

Solar Bulletin

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THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION
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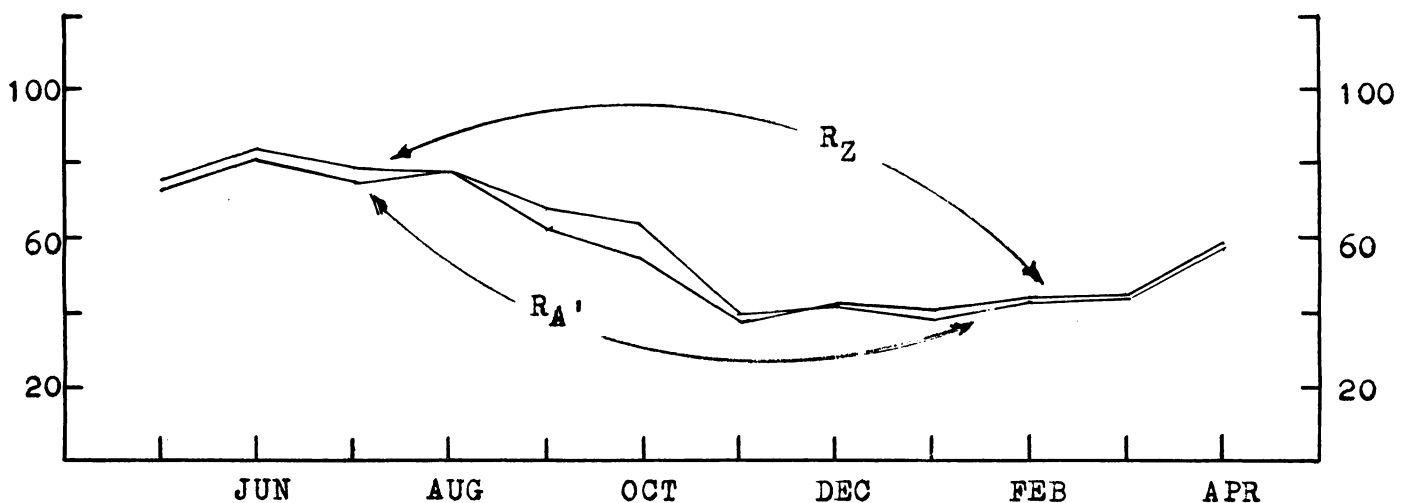
April 1973

Thirty-eight ionospheric disturbances were recorded by the Solar Division's observers during April. Many of these events were greater than average in energy, especially those events recorded toward the end of the month. Events were noted through a major part of the month but most of the energetic ones occurred from the 24th through the end of the month. While it appears that the terrestrial effects were much less than during the period of August 1972, many of the events were the largest that have been recorded since last August.

On page two is reproduced a part of a chart from day 22 which shows two ionospheric disturbances that were recorded by A38, Mr. Neal R. Scott, Ormond Beach, Florida, by the SES (Sudden Enhancement of Signal) method. The two events are interesting in that the first is rather typical of the "sudden rise" type in that the time from the start to the peak is relatively short. The second event is typical of the "slow rise" type in that the rise is very slow, giving a shape that tends toward being symmetrical. Close examination will show that the rise side of the trace is convex while the decay side follows the usual concave characteristics. The interruption of the trace for about ten minutes before 1400 UT is due to the radio station in Cutler, Maine sending its special time signals and identification code which is transmitted periodically and decreases the total energy received during that period.

The mean of the American sunspot numbers rose to 56.4 for the month of April. While this is not a great increase, it is the highest it has been during the last six months.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



