POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 1945

By Lucy T. Day

[Equatorial Division, U. S. Naval Observatory]

[Communicated by Commodore J. F. Hellweg, U. S. N. (Ret.) 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 longitude, latitude, area of spot or group, and spot count are included assumed longitude of center of the disk, assumed latitude of center of the disk, total areas 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
1945	*h m*		°	°	°	°				
Oct. 1	16 9	7854	−52	117	−18	57	218	3	F	U. S. Naval.
		7856	−42	127	−22	50	145	4		
		7856	−41	128	−23	50	6	1		
		7856	−38	131	−21	47	242	2		
		7853	−30	139	+23	33	194	2		
		7851	−28	141	−22	40	388	1		
		7853	−25	144	+22	28	73	10		
		7853	−20	149	+22	23	315	1		
		7852	+20	189	+19	22	48	4		
		7855	+47	216	−17	52	6	1		
				(169)	(+7)		1,635	29		
2	13 44	7854	−39	118	−19	46	121	7	G	Do.
		7856	−29	128	−23	42	194	6		
		7856	−27	130	−21	39	12	1		
		7856	−25	132	−22	38	194	3		
		7856	−23	134	−20	35	12	3		
		7856	−22	135	−22	36	206	1		
		7853	−20	137	+23	25	194	1		
		7853	−19	138	+23	23	97	5		
		7853	−15	142	+23	21	97	9		
		7851	−13	144	−22	31	388	1		
		7853	−9	148	+23	18	339	1		
		7852	+31	188	+20	33	24	1		
				(157)	(+7)		1,878	39		
3	11 20	7854	−30	115	−17	38	12	6	F	Do.
		7854	−27	118	−19	37	73	5		
		7856	−18	127	−23	35	194	9		
		7856	−17	128	−21	33	48	3		
		7856	−14	131	−22	32	194	4		
		7856	−11	134	−21	30	145	1		
		7856	−11	134	−24	32	48	5		
		7853	−9	136	+23	18	194	1		
		7853	−8	137	+23	18	170	3		
		7853	−3	142	+22	15	97	11		
		7851	−2	143	−22	29	388	2		
		7853	+2	147	+23	16	267	2		
				(145)	(+7)		1,830	52		
4	11 40	7854	−13	119	−17	28	73	4	P	Do.
		7856	−5	127	−22	30	121	9		
		7856	+1	133	−21	28	339	7		
		7853	+4	136	+23	17	109	2		
		7853	+6	138	+22	17	145	4		
		7853	+7	139	+22	18	97	8		
		7851	+12	144	−22	31	388	1		
		7853	+14	146	+22	20	218	5		
				(132)	(+7)		1,490	40		
5	10 39	7854	−1	118	−19	26	73	3	F	Do.
		7856	+7	126	−23	29	97	7		
		7856	+14	133	−22	31	291	4		
		7853	+16	135	+24	23	267	9		
		7853	+20	139	+24	27	194	10		
		7851	+22	141	−21	35	436	1		
		7853	+25	144	+23	30	48	8		
		7853	+27	146	+23	31	218	1		
				(119)	(+6)		1,624	43		
7	15 21	7859	−70	20	−31	76	194	1	F	Do.
		7859	−57	33	−29	65	97	3		
		7857	−29	61	+22	33	97	10		
		7857	−23	67	+21	27	73	2		
		7858	+21	111	−11	27	12	2		
		7854	+27	117	−20	37	16	5		
		7856	+43	133	−22	51	267	3		
		7853	+47	137	+23	49	339	16		
		7853	+50	140	+21	52	145	8		
		7851	+51	141	−22	59	388	1		
		7853	+55	145	+21	56	194	1		
				(90)	(+6)		1,822	52		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 1945—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
1945	*h m*		°	°	°	°				
Oct. 8	11 40	7859	−58	21	−32	67	170	1	G	U. S. Naval
		7859	−48	31	−30	60	97	4		
		7857	−18	61	+22	24	97	7		
		7857	−13	66	+21	20	97	9		
		7856	+55	134	−22	61	242	3		
		7853	+57	136	+23	58	339	12		
		7853	+65	144	+22	66	436	8		
		7851	+65	144	−22	70	339	1		
				(79)	(+6)		1,817	45		
9	12 11	7859	−45	21	−32	58	170	1	F	Do.
		7860	−43	23	−20	50	12	5		
