Dry	Wet	Naz	Wind	Clouds	
7								
10								
10¼	30.250	62.3	67.0	56.6		8 S	7	R. Pe? Ri Rm.
2					70.1			
4	30.169	66.2	66.9	55.4		5	10	Pe Ri (Rm?)
9	30.118	65.4			58.5			

Mean. 51.7
Polar Therm. 1363 (69.0)
Max. 71.4

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TUESDAY, OCTOBER 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.3		
10	29.570*	63.9	67.8	60.4		15 SW	10 Fm NW Rm Rs. Rm
2					59.9		
4	29.726	63.6	53.0	45.0		~~1.7~~ W	5 Fm N
9	29.882	58.2			46.3		

Min. 56.0
Solar Therm. 123.7 (64.0)
Max. 69.0

* Remarkable fall since 9 P.M.
A few drops of rain before noon
At noon wind 35
At 2 P.M. " 33 bar. 29.650 att. 64.5

Auroral arch formed early, moderately bright at 10 P.M.: low and steady.

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WEDNESDAY, OCTOBER 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.3		
10	30.042	52.0	43.4	37.0		8 W	0 Ro
2 2½					52.3		
4	30.009	61.6	52.1	44.9		0 W	10 Bc Bc Rm Fm
9	30.019	52.7			45.0		

Min. 34.7
Solar Therm. 118.5 (-3.0)
Max. 52.6

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TOBER 20, 1870.

				Wet	No.4	Wind	Clouds
	At 1h 8m	29.458	63.0				
	At 1¼ wind 16						
1	1 19	29.449	63.0		51.3		
10	White found						
12	by milkman			56.7		N.N.E. S.E.	10 Pm raining
2	at home that				66.5		
	the shock was						
	N.E. S.W.						
4	By compass 10° E of true mer			63.8		N.W. S	10 Pm raining
	At 1½ wind 17						
8 1	1 23	29.441	68.0		55.9		
My	1 41	29.428	63.0				
Do	1¾ wind 9						
	1 48	29.420	63.0				
	2 3	29.418	62.9				
	2 7	29.416	63.0				
	2½ wind 15						
	2 34	29.406	63.0				
	3 5	29.403	63.0				
	4 8	29.361	63.5				
	5 0	29.344	63.3				
	5 20	29.350	63.4				
	Wind N.W. moderate (7)						
	5 25	29.348					
	5 55	29.360	63.2				

(65.7)

thro strong, all forenoon

iming at 11h 26m 5s A.M. by E. Clock

Clock observed after shock by

in error 10s.

recorded in Mer Circle Book

Upright motion was S.W. to N.E.

as to move E. & W.

ning felt building shake and

the balls. Impression left was

Total duration seemed not over 10s.

looking there were two

ntinuous tremor between them.

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1870phae.proj..1369

TOBER 20, 1870.

				Wet	No.4	Wind	Clouds
7					51.3		
10	29.640	62.8	57.5	56.7		N.N. & E.	10 Pm raining
12 2/3	29.476	62.9					
2					66.5		
4	29.367	63.3	65.2	63.8		W 7 S	10 Pm raining
11	29.402	64.8			55.9		

Mean 63.4
Solar Therm. 82.7 (65.7)
Max. 67.2

Wind southerly, rather strong, all forenoon

Slight earthquake (2 Rappes) beginning at 11h 26m 5s A.M. by E. Clock (this clock about 11s. fast.) Clock observed after shock by W.A.R. and time may be in error 10s.

Some particulars of shock recorded in Meridian Book by W.A.R.

Mrs. Winlock, in the house, thought motion was S.W. to N.E. Rocking chair moved. It stood so as to move E. & W.

A.S. in upper story of west wing felt building shake and heard small dome rock upon the balls. Impression left was of motion from S.W. to N.E. Total duration seemed not over 10s.

A.S. & C.P.A. agree in thinking that there were two principal shocks with continuous tremor between them.

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FRIDAY, OCTOBER 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					46.2		
10	29.806	56.3	53.7	45.8		W	8 Pr Rn Rs
2					57.2		
4	29.884	59.8	55.6	49.0		W	10 Pr Rn M.
9	29.950	59.7			47.0		

Min. 45.7
Solar Therm. 108.0 (58.1)
Max. 57.2

Probably no rain after 11 P.M. Oct. 20

At 10½ AM, A 172 B 16½ C 16¾ vibrations
B 146 C 149 divisions

M. White's Observations of the Earth

Milk pan. 8 in dia. milk 2 to 2 in deep. containing about 1 pt. milk. Movement—first part—to measure rise 5/8 + 1/16 in

Observations by W & R. 40 to the minute

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SATURDAY, OCTOBER 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7.					38.7		
10	30.096	53.2	53,8	46.5		3 SW	0 Fm M haze
2					58.6		
4	30.117	59.0	59.0	48.3		9 SW	2 M Fm
9	30,284	63,7			50,2		

Min. Therm. 37.6
Solar Therm. 121.7
Max. 60.8

(70.2)

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SUNDAY, OCTOBER 23, 1870.

