

The event that I have looked forward to all of my life is now nearly upon us. Let's hope that August 11 brings sparkling, clear weather to the south-west and that daft statements in the press do not persuade people to watch totality on TV or turn their back on this majestic spectacle. Many of us will be away over the eclipse week and I must emphasize Guy's comments earlier in the magazine. If you don't meet the August 2 deadline your July observations will not appear in the next TA!

**White light MDF, 1999 June**

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
J. Shanklin	5.4	3.6	9.0	24	128.0	24	-	-
G. Johnstone	-	-	7.1	17	-	-	-	-
D. Storey	3.2	2.8	6.0	14	-	-	-	-
P. Meadows	5.5	4.1	9.6	17	145.0	17	27.5	17
E. Strach	3.7	2.3	6.0	10	98.8	10	21.6	10
G. North	2.7	2.1	4.9	7	91.7	7	-	-
MEANS	4.5	3.2	7.6	89	123.6	58	25.3	27

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

I must apologize that I included Wilfrid Heyes' estimates of Q in the R column for 1999 May. The revised totals are given below.

**White light MDF, 1999 May (revised)**

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
MEANS	3.8	2.8	6.8	136	95.8	84	19.8	46

**White light activity, 1999 June**

White-light activity continued to increase in June with many impressive features on display.

On the 1st, three of the ten groups seen were of moderate size. Meadows reported an Esi group at N19/343 with an area of 410 millionths which comprised of similarly sized leading and following penumbral spots with a few small spots between; a Dac group at S16/291 with an area of 300 millionths which comprised an asymmetrical leading spot and numerous small following penumbral spots; a Dsc group at N14/284 with an area of 550 millionths which comprised a leading symmetrical spot, two similar sized following spots together with other smaller penumbral spots. By the 5th only the following spot of the first group was seen - this being close to the W limb. The second group had developed a larger following spot while the leading spot had become quite asymmetrical - also the number of penumbral spots had reduced considerably although the total area had increased to 420 millionths. The third group almost halved in size while being of a similar structure. Meadows saw the latter two groups on the 8th and 9th respectively.

Also on the 5th, Meadows reported three small N hemisphere groups near the E limb. The number of groups in this general area increased to four on the 6th and five by the 8th. The northernmost of these was of type Dai at N30/208 with an area of 200 millionths. Just to the S was an Axx spot at N20/204 and a Cso group at N19/191 (area 40 millionths). All of these groups had developed by the 10th such that Meadows classified

them as of type Eac (still with an area of 200 millionths), Dsc (area 70 millionths) and Eai (area 190 millionths). By the 13th, the N group had decayed into a Dai group with an area of 110 millionths, while, the other two above mentioned groups appeared to merge into a Fac group (mean location at N20/193) with a total area of 350 millionths. These groups were close to the W limb on the 14th and the Fac group was last seen on the 16th.

On the 6th Meadows noted three S hemisphere groups near the E limb at similar longitudes: an Hsx group at S12/188 (area 50 millionths), a Dao group at S18/188 (area 120 millionths) and a Bxo group at S28/184. By the 8th, the Dao group developed into type Dsi with an increased area of 270 millionths. On the 9th, a higher latitude group appeared (at S38/186). This was not seen on the 11th but the three other groups were still visible as they progressed towards the W limb on the 15th and 16th.

A single Hsx spot appeared around the E limb on the 9th (at S22/126). As this group progressed across the disk, it became slightly asymmetrical on the 13th when it had an area of 140 millionths. By the 15th, a few accompanying small spots were seen surrounding the Hkx spot. These had disappeared by the 17th when the spot became symmetrical again. It was last seen on the 21st when it was on the W limb.

On the 21st Meadows observed a Fac group and an Hkx spot near the E limb. These were at N22/344 and N14/331 respectively. On the 22nd, these had areas of 380 and 290 millionths respectively. By the 24th, the F

type group appeared to separate into a leading Hsx spot at N23/352 and an Eac group at N23/332. The Hkx spot had decayed into a Dac group with an area of 130 millionths. Following these groups were four other groups at similar latitudes. Also two S hemisphere groups had appeared around the E limb, one of which was a Fac group at S14/290. This increase in activity meant that Meadows counted a total of 13 groups on the 24th

Strach counted a peak of no less than 35 spots in the group at N19/332 between the 24th and 28th. This group showed hardly any orientation. In contrast the S group showed many spots aligned along the S14 parallel between the 24th and the 29th.

Storey reported that the following AAs were visible to the naked eye: on the 1st at N16/284 and on the 25th at N16/330

### H $\alpha$ activity, 1999 June

Strach reports that the prominence MDF remained at a similar level to that observed in previous months but no

### Prominence MDF, 1999 June

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
E. Strach	7.8	5.1	12.9	8	2.9	3.4	6.3	4.9	1.7	6.6

less than four eruptive prominences were seen during his eight days of H $\alpha$  observations.

On the 16th a small but dense prominence was seen at S27 on the W limb at 0725. By 1559 the most S part had grown to twice its original size and by 1610 it had formed a curved extension northwards. At 1650 an almost complete arch had formed with a maximum height of 130,000 km. We can only hope for a similar prominence on August 11!

### Flares, 1999 June

Date	Time	Lat	CMD	Type	Obs.
18	0638-0710	N35	E13	Sf	EHS
29	0615	N19	E04	Sf	EHS
29	0655	N19	E03	Sf	EHS
29	0715	S16	E16	Sf	EHS
29	0825	S26	E48	2B	EHS