

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION

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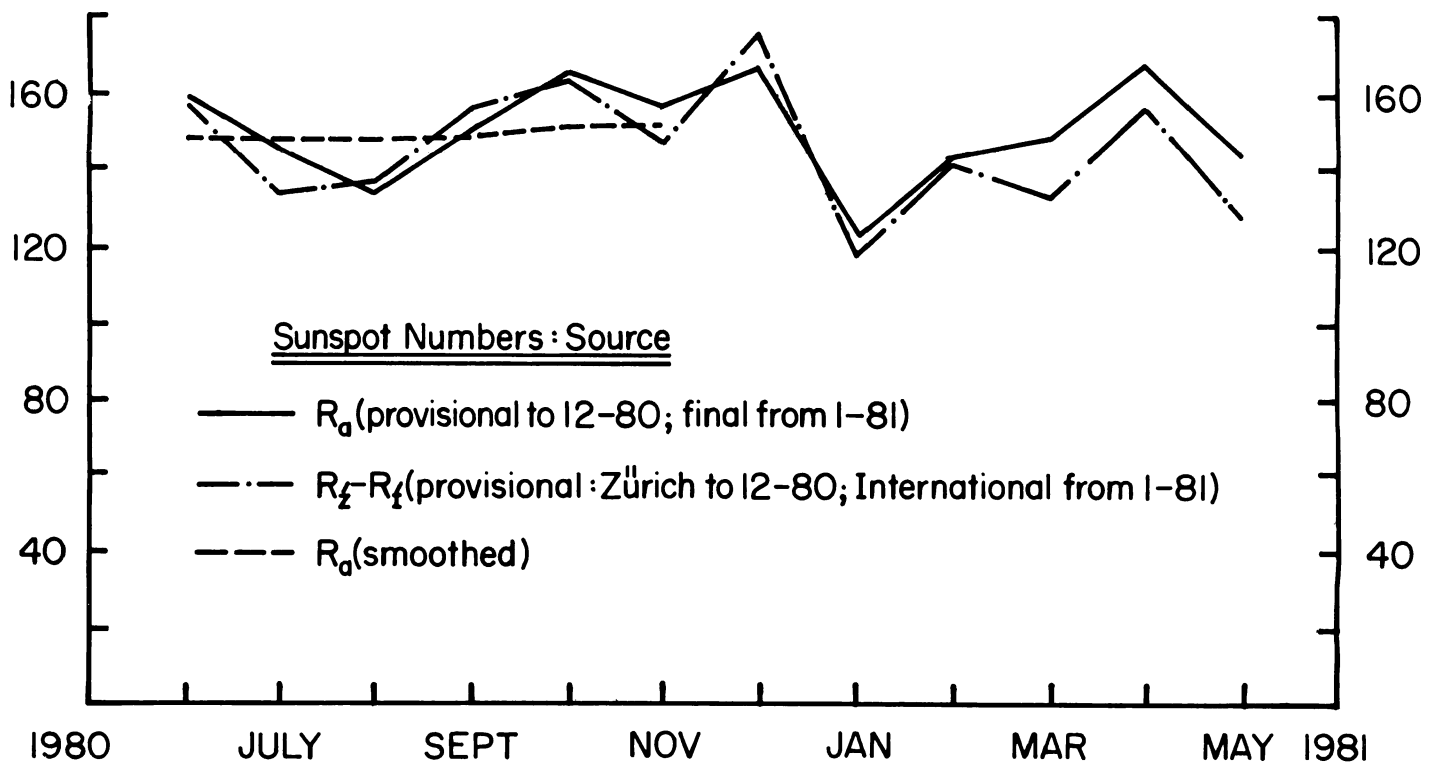
Number 5

May 1981

SOLAR ACTIVITY DURING MAY 1981

Sunspot data are given in the summary graph at the bottom of this page, and in the table of daily numbers on page 2. There was a marked decrease in solar activity during May 1981. The smoothed mean of AAVSO sunspot numbers fell from 151.6 for October 1980 to 150.9 for November 1980, while the monthly mean dropped from 169.2 for April 1981 to 141.3 for May 1981. Daily numbers ranged from 204 (May 6) to 79 (May 20). Sunspot activity reached a high at the end of the first week, with four large complex groups visible, as well as a number of small groups. Activity then generally decreased until May 22, when groups with 30+ individual spots rapidly developed in two areas, and 5 small spot groups appeared. The large decrease during the last week of the month was due to the almost total disappearance of spots in an extended active region whose central meridian dates were approximately May 4 and May 30. May 4 the region contained 10 spot groups, 3 on May 30.

Times of maximum for 84 Sudden Enhancements of Signal (SESs) reported for May by 14 participants in the AAVSO Indirect Solar Flare Patrol, and meeting high-certainty criteria for listing, appear in the table on page 2. SES incidence was still high, although much below the levels for February (148 events), March (182 events), and April (235 events). Most SESs were recorded on May 9 (8), 10 (9), and 11 (7). Numbers of SESs decreased markedly in the last third of the month. At the bottom of page 2 are three VLF records of local "thunderstorm effects" showing results of lightning-produced radio (RF) noise bursts ("atmospherics", "sferics").

