

The bad weather in the UK seriously reduced the number of observations made this month. In particular heavy snowfalls in many parts of the country have been a particular problem.

WHITE LIGHT SOLAR ACTIVITY

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
J. Jahn	-	-	2.00	2	45.00	2	-	-
MEANS	2.20	0.90	2.94	102	60.52	73	10.65	38

Table 1: Solar activity, 1994 January additional report

Observer	MDF				R		Q	
	North	South	Total	Days	Total	Days	Total	Days
K.J.Medway	1.54	0.46	2.00	13	-	-	-	-
E.H.Strach	2.30	0.50	2.80	10	39.25	10	6.60	10
W.F.Heyes	1.67	0.50	2.17	6	-	-	5.83	6
J.G.Gissing	2.00	0.30	2.30	7	-	-	6.42	7
M. Götz	-	-	1.56	16	35.10	16	-	-
MEANS	1.86	0.45	2.08	52	36.70	26	6.34	23

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

Table 2: Solar activity, 1994 February

BAA/TA Comparison

Month	Active areas		Spot numbers	
	BAA	TA	BAA	TA
1994 January	3.19	2.94	58.9	60.52

Sunspot Activity, 1994 January

The only notable group seen this month crossed the CM on the 19th. This consisted of a single large spot with several smaller areas of umbra embedded in an extensive penumbra.

Strach reports *mean spot latitude* was 14.0 in the N and 7.7 in the S. He notes that the difference between the two hemispheres is even larger than last month. As the number of spots reduces the variation in these latitude figures is likely to increase simply due to the effects of small number statistics

Strach observed *polar faculae* in the S on the 4th and in the N and S on the 5th and 13th. On the 21st there were three polar faculae in the S, two of them associated with dark patches. A single polar facula was seen in the N on this date. On the 22nd there were two polar faculae in the S.

MONOCHROMATIC SOLAR ACTIVITY

H α Prominence Activity, 1994 January

Activity in H α mirrored the low activity in white light. Strach notes that the only important prominence that he observed during the month was an arch

formation on the W limb extending from S14 to S28 (figure 1). On the 12th a low hedgerow type was seen on the W limb from N34 to N43. On the same day a minor eruptive prominence was seen on the E limb at N12. This lasted from 0950 to 1115. A tree-like prominence was seen on the E limb lasting three consecutive days from the 20th to the 22nd. Strach also reports a similar but thinner prominence which was seen on the W limb at N42 on the 20th.

Medway also reports that most prominences in February were small. He noticed that they had a tendency to concentrate in the zone $\pm 40^\circ$ and were quite scarce towards the polar regions. On the 28th between 1300 and 1610 Medway reports that there were at least seven filaments on the disk. Also on this day many small prominences were seen.

Flares, 1994 January

Date	Time	Lat	CMD	Type	Obs.
2	1042-1102	N19	E80	SB	BH
2	1042	N3	E35	Sf	BH ¹
12	1500	N8	E5	Sf	KJM

Notes

1. This flare was a small, point-like brightening that manifested itself in a bright plage ring around the a spot at N4/026.

Radio observations. 1994 February

Strach's interferometer recorded short bursts on the 4th between 1330 and 1520 and two bursts on the 22nd between 1050 and 1215 and again between 1445 and 1515.

Observer	All Latitudes				0-40°			40-90°		
	North	South	Total	Days	North	South	Total	North	South	Total
B. Hardie	-	-	2.4	5	-	-	-	-	-	-
E.H.Strach	2.43	1.43	3.86	7	1.71	1.28	2.99	0.71	0.14	0.85
K.J.Medway	4.20	0.60	4.80	5	3.20	0.60	3.80	1.00	0.00	1.00

H α prominence activity

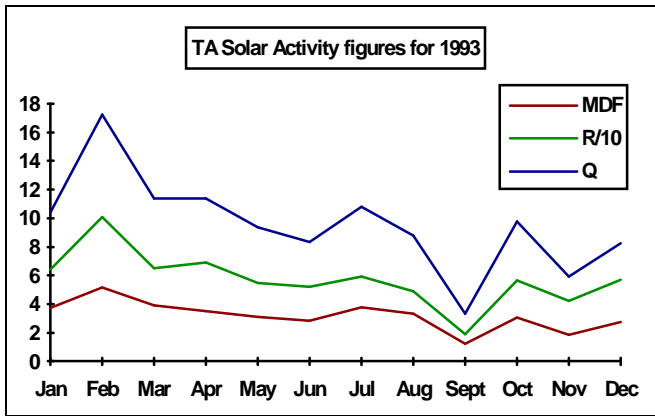


Figure 2 - 1993 Solar activity

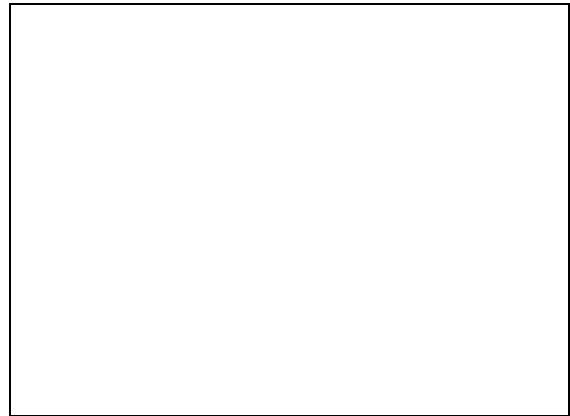


Figure 1 - Arc prominence. 1994 Feb 4, 1130

Observer	Annual spot MDF				Ave. spot latitude		H α summary		
	Obs. days	N	S	Total	N	S	Obs. days	Prom. MDF	Total flares
K. J. Medway	276	1.49	1.42	2.91	+11.9	-11.4	162	6.98	99
W.F.Heyes	85	1.42	1.56	2.99	+11.3	-10.9	-	-	-
P. Meadows	110	1.88	1.78	3.66	-	-	-	-	-
E. Strach	201	1.67	1.46	3.13	+9.7	-12.5	153	4.28	34
T. Tanti	237	1.80	1.73	3.53	-	-	-	-	-
CUAS	147	-	-	3.65	-	-	-	-	-
B. Hardie	205	-	-	3.21	-	-	-	-	-

Table 3 - Solar activity summary for 1993.

ANNUAL SUMMARY OF SOLAR ACTIVITY FOR 1993.

With solar minimum expected sometime around 1996 activity in 1993 was characteristic of late in the solar cycle. As expected for this stage of the cycle all three measures of activity show a general decline over the year. Figure 2 shows the results for TA observers through the year. It is interesting to note that all three measures (MDF, Q and R) track quite closely.

Ken Medway reports seeing a total of 13 *naked eye spots* during 1993.

Medway's flare distribution was 35 Sf, 29 Sn, 26 SB, 7 1B and 2 2B. Strach's was 21 Sf, 2 Sn, 1 1B, 1, 2B, 1 1f, 7 1n, 1 2n.