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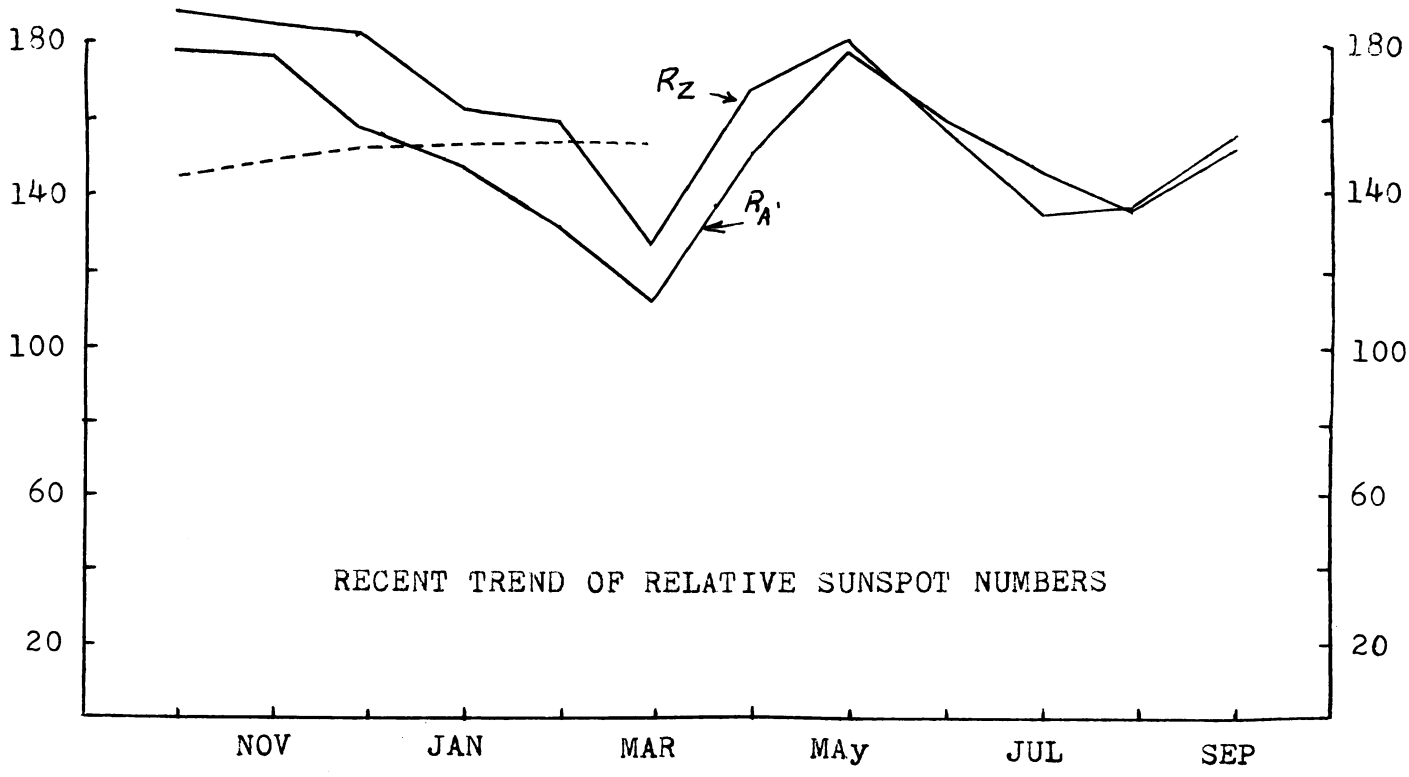
SOLAR ACTIVITY DURING SEPTEMBER

Sunspot activity increased from the level of last month. The mean of the AAVSO relative sunspot numbers, R_a, rose to 151.4 (R_a is the new designation assigned to the AAVSO relative sunspot numbers by the National Oceanic and Atmospheric Administration, NOAA). This high September monthly mean was nevertheless insufficient to prevent the 12-month smoothed mean for March from dropping to 152.7 from its peak of 153.6 in February 1980.

