

**White light MDF, 1997 December**

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
P. Meadows	2.27	1.18	3.45	11	51.18	11	10.45	11
J.G. Gissing	1.80	0.80	2.60	5	-	-	4.80	5
E.H. Strach	1.58	0.95	2.53	19	41.95	19	8.60	19
G.F. Johnstone	1.66	1.33	3.00	3	-	-	-	-
K. Medway	1.00	0.55	1.55	18	-	-	-	-
CUAS	1.71	1.00	2.71	14	35.20	14	-	-
G. North	2.25	0.50	2.75	4	41.75	4	-	-
T. Tanti	1.90	0.80	2.70	10	42.20	10	7.40	10
MEANS	1.65	0.87	2.52	84	42.10	58	8.36	45

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

**BAA/TA Comparison**

Month	Active areas		Spot numbers	
	BAA	TA	BAA	TA
1997 November	2.36	1.85	42.9	36.9

**Sunspot Activity, 1997 December**

Activity this month was similar to the levels observed in the last three months. As in November the N hemisphere dominated. Strach reported a total of 12 groups in December with eight in the N hemisphere. Meadows reported 13 with nine in the N.

Strach's first observation of the month was on the 2nd and at this time a large spot was visible on the CM at N19/313. This was the E-type group seen at the end of last month. Followers were visible over 10° of longitude and Strach estimated the area as 600 millionths. By the 6th Meadows reported that it had decayed into type Cso and the area had reduced to 330 millionths.

Meadows reports that a high latitude Axx spot was seen on the 6th at N34/287. This changed into type Bxo by the 7th but it was not seen again.

The S hemisphere came to life on the 9th when Strach reported a high latitude spot at S39/190 and a group at S23/190. Both Strach and Meadows note that the group was not seen on the 11th but the high-latitude spot survived until the 14th. Meadows reports its area as 40 millionths.

On the 21st Strach reported the first observation of a group at S21/352 near the E limb. During its passage across the disk it developed into an important bipolar group. On the 26th Meadows reported that it had an area of 190 millionths. This Esi group was still present on the 31st as it neared the W limb and it comprised a string of three roughly equal size penumbral spots together with several intervening spots. Strach notes that the group was in an area which had been active since early September.

**Prominence MDF, 1997 December**

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
K.J. Medway	2.33	1.50	3.83	6	2.00	1.33	3.33	0.33	0.17	0.50
E.H. Strach	4.00	3.00	7.00	11	1.45	1.00	2.45	2.55	2.00	4.55

**Prominence activity, 1997 December**

On the 10th Strach reported a 120,000 km high prominence on the W limb at N44. Another high eruption was seen on the 12th, also on the W limb but at S37.

On the 21st Strach noted two dense prominences in the NE. One was at N40 to N43 and the other was between N57 and N61. The latter already had an extension onto the disk as a filament. At his next observation on the 25th the two broad filaments were visible and a third, smaller, filament straddled the N40 parallel. Medway also reported that many filaments were visible between the 26th - 28th over most of the disk. Three large filaments were noted 10° E and W of the CM.

Medway reported that an impressive arch prominence was seen on the SW limb on the 26th. It had gone by the 27th.

**Flares, 1997 December**

Date	Time	Lat	CMD	Type	Obs.
12	1020-1050	N30	W45	Sf	EHS
12	1125	N31	W15	Sf	EHS
12	1225	N30	W46	Sf	EHS

**Correction:** Eric Strach has written to correct his 1997 October report. The corrected figures are:  $MDF(N) = 1.00$ ,  $MDF(S) = 0.48$ ,  $R = 20.88$ .