Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION
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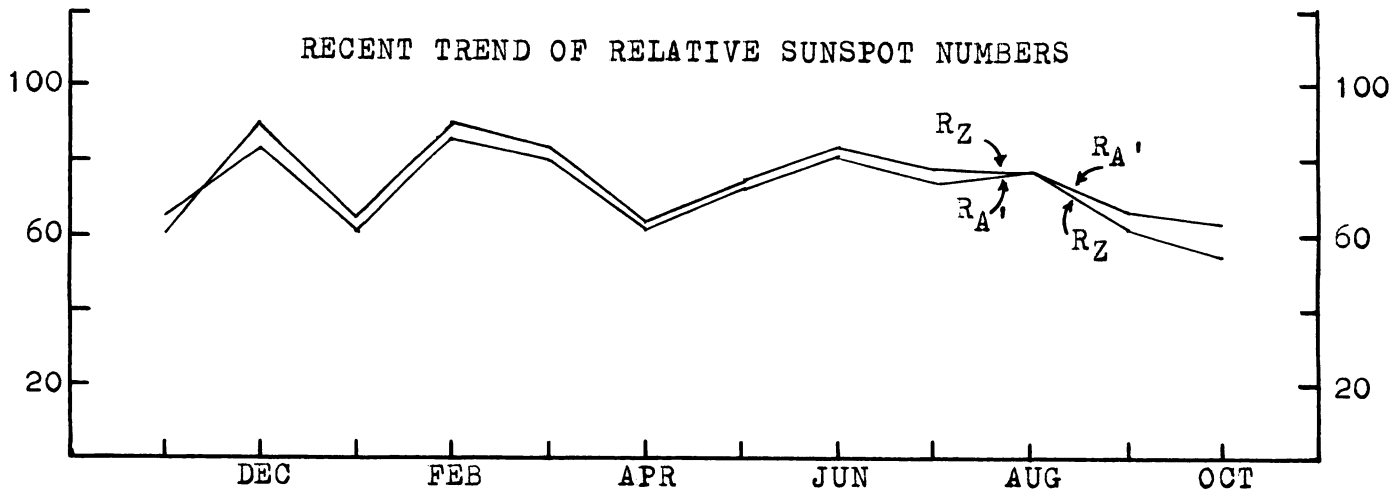
Thirty-one ionospheric disturbances were recorded by the Solar Division's observers. While the total number of events equaled the number recorded in August 1972, the average size of the events of October were smaller and less energetic. Most of the events were grouped between 22nd and 31st of October.

Perhaps one of the events having the greatest energy occurred on the 29th. This event was unusual in that most of the recordings showed a typical fast rise and peaking at first at about 1616 UT but instead of being followed by the normal decay, the amplitude continued to rise with another very small event peaking at about 1756 UT, giving a very slow and rounded peak that showed no real definite decay and end point. The characteristics of the trace suggests that the "Solar Flare" continued to emit energy over several hours after the first start.

Six individual events were recorded on the 27th, making it the day with the highest number of events recorded. On page two, five of these events are shown as recorded by Mr. Steven Wingerter, Yakima, Washington. The first event, peaking at about 1612 UT does not show in this trace, probably due to the early morning hours at the observer's location. The signal path through the ionosphere normally reaches a maximum sensitivity to "Solar Flares" about an hour after the sun passes the signals midpath point. This lag in sensitivity normally makes the period after local sunrise rather insensitive to events, especially those events of minor size.

The first spotless period of the current cycle occurred during October. A small group that was nearing the west limb became invisible by about 2000 UT on 13 October. A new sunspot group quickly formed the next day near the center of the disk. This new group was seen as early as 0400 UT on the 14th so the spotless period was less than a day.



AMERICAN (R_A') AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, OCTOBER 1972

DAY	R_A'	R_Z	DAY	R_A'	R_Z
1	73	70	16	36	34
2	77	65	17	36	30
3	90	73	18	39	28
4	69	73	19	49	44
5	82	67	20	48	45
6	62	57	21	78	53
7	40	54	22	87	63
8	42	52	23	88	66
9	32	30	24	100	81
10	28	24	25	103	91
11	37	26	26	104	95
12	21	16	27	102	103
13	8	14	28	105	84
14	7	8	29	92	65
15	22	14	30	106	90
			31	91	84

Monthly Means

R_A' = 63.0

R_Z = 54.8

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING OCTOBER 1972

DAY	MAX	SEA	SES	DEF	OBSERVERS
1	0444		1	3	A31
1	1653	2	2	5	A1,5,18,19,21,26,28, 30,31,33,34,36,37,*
1	2040	1	1+	5	A1,5,18,19,21,26,30, 31,33,34,36,37
14	1648		1	5	A1,19,21,31,33
19	1913		1-	5	A1,19,21,30,37
22	1743		1-	5	A19,21,31,37
22	1755	1	1	5	A1,5,8,19,21,26,31, 33,34,37
22	2335		1	4	A30,31
23	1633		1-	5	A1,21,31,33,37
23	2010		1-	5	A1,19,21,30,31,33,37
23	2028		1-	5	A1,19,21,30,31,33,37
24	1558	1+	1+	5	A1,5,8,15,18,19,21, 23,26,33,34,36,37
24	2253		1	5	A30,31,37
25	2105	1	1+	5	A1,19,21,26,28,30, 31,33,34,35,37
25	2308		1	4	A30,31
26	2149		1-	5	A1,21,30,31,33,35,37
27	1612		1-	5	A1,19,33
27	1711		1-	5	A1,19,33,37
27	1756	1+	2-	5	A1,5,8,19,21,23,26, 30,31,33,34,37
27	1901	2-	2-	5	A1,5,8,18,19,21,23, 26,30,31,33,34,37
27	2002		1-	5	A1,19,21,28,30,31, 33,37
27	2054		1	5	A1,19,21,28,30,31, 33,37
28	0425		1	2	A31
29	1756	2+	2+	5	A1,8,19,21,26,31,33, 34,37
30	1454	1	1	5	A1,5,18,19,26,31,33, 35
30	1700	2-	2	5	A1,5,8,18,19,21,26, 31,33,34,35,36,37
30	1937	1	1	5	A1,8,19,21,26,31,33 35,37
30	2016		1-	4	A1,19,31,35,37
30	2039		1-	4	A1,19,31,35,37
30	2314		1+	5	A31
31	0515	1	1+	4	A17,31

*Additional events, to above, as reported by letter by Dr. V. Barocas, Preston, U.K. are: OCT 25-1010, 1144, 1205; 26-1301, 1340.