



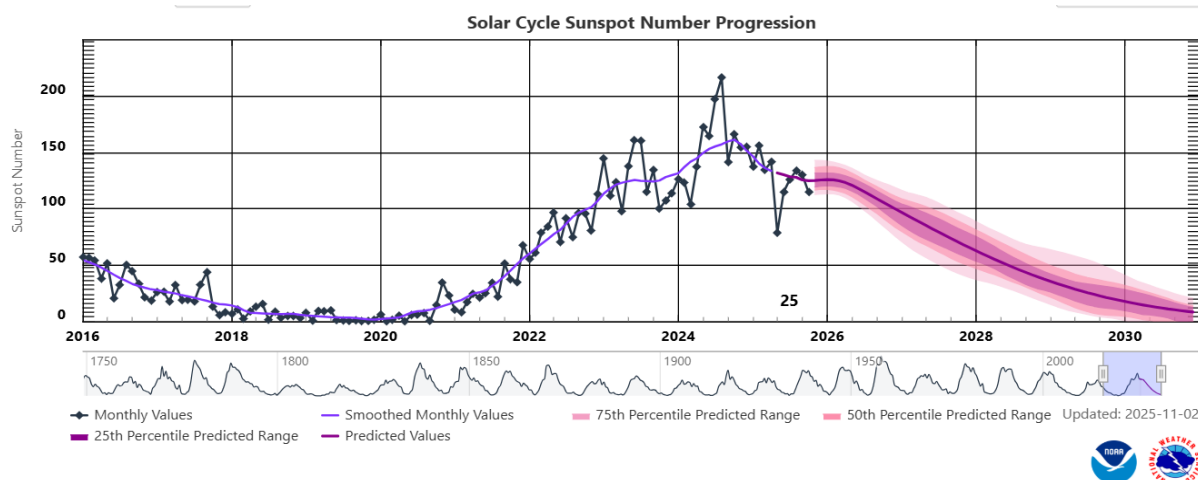
Month: October 25

• NEWS FROM THE SOLAR SECTION



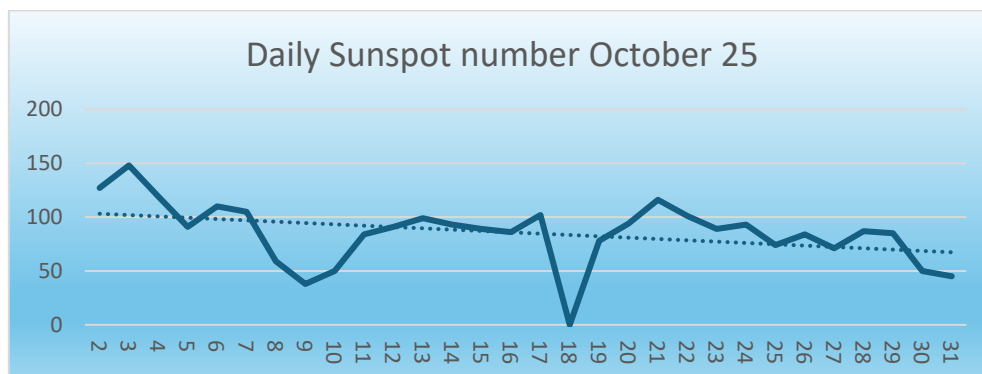
October 2025 Solar News

The updated October 2025 solar cycle data show that Solar Cycle 25 has now clearly begun its gradual decline from maximum, although overall activity remains strong. Sunspot numbers continue to track near the upper range of NOAA's predictions, confirming that Solar Cycle 25 has been a more active cycle than originally forecast. Despite the downward trend in the smoothed curve, the Sun remains highly dynamic, and elevated levels of active regions, flares, and CMEs are still expected as we move into 2026.



