Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS— SOLAR DIVISION

Peter O. Taylor, editor
4523 Thurston Lane, #5
Madison, WI 53711-4738 USA

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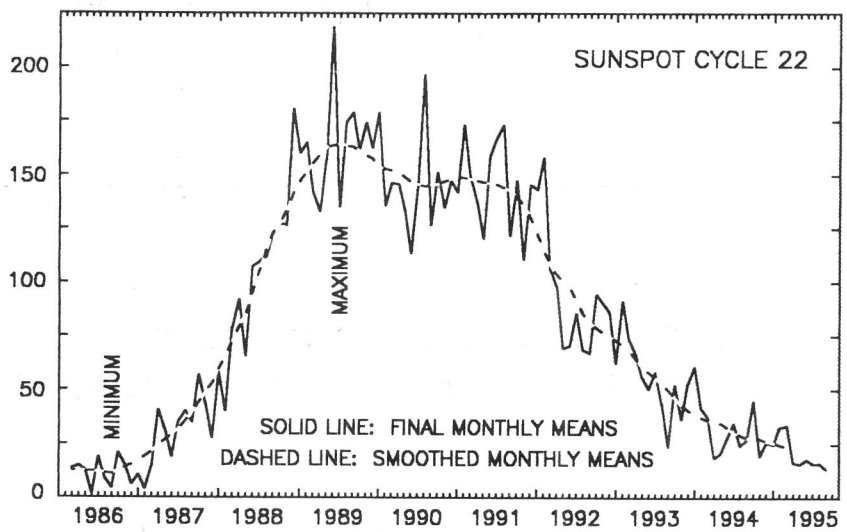
American Relative Sunspot Numbers for September

		R_a Final			
1)	11	11)	0	21)	26
2)	9	12)	10	22)	29
3)	10	13)	7	23)	34
4)	20	14)	0	24)	27
5)	11	15)	10	25)	24
6)	9	16)	8	26)	27
7)	2	17)	0	27)	28
8)	0	18)	3	28)	15
9)	0	19)	13	29)	9
10)	0	20)	24	30)	8

Mean: 12.5
Number of reports: 94



September Summary: Solar activity was very low on all but one day during the first week of September. The lone exception occurred on the 5th when an optically-uncorrelated class C1 X-ray burst boosted activity into the low range. Other noteworthy events during the period included 6- and 11-degree filaments which disappeared from the Sun's SE and NW hemispheres (respectively) on the 1st, and a series of impressive eruptions from a region that made a brief appearance near the NW limb before rotating off the visible hemisphere on the 6th. The geomagnetic field was quiet until the 5th when a coronal hole rotated into a geoeffective position and spawned major storm conditions at all latitudes. The >2 MeV electron fluence was normal until the 7th; thereafter it was moderate and high.

Activity continued to be very low during week two. The geomagnetic field was initially at minor storm levels, but by the 10th the disturbance had declined and field conditions were in the quiet to unsettled range. The respite was short-lived, however, and intervals of storm conditions re-occurred between the 11th and 14th. These disturbances are believed to be associated with coronal hole phenomena. The >2 MeV electron fluence remained in the moderate to high range.

