TABLE 2.—*Total solar radiation (direct+diffuse) received on a horizontal surface*

Week beginning	Average daily totals									
	Washington	Madison	Lincoln	Chicago	New York	Pittsburgh	Gainesville	Fresno	La Jolla	Miami
1930										
Sept. 3	404	396	307	302	352	366	----	546	455	428
Sept. 10	390	411	399	292	253	318	360	545	333	462
Sept. 17	404	430	456	320	377	355	427	457	327	517
Sept. 24	438	306	401	216	288	294	427	410	312	487
	Departures from weekly normals									
Sept. 3	+26	+28	−109	−8	+51	----	----	−19	+110	----
Sept. 10	+15	+66	−7	+5	−44	----	----	+13	+36	----
Sept. 17	+50	+86	+68	+50	+95	----	----	−35	+21	----
Sept. 24	+92	+15	+57	−19	+29	----	----	−44	−38	----
Accumulated departure on Sept. 30	+5,957	+1,708	−1,841	+861	+896	----	----	−2,304	−2,030	----

POSITIONS AND AREAS OF SUN SPOTS

[Communicated by Capt. J. F. Hellweg, Superintendent United States Naval Observatory. Data furnished by Naval Observatory, in cooperation with Harvard, Yerkes, Perkins, and Mount Wilson Observatories. The differences of longitude are measured from central meridian, positive west. The north latitudes are plus. Areas are corrected for foreshortening and are expressed in millionths of sun's visible hemisphere. The total area, including spots and groups, is given for each day in the last column]

Date	Eastern standard civil time		Heliographic			Area		Total area for each day
			Diff. long.	Longitude	Latitude	Spot	Group	
1930	h	m	°	°	°			
Sept. 1 (Naval Observatory)	11	59	−79.0	84.4	+5.0	------	68	------
			−15.5	147.9	+9.5	40	------	------
			−13.5	149.9	−13.5	6	------	------
			+25.0	188.4	+7.5	------	15	------
			+37.5	200.9	−10.0	------	28	157
Sept. 2 (Naval Observatory)	10	51	−74.5	76.3	−8.0	93	------	------
			−65.5	85.3	+5.0	------	62	------
			−2.0	148.8	+9.0	46	------	------
			−0.5	150.3	−13.0	6	------	------
			+51.5	202.3	−10.0	------	18	225
Sept. 3 (Naval Observatory)	10	11	−79.0	59.0	−16.5	28	------	------
			−61.5	76.5	−7.0	108	------	------
			−53.5	84.5	+5.0	31	------	------
			−9.5	128.5	+5.0	------	43	------
			+10.5	148.5	+9.0	40	------	------
			+12.5	150.5	−13.0	6	------	------
			+65.0	203.0	−10.0	------	15	271
Sept. 4 (Naval Observatory)	10	55	−84.0	35.4	+16.5	231	------	------
			−63.5	60.9	−17.0	------	62	------
			−48.0	76.4	−7.0	68	------	------
			−39.0	85.4	+5.0	6	------	------
			+6.0	130.4	+5.0	------	185	------
			+24.5	148.9	+9.5	37	------	------
			+24.5	148.9	−11.0	2	------	591
Sept. 5 (Naval Observatory)	12	50	−71.5	38.6	+16.0	278	------	------
			−51.0	59.1	−17.5	------	49	------
			−33.5	76.6	−7.5	65	------	------
			−29.5	80.6	+5.5	------	9	------
			+21.0	131.1	+5.0	------	201	------
			+38.5	148.6	+9.5	31	------	633
Sept. 6 (Naval Observatory)	10	40	−59.5	38.6	+16.0	262	------	------
			−38.5	59.6	−17.5	------	15	------
			−21.0	77.1	−7.5	65	------	------
			−17.5	80.6	+6.0	------	6	------
			+8.5	106.6	−3.5	------	9	------
			+33.0	131.1	+5.0	------	247	------
			+45.0	143.1	−13.0	15	------	------
			+51.0	149.1	+9.5	31	------	650
Sept. 7 (Naval Observatory)	11	9	−46.5	38.1	+16.0	170	------	------
			−24.0	60.6	−17.0	------	3	------
			−8.0	76.6	−7.5	62	------	------
			−0.5	84.1	+6.0	------	15	------
			+22.5	107.1	−4.5	3	------	------
			+36.5	121.1	−11.5	3	------	------
			+49.0	133.6	+4.5	------	231	------
			+64.5	149.1	+9.5	9	------	496
Sept. 8 (Naval Observatory)	12	36	−33.0	37.6	+16.5	185	------	------
			+6.0	76.6	−7.5	56	------	------
			+15.0	85.6	+5.5	------	15	------
			+50.5	121.1	−11.5	9	------	------
			+63.5	134.1	+5.0	------	170	435

