POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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, area of spot or 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 area of spots 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*		°	°	°	°				
Oct. 1	10 14	8224	−73	322	−15	77	6	1	G	U. S. Naval.
		8223	−60	335	−15	64	12	3		
		8222	−42	353	+19	43	12	2		
		8222	−39	356	+18	40	61	10		
		8216	−31	4	−17	39	388	1		
		8221	+23	58	+12	23	6	2		
		8213	+26	61	−43	55	6	1		
		8218	+30	65	−22	41	24	2		
		8204	+46	81	−10	49	36	4		
		8203	+51	86	−18	56	24	5		
		8200	+65	100	+22	65	109	1		
		8200	+69	104	+22	70	291	10		
		8200	+71	106	+19	71	12	2		
		(10)		(35)	(+7)		987	44		
2	10 41	8223	−46	335	−15	50	24	1	F	Do.
		8222	−28	353	+18	30	36	6		
		8222	−26	355	+17	28	48	7		
		8216	−18	3	−17	31	388	1		
		8225	+33	54	+18	35	24	2		
		8218	+43	64	−22	52	48	3		
		8204	+60	81	−10	62	24	2		
		8220	+63	84	−25	69	24	2		
		8200	+78	99	+23	79	109	1		
		8200	+83	104	+24	83	291	4		
		(8)		(21)	(+7)		1,016	29		
3	10 35	8222	−16	352	+18	20	61	9	F	Do.
		8222	−12	356	+17	15	61	5		
		8216	−4	4	−17	25	388	1		
		8225	+45	53	+17	47	48	1		
		8225	+50	58	+18	50	24	1		
		8221	+51	59	+10	51	12	4		
		8218	+56	64	−22	62	48	5		
		(5)		(8)	(+7)		642	26		
4	10 31	8226	−6	349	−12	19	6	1	VG	Do.
		8222	−3	352	+17	10	73	11		
		8216	−2	353	−19	27	6	3		
		8222	0	355	+18	11	48	8		
		8222	+2	357	+15	8	24	6		
		8216	+10	5	−17	27	388	1		
		8225	+56	51	+16	56	24	1		
		8225	+64	59	+16	64	24	1		
		8218	+68	63	−21	71	12	1		
		(5)		(355)	(+7)		605	33		
5	12 18	8229	−70	271	−13	72	145	1	G	Do.
		8228	−50	291	−15	55	24	1		
		8227	+10	351	−12	20	12	2		
		8222	+11	352	+18	16	121	10		
		8222	+14	355	+18	19	97	11		
		8227	+15	356	−15	26	48	5		
		8227	+18	359	−16	29	48	2		
		8216	+24	5	−17	33	339	5		
		(*)	+70	51	−26	76	6	1		
		(6)		(341)	(+6)		840	38		
6	11 47	8229	−58	270	−13	61	61	1	G	Do.
		8228	−36	292	−15	42	6	1		
		8227	+25	353	−12	31	12	1		
		8222	+26	354	+16	27	73	12		
		8222	+27	355	+18	30	121	7		
		8227	+31	359	−17	38	121	10		
		8216	+39	7	−19	46	267	2		
		(5)		(328)	(+6)		661	34		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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*		°	°	°	°				
Oct. 7	11 26	(*)	−70	245	+11	70	6	1	G	U. S. Naval.
		8229	−45	270	−13	49	48	1		
		8228	−22	293	−15	30	12	5		
		8227	+37	352	−13	42	12	2		
		8222	+39	354	+15	40	73	13		
		8222	+40	355	+17	41	61	6		
		8227	+41	356	−18	48	24	7		
		8227	+47	2	−17	53	73	3		
		8216	+50	5	−19	56	315	1		
		(6)		(315)	(+6)		624	39		
8	10 33	8229	−32	270	−13	37	36	1	G	Do.
		8228	−10	292	−15	23	97	11		
		8228	−6	296	−15	22	73	1		
		8230	+11	313	+31	27	24	5		
		8222	+48	350	+14	48	24	4		
		8227	+51	353	−18	58	6	2		
		8222	+55	357	+18	56	48	2		
		8227	+60	2	−17	64	24	1		
		8216	+63	5	−19	68	339	1		
		(6)		(302)	(+6)		671	28		
9	11 10	8229	−18	271	−14	27	24	1	P	Mt. Wilson.
