Atmospheric conditions during solar radiation measurements, Blue Hill Observatory of Harvard University, October 1936

Date	Time from apparent noon	Air temperature ° C.	Wind, Beaufort	Visibility 0-10	Sky blueness	Cloudiness and remarks
Oct. 2	3:52 a. m.	10.5	NNW 3	8	7	1 Ci; moderate haze.
3	2:44 a. m.	10.5	NW 3	8	7	Zero clouds; light haze.
3	0:03 a. m.	12.8	NNW 3	9	8	Few Ci; few Cu; light haze.
4	2:55 a. m.	9.3	NE 3	6	8	Few Acu; dense haze.
4	0:09 p. m.	13.9	NE 2	8	8	1 Cu; light haze; Cu, near sun.
4	3:14 p. m.	14.5	SE 2	8	8	2 Cu; light haze; FrCu, near sun.
5	3:49 a. m.	11.8	SW 3	7	8	Few Acu; moderate haze.
6	3:54 a. m.	12.8	SSE 3	8	8	1 Ci; 1 Acu; moderate haze.
8	3:04 a. m.	16.7	WNW 3	7	7	3 Ci; moderate water haze.
10	3:02 a. m.	11.7	N 3	7	8	Few Ci; moderate haze.
11	2:56 a. m.	11.6	WSW 5G	8	9	Few Ci; few Cu; light haze.
11	1:52 p. m.	9.8	W 6G	9	8	Few Cu; FrCu; very light haze.
13	2:14 a. m.	5.4	NW 2	9	8	Few Acu; very light haze.
18	3:23 a. m.	10.6	SW 5	8	8	1 Cu.
20	2:56 a. m.	13.8	SW 5	7	8	Zero clouds; moderate haze.
20	0:00 a. m.	19.7	WSW 5	8	8	Do.
25	3:03 a. m.	6.9	NE 2	7	8	Few Cu; moderate haze.
27	3:03 a. m.	−4.4	NW 3	9	8	Few Cu.
27	0:14 a. m.	−1.0	NW 2	9	8	Zero clouds; light haze.
28	0:15 a. m.	5.8	W 3	8	8	Zero clouds; moderate haze in north.
29	2:06 a. m.	6.8	SW 2	7	8	Few Acu; moderate haze.
29	1:16 p. m.	10.9	SW 3	7	8	Zero clouds; moderate haze.
31	3:08 a. m.	.7	WNW 5G	9	8	Few Cu; light haze north; instrument indoors.
31	0:17 a. m.	5.3	NW 4	9	8	2 Ci; light haze north and east.

Atmospheric conditions during solar radiation measurements, September 1936

Date	Time from apparent noon	Air temperature ° C.	Wind, Beaufort	Visibility 0-10	Sky blueness	Cloudiness and remarks
Sept. 1	3:16 a. m.	15.3	WSW 4	9	8	Few Cu; light haze.
4	2:58 p. m.	17.4	NE 2	8	8	2 Acu; 2 Cu; light haze.
6	4:38 a. m.	14.3	SSW 3	9	9	Few Ci; very light haze.
8	1:05 a. m.	27.2	W 3	7	7	3 Acu; moderate haze.
9	2:58 a. m.	22.4	NW 1	6	6	1 Acu; dense haze.
9	0:07 p. m.	26.1	W 2	8	8	Few Cu; 1 Cu; light haze.
11	3:05 p. m.	21.8	SSE 2	7	8	3 Ci; dense haze.
14	4:23 a. m.	11.8	NE 4	9	8	Few Ci; few Cu; moderate haze.
16	1:33 p. m.	22.6	SSW 5	8	7	1 Cu; light haze.
19	5:14 p. m.	18.9	NW 3	9	8	Few Cu.
22	2:56 p. m.	24.5	SSW 3	8	8	2 Ci; 1 Cu; light haze.
23	0:14 p. m.	23.2	S 3	6	6	Zero clouds; dense haze.
24	0:52 a. m.	22.0	E 2	7	7	2 Ci; few Cu; dense haze.
25	4:29 a. m.	7.9	WNW 5	9	9	Few Stcu.
25	0:22 p. m.	11.9	NW 5	8	8	Few Ci; few Cu.
26	4:33 a. m.	5.3	NE 2	9	9	2 Acu; light haze.
26	0:02 p. m.	13.2	S 1	9	8	Few Acu; light haze.
26	3:12 p. m.	13.2	E 3	9	8	2 Ci; light haze.
29	3:51 a. m.	6.7	NNW 4	9	8	Few Acu; few Cu; light haze.

