

As we dive headlong into Winter a number of observers have noted how difficult it is to keep an eye on the Sun at this time of year. Not only do we have to contend with the weather but, in UK latitudes at least, the Sun is not above the horizon except when most people are at work. Observations are always important but I would particularly like to thank those who make the effort at this time of year. One of our regular observers, Peter Meadows, did not submit any observations this month. This was not due to overwork in his new job as TA secretary but simply that he was unable to take a telescope with him on his honeymoon!

WHITE LIGHT SOLAR ACTIVITY

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
E.H. Strach	1.18	2.06	3.24	17	62.31	17	11.18	17
W. Hayes	1.33	1.56	2.89	9	-	-	7.56	9
J.G. Gissing	1.15	2.54	3.69	13	-	-	8.53	13
T. Tanti	1.25	2.33	3.58	12	62.50	12	10.80	12
B. Hardie	1.19	2.09	3.28	21	58.09	21	-	-
K. Medway	1.09	1.73	2.82	22	-	-	-	-
M. Götz	-	-	1.94	18	49.63	18	-	-
MEANS	1.18	2.04	3.02	112	57.68	68	9.78	51

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

Table 1: Solar activity, 1993 October

BAA/TA Comparison, 1993 September

Month	Active areas		Spot numbers	
	BAA	TA	BAA	TA
1993 September	1.53	1.25	21.83	19.14

Sunspot Activity, 1993 October

October showed a major increase in activity over the previous month but this is not particularly surprising considering the very low activity of September. The MDF was up by a factor of 2.4 and there were no spotless days.

The large N group seen at the end of last month developed considerably at the start of October. Heyes notes that on the 1st this group extended over about 20° and the large leader had a penumbra about 5° across at its widest. On the 4th Strach noted that the group consisted of a complex leader at N11/231 and a small follower at N10/215. He says that this was clearly an Fki group since it covered more than 15° of longitude. This group crossed the W limb on the 9th.

Another complex group was seen in the S. On the 4th, according to Strach, it consisted of a large leader at

S15/186 and a string of smaller followers stretching to S14/176. At this time he classified it as an Eki group.

On the 8th Strach saw a new spot appearing over the E limb at S19/086 and on the following day a further spot appeared at S22/076. Although they could be considered a bipolar grouping Strach notes that he counted these two spots as two separate active areas since they were more than 10° apart. As some confirmation of their separate identities the E spot faded on the 16th and it was no longer visible on the 18th whereas the W spot persisted until its W limb passage on the 20th.

Strach reported a new Hsx spot at N14/045 on the 13th. This was associated with an almost elliptical filament. This spot faded on the 16th to an Axx type and it had disappeared by the 17th when it would have reached the CM. The filament persisted until the 21st.

On the 15th Strach observed a new spot almost on the CM at N5/068. This developed rapidly into a bipolar group on the next day but then faded.

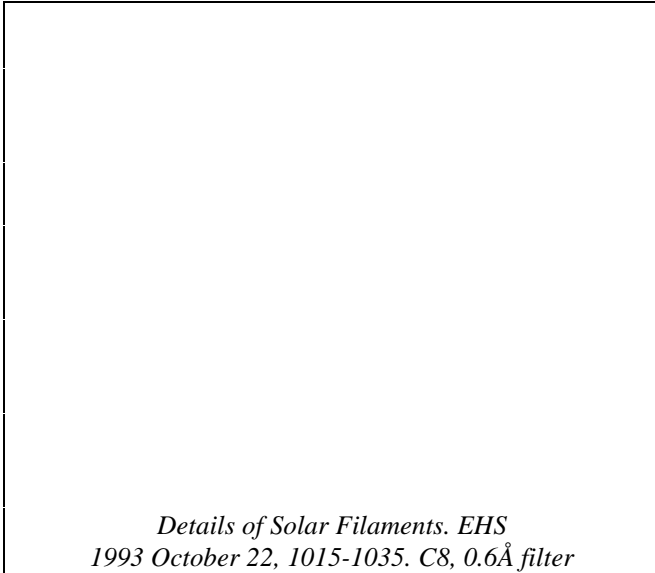
Strach reports *polar faculae* in the N on the 9th, 10th, 14th and 16th and in the S on the 16th.

MONOCHROMATIC SOLAR ACTIVITY

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
K. J. Medway	2.58	3.92	6.50	12	1.42	3.08	4.50	1.16	0.67	1.83
B. Hardie	-	-	2.22	9	-	-	-	-	-	-
E. Strach	1.44	2.31	3.75	16	0.75	2.19	2.94	0.69	0.12	0.81

H α Prominence Activity, 1993 October

Medway managed H α observations on 12 days during the month. He notes that prominences were well distributed in latitude from S80 to N80. Of particular note on the 23rd were a series of large spike prominences on the W limb from N65 to S12. Adjacent to this on the disk was a 30° long filament extending from N10 to N35. By the 24th the prominences had largely disappeared when he observed at 1010.



*Details of Solar Filaments. EHS
1993 October 22, 1015-1035. C8, 0.6Å filter*

Strach reports that he saw few prominences during the month but that there were plenty of filaments. In fact he considers that the most notable feature of the month in H α was the abundance of filaments. He notes that they appeared to have been confined to the longitudes 70°-340°. The sketch shows the intricate structure of one of these prominences at the scale of 8" to the Solar diameter.

Flares, 1993 October

Date	Time	Lat	CMD	Type	Obs.
3	1251	N9	E2	SB	KJM
4	0755	N8	W14	1n	EHS
8	1445	S23	W55	Sn	KJM
9	1224	S13	W28	SB	KJM
9	1225	S12	W25	Sf	EHS ¹
9	1344	S23	E75	Sn	KJM
9	1407	S23	E75	Sn	KJM
9	1227	N11	W75	Sn	KJM
15	0820-0842	N4	E2	1n	EHS
15	1040-1055	N5	E1	Sn	EHS
16	0919	S20	W25	1B	KJM
16	0925	S20	W20	Sn	EHS
17	1125	N9	W25	SB	KJM
17	1330	N9	W25	Sn	KJM
17	1400-1415	S20	W37	SB	KJM
17	1444	S20	W37	Sn	KJM
17	1458	S20	E65	Sf	KJM
18	0920-0947	S17	W52	Sf	EHS
18	1020	N8	W52	Sf	EHS
20	1317-1332	N9	W65	Sn	KJM
20	1321	N6	W58	Sn	KJM
20	1422	N8	W70	Sn	KJM
20	1437	S5	E17	Sn	KJM
22	0955-1015	N12	W25	Sn	KJM
22	1454	N12	W25	Sf	KJM
22	1502-1515	N12	W25	SB	KJM
23	1030	N8	W38	Sf	EHS
24	1450	S13	W28	Sf	EHS

Notes

1. Associated filamentous surges