bring them to the attention of meteorologists. Our method cannot predict the course of sunspots after the beginning of the next cycle, which may be expected (but uncertainly) in 1944. We question whether any method can at the present time predict in detail spot numbers after the next "outburst" begins.

TABLE 1.—*Annual Wolf numbers 1933–44*

Year	Observed	Computed	Year	Observed	Computed
1933.5	5.7	(7)	1939.5	88.8	87
1934.5	8.7	(7)	1940.5		61
1935.5	36.1	(37)	1941.5		38
1936.5	79.7	(84)	1942.5		22
1937.5	114.1	(111)	1943.5		12
1938.5	109.6	(109)	1944.5		6

NOTE.—The computed numbers in parentheses, 1933–38, were those used in the fit the computed numbers after January 1, 1939, were predictions by extrapolation.

TABLE 2.—*Predicted monthly numbers 1939–44*

	1939	1940	1941	1942	1943	1944
January	99.8	73.5	48.2	28.9	16.2	8.6
February	97.8	71.1	46.2	27.5	15.3	8.1
March	95.8	68.9	44.4	26.3	14.6	7.7
April	93.8	66.8	42.8	25.2	13.9	7.3
May	91.4	64.4	40.9	23.9	13.1	6.8
June	89.4	62.3	39.3	22.8	12.5	6.5
July	87.2	60.3	37.7	21.8	11.9	6.2
August	84.8	58.0	36.0	20.7	11.2	5.8
September	82.6	56.0	34.5	19.8	10.7	5.5
October	80.4	54.1	33.1	18.9	10.1	5.2
November	77.9	51.9	31.6	17.9	9.6	4.9
December	75.7	50.1	30.2	17.0	9.1	4.6

NOTE.—All the computed monthly values are for the middle of the month. A random irregularity from the predictions, month by month, is to be expected: The predictions purport to represent the underlying trend.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS

[Communicated by Capt. J. F. Hellweg, U. S. Navy (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 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
1940	*h m*		°	°	°	°				
Sept. 1	11 4	6973	−74	115	−4	75	24	5	F	U. S. Naval.
		6972	−69	120	−17	73	145	10		
		6971	−48	141	−11	52	48	11		
		6969	−48	141	+12	48	12	2		
		6969	−40	149	+11	40	291	14		
		6968	−38	151	+16	39	145	1		
		6967	−10	179	+15	13	73	6		
		6967	−2	187	+15	8	73	7		
		6965	+6	195	−7	15	776	35		
		6955	+87	276	−7	88	48	1		
				(189)	(+7)		1,490	92		
Sept. 2	11 25	6972	−55	120	−17	60	194	15	G	Do.
		6971	−34	141	−11	39	121	8		
		6969	−27	148	+10	27	194	10		
		6968	−24	151	+16	26	145	1		
		6967	+3	178	+15	9	48	2		
		6967	+12	187	+15	14	48	2		
		6965	+17	192	−8	23	291	35		
		6965	+26	201	−8	31	582	8		
		6974	+60	235	−7	63	73	7		
				(175)	(+7)		1,696	88		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS—Con.