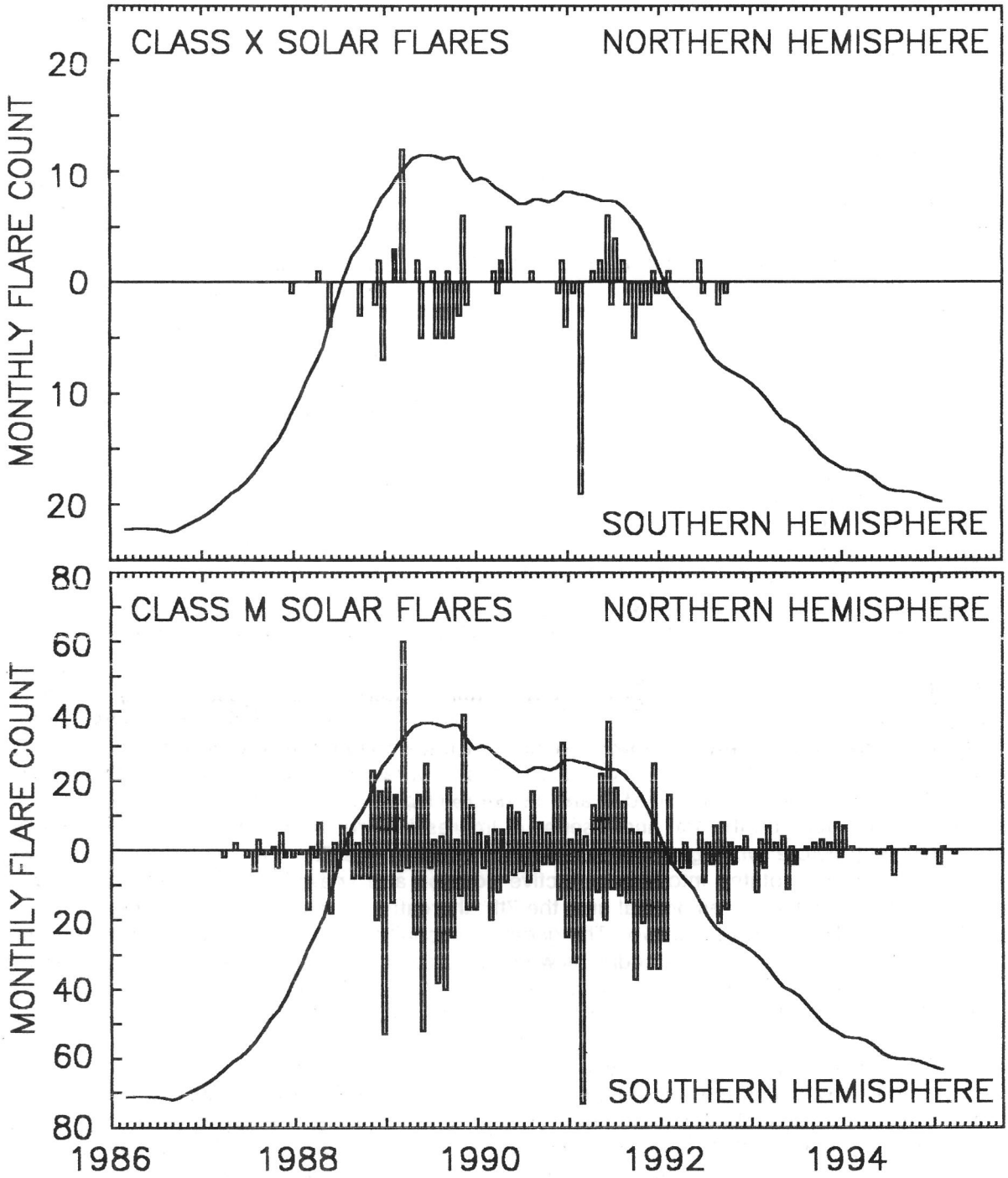
Solar activity was low on the 20th due to the production of a C3/SN flare in *NOAA/USAF* Region 7907 (N05, L055, EAO). Otherwise, very low activity was the rule during the third week of September. After a lapse of nearly three weeks, a spot-group finally appeared in the Sun's Southern Hemisphere on the 15th. However, it is interesting to note that this group -- Region 7906 (S18, L255, CRO) -- was associated with new Cycle 23 rather than the current cycle. In fact, until the 21st and the arrival of a small group at S04, no Cycle 22 group had surfaced in the Southern Hemisphere since August 7th. The geomagnetic field was mainly quiet to unsettled with minor storm conditions on the 15th. The latter may have been instigated by a solar wind transient. The >2 MeV electron fluence varied between moderate and normal.

Activity was very low during the remainder of September. The geomagnetic field was in the quiet to unsettled range until the 27th, when a minor (major at high latitudes) disturbance began. Consequently, numerous reports of visual aurorae sightings were received for the 27th/28th. According to *Space Weather Operations* (formerly the Space Environment Services Center), this storm was likely to be the result of a previously undetected shock-front produced by a coronal mass ejection. The disturbance began to subside on the 28th. The >2 MeV electron fluence was near-normal throughout the period. The smoothed mean American Relative Sunspot Number for March 1995 is 22.7.

The mean estimated American Relative Sunspot number for 1-14 October is 18. On the 12th and 13th, reversed polarity Region 7912 (S10, L143, EHO) produced the first class M flares (M1.5/SF and M4.8/1F) since April 1995.

[A Portion of the above information was obtained from **SELDADS**]

Class M and X Solar Flare Occurrence by Hemisphere During Solar Cycle 22



Source: Vertical bars represent monthly class M or X solar flare totals by hemisphere as presented in the SESC/SWO Preliminary Report and Forecast of Solar Geophysical Data. The solid line depicts the smoothed monthly *American Relative Sunspot Number*. All three indices are computed as of 1 October 1995.

Sudden Ionospheric Disturbances (SES) Recorded During August 1995

Records were received from A5,9,40,50,59,61,62,63,65,68,69,70,71,72,73,74,75,76,77,78,80,81,82,83,84,85

Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	D
8	1920	1-	5	11	2052	1+	5	18	1900	2+	5	30	0549	1-	4
8	1934	1-	5	18	1720	2+	5								

Analysts: J. Ellerbe; S. Hansen; M. Hayden; P. King; A. Landry; R. Papp; G. Rosenberg; A. Stokes; M. Taylor; P. Taylor; L. Witkowsk

Frequencies recorded (kHz): 16.8; 18.3; 19.6; 20.3; 21.4; 23.4; 24.0; 24.8; 30.6; 48.5; 51.6.

INTERNET: ptaylor@ngdc.noaa.gov **FAX:** [USA] 608-231-2385