SUNSPOT OBSERVATIONS October 2025

2025	October	Time	Seeing	Groups	Spots	W no.	North Groups	South groups	North spots	South spots
Wed	1	1215	G	9	19	109	6	3	66	25
Thu	2	1355	G	8	47	127	5	3	27	20
Fri	3	1500	G	9	58	148	6	3	45	13
Sat	4	1455	G	8	39	119	6	2	33	6
Sun	5	1430	G	6	31	91	5	1	23	8
Mon	6	1205	G	7	40	110	5	2	29	11
Tue	7	1505	G	8	25	105	5	3	16	9
Wed	8	1530	G	5	9	59	4	1	4	5
Thu	9	1425	G	3	8	38	1	2	1	7
Fri	10	1445	G	4	10	50	1	3	3	7
Sat	11	1510	G	6	24	84	3	3	16	8
Sun	12	1210	G	5	41	91	3	2	33	8
Mon	13	1420	G	6	39	99	3	3	34	5
Tue	14	1530	G	6	33	93	4	2	31	2
Wed	15	1545	G	5	39	89	4	1	38	1
Thu	16	1511	G	5	36	86	3	2	31	5
Fri	17	1530	G	7	32	102	4	3	25	7
Sat	18		G			0				
Sun	19	1100	G	6	18	78	2	4	4	14
Mon	20	1235	G	8	14	94	2	6	3	11
Tue	21	1430	G	10	16	116	3	7	5	11
Wed	22	1415	G	9	11	101	3	6	3	8
Thu	23	1505	G	8	9	89	4	4	4	5
Fri	24	1600	G	8	13	93	3	5	4	9
Sat	25	1430	G	6	14	74	2	4	5	9
Sun	26	1240	G	7	14	84	2	5	6	8
Mon	27	1600	G	6	11	71	2	4	6	5
Tue	28	1155	G	7	17	87	2	5	7	10
Wed	29	1405	G	7	15	85	2	5	6	9
Thu	30	1350	G	4	10	50	1	3	5	5
Fri	31	1100	G	4	5	45	1	3	2	3



Monthly Means		
MDF	88,9	1 Observer
MDF g	6,6	1 Observer
MDF Ng	3,2	1 Observer
MDF Sg	3,3	1 Observer

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 OCTOBER 2024

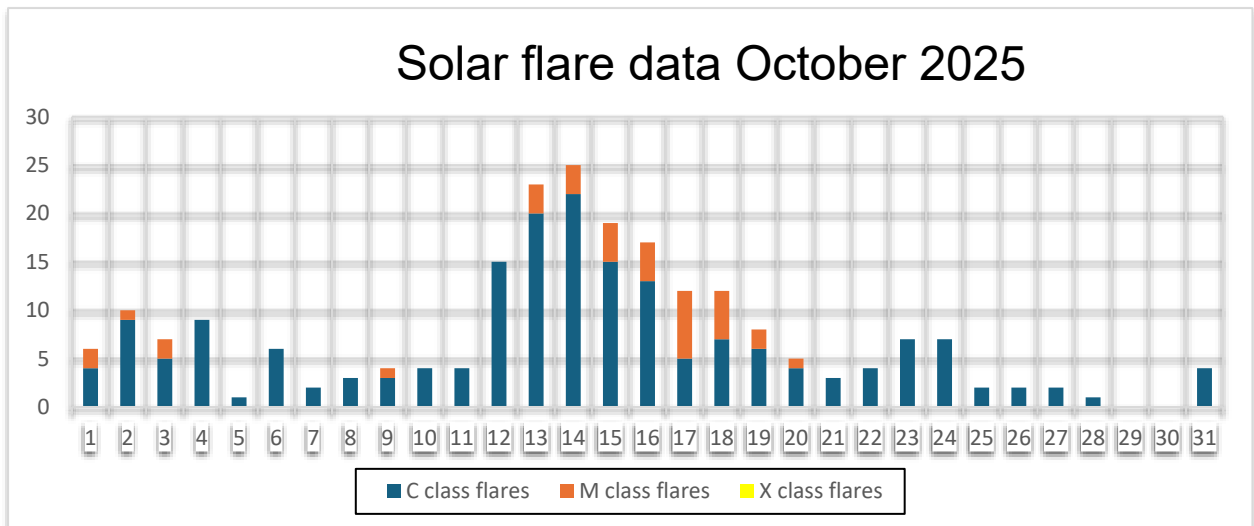
Solar flares are classified according to their x-ray brightness in the wavelength range 1 to 8 Angstrom. There are 3 categories: C class – minor, M class – medium and X class – big. Each category has 9 subdivisions.

A total of 224 solar flares were observed: 189 C-class flares and 35 M-class flares and 0 X class flare.