Thirty-five sudden ionospheric disturbances were recorded by the AAVSO during September. The bottom three charts on page two show one of the stronger and more widely recorded events of September. it is notable for its fast rise time. Above these is a recording of the new signal on 29.5 kHz. Its location and identity are unknown but it produces a nice smooth trace with no dropouts or power level changes. Its propagation path from wherever it is to the Pittsburg area was very sensitive during September. Above the 29.5 kHz trace and to the right are two more recordings of the same pair of ionospheric disturbances. The top one by new observer A-52 was made while testing his receiver on 23.4 kHz in Hawaii. A-52 has now taken this receiver back to his home in South Africa where it is now tuned to 22.3 kHz in North West Cape, Australia. Hopefully the receiver survived the trip and will soon be recording ionospheric disturbances during the early UT hours not presently covered by the AAVSO.



RECENT TREND OF RELATIVE SUNSPOT NUMBERS

SUDDEN IONOSPHERIC DISTURBANCES RECORDED DURING SEPTEMBER 1980

AAVSO (R_a) and Zurich (R_z) relative sunspot numbers

Day	September 1980 R_a	September 1980 R_z	August 1980 R_z
1	205	208	78
2	225	226	63
3	229	232	65
4	230	233	65
5	189	188	53
6	169	179	72
7	149	136	64
8	144	140	90
9	122	108	125
10	135	119	130
11	137	125	181
12	123	128	174
13	111	133	172
14	83	100	193
15	82	83	192
16	76	98	196
17	80	93	190
18	121	114	195
19	154	137	185
20	152	150	179
21	144	118	152
22	171	147	139
23	170	158	154
24	179	178	122
25	169	168	109
26	178	209	101
27	178	231	98
28	173	181	124
29	151	166	158
30	123	149	184
31			194
Means	151.4	154.5	135.4

DAY	MAX	SEA	SES	DEF	FREQ	OBSERVERS
1	1414	2	5	3		A-1,19,26,32,48
1	1625	2	5	6		A-1,5,19,26,31,32,48,51
1	1858	1+	4	3		A-5,19,26,48
1	1938	2	4	3		A-5,19,26,48
2	1319	2	3	3		A-19,32,50
2	1636	2	4	4		A-5,19,31,32
2	1810	1+	4	7		A-19,31,32,51
3	1352	1+	4	3		A-5,26,32,48,51
3	1425	1+	4	3		A-5,26,32,48,51
3	1722	1+	5	5		A-5,19,26,31,32,48,51
3	1931	2+	5	7		A-1,5,19,26,31,32,48,51
3	2100	2	5	5		A-5,26,31,32,48,51
4	1716	1+	5	3		A-19,26,32,48,51
4	2222	2	4	5		A-5,26,31,32,48,51
5	1812	2+	4	5		A-31,48,51
7	1302	1-	3	3		A-19,26,32
7	1431	1+	4	3		A-5,19,26,48,51
8	1450	2+	2	1		A-48
8	1915	2+	5	5		A-1,5,19,26,31,32,48,51
9	1912	2	4	4		A-5,19,31
10	2205	2	4	5		A-5,19,26,31
11	1337	1-	3	2		A-19,26,48,51
11	1422	1-	2	2		A-19,26
11	1526	1-	2	2		A-19,26
17	1827	2+	5	6		A-5,19,26,31,32,48,51
18	1806	2	3	2		A-19,26,48,51
20	1944	1+	5	7		A 19,26,31,32,48,50,51,52
20	2018	1-	4	6		A 19,26,31,52
22	2225	1+	2	4		A-31,50
23	1603	2	4	6		A-1,19,31,50,51
24	1639	1+	5	5		A-1,19,26,31,32,48,50,51
24	1914	1-	1	1		A-48
26	1751	1+	5	8		A 19,26,31,48
27	1725	1+	5	7		A 19,26,31,32,48,50
30	1831	3	5	7		A-1,5,19,50