

Solar Bulletin

NOV 21 1970

Publisher:

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS — SOLAR DIVISION
540 NORTH CENTRAL AVENUE
RAMSEY, NEW JERSEY, U.S.A.



Volume 26 Number 10

October 1970

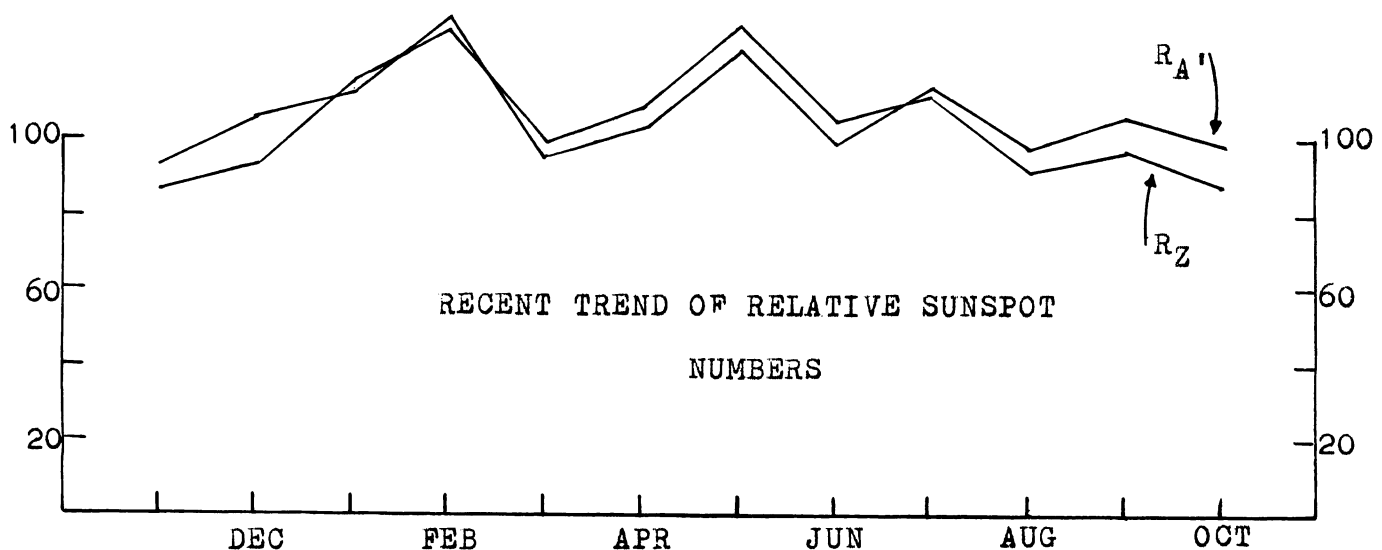
SOLAR ACTIVITY DURING OCTOBER

Twelve separate ionospheric disturbances were recorded by the Solar Division observers during October. Of these twelve events, seven were of minor importance, indicating a continuation of low level of activity.

The most widely recorded and largest event of the month is reproduced as recorded by observers in Pennsylvania, Wisconsin, and Missouri. The "flat top" or "second peak" was quite noticeable in recordings made by other SEA and SES observers. These recordings also illustrate how the "sunrise dip" may vary as related to local sunrise time. For the event of the 23rd, the normal "sunset rise" appears to be delayed on this date for approximately one hour. This is a common departure when preceded by a SID near sunset. While some scientific papers have been published concerning these anomalies, no theories have been widely accepted, however these variations do suggest that the recordings of observers may contribute to a better knowledge of the earth's environment in addition to the study of the sun's activities.

Sunspot activity was off from the level of last month. The monthly mean of the American sunspot numbers returned to the August level of 98.1 from 106.6 in September. The highest sunspot counts occurred during the latter third of the month, correlating with ionospheric activity.

The most confusing group was seen at the east limb on the 23rd. By the usual criteria this one could easily have been called several groups but magnetic data indicated a single group having an unusual spread in latitude. This group was easily visible to the unaided eye during most of its transit across the disk. It was not until it approached the west limb that it started to take on the appearance of a single group.