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
1940	*h m*		°	°	°	°				
Sept. 3	10 56	6972	−41	121	−17	47	194	15	VG	U. S. Naval.
		6971	−20	142	−11	26	133	10		
		6969	−20	142	+12	21	48	6		
		6969	−13	149	+11	14	145	2		
		6968	−11	151	+16	15	48	1		
		6967	+17	179	+15	20	36	3		
		6967	+26	188	+15	27	24	3		
		6965	+30	192	−7	34	291	35		
		6965	+39	201	−8	42	582	4		
		6974	+73	235	−7	75	12	3		
				(162)	(+7)		1,513	82		
Sept. 4	11 18	6972	−28	121	−17	38	194	11	G	Do.
		6971	−5	144	−10	18	145	14		
		6969	+2	151	+11	5	121	3		
		6968	+3	152	+16	10	145	1		
		6967	+30	179	+15	31	24	1		
		6965	+44	193	−7	46	194	15		
		6965	+52	201	−7	55	485	48		
				(149)	(+7)		1,308	93		
Sept. 5	10 57	6972	−14	122	−17	29	218	18	Gn	Do.
		6972	−7	129	−15	24	48	4		
		6971	+3	139	−10	17	48	3		
		6971	+10	146	−10	20	97	11		
		6969	+11	147	+12	13	24	8		
		6969	+15	151	+11	16	121	10		
		6968	+16	152	+16	19	145	2		
		6975	+46	182	−11	48	73	6		
		6965	+57	193	−7	60	97	10		
		6965	+67	203	−7	69	485	1		
				(136)	(+7)		1,356	73		
Sept. 6	10 50	6977	−78	45	+16	77	6	1	G	Do.
		6977	−69	54	+14	70	6	1		
		6972	−1	122	−17	24	267	19		
		6971	+23	146	−10	29	145	16		
		6969	+29	152	+10	29	73	6		
		6968	+30	153	+16	32	121	2		
		6975	+57	180	−10	60	12	2		
		6975	+60	183	−12	63	97	7		
		6965	+80	203	−7	80	582	1		
				(123)	(+7)		1,309	55		
Sept. 7	10 48	6977	−56	54	+16	56	73	8	G	Do.
		6978	−1	109	−13	20	12	1		
		6972	+11	121	−18	27	158	9		
		6972	+17	127	−17	30	48	18		
		6971	+36	146	−10	40	145	24		
		6969	+41	151	+11	41	48	6		
		6968	+43	153	+16	43	97	2		
		6975	+76	186	−12	77	48	4		
				(110)	(+7)		629	72		
Sept. 8	9 4	6977	−49	48	+15	49	73	14	G	Mount Wilson.
		6972	+26	123	−17	35	242	30		
		6971	+47	144	−12	50	97	23		
		6969	+53	150	+11	53	24	4		
		6968	+56	153	+16	56	73	9		
				(97)	(+7)		509	80		
Sept. 9	11 27	6979	−88	355	+6	88	48	2	G	U. S. Naval.
		6977	−38	45	+14	39	24	10		
		6977	−32	51	+14	33	24	6		
		*	+31	114	+5	31	6	1		
		6972	+40	123	−17	47	170	15		
		6971	+62	145	−12	65	97	10		
		6968	+70	153	+16	70	48	2		
				(83)	(+7)		417	46		
Sept. 10	12 21	6979	−74	355	+6	74	242	2	G	Do.
		6977	−18	51	+14	20	145	15		
		*	−11	58	+5	11	6	1		
		6972	+53	122	−17	59	182	9		
		6971	+76	145	−12	78	6	1		
				(69)	(+7)		581	28		
Sept. 11	12 46	6979	−60	356	+6	60	145	3	F	Do.
		6977	−4	52	+14	9	121	10		
		6972	+66	122	−16	70	97	5		
				(56)	(+7)		363	18		

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

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS—Con.

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
1940	*h m*		°	°	°	°				
Sept. 12	11 42	6980	−57	346	+15	57	48	4	G	U. S. Naval.
		6979	−47	356	+6	47	73	6		
		6977	+9	52	+14	11	97	6		
		6972	+79	122	−16	80	48	1		
				(43)	(+7)		266	17		
Sept. 13	11 32	6980	−43	347	+15	43	48	5	G	Do.
		6979	−34	356	+6	34	24	2		
		6981	−31	359	+14	32	24	4		
		6977	+24	54	+14	25	145	14		
				(30)	(+7)		241	25		
Sept. 14	10 48	6982	−73	304	−13	75	6	1	VG	Do.
		6980	−26	351	+15	28	12	5		
		6979	−21	356	+5	21	12	3		
		6981	−18	359	+14	20	24	4		
		6977	+38	55	+14	39	206	20		
				(17)	(+7)		260	33		
Sept. 15	12 47	6982	−57	306	−13	61	6	1	G	Do.
		6980	−14	349	+15	17	97	11		
		6981	−8	355	+14	12	24	2		
		6983	+17	20	+26	24	73	6		
		6977	+54	57	+15	54	97	9		
				(3)	(+7)		297	29		
Sept. 16	11 19	6985	−80	271	−10	80	121	1	VG	Do.
		6982	−43	308	−12	47	6	2		
		6980	0	351	+14	7	145	15		
		6983	+29	20	+27	34	73	6		
		6984	+37	28	−7	40	24	3		
		6977	+67	58	+15	67	97	9		
				(351)	(+7)		466	36		
Sept. 17	11 40	6985	−72	265	−11	74	121	1	F	Do.
		6985	−67	270	−10	69	170	1		
		6982	−29	308	−12	35	170	14		
		6980	+12	349	+15	15	121	17		
		6986	+20	357	+3	21	6	3		
		6983	+41	18	+27	44	48	7		
		6984	+55	32	−7	58	12	4		
		6977	+78	55	+15	78	12	1		
				(337)	(+7)		660	48		
Sept. 18	11 27	6988	−85	239	−5	85	48	1	F	Do.
		6988	−85	239	−11	86	242	3		
		6987	−67	257	−11	69	48	1		
		6985	−59	265	−11	61	73	1		
		6985	−53	271	−10	56	97	1		
		6982	−15	309	−11	23	364	19		
		6980	+26	350	+15	27	339	22		
		6986	+34	358	+4	35	12	2		
		6983	+52	16	+28	54	36	5		
				(324)	(+7)		1,259	55		
Sept. 19	11 29	6988	−70	241	−7	72	145	3	F	Do.
		6988	−69	242	−11	70	194	6		
		6987	−53	258	−11	56	24	1		
		6985	−45	266	−10	48	73	2		
		6985	−39	272	−10	42	97	1		
		6982	−2	309	−12	20	533	25		
		6980	+40	351	+15	40	436	30		
				(311)	(+7)		1,502	68		
Sept. 20	11 16	6988	−57	241	−7	60	97	3	G	Do.
		6988	−56	242	−11	60	145	5		
		6987	−40	258	−11	44	6	1		
		6985	−31	267	−11	36	73	2		
		6985	−27	271	−10	33	97	1		
		6989	−19	279	+4	20	48	3		
		6982	+12	310	−11	22	727	37		
		6980	+53	351	+16	53	630	32		
				(298)	(+7)		1,823	84		
Sept. 21	11 1	6991	−80	205	−6	81	582	1	VG	Do.
		6988	−43	242	−7	46	73	6		
		6988	−42	243	−10	45	73	10		
		6987	−26	259	−11	32	6	1		
		6985	−18	267	−10	25	24	2		
		6985	−13	272	−9	22	97	1		
		6989	−5	280	+4	5	48	5		
		6990	+17	302	+8	17	24	3		
		6982	+25	310	−11	30	727	35		
		6980	+61	346	+18	61	48	1		
		6980	+67	352	+14	67	533	20		
				(285)	(+7)		2,235	85		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS—Con.