		7859	−38	28	−31	52	24	9		
		7859	−31	35	−31	49	61	5		
		7857	−4	62	+22	16	109	8		
		7857	−1	65	+21	15	12	3		
		7857	+3	69	+21	15	73	7		
		7856	+70	136	−23	75	242	2		
		7853	+70	136	+23	70	242	7		
		7853	+80	146	+22	80	436	2		
		7851	+82	148	−23	85	242	1		
				(66)	(+6)		1,623	50		
10	11 40	7859	−33	20	−32	49	73	1	F	Do.
		7860	−29	24	−22	41	24	5		
		7859	−27	26	−32	46	24	5		
		7859	−18	35	−30	40	48	1		
		7857	+10	63	+22	18	24	2		
		7857	+15	68	+21	21	48	1		
		7853	+84	137	+23	84	242	3		
		7856	+85	138	−22	88	242	1		
				(53)	(+6)		725	19		
11	11 4	7859	−20	20	−32	42	48	1	F	Do.
		7859	−14	26	−32	40	24	2		
		7859	−10	30	−32	39	48	4		
		7859	−4	36	−31	37	48	2		
		7857	+22	62	+21	26	12	6		
		7857	+28	68	+20	31	61	3		
				(40)	(+6)		241	18		
12	13 0	7862	−88	298	+27	88	242	2	G	Do.
		7859	−7	19	−33	39	61	1		
		7859	−2	24	−32	38	48	2		
		7859	+6	32	−32	39	24	1		
		7859	+10	36	−31	38	73	2		
		7857	+41	67	+20	43	24	1		
				(26)	(+6)		472	9		
13	10 43	7862	−76	298	+27	76	291	4	G	Do.
		7859	+4	18	−33	39	48	2		
		7859	+8	22	−32	38	12	1		
		7859	+15	29	−31	40	24	5		
		7859	+18	32	−31	41	48	4		
		7859	+22	36	−31	43	24	4		
		7861	+36	50	−17	42	48	5		
		7857	+53	67	+20	54	16	1		
				(14)	(+6)		511	26		
14	10 46	7862	−78	282	+29	78	48	1	F	Mt. Wilson.
		7862	−63	297	+27	63	242	1		
		7859	+18	18	−34	43	24	1		
		7859	+37	37	−32	52	36	1		
		7861	+51	51	−18	58	16	2		
		7861	+55	55	−17	60	36	1		
		7857	+67	67	+23	68	12	1		
				(0)	(+6)		414	8		
15	11 43	7863	−69	278	−21	73	291	1	G	U. S. Naval
		7863	−65	282	−19	69	194	1		
		7862	−64	283	+28	65	48	3		
		7862	−49	298	+27	52	242	1		
		7862	−49	298	+26	51	12	1		
		7859	+44	31	−28	57	24	2		
		7861	+62	49	−19	67	12	1		
		7861	+68	55	−17	70	12	3		
				(347)	(+6)		835	13		
16	11 0	7864	−68	266	−23	72	194	8	G	Do.
		7863	−57	277	−18	62	242	2		
		7863	−56	278	−17	61	24	1		
		7863	−53	281	−17	58	48	3		
		7862	−50	284	+30	53	24	1		
		7862	−36	298	+27	40	242	1		
		7859	+56	30	−28	66	12	1		
				(334)	(+6)		786	17		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 1945—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
1945	*h m*		°	°	°	°				
Oct. 17	11 30	7864	−66	254	−26	70	339	9	G	U. S. Naval
		7864	−60	260	−25	67	48	2		
		7864	−57	263	−23	63	170	6		
		7864	−53	267	−23	61	97	5		
		7863	−45	275	−19	51	194	6		
		7863	−39	281	−13	43	121	7		
		7862	−39	281	+29	44	24	4		
		7862	−23	297	+27	31	194	7		
				(320)	(+6)		1,187	46		
18	11 6	7865	−73	234	+34	73	16	1	VG	Do.
		7864	−53	254	−26	62	315	16		
		7864	−50	257	−25	59	48	15		
		7864	−47	260	−24	56	97	9		
		7864	−44	263	−23	53	109	7		
		7864	−40	267	−23	50	61	5		
		7863	−32	275	−19	40	194	6		
		7863	−26	281	−18	37	61	7		
		7862	−25	282	+30	33	24	3		
		7866	−16	291	+15	18	24	1		
		7862	−10	297	+26	22	194	10		
				(307)	(+6)		1,143	80		
19	11 1	7869	−67	227	+23	68	24	6	VG	Do.
		7865	−59	235	+34	61	12	1		
		7867	−43	251	+28	48	24	5		
		7864	−42	252	−29	53	315	6		
		7864	−35	259	−27	48	218	25		
		7864	−27	267	−26	41	97	2		
		7863	−20	274	−21	33	194	4		
		7863	−20	274	−24	36	12	4		
