Monthly Preliminary Report

MPR

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CV-Helios Network

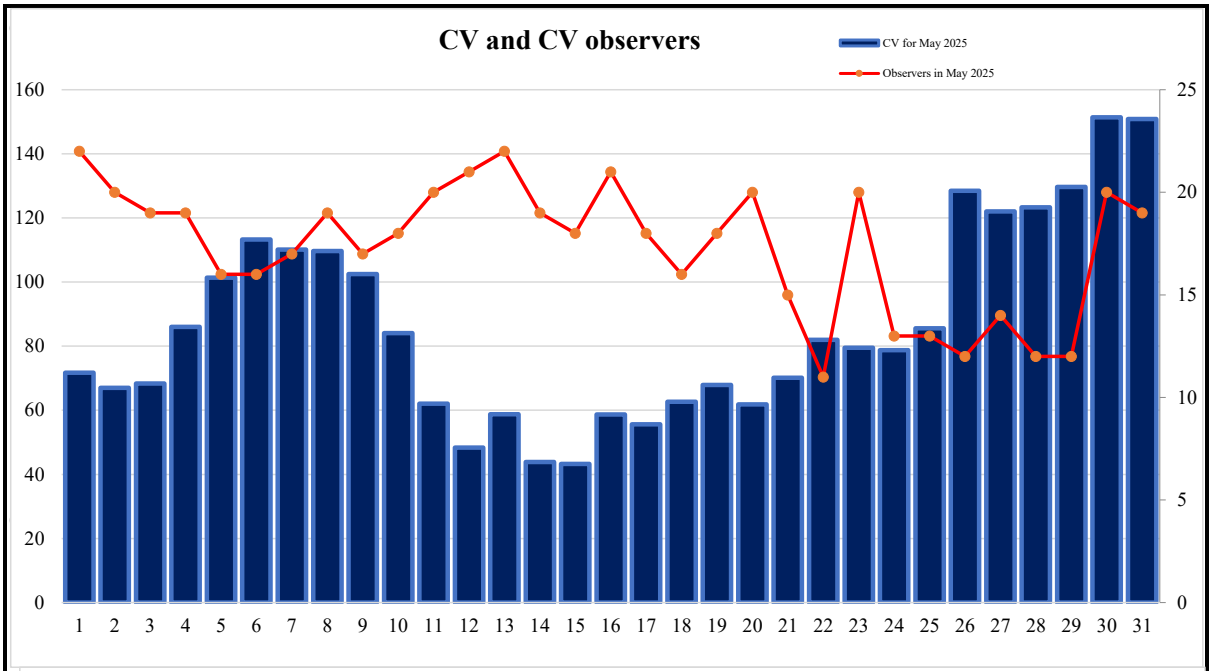
Monthly Preliminary Report for May 2025
Solar Cycle 25: Month no. 66
Report id.: cv2505 - CV-report no.: 526