Solar flare data: LABORATORY OF X-RAY ASTRONOMY OF THE SUN

2025	October	C class	M class	X class	Sol Act Index	NOA No
Wed	1	4	2	0	6,2	4232
Thu	2	9	1	0	5,6	4226
Fri	3	5	2	0	6,1	4236/4238
Sat	4	9	0	0	5,8	
Sun	5	1	0	0	3,9	
Mon	6	6	0	0	3,7	
Tue	7	2	0	0	4,4	
Wed	8	3	0	0	3,6	
Thu	9	3	1	0	4,6	4236
Fri	10	4	0	0	4,3	
Sat	11	4	0	0	3,1	
Sun	12	15	0	0	5,4	
Mon	13	20	3	0	7,3	4236
Tue	14	22	3	0	7,8	4246/4248
Wed	15	15	4	0	8	4246/??
Thu	16	13	4	0	7,6	4246
Fri	17	5	7	0	7,3	4246
Sat	18	7	5	0	7,2	4246
Sun	19	6	2	0	6,4	4246
Mon	20	4	1	0	5,6	4148
Tue	21	3	0	0	4	
Wed	22	4	0	0	3,6	
Thu	23	7	0	0	4,1	
Fri	24	7	0	0	3,9	
Sat	25	2	0	0	2,9	
Sun	26	2	0	0	2,3	
Mon	27	2	0	0	1,3	
Tue	28	1	0	0	1,3	
Wed	29	0	0	0	0	
Thu	30	0	0	0	0	
Fri	31	4	0	0	3,7	
Totals		189	35	0		

Credit: https://xras.ru/en/sun_flares.html



- **Geomagnetic data**

K INDEX

Scientists monitor geomagnetic activity using various instruments, including magnetometers and satellites, to better understand the processes involved and predict potential impacts on technological systems such as power grids, communication networks, and navigation systems as well as changes in our climate. Severe geomagnetic storms have the potential to disrupt these systems, making the study of geomagnetic activity crucial for both scientific understanding and practical applications.

Increased geo-magnetic activities are caused by Coronal Mass Ejections (CME's) triggered by solar activities such as solar flares, filament eruptions and Coronal openings.

The K-index scale has a range from 0 to 9 and is directly related to the maximum amount of fluctuation (relative to a quiet day) in the geomagnetic field over a three-hour interval.

2025	October	0hrs to 03hrs	03hrs to 06hrs	06hrs to 09hrs	09hrs to 12hrs	12hrs to 15hrs	15hrs to 18hrs	18hrs to 21hrs	21hrs to 24hrs	A Index
Wed	1	5,33	5,33	4,67	3,67	5,67	5,00	6,00	4,33	50
Thu	2	5,33	6,67	4,67	4,67	4,33	2,33	4,67	4,33	45
Fri	3	4,33	5,00	5,00	4,33	3,33	3,33	4,00	3,00	30
Sat	4	3,67	3,67	4,00	3,67	4,00	3,67	2,67	2,33	20
Sun	5	2,67	3,33	2,67	2,00	2,33	1,33	1,00	1,33	9
Mon	6	1,33	0,67	1,33	1,33	1,67	1,67	1,67	2,33	6
Tue	7	2,67	2,33	3,00	3,00	4,33	3,33	2,67	2,00	15
Wed	8	3,00	3,67	3,00	2,33	2,67	2,00	1,67	0,67	11
Thu	9	1,00	0,67	2,00	1,33	1,33	0,67	1,67	2,00	5
Fri	10	3,67	2,33	2,67	2,67	1,67	0,67	1,33	1,67	9
Sat	11	2,33	3,67	4,67	3,00	2,33	2,33	2,67	3,67	17
Sun	12	4,00	4,00	3,67	3,67	3,67	4,33	5,33	4,00	29
Mon	13	4,67	4,67	3,33	4,00	3,00	2,67	3,33	3,00	23
Tue	14	2,67	2,00	2,67	1,67	1,67	2,00	1,00	2,33	8
Wed	15	3,67	3,33	3,33	2,67	2,00	1,00	1,33	2,00	12
Thu	16	1,00	1,00	1,67	1,33	0,67	0,33	1,33	1,67	4
Fri	17	2,00	1,67	2,67	3,33	2,00	0,00	2,67	1,33	9
Sat	18	3,67	4,00	5,00	3,67	3,00	5,00	6,00	4,00	36
Sun	19	5,00	3,33	2,00	2,67	2,67	3,33	3,00	3,00	18
Mon	20	3,00	2,67	2,33	2,00	1,67	1,00	1,33	2,00	8
Tue	21	3,33	3,00	1,67	0,67	1,33	1,67	2,00	2,33	9
Wed	22	1,33	1,00	0,67	1,00	1,00	1,00	1,33	1,67	4
Thu	23	2,00	1,00	0,33	1,33	1,33	1,33	2,00	2,33	6
Fri	24	3,00	2,33	2,33	2,33	1,67	2,00	3,00	1,67	10
Sat	25	2,67	3,67	2,67	2,33	2,00	0,67	0,67	0,67	9
Sun	26	1,00	1,33	1,33	1,33	0,33	1,00	0,67	1,00	4
Mon	27	1,33	0,67	1,00	1,33	0,67	1,67	2,00	2,33	6
Tue	28	2,33	3,00	3,33	2,33	3,67	3,00	4,33	3,67	19
Wed	3	3,00	3,00	3,33	3,00	3,00	3,67	4,00	4,33	20
Thu	30	4,67	3,67	4,33	5,33	5,33	5,00	3,00	4,33	38
Fri	31	4,33	4,67	4,33	3,67	4,00	3,33	2,67	3,00	25

