

# Solar Bulletin

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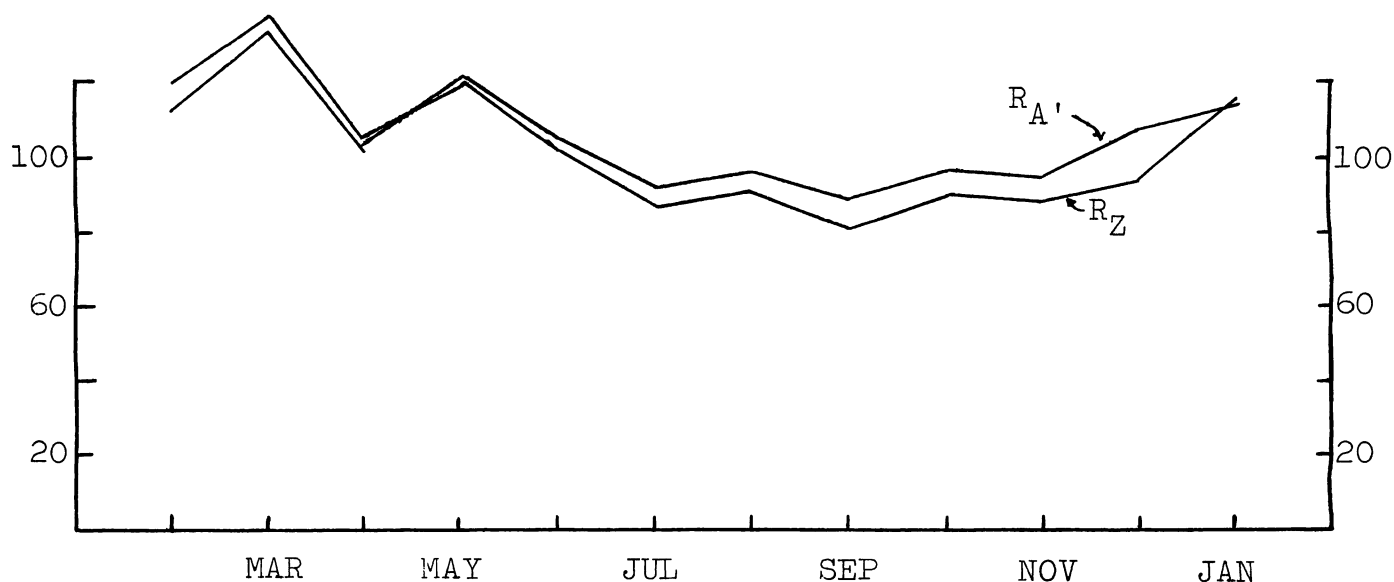
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## SOLAR ACTIVITY DURING JANUARY

Twenty-six ionospheric disturbances were recorded by Solar Division observers during January with most of them concentrated in the last five days of the month. Five events occurred on the 28th alone which is an unusual number for a single day. A chart recording of three of these events is reproduced on page two. The last, starting at 2:15 local time = 1915 UT was of above average intensity and its effect lasted almost two hours. The most outstanding occurrence by far started at 1516 UT on the 31st. A recording of this exceptionally intense disturbance is also shown on page two starting at 10:16 local time and lasting several hours. It is hard to tell where the SEA ends and the normal downward trend of the atmospheric noise level starts but its effect seems to have lasted about 3 hours as judged by this and other charts. Events of such long duration are extremely rare. Another unusual feature is the long rise time of about 20 minutes.

Sunspot activity increased too during January with the mean of the American sunspot numbers rising to 113.7 from 106.7 in december. The division of spots into groups proved difficult during the latter third of the month. This time these active longitudes produced many smaller groups in contrast to the several large groups seen last rotation. Thomas Cragg, who is the Solar Divisions expert on grouping reported that he had difficulty deciding how to divide the region despite the fact that he had the magnetic data to guide him. He pointed out that where many possibilities exist, the simplest grouping is most likely to be correct.

## RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (R<sub>A</sub>) AND ZURICH (R<sub>Z</sub>) RELATIVE SUNSPOT NUMBERS, JANUARY 1970

DAY	R <sub>A</sub>	R <sub>Z</sub>
1	125	117
2	72	84
3	71	79
4	85	70
5	55	77
6	31	58
7	29	31
8	31	38
9	55	60
10	64	85
11	103	108
12	153	154
13	166	147
14	174	174
15	187	157
16	117	117
17	125	148
18	153	26
19	154	148
20	27	112
21	22	112
22	98	120
23	80	106
24	81	80
25	117	74
26	148	99
27	165	125
28	156	158
29	155	156
30	128	154
31	115	154

Monthly Means  
 $R_A = 113.7$   
 $R_Z = 115.4$

SUDDEN IOSPHERIC DISTURBANCES RECORDED DURING JANUARY 1970

DAY MAX. SEA SES DEF. OBSERVERS DAY MAX. SEA SES DEF. OBSERVERS

1	1945	1	A-21	2	27	2-	A-21, 19
2	0948	1+	A-17	2	28	2	A-17
3	1918	1	A-19, 22, 8, 21	4	28	2+	A-21, 19, 8, 22, 1
5	1806	1+	A-19, 8, 22, 21	5	28	1	A-21, 19, 8, 1, 22
10	1638	1	A-21, 19, 8	5	28	1-	A-21, 19
12	1359	1+	A-17	5	28	3+	A-19, 21, 8, 1, 22
17	1919	1	A-21	5	29	2	A-1, 21, 8, 22
17	2047	1+	A-21, 1	5	29	1+	A-21, 1, 22, 8
18	1827	1+	A-21, 19	5	29	2+	A-19, 21, 6, 22, 8
21	1431	2	A-21, 1	5	30	2	A-21, 1, 19, 8, 22, 8
22	2151	1	A-21, 1	5	30	1+	A-21, 22, 8
24	1910	2+	A-19, 21, 22, 1, 8	5	31	1+	A-21, 1
27	1653	-	A-21, 19	5	31	3+	A-21, 19, 1, 22

