POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1946

By LUCY T. DAY

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[Communicated by the Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under Mount Wilson group number, longitude, latitude, areas of spot of group, and spot count, are included respectively: number of groups, assumed longitude of center of the disk, assumed latitude of center of the disk, total areas of spot and groups, and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	*h m*		°	°	°	°				
June 1	10 14	8068	−54	154	+16	57	61	3	G	U. S. Naval.
		8068	−50	158	+15	53	97	4		
		8065	+7	215	−18	17	48	10		
		8065	+11	219	−19	20	48	2		
		(2)		(208)	(−1)		254	19		
2	11 9	8068	−40	154	+16	44	48	3	G	Do.
		8068	−37	157	+15	41	97	7		
		8065	+19	213	−19	25	48	5		
		8065	+21	215	−18	27	48	5	5	
		8065	+23	217	−20	28	24	1		
		8069	+47	241	−33	54	4	4		
		(3)		(194)	(−1)		269	25		
3	11 21	8068	−27	154	+16	32	48	10	G	Do.
		8068	−24	157	+15	28	97	2		
		8065	+31	212	−18	36	48	2		
		8065	+36	217	−18	40	24	7		
		8065	+37	218	−19	41	24	1		
		(2)		(181)	(0)		241	22		
4	11 25	8068	−15	152	+17	23	24	2	P	Do.
		8068	−11	156	+15	19	121	1		
		8065	+45	212	−18	47	12	2		
		8065	+50	217	−19	52	48	2		
		(2)		(167)	(0)		205	7		
5	11 12	8072	−68	86	+18	70	12	2	G	Do.
		8071	−67	87	−24	69	12	2		
		8071	−63	91	−23	65	12	3		
		8070	−63	91	+19	65	48	1		
		8073	−59	95	−16	60	12	1		
		8068	−1	153	+17	17	12	1		
		8068	+3	157	+14	15	97	6		
		8065	+65	219	−20	67	12	1		
		(6)		(154)	(0)		217	17		
6	15 34	8072	−54	85	+18	57	6	1	F	Do
		8071	−48	91	−23	52	97	2		
		8070	−45	94	+19	49	48	1		
		8074	−10	129	−26	28	61	1		
		8074	−7	132	−25	27	48	1		
		8068	+18	157	+14	23	73	2		
		(5)		(139)	(0)		333	8		
7	10 47	8075	−57	71	−14	58	12	2	G	Do.
		8072	−44	84	+18	47	12	4		
		8071	−37	91	−23	42	36	1		
		8071	−35	93	−23	41	48	1		
		8070	−35	93	+19	40	36	1		
		8074	+1	129	−27	27	145	2		
		8074	+5	133	−25	26	97	11		
		8068	+29	157	+14	32	48	3		
		(6)		(128)	(0)		434	25		
8	10 6	(*)	−58	57	−9	58	12	1	G	Do.
		8075	−44	71	−14	47	12	1		
		8072	−32	83	+18	37	12	2		
		8071	−22	93	−23	32	61	10		
		8070	−22	93	+19	29	12	1		
		8074	+13	128	−27	30	145	1		
		8074	+17	132	−26	32	48	13		
		8068	+41	156	+14	43	12	1		
		(7)		(115)	(0)		314	30		

See footnotes at end of table.