	Barom.	Attr	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.580	59.8	48.0	39.8		11 W	0
2							
4					53.8		
9	30.641	68.0			42.2		

Min. 40.2
Solar Therm. *
Max. 53.4

Day may probably have been entirely cloudless.

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1870phae.proj...369

24, 1870.

t	No.4	Wind	Clouds
7.4		"5 S W	1 R Rs
	62.3		
2.3		"8 S W	3 R Rs Ri
	52.5		

(70.5)

At 9 11/12 began flashing. Previously there was an ordinary aurora extending beyond zenith: centre of convergence at δ Andromedæ beyond it red arch again but faint: and white streamers nearly horizontal appearing again about Fomalhaut. This streamers gone again and red light fainter though remaining about β Cetæ, At 10 1/3.

At midnight no red light. Flashing streamers covering most of the sky most brilliant from W to E through the zenith.

6. light behind clouds
ranch white streak
pile: Fomalhaut about
this a broad
very intense) through
Aquarius reaching about as high as α Aquilæ.
White streak gradually retired towards
the S.E. and disappeared about 8: arch became
more crimson than scarlet, the western half of it
sometimes white. It faded out soon after
8

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24, 1870.

					t	No. 4	Wind	Clouds
7								
10	30.571	62.1	53.0	47.4			5 SW	1 R Rs
2						62.3		
4	30.400	66.3	60.8	52.3			8 SW	3 R Rs R
9	30.346	65.8				52.5		

Min. 32.6
Solar Therm. 121.0 (70.5)
Max. 62.7

Aurora: at 6 3/4 P.M. light behind clouds in the north: a very permanent white streak from the S.E. towards Aquila: remarkant about the middle of it: above this a broad scarlet arch: (color not very intense) through Aquarius reaching about as high as α Aquilae. White streak gradually retired towards the S.E. and disappeared about 8: arch became more crimson than scarlet, the western half of it sometimes white. It faded out soon after 8

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TUESDAY, OCTOBER 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					57.8		
10½	30.081	70.6	68.4	58.7		8 S.	9 Pm Pa. R
2					69.7		
4	29.980	72.4	68.0	58.3		6	10 Pm Pa R
9	29.972	71.3			61.9	S	

Min. 51.0
Solar Therm. 127.0
Max. 71.1

(71.6)

Rain in the evening

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WEDNESDAY, OCTOBER 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					46.5		
10 ½	30.240	64.8	45.8	40.9		1/4 N.	4 Fm Ac
2					47.5		
4	30.301	65.4	45.0	34.3		22 N.	0 Cl
9	30.478	64.1			33.9		

Min. 45.2
Solar Therm. 119.1
Max. 63.1

(.5 7.3)

At 11 A.M. A $18\frac{1}{4}$ B $1\frac{3}{4}$ C $1\frac{7}{8}$ vinch
B 16 C 17 divisions

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THURSDAY, OCTOBER 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					26:2		
10	30.488	65.2	38.4	33.1		1 N	4 Fm NE
2					48.0		
4	30.251	66.8	44.1	39.6		7 S	10 Pm Pr RD some rain
9	30.000	64.6			46.5		

Min. 25.8
Solar Therm. 116.0
Max. 48.2

(42.7)

A little rain at times

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FRIDAY, OCTOBER 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					51.3		
10	29.825	65.8	54.5	45.0		16 W	1 Fm N
2					55.5		
4	29.867	65.1	52.9	42.9		13 W	9 Pn [illegible] Rs Rm
9	29.964	62.5			40.9		

Min. 37.3
Solar Therm. 118.9 (53.8)
Max. 56.8

At 10½ AM. A 5¾ B 0½ C 0½ ounces
B 4 C 4 divisions

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SATURDAY, OCTOBER 29, 1870.

	Barom.	Attd	Dry	Wet	No. 4	Wind	Clouds
7					36.3		
10½	29.435	58.2	44.0	36.3		17 NW	9 Rm M 7m RS
2					46.2		
4	30.000	62.7	45.0	36.5		25 NW	2 M 7m
9	30.134	60.0			36.8		
Min.		32.3					
Polar Therm.			111.2			(55.6)	
Max.		47.4					

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SUNDAY, OCTOBER 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind.	Clouds	
7								
10	30.274	48.1	39.6	32.6		" 4 NW	0	Rs.
2					46.0			
4	30.230	56.5	46.5	41.0		5 S.E.	7	Rz. Rs. Rm.
9								

Min. 29.5

Solar Therm.

