



The British Astronomical Association

A company limited by guarantee Registered Charity No. 210769
Ossington Chambers, 6/8 Castle Gate, Newark. NG24 1AX
Telephone: 01636 705624 Fax No.: 020 7439 4629
Email: office@britastro.org Website: www.britastro.org



BAA Solar Section Newsletter

Sunspot data 2025 October

Day	g	R
1	8	133
2	9	139
3	9	149
4	7	126
5	7	129
6	7	111
7	6	94
8	4	55
9	4	45
10	5	58
11	5	85
12	6	102
13	6	104
14	5	97
15	5	94
16	6	101
17	6	94
18	7	94
19	7	88
20	7	89
21	8	101
22	7	84
23	7	78
24	7	84
25	6	83
26	7	86
27	7	81
28	7	90
29	6	77
30	5	59
31	3	31

Monthly Means

MDFg:	6.27	(42 observers)
MDFNg	3.32	(36 observers)
MDFSg	3.13	(36 observers)
Mean R:	92.36	(43 observers)

**Lyn Smith, 1 Montboy Steading, Careston,
Brechin, Angus DD9 6RX, Scotland, UK.**
Telephone : 01356 630218 or mob: 07725 347711
Email: solar@britastro.org

Images for the web should be sent to
Peter Meadows: peter@petermeadows.com and
copied to me. All digital images must be in "JPEG"
format with the same orientation as naked eye
orientation. Include initials, date and time in the
file name. Keep each image file to less than 1Mb.

On-line Reporting:

<https://britastro.org/solarwl>
<https://britastro.org/solarha>

Observers:

R S Armas, Cuba	A Johnston, Denbighshire
J Arnold, Leeds	S L Karl, Aberdeen
C Bailey, Suffolk	M Kinder, Cheshire
R Battaiola, Milan, Italy	C Longthorn, Rugby
M Boschat, Canada	L Macdonald, Berkshire
C F Bowron, South Yorks	R Mackenzie, Kent
A Bowyer, Epsom Downs	M Mattos, Spain
S Brown, Leicestershire	P Meadows, Essex
M Buck, Bristol	A Mengus, France
L Cambon, France	H Meyerdierks, Germany
G Clarke, Australia	C C Moraes, Brazil
E Colombo, Italy	R Morgan, East Sussex
J Cook, Wolverhampton	M Nicholls, Sheffield
A Coombs, Vic, Aust	P Norman, Worcester
P Curtin, USA	R Samworth, Leicestershire
S Dawes, London	J D Shanklin, Cambridge
A Devey, Spain	D Smith, Essex
R Dryden, Oxon	L Smith, Angus
F Dubois, Belgium	M Stephanou, Greece
T Emmett, Cambs	A Stone, Bristol
E Fabrigat, France	T Tanti, Malta
M Giuntoli, Italy	D Teske, Mississippi, USA
D Glover, Essex	C B Thielke, Denmark
S Green, Lancs	Towarzystwo Milosnikow
K Hall, Warrington	Towarzystwo Obs Slonca
B Halls, W Sussex	S Ove Thimm, Denmark
K Hay, Canada	P Urbanski, Poland
R Heard, Suffolk	G Vargas, Bolivia
J Janssens, Belgium	D Vidican, Romania
S Jenner, Kent	S Viney, Cheshire

The Sun in White Light – October

Activity reduced in both hemispheres and was the second lowest recorded Relative Sunspot number (R) by the Section for 2025. Both hemispheres however were quite similar in their activity levels. The largest sunspots occurred during the first half of the month with a definite decrease during the last 10 days. The Quality number (Q) was correspondingly lower than last month. The largest/most active sunspot groups are described below.

AR4230 S10°/110° & AR4238 S14°/114° was still visible at the start of the month but nearing the SW limb. As the group approached the limb, the sunspots became less distinct with only 3 penumbral sunspots and a collection of fainter sunspots being visible on the 2nd. The group rounded the limb on the 3rd.

AR4232 N05°/050° & AR4236 N11°/059° both groups were also survivors from the previous month and by the 1st were nearing the central meridian (CM). AR4236 was the most westerly of the two groups also being at a slightly higher northern latitude. By the 4th AR4232 and AR4236 dominated the western hemisphere being about midway across the NW quadrant. AR4236 was type Eki with an area of 510 millionths and comprised of an irregular penumbral leader and follower sunspots with several pores in-between. It had changed in appearance slightly the following day with an area increase to 600 millionths. By the 6th, with the group approaching the limb, it had decreased significantly to 280 millionths and was now type Dsc. Meanwhile, AR4232 comprised a main symmetrical leader with a small penumbral follower and several pores, being type Dsi with an area of 340 millionths. On subsequent days, the group was of a similar form though with fewer follower sunspots. AR4236 rounded the limb on the 7th whilst AR4232 followed on the 8th being last seen as a single Hsx sunspot.