Geomagnetic Storm Index

G1	G2	G3	G4	G5
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Credit: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

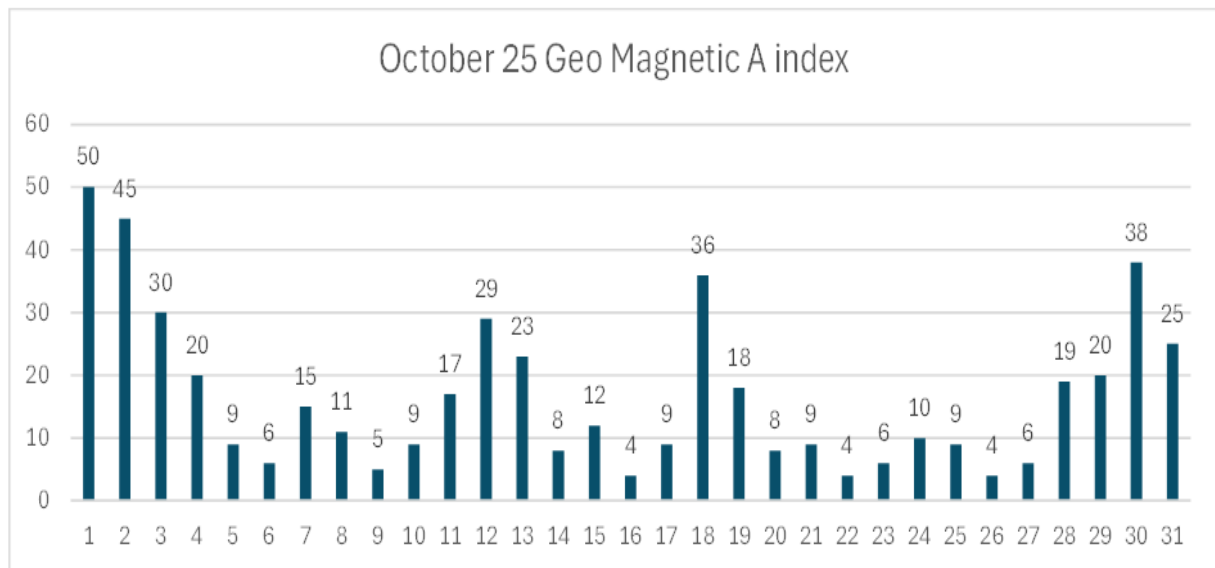
A INDEX

The solar A Index is a numerical scale that represents the geomagnetic activity in the Earth's ionosphere caused by solar flares and other solar phenomena. It measures the overall geomagnetic disturbance level on a scale from 0 to 400. The index is derived from the observed planetary A index, which quantifies the magnetic activity over a 24-hour period.

Here's a breakdown of the solar A Index scale:

- 0 to 7: Quiet geomagnetic conditions.
- 08 to 15: Unsettled geomagnetic conditions.
- 16 to 29: Active geomagnetic conditions.
- 30 to 49: Minor storm levels.
- 50 to 99: Major storm levels.
- 100 and above: Severe storm levels.