POSITIONS AND AREAS OF SUN SPOTS

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Date	Eastern standard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longitude	Longitude	Latitude	Spot	Group		
1936	h. m.	°	°	°				
Oct. 1	11 16	−62.0	294.0	+19.5		340		U. S. Naval.
		−29.0	327.0	+18.0		401		
		−28.5	327.5	−19.0		62		
		−26.0	330.0	+7.5		46		
		+43.0	39.0	−19.0	15			
		+47.0	43.0	+17.5		62		
		+63.0	59.0	−24.5		123	1,049	
Oct. 2	10 56	−63.0	280.0	−19.0		77		Do.
		−49.0	294.0	+19.5		401		
		−16.0	327.0	−20.0		62		
		−16.0	327.0	+18.0		432		
		−12.0	331.0	+7.5		46		
		+58.0	41.0	−19.0	8			
		+60.0	43.0	+17.0		15		
		+79.0	62.0	−24.0	62		1,103	

POSITIONS AND AREAS OF SUN SPOTS—Continued

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Date	Eastern standard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longitude	Longitude	Latitude	Spot	Group		
1936	h. m.	°	°	°				
Oct. 3	11 58	−48.0	281.2	−19.0		123		U. S. Naval.
		−35.0	294.2	+20.0		432		
		−29.0	300.2	−12.0	23			
		−5.0	324.2	+20.0		31		
		−3.0	326.2	−20.0		77		
		−2.0	327.2	+18.0		401		
		+2.0	331.2	+7.5		31		
		+40.0	9.2	+15.0		23	1,141	
Oct. 4	12 25	−34.0	281.8	−18.5		123		Do.
		−21.0	294.8	+20.5		525		
		−15.0	300.8	−12.0	15			
		+11.0	326.8	−19.5		46		
		+12.0	327.8	+17.5		278		
		+16.0	331.8	+8.0		31	1,018	
Oct. 5	11 56	−82.0	220.9	−12.0	93			Do.
		−55.0	247.9	+10.0	15			
		−23.0	279.9	−19.0		46		
		−15.0	287.9	−19.0		77		
		−8.0	294.9	+19.5		679		
		−1.0	301.9	−12.5	8			
		+24.0	326.9	+17.0		340		
		+27.0	329.9	−20.0		62		
		+29.0	331.9	+7.0	15		1,335	Do.
Oct. 6	13 12	−66.0	223.0	−13.0	216			
		−66.0	223.0	−20.0	62			
		−40.5	248.5	+10.0	15			
		−21.0	268.0	−28.5		46		
		−9.5	279.5	−19.5		31		
		0.0	289.0	−19.5		93		
		+6.0	295.0	+19.5		741		
		+39.0	328.0	+17.0		154		
		+41.0	330.0	−20.0		46	1,404	
Oct. 7	13 41	−62.5	213.0	−17.0	8			Do.
		−56.0	219.5	−20.0		62		
		−53.0	222.5	−12.5	231			
		−27.5	248.0	+10.0	15			
		−8.0	267.5	−28.0		46		
		+13.0	288.5	−19.0		108		
		+20.0	295.5	+19.5		648		
		+51.5	327.0	+17.0		108		
		+53.0	328.5	−20.0		93	1,319	
Oct. 8	11 2	−44.5	219.3	−20.5		77		Do.
		−41.0	222.8	−13.0	278			
		+3.0	266.8	−28.0		39		
		+27.0	290.8	−20.0		154		
		+32.0	295.8	+19.0		586		
		+65.0	328.8	+16.0		62		
		+66.0	329.8	−20.0		62	1,258	
Oct. 9	12 30	−40.0	209.8	+19.0	5			Mt. Wilson.
		−29.0	220.8	−20.0	75			
		−27.0	222.8	−14.0		368		
		−14.0	235.8	−36.0		61		
		+15.0	264.8	−28.0	5			
		+42.0	291.8	−20.0		42		
		+48.0	297.8	+19.0		601		
		+53.0	302.8	−12.0	5			
		+79.0	328.8	+15.0	16			
		+80.0	329.8	−21.0	128		1,306	
Oct. 10	17 45	−79.0	154.7	−18.0	268			Do.
		−40.0	193.7	−18.0		15		
		−12.5	221.2	−19.0		55		
		−10.0	223.7	−14.0	377			
		+1.0	234.7	−35.0		37		
		+60.0	293.7	−20.0		108		
		+65.0	298.7	+20.0		706		
		+70.0	303.7	−11.0		9	1,575	
Oct. 11	14 0	−71.0	151.6	−20.0		457		Do.
		−29.0	193.6	−18.0		13		
		−20.0	202.6	+32.0	12			
		−12.0	210.6	+18.0		43		
		−1.0	221.6	−20.0	64			
		+2.0	224.6	−14.0	365			
		+17.0	239.6	−33.0	10			
		+72.0	294.6	−20.0		30		
		+75.0	297.6	+20.0		814	1,808	
Oct. 12	11 44	−58.0	152.6	−19.0		309		U. S. Naval.
		+3.0	213.6	+19.0		93		
		+10.0	220.6	−20.0	31			
		+13.0	223.6	−13.0	247			
		+87.0	297.6	+20.0	278		958	
Oct. 13	11 39	−65.0	132.5	−19.0	8			
		−45.0	152.5	−19.0		216		Do.
		−3.0	194.5	−15.0		93		
		+19.0	216.5	+17.5	31			
		+21.5	219.0	+20.0	15			
		+23.0	220.5	−19.5	31			
		+26.5	224.0	−13.0	247		641	