AR4241 N14°/011° formed on the disk near to the NE limb on the 1st and was of type Cro. The group evolved to a minor D class group and was type Dso on the 5th. The group was now near to the CM and comprised of several small penumbral sunspots and pores. There were some additional small penumbral sunspots the following day but as the group progressed across the NW quadrant it began to fade. By the 10th the group was type Bxo and nearing the limb and was not seen on the 11th.

AR4242 S11°/005° formed on the disk on the 3rd in the SE quadrant type Dro. By the 5th the group had developed into a small Dsc group containing three small penumbral sunspots aligned east/west. The following day the group was in decline with only the follower retaining its penumbra. The group continued to fade as it crossed the SW quadrant and was last seen on the 10th close to the limb, type Axx.

AR4246 N24°/289° there were signs of this group forming in the NE quadrant near to the CM on the 10th. However, by the 11th it had undergone rapid development into a compact Dsi group with an area of 140 millionths. The following day the group had expanded increasing its size to 250 millionths and changing its classification to type Dsc. The group continued to grow daily being type Dai on the 13th and Ekc on the 15th. Many sunspots were contained within a large asymmetrical penumbral follower with a smaller asymmetrical leader. On the 16th the group was estimated at 1220 millionths and was described as large and complex with multiple umbrae and penumbrae. The group also contained bright faculae mingling within the general activity. The group rotated over the limb on the 17th/18th.

AR4248 N08°/259° formed on the disk on the 10th not far from the NE limb. It comprised of three small penumbral sunspots in a line with the leader being a further distance from the two small followers. The following day, several small penumbral and other minor sunspots appeared developing the group into type Eac with an area of 220 millionths. By the 12th, a few of the penumbral sunspots had enlarged, increasing the overall area of 400 millionths. The following day, substantial development occurred with the group condensing into a large penumbral leader and an equally large asymmetrical penumbral follower, both accompanied by pores. The group was now type Eko. Structural changes occurred over the next few days with the follower degrading and a small penumbral sunspot developing between the leader and follower. By the 16th the group was 500 millionths in area. The group continued to reduce as it approached the limb particularly the follower sunspot. The group rotated on the 19th/20th.

AR4257 S10°/135° & AR4262 S12°/133° AR4257 appeared close to the SE limb on the 17th as a single Hsx sunspot. The following day, another smaller Hsx sunspot was to its south, being AR4262. Over the coming days, AR4257 remained unchanged but AR4262 slowly grew in strength. By the 22nd it was the larger of the two being an elongated Hax type sunspot. Both sunspots were of similar composition on the 24th each with a light bridge across its umbra. As both groups crossed the SW quadrant, they both reduced slightly with AR4262 becoming more symmetrical in shape. Both sunspots were near to the SW limb on the 29th.

AR4267 N04°/060° faculae was noted on the NE limb on the 22nd and AR4267 rotated over the NE limb on the 23rd. On the 24th the group was type Hsx and was still associated with a notable patch of faculae to its north-west. The group changed little until it reached the CM on the 28th/29th when it sported several pores to its north. The group achieved a maximum area of 160 millionths. Once into the NW quadrant, the group slowly lost its accompanying pores and reverted to type Hsx at the end of the month.

23 observers reported a Quality number of **Q = 18.01** for October.

The Sun in H-alpha Prominences

18 observers reported a prominence MDF of **7.89** for October.

On the 5th an active prominence hearth was on the SE limb and a fila-prom was reported on the southern limb.

A diffuse prominence hearth consisting of several elements was on the NE limb on the 10th. The following day it had changed shape into a large, broken arch and on the 12th, formed a complex large tree type prominence with many strands throughout its structure. The following day it had changed into a large arc, broken at the southern end and not attached to the limb.

A fine hedgerow prominence with an arch at its southern end was on the SW limb on the 15th.

On the 16th an arch prominence was on the NW limb rising to about 40,000 km and a flat arch prominence was on the SE limb rising to about 30,000 km and extending around the limb for 60,000 km.