October 2025 was marked by three distinct periods of geomagnetic disturbances: a strong storm at the beginning of the month, a moderate mid-month rise, and a renewed increase in activity in the final days. The highest values occurred on 1 October (50) and 2 October (45), confirming an intense geomagnetic event early on. Overall, the month showed elevated geomagnetic variability compared with typical background levels, reflecting continued heightened solar activity as the solar cycle advances. These disturbances likely influenced HF radio conditions, satellite operations, and auroral visibility at higher latitudes..



H Alpha Observations

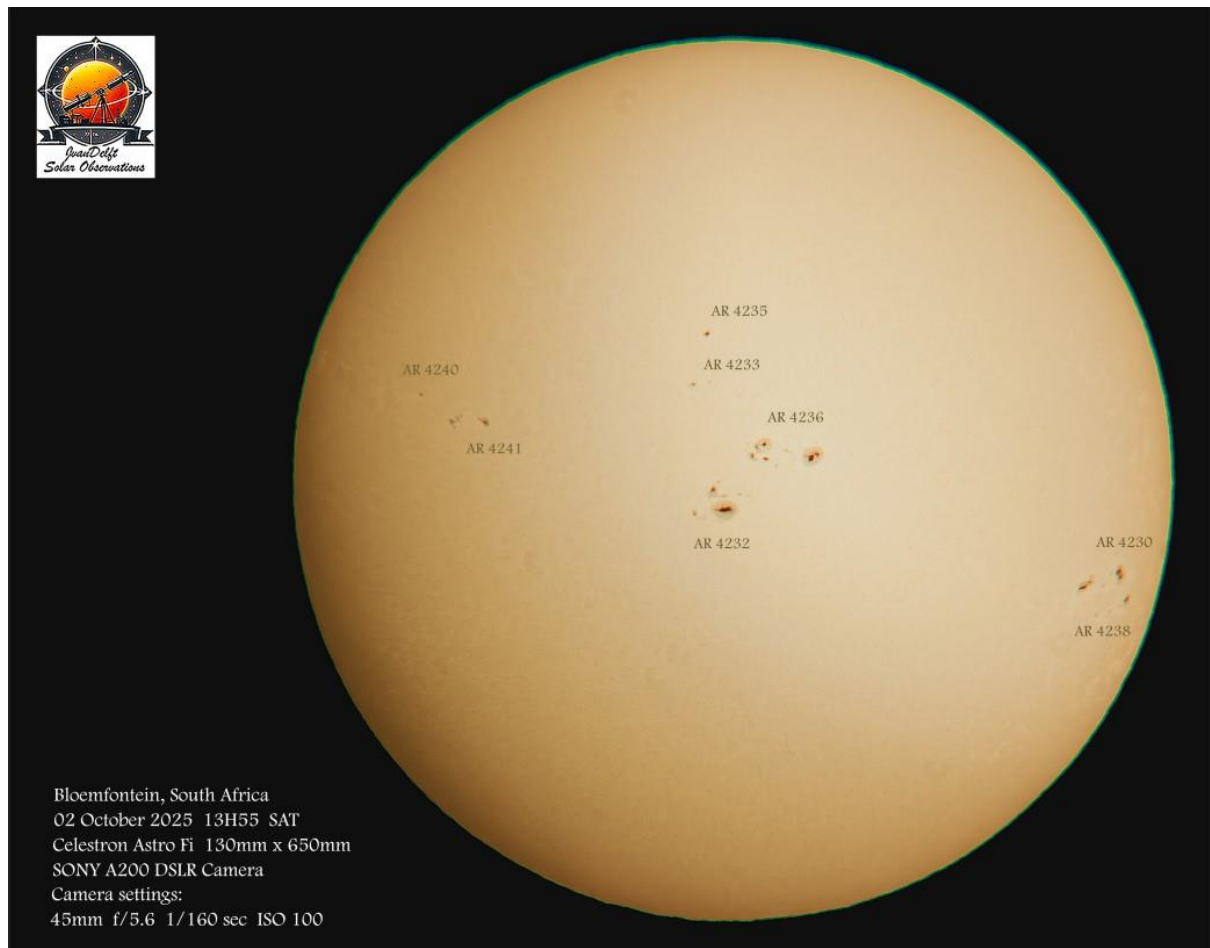
Two observers shared their H-Alpha data for October 2025. Andrew Devey from BAA & MSAS living in Spain and Mick Nicholls from BAA & MSAS living in the UK.