POSITIONS AND AREAS OF SUN SPOTS—Continued

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Date	Eastern standard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longitude	Longitude	Latitude	Spot	Group		
1936	h. m.	°	°	°				
Oct. 14	11 26	−52.0	132.4	−18.5		93		U. S. Naval.
		−32.0	152.4	−19.5		247		
		+11.0	195.4	−15.5		216		
		+32.5	216.9	+18.0		154		
		+36.0	220.4	−20.0	31			
		+40.0	224.4	−14.0	278		1,019	
Oct. 15	11 45	−52.0	119.0	−12.0		66		Mt. Wilson.
		−37.0	134.0	−19.0		147		
		−17.0	154.0	−20.0		244		
		−14.0	157.0	+13.0		38		
		+26.0	197.0	−16.0		269		
		+45.0	216.0	+19.0		84		
		+50.0	221.0	−20.0		23		
		+53.0	224.0	−14.0	279		1,090	
Oct. 17	11 27	−74.0	70.9	+22.0		77		U. S. Naval.
		−69.0	75.9	+12.0		93		
		−22.0	122.9	−11.5		62		
		−15.0	129.9	−19.0		62		
		−8.0	136.9	−17.0	46			
		+9.0	153.9	−19.5		108		
		+16.5	161.4	+12.0	15			
		+51.0	195.9	−15.0		77		
		+82.0	226.9	−13.5	154		694	
Oct. 18	11 15	−56.0	75.9	+21.0		70		Harvard.
		−6.5	125.4	−12.5		64		
		+8.0	139.9	−17.0	79			
		+26.5	158.4	−18.0		235		
		+32.5	164.4	+12.0	30			
		+68.0	199.9	−14.5		139	617	
Oct. 19	11 15	−46.0	72.6	+21.5		62		U. S. Naval.
		+4.0	122.6	−12.0		93		
		+20.0	138.6	−19.5	39			
		+37.5	156.1	−20.0	93			
		+44.0	162.6	+10.5	31		318	
Oct. 20	11 10	−32.0	73.4	+21.0		46		Do.
		+17.0	122.4	−11.5		93		
		+34.5	139.9	−19.5		77		
		+50.0	155.4	−20.0	62		278	
Oct. 21	11 5	−75.0	17.3	+17.0		216		Do.
		−20.0	72.3	+21.0		46		
		+31.0	123.3	−11.0		77		
		+47.0	139.3	−19.5		154		
		+64.0	156.3	−20.0	46		539	
Oct. 22	11 11	−61.0	18.0	+17.0		247		Do.
		−7.0	72.0	+21.0		31		
		+45.0	124.0	−11.0		77		
		+62.0	141.0	−19.5		31		
		+79.0	158.0	−20.0	31		417	
Oct. 23	11 45	−44.0	21.5	+16.0		288		Mt. Wilson.
		−4.0	61.5	−26.0		29		
		+8.0	73.5	+22.5	5			
		+38.0	103.5	+19.0	21			
		+64.0	129.5	−12.0		20		
		+79.0	144.5	−19.0		15	378	
Oct. 24	11 38	−40.0	12.4	+17.5		62		U. S. Naval.
		−31.0	21.4	+16.0		154	216	
Oct. 25	12 48	−27.0	11.6	+17.5		46		Do.
		−18.0	20.6	+16.0		185	231	
Oct. 26	10 50	−85.0	301.5	+20.0	256			Mt. Wilson.
		−85.0	301.5	−25.0	21			
		−9.0	17.5	−14.0		207		
		−6.0	20.5	+17.0		235		
		+9.0	35.5	−25.0		10		
		+35.0	61.5	−23.0		2		
		+72.0	98.5	+19.5		14	745	
Oct. 27	11 12	−70.0	303.1	+20.0	123			U. S. Naval.
		−1.0	12.1	+17.0		31		
		+7.0	20.1	−16.0		77		
		+9.0	22.1	+16.0		123	354	

