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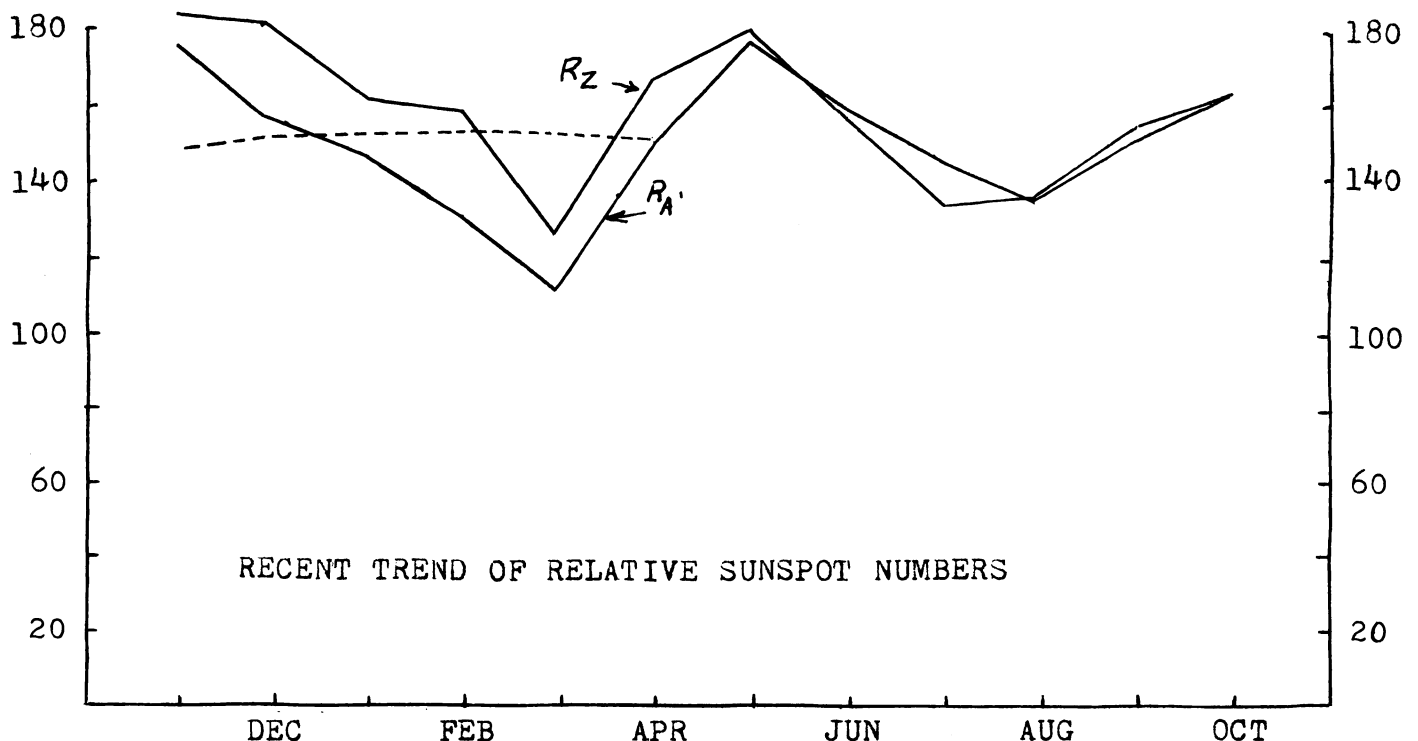
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SOLAR ACTIVITY DURING OCTOBER

The mean of the AAVSO sunspot numbers rose from 151.4 to 163.0 for October. Both of these means are low compared to the September and October 1979 means so the 12-month smoothed mean fell two points to 150.7 for April 1980.

The ionosphere was much more affected by solar flare activity during October than the previous month. The list of disturbances on page two contains 68 events compared to 35 in September. Charts this month are all of the 17th which was the most active day. At the bottom of the page the normally sensitive 73.6 kHz trace shows only two of the 12 events clearly with only a hint of two additional. Above it 21.4 kHz recorded at Louisville shows six events and the same signal recorded above it at Thornwood, New York shows only five. Why the 6th event at 2015 UT is missing is a mystery. The fourth chart is a recording of 29.5 kHz now known from reliable information to be located in Silver Creek, Nebraska. This signal shows the same six events very clearly plus four additional small ones. This 29.5 trace was by far the most sensitive this month. Above it is a recording of 55.5 kHz. The identity and location of this signal is unknown although it is a frequency assigned to the US Navy. This trace shows an additional event at 2145 UT which suggests that the signal is probably somewhere on the west coast of the USA. A 22.3 kHz recording above it confirms the 2145 UT event and shows an additional event at 2337 UT. Note the importance of having several signal sources in order to show all twelve events.