	Oct-25	Prominence Active	Andrew Devey	Mick Nicholls	Prominence Quiet	Andrew Devey	Mick Nicholls	Prominence Total	Andrew Devey	Mick Nicholls	Plage Areas	Andrew Devey	Mick Nicholls	Filaments	Andrew Devey	Mick Nicholls	Flares	Andrew Devey	Mick Nicholls
1	2				0			2			6			7			0		
2	2				2			4			6			7			0		
3	2				0			2			6			8			0		
4	2				4			6			6			8			0		
5	2				4			6			5			7			0		
6																			
7	2				4			6			5			9			0		
8																			
9																			
10																			
11		0		4			4		3			9					0		
12	1			3			4		4			7					0		
13	2			3			5		3			6					0		
14																			
15																			
16																			
17																			
18	1			2			3		4			6					0		
19	3	0	1	4	4	4	3	5	6	10	0	0					0	0	
20																			
21	2			2			4		3			7					0		
22		0		6			6		3			6					0		
23																			
24	2	0	2	6	4	6	3	3	7	8	0	0					0	0	
25	2	0	3	3	5	3	3	2	7	7	0	0					0	0	
26	2			3			5		3			7					0		
27	2			3			5		3			6					0		
28	2			2			4		2			4					0		
29																			
30	1			4			5		2			6					0		
Total Nr	32		42	23	74	23	67	16	115	40	0	0							

October 2025	Counts	Observations	MDF
Prominence	97	22	4,4
Plage Areas	83	22	3,8
Filaments	155	22	7,0
Flares	0	22	0,0

