

# Solar Bulletin

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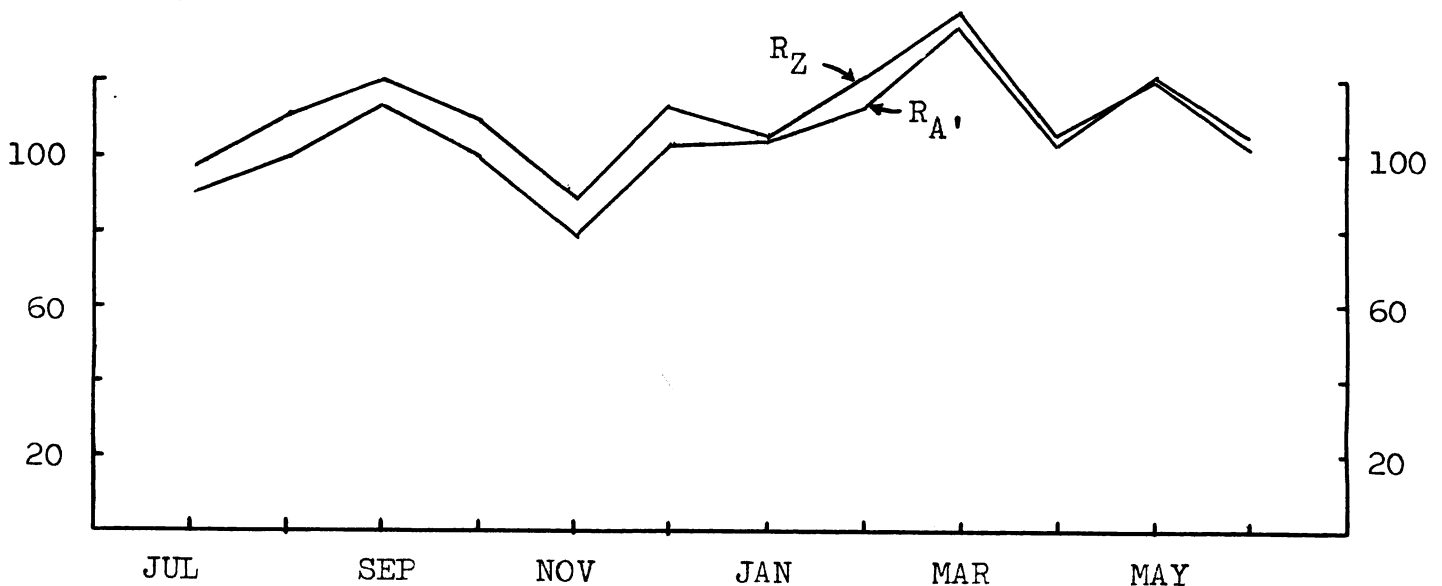
June 1969

## SOLAR ACTIVITY DURING JUNE

Nine ionospheric disturbances were recorded by Solar Division observers during the first Half of June. An event that reached maximum at 1505 UT on the 5th was the most severe with another almost as intense the following day. Two disturbances separated by about one-half hour occurred on the 16th. Three recordings of this double event are reproduced on page two. Both events were recorded as sudden enhancements of atmospheric noise of about equal intensity in Missouri and Massachusetts, a separation of over 1000 miles. There is a great difference in the intensity of the two events where they are shown as a sudden enhancement of the signal of very-low-frequency station NBA in Panama. Here the first disturbance is so small it would hardly be considered real if not confirmed by the SEA records. Such differences in apparent intensity are not unusual and indicate the advantage of using more than one method of detection.

Sunspot activity was down somewhat with the June mean of the American sunspot numbers at 105.5 compared to 120.9 last month. The numbers rose rapidly from their low point on the 1st to reach peak values on the 7th and 8th. By month's end, they had again dropped to low values.

## RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN ( $R_A$ ) AND ZURICH ( $R_Z$ ) RELATIVE SUNSPOT NUMBERS, JUNE 1969