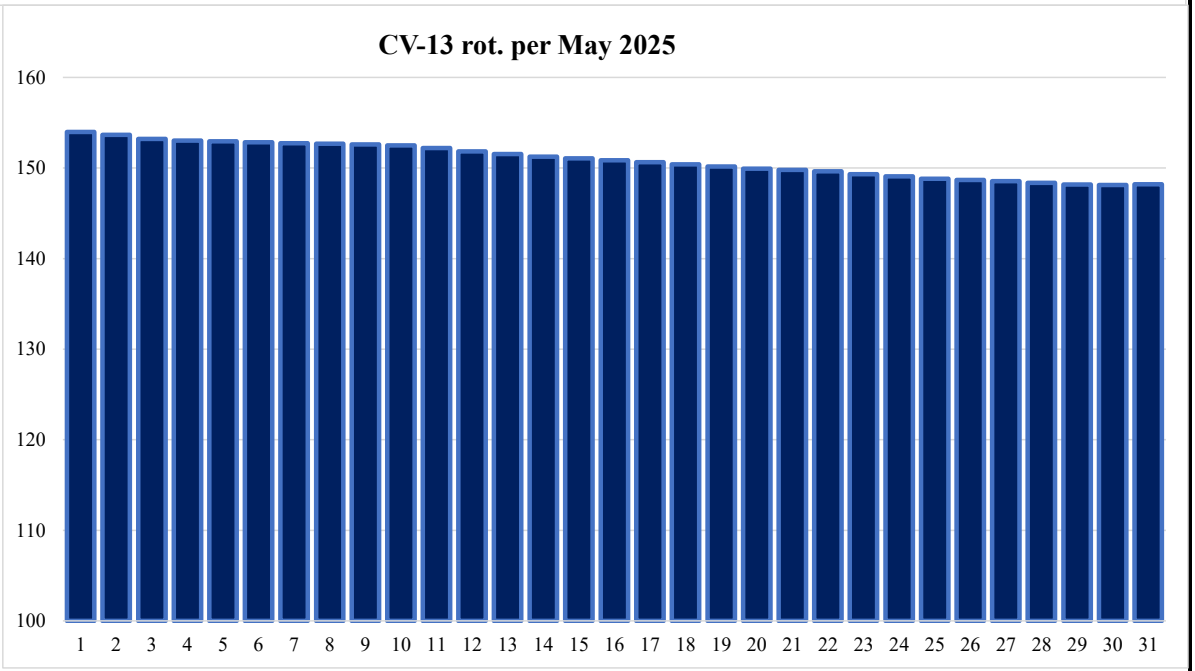
Memno.	Name	Country	CV	Obs	Obs. Tot.
CV-001	KJELL INGE MALDE	NORWAY	92,3	26	9693
CV-010	FRANKY DUBOIS	BELGIUM	77,7	25	10063
CV-019	ELMAR JUNKER	GERMANY	87,5	10	3981
CV-040	ROBERTO BATTAIOLA	ITALY	84,3	6	2227
CV-068	SVEN OVE THIMM	DENMARK	59,5	26	4552
CV-077	ANDREW JOHNSTON	UNITED KINGDOM	71,2	27	3974
CV-080	JAN JANSSENS	BELGIUM	66,5	2	1257
CV-082	PIOTR URBANSKI	POLAND	80,4	28	5966
CV-086	TOS POLAND	POLAND	83,4	31	9269
CV-091	GRZEGORZ DALEK	POLAND	81,2	24	5116
CV-102	PAULO ROBERTO MOSER	BRAZIL	81,6	20	3546
CV-105	ALEXEY RYBACK	RUSSIA	92,9	20	3747
CV-122	VLASTISLAV FEIK	CZECH REPUBLIC	82,7	14	3395
CV-135	GEMA ARAUJO	SPAIN	102,9	31	8087
CV-136	FAUSTINO GARCIA	SPAIN	69,4	16	4244
CV-139	JAVIER ALONSO	SPAIN	85,6	26	4428
CV-151	JEFFREY CARELS	BELGIUM	72,5	19	3462
CV-171	WALTER JOSE MALUF	BRAZIL	107,6	28	3429
CV-181	ADAM DERDZIKOWSKI	POLAND	82,6	18	1391
CV-198	DENIS WALLIAN	FRANCE	81,4	17	702
CV-204	STEFAN MEISTER	SWITZERLAND	84,3	6	869
CV-205	TOM MANGELSDORF	UNITED STATES	74,5	2	63
CV-207	ONDREJOV OBS. (AI CAS)	CZECH REPUBLIC	103,7	27	4226
CV-208	JOHAN NEYS	BELGIUM	92,1	14	912
CV-209	CAIO CRESPO MORAES	BRAZIL	70,0	3	646
CV-214	IGOR GRAGEDA MENDEZ	BOLIVIA	81,6	27	1752
CV-215	ARNAUD MENGUS	FRANCE	109,7	6	436
CV-219	KANDILLI OBSERVATORY	TURKEY	82,2	25	1405
CV-220	MICHEL FRANGEUL	FRANCE	65,5	13	369
CV-222	MILENA NIEMCZYK	POLAND	60,5	4	251
CV-224	SWO-NOAA (CV-USAF)	UNITED STATES	84,6	31	1978