- **Solar images**

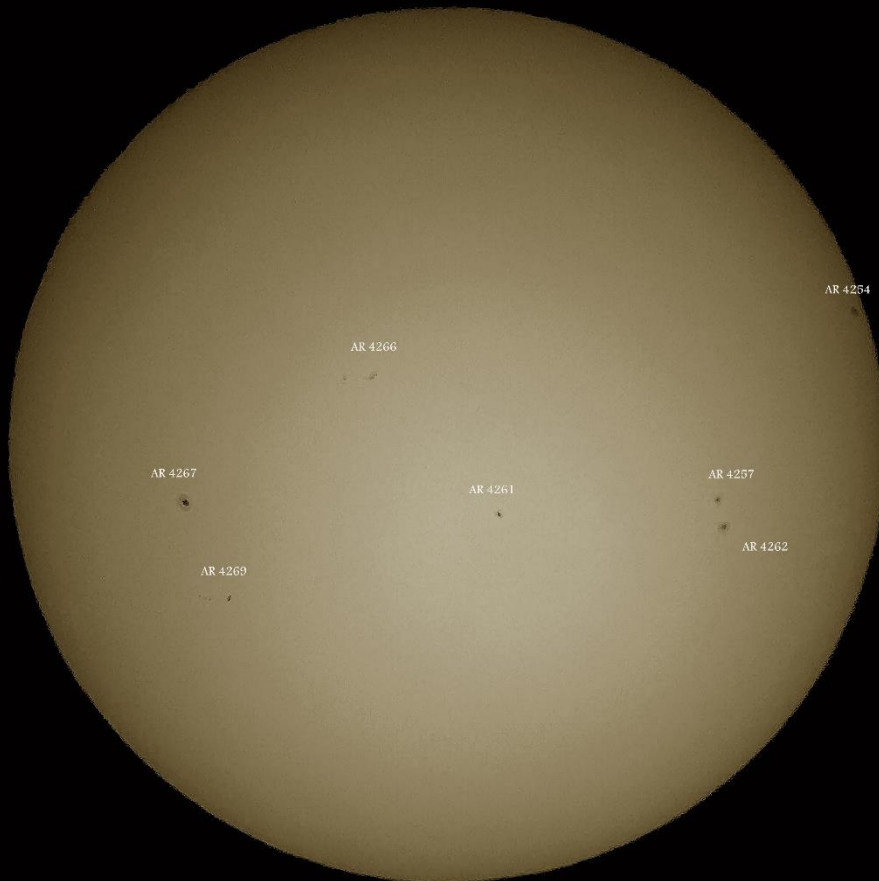
WHITE LIGHT



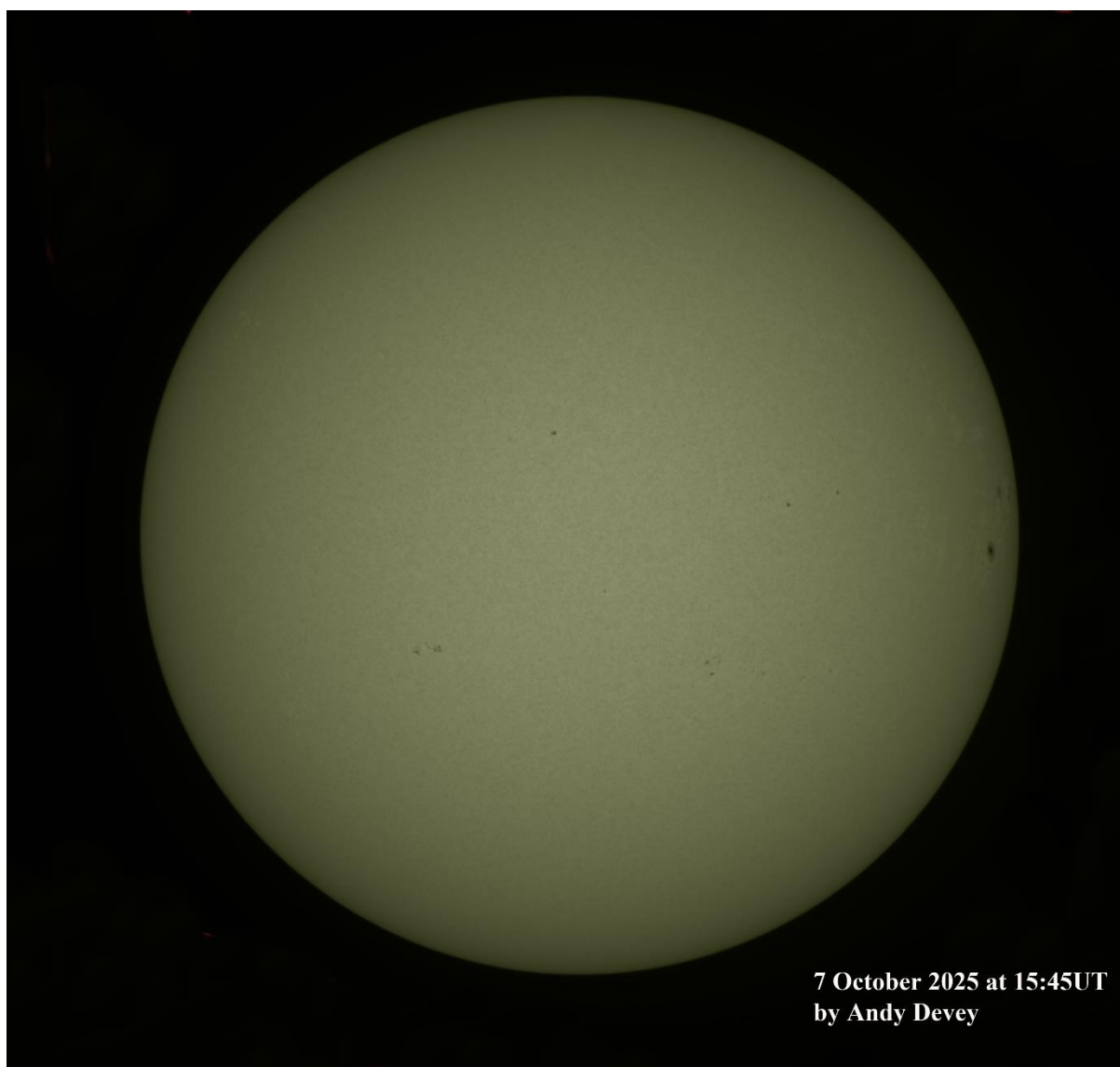
Jacques van Delft ASSA South Africa



Bloemfontein, South Africa
26 October 2025 12h40 SAT
Celestron Astro Fi 130mm x 650mm
Huawei nova Y9a cellphone camera

