

# Solar Bulletin

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## SOLAR ACTIVITY DURING FEBRUARY

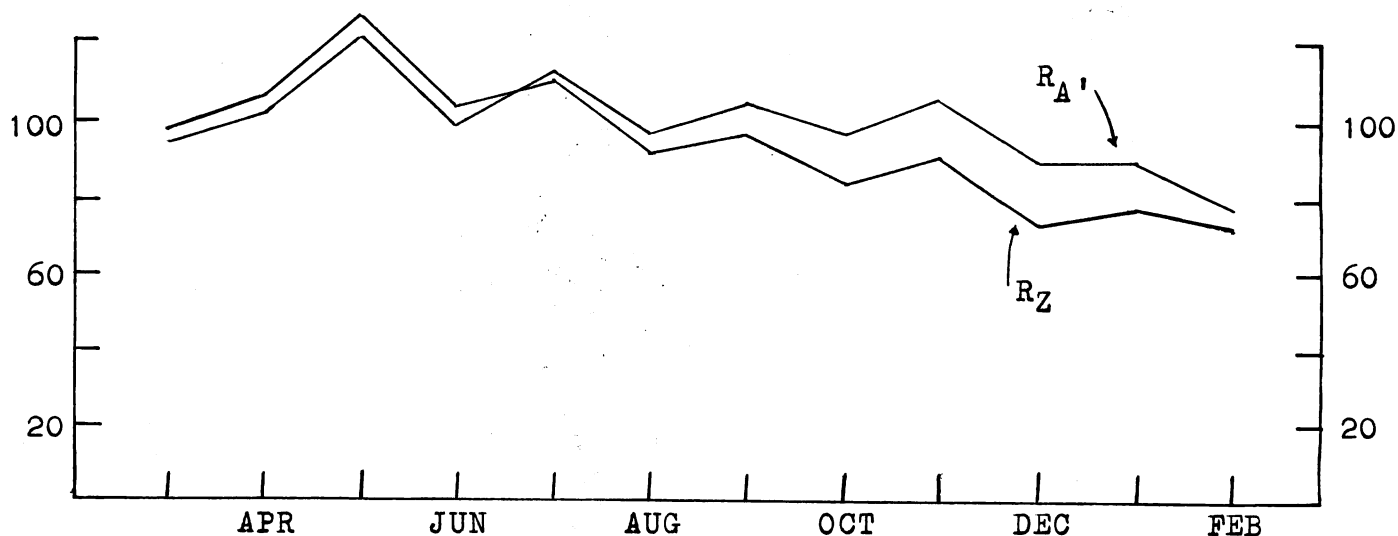
Eleven separate ionospheric disturbances were recorded by the Solar Division observers during February. This decrease from last months number is in agreement with the trend of decrease in sunspot numbers and the downward slope in general activity.

A small amount of ionospheric activity was indicated on the 3rd and 4th, followed by a quiet period until the 15th. The period of 15th through the 20th produced most of the months ionospheric activity with the peak appearing to be on the 16th and 17th.

A reproduction of the three events noted on the 17th is shown on page two. On this chart, three recordings are made at the same time. At the top of the chart, the trace represents the amplitude of the signal received from a unlisted radio station operating at 34.5 kHz. This method is commonly called SES (Sudden Enhancement of Signal). The middle trace is SEA (Sudden Enhancement of Atmospherics) as was received at a frequency of 27 kHz. The trace at the bottom is made by the SES method, recording 24 kHz. For the larger event, starting at 1600 UT, the SEA trace went off scale and the peak is not recorded. Some characteristics of this large event are: It had a very fast rise time, and a high amplitude, followed by a very fast decay slope.

The mean of the American sunspot numbers for February decreased to 77.8 from a level of 90.8 recorded in January.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (R<sub>A</sub>') AND ZURICH (R<sub>Z</sub>) RELATIVE SUNSPOT NUMBERS, FEBRUARY 1971

DAY	R <sub>A</sub> '	R <sub>Z</sub>		DAY	R <sub>A</sub> '	R <sub>Z</sub>
1	88	77		15	57	69
2	89	78		16	64	66
3	85	68		17	76	62
4	80	80		18	84	68
5	72	65		19	104	87
6	75	73	Monthly Means	20	101	91
7	67	75		21	109	91
8	51	60	R <sub>A</sub> ' = 77.8	22	99	100
9	41	37		23	110	87
10	42	37	R <sub>Z</sub> = 71.5	24	103	98
11	51	62		25	97	93
12	48	50		26	87	69
13	60	63		27	87	66
14	62	60		28	90	71

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING FEBRUARY 1971

DAY	MAX	SEA	SES	DEF	OBSERVERS	DAY	MAX	SEA	SES	DEF	OBSERVERS
3	1539	1	1	5	A1,19,22,27,28	16	1922	1-	1	5	A1,19,27
4	1939	1+	1+	5	A1,4,19,22,27	17	1605	2+	2+	5	A1,19
15	1652	1	1+	5	A1,8,19	17	1702	1-	1-	5	A1,19
16	1612		1-	4	A1,19	17	1744	1-	1-	4	A1,19
16	1853		1-	4	A1,19	19	1916		1	4	A19
						20	1923	1	1	5	A1,19,27

Following are listed SEA's as recorded by A-17 during month of January 1971, which were received too late to be included in the January Solar Bulletin: 22nd, 1109 UT, IMP 2: 23rd, 0415 UT, IMP 1: 27th, 0552 UT, IMP 1: 29th, 0515 UT, IMP 2+: and 30th, 0718 UT, IMP 1+.

