Science. New York. N. S. Vol. 13.
Bigelow, F. H. Clayton's Eclipse Cyclone and the Diurnal Cyclones. Pp. 589-591.
American Journal of Science. New Haven. 4th series. Vol. 11.
Hallock, William. Very on Atmospheric Radiation. Pp. 230-234.
Scottish Geographical Magazine. Edinburgh. Vol. 17..
—— British Rainfall Organization. Pp. 194-195.
L'Aérophile. Paris. 9me Année.
Tatin, Victor. Étude sur les Aéronauts. Pp. 44-53.
Annalen der Physik. Leipzig. Vierte folge. Band 4.
Naber, H. A. Das Luftbarometer. Pp. 815-827.
Himmel und Erde. Berlin. 13 *Jahrg.*
Assmann, Richard. Die modernen Methoden zur Erforschung der Atmosphäre mittels des Luftballons und Drachens. P. 306-319.
Annuaire de la Société Météorologique de France. Paris. 49me année.
Angot, A. La variation diurne de la déclinaison magnétique et ses relations avec l'activité solaire. Pp. 19-26.

OBSERVATIONS AT HONOLULU.

Through the kind cooperation of Mr. Curtis J. Lyons, Meteorologist to the Government Survey, the monthly report of meteorological conditions at Honolulu is now made partly in accordance with the new form, No. 1040, and the arrangement of the columns, therefore, differs from those previously published.

Meteorological Observations at Honolulu, March, 1901.

The station is at 21° 18′ N., 157° 50′ W.

Hawaiian standard time is 10h 30m slow of Greenwich time. Honolulu local mean time is 10h 31m slow of Greenwich.

Pressure is corrected for temperature and reduced to sea level, and the gravity correction, −0.06, has been applied.

The average direction and force of the wind and the average cloudiness for the whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 12, or Beaufort scale. Two directions of wind, or values of wind force, or amounts of cloudiness, connected by a dash, indicate change from one to the other.

The rainfall for twenty-four hours is measured at 9 a. m. local, or 7.31 p. m., Greenwich time, on the respective dates.

The rain gage, 8 inches in diameter, is 1 foot above ground. Thermometer, 9 feet above ground. Ground is 43 feet, and the barometer 50 feet above sea level.

