Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS— SOLAR DIVISION

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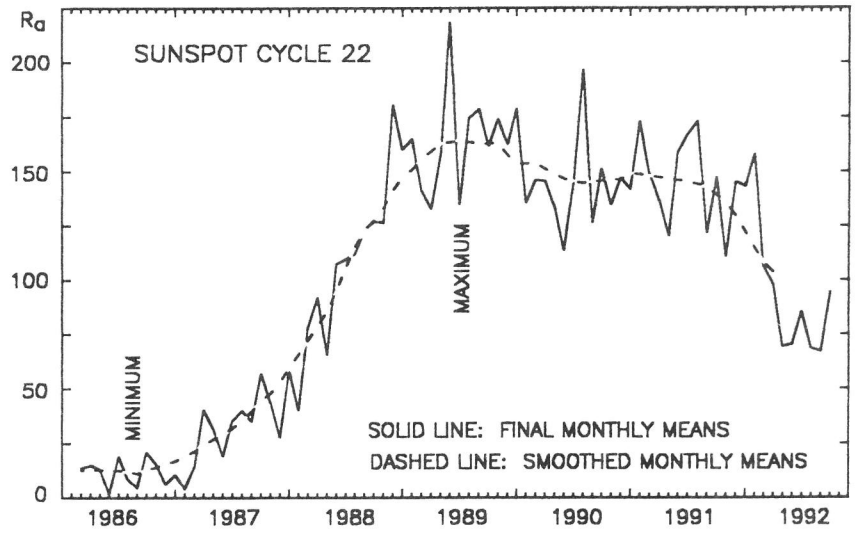
American Relative Sunspot Numbers for October

	R_a Final				
1)	89	11)	61	21)	97
2)	95	12)	45	22)	111
3)	104	13)	43	23)	93
4)	120	14)	47	24)	101
5)	129	15)	47	25)	121
6)	130	16)	54	26)	134
7)	110	17)	65	27)	130
8)	95	18)	79	28)	134
9)	90	19)	90	29)	126
10)	81	20)	82	30)	107
				31)	82

Mean: 93.3
Number of reports: 99



October Summary: Solar activity was low and moderate between the 1st and 9th; eight class M flares were recorded. These events took place in NOAA/USAF Regions 7293 (S09, L068, HAX) [one], 7301 (S16, L333, CSO) [one], 7305 (N12, L302, DAO) [one], and 7306 (S08, L282, DAI) [four]. An additional event was optically uncorrelated. Minor geomagnetic storming associated with a coronal hole occurred on the 1st. Thereafter, conditions varied between quiet and unsettled. A sudden impulse (14 nT) was recorded at Boulder on the 8th.

Activity was mainly low with three days in the moderate range during the following two weeks. The instances of moderate conditions were related to the eruption of a class M2.1/1B solar flare in Region 7306 on the 10th, and class M1.1/1F and M4.1/2B events on the 19th and 23rd in Region 7315 (N06, L126, DAI). The geomagnetic field became disturbed on the 12th, and again on the 14th-16th. The second of these storms was associated with coronal hole activity. Other events of interest included an eruptive prominence at the NW limb on the 14th with material visible out to 0.16 solar radii, two filament disappearances on the 15th, and another small filament which disappeared from the Sun's NW quadrant on the 20th/21st.