		7863	−12	282	−19	27	73	13		
		7862	−11	283	+28	25	12	1		
		7866	−4	290	+15	10	48	12		
		7862	+3	297	+25	19	109	16		
		7862	+8	302	+28	23	12	2		
		7868	+43	337	−32	57	6	2		
				(294)	(+6)		1,156	99		
20	11 0	7869	−54	227	+23	56	24	2	VG	Do.
		7865	−45	236	+34	51	12	1		
		7864	−29	252	−28	44	388	1		
		7867	−28	253	+28	36	24	5		
		7864	−27	254	−28	43	48	2		
		7864	−26	255	−26	40	109	5		
		7864	−23	258	−25	38	97	2		
		7864	−21	260	−26	37	24	1		
		7864	−18	263	−25	35	12	4		
		7864	−16	265	−25	33	145	10		
		7864	−13	268	−24	32	61	2		
		7863	−7	274	−20	26	194	6		
		7863	+1	282	−18	23	48	6		
		7862	+1	282	+29	24	12	1		
		7862	+16	297	+25	25	170	8		
		7868	+57	338	−32	64	12	3		
				(281)	(+5)		1,380	59		
21	11 59	7869	−40	227	+25	43	12	1	G	Do.
		7867	−19	248	+29	30	48	8		
		7864	−17	250	−28	37	339	4		
		7867	−12	255	+28	27	24	1		
		7864	−12	255	−27	35	73	4		
		7864	−9	258	−27	34	291	12		
		7864	−5	262	−27	32	24	6		
		7864	−3	264	−26	31	97	1		
		7864	+2	269	−26	31	36	4		
		7864	+2	269	−20	25	12	3		
		7863	+7	274	−20	26	121	2		
		7862	+13	280	+27	27	24	7		
		7863	+15	282	−19	28	48	7		
		7862	+30	297	+26	37	73	5		
		7868	+70	337	−32	75	12	2		
				(267)	(+5)		1,234	67		
22	11 13	7867	−5	250	+28	25	36	4	F	Do.
		7864	−3	252	−28	33	339	5		
		7867	−2	253	+28	25	24	4		
		7867	0	255	+28	23	6	6		
		7864	0	255	−26	31	73	9		
		7864	+2	257	−26	31	121	12		
		7864	+5	260	−25	29	145	9		
		7864	+12	267	−25	32	145	10		
		7863	+20	275	−20	32	97	4		
		7863	+28	283	−18	37	24	3		
		7862	+43	298	+26	47	73	4		
				(255)	(+5)		1,083	70		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 1945—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
1945	*h m*		°	°	°	°				
Oct. 23	9 50	7867	+8	250	+29	26	61	4	F	Mt. Wilson
		7864	+10	252	−28	35	291	4		
		7867	+12	254	+29	27	121	2		
		7864	+13	255	−27	35	97	3		
		7864	+19	261	−25	36	121	7		
		7864	+26	268	−25	39	73	1		
		7863	+33	275	−18	40	73	2		
		7863	+42	284	−17	47	61	1		
		7862	+56	298	+27	58	48	1		
				(242)	(+5)		946	25		
24	11 13	7873	−88	140	+22	88	48	1	G	Do.
		7871	−41	187	−40	57	12	2		
		7871	−37	191	−38	55	12	2		
		7867	+19	247	+29	37	61	10		
		7864	+22	250	−28	39	339	2		
		7664	+26	254	−27	40	97	9		
		7867	+27	255	+29	35	97	1		
		7864	+34	262	−25	45	73	7		
		7864	+41	269	−25	50	48	1		
		7863	+48	276	−18	53	16	1		
		7863	+51	279	−17	56	12	2		
		7862	+67	295	+28	68	12	1		
		7870	+75	303	−22	78	97	4		
				(228)	(+5)		924	43		
25	10 53	7874	−77	138	−22	79	12	2	G	Do.
		7873	−75	140	+23	75	97	1		
		7872	−37	178	−20	44	6	1		
		7871	−29	186	−40	52	12	6		
		7871	−22	193	−38	48	16	2		
		7867	+34	249	+30	41	145	17		
		7864	+35	250	−28	47	461	7		
		7867	+37	252	+39	48	194	23		
		7864	+41	256	−25	49	97	4		
		7864	+49	264	−25	55	48	12		
		7864	+55	270	−24	60	24	1		
		7863	+61	276	−18	65	6	1		
				(215)	(+5)		1,118	77		
26	11 35	7873	−68	134	+25	69	194	2	F	U. S. Naval.
		7873	−66	136	+20	66	121	3		
		7874	−65	137	−24	68	145	1		
		7872	−23	179	−21	34	6	1		
		7871	−18	184	−40	48	6	1		
		7871	−7	195	−40	45	6	1		
		7867	+47	249	+28	51	121	2		