Max. 47.2

55.1

29.484

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MONDAY, OCTOBER 31, 1870.

	Barom.	Att.	Dry	Wet	Nort	Wind	Clouds
7					50.7		
10	29.486	55.1	54.0	52.0		15 SW	6 7m Rs. Rm.
2					47.1		
4	29.585	67.0	48.9	40.2		18 SW	O H Fm.
9	29.682	68.5			45.4		

Min. 38.5
Solar Therm.
Max. 57.1

Rain before daylight
Squall at 1 2/3 P.M. wind 30 miles, with
Rain from W.
Over at 2 P.M.
~~Rain~~ At 5 P.M. A 68 B 7 C 7 ounces
B 61 C 62 divisions.

Rain [illegible]

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TUESDAY, NOVEMBER 1, 1870.

	Barom.	Attn.	Dry	Wet	No. 4	Wind	Clouds
7					40.0		
10	29.970	66.1	47.0	38.7		18 W	5 7m
2							
4	30.032	74.2	51.3	42.7		7 W	0 R (or Ra)
9	30.070	69.7			40.7		

Min. 39.7
Solar Therm. 116.2 (64.7)
Max. 51.3

~~Rain before daylight and Snow~~

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WEDNESDAY, NOVEMBER 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.3		
10	30.050	60.8	57.0	48.7		7 S	1 R. R. (7)
2							
4	29.969	70.6	60.7	53.3		9 S	1 R. (7) Rm. Rm Rs
9	29.955	69.7			52.8		

Min. 32.3
Solar Therm. 123.4
Max. 64.6

(73.5)

Light clouds (7m) from the south in a rapid upper current, about 7 P.M. The same has occurred perhaps twice for six weeks past.

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THURSDAY, NOVEMBER 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					58.2		
10	29.748	63.8	62.7	58.7		9 S.E.	6 Pr 1 Rn Ro. Rn
2 1/4					62.2		
4 3/4	29.612	70.4	53.0	50.0		6 est. W	10 Rn
9	29.692	70.1			48.6		

Min. 51.5
Solar Therm. 123.8 (52.2)
Max. 67.1

Southerly rain 3 P.M. with some thunder
A little rain later.

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FRIDAY, NOVEMBER 4, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.7		
10	29.906	66.4	114.9	37.4		7 est N.W.	0
2 1/4					*47.0		
4	29.982	68.8	57.1	38.6		7 est S.W	0
9	30.032	70.4			44.3		

Min. 39.7
Polar Therm. 113.6 (64.8)
Max. 52.4

At 10 1/4 A.M. A 37 1/2 B 31/4 C 3 1/2 ounces
B 28 1/2 C 30 divisions

* From memory: set down at 3 3/4

No clouds perhaps till about sunset when there were some streaks in the west. At 11 1/2 P.M. sky rather cloudy.

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SATURDAY, NOVEMBER 5, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.059	67.8	50.0	44.6		1 est. S	10 Pm
2					51.6		
4	30.100	73.0	52.4	48.0		2 S	2 Pm Rm R
9	30.225	69.2			45.6		

Min. 42.2
Solar Therm. 90.7 (60.2)
Max. 53.6

At 4 P.M. A. 7 B $0\frac{3}{4}$ C. $0\frac{3}{4}$ inches
B 6 C 6 divisions

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SUNDAY, NOVEMBER 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					31.8		
10	30.490	67.5	40.3	33.0		8 N	O Nb Rs
2					41.4		
4	30.430	74.2	39.0	34.0		2 E.	O R Rs
9	30.405	69.3			34.3		

Min. 31.5
Solar Therm. 107.3
Max. 45.7

(36.3)

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MONDAY, NOVEMBER 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.176	64.5	43.6	42.6		9 SW	9 Cs Rm Pr
2					~~46.4~~		
2½					46.4		
4	30.232	70.0	43.9	35.4		14. NW	3 Cs Rm R
9	30.349	68.6			34.2		
Min.		28.1					
Solar Therm. Max.		112.3			(52.7)		
		48.6					

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TUESDAY, NOVEMBER 8, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					28.7		
10	30.236	63.7	38.2	35.5		0 S	5 Rs Rm R
2					45.5		
4	30.190	69.0	46.8	41.8		6 S E	10 Pm
9							

Min. 28.6
Polar Therm. 1047 (46.3)
Max.

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WEDNESDAY, NOVEMBER 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4.	Wind	Clouds
1					49.6		
10							
2					61.9		
4	29.777	72.9	59.6	56.3		7 S	10 Pm 7m
9	29.670	70.9			57.6		

Min. Solar Therm. 118.7 (61.4)
Mass. 63.3

Rain in the evening about 9 P.M.

