

Month: September 2023

- **NEWS FROM THE SOLAR SECTION**



August was a good start for the ASSA solar section. Two astronomy associations were willing to work together with the ASSA solar section and I would like to take the opportunity to thank and welcome the British Astronomy Association (BAA) and the Mexborough and Swinton Astronomy society (MSAS) both from the United Kingdom. Working together will take the ASSA solar section to new heights in solar science in Africa. Two observers from the BAA and MSAS were actively involved in August namely Andrew Devey from BAA and MSAS living in Spain and Mick Nicholls from BAA and MSAS living the United Kingdom.

A Whatsapp group, "Solar section ASSA/MSAS/BAA" was developed where information, images, Q&A etc can be shared. When you become a member of the solar section you will be added to the group.

• **SUNSPOT OBSERVATIONS**

| Day | Time | Groups | Spots | W no. | North Groups | South groups | North spots | South spots |
|-----|------|--------|-------|-------|--------------|--------------|-------------|-------------|
| 1 | | | | 0 | | | | |
| 2 | | | | 0 | | | | |
| 3 | | | | 0 | | | | |
| 4 | | | | 0 | | | | |
| 5 | | | | 0 | | | | |
| 6 | 1145 | 4 | 13 | 53 | 3 | 1 | 12 | 1 |
| 7 | 1220 | 4 | 16 | 56 | 1 | 3 | 1 | 15 |
| 8 | 1325 | 4 | 15 | 55 | 4 | 0 | 15 | 0 |
| 9 | 1321 | 5 | 26 | 76 | 4 | 1 | 25 | 1 |
| 10 | 1325 | 7 | 22 | 92 | 6 | 1 | 20 | 2 |
| 11 | | | | | | | | |
| 12 | 1045 | 6 | 24 | 84 | 4 | 2 | 18 | 6 |
| 13 | 1105 | 4 | 13 | 53 | 3 | 1 | 10 | 3 |
| 14 | 1325 | 5 | 17 | 67 | 4 | 1 | 15 | 2 |
| 15 | 1445 | 5 | 12 | 62 | 5 | 1 | 11 | 1 |
| 16 | 1351 | 3 | 8 | 38 | 3 | 0 | 8 | 0 |
| 17 | 1325 | 5 | 14 | 64 | 5 | 0 | 14 | 0 |
| 18 | 1340 | 7 | 14 | 84 | 4 | 3 | 9 | 5 |
| 19 | 1305 | 7 | 16 | 86 | 5 | 2 | 12 | 4 |
| 20 | 1345 | 9 | 20 | 110 | 7 | 2 | 16 | 4 |
| 21 | | | | 0 | | | | |
| 22 | 715 | 9 | 46 | 136 | 6 | 3 | 38 | 8 |
| 23 | | | | 0 | | | | |
| 24 | | | | 0 | | | | |
| 25 | 1335 | 6 | 24 | 84 | 3 | 3 | 9 | 15 |
| 26 | 935 | 6 | 26 | 86 | 1 | 5 | 1 | 25 |
| 27 | 85 | 6 | 24 | 84 | 2 | 4 | 6 | 18 |
| 28 | | | | 0 | | | | |
| 29 | 1450 | 5 | 14 | 64 | 2 | 3 | 5 | 9 |
| 30 | 1335 | 6 | 19 | 79 | 3 | 3 | 10 | 9 |
| | | | | | | | | |
| | | | | | | | | |

| | | | | | | | |
|--------------|--------|-------|-------|--------------|--------------|-------------|-------------|
| Observations | Groups | Spots | W no. | North Groups | South groups | North spots | South spots |
| 20 | 113 | 383 | 1513 | 75 | 39 | 255 | 128 |

| | |
|---|------|
| Observation Days | 20 |
| Total Sunspots Observed | 1513 |
| Observers | 1 |
| Monthly Daily Mean Frequencies - MDF | |
| Total sunspots | 75.7 |
| Total Groups | 5.7 |
| Northern Groups | 3.8 |
| Southern Groups | 2.0 |

