BLUE HILL METEOROLOGICAL OBSERVATORY OF HARVARD UNIVERSITY—Continued

Date and hour angle	Solar altitude	Air mass	I_m	I_y	I_r	β_{I_m-r}	β_{I_y-r}	β_{mean}	$\frac{I_{w=0}}{1.94}$ (Percentage of solar constant)	$\frac{I_{w=0}-I_m}{1.94}$ (Percentage of solar constant)	w	Air-mass type
Oct. 25	° ′	*m*	*gr. cal.*	*gr. cal.*	*gr. cal.*						*mm*	
1:24	32 29	1.86	1.269	0.903	0.738	0.057	0.085	0.071	71.5	6.8	2.1	N_{FC} or P_A
0:43	34 51	1.75	1.320	.944	.756	.058	.025	.042	77.0	9.7	3.4	------
3:34	16 55	3.41	.996	.776	.632	.058	.049	.054	57.6	6.8	1.2	P_C.
Oct. 27												
1:28	31 54	1.89	1.446	1.032	.828	.049	.025	.037	77.9	4.3	0.6	
0:06	35 03	1.74	1.438	1.018	.816	.025	.049	.037	79.2	6.0	1.5	
Oct. 29												
1:39	30 05	1.99	1.364	.978	.792	.036	.046	.041	76.2	6.9	2.0	P_C.
Oct. 30												
3:38	14 32	3.94	1.214	.921	.752	.014	.018	.016	68.9	7.2	1.2	P_C.
1:08	31 22	1.92	1.314	.951	.763	.042	.046	.044	75.1	8.3	3.8	
0:57	32 33	1.86	1.308	.943	.765	.053	.065	.059	73.7	7.2	2.4	

ATMOSPHERIC CONDITIONS DURING SOLAR RADIATION MEASUREMENTS, BLUE HILL OBSERVATORY OF HARVARD UNIVERSITY

Date and time from apparent noon	Air temperature	Wind (Beaufort scale)	Visibility scale, 0–10	Sky blueness	Clouds and remarks
October 1934	°C				
2, 3:46 a. m.	5.66	NNE 4	5–8	8	2 Acu.
2, 1:36 a. m.	11.1	ExN 3	9	6	1 Ast, 1 Cu. Smk. in W-N.
2, 1:18 p. m.	12.2	ExN 2	9	6	2 Ci, few Frcu.
2, 4:27 p. m.	12.2	E 2	9	7	1 Ci, lt. hz.
3, 2:43 a. m.	12.6	N 2	8	8	Few Ci.
3, 1:29 a. m.	15.1	NW 2	8	8	1 Ci.
7, 2:17 a. m.	14.4	WxN 7	------	6	7 Frcu.
7, 1:18 p. m.	15.6	WxN 7	------	4	7 Cu.
7, 3:46 p. m.	15.0	WNW 7	------	4	3 Cu.
8, 4:04 a. m.	9.0	W 6	8	12	0 clouds.
8, 2:08 a. m.	13.9	WxS 6	9	7	Few Acu.
8, 2:04 p. m.	19.2	WxS 6	9	------	0 clouds.
8, 4:44 p. m.	20.0	W 5	9	------	Few Cu, lt. hz.
9, 3:50 a. m.	9.4	NW 3	8	12	Few Ci.
9, 1:58 a. m.	13.9	WNW 5	9	7	4 Ci.
9, 0:20 p. m.	13.3	WNW 4	9	8	2 Ci.
9, 3:25 p. m.	13.6	W 2	9	------	Few Ci, few Acu.
10, 3:49 a. m.	4.3	NW 6	8	12	2 Ci.
10, 1:52 a. m.	7.2	NW 3	9	6	5 Ci.
10, 0:46 p. m.	10.9	SWxS 2	9	------	2 Ci.
10, 4:18 p. m.	13.6	WSW 2	9	8	1 Ci, few Acu.
14, 3:24 a. m.	4.3	NW 9	9	11	Few Acu, few Cu.
14, 1:08 a. m.	7.8	NN 5	9	8	Few Cu.
14, 0:40 p. m.	8.3	NW 5	9	------	Few Ci, 1 Cu.
14, 3:51 p. m.	10.0	WNW 4	10	------	1 Ci in E; few Cu.
16, 0:27 p. m.	9.4	NE 1	8	8	2 Cu.
16, 2:40 p. m.	9.9	NNE 2	------	------	Few Ci in S.
16, 4:18 p. m.	9.4	ENE 3	------	7	0 clouds; smk. on hor'n.
17, 3:12 a. m.	10.0	SW 3	8	8	Clear.
17, 1:32 a. m.	13.3	SSW 2	+8	------	4 Ci. (dense); mod. hz.
17, 2:40 p. m.	16.7	SSW 3	8	6	0 clouds; mod. to dns. hz.
17, 4:04 p. m.	15.0	SWxS 4	8	6	0 clouds, mod. hz.
20, 2:25 a. m.	6.7	WNW 4	8	6	Few Ci, 1 Cu.
20, 3:36 p. m.	11.7	WNW 4	8	9	1 Ci.
24, 12 noon	9.4	NExE 4	9	6	1 Cu & Frcu fumules.
24, 1:32 p. m.	10.6	NExE 4	9	7–8	1 Stcu, hy. smk. N & NW.
24, 3:40 p. m.	11.7	NExN 4	9	7	Few Acu, lt. hz., smk.
25, 3:07 a. m.	9.4	N 3	7	10	Few Acu in west.
25, 1:30 a. m.	10.0	N 3	------	10	1 Ci in W.
25, 0:42 p. m.	12.0	NNE 3	------	8	1 Ci in W.
25, 3:33 p. m.	10.5	NNE 2	------	8	Few Ci in W.
27, 3:21 a. m.	4.5	WNW 5	+9	------	Few Frcu, few Acu.
27, 2:24 a. m.	5.0	WNW 5	------	6	Few Frcu, few Acu.
27, 1:29 a. m.	6.1	WNW 7	9	8	1 Ast, few Frcu, lt. smk.
27, 1:07 p. m.	7.2	NWxW 6	9	------	Few Ci, 1 Acu, few Frcu.
29, 1:41 a. m.	6.1	SW 3	9	7	1 Ci, few Acu, few Cu.
30, 3:40 a. m.	1.1	WSW 4	8	9	1 Ci, few Acu.
30, 1:09 a. m.	6.7	WSW 4	9	------	Few Cu.
30, 0:56 p. m.	13.4	W 5	------	7	1 Cu.