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THURSDAY, NOVEMBER 10, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					40.0		
10							
10½	29.987	69.5	45.4	37.9		18 W	3 7m Nb
2					43.0		
4	30.074	68.3	40.6	32.8		23 NW	0 N 7m
9	30.152	70.6			33.5		

Min. 35.0

Solar Therm. 112.2 (57.9)

Max. 57.9

At 10½ A.M. A 37¼ B 3½ C 3¾ ounces

B 30½ C 32½ divisions

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FRIDAY, NOVEMBER 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					30.2		
10	29.930	64.2	40.0	31.1		27 N.W	0
2							
4	29.800	65.8	46.9	37.7		2.0 N W	10 Pm Pr
9	29.318	69.9			40.9		

Min. 29.0
Solar Therm. 108.0 (47.5)
Max. 48.4

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SATURDAY, NOVEMBER 12, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					41.8		
10	29.664	66.5	48.5	41.8		NW	10 Pm
2					48.8		
4	29.621	71.0	46.7	41.9		N	10 Pm raining
9	29.600	66.6			44.0		

Min. 38.6
Solar Therm. 69.2 (45.6)
Max. 50.0

Part of a rainbow in the north about
@ 9 3/4 A.M. Still somewhat visible at 10 A.M.

Rain at times

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SUNDAY, NOVEMBER 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.624	66.0	49.0	37.3		16 est W.	0 M. Rn.
2					6.25		
4	29.648	66.4	51.0	40.7		11	1 7m
9							

Mean Solar Therm. 41.7 Max. 112.5 (62.1)

Ap 10½ A.M. A 4 B 0½ C 0½ evening
B 3 C 4 div.

Aurora seen at 1 A.M. Nov. 14 and from that time to 3¼ A.M.: of the ordinary quiet type, arch rather irregular over a few clouds, streamers little developed or extinguished by moonlight. Some flashing at 3 A.M.

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MONDAY, NOVEMBER 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.790	63.4	43.7	39.4		0 SW	10 Pm
2					48.7		
4	29.680	71.6	46.3	40.9		0 NE	10 (Pm? Pm)
9	29.546	68.6			46.3		

Min. 34.0
Solar Therm. 109.4 (-46.9)
Max. 52.9

Thick clouds in the evening, and probably rain late at night.

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TUESDAY, NOVEMBER 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.7		
10	29.748	69.7	40.4	35.0		16 NW	5 R Rs
2					42.8		
4	29.776	72.0	41.5	35.3		7 NW	7 Rm Rm Rs Rs
9	29.791	70.3			34.0		

Min. 36.6
Solar Therm. 109.0
Max. 46.8

(41.7)

At 1 P.M. A $0\frac{1}{2}$ B $0\frac{1}{8}$ C $0\frac{1}{4}$ ounces
A 5 B 1 C 1 division

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WEDNESDAY, NOVEMBER 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					33.8		
10	29.942	63.2	39.0	33.5		6 NW	9 Pm 7m
2					43.7		
4	30.016	65.7	43.0	36.5		1 W	0 M 7m
9	30.140	61.1			35.0		

Min. 32.1
Solar Therm. 110.2 (54.1)
Max. 44.0

Some aurora about 10 P.M.

A little after 1 A.M. Nov. 17, there was a noise like the report of a heavy gun. It was heard by A. Searle at the Observatory and E.P. Austin at his lodgings. Either some explosion on earthquake. No tremor felt or a very slight tremor at most.
W.A. Rogers also heard the noise.
Later intelligence obtained by Austin
Makes it some explosion contrived by students.

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THURSDAY, NOVEMBER 17, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					25.2		
10	30.265	60.7	28.7	33.5		Fast. S.	0 haze
2					46.3		
4	30.185	64.6	44.3	36.7		2 S	0 M.
9 1/3	30.220	68.0			33.7		

Min. 25.5
Solar Therm. 108.3 (56.0)
Max. 46.8

Some aurora at 8 P.M.
Low steady arch at midnight.

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FRIDAY, NOVEMBER 18, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					28.7		
10	30.102	62.7	41.5	38.9		O S	10 Pm Pt. Rs. haze
2					47.3		
4	29.970	72.3	~~43.7~~	43.0		O S	10 Pm raining
9	29.898	73.7			39.3		

Min. 28.5
Polar Therm. 80.5 (43.9)
Max. 47.7

Rain afternoon & evening
At midnight rather clear with some aurora.

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SATURDAY, NOVEMBER 19, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					27.3		
10							
10½	29.777	67.1	32.3	27.4		15 W	6 R Pm
2					32.0		
4	29.709	64.4	31.7	26.2		14 SW	10 Pm R
9	29.755	64.6			30.1		

Min. 27.3
Solar Therm. 100.8
Max. 40.1

(32.8)

At 2 P.M. A $40\frac{1}{4}$ B $3\frac{3}{4}$ C $3\frac{3}{4}$ ounces
B 32 C $32\frac{1}{2}$ divisions

At 6 P.M. Clouds in the north with auroral light behind. Some reddish light and one long reddish streamer in the N.E. Afterwards clouded over. Clear at 9 P.M.: ordinary auroral arch.