Two flat arch prominences graced the eastern limb on the 21st and appeared to be connected by a very thin string of plasma at a height of 20,000 km and extending to about 150,000 km. The following day, there were many small prominences on the NE limb.

A high arch prominence with a small protrusion at the top of its arch was seen on the W limb on the 27th resembling the shape of a riding boot spur. Smaller prominences were seen along the eastern limb.

No prominences of note were recorded through to the end of the month.

Filaments & Plage

16 observers reported a filament MDF of **10.49** and 15 observers reported a plage MDF of **5.51** for October.

On the 4th a long north/south aligned filament was reported in the southern hemisphere extending for about 350,000 km. The following day the filament was longer at an estimated 400,000 kms extending from near the SE limb inwards to a point between AR4242 and AR4245. The filament was still visible on the 6th.

On the 6th a striking filament formed a broken circle around AR4243 in the NE quadrant. A long, broken chain of filaments formed a "polar crown" at high southern latitude on the 10th. This feature persisted through to the 15th progressing westward with the leading element being responsible for the prominence hearth on the SW limb on the 15th.

A long filament was in the NE quadrant on the 12th to the east of AR4246. The feature continued to trail the active region to the limb, rounding the limb on the 19th/20th.

In the southern hemisphere on the 22nd, a long, broken filament was estimated to be about 400,000 km in length. On the same day, a dark straight filament extended from a small

prominence hearth on the NE limb inwards. Also, a dark arch filament appeared to be associated with AR4261 in the SE quadrant. The dark filament near the NE limb on the 22nd, had moved into the NE quadrant by the 24th and had extended in length. The filament was placed to the north of AR4266. Also, a large arch filament was reported to the west of AR4261 in the SW quadrant. A bright area of plage and a small filament lay to the west of AR4257/62. On the 27th a new dark filament lay across the NE quadrant and a faint broken polar crown of prominences was noted at high southern latitude. Also, an east/west aligned filament trailed to the east of AR4267 in the NE quadrant. This filament was still in situ on the 29th. The broken polar crown was also still evident in the southern polar region and a few broken filaments were seen at high northern latitude.

Flares

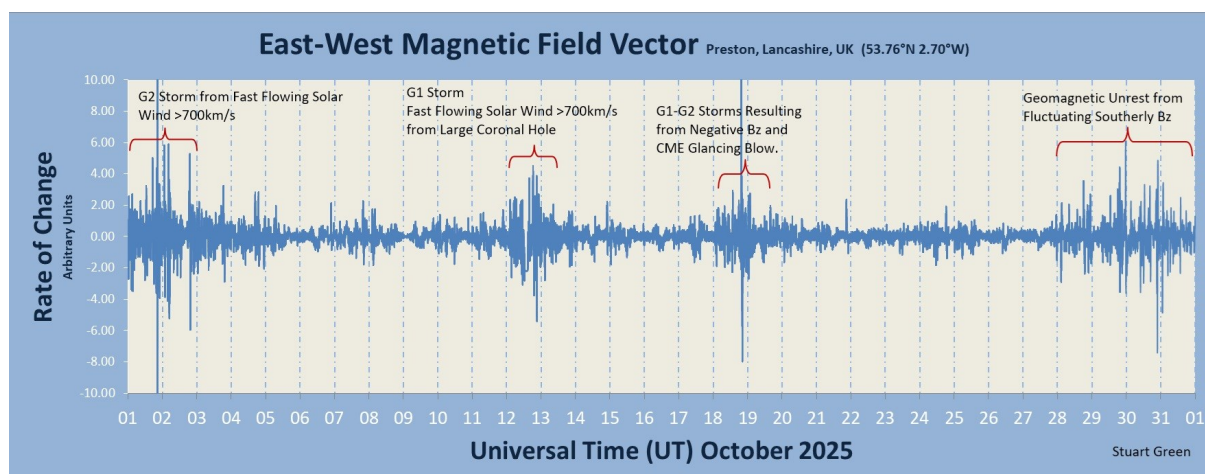
Flares were reported by L Cambon, A Coombs, M Giuntoli, D Glover and M Mattos. Lyn Smith observed an M1.2 flare on the 13th associated with AR4246 at 1300 UT (event 8360) and Andrew Johnston reported an M1 flare also associated with AR4246 on the 15th at 1410 UT.