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
1940	*h m*		°	°	°	°				
Sept. 22	11 39	6991	−66	205	−6	68	582	1	G	U. S. Naval.
		6988	−29	242	−7	33	48	4		
		6988	−28	243	−10	32	48	8		
		6985	−5	265	−10	18	12	7		
		6985	+1	272	−9	16	97	1		
		6992	+15	286	−6	20	6	1		
		6982	+40	311	−10	43	776	30		
		6980	+78	349	+14	78	145	9		
				(271)	(+7)		1,714	61		
Sept. 23	12 2	6991	−52	206	−6	54	533	1	G	Do.
		6995	−43	215	+6	43	12	2		
		6988	−16	242	−7	21	24	6		
		6988	−15	243	−11	24	48	2		
		6985	+14	272	−9	21	97	1		
		6994	+21	279	−5	24	6	1		
		6993	+42	300	+23	44	97	1		
		6982	+48	306	−11	51	194	5		
		6982	+60	318	−10	63	533	1		
				(258)	(+7)		1,544	20		
Sept. 24	11 32	6991	−39	206	−5	41	436	1	G	Do.
		6996	−15	230	+12	16	12	7		
		6988	−1	244	−10	18	24	1		
		6985	+28	273	−8	32	121	1		
		6993	+56	301	+23	58	109	2		
		6982	+61	306	−10	64	194	4		
		6982	+73	318	−9	75	727	1		
				(245)	(+7)		1,623	17		
Sept. 25	15 4	6997	−77	153	−11	79	12	3	G	Do.
		6991	−23	207	−5	26	436	1		
		6996	0	230	+11	4	6	1		
		6988	+12	242	−7	19	24	1		
		6985	+42	272	−8	45	73	1		
		6993	+70	300	+23	70	61	3		
		6982	+78	308	−10	79	73	1		
				(230)	(+7)		685	11		
Sept. 26	12 19	6991	−11	207	−5	16	436	1	F	Do.
		6996	+9	227	+8	10	6	2		
		6988	+23	241	−7	27	12	1		
		6985	+55	273	−8	59	73	1		
				(218)	(+7)		527	5		
Sept. 27	11 24	6991	+2	207	−5	12	436	1	G	Do.
		6999	+8	213	+14	11	12	4		
		6998	+20	225	−9	26	48	5		
		6985	+68	273	−8	70	73	1		
				(205)	(+7)		569	11		
Sept. 28	10 57	6991	+15	207	−5	19	436	1	G	Do.
		6999	+21	213	+14	23	24	2		
		6998	+33	225	−9	37	24	3		
		6985	+81	273	−8	82	73	1		
				(192)	(+7)		557	7		
Sept. 29	11 56	7001	−76	103	+5	76	73	2	VG	Do.
		7000	−23	156	−9	28	12	3		
		7000	−20	159	−5	23	12	2		
		6991	+29	208	−5	31	412	1		
		6998	+48	227	−9	50	121	12		
				(179)	(+7)		630	20		
Sept. 30	9 34	7001	−67	100	+5	67	73	4	VG	Mount Wilson.
		7000	−8	159	−7	17	12	4		
		6991	+41	208	−5	43	412	1		
		6999	+49	216	+14	49	48	12		
		6998	+61	228	−9	63	291	15		
				(167)	(+7)		836	36		

Mean daily area for 30 days=962.

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