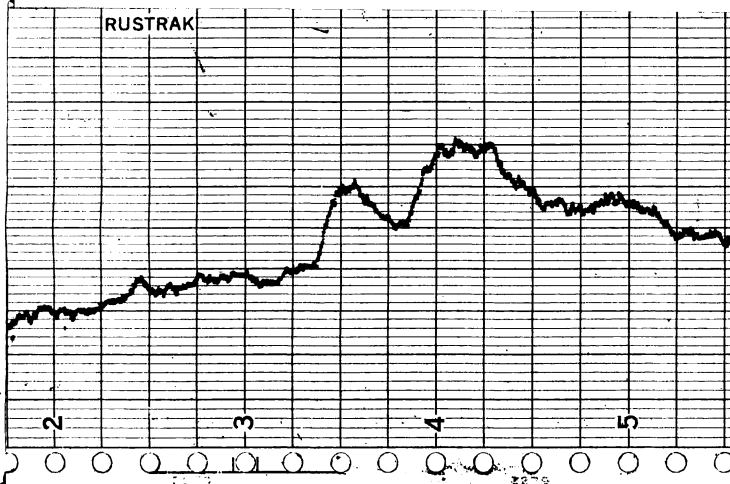
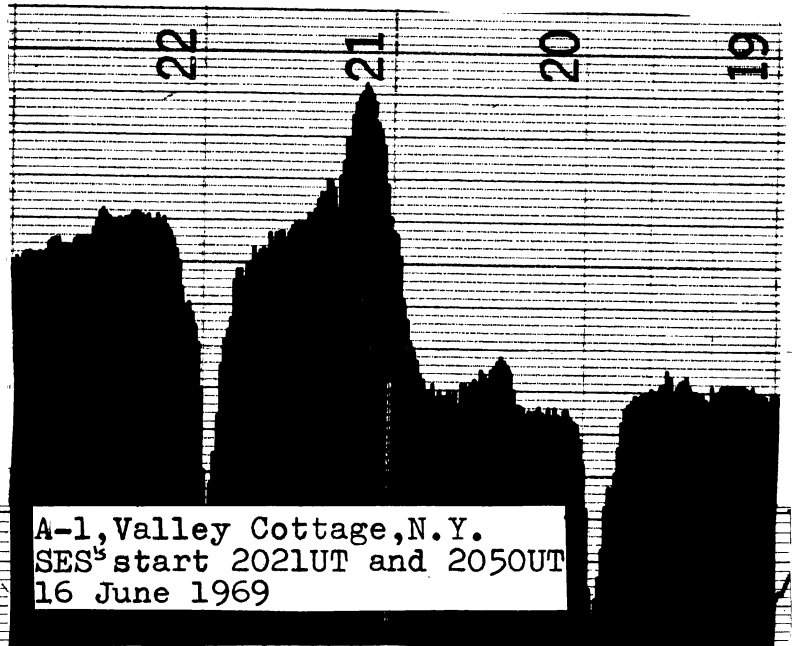
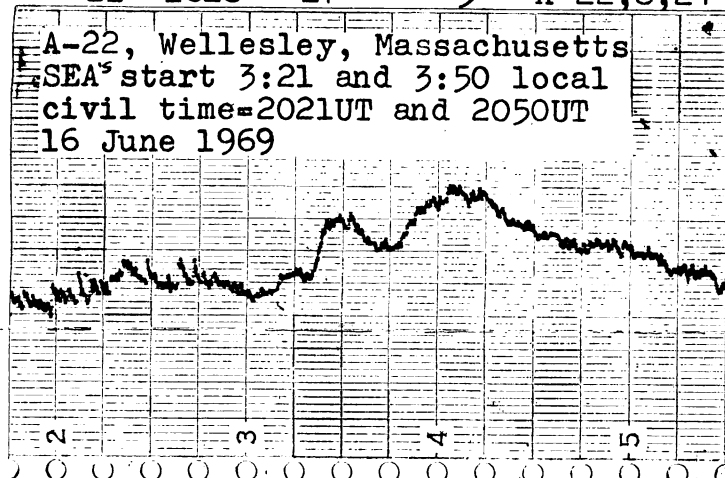
day	$R_A$	$R_Z$	day	$R_A$	$R_Z$
1	42	32	16	129	134
2	61	47	17	128	101
3	79	74	18	105	92
4	93	77	19	79	74
5	145	116	20	88	97
6	173	157	21	70	84
7	193	182	22	44	56
8	180	186	23	39	37
9	184	179	24	42	33
10	178	181	25	55	51
11	178	180	26	35	26
12	176	174	27	31	35
13	160	167	28	50	49
14	147	161	29	53	63
15	131	148	30	96	71

June mean  $R_A$  = 105.5

June Mean  $R_Z$  = 102.1

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING JUNE 1969

DAY	MAX.	SEA	SES	DEF.	OBSERVERS	DAY	MAX.	SEA	SES	DEF.	OBSERVERS
5	0958	1-		5	A-17	14	2109	1	2+	5	A-20,1,25
5	1505	2	3+	5	A-20,1,17	16	1300	1-	1	4	A-1,23,22
6	1610	2	3	5	A-20,1,8,25	16	2026	2	1-	5	A-23,22,1
9	1153	1-		4	A-8,22	16	2057	2	2	4	A-23,22,1,20
11	1628	2+		5	A-22,8,24						



A-23, St. Joseph, Missouri  
SEA<sup>s</sup> start 3:22 and 3:51 local  
civil time = 2022UT and 2051UT  
16 June 1969