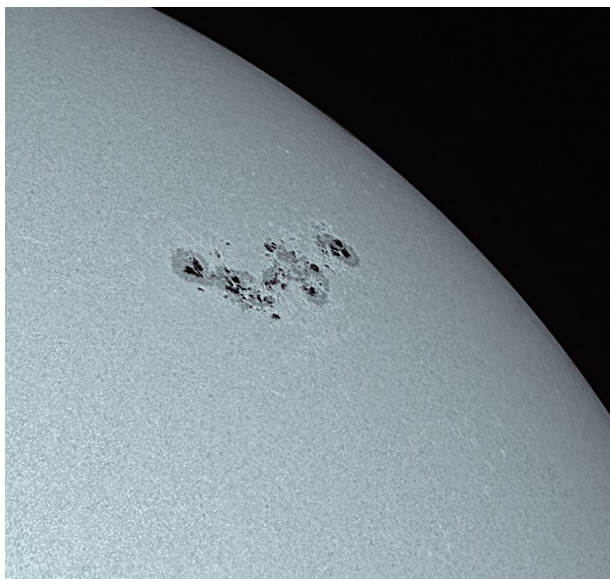
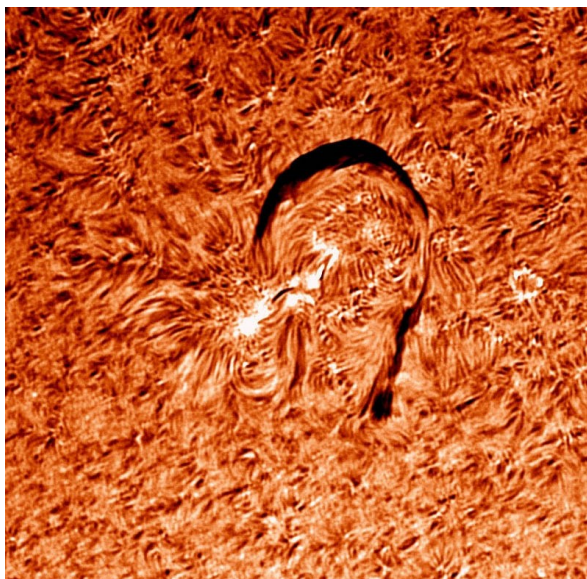
No CaK reports were received for October and the Polar Faculae count was zero.

MAGNETOMETER REPORT

2025 OCTOBER

DATE	DURATION (UT)		ACTIVITY
-/3	19:15		Disturbed Started in September
4	16:15	20:30	Disturbed
7/8	19:30	05:00	Disturbed
9/10	20:00	03:00	Disturbed
11/12/13	21:00	11:00	Disturbed
14	19:00	23:00	Disturbed
14/15	21:00	06:00	Disturbed
17	08:00	17:00	Disturbed
18/19	01:30	18:00	Disturbed
21	20:45	23:00	Disturbed
24	07:45	21:00	Disturbed
27/28	23:00	05:00	Disturbed
28/29	18:00	01:00	Disturbed
29/30	05:30	04:00	Disturbed
30	08:30	17:30	Disturbed
30/31	20:30	19:00	Disturbed

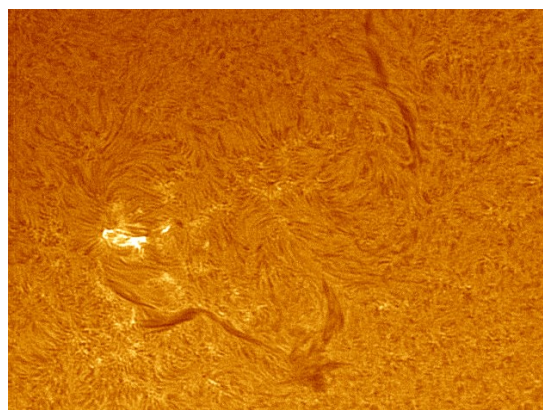
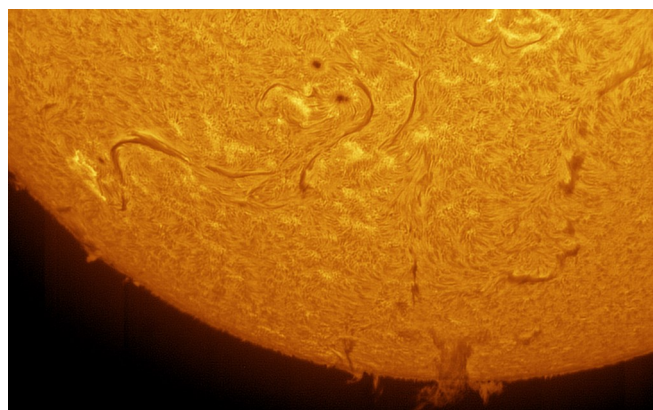