POSITIONS AND AREAS OF SUN SPOTS

Communicated by Capt. J. F. Hellweg, U. S. Navy, Superintendent U. S. Naval Observatory. Data furnished by the U. S. Naval Observatory in cooperation with Harvard and Mount Wilson Observatories. The difference in longitude is measured from the central meridian, positive west. The north latitude is positive. Areas are corrected for foreshortening and are expressed in millionths of the sun's visible hemisphere. The total area for each day includes spots and groups]

Date	Eastern standard time		Heliographic: Diff. in longitude	Heliographic: Longitude	Heliographic: Latitude	Area: Spot	Area: Group	Total area for each day	Observatory
1934	*h*	*m*							
Oct. 1	11	21		No spots		------	------	------	U. S. Naval.
Oct. 2	11	29		No spots		------	------	------	Do.
Oct. 3	11	11		No spots		------	------	------	Do.
Oct. 4	9	35		No spots		------	------	------	Mt. Wilson.
Oct. 5	9	20		No spots		------	------	------	Do.
Oct. 7	12	22		No spots		------	------	------	U. S. Naval.
Oct. 8	11	10		No spots		------	------	------	Do.
Oct. 9	11	38		No spots		------	------	------	Do.
Oct. 10	11	0		No spots		------	------	------	Mt. Wilson.
Oct. 11	11	25		No spots		------	------	------	U. S. Naval.
Oct. 12	11	56	−64.0	74.9	−22.0	46	------	46	Do.
Oct. 13	11	6	−51.0	75.1	−22.5	39	------	39	Do.
Oct. 14	11	36	−37.5	75.2	−22.5	27	------	27	Do.
Oct. 15	11	44	−24.5	74.9	−22.5	27	------	27	Do.
Oct. 16	11	10	−12.0	74.5	−22.0	15	------	15	Do.
Oct. 17	14	14	+4.0	75.6	−22.0	15	------	15	Do.
Oct. 18	11	8	+16.0	76.1	−22.0	15	------	15	Do.
Oct. 19	11	32		No spots		------	------	------	Do.
Oct. 20	11	14		No spots		------	------	------	Do.
Oct. 21	11	10		No spots		------	------	------	Mt. Wilson.
Oct. 22	11	53	−22.5	344.5	+24.0	39	------	39	U. S. Naval.
Oct. 23	13	14	−8.5	344.6	+23.0	15	------	15	Do.
Oct. 24	9	30		No spots		------	------	------	Mt. Wilson.
Oct. 25	11	58	−80.0	247.4	+4.5	31	------	31	U. S. Naval.
Oct. 26	11	22	−65.5	249.0	+4.5	46	------	46	Do.
Oct. 27	12	0	−51.0	250.0	+5.0	27	------	27	Mt. Wilson.
Oct. 28	11	53	−39.0	248.9	+4.5	31	------	31	U. S. Naval.
Oct. 29	13	56	−24.5	249.0	+4.5	31	------	31	Do.
Oct. 30	11	17	−11.5	250.3	+4.5	15	------	15	Do.
Oct. 31	13	15	−80.0	167.5	+23.0	------	123	123	Do.

Mean daily area for 30 days, 18.

PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR OCTOBER 1934

(Dependent alone on observations at Zurich and its station at Arosa)

[Data furnished through the courtesy of Prof. W. Brunner, Eidgenossische Sternwarte, Zurich, Switzerland]

October 1934	Relative numbers	October 1934	Relative numbers	October 1934	Relative numbers
1	15	11	7	21	0
2	0	12	8	22	7
3	0	13	8	23	8
4	8?	14	8	24	0
5	0	15	------	25	7
6	0	16	------	26	7
7	0	17	8	27	7
8	0	18	8	28	7
9	0	19	14	29	10
10	0	20	0	30	16
				31	8

Mean, 29 days=5.6.