Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS— SOLAR DIVISION

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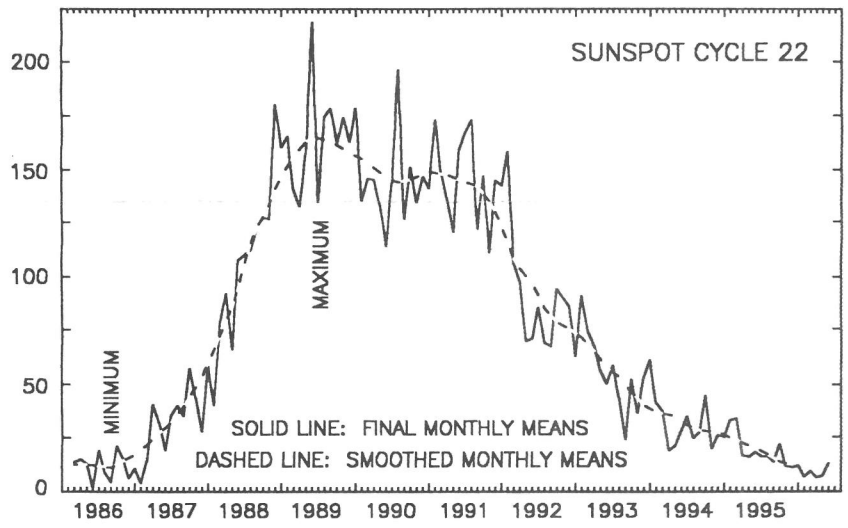
American Relative Sunspot Numbers for June

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

Mean: 11.6
Number of reports: 90



June Summary: Solar activity was very low between June 1st and 6th. New cycle spotted **NOAA/USAF** Region 7967 (N35, L327, AXX) was present on the Sun's visible hemisphere on the 1st and 2nd, but little other noteworthy activity occurred. The geomagnetic field was mostly quiet with occasional periods of unsettled conditions until the 6th, when minor storming occurred. The latter occurrence has been attributed to an earlier filament disappearance. The >2 MeV electron fluence was normal.

In spite of some moderate sunspot activity, the Sun continued to be very quiet from the 7th through 13th. The geomagnetic field was mostly quiet, and the daily >2 MeV electron fluence remained in the normal range.

