

Solar Bulletin

SEP 23 1970

Publisher:

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



Volume 26 Number 8

1970

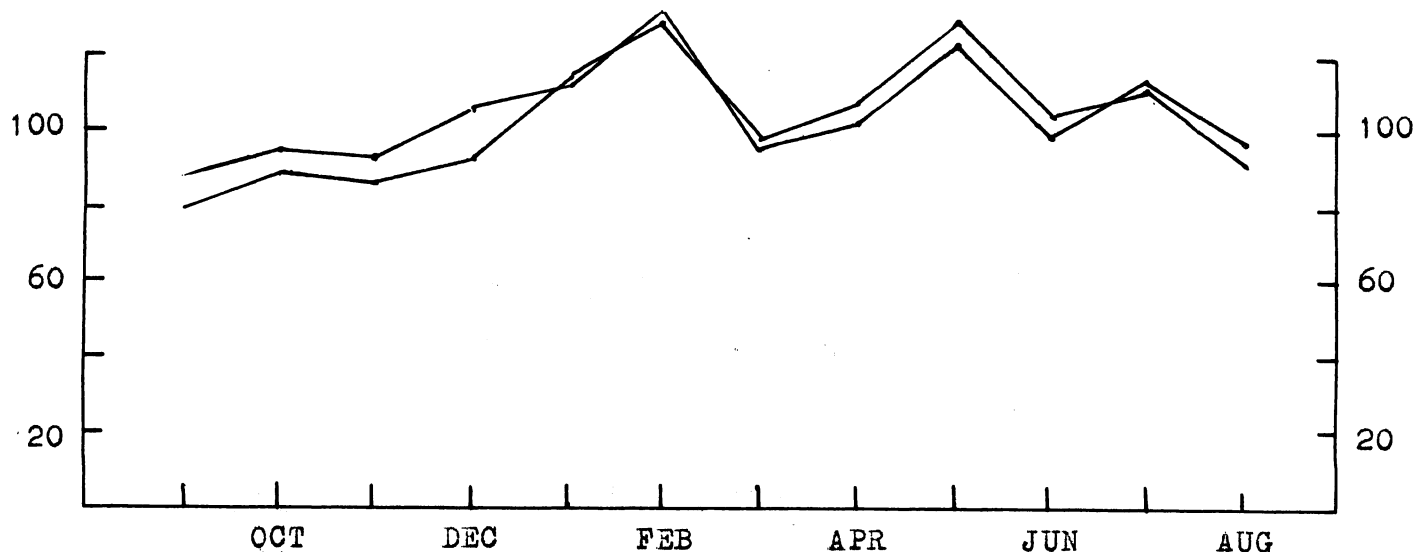
SOLAR ACTIVITY DURING AUGUST

Nineteen separate ionospheric disturbances were recorded by the Solar division, starting with the first event on the 11th. Activity was high from 12th thru 19th, with news media reporting instances of "radio blackout" and the sighting of the aurora borealis during this period.

A reproduction of a recording of this first large event occurring on the 11th is shown on page two. This recording shows the typical "sunset effect", that is, the rise in amplitude of atmospherics at about 20 to 40 minutes after local sunset. The large event recorded on the 12th is shown by two different observers. This event is unusual in respect to having what appears to be a second starting point at about 2016 UT. Five of the eight recordings of this event by six observers showed this "notch". The most common explanation is that the sun had two separate "flares" or one had a second burst, however, the dynamics of the earth's magnetosphere and the related electrojet activity is not known well enough at this time to rule out other explanations. A recording of the large event on the 18th is shown to illustrate that significant events can be identified even during days of rather high interference from local thunderstorms.

August sunspot activity was noticeably diminished from the level of July. The monthly mean of the American sunspot numbers fell to 98.1 from 114.0. A small J-type group seen on the northeast limb on 1 August was probably a return of a single spot last seen at the west limb on 17 July. That one had previously been seen at west limb passage on 19 June ending a return of the large naked-eye group of May.

RECENT TREND OF RELATIVE SUNSPOT NUMBERS



AMERICAN (R_A) AND ZURICH (R_Z) RELATIVE SUNSPOT NUMBER, AUGUST 1970

DAY	R_A	R_Z		DAY	R_A	R_Z
1	75	77		16	105	100
2	77	68		17	98	99
3	62	64		18	110	108
4	69	59		19	98	113
5	66	65		20	103	117
6	71	68	Monthly Means	21	114	117
7	90	72			22	109
8	87	82	$R_A = 98.1$	23	107	101
9	77	76	$R_Z = 92.9$	24	125	116
10	83	71			25	129
11	89	75		26	128	114
12	85	73		27	102	91
13	81	92		28	116	101
14	103	94		29	126	114
15	124	108		30	127	120
				31	105	111

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING AUGUST 1970

DAY	MAX.	SEA	SES	DEF.	OBSERVERS	DAY	MAX.	SEA	SES	DEF.	OBSERVERS
11	2345	2+	2+	5	A-21, 4, 23, 27, 19	16	1438	1-	1	5	A-21, 1, 4
12	1928	1	1	5	A-21, 1	16	1456	1-	1+	5	A-21, 1, 4
12	2020	2+	2+	5	A-21, 1, 22, 27, 23, 19	18	1650		1	4	A-21
13	1653	1-	1	5	A-21, 1, 19	18	2208	1+	2	5	A-21, 1, 27, 19, 23
13	1840	1	1	5	A-21, 1	19	1120		1+	4	A-1
14	1250		1	5	A-1, 21	19	1612		1+	5	A-21, 1
14	2317	1	1	5	A-21, 1, 23	27	1413	1+	2	5	A-21, 1, 4, 6, 23, 19, 27
15	1150	1+	1+	5	A-1, 22, 19, 4	28	1443		1	4	A-21
15	1417		1+	5	A-21, 1	29	1858	1+	3	5	A-21, 1, 23, 4, 19, 6, 27
16	1151	1-	1+	5	A-1, 4						