		8228	+4	293	−15	22	121	3		
		8228	+9	298	−15	23	194	4		
		8231	+11	300	+19	17	24	2		
		8222	+69	358	+19	69	48	1		
		8216	+78	7	−18	80	339	1		
		(5)		(289)	(+6)		750	12		
10	11 56	8233	−58	217	+16	59	24	10	G	Do.
		8232	−36	239	−15	42	61	9		
		8232	−34	241	−15	40	48	1		
		8229	−5	270	−13	20	16	4		
		8228	+17	292	−16	28	109	5		
		8228	+21	296	−15	30	24	2		
		8228	+23	298	−14	30	145	3		
		8222	+82	357	+19	82	48	1		
		(5)		(275)	(+6)		475	35		
11	13 2	8235	−80	181	−17	82	97	1	F	U. S. Naval.
		8234	−70	191	+13	70	24	6		
		8233	−45	216	+16	47	6	4		
		8232	−21	240	−15	29	61	7		
		8232	−18	243	−15	27	145	1		
		8228	+29	290	−17	37	73	6		
		8228	+37	298	−15	42	194	3		
		(5)		(261)	(+6)		600	28		
12	11 56	8238	−80	169	−12	80	339	1	VG	Do.
		8237	−77	172	−13	79	97	1		
		8235	−66	183	−16	70	73	2		
		8234	−58	191	+16	59	97	6		
		8234	−55	194	+14	55	73	7		
		8233	−40	209	+12	40	6	3		
		8233	−27	222	+15	29	48	8		
		8232	−9	240	−15	23	48	6		
		8232	−5	244	−15	21	194	4		
		8228	+41	290	−16	46	48	1		
		8236	+44	293	−23	52	12	3		
		8228	+48	297	−14	52	121	8		
		(8)		(249)	(+6)		1,156	50		
13	11 20	8238	−76	160	−13	78	194	1	F	Do.
		8238	−68	168	−12	70	388	5		
		8237	−63	173	−12	65	48	1		
		8237	−63	173	−17	68	48	1		
		8235	−54	182	−16	58	73	1		
		8234	−45	191	+16	46	12	6		
		8234	−41	195	+14	41	109	2		
		8233	−18	218	+17	21	48	4		
		8233	−12	224	+16	16	61	4		
		8232	+6	242	−15	22	48	1		
		8232	+9	245	−15	23	194	1		
		8228	+55	291	−17	60	48	3		
		8236	+57	293	−23	63	48	2		
		8228	+61	297	−15	65	170	8		
		(8)		(236)	(+6)		1,489	40		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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*		°	°	°	°				
Oct. 14	10 32	8241	−83	140	+21	83	291	1	G	U. S. Naval.
		8240	−72	151	−19	76	315	1		
		8238	−63	160	−13	67	218	2		
		8238	−56	167	−12	58	242	2		
		8237	−50	173	−15	55	73	2		
		8237	−50	173	−13	54	73	2		
		8235	−41	182	−14	46	48	1		
		8234	−30	193	+14	31	145	10		
		8233	−5	218	+17	12	48	7		
		8233	+1	224	+15	8	48	9		
		8232	+19	242	−15	27	12	2		
		8232	+20	243	−15	29	170	1		
		8236	+68	291	−26	73	73	1		
		8236	+70	293	−23	74	145	1		
		8228	+72	295	−15	77	194	8		
		(10)		(223)	(+6)		2,095	50		
15	10 11	8241	−69	141	+21	69	315	1	F	Do.
		8240	−59	151	−19	63	291	1		
		8239	−58	152	+12	57	24	3		
		8238	−50	160	−13	53	194	1		
		8238	−40	170	−12	43	242	1		
		8237	−40	170	−15	45	36	2		
		8237	−37	173	−13	42	73	2		
		8242	−32	178	+17	33	12	1		
		8235	−29	181	−15	36	61	2		
		8234	−19	191	+14	21	73	2		
		8234	−15	195	+14	19	145	1		
		8233	+8	218	+17	14	61	3		
		8233	+15	225	+16	18	24	2		
		8232	+34	244	−15	40	194	2		
		(10)		(210)	(+6)		1,745	24		
16	11 12	8245	−83	113	+23	83	48	1	P	Do.
