

Solar Bulletin

Publisher:

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



Volume 36 Number 8

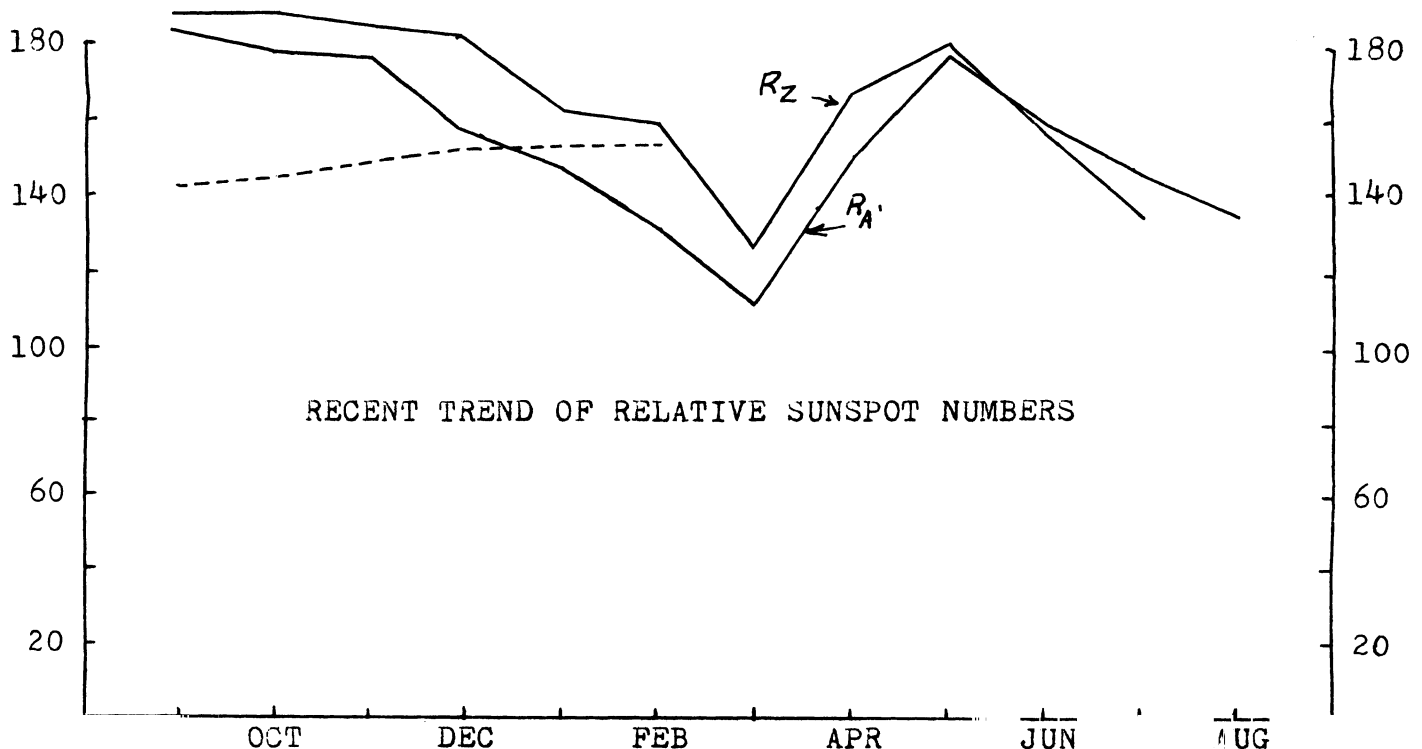
August 1980

SOLAR ACTIVITY DURING AUGUST

Sunspot numbers reached a low level during the first week. They rose to near 200 at the middle of August when active longitudes returned. The monthly mean of 134.5 was down somewhat from the previous month but still high enough to raise the 12-month smoothed mean to 153.6 for February.