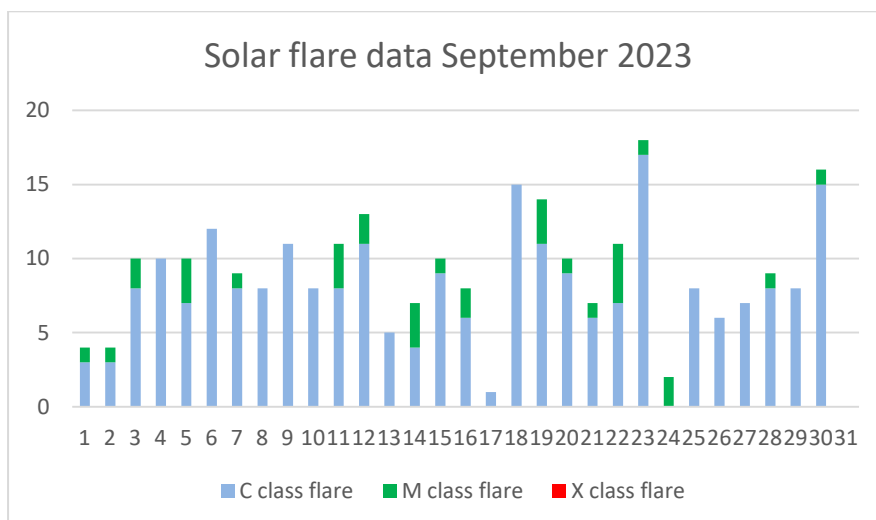
Observers:

Jacques van Delft ASSA Bloemfontein South Africa

When more than 1 observer is submitting sunspots, the average per day is calculated and noted.

- **SOLAR FLARE ACTIVITY September 2023**

Solar flares are classified according to their x-ray brightness in the wavelength range 1 to 8 Angstrom. There are 3 categories: C class – minor, M class – medium and X class – big. Each category has 9 subdivisions.



| September | C class | M class | X class | NOA No |
|-----------|---------|---------|---------|-----------|
| 1 | 3 | 1 | | 3413 |
| 2 | 3 | 1 | | 3413 |
| 3 | 8 | 2 | | 3413 |
| 4 | 10 | | | |
| 5 | 7 | 3 | | 3421 |
| 6 | 12 | | | |
| 7 | 8 | 1 | | 3425 |
| 8 | 8 | | | |
| 9 | 11 | | | |
| 10 | 8 | | | |
| 11 | 8 | 3 | | 3429/3431 |
| 12 | 11 | 2 | | 3425/3423 |
| 13 | 5 | | | |
| 14 | 4 | 3 | | 3429 |
| 15 | 9 | 1 | | 3429 |
| 16 | 6 | 2 | | 3429 |
| 17 | 1 | | | |
| 18 | 15 | | | |
| 19 | 11 | 3 | | 3435 |
| 20 | 9 | 1 | | 3435 |
| 21 | 6 | 1 | | 3435 |
| 22 | 7 | 4 | | 3443/3435 |
| 23 | 17 | 1 | | 3436 |
| 24 | | 2 | | 3443/3445 |
| 25 | 8 | | | |
| 26 | 6 | | | |
| 27 | 7 | | | |
| 28 | 8 | 1 | | 3450 |
| 29 | 8 | | | |
| 30 | 15 | 1 | | 3451 |
| | | | | |
| Totals | 239 | 33 | 0 | |