		8244	−73	123	+6	73	109	1		
		8243	−60	136	+16	60	48	4		
		8241	−56	140	+21	58	291	1		
		8239	−51	145	+14	55	24	4		
		8240	−47	149	−19	54	315	1		
		8239	−44	152	+14	44	12	5		
		8238	−38	158	−15	43	194	1		
		8238	−29	167	−13	36	291	1		
		8238	−28	168	−17	37	6	1		
		8237	−21	175	−14	28	48	3		
		8242	−19	177	+15	21	97	12		
		8235	−16	180	−18	28	12	2		
		8234	−6	190	+13	10	24	2		
		8234	−3	193	+13	8	121	5		
		8233	+20	216	+16	23	48	2		
		8233	+27	233	+14	28	24	1		
		8232	+47	243	−15	52	194	2		
		(13)		(196)	(+6)		1,906	54		
17	10 30	8246	−88	95	+27	88	48	1	F	Do.
		8245	−73	110	+24	73	97	2		
		8244	−60	123	+6	60	97	1		
		8241	−42	141	+21	44	339	1		
		8240	−33	150	−19	43	315	1		
		8239	−29	154	+14	30	36	3		
		8238	−25	158	−15	32	194	1		
		8238	−15	168	−12	23	194	5		
		8242	−9	174	+16	13	97	10		
		8237	−8	175	−14	22	24	4		
		8242	−4	179	+16	11	61	7		
		8234	+11	194	+13	13	97	5		
		8233	+40	223	+14	41	109	7		
		8232	+60	243	−15	63	194	1		
		(12)		(183)	(+6)		1,902	49		
18	13 4	8246	−71	98	+26	71	97	1	F	Do.
		8245	−58	111	+24	59	73	2		
		8244	−46	123	+6	46	97	1		
		8241	−31	138	+26	37	24	1		
		8241	−28	141	+22	32	339	2		
		8243	−28	141	+14	30	6	2		
		8240	−19	150	−19	32	315	1		
		8238	−10	159	−13	22	194	1		
		8238	−2	167	−12	18	48	2		
		8238	+1	170	−12	17	194	3		
		8237	+6	175	−14	21	12	4		
		8242	+6	175	+16	12	48	3		
		8235	+11	180	−18	28	24	3		
		8242	+13	182	+16	18	48	1		
		8234	+22	191	+11	23	24	2		
		8234	+25	194	+13	27	73	2		
		8233	+56	225	+16	56	97	2		
		8232	+75	244	−15	78	97	2		
		(13)		(169)	(+6)		1,810	35		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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*		°	°	°	°				
Oct. 19	10 13	8248	−75	82	−27	80	73	1	F	U. S. Naval.
		8246	−58	99	+26	60	61	1		
		8245	−46	111	+24	49	73	1		
		8244	−34	123	+6	34	97	1		
		8241	−16	141	+21	22	315	1		
		8243	−14	143	+11	15	24	3		
		8243	−9	148	+12	11	12	2		
		8240	−7	150	−20	27	291	1		
		8238	0	157	−18	24	24	1		
		8238	+3	160	−15	22	145	1		
		8239	+5	162	+11	7	12	3		
		8247	+8	165	+12	10	12	2		
		8237	+12	169	−15	25	121	6		
		8242	+19	176	+15	22	73	2		
		8242	+24	181	+15	25	97	1		
		8234	+37	194	+13	38	24	4		
		8233	+69	226	+16	69	48	1		
		(14)		(157)	(+6)		1,502	32		
20	10 31	8249	−79	65	+14	79	12	1	VG	Mt. Wilson.
		8249	−74	70	+11	74	97	6		
		8248	−63	81	−26	68	145	1		
		8246	−48	96	+29	52	6	1		
		8246	−45	99	+26	50	73	1		
		8250	−35	109	−31	48	48	3		
		8245	−33	111	+24	38	61	2		
		8250	−31	113	−29	45	61	8		
		8244	−20	124	+6	20	97	1		
		8241	−2	142	+21	16	291	1		
		8240	+3	147	−21	27	24	2		
		8240	+4	148	−20	24	339	1		
		8238	+12	156	−18	26	16	6		
		8238	+13	157	−15	23	170	1		
		8238	+25	169	−15	32	97	11		
		8242	+33	177	+15	35	61	12		
		8242	+37	181	+15	38	97	10		
		8242	+45	189	+15	46	12	3		
		8234	+50	194	+12	51	12	2		
		8233	+81	225	+16	81	24	1		
		(12)		(144)	(+5)		1,743	74		
21	10 52	8249	−67	63	+10	67	12	1	G	U. S. Naval.