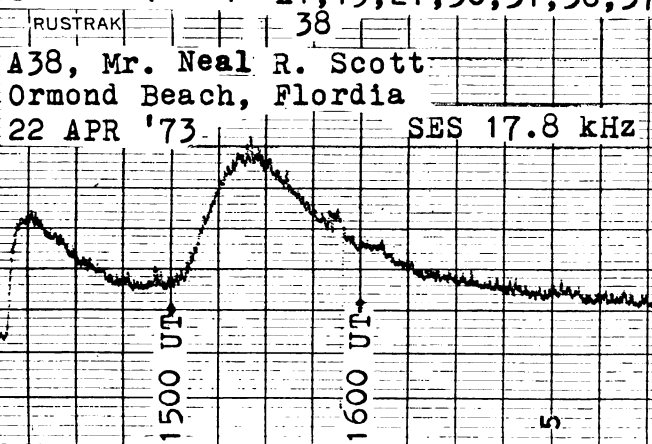
AMERICAN (R_A) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, APRIL 1973

DAY	R _A	R _Z	DAY	R _A	R _Z
1	74	65	16	20	29
2	91	79	17	10	16
3	93	93	18	13	15
4	92	93	19	32	32
5	84	75	20	42	42
6	71	75	21	41	45
7	76	76	22	58	67
8	79	71	23	75	72
9	85	68	24	70	73
10	65	65	25	57	67
11	56	62	26	58	67
12	38	42	27	64	67
13	36	41	28	62	60
14	27	37	29	52	54
15	31	35	30	39	42

Monthly Means
 R_A = 56.4
 R_Z = 57.6

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING APRIL 1973

DAY	MAX	SEA	SES	DEF	OBSERVERS	DAY	MAX	SEA	SES	DEF	OBSERVERS
1	1537	1	1	5	A1,19,21,26,30,31,33,34,37	14	1448	1	1+	5	A1,19,21,26,30,31,33,36,37,38
1	1710		1	5	A1,21,30,31,33,37	14	2146		1	5	A19,21,30,31,33,38
1	1833		1-	4	A1,21,30,31,33,37	15	1718		1-	5	A1,19,21,30,31,36,37,38
1	2213		1	5	A21,30,31	15	2241	1	1	5	A1,19,21,26,30,31,34,36,37,38
9	1626		1-	4	A1,19,30,36,38	22	1416		1	5	A1,19,21,30,33,36,37,38
9	1752	1	1	5	A1,19,21,26,30,31,32,33,36,37,38	22	1525		1+	5	A1,19,21,33,36,37,38
9	1942	1	1-	5	A1,8,21,26,30,31,32,36,37	22	2200	1+	1+	5	A1,19,21,30,31,33,34,36,37,38
10	0110		1	5	A30,31	24	1230	1	1+	5	A1,19,26,33,34,36,38
10	1233	1	1	5	A1,8,17,19,23,26,32,33,36,37,*	24	1415	1	1	5	A1,19,26,33,34,36,38
10	1917	1	1	5	A1,19,26,30,31,33,38	24	1932	2-	2-	5	A1,8,19,21,23,26,30,31,33,34,36,37,38
10	2141		1-	5	A21,30,31,33,36,37,38	26	2005	3-	3-	5	A1,19,21,26,31,33,34,36,37
11	1411	1	1	5	A1,19,21,26,30,31,33,36,37,38,*	26	2310		1-	5	A19,31,33,36,37
11	1625		1	5	A1,21,30,31,33,38	28	1412		1-	5	A19,33,36,38
11	1848	1	1	5	A19,21,23,31,33,36,37,38	28	1753	1-	1-	5	A1,19,30,31,33,34,36,37,38
13	1404	1-	1-	5	A1,19,21,26,33,36	28	2015	1-	1	5	A1,19,30,31,33,34,36,37,38
13	1731		1-	5	A1,19,21,30,31,33,36,37	29	1636	1	1	5	A1,19,21,30,31,33,34,36,37
13	1908		1-	4	A1,19,21,30,31,36,37,38	29	1848	2	2	5	A1,19,21,23,26,30,31,33,34,36,37
						29	2104	3	3	5	A1,19,21,23,26,30,31,33,34,36,37
						30	1735	2-	2+	5	A1,19,23,26,30,31,33,34,36,37
						30	2018		1-	5	A1,19,30,31,33,36,37,38
						30	2259	2+	2+	5	A1,19,26,30,31,33,34,36,37



*Events reported by letter by Dr. Barocas, Preston, U.K. and on 29th at 1012 UT.