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SUNDAY, NOVEMBER 20, 1870.

	Barom.	Attr.	Dry	Wet	No 4	Wind	Cloud
7					30.0		
10	30.028	55.0	36.3	30.6		11 SW	0
2							
4							
9	30.082	69.3			35.2		

Min. 28.7
Polar Therm.
Max. 43.1

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MONDAY, NOVEMBER 21, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.060	62.2	41.2	36.6		6 S	10 Pm Rm Rs
2					48.6		
4	30.072	68.2	47.0	39.9		8 W	10 Pm
9	30.216	61.2			41.2		

Min. 34.8
Solar Therm. 111.6 (47.0)
Max. 49.4

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TUESDAY, NOVEMBER 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.3		
10	30.441	56.5	36.4	31.6		A Q N.E.	10 Pm
2					37.0		
4	30.339	67.2	38.4	36.1		Q	10 Pm fine rain
9	30.166	65.3			38.3		

Min. 32.0
Solar Therm. 47.0 as set 21st. (37.0)
Max. 41.4 probably as set 21st

Rain at intervals after noon beginning with a little sleet.

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WEDNESDAY, NOVEMBER 23, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					45.2		
10	29.650	65.4	50.6	48.0		1.0 S.E.	9 7m N
2					49.5		
4 1/4	29.620	66.3	48.3	43.0		9 SW	10 Rn
9	29.700	69.7			42.6		

Min. 35.3
Solar Therm. 116.1 (47.4)
Max. 52.0

5 6½
5 10
3 10½
7 1 6 6½

At 12¾ P.M. A 140½ B 19½ C 20½ ounces
B 172½ C 182 divisions

Cleared off mostly about 9 P.M.: auroral light from behind clouds in the N.

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THURSDAY, NOVEMBER 24, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					33.5		
10	29.850	63.0	37.1	30.7		1.2 SW	10 Pm R
2					41.0		
4	29.920	73.6	40.9	35.6		1.1 SW	10 Pm
9	30.031	73.2			38.7		

Min. 33.3
Solar Therm. 112.6 (41.4)
Max. 42.9

At 9 P.M. light, apparently auroral, among clouds in the N.

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FRIDAY, NOVEMBER 25, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
1					30.8		
10	30.058	63.6	39.9	36.0		5 SW	0
2					48.4		
4	29.936	67.8	47.2	39.8		6 SW	0
9	29.854	64.9	39.7	37.9	37.8		

Min. 30.6

Solar Therm. 110.2 (61.4)

Max. 63 × 64 in shade

48.9 at 11¼ P.M.

No. 4 35.6

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SATURDAY, NOVEMBER 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					36.3		
10	29.507	67.1	39.3	38.7		3 W	10 Pm (raining)
2					43.0		
4	29.551	70.6	44.3	41.0		6	4 Pm. Fm. R.
9	29.699	69.2	31.2	38.1	40.5		

Min. 30.6

Polar therm. Max. 76.5 Min. (57.6)

Max. 44.7 38.1

Rain early morning continuing into forenoon.

At 4 P.M. A 66½ B 67/8 C. 7 ounces

B 61 C 62 divisions

Dry bulb No. 4 Max. at 10 P.M.

39.2 38.5 45.0

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SUNDAY, NOVEMBER 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					36.5		
10	29.701	62.4	43.4	38.9		~~W.~~ SW	9 Pm Pm
2					51.5		
4	29.735	65.2	51.8	44.3		~~S.~~ SW	1 7m
9	29.890	68.5			47.3		

Min. 34.4
Solar Therm. 115.6
Max. 52.4

(62.6)

Bright meteor (equal to Jupiter) at about 7½ P.M., ♂: red, with train, (not permanent) moving slowly from near ε Urs. Min., directly towards ν Urs. Maj. within 5° of which it vanished.

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MONDAY, NOVEMBER 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.5		
10	30.190	63.1	45.0	40.2		6 est S	0
2							
4	30.180	68.2	50.7	42.3		0	0 Pm R
9 1/3	30.220	70.3			37.8		

Min. 37.6
Solar Therm. 111.0 (54.3)
Max. 52.2

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TUESDAY, NOVEMBER 29, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.2		
10	30.093	67.3	41.4	39.9		0 SW	10 Pm fog
2					47.3		
4	30.036	71.2	36.7	35.5		1.5 NE	10 Pm
9	30.024	68.6			36.2		

Min. 36.4
Solar Therm. 67.3
Max. 47.7

(36.2)

A little rain in the afternoon

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WEDNESDAY, NOVEMBER 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					32.0		
10	30.326	58.0	33.8	28.8		10 N	0 Pr.
2					36.8		
4	30338	64.4	36.0	28.0		7 N.W.	1 Pr. Rm
9	30.362	64.8			28.7		

Min. 29.9
Solar Therm. 102.4 (43.8)
Max. 37.2

At 10¼ A.M. A 1 B 0 1/16 C 0 1/16 ounces
A 9 B 0 3/4 0 1 divisions.