NASA
Credit: SDO

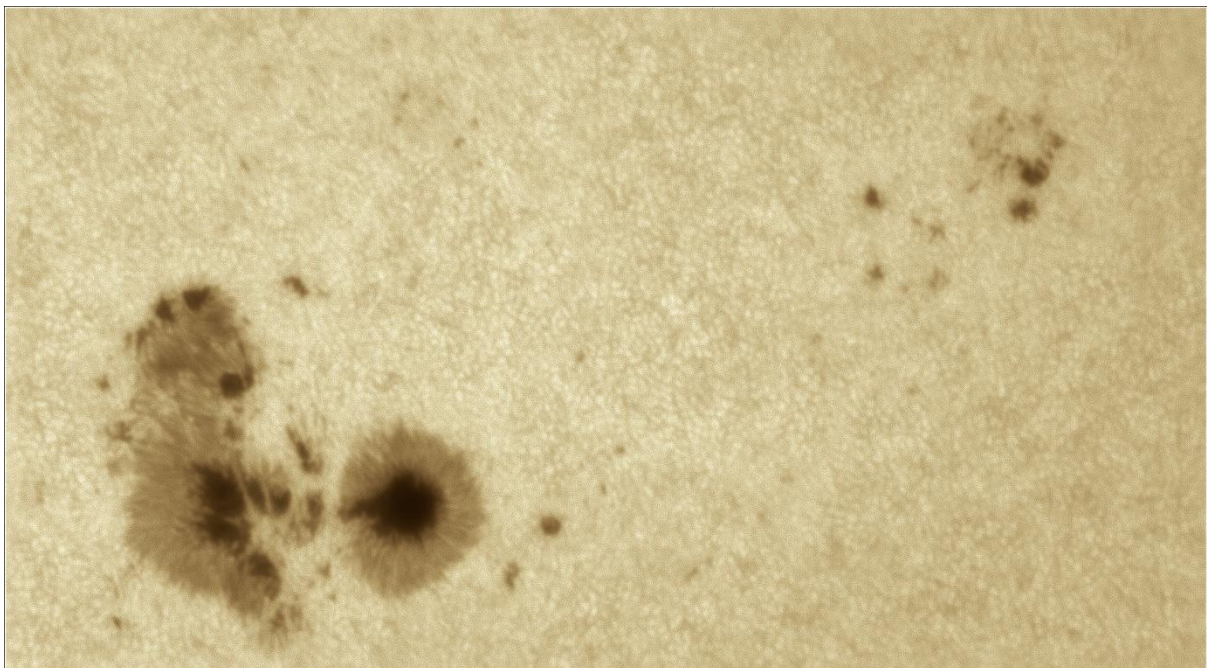
September saw an increase of 27% in M class flares of which NOAA 3429 and 3435 produced flares that were earth directed. It caused some spectacular Auroras' around the polar regions.

- **H Alpha Observations**

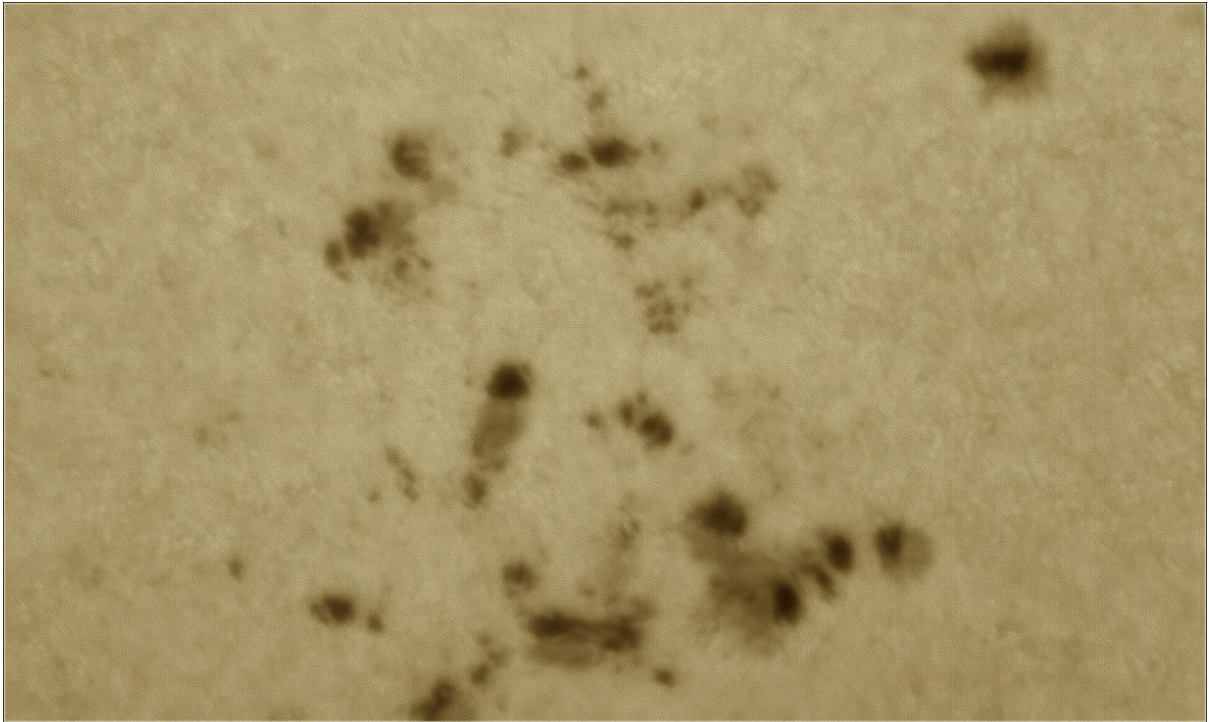
Tree observers shared their H Alpha data for August 2023. Andrew Devey from BAA & MSAS living in Spain using a PST double stack H Alpha telescope, Mick Nicholls from BAA and MSAS living in the United Kingdom using a PST 40mm single or double stack H Alpha telescope and Jacques v Delft from ASSA living in South Africa.