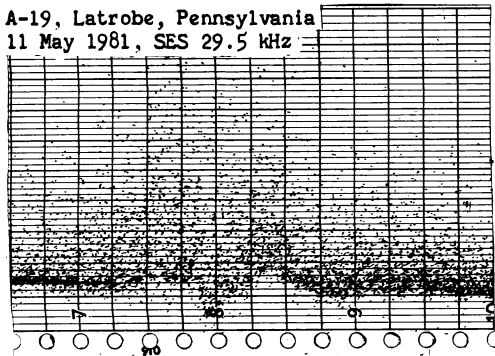


SUDDEN IONOSPHERIC DISTURBANCES (SESs) RECORDED DURING MAY 1981

Records were received from A1, 9, 19, 26, 28, 31, 37, 46, 50, 51, 54, 55, 56, 57

MAY 1981		
RELATIVE SUNSPOT NUMBERS (R):		
AAVSO (a), INTERNATIONAL (I)		
DAY	R _a (final)	R _I (prov)
1	142	112
2	160	133
3	187	156
4	169	152
5	186	162
6	204	178
7	192	171
8	203	177
9	171	158
10	164	148
11	169	169
12	183	183
13	172	149
14	165	140
15	160	141
16	150	127
17	133	124
18	124	119
19	105	100
20	79	77
21	90	99
22	116	106
23	103	93
24	107	96
25	116	93
26	123	105
27	120	79
28	110	93
29	98	92
30	94	83
31	85	92
Mean	141.3	126.0

Day	Max	Imp	Def	Observers	Day	Max	Imp	Def	Observers
1	21:45	1-	5	A26,31,55,57	11	16:58	1-	4	A19,46,50,54,55
2	17:38	1-	5	A1,19,26,28,31,46,51,54,55,56,57	11	20:20	1-	5	A1,26,31,51,54,55,56
2	19:53	1-	4	A31,56	11	21:08	1-	4	A26,31,54,55
3	20:42	1-	5	A55	12	01:13	1+	5	A31,56
4	08:45	4	5	A31,55,56	12	01:44	1-	5	A31,55,56
4	14:54	1-	4	A19,46,54	13	18:16	3	5	A1,19,26,31,37,46,51,54,55,56
4	16:29	1	5	A1,19,54	13	23:30	1	5	A31
5	14:15	2+	5	A1,19,31,37,46,50,54,55,56	14	03:21	1-	5	A31,55,56
5	21:56	1-	5	A19,31,55,57	14	08:54	3+	5	A31
5	23:08	3	5	A1,19,26,31,46,50,51,55,56,57	14	14:31	2	5	A1,19,26,28,31,46,50,51,54,55,56
6	18:53	1	5	A1,19,26,31,46,54,55,56	14	19:40	2+	5	A1,19,26,28,31,46,51,54,55,56
7	14:30	1-	5	A1,19,26,54	14	21:32	1+	5	A1,19,26,28,31,46,51,54,55,56
7	15:18	1	5	A1,19,26,31,51,54	15	06:07	1-	4	A31,56
7	17:53	1+	5	A1,19,26,28,31,46,51,54,55,56,57	15	06:21	1-	4	A31,56
7	21:10	1-	4	A1,19,31	15	07:52	1+	5	A31,55,56
8	15:06	1	5	A1,19,26,28,31,37,46,50,51,54,55,56	15	18:35	1-	5	A1,9,26,31,46,54,55,56
8	16:23	1-	5	A19,26,31,46,55,56	15	19:03	1-	5	A9,26,31,54,55,56
8	17:07	1	5	A19,26,31,46,50,55,57	16	00:30	1-	5	A31,46,55
8	19:36	1-	4	A19,46,55	16	00:45	1-	5	A55
8	22:43	3+	5	A1,19,26,28,31,37,46,51,54,55,56,57	16	02:15	1-	5	A31
9	02:56	1+	5	A31,55,56,57	16	08:31	2+	5	A31,55
9	06:30	1-	4	A31	16	16:32	1-	5	A28,31,54
9	12:35	1+	5	A1,26,51,54	17	19:53	1+	5	A1,26,28,31,46,50,51,54,55,56
9	16:45	2+	5	A1,19,26,28,31,46,51,54,55,56,57	17	21:38	1	5	A1,26,28,31,46,51,54,55,56
9	17:27	1+	5	A1,19,26,31,46,51,54,55,56,57	18	14:26	1-	4	A19,26,51,54
9	21:52	1-	5	A1,31,55,56	18	15:01	1	5	A1,9,19,26,28,31,37,46,50,51,54,55,56
9	22:15	2+	5	A1,19,26,28,31,46,51,55,56,57	18	18:32	1-	5	A26,51
9	23:11	2+	5	A19,31,46,51,55,56,57	18	19:52	1+	5	A1,9,19,26,28,31,37,46,51,54,55,56
10	01:43	1+	5	A31,46,55,56,57	18	22:00	1-	4	A31
10	05:12	1	5	A31,55,56	20	03:13	1	5	A31,46,55,56
10	07:35	2	5	A31,55,56	20	19:02	1	4	A19,31,55
10	12:55	4	5	A1,19,26,51	20	21:53	1-	4	A1,31
10	15:34	1-	5	A1,19,26,31,46,50,51,55,56	21	19:38	2	5	A31,55,56
10	19:41	2	5	A1,19,26,31,46,50,51,54,55,56,57	21	23:23	2	5	A31,55
10	22:45	1	4	A1,31,55,56	22	06:30	1+	5	A31,55,56
10	23:29	1-	5	A31,55,56	23	03:31	1	5	A31
11	14:13	1	5	A26,31,55	23	16:51	1	5	A31,55
11	15:15	1+	5	A1,19,26,31,46,55,56	23	18:10	1+	5	A1,9,19,26,31,46,54,55,56,57
11	15:42	1	5	A1,19,26,31,37,46,50,51,54,55,56	24	04:44	1+	5	A31
11	16:13	2+	5	A1,19,26,31,37,46,50,51,54,55,56	24	14:32	1+	5	A19,26,46,54
					24	18:58	1-	5	A1,19,26
					28	03:12	1-	5	A31
					28	14:40	1-	4	A31



THUNDERSTORMS