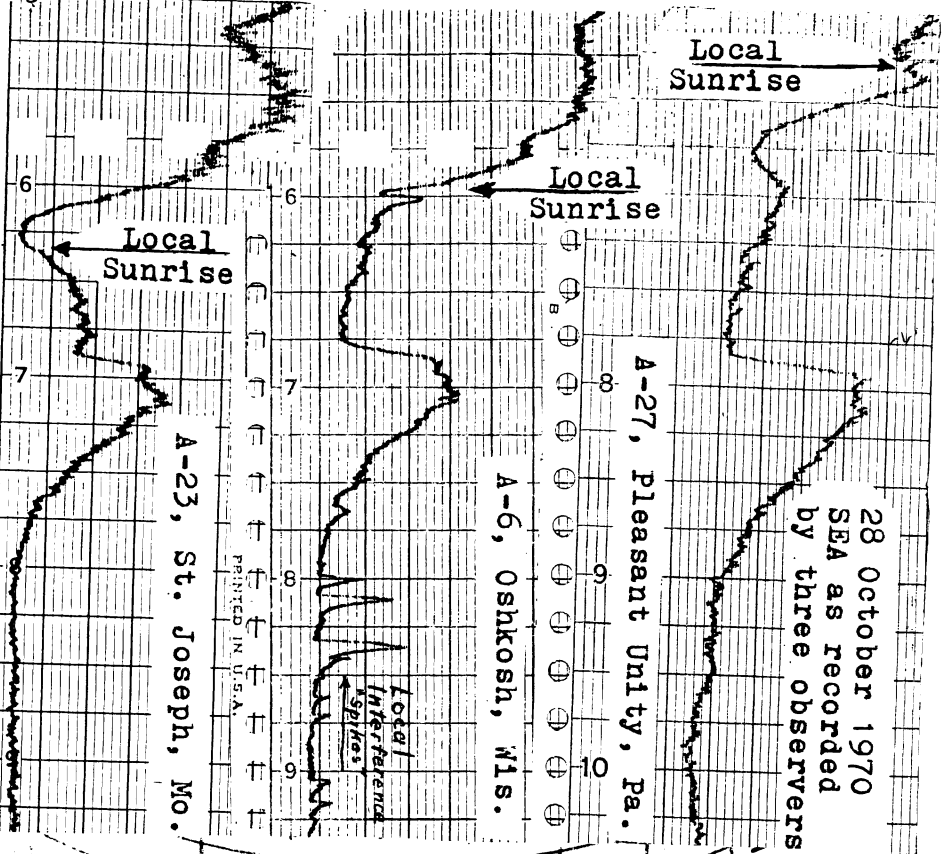
AMERICAN (R_{A'}) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBERS, OCTOBER 1970

DAY	R _{A'}	R _Z	DAY	R _{A'}	R _Z
1	64	62	16	102	93
2	62	56	17	110	83
3	55	42	18	90	75
4	69	54	19	98	82
5	63	74	20	85	69
6	63	52	21	75	68
7	75	71	22	90	72
8	80	72	23	107	88
9	89	67	24	131	99
10	95	72	25	128	110
11	92	74	26	146	116
12	101	79	27	156	141
13	94	83	28	146	130
14	93	86	29	151	138
15	85	86	30	133	125
			31	114	116
			Monthly Means		
			RA' = 98.1		
			RZ = 85.0		

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING OCTOBER 1970

DAY	MAX.	SEA	SES	DEF.	OBSERVERS	DAY	MAX.	SEA	SES	DEF.	OBSERVERS
4	1740	1	1+	5	A-1, 19, 21, 27.	24	1945	1	1	5	A-1, 4, 6, 19, 21, 27.
4	2211	1-	1-	4	A-1, 21.	25	1515	1-	1-	5	A-1, 4, 6, 21, 22.
14	1335	1-	1-	5	A-1, 21, 23.	26	1753	1-	1	5	A-1, 4, 19, 21, 22, & 27.
22	1803	1-	1-	4	A-21, 27.	26	2054	1-	1-	5	A-1, 19, 21, 27.
23	1719	1-	1-	5	A-4, 6, 19, 21.	27	1420	1-	1-	4	A-4, 19, 21, 22, 27.
23	2210	1-	1+	5	A-1, 4, 19, 21, 23, 27.	28	1255	2	2+	5	A-1, 4, 6, 19, 21, 22, 23, 27.

28 October 1970
SEA as recorded
by three observers



ANGUS INDIANAPOLIS, IND., U.S.A. E.S.