| Sept. 2023 | Counts | Observations | MDF |
|--------------|--------|--------------|-----|
| Prominence | 211 | 40 | 5.3 |
| Plague Areas | 184 | 40 | 4.6 |
| Filaments | 292 | 40 | 7.3 |
| Flares | 3 | 40 | 0.1 |

- **Solar images**



Andrew Devey BAA & MSAS image of AR3435

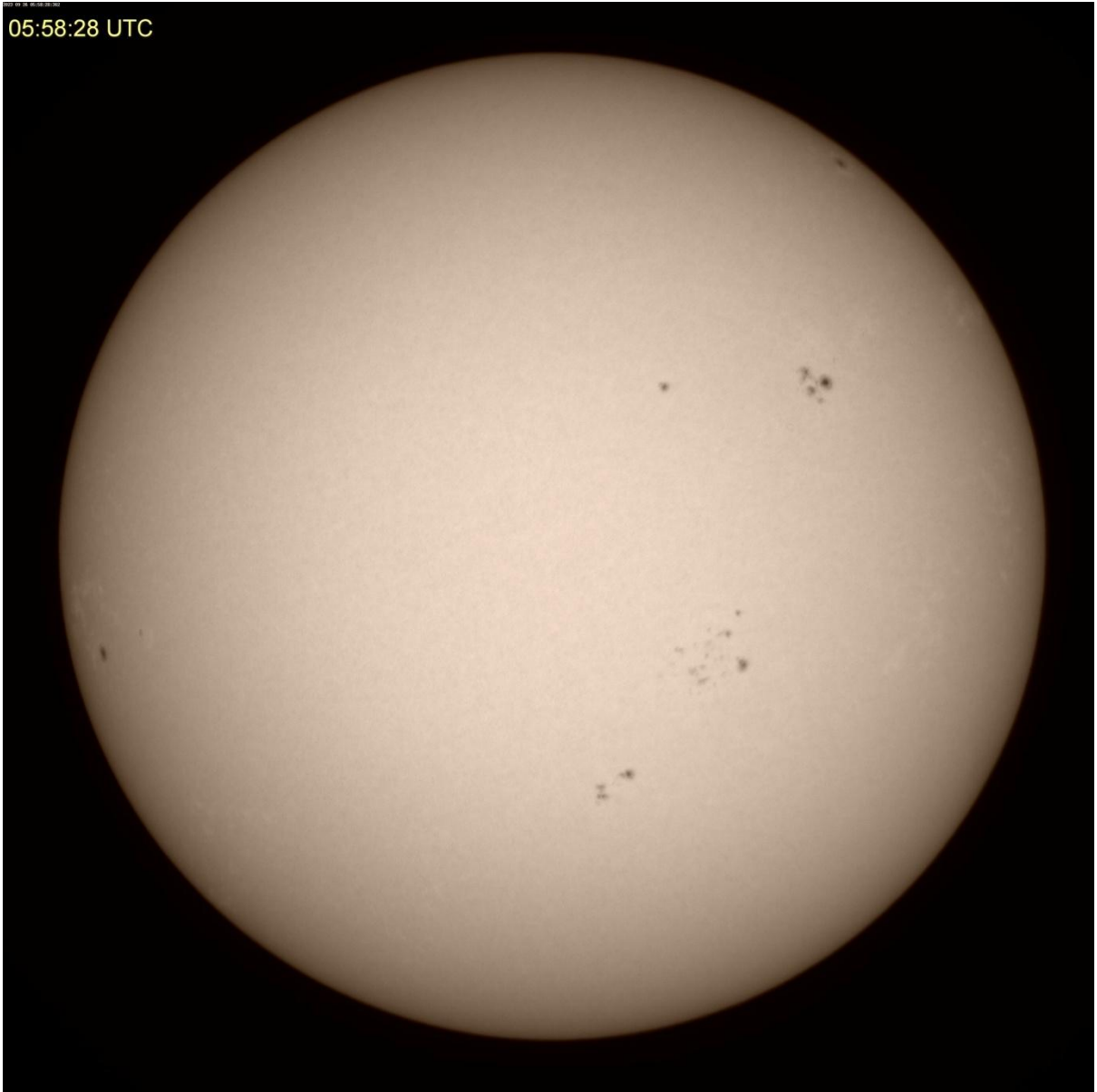


Andrew Devey BAA & MSAS Sunspot AR 3435 & 34442



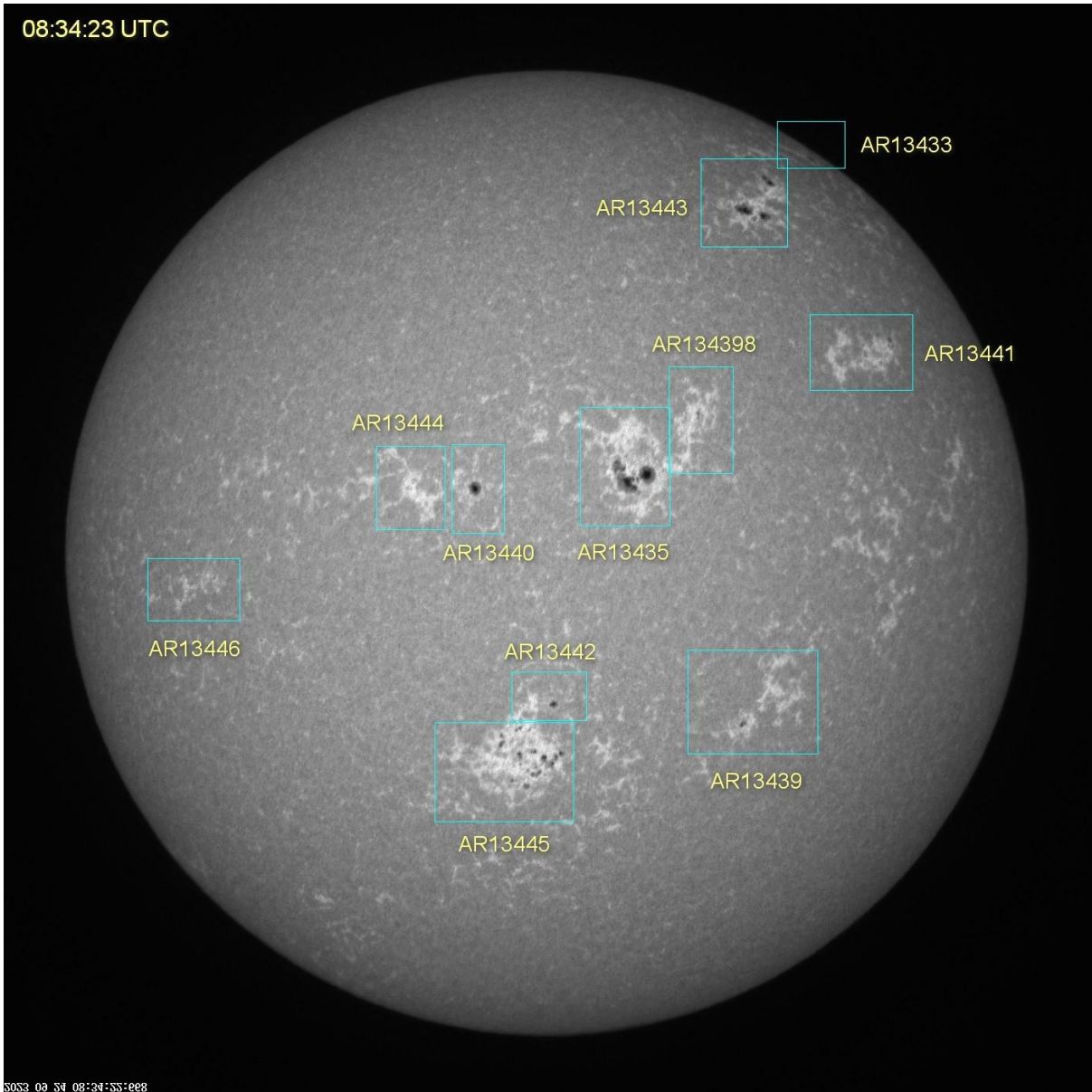
Andrew Devey BAA & MSAS Sunspots AR3443 & 3433