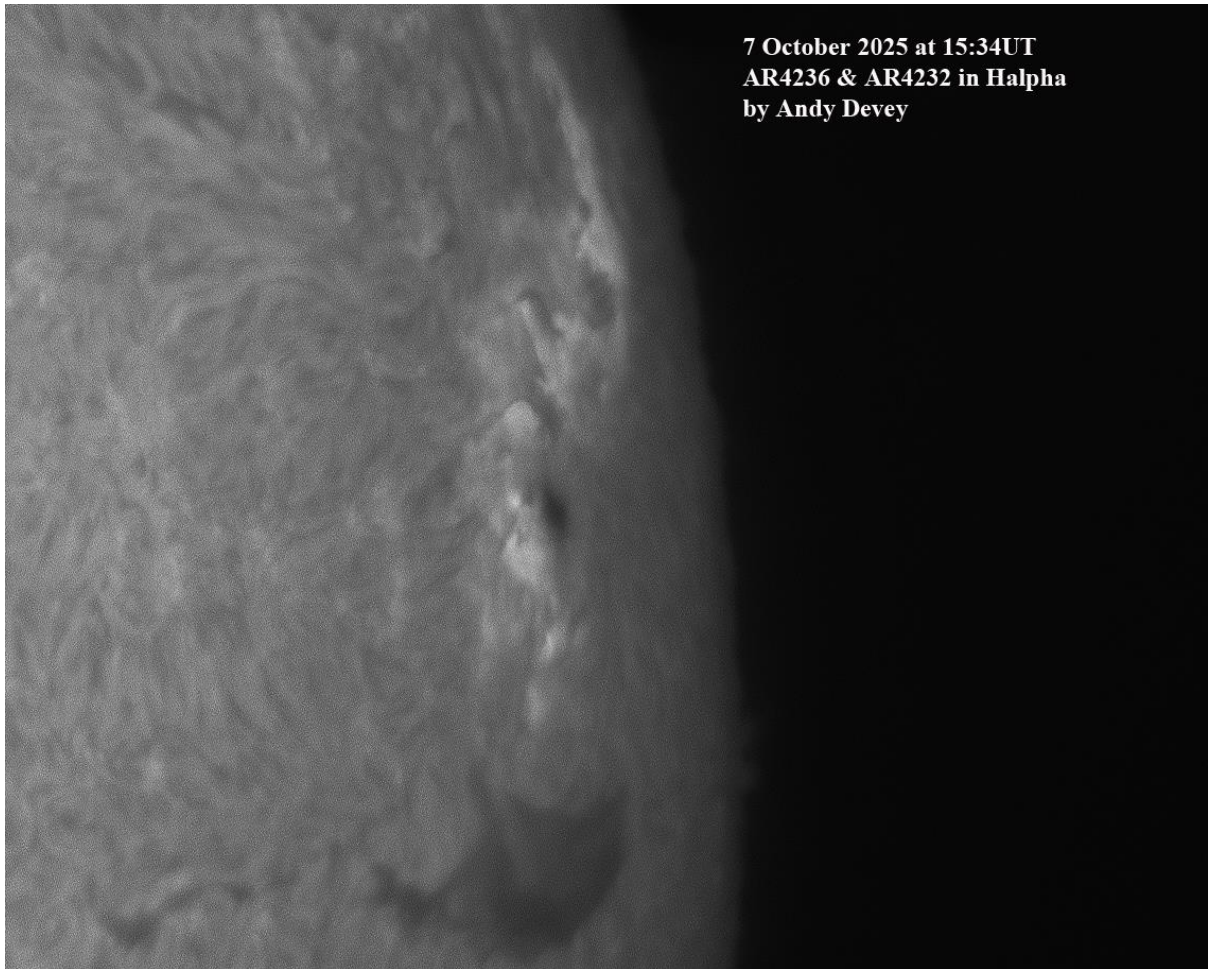


Jacques van Delft ASSA South Africa



Andrew Devey, BAA/MSAS Spain.

H-Alpha



7 October 2025 at 15:34UT
AR4236 & AR4232 in H α
by Andy Devey

Andrew Devey, BAA/MSAS Spain.

Thanks to the contributors of data and images.

Clear skies and regards
Jacques van Delft

ASSA Solar Section