Totals	Observers	Days	CV	Obs.
	31	**31**	**82,31**	**572**

Month Results for May 2025

Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV- 6 rot.	CV- 13 rot.
1	71,73	22	8,3	135,5	130,5	154,0
2	67,00	20	8,3	135,3	130,1	153,7
3	68,35	19	8,3	135,1	129,6	153,2
4	86,05	19	8,3	135,0	129,5	153,0
5	101,38	16	8,2	135,0	129,3	153,0
6	113,25	16	8,2	135,0	129,1	152,8
7	110,11	17	8,1	134,7	128,8	152,7
8	109,68	19	8,1	134,5	128,5	152,7
9	102,53	17	8,1	133,8	128,0	152,6
10	84,06	18	8,1	133,2	127,4	152,5
11	62,05	20	8,0	132,4	126,5	152,2
12	48,33	21	8,0	131,4	125,6	151,8
13	58,77	22	8,0	130,8	124,8	151,5
14	43,89	19	8,0	130,4	124,1	151,3
15	43,26	18	8,0	130,0	123,4	151,1
16	58,67	21	7,9	129,6	122,8	150,8
17	55,61	18	7,9	129,3	122,3	150,6
18	62,63	16	7,9	129,1	122,0	150,4
19	67,89	18	7,9	128,5	121,6	150,2
20	61,80	20	7,8	128,2	121,2	149,9
21	70,13	15	7,9	127,9	120,8	149,8
22	82,00	11	7,9	128,0	120,8	149,6
23	79,50	20	7,9	127,9	120,5	149,3
24	78,77	13	7,9	127,7	120,3	149,1
25	85,54	13	7,9	127,4	120,1	148,8
26	128,50	12	7,9	127,3	120,2	148,7
27	122,00	14	8,0	127,5	120,3	148,6
28	123,33	12	8,0	127,6	120,3	148,4
29	129,67	12	8,0	127,7	120,4	148,2
30	151,40	20	8,0	128,2	120,8	148,1
31	150,84	19	8,0	128,5	121,1	148,2
Totals/ Avrgs	**86,41**	**17,3**	**8,02**	**130,73**	**124,22**	**150,86**





:Product: Weekly Highlights and Forecasts

Highlights of Solar and Geomagnetic Activity
02 - 08 June 2025

Solar activity ranged from low to moderate levels. Regions 4100 (N08, L=245, class/area Eki/440 on 31 May) and 4105 (S15, L=130, class/area Eai/130 on 05 Jun) produced a few weak M-class (R1/Minor) flares this period. The largest event was an M3.3/2b flare observed at 02/1118 UTC from Region 4100. Weak, Earth-directed CME signatures were observed on 03 and 07 June.

The greater than 10 MeV proton event that began at 31/1710 UTC, reached the S2 (Moderate) levels at 01/0540 UTC, peaked at 666 pfu at 01/0915 UTC, decreased below S2 levels at 01/1245 UTC and ended at 02/0520 UTC.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 02-06 June with a peak flux of 5,180 pfu observed at 06/1615 UTC. Normal to moderate levels were observed on 07-08 June.

