

Solar Bulletin

THE AMERICAN ASSOCIATION OF VARIABLE STAR OBSERVERS— SOLAR DIVISION

Peter O. Taylor, editor
237 E Hoxie Street
Spring Green, WI 53588 USA



Internet: ptaylor@ngdc.noaa.gov
74270.1516@compuserve.com
Fax: [USA] 608-231-2385

Volume 53 Number 3

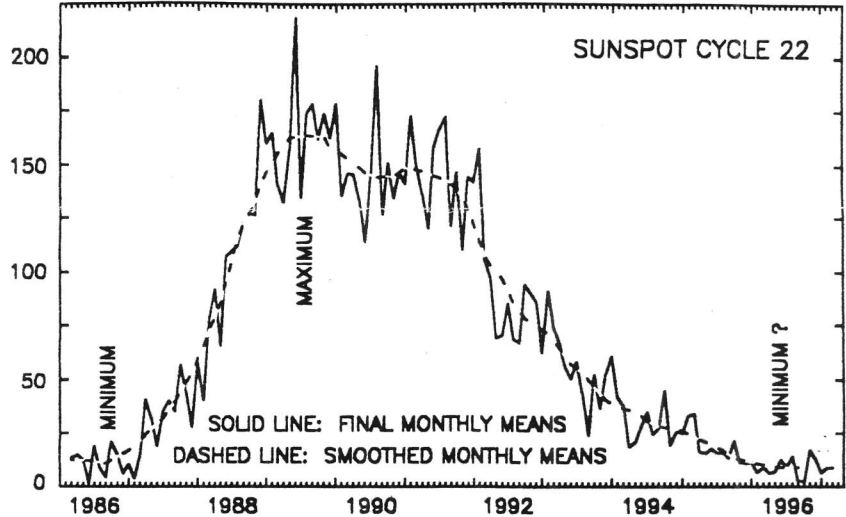
March 1997

American Relative Sunspot Numbers for March

		R _a Final			
1)	0	11)	10	21)	0
2)	0	12)	12	22)	0
3)	0	13)	12	23)	0
4)	0	14)	18	24)	0
5)	0	15)	14	25)	4
6)	7	16)	14	26)	0
7)	8	17)	11	27)	8
8)	17	18)	11	28)	11
9)	17	19)	0	29)	19
10)	14	20)	8	30)	17
				31)	13

Mean: 7.9

Number of reports: 80



March Summary: Solar activity continued to be very low during the first week of March. The geomagnetic field was quiet to unsettled with intervals of high-latitude storm conditions on the 2nd and 5th. The >2 MeV electron fluence was initially high, then gradually declined during the week.

With a single exception, few noteworthy solar activity levels or phenomena were recorded between the 7th and 13th. The lone feature which Space Environment Center (SEC) referred to as "remarkable" was seen in a SOHO EUV HEII image taken on the 8th at 1014 UT. SEC described the phenomenon as visible over the northeast limb, with the appearance of a prominence eruption that extended to a length of about 0.2 solar radii. The geomagnetic field was mostly quiet with periods of unsettled or active conditions, and the >2 MeV electron fluence was normal, rising a bit on the last day.

Activity continued to be very low between the 14th and 20th. The geomagnetic field was generally quiet to unsettled, and the >2 MeV electron fluence was in the normal range.