		7864	+48	250	−28	57	291	1		
		7867	+49	251	+28	52	315	9		
		7864	+55	257	−28	61	121	5		
		7864	+67	269	−27	70	97	2		
				(202)	(+5)		1,423	28		
27	13 11	7876	−78	110	−17	80	194	2	F	Do.
		7876	−69	119	−13	70	194	1		
		7874	−51	137	−23	57	194	1		
		7873	−50	138	+24	53	24	2		
		7873	−46	142	+23	48	73	7		
		7871	+1	189	−39	44	24	1		
		7871	+6	194	−40	45	48	10		
		7875	+9	197	+19	17	12	1		
		7875	+12	200	+18	18	73	14		
		7867	+60	248	+29	61	97	4		
		7864	+62	250	−28	68	436	2		
		7867	+67	255	+28	68	630	11		
		7864	+70	258	−27	74	48	2		
				(188)	(+5)		2,047	58		
28	11 45	7876	−58	117	−17	61	291	6	(†)	Mt. Wilson.
		7874	−38	137	−23	47	194	1		
		7873	−34	141	+22	37	121	3		
		7871	+14	189	−39	46	73	2		
		7875	+25	200	+18	28	242	12		
		7864	+77	252	−26	79	388	1		
		7867	+78	253	+29	78	533	7		
				(175)	(+5)		1,842	32		
29	11 37	7876	−50	112	−17	55	73	7	G	U. S. Naval.
		7876	−45	117	−14	48	6	1		
		7876	−43	119	−15	46	145	1		
		7874	−27	135	−22	37	194	1		
		7874	−25	137	−21	35	12	2		
		7873	−25	137	+23	30	145	16		
		7871	+26	188	−38	50	48	4		
		7871	+32	194	−39	53	73	11		
		7875	+36	198	+20	38	194	13		
		7875	+40	202	+18	41	194	11		
		7867	+85	247	+29	85	242	3		
		7867	+87	249	+30	87	145	2		
				(162)	(+5)		1,471	72		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR OCTOBER 1945—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
1945	h m		°	°	°	°				
Oct. 30	11 10	(*)	−54	95	−24	60	6	3	G	U. S. Naval
		7876	−37	112	−17	43	48	3		
		7876	−31	118	−16	36	6	1		
		7876	−30	119	−16	36	145	1		
		7874	−13	136	−24	31	194	1		
		7874	−12	137	−27	33	12	4		
		7871	+41	190	−39	57	109	9		
		7871	+48	197	−39	61	61	2		
		7875	+48	197	+20	50	339	10		
		7875	+51	200	+18	53	97	7		
		7875	+55	204	+18	57	194	7		
				(149)	(+5)		1,211	48		
31	11 29	7877	−79	57	−23	80	97	1	F	Do.
		7876	−24	112	−19	33	36	2		
		7876	−21	115	−18	30	24	3		
		7876	−17	119	−16	25	12	1		
		7876	−15	121	−16	24	145	1		
		7874	0	136	−25	29	170	1		
		7873	0	136	+21	17	12	2		
		7873	+4	140	+21	17	24	5		
		7871	+53	189	−40	67	48	2		
		7875	+61	197	+19	61	388	12		
		7871	+64	200	−39	73	48	1		
		7875	+70	206	+18	70	48	1		
				(136)	(+4)		1,052	32		

Mean daily area for 30 days=1,231

*Not numbered.
†Data from Mt. Wilson charts.
VG=very good; G=good; F=fair; P=poor.

675939—46——2

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR OCTOBER 1945

[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 1945	Relative numbers	October 1945	Relative numbers	October 1945	Relative numbers
1	87	11	31	21	78
2	82	12	29	22	*a*51
3	82	13	41	23	89
4	*aa*67	14	47	24	76
5	70	15	*d*52	25	59
6	79	16	50	26	54
7	93	17	55	27	*Mc*79
8	71	18	71	28	86
9	71	19	98	29	68
10	64	20	96	30	65
				31	71

Mean, 31 days=68.1

* Observed at Locarno.
a Passage of an average-sized group through the central meridian.
b Passage of a large group through the central meridian.
c New formation of a group developing into a middle-sized or large center of activity; E, on the eastern part of the Sun's disc; 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.