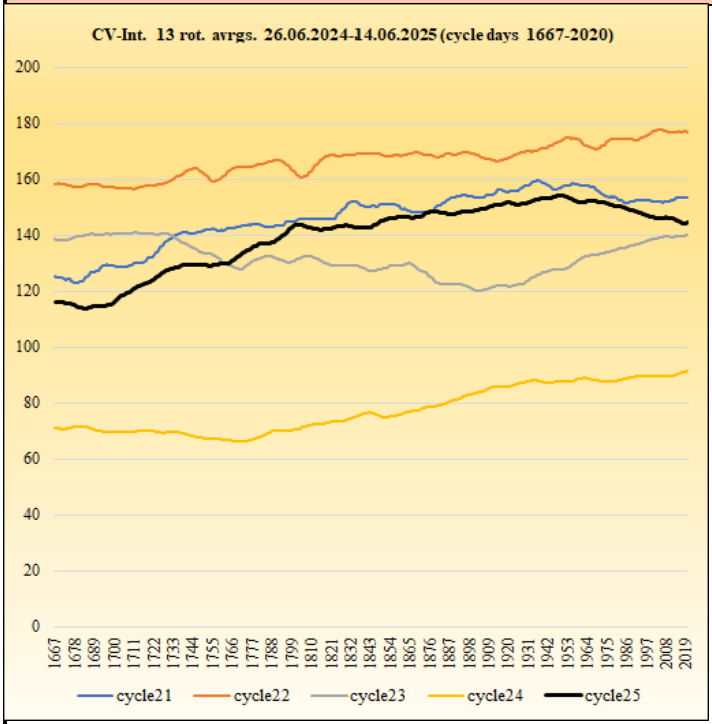
Solar activity is expected to be at a chance for R1-R2 (Minor-Moderate) levels throughout the outlook period due to multiple regions on the visible disk as well as multiple active regions scheduled to return from the farside of the Sun.

No proton events are expected at geosynchronous orbit.

Click on link below
to read the full weekly

Weekly PRF text at NOAA gov

Progress Solar Cycle no. 25



The left graphic show the progress last 13 rotations for CV 13 rotations averages.

Solar Cycle 25 6 rot. avrgs.
is currently behind both solar cycles 21, 22 and 23 at the same stage.

When it comes to the 13 rot. averages solar cycle 25 is currently behind solar cycles 21 and 22.

Looking at the graphic to the left, we might begin to wonder if 13 rot. CV had a maximum around April 04?
Number of regions, area measures and solar flux may indicate the same.

But - we still try to be optimistic and look forward to high activities this summer of 2025.

Stay tuned for updates!

Graphic show CV-Int. levels cycle 25 compared to same stage cycles 21-24 per 14 Jun 2025.

Highlights May 2025

The solar activity in May 2025 was a month with low numbers like April.
Largest regions were 4079 (EKC), 4082 (DAC), 4087 (DHO), 4099 (DKC), 4100 (EKI).
Really no regions were of significant size in May 2025.

Status per 14.06.2025:
CV 6 rot. highest since 20.02.2003 (22,3 years ago),
CV 13 rot. highest since 12.05.2003 (22,1 years ago).

A total of 1361 regions this cycle per end June 2025 (645 regions North and 716 regions South).
At the same time solar cycle 24 produced 1043 regions .(488 north and 555 south).

Update per 14.06.2025 - 6 rot. averages (rising)
Cycle 25: 22,8 CV-units under cycle 21 (rising)
Cycle 25: 63,4 CV-units under cycle 22 (falling)
Cycle 25: 40,5 CV-units under cycle 23 (falling)
Cycle 25: 12,3 CV-units over cycle 24 (falling)

Update per 14.06.2025 - 13 rot. averages (rising)
Cycle 25: 9,2 CV-units under cycle 21 (rising)
Cycle 25: 32,4 CV-units under cycle 22 (falling)
Cycle 25: 4,2 CV-units over cycle 23 (rising)
Cycle 25: 53,0 CV-units over cycle 24 (rising)
We reckon there have passed 2021 days of the new cycle by this issue 15 Jun 2025.

STATUS: Maximum period Solar Cycle 25 over 99 percent prediction started 11 Nov 2024
and expected to last until 31 Dec 2025. Maximum peak predicted as 20 Jul 2025.

It seems Maximum for the Northern hemisphere may have occurred 05 November 2023!
(Southern hemisphere Maximum date expected around 10 September 2025).

