

White light MDF, 1999 September

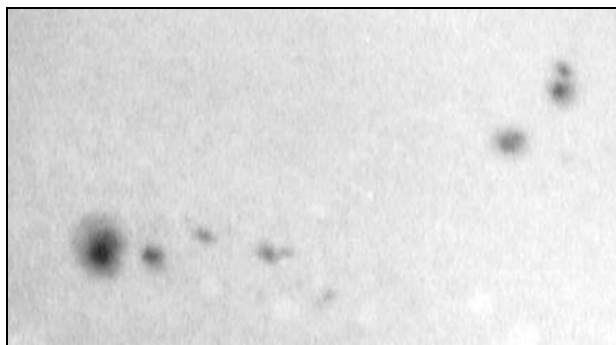
Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
D. Storey	4.2	1.0	5.2	5	-	-	-	-
J. Shanklin	3.6	1.7	5.3	22	71.0	22	-	-
A. Ibrahim	-	-	4.7	27	43.0	27	-	-
G. North	3.0	2.0	5.0	3	79.3	3	-	-
P. Meadows	4.1	1.9	6.0	16	83.6	16	15.6	16
E. Strach	3.5	1.8	5.3	28	78.1	28	13.5	28
M. Hendrie	4.3	1.9	6.1	8	82.3	8	-	-
W. Heyes	3.6	1.0	4.6	13	-	-	12.8	13
K. Medway	2.8	1.2	3.9	28	-	-	-	-
MEANS	3.5	1.5	5.0	150	68.7	104	13.9	57

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

White light activity, 1999 September

Activity levels were very disappointing for this stage in the solar cycle. The MDF was up slightly on last month but levels are substantially down on those seen earlier in the summer.

On the 1st Meadows reported that the largest of the seven groups seen was of type Dac at N21/207. This had a total area of 320 millionths. All the other groups on this date were either nearing the W limb or small in size. Up to the 6th, no groups appeared around the E limb and those groups that were on the disk were very small in size even though the number of groups on each day remained at 7.



Spot group. 1999 September 1, 0944UT. 5", f/12 refr. + Kodak T-Max 100. Aymen Ibrahim, Egypt.

On the 6th Meadows noted an Axx group on the E limb. By the 8th, this group had developed into type Dsi that consisted of a compact collection of four small penumbral spots at N14/26. By the 10th, the group had spread out further in both latitude and longitude. On the 11th, one of the penumbral spots had increased in size while the others had decreased. When seen on the 13th, the appearance of the group had changed considerably to become type Dac with a more conventional spread of spots in longitude. The group now had an area of 190 millionths. This group was next seen on the 17th of type Esc and nearing the W limb - it was last seen on the 18th.

The largest group of the month was first seen on the 8th near the E limb at S27/8. Meadows classified it to be of type Esi. When seen on the 10th, the leading spot appeared as a slightly distorted symmetrical penumbral spot while the following spot was a quite elongated asymmetrical spot; the total area was estimated to be 330 millionths. By the following day, the two main spots had become more symmetrical. The group had a similar appearance on the 13th but when seen on the 17th the number of spots between the leading and following spots had reduced. On the 18th, only the leading penumbral spot remained.

On the 17th and 18th Meadows reported a curious group at N13/293. On the 17th the group consisted of several small asymmetrical groups and other spots within an area of about 5° by 5°. By the 18th all the penumbral spots had decayed to leave an area of 22 small spots. By the 24th, the group was not on the disk.

Observations on the 24th, 25th and 26th showed only three groups. The only northern group was a Hsx spot at N21/210 with an area of 120 millionths; this was the return of the Dac group seen on the 1st. The other groups were, on the 24th, of type Cso at S20/247 with an area of 120 millionths and of type Bxo at S9/191. On the 28th three additional groups were seen but all these were small in size.

Ha activity, 1999 September

Ken Medway reports that notable prominences were seen on the 2nd and 10th. On the 2nd two fine arch prominences were noted on the SE limb at S5 and S52. High arch prominences were seen on the 10th, also on the SE limb, at S30. He also reports that, as in previous months, filaments were numerous with one extending from the CM to W40 on the 16th.

Eric Strach commented that the high level of prominence activity has been maintained and that there were a number of remarkable prominences. Three detached cloud-like prominences were seen on the E-limb on the 1st at N06 to N13. A larger and higher cloud was seen on the E limb at S25 to S39 on the

following day. On the 4th an enormous prominence was seen suspended above the E limb extending from S4 to S25. Its internal structure was complex and it changed rapidly. The sketch opposite was obtained from the TV monitor whilst using a CCD TV camera for observations. There was no trace of this prominence on following days.

On the 9th Strach reported a massive prominence on the E limb between S2 to S16. On the same day there was a good display of filaments. One appeared to emanate from a small prominence on the E limb at N47. The filament swept first southward and then veered to the SW. Strach noted that the disappearance of this filament on the 16th/17th was associated with a coronal mass ejection detected by professionals.

Flares, 1999 September

Date	Time	Lat	CMD	Type	Obs.
14	0925	N12	E60	Sf	EHS
15	1320	N10	E47	Sf	EHS
15	1400	N11	E49	Sf	EHS
17	0845	N18	W82	Sf	EHS ¹
21	0715	S23	E28	Sf	EHS

1. Limb flare associated with a jet eruption.

Prominence MDF, 1999 September

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
K. Medway	3.1	5.3	8.4	17	1.6	2.4	4.0	1.6	2.8	4.4
E. Strach	5.6	7.3	12.9	22	2.8	3.7	6.5	2.8	3.5	6.3



Giant prominence cloud on the E limb. 1999 September 4, 1235UT. C8 + 0.6Å filter. Eric Strach