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THURSDAY, DECEMBER 1, 1870.

	Barom.	Att.	Dry	Wet	No 4	Wind	Clouds
7					33.4		
10	30.089	58.5	37.1	32.4		W. S	2 R Rm
2					48.5		
4	29.921	65.6	48.1	38.0		8 S	8 R Rs
9	29.864	68.7			40.1		

Min. 23.5

Solar Therm. 105.6 (62.2)

Max. 49.2

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FRIDAY, DECEMBER 2, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					39.2		
10	29.622	64.5	42.0	37.3		4 SW	2 Rm Rs Pm
2					50.6		
4	29.686	73.0	48.3	39.9		7 W	0 Rs.
9	29.605	66.3			42.1		

Min. 36.2
Solar Therm. 109.5 (62.3)
Max. 50.7

Bright meteor in the east, moving S. from the moon at 5 2/3 P.M.

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SATURDAY, DECEMBER 3, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					35.5		
10	29.883	61.4	36.3	30.0		10 NW	10 Pm
2					36.2		
4	29.933	67.3	35.4	28.8		5 W	Cl
9	29.968	69.2			28.7		

Mix. 34.5
Polar Therm, 99.1 (40.0)
Max. 42.8 28.0

Small bright halo round moon at 10¼ P.M.

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SUNDAY, DECEMBER 4, 1870.

	Barom.	Att.	Dry	Wet	North	Wind	Clouds
7					34.8		
10¼	29,875	58,7	41,3	37,4	41,0	0 W	10 Pm. Fm (thin)
2					45.0		
4							
5	29,748	67.2	42,4	38,9		2 est	8 Fm.
9	29.849	69.0			39.2	S W	
Min.		27.9					
Solar Therm.			100,3		(39,3)		
Max.		46.5					

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MONDAY, DECEMBER 5, 1870.

	Barom.	Att:	Dry	Wet	No. 4	Wind	Clouds
7					34.6		
10	30.030	60.2	37.9	36.6		O SW	10 Pm fog
2					43.2		
4	29.934	69.1	44.2	41.0		10 E	10 Pm
9	29.808	70.1			43.6		

Min. 33.2
Solar Therm. 85.0 (44.0)
Max. 43.8

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TUESDAY, DECEMBER 6, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					43.0		
10	29.533	64.0	43.7	42.0		5 N	10 Pm
2					40.4		
4	29.565	65.2	41.0	39.5		2 SW	10 Pm a little rain,
9	29.666	68.2			41.7		

Min. 36.8

Solar Therm. 48.8 (from memory at 9 P.M.) (41.0)

Max. 45.6

Some rain previous night & during the day.

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WEDNESDAY, DECEMBER 7, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					36.5		
10	29.953	62.1	41.0	35.7		~~1.5.~~ NW	5 Rs Rm R M
2					43.8		
4	29.919	71.3	43.1	37.9		O SW	4 R Rs Pr
9	29.918	76.0			38.6		

Min. 36.1
Solar Therm. 106.0
Max. 44.3

(43.7)

At 8½ A.M. A 5 B 0½ C 0½ ounces
A 44 B 4 C 4 divisions

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THURSDAY, DECEMBER 8, 1870.

	Barom.	Att.	Dry	Wet	Nat	Wind	Clouds
7					42.5		
10	29.616	65.9	44.2	42.7		9 E	10 Pm
2					41.8		
4	29.600	65.4	39.2	38.4		11 E	10 Pm raining
9	29.729	65.0			33.1		

Min. 36.6
Solar Therm. 46.1
Max. 44.0

(39.8)

Rain in the afternoon & snow in the evening.

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FRIDAY, DECEMBER 9, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					28.3		
10	29.950	60.2	34.5	31.2		1/6 NW	0 Pm 7m
2					37.8		
4	30.005	65.5	36.4	31.6		25 NW	0 Pm 7m
9 1/4	30.102	68.4			30.3		

Min. 31.9
Solar Therm. 100.1 (45.5)
Mars. 38.4

Snow enough on the ground to whiten it in the morning.

At 10 1/4 A.M. A 54 1/2 B 6 C 6 1/2 vernes
B 52 C 58 divisions

E. P. Austin observed several spots on the sun this forenoon. The large spot photographed by Black some time ago is coming on again.

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SATURDAY, DECEMBER 10, 1870.