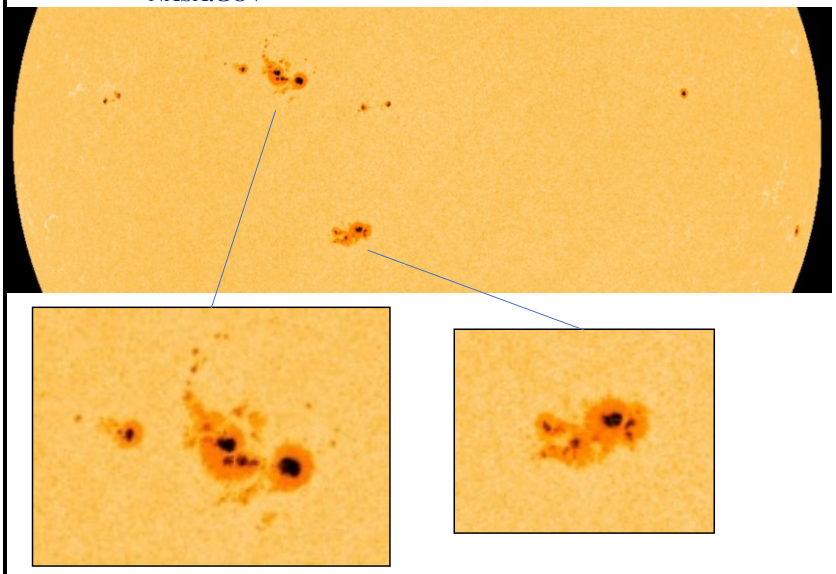
Reports of aurora borealis stillappears, but the aurora season is really over due to light nights!

Supergroups-catalogue:
CV-Helios Network is currently working on a catalogue with drawings or photos
of sunspot regions that exceeded 1000 mvh from 1874 until present.
Drawings or photos will be collected from the archives of wellknown different observatories!

Co-worker/assistant at CV-Helios Network? Please contact CV-Helios Network if this is something for you!

Pictures from last month - Observer contributions, etc.

NASA.GOV



All members are welcome to send in their photos for publishing!

Highlights May 2025

30th May 2025:

The highest CV-activity day in May 2025 was on the 30th.
CV-Int. is 152,1.

This is an image from SOHO and Nasa.gov.
The activity in May did not not show the very large groups.

Region 4100 was the 3rd return of large region from March and April (4055 and 4079).

We like to see more of these!