		8249	−60	70	+10	60	97	6		
		8248	−48	82	−24	54	73	1		
		8246	−33	97	+27	39	48	1		
		8245	−22	108	+27	30	12	1		
		8245	−20	110	+24	27	61	1		
		8250	−20	110	−30	40	61	2		
		8250	−15	115	−29	37	48	4		
		8244	−7	123	+6	7	97	1		
		8241	+10	140	+21	19	315	1		
		8240	+19	149	−20	31	339	1		
		8238	+29	159	−14	34	194	1		
		8242	+47	177	+17	48	121	13		
		8242	+51	181	+15	52	48	1		
		(10)		(130)	(+5)		1,526	35		
22	10 45	8251	−80	37	−9	80	388	1	F	Do.
		8251	−70	47	−8	72	218	5		
		8249	−50	67	+10	50	206	1		
		8249	−46	71	+9	46	194	6		
		8248	−34	83	−26	45	73	1		
		8246	−20	97	+25	27	36	1		
		8250	−7	110	−31	36	97	1		
		8245	−6	111	+22	18	48	3		
		8250	−1	116	−31	36	61	1		
		8244	+8	125	+6	9	73	1		
		8241	+22	139	+20	26	388	1		
		8240	+32	149	−20	40	291	1		
		8238	+41	158	−15	45	145	1		
		8238	+55	172	−14	58	73	1		
		8242	+60	177	+14	60	48	4		
		8242	+65	182	+14	65	73	1		
		(11)		(117)	(+5)		2,412	30		
23	10 26	8251	−65	39	−9	67	339	1	VG	Do.
		8252	−55	49	−29	62	6	2		
		8251	−54	50	−8	56	194	5		
		8249	−36	68	+10	36	315	12		
		8249	−32	72	+9	32	291	18		
		8248	−22	82	−26	37	73	1		
		8246	−6	98	+26	22	12	1		
		8250	+4	108	−31	36	12	1		
		8250	+6	110	−31	36	97	5		
		8245	+7	111	+22	18	24	2		
		8250	+11	115	−32	38	121	7		
		8244	+21	125	+5	21	48	2		
		8241	+35	139	+20	37	291	4		
		8240	+45	149	−21	51	291	4		
		8238	+55	159	−15	58	145	1		
		8242	+78	182	+14	78	145	4		
		(12)		(104)	(+5)		2,404	70		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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*		°	°	°	°				
Oct. 24	10 48	8253	−88	3	−14	88	97	1	G	U. S. Naval.
		8251	−59	32	−12	61	6	2		
		8251	−52	39	−10	53	291	1		
		8251	−50	41	−8	52	48	7		
		8251	−40	51	−8	43	242	4		
		8252	−39	52	−29	50	24	3		
		8249	−22	69	+9	22	242	12		
		8249	−19	72	+9	20	242	13		
		8248	−9	82	−28	34	61	1		
		8246	+7	98	+26	22	12	4		
		8245	+21	112	+23	27	12	1		
		8250	+23	114	−32	42	194	26		
		8244	+35	126	+5	35	48	2		
		8241	+43	139	+20	50	194	2		
		8240	+60	151	−22	63	291	2		
		8238	+70	161	−15	72	145	1		
		(12)		(91)	(+5)		2,149	82		
25	10 25	8253	−75	3	−14	76	194	1	F	Do.
		8243	−70	8	−13	71	218	1		
		8251	−53	25	−7	55	36	2		
		8254	−48	30	+17	50	6	3		
		8251	−40	38	−9	43	218	2		
		8251	−36	42	−8	38	61	4		
		8251	−28	50	−8	32	218	4		
		8252	−27	51	−28	42	12	2		
		8249	−10	68	+9	11	145	10		
		8249	−5	73	+9	6	242	5		
		8248	+4	82	−27	32	61	1		
		8246	+20	98	+25	27	48	1		
		8245	+30	108	+25	35	12	2		
		8250	+35	113	−32	50	145	9		
		8250	+40	118	−33	53	48	1		
		8244	+47	125	+5	47	48	1		
		8241	+60	138	+20	60	242	2		
		8240	+71	149	−22	73	388	3		
		8238	+86	164	−15	86	145	1		
		(13)		(78)	(+5)		2,487	55		
26	12 24	8256	−70	354	+19	70	48	2	F	Do.
		8257	−70	354	−14	72	12	3		
		8253	−60	4	−15	63	145	1		
		8253	−56	8	−13	58	194	1		
		8255	−52	12	−27	60	6	1		
		8254	−35	29	+17	37	24	2		
		8251	−26	38	−8	29	194	2		
		8251	−22	42	−8	26	24	2		
		8251	−18	46	−8	23	24	3		
		8251	−10	54	+7	16	218	1		
		8249	+4	68	+9	5	121	11		
		8249	+10	74	+9	11	242	8		
		8248	+18	82	−25	35	48	1		
		8246	+30	94	+24	32	6	2		
		8250	+53	117	−33	61	73	1		
		8244	+60	124	+5	60	24	1		
		8241	+74	138	+19	74	170	2		
		(12)		(64)	(+5)		1,573	44		
27	12 46	8259	−71	339	+10	71	48	2	F	Do.