Date.	Pressure at sea level.	Temperature.		During twenty-four hours preceding 1 p. m., Greenwich time, or 2.29 a. m., Honolulu time.									Total rainfall at 9 a. m., local time.
				Temperature.		Means.		Wind.		Average cloudiness.	Sea-level pressures.		
		Dry bulb.	Wet bulb.	Maximum.	Minimum.	Dew-point.	Relative humidity.	Prevailing direction.	Force.		Maximum.	Minimum.	
	*	†	†			‡	‡		§				
1	30.03	72	67	77	63	.....	.....	ne.	2-0	10-0	30.11	30.00	0.01
2	29.89	74	71	81	66	65.3	72	e-sw.	2	4-10	30.02	29.90	0.63
3	29.98	69	62	75	68	65.0	83	w-e	3-0	10-4	29.99	29.86	0.01
4	29.97	70	63	74	64	59.0	66	ne.	2-4	4	30 05	29.94	0.01
5	30.06	69	62	75	68	59.0	65	ne.	5-2	8-2	30.10	30.00	0.00
6	30.02	70	66	74	69	61.7	73	ne.	5-6	7	30.10	29.99	0.48
7	30.06	72	67	76	69	64.7	77	ne.	5-6	8	30.12	29.97	0.03
8	30.09	72	65.7	77	71	63.5	72	ne.	4-2	7-10	30.15	30.03	0.00
9	30.08	69	66.5	76	72	63.3	70	ne.	4	7	30.16	30.08	0.15
10	30.02	70	66	76	68	64.3	82	ne.	3	8	30.10	30.02	0.47
11	30.01	71	64.5	76	69	63.3	74	ne.	4	6	30.06	29.98	0.15
12	30.02a	71	66 5	78	71	63.3	72	ne.	3	5	30.08	29.96	0.11
13	30.01	67	64.5	78	70	64.0	73	ne.	3	3	30.07	29.96	0.02
14	30 00	68	66.8	79	67	64.7	76	ne.	3	3	30.05	29.96	0.40
15	30.02	71	65	77	66	66.3	82	ne.	3	5	20.06	29.96	0.15
16	30.03	70	65	76	70	63.3	73	ene.	3	2	30.09	29.99	0.01
17	30.04	65	64	78	69	64.0	73	ne.	3-1	2	30.08	30.00	0.01
18	30.07	71	65	79	64	63.5	77	ne.	3-4	3-9	30.10	30.00	0.13
19	30.10a	71	64	76	68	63.3	75	ne.	3-5	5	30.15	30.04	0.57
20	30.09	69	66	75	67	61.3	68	ne.	4	8	30.16	30.06	0.33
21	30.07	71	64	78	68	64.0	75	ne.	5	5	30.16	30.06	0.01
22	30.03	70	64	76	69	60.5	65	ne.	4	3	30.13	30.02	0.01
23	29.96	70	67.5	77	69	62.0	68	ne.	3	3	30.06	29.94	0.02
24	29.95	70	68.7	80	70	65.5	74	ne	3	3	30.02	29.93	0.32
25	30.04	72	68.5	80	69	69.0	82	ese.	0-4	6	30.06	29.97	0.00
26	30.04	68	66.5	80	70	68.7	80	s.	0-1	6	30 09	30.02	0.02
27	30.02	70	65	79	67	65.3	77	nne.	2-4	8	30.10	30.01	0.00
28	29.96	62	60.7	75	70	60.5	70	nne.	4-2	7-3	30.05	29.96	0.00
29	29.86	65	61.5	76	60	60.7	75	ne.	2	6-0	29.98	29.88	0.02
30	29.92	65	64.3	80	60	63.5	76	s-e.	2	4	29.97	29.87	0.05
31	29.97	67	65.5	83	64	65.5	74	sw-ne.	1	2	29.99	29.87	0.00
Sums	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.12
Means	30.013	69.4	65.3	77.5	67.7	63.4	74.0	.....	3.0	5.2	30.078	29.975	.....
Departure	+.036	.....	.....	.....	.....	+1.9	+1.5	.....	.....	+0.6	.....	.....	+0.82

Mean temperature for March, 1901 (6 + 2 + 9) ÷ 3 = 72.5; normal is 71.5. Mean pressure for March, 1901 (9 + 3) ÷ 2 = 30.023; normal is 29.987.

*This pressure is as recorded at 1 p. m., Greenwich time. †These temperatures are observed at 6 a. m., local, or 4.31 p. m., Greenwich time. ‡These values are the means of (6 + 9 + 2 + 9) ÷ 4. §Beaufort scale. aValues interpolated.

CLIMATOLOGY OF COSTA RICA.

Communicated by H. PITTIER, Director, Physical Geographic Institute.

TABLE 1.—*Hourly observations at the Observatory, San Jose de Costa Rica, during March,* 1901.