Awards this month 0

none

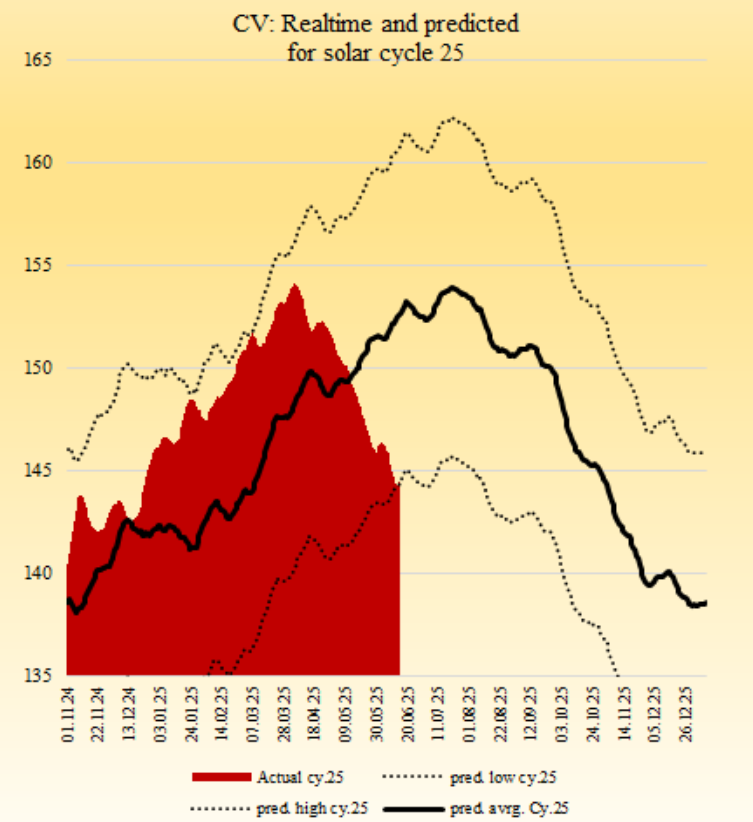
New members:	Welcome to:
- - -	

We are now 50 active members (last 12 mo.)

Sunspot regions of May 2025

Reg,1stD,Rot,Mo.Yr,Cla;Lat,Long,Mvh	Reg,1stD,Rot,Mo.Yr,Cla;Lat,Long,Mvh
4079,28.04.25,14,8,242,2297,EKC,56	4090,16.05.25,12,-12,21,2297,CAO,8
4080,03.05.25,2,-12,331,2297,BXO,2	4091,17.05.25,3,-13,33,2297,CAO,8
4081,03.05.25,9,7,212,2297,DAI,22	4092,19.05.25,12,-13,339,2298,CSO,11
4082,04.05.25,12,-10,184,2297,DAC,31	4093,20.05.25,7,-6,328,2298,CRO,5
4083,05.05.25,1,18,254,2297,AXX,1	4094,21.05.25,6,20,330,2298,CRO,5
4084,08.05.25,5,-21,129,2297,CSO,11	4095,21.05.25,3,-5,75,2297,DAI,22
4085,10.05.25,5,3,139,2297,DSO,25	4096,21.05.25,13,6,307,2298,HSX,10
4086,11.05.25,3,7,207,2297,DAO,19	4097,22.05.25,5,-13,305,2298,CRI,6
4087,12.05.25,13,15,59,2297,DHO,49	4098,23.05.25,5,-4,20,2297,DAI,22
4088,14.05.25,3,9,153,2297,CRO,5	4099,25.05.25,13,-13,256,2298,DKC,55
4089,16.05.25,5,18,28,2297,DRO,13	4100,26.05.25,13,9,245,2298,EKI,47

Progress of Solar Cycle 25 (13 rot. averages)



THE PROGRESS OF SOLAR CYCLE 25 against average solar cycles (cycles 21-24) per 15 Jun 2025.

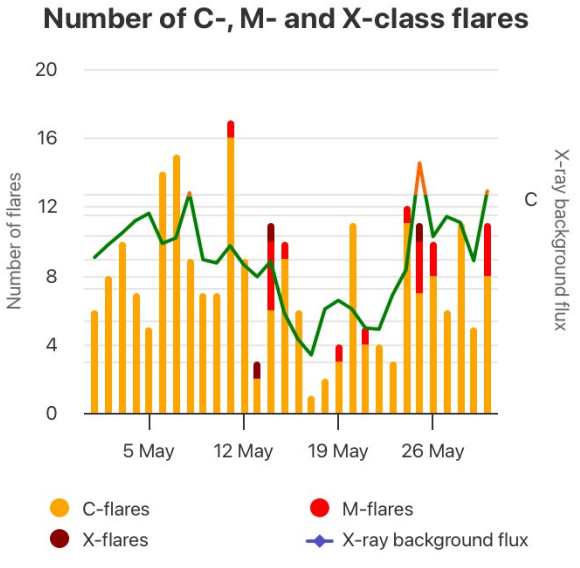
13-rotation averages:
We now may reckon we are about 99 % into the (pre-)maximum period, estimated to have begun about 01 November 2024 and will last until around 08 January 2026.
The above is based on average progress on solar cycles 21-24 compared to the present one.

If the above show almost correct, Maximum should occur around 20 July 2025.

The image to the left show the progress from Nov 2024 until today and show a kind of disappointing development as per 15 Jun 2025.

We hope for better times with still increasing activity this spring and summer!

