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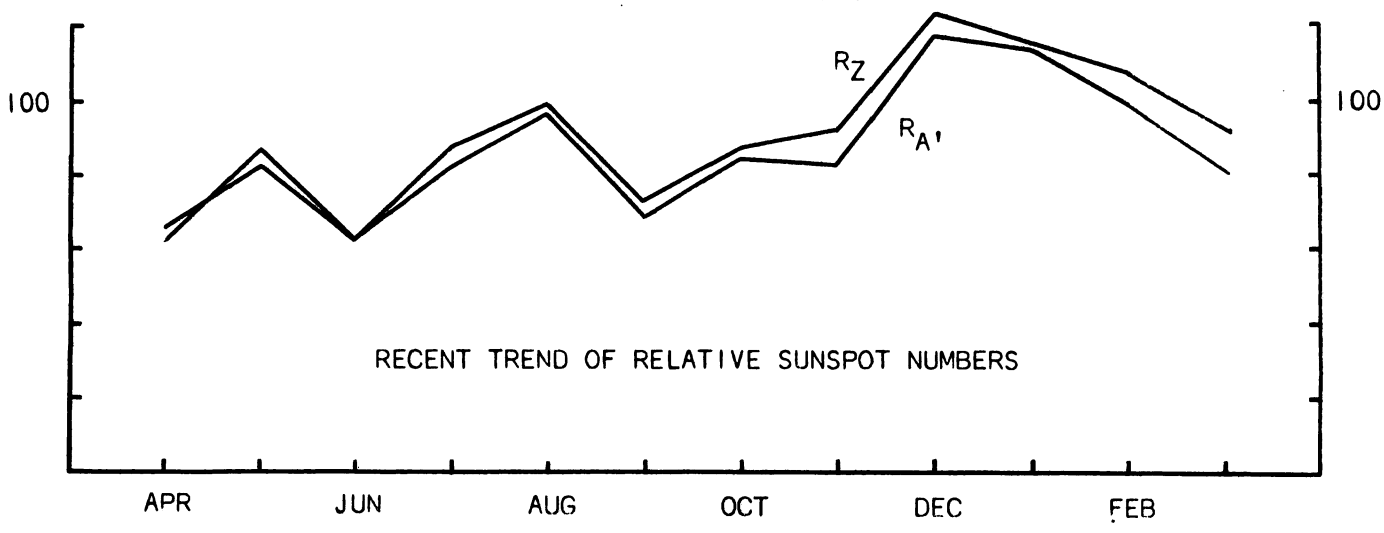
SOLAR ACTIVITY DURING MARCH

Although two ionospheric disturbances were recorded by an AAVSO observer on the 2nd, most of such activity during March occurred at the end of the month from the 21st through the 27th. At this time two flare-producing sunspot groups were developing. One was first seen on the 19th as an A-type group at about 14 degrees south latitude and 60 degrees east of the central meridian. The other started as a B-type group of about 15 very small spots on the 21st near the central meridian at about 11 degrees north latitude. A recording of an ionospheric disturbance associated with one of the flares of the 25th is reproduced on page two.

Sunspot activity continued its downward trend of the previous two months to reach a mean value for March of 80.6 for the American sunspot numbers. The highest numbers occurred toward the end of the month when about 10 groups were present on most days. There were no outstanding large groups during March although there were two spot associations that proved difficult to devide into groups. On the 16th a small bunch of spots formed between two old J-type spots and developed into a small bipolar group. By the 20th the leader of this bipolar group had decayed leaving the follower close enough to the old J spot for the two to resemble a bipolar group which their past history clearly showed was not the case. On 24 March, a large H-type spot came over the northeast limb followed closely by a slightly smaller spot at a somewhat lower latitude. These two resembled a bipolar group but magnetic data revealed that actually it was two spots of the same polarity, both leaders. During disk passage of these two groups, many small spots continually formed and decayed in their vicinity to further complicate their classification.