POSITIONS AND AREAS OF SUN SPOTS—Continued

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Date	Eastern standard time	Heliographic			Area		Total area for each day	Observatory
		Diff. in longitude	Longitude	Latitude	Spot	Group		
1936	h. m.	°	°	°				
Oct. 28	11 8	−69.0	290.9	−20.0	46			U. S. Naval.
		−58.0	301.9	+19.5		247		
		−54.0	305.9	−25.0	31			
		+20.0	19.9	−16.0		46		
		+21.0	20.9	+16.0		123		
		+38.0	37.9	−25.0	15		508	
Oct. 29	11 17	−55.0	291.7	−20.0	62			Do.
		−45.0	301.7	+19.5		309		
		−40.0	306.7	−22.5	31			
		+35.0	21.7	+16.0	185			
		+48.0	34.7	−16.0	15			
		+51.0	37.7	−24.5	15		617	
Oct. 30	13 19	−65.0	267.4	−17.0		123		Do.
		−60.0	272.4	+20.0		46		
		−40.5	291.9	−20.5	39			
		−30.0	302.4	+19.0		216		
		−28.0	304.4	−25.0	15			
		+50.0	22.4	+15.0	93		532	
Oct. 31	11 19	−70.0	250.3	−17.0		93		Do.
		−53.0	267.3	−17.0		185		
		−47.0	273.3	+20.0		93		
		−29.0	291.3	−21.0	46			
		−20.0	300.3	+19.5		185		
		−16.0	304.3	−25.0	15			
		+62.0	22.3	+15.0		77	694	

Mean daily area for 30 days, 839.

PROVISIONAL SUN-SPOT RELATIVE NUMBERS, OCTOBER 1936

[Data dependent alone on observations at Zurich and its station at Arosa]

[Furnished through the courtesy of Prof. W. Brunner, Eidgen, Sternwarte, Zurich Switzerland]

October 1936	Relative numbers	October 1936	Relative numbers	October 1936	Relative numbers
1	113	11	*ad* --	21	*d* 65
2	*Ec* 98	12	*Mac* 82	22	55
3	*Wac* 103	13	*a* 76	23	63
4	112	14	92	24	52
5	122	15	*WMcc*123	25	35
6	*bd* 129	16	*ad* 90	26	*Mc* 40
7	*Ec* --	17	105	27	*aad* 52
8	--	18	*a* 82	28	77
9	107	19	*a* 80	29	*d* --
10	81	20	85	30	95
				31	*d* 95

Mean, 27 days=85.5.

a=Passage of an average-sized group through the central meridian.
b=Passage of a large group or spot through the central meridian.
c=New formation of a center of activity: E, on the eastern part of the sun's disk; W, on the western part; M, in the central circle zone.
d=Entrance of a large or average-sized center of activity on the east limb.