Chart will be updated next MPR.
Last update 15 Jun 2025.



THE PRODUCTION OF SOLAR FLARES IN MAY 2025

The curves on the left here show the production of C- M- and X-class type flares in May 2025.

Activity has become fairly high, though the most intense flares did not appear. Anyway giving the notice on closeliness to solar maximum solar cycle 25.

We may also experience severe storms in the time coming towards maximum and after.

CV-observations and the CV-observers

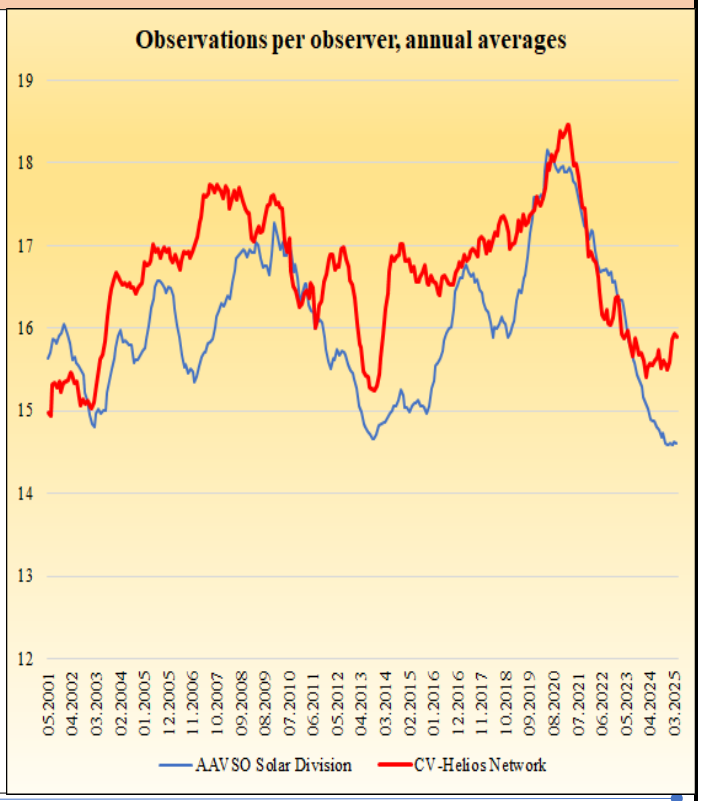
CV-observations and the CV-observers part 1

In this issue of MPR we shall look at the number of CV-observations performed by our many CV-observers through time.
This is also a tribute and thanking for all of you valuable members who have supported CV-Helios Network through many years.
We are so thankful to have you here!

Since August 1981 a total of 139 observers have tried out the CV system for shorter or longer periods.
The CV-observers have originated from 31 countries all over the globe. This is very important thinking of how sunspots may develop or disperse within a 24.hour period.

We took the liberty of comparing the number of observers from the well known AAVSO Solar Division (they have many more observers), in the period 2001 up until today (April 2025) to see how many observations do one single observer do on average, and compare it with the same table made for CV-Helios Network.

Excactly 24 years have now passed, and AAVSO-SD have a monthly average of 16,05 obs. per observer, while CV-Helios Network have 16,65.
We beat AAVSO-SD with 0,600 obs./month/observer.



CV-observations and the CV-observers part 2

The graphic to the right show in ascending order the number of years a CV-observer have submitted their contributions.