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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	*h m*		°	°	°	°				
June 9	9 15	8078	−42	60	−12	44	6	1	G	Mt. Wilson.
		8075	−30	72	−13	33	6	1		
		8072	−18	84	+17	24	48	20		
		8072	−17	85	+17	23	61	7		
		8071	−11	91	−23	27	12	8		
		8073	−9	93	−16	18	6	1		
		8070	−9	93	+18	20	6	1		
		8071	−8	94	−23	25	24	12		
		8077	+4	106	+9	10	6	4		
		8074	+27	129	−26	38	121	1		
		8074	+33	135	−25	40	12	7		
		8076	+43	145	+23	49	24	6		
		(9)		(102)	(0)		332	69		
10	11 24	8072	−7	81	+18	20	48	9	F	U. S. Naval.
		8072	−3	85	+18	18	121	2		
		8071	+8	96	−22	24	6	3		
		8074	+40	128	−27	47	145	1		
		(3)		(88)	(0)		320	15		
11	11 5	8079	−2	73	+17	16	12	1	G	Do.
		8072	+9	84	+18	19	48	11		
		8072	+11	86	+18	20	145	2		
		8071	+17	92	−24	31	73	4		
		8074	+52	127	−27	58	109	1		
		(4)		(75)	(+1)		387	19		
12	9 45	8083	−80	342	+18	80	291	3	G	Mt. Wilson.
		8082	−15	47	−14	21	16	16		
		8072	+23	85	+18	28	24	15		
		8072	+25	87	+18	30	145	10		
		8071	+29	91	−24	38	73	6		
		8071	+31	93	−24	40	48	23		
		8081	+39	101	+14	41	6	1		
		8081	+41	103	+11	42	12	3		
		8080	+45	107	+26	50	24	8		
		8080	+47	109	+25	51	24	3		
		8074	+65	127	−26	68	121	3		
		(6)		(62)	(+1)		784	91		
13	10 48	8083	−68	341	+18	70	267	5	F	U. S. Naval.
		8082	−1	48	−14	15	73	4		
		8072	+37	86	+18	40	145	4		
		8071	+43	92	−25	49	12	3		
		8071	+47	96	−24	51	12	2		
		8080	+57	106	+28	61	12	1		
		8080	+61	110	+25	63	48	2		
		(5)		(49)	(+1)		69	21		
14	11 53	8087	−88	307	+25	88	194	2	P	U. S. Naval.
		8088	−87	308	+31	87	97	3		
		8086	−80	315	+18	80	388	1		
		8083	−53	342	+18	55	218	6		
		8083	−51	344	+16	53	24	1		
		8084	−18	17	−20	27	12	2		
		8082	+11	46	−13	18	24	1		
		8072	+53	88	+17	55	61	1		
		8071	+61	96	−25	68	12	1		
		8080	+73	108	+25	74	24	1		
		(8)		(35)	(+1)		1,054	19		
15	12 2	8088	−70	311	+31	71	194	2	P	Mt. Wilson.
		8087	−70	311	+24	71	97	1		
		8086	−66	315	+17	67	242	1		
		8085	−45	336	−20	48	48	1		
		8083	−41	340	+21	45	24	1		
		8083	−39	342	+17	41	121	10		
		8083	−36	345	+15	38	24	1		
		8084	−2	19	−20	21	48	6		
		8072	+67	88	+18	68	48	1		
		8071	+71	92	−26	75	24	7		
		(8)		(21)	(+1)		870	31		
16	9 7	8088	−71	299	+33	75	97	8	G	Do.
		8088	−69	301	+32	70	24	4		
		8088	−65	305	+35	69	194	14		
		8088	−60	310	+33	64	36	6		
		8087	−59	311	+25	60	145	1		
		8088	−57	313	+33	61	36	8		
		8086	−54	316	+18	56	194	1		
		8083	−26	344	+17	31	170	30		
		8084	+7	17	−19	21	12	2		
		8072	+78	88	+19	78	97	4		
		(6)		(10)	(+1)		1,005	78		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	*h m*		°	°	°	°				
June 17	12 23	8088	−55	300	+33	60	145	12	F	U. S. Naval.
		8088	−50	305	+32	57	121	7		
		8088	−45	310	+30	51	48	3		
		8087	−45	310	+25	50	145	1		
		8086	−39	316	+17	41	218	1		
		8083	−17	338	+15	22	73	9		
		8083	−11	344	+15	17	242	27		
		8084	+23	18	−21	31	61	3		
		8089	+42	37	−25	48	24	2		
		(6)		(355)	(+1)		1,077	65		
18	11 44	8088	−41	301	+33	50	145	10	F	Do.
		8088	−38	304	+32	47	97	7		
		8088	−32	310	+31	42	121	8		
		8087	−32	310	+25	39	73	2		
		8086	−27	315	+17	31	194	1		
