## Solar Bulletin

Publisher:

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION

540 NORTH CENTRAL AVENUE RAMSEY, NEW JERSEY, U.S.A.

EDITOR: C. H. HOSSFIELD

Volume 25 Number 10

October 1969

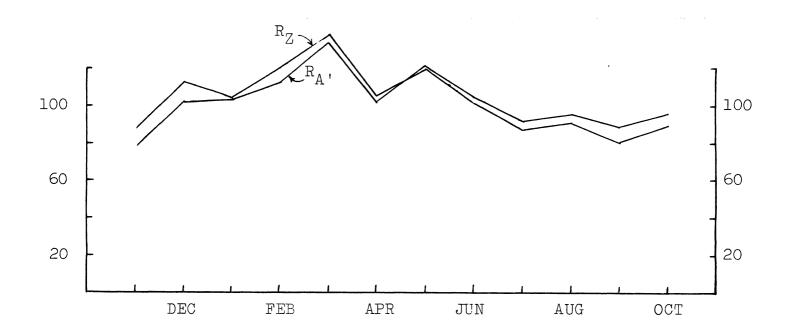
## SOLAR ACTIVITY DURING OCTOBER

Anyone seeing the large sunspot group which made its first appearance at the east limb on the 19th would have expected such an outstanding group to produce numerous large flares. Despite its ominous appearance Solar Division observers of the indirect flare patrol group recorded only four ionospheric disturbances during its passage across the sun's disk. None of these were of above average intensity and only two were widely recorded. A recording of the event on the 26th is reproduced on page two. Here it can be seen that the enhancement of atmospheric noise associated with this disturbance was very modest. It is very unusual for such a spectacular group to produce so little activity.

Sunspot numbers were slightly higher in October. The mean of the American sunspot numbers rose to 96.4 from 88.9. Most of this higher mean is attributable to the one large group mentioned above. As can be seen, the numbers exceeded one hundred for nine days with the highest counts on the 26th when the group was on the central meridian and its numerous small spots easily visible.

A southern sunspot region that caused some problems concerning its group count crossed the central meridian on the 29th. This was actually three separate groups as became more evident by the 30th.

## RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (R<sub>A</sub>,) AND ZURICH (R<sub>Z</sub>) RELATIVE SUNSPOT NUMBERS, OCTOBER 1969

day	$^{ m R}_{ m A}$ ,	$^{ m R}{_{ m Z}}$	day	R <sub>A'</sub>	$\mathtt{R}_{\mathtt{Z}}$
1 2 3 4 5	107 117 113 106 118	84 101 98 92 103	16 17 18 19 20	43 23 40 39 72	43 38 43 43 57
6 7 8 9 10	125 121 125 96 91	117 120 92 89 78	21 22 23 24 25	84 113 123 138 153	102 107 124 133 137
11 12 13 14 15	70 63 62 71 48	68 60 47 55 46	26 27 28 29 30 31	161 130 123 129 101 83	142 138 121 113 95 80
October	mean R <sub>A</sub> ,	= 96.4	October	mean R <sub>Z</sub>	= 89.9

## SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING OCTOBER 1969

DAY		SEA	SES	DEF.	OBSERVERS	DAY	MAX.	SEA	SES	DEF.	OBSERVERS
	1636	1+	2	5	A-21,19,22,1,20	17	0920	2		4	A-17
	2110		2	5	A-21,20		1725	1+	1+	5	A-21,22,19,1
	2032		1	4	A-21,1	24	2119		1	4	A-21
	2228		1	4	A-21	26	1637	2-		4	A-19,22,21,1
17	0715	1-		1	A-17	27	2104		2+		A-21

