Solar Bulletin

Publisher:

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION
540 NORTH CENTRAL AVENUE
RAMSEY, NEW JERSEY, U.S.A.

Volume 28 Number 6

June 1972

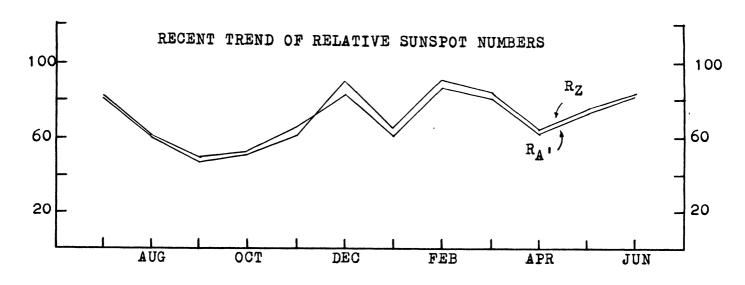
Twenty-seven ionospheric disturbances were recorded by the Solar Division's observers. The large number of events continued without interruption from previous month, with several high energy disturbances.

While the number of events reported is slightly increased by having more observer stations with improved techniques, activity remains much higher than would be expected by the predicted downward trend of the 20th cycle of the sun's activity. Both the ionospheric and the sunspot numbers show high activity. Comparing the monthly means of the relative sunspot numbers for the past seven months with the previous seven months, that is, comparing May thru November of 1971 with December 1971 thru June 1972, gives an average increase in the mean of the month's relative sunspot numbers of about twenty-nine percent (29%) instead of a decrease which could be expected. Short term perturbations of this type are not really unusual and do not indicate that the long range downward trend as predicated is not valid.

The single most active day for ionospheric disturbances was on the 11th when six events were recorded. On page two, the events of the 6th and the 23rd are reproduced as recorded by observers using the SEA (Sudden Enhancement of Atmospherics) method.

To provide additional information toward 24 hour coverage of ionospheric disturbances produced by solar flares, events reported by letter by Dr. V. Barocas, Director, Jeremiah Horrocks & Wilfred Hall Observatories, Preston, U.K. (England) are noted with an asterisk (*). These events were recorded by the SEA method which has been in operation at Dr. V. Barocos' observatory since 1957.

The mean of the American sunspot numbers rose to 81.7 for June from a mean of 75.7 recorded in May.



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

DAY	R _A '	$\mathtt{R}_{\mathbf{Z}}$		DAY	R _▲ '	$\mathtt{R}_{\mathbf{Z}}$
1	75	78		16	95	98
2	86	96		17	96	101
3	100	102		18	84	86
4	121	116		19	80	83
5	130	132		20	88	92
6 7 8 9	115 99 90 79 65	103 95 87 76 68	4	ns 21 22 .7 23 24 .4 25	98 97 84 80 74	96 87 84 79 77
11	41	63		26	71	73
12	38	48		27	63	66
13	45	43		28	69	78
14	56	60		29	70	73
15	96	88		30	66	73

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING JUNE 1972

										U U 2	, , -
	MAX 1938	SEA			OBSERVERS A1,19,30,31	DAY	_				OBSERVERS
	2040		1	5	A1,19,21,30,31,33	12	1338	1	1+)	A1,18,19,21,22,26, 31,32,33,34
3	1414	1	1	5	A1,18,19,21,22,26,		1711		1 -	5	A1,19,21,31,33
5	1305	1 -	1-	5	30,31,32,33,34,* A1,19,26,32,33	15	1310	1	1	5	A1,8,18,19,21,22, 26,31,33,34
	1546	,			A1,19,21,31,33	15	2131		1-	5	A1,21,30,31
5	2128	1	1+	5	A1,8,18,19,21,22,		1652	_	1 -	5	A19,21,30,31,33
6	1514	2	2	5	30,31,33,34 A1,8,18,19,21,22,	16	2019	2+	2+	5	A1,18,19,21,26,30, 31,33
		_	_		31,32,33,*	17	1743		1 -	5	A19,21,30,33
	0303		1	2	A31	20	1922	1	1	5	A1,4,8,18,19,21,
	1237 1505	1	1-	5 5	A1,19,33,* A1,8,18,19,21,31,33						22,26,30,31,33, 34,35
	1647	i	i	5	A1,8,15,18,19,21,22	. 23	1735	2	2	5	
	4000	4		_	26,30,31,32,33,34				_		30,31,32,33,34,35,*
11	1800	1	1	5	A1,8,15,18,19,21,22, 26,31,32,33,34	, 24	1920	1+	2	5	A1,18,19,21,22,26, 30,31,32,33,34,35
11	1928	1	1	5	A1,8,15,18,19,21,22	, 25	0020		1 -	5	A30,31
4.4	0175		4	_	26,31,32,33,34		2053		1+	4	A1,31,35
1 1	2135	1	1	5	∆ 1,8,18,19,21,22,26, 30,31,32,33,34	, 28	2017		1	5	A21,30,31,33

*Additional events reported by Dr. V. Barocas were on 21st at 1040 UT and on 24th at 0708 UT.