The list of ionospheric disturbances for August was compiled from an analysis of most of the August recordings. The arrangement of the data is slightly different than previously. Following the day, the time of maximum is given in Universal Time. The next column (SES) rates the importance on a scale of three. It is based on the duration of the event. 1- lasts less than 20 minutes. 1+ is 20 to 30 minutes. 2 is 30 to 45 minutes. 2+ is 45 to 85 minutes, 3 is 85 to 125 minutes and 3+ exceeds 125 minutes in duration. August ended with an importance 3 event (90 minutes duration) on the 31st. Next is a column (FREQ) in which the number refers to the total number of different signal-source frequencies on which the event was recorded. Last are the observers who recorded the event. Many observers on several frequencies increase the definiteness of even tiny events to 5.

The most sensitive propagation path this month was 21.4 kHz over short distances. Examples are reproduced for the three most active days during which almost half of the 41 ionospheric disturbances of August occurred. By comparing the actual recording with the list above it is possible to get a better idea of how the disturbances are rated for importance and definiteness.



SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING AUGUST 1980

American (R_A) and Zurich (R_Z) relative sunspot numbers

Day	August R _A	July R _Z
1	52	101
2	83	108
3	68	97
4	35	85
5	58	96
6	89	98
7	81	97
8	97	87
9	115	78
10	132	86
11	166	87
12	167	98
13	165	105
14	198	128
15	196	161
16	203	198
17	195	211
18	203	241
19	200	213
20	181	212
21	155	217
22	116	201
23	125	184
24	112	155
25	97	151
26	107	138
27	119	117
28	129	127
29	168	118
30	178	108
31	179	81

Mean 134.5 135.0

Please note that the above numbers are for two different months

DAY MAX SEA SES DEF PREQ OBSERVERS

DAY	MAX	SEA	SES	DEF	PREQ	OBSERVERS
2	1410	2+	2	2		A-32,48
7	1130	1-	2	1		A-32
7	2007	2	3	3		A-19,32,26
9	2017	1-	3	5		A-31,19,32,48,50,51,26
10	1815	1+	5	5		A-31,19,32,48,51,26
10	2115	2+	5	4		A-31,19,32,48,51,41,1,26
13	1301	3	5	3		A-19,32,48,51,1,26,5
16	1935	2	5	5		A-19,32,48,51,41,1,50,26,5
17	1907	1+	5	4		A-19,32,48,5
19	1530	2	3	3		A-19,48,5
21	1355	2+	5	3		A-32,48,51,1,19,26,5
21	1901	2+	5	2		A-32,48,51,1,19,50,26
21	2017	1-	2	2		A-32,48
22	1424	1+	5	3		A-48,32,1,26,5
22	1702	1-	1	1		A-48
22	1725	2	2	2		A-48,32
22	2133	2	5	3		A-48,19,32,1,50,26,5
23	1207	1+	3	1		A-32
23	1300	1-	3	2		A-32,26
23	1452	1-	4	3		A-48,32,26,5

DAY MAX SEA SES DEF PREQ OBSERVERS

DAY	MAX	SEA	SES	DEF	PREQ	OBSERVERS
23	1824	2	5	2		A-48,19,51,32,1,50,26
23	2052	1-	2	1		A-26
23	2135	1+	5	3		A-48,19,51,32,1,50,26
24	1613	2	5	3		A-48,19,51,32,1,50,26,5
24	1649	1-	4	2		A-48,19,50,26,5
24	1705	1-	4	2		A-48,19,26,5
24	1853	1+	3	2		A-48,19,51,1,50,5
24	1953	2+	5	2		A-48,19,51,1,50,26,5
24	2210	1+	4	2		A-19,51,26,5
25	1307	2+	5	2		A-48,19,51,1,26,5
25	1417	1+	5	3		A-48,19,51,32,50,26,5
25	1502	1+	5	2		A-48,19,51,1,26,5
25	1758	1-	5	2		A-19,48,50,51,26,1,5
25	1853	1-	3	1		A-48,26
25	2010	1+	5	3		A-48,19,51,32,1,50,26,5
26	1410	1+	2	3		A-48,51,32,1,26,5
27	1336	2+	5	3		A-48,51,32,1,26,5
27	1617	1-	3	1		A-48,26
30	1244	1-	1	2		A-48,51,32,26
31	1253	1+	5	3		A-48,19,51,32,1,5
31	1334	3	5	3		A-19,48,51,32,50,5