AAVSO (R_a) and Zurich (R_z) Relative sunspot numbers for October 1980

Day	R_a	R_z
1	124	151
2	118	135
3	128	139
4	101	121
5	96	96
6	109	116
7	156	135
8	184	181
9	225	186
10	246	235
11	249	260
12	257	234
13	237	197
14	232	232
15	221	209
16	184	187
17	150	173
18	144	150
19	133	137
20	127	167
21	146	155
22	159	164
23	140	140
24	145	127
25	103	123
26	137	119
27	119	134
28	165	136
29	150	173
30	188	170
31	180	167
Means	163.0	162.9

DAY	MAX.	SES	DEF.	FREQ.	OBSERVERS
1	1258	1+	1	1	A-32
2	1706	2	4	3	A-19, 32, 48, 26, 28
3	1345	1-	1	1	A-19
3	1650	2	2	3	A-19, 48, 26
7	1416	2+	5	5	A-19, 32, 31, 5
7	1611	2+	5	5	A-19, 32, 31, 1, 5
7	1736	2+	5	6	A-19, 32, 31, 5
8	1543	2	5	7	A-19, 48, 51, 32, 31, 1, 26, 28, 5
8	1707	2+	5	7	A-19, 48, 51, 32, 31, 1, 26, 28, 5
8	1919	2	5	8	A-19, 48, 32, 31, 1, 26, 28, 5
8	2031	2	5	8	A-19, 48, 51, 32, 31, 1, 26, 28, 5
9	1752	2	5	4	A-19, 48, 51, 31, 26, 28
9	2001	2	5	6	A-19, 32, 48, 51, 31, 26, 28
10	1512	1-	2	4	A-19, 51, 31, 26
10	1712	2	4	6	A-19, 51, 31, 1, 26, 28, 5
10	1946	1-	3	5	A-19, 51, 31, 1, 26, 28, 5
10	2005	1-	3	3	A-19, 32, 31
11	1331	1+	2	2	A-32, 51, 26
11	1745	2	5	7	A-19, 32, 48, 51, 31, 1, 28, 5
11	1928	1-	2	4	A-19, 51, 31, 5
11	2020	2	5	7	A-19, 32, 51, 31, 28
12	1525	1+	4	4	A-19, 32, 51, 5
12	1555	1+	4	3	A-19, 51, 5
12	1821	2	1	1	A-19
13	1325	1+	2	1	A-32
13	1938	1+	5	8	A-19, 32, 48, 51, 31, 5
14	1814	1+	4	5	A-19, 32, 31, 5
15	1610	2+	5	4	A-19, 32, 48, 51, 31
15	1736	1-	5	8	A-19, 32, 48, 51, 31
15	1926	3	5	3	A-19, 32, 48, 51
16	1405	1-	4	3	A-19, 32, 48, 51, 26
16	1450	1+	2	2	A-19, 48, 26
16	1535	1+	3	2	A-19, 48, 51, 26
16	1655	1+	4	3	A-19, 32, 48, 51, 26

DAY	MAX.	SES	DEF.	FREQ.	OBSERVERS
17	1414	1-	5	3	A-19, 48, 51, 41, 26
17	1512	1+	5	3	A-19, 48, 51, 41, 26, 5
17	1618	1-	5	8	A-19, 32, 48, 51, 31, 1, 41, 26, 28, 5
17	1642	2	5	8	A-19, 32, 48, 51, 31, 1, 41, 26, 28, 5
17	1736	1-	5	5	A-19, 32, 31, 41
17	1800	1-	5	6	A-19, 32, 31, 41, 5
17	1840	1-	5	6	A-19, 32, 41, 41, 5
17	1915	U	5	7	A-19, 32, 48, 31, 41, 26, 28, 5
17	1920	2	5	9	A-19, 32, 48, 51, 31, 1, 41, 26, 28, 5
17	2014	1+	5	7	A-19, 51, 31, 41, 26, 28, 5
18	1414	1+	1	2	A-19, 26
18	1512	2	5	6	A-19, 32, 48, 51, 31, 26, 5
18	1525	1-	4	4	A-19, 48, 31, 41
18	1544	1-	4	4	A-19, 48, 51, 31, 26, 5
18	1605	1+	2	1	A-19
18	1645	1-	5	6	A-19, 48, 31, 41, 26, 5
18	1840	2+	5	9	A-19, 32, 48, 51, 31, 1, 41, 26, 28, 5
18	2131	1-	5	5	A-19, 31, 41
18	2149	1-	4	4	A-19, 31
19	1551	1-	4	3	A-19, 31
19	1621	1-	1	1	A-19
19	1656	1+	5	5	A-19, 48, 31, 41
20	1833	2	5	8	A-19, 48, 51, 31, 50, 1, 41, 26, 28, 5
22	1535	2	5	7	A-19, 32, 48, 31, 1, 41, 26, 28, 5
23	1556	2	5	4	A-19, 32, 48, 31, 26, 28
25	1847	1+	5	5	A-19, 48, 31, 26, 28
26	2010	1+	5	7	A-19, 48, 51, 31, 50, 41, 26, 5
27	1644	2	5	5	A-19, 48, 31, 41, 26
27	1730	2	5	8	A-19, 48, 31, 1, 41, 26, 28, 5
28	1635	1-	1	2	A-19, 32
28	1905	1-	4	5	A-19, 32, 31, 41, 26
29	1537	1+	5	7	A-19, 32, 48, 51, 31, 50, 41, 26, 28, 5
30	2057	1+	5	6	A-19, 48, 51, 31, 50, 28
31	1718	1-	5	6	A-19, 32, 48, 31, 1, 26, 5