Above Left: Dark curved filament around AR4243 imaged by Carl Bowron on the 6th at 0941 UT using a Sky-Watcher Heliostar 76Ha @F14

Above Right: AR4246 in white light imaged on the 16th at 1031UT by Brian Halls

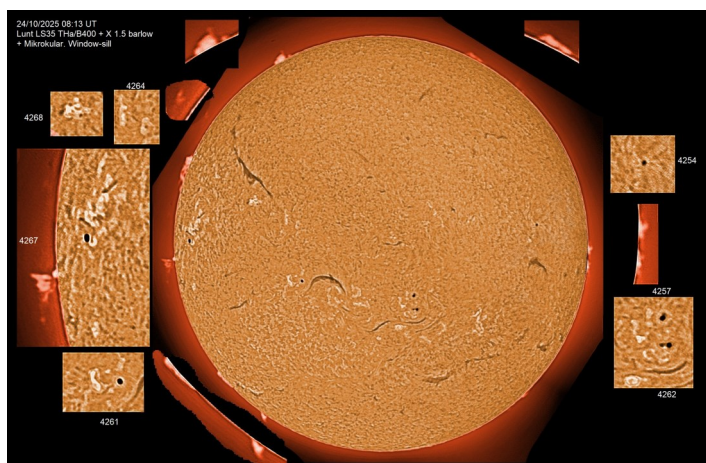
Below Left: H-alpha image of AR4257 and associated filaments, imaged by Dave Smith on the 21st at 0924 UT



Above Right: Filament and associated flare imaged by Arthur Coombs on the 3rd at 2125 UT

Below Left: Montage by Roger Samworth imaged on the 24th at 0813 UT using Lunt 35 THa/ B400 + x1.5 Barlow

Below Right: AR4232 and AR4236 in white light imaged by Chris Longthorn on the 6th at 0941 UT



Section News

Our next Section Zoom meeting will be held at 1930 hrs UT on Friday 16th January 2026

Topic: Solar Section Zoom

Time: Jan 16, 2026 19:30 Greenwich Mean Time

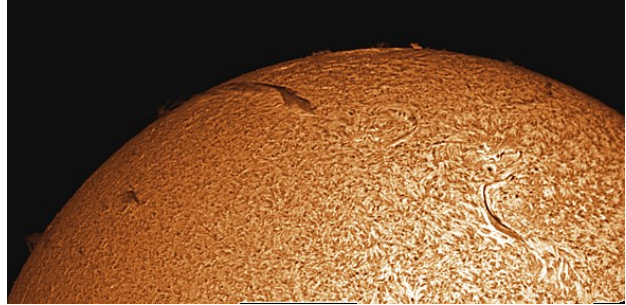
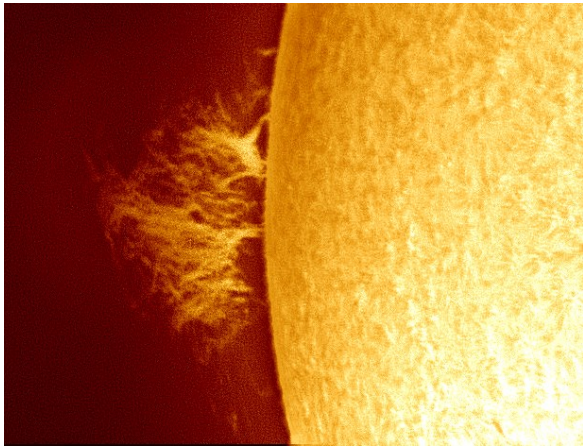
Join Zoom Meeting

<https://us02web.zoom.us/j/88352074542?pwd=MlX8BTpgSnCLXHsYMoLMMsM5XOSJme.1>

Meeting ID: 883 5207 4542

Passcode: 951312

Members are always keen to read articles from fellow members that are printed on this back page from time to time. All such articles received have now been published so if you would like to write a short article please send it in to me via email. Articles should be around 500 to 600 words or be suitable to be published over two months in two parts. Anything solar related is welcomed including articles on yourself, your equipment, any hints regarding observing techniques or imaging, equipment reviews etc. An image or two would also be appreciated to add interest to the article. Articles from new members are particularly welcomed.



Above Left: Complex tree-like prominence of the 12th imaged by Arthur Coombs at 2152 UT
Above: Dark filament imaged by Sheri Lynn Karl on the 22nd at 1033 UT