		8253	−47	3	−15	51	170	1		
		8253	−47	3	−13	50	194	1		
		8254	−20	30	+16	23	48	9		
		8251	−12	38	−9	17	194	2		
		8251	−1	49	−9	14	48	12		
		8251	+5	55	−8	13	242	1		
		8249	+18	68	+9	19	145	9		
		8249	+23	73	+9	24	145	5		
		8248	+31	81	−25	43	48	1		
		8250	+70	120	−35	76	97	1		
		(*)	+73	123	−20	77	73	2		
		(8)		(50)	(+5)		1,452	46		
28	11 24	8260	−80	318	+30	80	97	2	F	Do.
		8259	−59	339	+9	59	61	2		
		8253	−34	4	−15	39	158	1		
		8253	−30	8	−13	35	194	1		
		8254	−10	28	+17	16	12	3		
		8254	−5	33	+15	12	12	4		
		8251	+1	39	−10	14	97	4		
		8251	+11	49	−9	18	24	5		
		8251	+18	56	−8	22	242	2		
		8249	+31	69	+9	31	97	12		
		8249	+37	75	+9	37	121	10		
		8248	+45	83	−25	53	24	1		
		(7)		(38)	(+5)		1,139	47		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 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*		°	°	°	°				
Oct. 29	10 35	8260	−69	316	+30	71	97	1	F	U. S. Naval.
		8259	−45	340	+10	45	61	1		
		8253	−20	5	−15	28	170	1		
		8253	−17	8	−13	24	194	1		
		8258	−8	17	+12	11	12	2		
		8254	+5	30	+14	11	24	4		
		8254	+7	32	+16	13	61	2		
		8251	+13	38	−10	20	73	1		
		8252	+21	46	−29	40	6	1		
		8252	+27	52	−28	43	6	2		
		8251	+30	55	−7	33	218	3		
		8249	+43	68	+9	43	73	8		
		8249	+50	75	+9	50	73	2		
		8248	+57	82	−25	62	12	1		
		(9)		(25)	(+5)		1,080	30		
30	10 13	8260	−56	316	+30	58	97	2	F	Do.
		8259	−31	341	+9	31	36	1		
		8253	−8	4	−15	22	194	1		
		(*)	−7	5	−30	35	48	4		
		8253	−4	8	−13	18	194	1		
		8258	+4	16	+10	7	24	1		
		8258	+9	21	+11	11	48	1		
		8254	+10	22	+14	13	48	8		
		8251	+27	39	−10	31	48	1		
		8251	+41	53	−9	43	48	1		
		8251	+44	56	−9	47	291	1		
		8249	+64	76	+9	64	73	1		
		(7)		(12)	(+5)		1,149	23		
31	10 28	8260	−55	304	+34	58	48	1	G	Do.
		8260	−49	310	+28	52	97	5		
		8260	−43	316	+29	48	48	2		
		8259	−18	341	+9	19	24	1		
		8252	+4	3	−32	36	61	1		
		8253	+5	4	−16	21	121	1		
		8252	+8	7	−29	35	97	7		
		8253	+10	9	−14	21	194	1		
		8258	+22	21	−10	23	36	1		
		8258	+30	29	+13	31	24	1		
		8258	+37	36	+15	39	6	1		
		8251	+40	39	−10	43	145	12		
		8251	+56	55	−9	58	24	1		
		8251	+58	57	−9	59	291	1		
		(5)		(359)	(+4)		1,216	36		

Mean daily area for 31 days=1,349
Mean 10 g+s for 31 days=128.1

*Not numbered.
VG=very good; G=good; F=fair; P=poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR OCTOBER 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.]

October 1946	Relative numbers	October 1946	Relative numbers	October 1946	Relative numbers
1	91	11	50	21	128
2	107	12	68	22	133
3	73	13	92	23	132
4	77	14	144	24	123
5	55	15	115	25	136
6	64	16	131	26	128
7	67	17	126	27	130
8	65	18	127	28	106
9	57	19	134	29	109
10	61	20	131	30	102
				31	103

Mean, 31 days=102.1