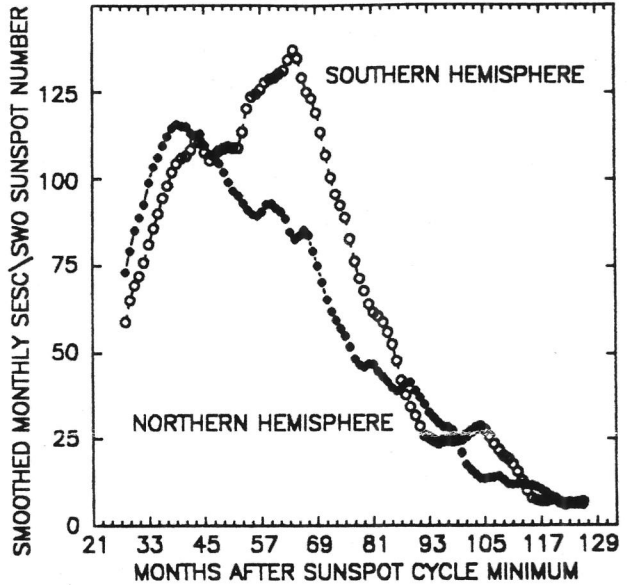
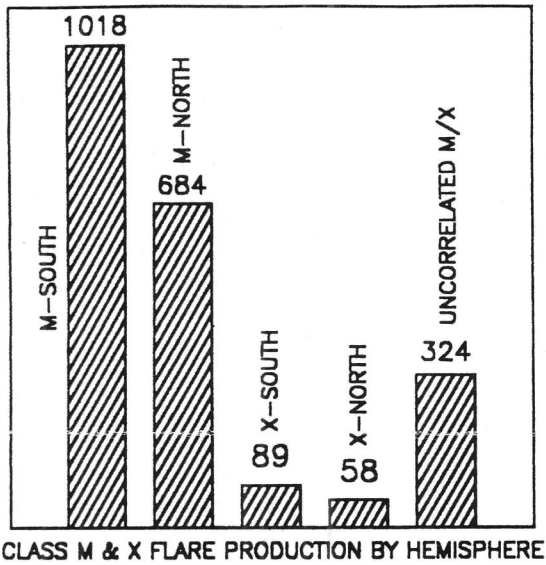
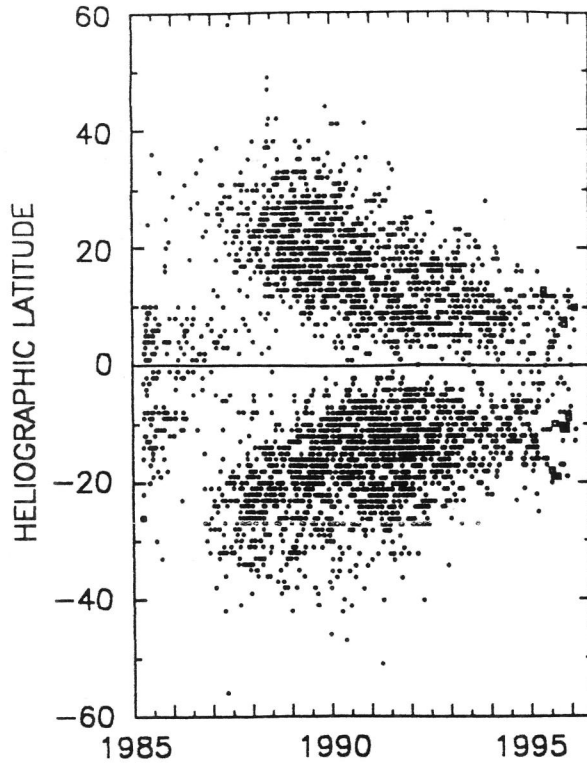
Very low solar activity levels were the rule between the 21st and 27th. The visible hemisphere was spotless until new cycle NOAA/USAF Region 8026 (S25, L294, BXO) made its appearance on the 27th. This region is the probable source of an optically un-correlated class-C flare which occurred on the 27th. Otherwise, a large coronal mass ejection -- which may have occurred on the back side of the Sun -- was observed off the west limb around mid-week. Intervals of minor to major geomagnetic storm conditions were recorded at high latitude sites on the 26th, probably caused by a high-speed coronal hole wind stream. The daily >2 MeV electron fluence rose accordingly, with high flux rates observed late in the period.

Solar activity climbed into the low range on the 28th, due to the occurrence of a single class-C X-ray flare without optical correlation. A minor to major (at some high-latitude sites) geomagnetic disturbance -- consistent with a coronal transient -- occurred on the 28th. The >2 MeV electron fluence was high throughout the remainder of the month, although field conditions declined somewhat. (Note that Region 8026 attained beta-gamma-delta magnetic configuration late in the month, and spawned a class-M solar flare in conjunction with a coronal mass ejection on April 1st.) The smoothed mean American Relative Sunspot Number for September 1996 is 8.1.

The estimated American Relative Sunspot Number for 1-10 April is 19.

[A Portion of the above information was obtained from Space Environment Center]

Diagraming Solar Cycle 22 -- Part II



SUDDEN IONOSPHERIC DISTURBANCES (SES) RECORDED DURING FEBRUARY 1997

Records were received from A9,50,52,61,62,63,69,70,71,72,73,74,75,76,77,78,80,81,82,83,84,85,86.

Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def	Day	Max	Imp	Def
2	1057	1-	4	2	1930	1-	5	4	1849	1-	5	20	1144	1-	5
2	1145	1-	5	2	2120	1-	5	19	2222	1	5				
2	1349	1-	5	4	1119	1-	5	20	0804	1	5				

Analysts: J. Ellerbe; S. Hansen; M. Hayden; P. King; A. Landry; D. Overbeek; 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; 71.6.