

Early reports from those lucky enough to travel to this month's Solar eclipse indicate that it was a particularly spectacular event and that the corona was "typical" of this stage in the Solar cycle. The received wisdom is that the corona is extended in the equatorial plane near minimum but more evenly distributed at maximum. Readers of the November 1994 Sky and Telescope will know that this is now in dispute and it will be interesting to see the photographs of this eclipse and compare them to those of 1991.

**WHITE LIGHT SOLAR ACTIVITY**

**White light MDF, 1994 October**

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
E.H. Strach	1.62	1.69	3.31	26	60.27	11	10.30	26
B. Hardie	1.11	2.58	3.70	17	54.41	17	-	-
J.G. Gissing	1.92	1.23	3.15	13	-	-	6.70	13
W. Heyes	1.71	1.29	3.00	7	-	-	7.71	7
M. Götz	-	-	2.65	20	-	-	-	-
CUAS	1.50	2.50	4.00	15	57.00	15	-	-
MEANS	1.54	1.93	3.31	98	56.81	43	8.89	46

MDF = Mean Daily Frequency of active areas, R = sunspot number, Q = mean quality estimate (JBAA 98,6,pp282-286)

Table 1

**White light MDF, 1994 September**

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
E.H. Strach	1.04	1.30	2.34	23	35.10	20	6.35	23
MEANS	0.88	1.39	2.17	161	34.08	96	5.77	70

Table 2

**BAA/TA Comparison**

Month	Active areas		Spot numbers	
	BAA	TA	BAA	TA
1994 July	2.70	2.36	37.96	39.74
1994 August	1.83	1.54	27.16	24.36
1994 September	2.13	2.17	31.40	34.08

**Sunspot Activity, 1994 October**

October saw an overall increase in activity over previous months. Strach reports that a large group came around the E limb on the 12th at N10/257 but on approaching the CM it had dissolved into a large leader with a chain of smaller spots following it in a W to E direction covering 12° of longitude.

**Sunspot Activity, 1994 September**

Due to a short absence last month I had to prepare this column immediately the deadline had passed. This meant that Eric Strach's observations were missing from the report. Table 2 gives the revised MDF figures for last month including his observations.

Strach's average *spot latitudes* in October were 11.25° in the N and 8.1° in the S. A near-equatorial spot was seen on the 13th within 0°.1 of the equator but it lasted only until the 17th. This spot was preceded by faculae in the same area as early as the 8th and in H $\alpha$  by bright flocculi and flaring. Associated filaments were particularly bright on the 10th and 12th.

**MONOCHROMATIC SOLAR ACTIVITY**

**Prominence MDF, 1994 October**

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
B. Hardie			3.35	14						
E.H.Strach	1.17	1.72	2.89	18	0.78	1.22	2.00	0.39	0.50	0.89

**Prominence activity**

Strach reports that his prominence MDF is the lowest since 1987 February. Most events were unremarkable

and many extended only just beyond a 30" threshold. The ejection of a minor prominence on the E limb at S18 was seen on the 9th between 0950 and 1525.

## Filaments

In contrast to the low level of prominence activity the disk was more active, showing flares, filaments and filamentous surges.

On the 15th Strach saw a V-shaped filament to the N of the group at N10/257. This had a very dark E limb due to rapid motion in the line of sight. Also on the 15th a very long, gently S-shaped filament separated the eastern portion of the same group and was associated with the flare described above. On the 18th, the N half of the S shaped filament was still in evidence.

Four filaments were seen in the E half of the S hemisphere on the 25th. Strach notes that these filaments may have been visible during the total eclipse of November 3.

## Flares, 1994 October

Date	Time	Lat	CMD	Type	Obs.
5	0920-0930	S12	W75	Sf	EHS
5	1059-1132	N10	E79	SB	BH
5	1102	S10	W04	SB	BH
5	1130	S5	E10	SB	BH
5	1136-1148	S5	E10	1B	BH
6	0925	N9	E70	Sf	EHS
8	1135	S3	E54	Sf	EHS <sup>1</sup>
8	1149-1207	S3	W48	1B	BH <sup>2</sup>
8	1150	S10	W40	SB	BH
8	1212	S9	W40	SB	BH
8	1214	N10	E37	Sn	BH
9	1138	S10	W56	SB	BH
10	1002-1009	S10	W68	SB	BH
12	0940	N3	W2	Sf	EHS
15	1020	N11	E40	SN	EHS <sup>3</sup>
23	1040	N10	W70	1F	EHS
25	1025-1110	S9	W14	2N	EHS

### Notes

1. Precursor to the near-equatorial spot group.
  2. No spots seen.
  3. Associated with large filament.
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