Development of the above two puzzling groups plus the two groups associated with the ionospheric disturbances is shown schematically from day to day in the March sunspot distribution summary which is sent with this issue of the Solar Bulletin.



RECENT TREND OF RELATIVE SUNSPOT NUMBERS

AMERICAN ($R_{A'}$) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, MARCH 1968

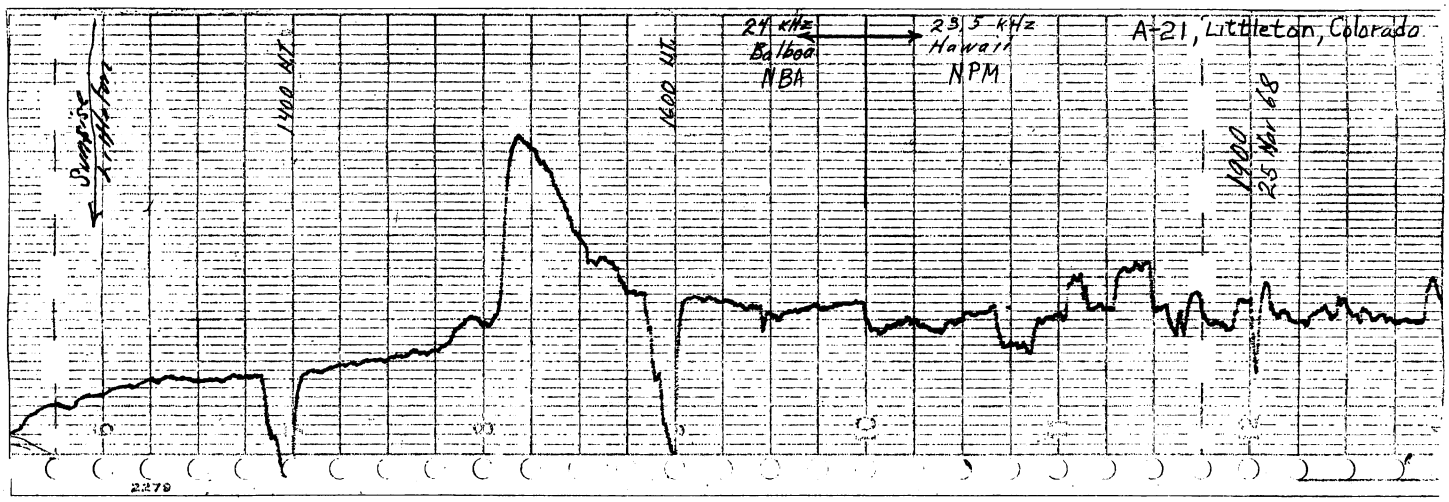
day	$R_{A'}$	R_Z	day	$R_{A'}$	R_Z
1	96	108	16	50	46
2	89	118	17	57	59
3	75	83	18	46	59
4	47	92	19	43	53
5	48	71	20	56	56
6	34	56	21	91	70
7	51	52	22	99	91
8	55	79	23	100	113
9	48	69	24	109	132
10	69	74	25	117	156
11	90	85	26	108	141
12	88	87	27	128	146
13	72	89	28	130	138
14	57	67	29	135	127
15	54	59	30	135	154
			31	122	134

March mean $R_{A'}$ = 80.6

March mean R_Z = 92.4

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING MARCH

DAY	MAX.	SEA	SES	DEF.	OBSERVERS
2	2245		2+	5	A-21
2	2323		1	2	A-21
21	1430		1+	4	A-21
21	1915	3	1+	5	A-1, 21
21	2207		2	4	A-21
24	1645	2+	2+	5	A-1,21,20
25	1509	3	3	5	A-21,1,20
27	1821		1	3	A-21,20



A sudden enhancement of signal strength (SES) of very-low-frequency station NBA in Panama caused by a sudden ionospheric disturbance starting at 1505 UT.