POSITIONS AND AREAS OF SUN SPOTS—Continued

Date	Eastern standard civil time		Heliographic			Area		Total area for each day
			Diff. long.	Longitude	Latitude	Spot	Group	
1930	h	m	°	°	°			
Sept. 9 (Naval Observatory)	10	44	−21.0	37.5	+16.0	247	------	------
			+18.5	77.0	−8.0	46	------	------
			+28.5	87.0	+5.5	6	------	------
			+78.0	136.5	+4.5	185	------	484
Sept 10 (Naval Observatory)	11	37	−77.5	327.3	−10.5	------	18	------
			−8.0	36.8	+16.0	231	------	------
			+32.0	76.8	−8.0	34	------	------
			+34.5	79.3	+4.0	3	------	286
Sept 11 (Naval Observatory)	10	39	−60.5	331.6	−11.0	15	------	------
			+4.5	36.6	+16.0	------	231	------
			+45.0	77.1	−8.0	34	------	------
			+68.0	100.1	−10.0	------	37	317
Sept. 12 (Mount Wilson)	11	10	−48.0	330.5	−11.0	------	6	------
			+19.0	37.5	+18.0	------	303	------
			+60.0	78.5	−8.0	7	------	316
Sept. 13 (Naval Observatory)	10	31	−75.5	290.3	−12.0	------	93	------
			−39.0	326.8	−11.0	6	------	------
			+32.0	37.8	+16.0	------	185	------
			+39.0	44.8	−9.5	------	12	296
Sept. 14 (Naval Observatory)	11	24	−60.5	291.6	−11.5	------	46	------
			+45.5	37.6	+16.0	------	139	------
			+54.5	46.6	−9.0	6	------	191
Sept. 15 (Naval Observatory)	10	44	−47.5	291.7	−11.5	------	18	------
			+58.5	37.7	+16.5	------	37	55
Sept. 16 (Naval Observatory)	10	43	−33.5	292.5	−11.5	------	15	15
Sept. 17 (Naval Observatory)	10	40	−19.5	293.4	−11.5	------	12	12
Sept. 18 (Naval Observatory)	11	9	------	------	------	(1)	(1)	------
Sept. 19 (Naval Observatory)	13	11	−15.5	269.6	+16.5	3	------	------
			+3.0	288.1	−19.5	------	6	9
Sept. 20 (Naval Observatory)	10	42	−3.5	269.8	+16.5	9	------	9
Sept. 21 (Naval Observatory)	10	53	+9.5	269.5	+16.5	------	6	6
Sept. 22 (Naval Observatory)	10	41	−11.5	235.4	+18.0	------	31	31
Sept. 23 (Naval Observatory)	10	41	+2.0	235.7	+18.0	------	15	15
Sept. 24 (Naval Observatory)	10	40	−85.5	135.0	+6.0	185	------	------
			+14.5	235.0	+18.5	------	12	197
Sept. 25 (Naval Observatory)	10	40	−71.0	136.3	+6.0	170	------	------
			+28.5	235.8	+18.5	------	31	201
Sept. 26 (Naval Observatory)	10	42	−78.5	115.6	−3.0	123	------	------
			−60.0	134.1	−24.5	------	9	------
			−58.5	135.6	+6.0	139	------	------
			+41.0	235.1	+18.0	------	56	327
Sept 27 (Naval Observatory)	10	59	−64.5	116.2	−2.5	139	------	------
			−44.5	136.2	+6.0	108	------	------
			+56.0	236.7	+18.0	------	77	324
Sept. 28 (Naval Observatory)	10	49	−51.5	116.1	−2.5	123	------	------
			−31.5	136.1	+6.0	123	------	------
			+70.0	237.6	+17.5	------	25	271
Sept. 29 (Naval Observatory)	10	56	−37.5	116.8	−3.0	------	139	------
			−18.5	135.8	+6.5	123	------	262
Sept. 30 (Naval Observatory)	10	42	−24.0	117.3	−3.5	------	139	------
			−5.0	136.3	+6.0	123	------	262
Mean daily area for September			------	------	------	------	------	245

[1] No spots

PROVISIONAL SUN-SPOT RELATIVE NUMBERS FOR SEPTEMBER, 1930 [1]

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

September, 1930	Relative numbers	September, 1930	Relative numbers	September, 1930	Relative numbers
1	d 56	11	a 39	21	8
2	a 46	12	33	22	Mc 10
3	Mc 48	13	39	23	------
4	ad 68	14	23	24	d 18
5	66	15	28	25	19
6	73	16	17	26	d 35
7	70	17	8	27	33
8	a 41	18	0	28	31
9	40	19	7	29	26
10	41	20	6	30	a 20

Mean (29 days) = 32.7.

[1] Dependent alone on observations at Zurich and its station at Arosa.

a Passage of an average-sized group through the central meridian.

c New formation of a large or average-sized center of activity: E, on the eastern part of the sun's disk; W, on the western part; M, in the central zone.

d = Entrance of a large or average-sized center of activity on the east limb.