		(*)	−3	339	+31	30	24	11		
		8085	−1	341	−21	22	97	8		
		8083	+2	344	+16	15	145	18		
		8084	+35	17	−20	40	48	3		
		8084	+40	22	−19	43	24	3		
		8089	+55	37	−25	60	194	13		
		(8)		(342)	(+1)		1,162	84		
19	8 48	8091	−76	254	−24	78	24	1	F	Mt. Wilson.
		8088	−30	300	+34	42	145	25		
		8087	−22	308	+26	31	73	1		
		8088	−20	310	+33	36	145	21		
		8086	−14	316	+19	22	121	1		
		8083	+15	345	+17	21	97	12		
		8084	+53	23	−18	56	16	2		
		8089	+64	34	−22	67	73	6		
		8089	+70	40	−22	72	194	2		
		(7)		(330)	(+2)		888	71		
20	9 20	8095	−80	237	−21	80	194	4	F	Do.
		8091	−66	251	−23	69	12	1		
		8094	−33	284	−18	37	24	4		
		8088	−17	300	+34	36	194	19		
		8087	−9	308	+26	25	73	1		
		8088	−7	310	+34	33	145	14		
		8090	−7	310	−20	23	16	4		
		8086	−1	316	+19	18	97	1		
		8093	+4	321	+24	23	12	3		
		8092	+12	329	−21	27	73	9		
		8083	+29	346	+17	32	12	4		
		8089	+80	37	−22	80	145	5		
		(11)		(317)	(+2)		997	69		
21	10 32	8097	−70	233	−30	73	12	1	G	U. S. Naval.
		8095	−70	233	−22	72	6	1		
		8095	−65	238	−21	68	12	1		
		8095	−61	242	−21	65	194	1		
		8091	−52	251	−25	57	6	1		
		8094	−22	281	−18	29	12	2		
		8094	−18	285	−17	25	6	2		
		8096	−6	297	+18	17	16	3		
		8088	−4	299	+34	33	291	19		
		8087	+4	307	+25	24	48	1		
		8088	+5	308	+33	32	48	10		
		8086	+12	315	+17	20	121	1		
		8092	+25	328	−22	34	48	9		
		(9)		(303)	(+2)		820	52		
22	10 14	8098	−62	228	−18	64	6	2	G	Do.
		8098	−59	231	−18	61	24	3		
		8095	−55	235	−22	59	97	8		
		8095	−49	241	−20	52	218	4		
		8091	−40	250	−24	47	6	2		
		8088	+5	295	+32	31	12	8		
		8088	+7	297	+33	32	145	11		
		8096	+8	298	+19	19	24	13		
		8087	+16	306	+25	24	12	3		
		8088	+16	306	+32	33	48	5		
		8088	+22	312	+32	36	12	4		
		8086	+25	315	+17	30	145	1		
		(*)	+25	315	−28	38	6	4		
		8092	+37	327	−22	42	24	13		
		8092	+40	330	−22	45	24	4		
		(9)		(290)	(+2)		803	85		
23	11 11	8101	−78	198	−28	78	242	3	G	Do.
		8100	−61	215	−39	69	97	4		
		8098	−46	230	−19	50	121	4		
		8095	−41	235	−22	46	97	2		
		8095	−37	239	−21	43	291	1		
		8091	−27	249	−26	38	6	1		
		8099	−15	261	+27	30	12	1		
		8088	+20	296	+32	36	145	13		
		8096	+21	297	+19	27	97	16		
		8088	+23	299	+29	35	48	7		
		8087	+29	305	+24	36	24	2		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	*h m*		°	°	°	°				
June 23	11 11	8088	+30	306	+31	40	48	4	G	U. S. Naval.
		8086	+39	315	+16	41	170	4		
		8093	+44	320	+23	49	12	1		
		8092	+53	329	−23	58	121	6		
		(12)		(276)	(+2)		1,531	69		
24	13 10	8101	−65	197	−28	69	194	2	G	Do.
		8100	−47	215	−40	60	242	3		
		8098	−30	232	−19	35	170	14		
		8095	−27	235	−21	34	97	5		
		8095	−21	241	−21	31	206	1		
		8099	−2	260	+29	27	36	1		
		8088	+34	296	+35	46	170	10		
		8096	+35	297	+20	39	48	4		
		8102	+41	303	−15	43	24	2		
		8087	+42	304	+27	47	24	2		
		8086	+53	315	+20	55	121	1		
		8092	+65	327	−21	67	48	2		
		(11)		(262)	(+2)		1,380	47		
25	11 48	8101	−61	188	−29	67	48	3	F	Do.
		8101	−51	198	−28	59	170	3		
		8100	−39	210	−40	53	61	1		
		8100	−33	216	−40	51	61	1		
		8098	−21	228	−18	30	158	14		
		8098	−15	234	−18	25	73	5		
		8095	−15	234	−21	27	24	2		
		8095	−9	240	−21	24	206	1		