	Barom.	Att.	Dry	Wet	Nov. 4	Wind	Clouds
7					28.9		
10	30.099	65.3	33.7	29.0		W. N/W	0 Pm
2					35.7		
4	30.057	65.0	34.9	29.9		W N.W	0 7m
9	30.158	65.1			29.4		

Min. 28.4
Solar Therm. 96.1 (41.5)
Max. 36.4

Aurora before moon rose: a little red light in the N.E.

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SUNDAY, DECEMBER 11, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					29.0		
10 1/4	30.393	66.1	32.0	32.0		1/3 NE	10 Pm mist
2					40.6		
4	30.400	67.1	40.0	36.4		1/2 E	10 Pm mist
9	30.217	69.1			42.5		

Min. 24.3
Solar Therm. 65.9 (40.1)
Max. 42.5

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MONDAY, DECEMBER 12, 1870.

	Berom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	30.340	63.7	42.6	40.6		14 E	10 Pm
2					41.7		
4	30.222	67.0	42.0	41.0		15 E	10 Pm (raining)
9	30.134	66.8			42.1		

Min. 32.2
Solar Therm. 50.0 (42.0)
Max. 43.2

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TUESDAY, DECEMBER 13, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					40.8		
10	29.882	64.0	41.8	41.0	"	12 E	10 Pm mist
2 2¼					42.6		
4	29.898	72.9	43.2	41.4		6 W	10 Pm Fog
9	29.872	67.6			36.8		

Min. 40.6
Solar Therm. 50.0 (43.9)
Max. 45.4

At 4 PM. A 15 B 15 C 16 ones
B 133 C 141 divisions

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WEDNESDAY, DECEMBER 14, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					38.5		
10	29.712	62.5	40.0	37.2		S	10 Pm
12½					42.1	SW	
2							
4	29.628	66.3	41.5	36.0		S	9 Pm 7m R.
						SW	
9	29.636	64.0			34.2		

Min. 34.9
Solar Therm. 108.7 (41.6)
Max. 43.7

A few drops of rain in the forenoon

At 4 P.M. A $0\frac{1}{4}$ B $0\frac{1}{16}$ C 0 ounces,
A 3 B 1 C $0\frac{1}{2}$ divisions

Some auroral light all the evening.

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THURSDAY, DECEMBER 15, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7							
10	29.619	61.3	32.4	27.0	"	24 NW SW	9 Pm Fm Rm
2					29.2	SW	
4	29.624	61.7	25.3	20.4		26 NW	6 Pr. Fm N.
9	29.717 ×	66.8 ×			22.0		

Min. 31.3
Solar Therm. 100.0 (25.2)
Max. 35.2

× At. 9 1/3

Aurora among clouds.

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FRIDAY, DECEMBER 16, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					18.7		
10½	29.749	57.6	26.0	21.3		32 NNW	1 R (Fr)
2					27.4		
4	29.784	60.6	27.8	22.9		21 NW	0 Rs
9	29.902	61.2			23.8		

Min. 18.4
Solar Therm. 89.1 (37.9)
Max. 27.9

Some aurora in the evening

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SATURDAY, DECEMBER 17, 1870.

	Barom.	Att. Dry	Wet	No. 4	Wind	Clouds
7				17.5		
10	29.930	53.2	25.0	21.2	4 NW	9 R Rm Rs
2				30.1		
4	29.840	61.2	29.1	24.1	4 W	1 R R Rs
9	29.891	59.8		24.0		

Min. 17.4
Polar Therm. 93.0
Max. 30.2

(36.8)

Sky rather light in the N. especially among the clouds after 9 P.M.: light probably auroral.

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SUNDAY, DECEMBER ~~18~~ Tuesday 20, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					x 27.5		
10	29.388	57.0	34.7	33.7		9 W	10 Pm (fog)
2					39.5		
4	29.492	61.3	39.7	36.1		1.0 S W	2 Pm Fm
9	29.599	67.2			35.7		

Mw. 259

Solar Therm. 97.0 (42.3)

Max. 40.8

Snow previous night, mostly melted by sunset.

At 4 P.M. A $48\frac{3}{4}$ B $4\frac{3}{4}$ C $4\frac{3}{4}$ ounces
B 42 C 42 divisions

x Dec. 18

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MONDAY, DECEMBER 19, 1870.

	Baron.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					25.3		
10	30,072	60.3	26.9	20.7		9 NW	0 Rm Rs
2					34.6		
2½							
4	30.017	65.3	34.1	26.4		6 W	3 R R Rs
9	29.975	65.0			29.4		

Min. 18.1

Solar Therm. 99.2 (33.1)

Max. 35.6

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TUESDAY, DECEMBER 20, 1870.