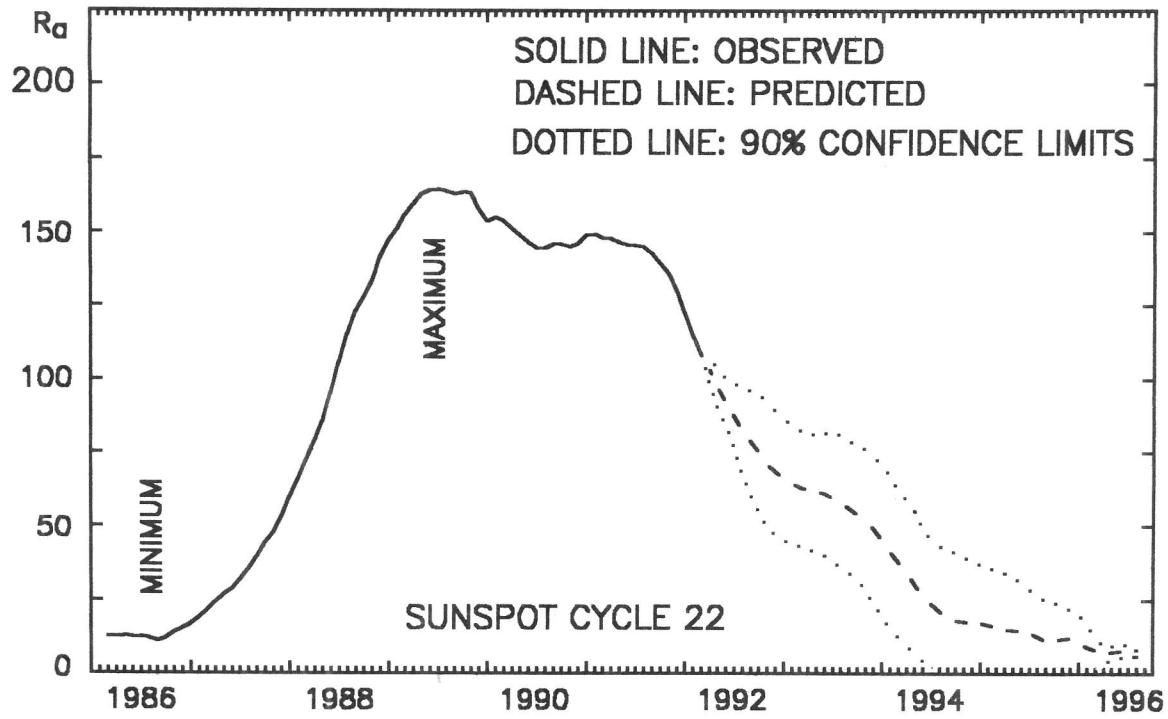
The Sun's activity level varied between low and high during the final eight days of October. The largest spot-group on the disk (~1500 millionths solar hemisphere), Region 7321 (S25, L070, EKC), produced five class M flares during a 24-hour period beginning just before 1800 UT on the 26th, and Regions 7315 and 7323 (S13, L014, DAI) added sixth and seventh events on the 27th. Three additional class M flares, on the 27th, 29th and 31st, were uncorrelated. Region 7321 also spawned class M2.2/SB and M1.3/SF events on the 29th and 31st, respectively. None of these flares attained major event status. An eruptive prominence extending to 0.14 solar radii was observed at the SW limb on the 26th. The geomagnetic field was mainly quiet to unsettled, with a few brief periods of storm conditions at middle and higher latitudes.

The highlight of the final days of the month occurred on the 30th when Region 7321 produced the largest energetic event during October: a class X1.7/2B Tenflare. A proton event at satellite altitude and polar cap absorption began shortly thereafter along with periods of major geomagnetic storm levels at high latitudes; these conditions continued in progress as the month ended. The smoothed mean American Relative Sunspot Number for April, 1992, declined to 102.6.

The estimated mean American Relative Sunspot Number for 1-15 November is 79. The Sun continued to be fairly active during the first half of November. On the 2nd, Region 7321 (see above) generated the largest energetic event since June, 1991; a class X9.0 Tenflare. This powerful flare occurred when the spot-group was over a day beyond west limb passage. Just one class M flare has been recorded during this interval.

[A portion of this information was obtained from the **SELDADS** data-base.]

A Prediction of Future Sunspot Activity During the Remainder of Cycle Twenty-Two



(Prepared from data contained in Preliminary Report and Forecast of Solar Geophysical Data, **894**, October, 1992.)

Sudden Ionospheric Disturbances (SES) Recorded During September, 1992

Records were received from A3,9,40,50,59,61,62,63,65,66,67,68,69,70,71,72,73,74,75.

Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def
4	0032	1-	5	6	1047	1	5	8	1655	2	5	16	2009	1+	5
4	1016	2	5	6	1200	2+	5	8	1930	2	5	16	2114	2	5
4	1232	1-	5	6	1311	2+	5	9	1056	1	5	16	2338	1+	5
4	1414	1+	5	6	1516	2+	5	9	1140	1+	5	17	0731	1+	5
4	1443	1-	5	6	1644	1+	5	9	1438	1-	5	17	0848	2+	5
4	1623	1+	5	6	1713	2	5	9	1529	1	5	17	1009	1	5
4	1854	1	5	6	1833	1-	5	9	1801	2+	5	17	1120	1+	5
5	0805	2	5	6	1846	3	5	9	2101	1	5	17	1300	2	5
5	1128	2	5	6	2057	2+	5	10	1035	1	5	17	1342	1+	5
5	1216	1	5	7	0632	2+	5	10	1815	1	5	17	1516	2	5
5	1334	2	5	7	0857	2	5	10	1938	1-	5	17	1700	1	5
5	1439	2	5	7	1240	1+	5	10	1954	1	5	17	1721	1+	5
5	1559	1	5	7	1309	2+	5	10	2255	2+	5	17	1838	2	5
5	1622	2	5	7	1431	1	5	11	0809	2	5	17	1920	1+	5
5	1725	1-	5	7	1503	1-	5	12	1322	1	5	17	2048	2	5
5	1814	1-	5	7	1728	1+	5	12	1540	2	5	19	1120	1	5
5	1853	2	5	7	1850	1+	5	13	1020	2	5	20	1408	1+	5
5	2014	2	5	7	1936	2+	5	14	1649	1-	5	21	1102	1-	5
5	2125	1	5	7	2112	1+	5	16	1017	2	5	25	1618	1-	5
6	0655	2+	5	7	2302	1+	5	16	1349	1-	5	27	0937	1-	5
6	0848	1-	5	8	0837	2	5	16	1454	1+	5	27	2025	1	5
6	0905	2	5	8	1208	2	5								

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