05:58:28 UTC



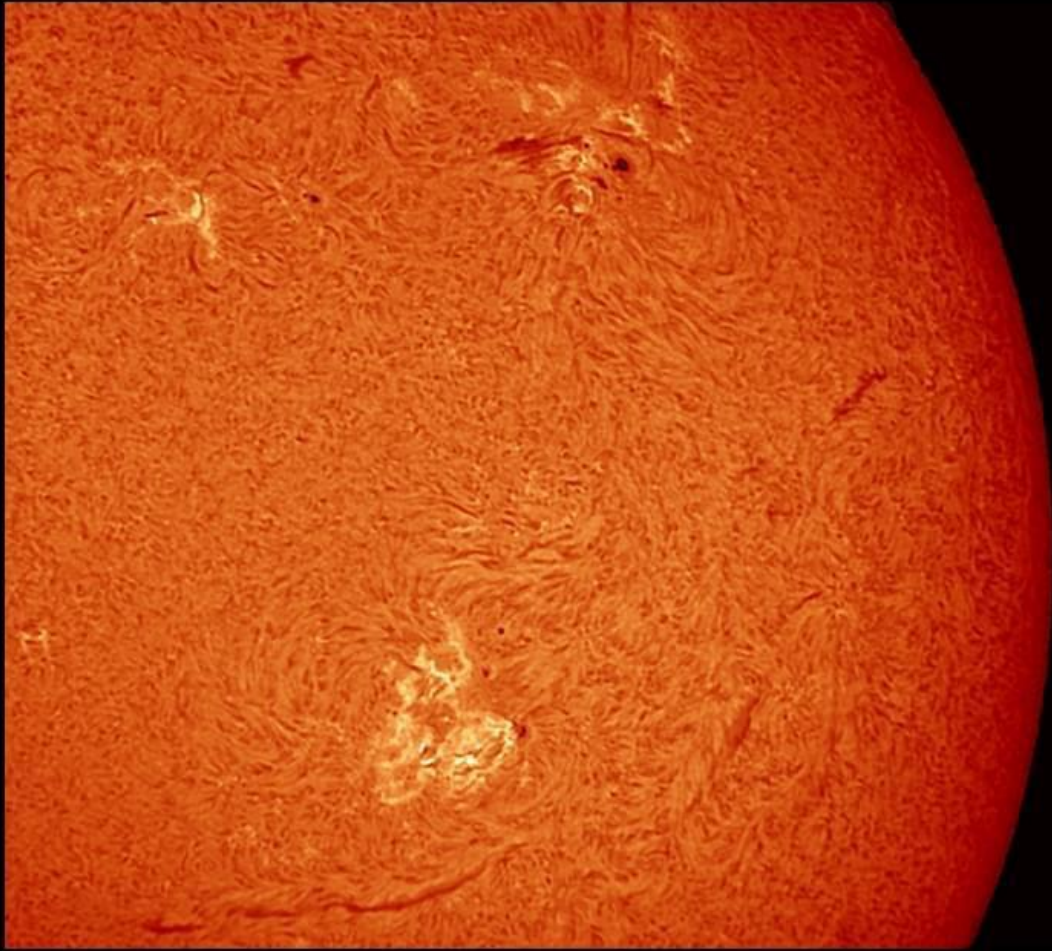
Mick Nicholls BAA & MSAS Full disc in white light, 29 September 2023