Swangan 18

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds	
7					†34.3			
10 1/2	29.636	56.5	31.9	25.8		2 3 W	7	Pc Fm Mo (Fmo) (N)
2								
4 1/2	29.748	62.8	29.4	23.8		1 5 N W	0	Mo (N)
~~11 3/4~~	29.880	61.0			22.7			

Min. 23.4
Solar Therm. 95.0 (27.8)
Max. 32.0

Aurora, distinct at 11 3/4 P.M.

† Dec. 20

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WEDNESDAY, DECEMBER 21, 1870.

	Barom.	Att.	Dry	Wet	Natl	Wind	Clouds
7					32.0		
10	29.711	64.8	37.2*	30.9*		9 S W	*0 M
2					35.8		
4	29.821	65.6	32.8	27.1		1.5 W	0 M
9	29.963	60.7			23.7		

Min. 32.3
Solar Therm. 98.6 (48.6)
Max. 37.7

*At 10½

Auroral arch at 10 P.M.

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THURSDAY, DECEMBER 22, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					17.3		
10	30.242	59.3	20.4	16.9		10 SW	8 R Rs
2					23.9		
4	30.188	61.2	24.0	19.5		13 W	9 Rs R Rm
9	30.242	64.2			16.2		

Min. 16.1

Solar Therm. 64.6 (26.6)

Max. 25.0

Some aurora at 9 PM.

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FRIDAY, DECEMBER 23, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					14.0		
10	30.006	65.8	16.3	15.7		NW	10 Pn snowing
2							
4							
9	29.920	65.0			14.4		

Min. 13.0
Solar Therm.
Max.

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SATURDAY, DECEMBER 24, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7	29.86				10.	N W	
10							
2							
4							
9	30.080	65.6			12.2		

Min. 8.3
Solar Therm. 100.
Max. 20.0

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SUNDAY, DECEMBER 25, 1870.

	Baromr.	Att.	Dry	Wet	No. 4	Wind	Clouds
9	30.345	53.2			45°	N W	Clear
10							
2	30.349	67.8	21				
4							
9	30.480	65.			9°8		

Min. +3°.5

Solar Therm. 90°.2

Max. ~~70.2~~

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MONDAY, DECEMBER 26, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
9	30.253	57.0			21	WSW	
10							
2					29.5		
4	30.120	63.5	18				clear
9							

Min. 18°.2
Solar Therm. 87.5
Max. 30°

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TUESDAY, DECEMBER 27, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					16.5		
10	30.267	56.7	24.8	21.2	22.7	3	2
2					26.5		
4	30.142	66.0	27.9	23.8		3 S	R R₂ R R₀ Rₙ
9	30.079	61.1			25.3		

Min. 14.2
Solar Therm. 89.5
Max. 30.61

(26.3)

H 2

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WEDNESDAY, DECEMBER 28, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					26.5		
10	29.949	60.2	32.7	30.7		1 W	10 Pr
2					33.3		
4	29.863	66.4	32.9	32.1		0 calm snow falling vertical	10 R. snowing
9½	29.801	68.4			28.8		

Min. 11.2
Solar Therm. 45.8
Max. 34.3

(33.6)

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THURSDAY, DECEMBER 29, 1870.

	Barom.	Att.	Dry	Wet	Sun	Wind	Clouds
7					21.8		
10	29.534	65.1	22.5	21.6		12 at NE	10 Pc moving
2	"				22.4		
4	29.508	62.8	20.6	17.8		14 NW	10 Pc a little snow
9	29.717	65.8			14.2		

Min. 21.2
Solar Therm. 35.3 (25.1)
Max. 28.7

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FRIDAY, DECEMBER 30, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					1c 8		
10	30.062	56.2	9.0	6.0		O S	0
2					20.3		
4	30.021	64.8	21.8	18.3		O S E	10 Rm P2
9	29.963	63.0			23.1		

Min. 1.9
Solar Therm. 104.5 (25.5)
Max. 23.1

Snow much drifted; depths 0 to 14 inches; average about 3½ inches.
6¼ inches of snow in cylinder 1 7/8 inches diam. weigh 1¼ ounces

At 12 M. B 1¼ C 2 ounces
B 12 C 18 divisions.

Snow after dark.

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SATURDAY, DECEMBER 31, 1870.

	Barom.	Att.	Dry	Wet	No. 4	Wind	Clouds
7					31.8		
10	29.778	65.3	35.3	32.1		5 S	5 Pn Rs Rm
2			~~6~~		40.4		
4	29.736	71.8	38.2	34.6		0 S	10 Pm Fm
9	29.781	62.9			31.6		

Min. 7.2
Solar Therm. 109.2 (39.0)
Max. 40.7

At 10 A.M. Snow about 1½ deep, pretty uniform.
Melting fast during the day.

At 1¾ P.M. A 8 B 1¼ C 91 ~~91~~ ounces
A 70 B 11 C 8 divisions

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