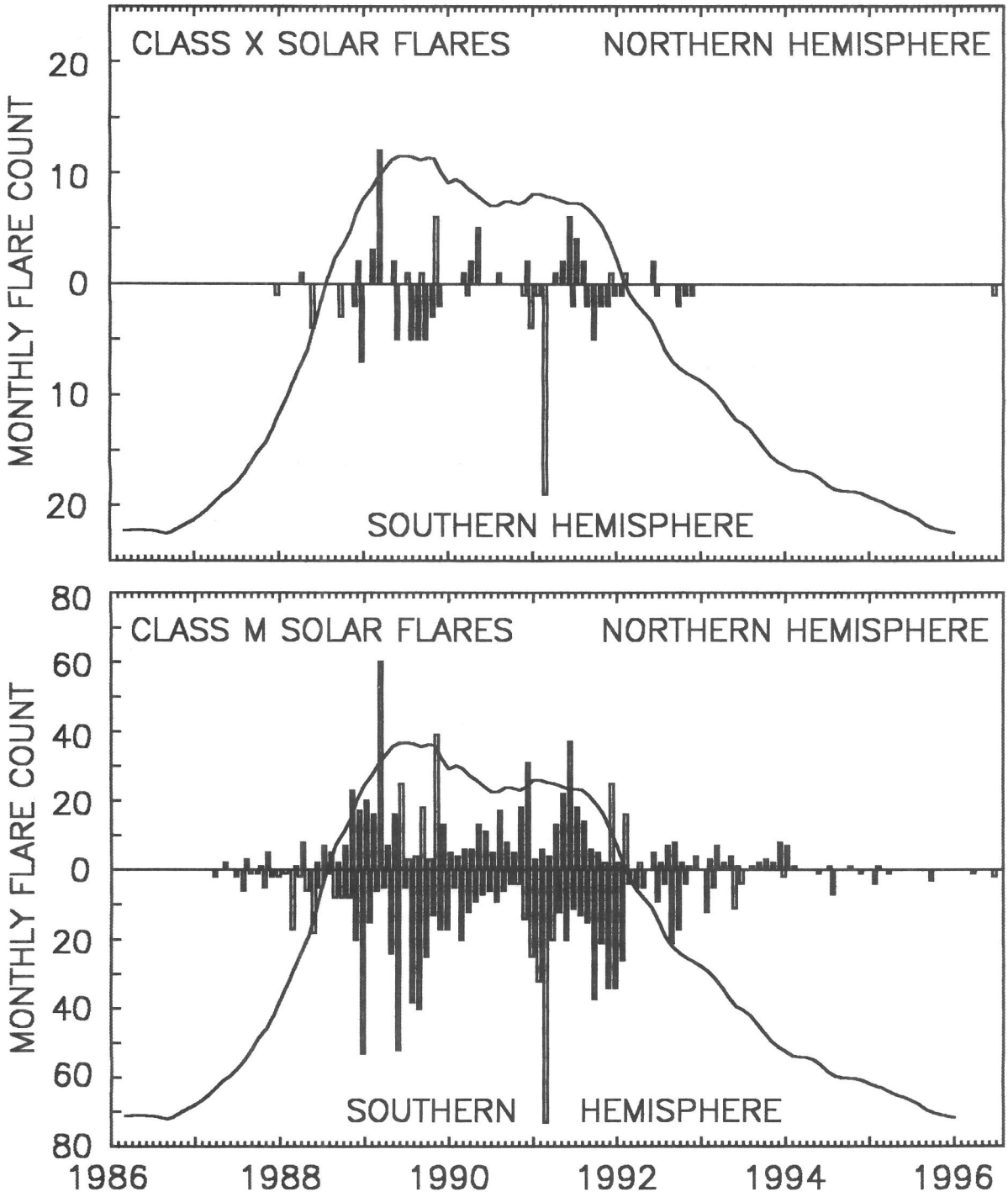
Activity continued to be very low between the 14th and 20th. The Sun's visible hemisphere was spotless until new cycle Region 7972 (N28, L105, BXO) emerged on the 18th and remained active throughout the rest of the period. Other events of interest included prominence activity noted at both limbs on the 17th. The geomagnetic field was quiet or unsettled for most of the week, although minor storming (without an obvious source) was recorded on the 19th. The >2 MeV electron fluence continued to be in the normal range.

With the exception of the 24th -- after Region 7976 (N12, L359, BXO) spawned a class C1/SF solar flare late the previous day and raised the 24-hour activity level to low -- solar activity continued to be very low between the 21st and 30th. At month's end, no spotted regions had appeared in the Sun's Southern Hemisphere since June 9th. As was the rule during the earlier portion of June, the geomagnetic field was mostly quiet, and the >2 MeV electron fluence was normal. As Cycle 22 draws to an expected end sometime during the next several months, the smoothed mean American Relative Sunspot Number for December 1995 continued to decline, falling to a value of 11.2.

The estimated mean American Sunspot Number for 1-14 July is 12. Activity continued to be very low during the first week of July. However, the level rose to low on the 8th by virtue of a class C1 flare in Region 7978 (S10, L248, DAI), and to high on the 9th after this (Cycle 22) region spawned the first class X flare (X2.6/1B) to be recorded since November 1992 (see page 2). The flare was accompanied by a 10 centimeter radio burst, and a coronal mass ejection is believed to have occurred in conjunction with this event. Region 7978 also produced a class M flare (M1.4/SF) prior to the major flare, and a second (M1.0/SF) early on the following day. This group was a fast-evolving region which developed into a beta-gamma-delta magnetic configuration while demonstrating a remarkably rapid increase in area. It was also the source of numerous flares of class C and lesser X-ray intensity. The geomagnetic field was mainly quiet with intervals of unsettled or active conditions. The daily >2 MeV electron fluence remained at near background levels.

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

Updating Class M/X Flare Occurrence by Hemisphere During Solar Cycle 22



Source: Vertical bars represent monthly class M or X solar flare totals 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 10 July 1996.

Sudden Ionospheric Disturbances (SES) Recorded During May 1996

Records were received from A9,40,50,61,62,63,68,69,70,71,72,73,74,75,76,77,78,80,81,82,83,84,85

Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	D
5	1836	2+	5	6	1520	1-	5	8	2144	1+	5	11	2110	1-	5
6	0740	1+	5	8	1303	1-	5	8	2234	1	5	11	2122	1	5
6	0922	2	4	8	1550	1-	5	11	1818	1+	5	12	1929	1-	5

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