08:34:23 UTC



Mick Nicholls BAA & MSAS Full disc in Ca-K, 29 September 2023

AR3435 AND AR3445 IN H-ALPHA 26th SEPTEMBER 2023 @12.02pmGMT
40mm SINGLE STACK PST AND A DMK31 CAMERA

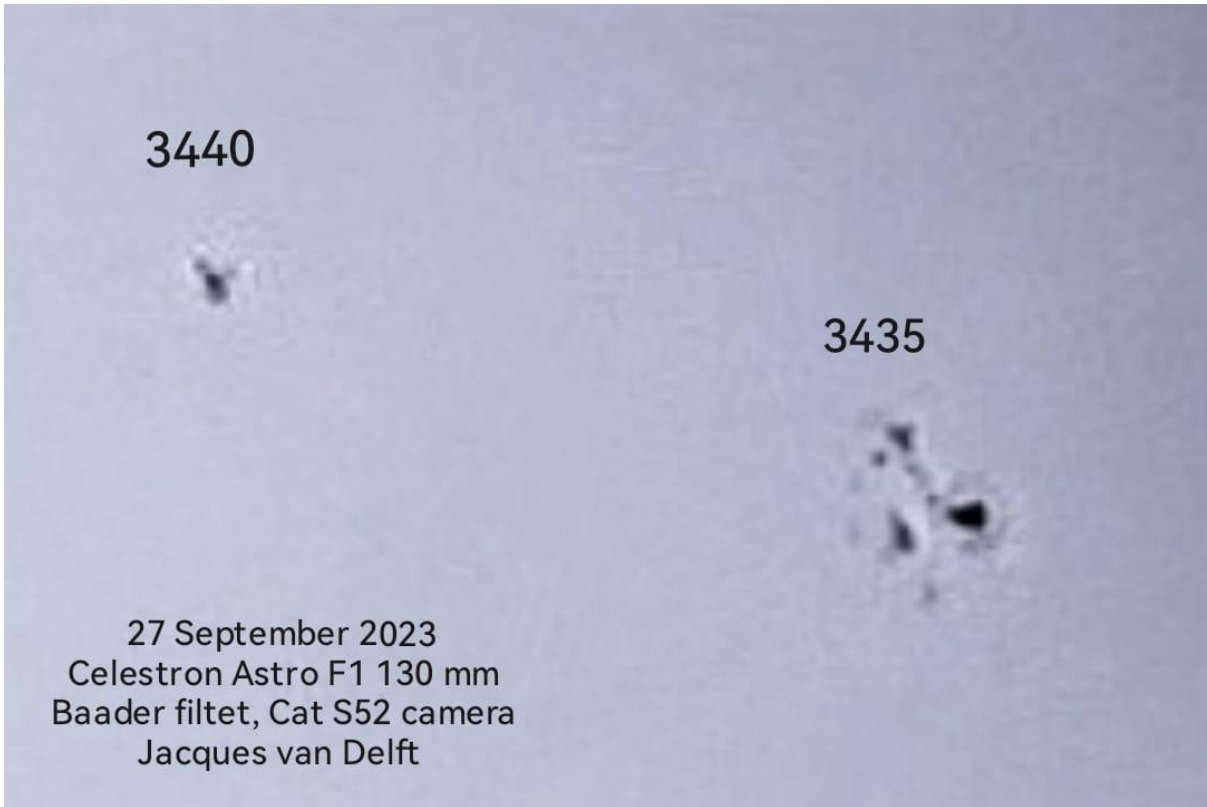


Mick Nicholls BAA & MSAS

27September2023, seeing good
Celestron Astro F1 130 mm, Baader filter
Cat S52 cellphone camera.
Jacques van Delft



Jacques van Delft ASSA Full disc in white light



Jacques van Delft ASSA

Clear Skies

Jacques van Delft

Solar Section ASSA