Hours.	Pressure.		Temperature.		Relative humidity.		Rainfall.		
	Observed, 1901.	Normal, 1889-1900.	Observed, 1901.	Normal, 1889-1900.	Observed, 1901.	Normal, 1889-1900.	Observed, 1901.	Normal, 1889-1900.	Duration, 1901.
	660+ *Mm.*	660+ *Mm.*	° *C.*	° *C.*	%	%	*Mm.*	*Mm.*	*Hrs.*
1 a. m.	4.62	3.84	17.06	16.64	79	84	0.0	0.1	0.00
2 a. m.	4.27	3.42	16.75	16.45	80	84	0.0	0.1	0.00
3 a. m.	4.13	3.20	16 48	12.25	80	85	0.0	0.0	0.00
4 a. m.	4.13	3.18	16.24	16.11	80	85	0.0	0.0	0.00
5 a. m.	4.30	3.40	16.01	16.01	81	84	0.0	0.0	0.00
6 a. m.	4.62	3.82	15.29	15.93	80	84	0.0	0.0	0.00
7 a. m.	4.94	4.27	17.05	16.99	75	81	0.0	0.0	0.00
8 a. m.	5.21	4.63	19.36	18.98	67	71	0.0	0.0	0.00
9 a. m.	5.43	4.79	21.72	21.52	59	64	0.0	0.0	0.00
10 a. m.	5.48	4.66	23.89	23.77	54	57	0.0	0.0	0.00
11 a. m.	5.19	4.37	25.05	25.10	50	54	0.0	0.0	0.00
12 m.	4.72	3.94	26.15	26.01	48	52	0.0	0.0	0.00
1 p. m.	4.11	3.37	26.43	26.48	48	51	0.0	0.1	0.00
2 p. m.	3.62	2.78	26.09	25.87	49	53	0.0	1.1	0.00
3 p. m.	3.23	2.47	25.11	24.58	54	57	0.0	1.2	0.00
4 p. m.	3.16	2.43	23.25	22.90	60	62	0.0	2.3	0.00
5 p. m.	3.35	2.63	21.48	21.61	66	68	0.0	1.8	0.00
6 p. m.	3.70	3.03	20.04	19.85	73	75	0.0	1.3	0.00
7 p. m.	4.14	3.53	19.26	18.79	77	79	0.0	1.4	0.00
8 p. m.	4.52	3.99	18.85	18.33	77	81	4.4	0.8	1.00
9 p. m.	4.86	4.33	18.26	17.85	79	82	8.6	0.6	1.00
10 p. m.	5.08	4.56	17.85	17.42	80	83	11.4	0.9	1.00
11 p. m.	5.12	4.57	17.56	17.17	80	84	0.0	0.3	0.00
Midnight	4.88	4.30	17.25	16.91	80	84	0.0	0.5	0.00
Mean	4.45	3.72	20.13	19.87	69	73	.....	.....	.....
Minimum	661.40	659.93	12.2	9.9	.....	.....	.....	.....	.....
Maximum	668.60	667.22	30.8	32.6	.....	.....	11.4	2.3	.....
Total	.....	.....	.....	.....	.....	.....	24.4	14.2	3.00

REMARKS.—The barometer is 1,169 meters above sea level. Readings are corrected for gravity, temperature, and instrumental error. The dry and wet bulb thermometers are 1.5 meters above ground and corrected for instrumental errors. The hourly readings for pressure, wet and dry bulb thermometers, are obtained by means of Richard registering instruments, checked by direct observations every three hours from 7 a. m. to 10 p. m. The hourly rainfall is as given by Hottinger's self-register, checked once a day. The standard rain gage is 1.5 meters above ground.

TABLE 2.

Time.	Sunshine.		Cloudiness observed, 1901.	Temperature of the soil at depth of—				
	Observed, 1901.	Normal, 1889-1.00.		0.15 *m.*	0.30 *m.*	0.60 *m.*	1.20 *m.*	3.00 *m.*
	Hours.	*Hours.*	%	° *C.*	° *C.*	° *C.*	° *C.*	° *C.*
7 a. m.	7.92	12.94	28	21.28	21.76	21.98	20.95	.....
8 a. m.	25.69	23.80						
9 a. m.	23.81	23.77						
10 a. m.	25.35	22.73	41	21.65	21.78	22.00	21.01	.....
11 a. m.	23.79	22.25						
12 m.	22.54	21.78						
1 p. m.	20.91	22.07	51	22.56	22.11	22.02	21.05	.....
2 p. m.	21.55	22.64						
3 p. m.	22.94	20.74						
4 p. m.	20.03	17.64	63	22.87	22.34	22.07	20.95	.....
5 p. m.	13.69	12.90						
6 p. m.	6.31	4.73						
7 p. m.	.....	.....	48	22.55	22.32	22.03	20.94	.....
8 p. m.	.....	.....						
9 p. m.	.....	.....						
10 p. m.	.....	.....	30	22.16	22.19	21.98	20.94	.....
11 p. m.	.....	.....						
Midnight	.....	.....						
Mean	.....	.....	44	22.17	22.10	22.02	20.99	20.74
Total	234.53	227.98	.....	.....	.....	.....	.....	.....

Notes on the weather.—During the first fortnight the weather was normal for the season, although very dusty and close. The night from 16th to 17th was stormy, with rather low temperature and high pressure. The strong northeast wind continued blowing from the 17th to 21st. On the 23d a decided change was noted in the higher currents of the atmos-