		8099	+11	260	+28	29	24	1		
		8088	+47	296	+34	54	145	9		
		8087	+54	303	+27	59	12	1		
		8102	+54	303	−15	57	6	1		
		8086	+65	314	+19	66	121	1		
		(9)		(249)	(+2)		1,109	43		
26	12 15	8101	−47	189	−32	57	97	7	G	Do.
		8101	−41	195	−30	50	145	13		
		8101	−38	198	−26	47	24	3		
		8101	−35	201	−29	46	61	1		
		8100	−25	211	−41	49	97	3		
		8100	−19	217	−39	44	61	1		
		8098	−7	229	−18	22	73	15		
		8098	−2	234	−19	21	97	10		
		8095	−2	234	−21	23	24	6		
		8095	+4	240	−21	24	218	1		
		8088	+60	296	+34	64	145	9		
		8087	+68	304	+26	69	6	1		
		8086	+79	315	+19	79	145	1		
		(7)		(236)	(+2)		1,193	71		
27	10 51	8101	−38	185	−32	49	73	10	F	Do.
		8101	−31	192	−30	43	48	8		
		8101	−28	195	−30	41	97	3		
		8101	−22	201	−29	37	61	1		
		8100	−12	211	−41	43	48	2		
		8104	−12	211	−19	24	12	3		
		8100	−8	215	−39	40	48	2		
		8104	−7	216	−21	23	12	1		
		8103	−2	221	+21	19	24	1		
		8098	+5	228	−18	21	97	10		
		8098	+11	234	−18	23	145	5		
		8095	+15	238	−20	27	218	1		
		8095	+16	239	−21	28	6	2		
		8088	+75	298	+34	77	97	2		
		(7)		(223)	(+2)		986	51		
28	10 59	8105	−80	130	+27	80	97	1	G	Do.
		8101	−24	186	−31	41	24	2		
		8101	−18	192	−30	37	24	1		
		8101	−13	197	−30	35	61	7		
		8101	−10	200	−30	34	48	1		
		8100	−1	209	−41	43	48	2		
		8100	+4	214	−39	41	48	3		
		8104	+8	218	−21	26	12	2		
		8103	+10	220	+21	20	12	1		
		8098	+18	228	−19	28	61	6		
		8098	+23	233	−18	31	73	14		
		8095	+29	239	−21	37	145	3		
		(7)		(210)	(+3)		653	43		
29	11 17	8106	−80	116	+24	80	291	1	F	Do.
		8105	−65	131	+29	68	97	1		
		8101	−7	189	−30	33	12	1		
		8101	−2	194	−29	32	97	8		
		8101	+2	198	−30	33	48	1		
		8100	+11	207	−40	43	6	1		
		8100	+17	213	−39	44	12	1		
		8098	+31	227	−19	37	48	2		
		9098	+39	235	−18	43	73	3		
		8095	+40	236	−21	46	145	5		
		(6)		(196)	(+3)		829	24		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1946—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1946	*h m*		°	°	°	°				
June 30	9 48	8110	−86	98	+18	88	24	1	G	Mt. Wilson.
		8109	−83	101	−16	83	97	1		
		8106	−68	116	+24	70	388	7		
		8105	−52	132	+28	56	73	1		
		8108	−23	161	−13	27	12	2		
		8101	+7	191	−29	32	6	2		
		8101	+9	193	−29	33	6	1		
		8101	+13	197	−29	34	24	11		
		8101	+15	199	−27	35	48	1		
		8107	+15	199	+23	24	6	1		
		8100	+30	214	−39	50	12	3		
		8103	+38	222	+20	40	6	9		
		8103	+41	225	+20	43	36	9		
		8098	+45	229	−19	50	12	3		
		8098	+50	234	−19	54	24	18		
		8098	+53	237	−18	58	12	7		
		8095	+55	239	−22	60	61	9		
		(11)		(184)	(+3)		847	86		

Mean daily area for 30 days=729
Mean 10 g+s for 30 days=112.5

*Not Numbered.
VG=very good; G=good; F=fair; P=poor.
g=number of groups; s=number of spots.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR JUNE 1946

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland.]

June 1946	Relative numbers	June 1946	Relative numbers	June 1946	Relative numbers
1	20	11	54	21	105
2	28	12	62	22	--------
3	31	13	--------	23	111
4	26	14	74	24	112
5	43	15	92	25	99
6	63	16	81	26	101
7	54	17	67	27	94
8	75	18	94	28	94
9	70	19	68	29	75
10	48	20	112	30	89

Mean, 28 days=72.9