## 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 24 Number 11

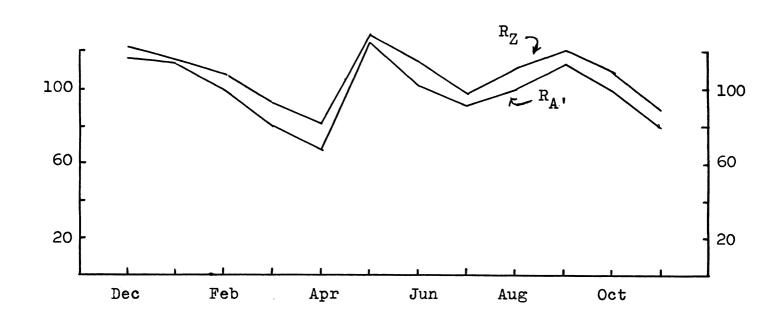
November 1968

## SUNSPOT ACTIVITY DURING NOVEMBER

Seven ionospheric disturbances due to flares were recorded by Solar Division observers during November. Most of these were of moderate intensity. A complete listing of these events appears on page two. None of the recordings of November's disturbances were outstanding so two additional recordings from the previous month, October, are reproduced at the bottom of page two. These two SEA recordings were made by Walter Scott Houston, A-8, at Haddam, Conn.

Sunspot activity continued to decline with the monthly mean of the American sunspot numbers down to 79.0 compared to 99.4 in October. At the beginning of the month the great gamma group of the latter part of October was approaching the west limb and was last seen on the 3rd. By the 5th, another interesting came over the northeast limb and had begun to show gamma characteristics by the 7th. This group grew large enough to be seen by the unaided eye on the 8th and continued to show gamma characteristics until west limb passage on the 17th. The following day saw the return of the great group that had gone over the west limb on the 3rd and by now it resembled two groups due to its spread in latitude. Several additional groups formed nearby to cause additional confusion for many observers as they tried to devide the region into groups.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN ( $R_{A}$ ) AND ZURICH ( $R_{Z}$ ) RELATIVE SUMSPOT NUMBERS, NOVEMBER 1968

diding philaire product provide product product product and product pr									
٤•88 =	mean ${ t E}^{ m Z}$	November		0.67 =	uesu K <sup>∀</sup> ' =	November n			
56 524 76 76	84 25 55 78	20 28 25 26 26		78 68 76 76 211	28 29 29	15 15 15 15 11			
90 85 97 80 80	64 04 65 05 T9	52 53 53 55 51 51		T£1 8T1 86 26 26	28 36 50 50 70 70 70 70 70 70 70 70 70 70 70 70 70	OT 6 8 4 9			
26 94 44 64	08 £4 £9 48	50 18 27 27 91		TT1 26 92 02 58	705 708 88 108 708 708 708 708	J 2 34 5			
$\mathbf{z}^{\mathtt{A}}$	$^{\prime}A^{A}$	YAU		$Z_{\epsilon}$	B <sup>∀</sup> .	дэЛ			

ENDDEN IONDSHEELC DISTURBANCES RECORDED DURING NOVEMBER

	n Zoo	OS 81	rete	T SEV									
					(4.5)			<b>ήποτ</b> η	ruecı	8961 ໃ <b>ດ</b> ວ່າ	sddam sober	4-8, H	,
 ∇ <b>L-A</b> ∂ <b>-</b> A <b>L-A</b>	† T †	+1	J+ T+	1354 1815 0218	77 77	τ'∠τ- ∠τ- ∠τ-	-A -A -A	S S	+T	Σ+ Σ	15#0 1252 082#	S S S	
OBSEKAEKS	DEE.	ZEZ	REA	.XAM	YAG	BEEKAEKE	O	DEE.	ZEZ	REV	.XAM	YAG	