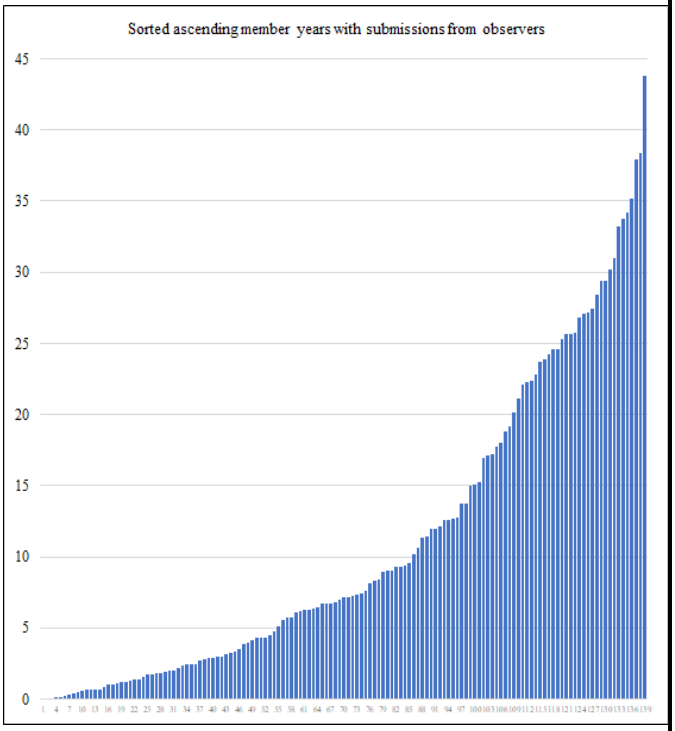
85 observers members/submitted for 0-10 years
23 observers members/submitted for 10-20 years
22 observers members/submitted for 20-30 years
8 observers members/submitted for 30-40 years
1 observer member/submitted for over 40 years

Per May 2025 we have a total of 240.974 CV-observations.

We have had top-years especially between 2001 and 2009 where the 3-year total were betweeen 65 and 70 observers (70 observers period November 2005 to October 2008).

Situation today is we are 44 observers through the last 3 years.
This means we have to gain new observers!

If you should know anyone you may recommend trying out the CV system, please have them contact us at cvhelios@gmail.com.



Solar Coordinates

Daily list of Solar Ephemeris available at:

Daily list of Solar Ephemeris and SDO on grid

Here you can see Today's Po, Bo, Lo, Rotation no., RA and Dec. and adjusted SOHO-picture on grid.

Calculating CV for total CV only	for classifications
For your convenience and security, use the mif2021,	**NEW form for classifications released!**
https://www.cv-helios.net/mif2021.xlsx	**CLASS-FORM 2024**
The Monthly Input Form, used for all of your next reportings!	

Monitor MPR daily progress

CV-Helios Network: Monitor MPR progress as entries are made!

Monitor your submissions as they are registered:

https://cv-helios.net/helios/cv/web/mprpost.html

The data are available fresh from approx. 10:00 UTC until local midnight. List later.

Content comprises CV-Report for latest month, CV-Report for latest month

individual results, Extracts from NOAA on forecasts/discussion,

Extracts from NOAA warehouse on SRS and other activity,

Last 24 months CV-data, This month CV acc. to USAF

Registration data

Check if your CV-observations have been registered (please allow up to 24 hrs):

https://www.cv-helios.net/helios/cv/web/datlist.htm

https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm for checking of Entries Summary

CONTRIBUTE WITH YOUR PHOTOS AND OTHER OF INTEREST!

We would like YOU to contribute with drawings or photos from last month

Also any other contribution that may have an interest for our observers.

Please send by email to:

cvhelios@gmail.com

Please check out www.cv-helios.net/cvrep2.html for updates of files!

SUBMISSIONS OF CV-OBSERVATIONS

Log on to:

https://www.cv-helios.net/observations/index.html

login	solaris
password	cvheliosobs

Submission before 15th of proceeding month 18:00 UTC. (password: cvhelios)

MPR issue 15th of proceeding month 2000 UTC. Good luck CV-observing!

Average received to registered time: 0 day 08 hours 24 minutes
and average macrotime for one registration is 16,65 seconds

CV-Helios Network
- over 43 years in solar amateur astronomy service!

There are now 13689 registrations made, containing 52879 CV-observations!
Last 12 months 6604 CV-observations from 39 observers originating from 16 countries

Editorial close: 15.06.2025 17:46 UTC

CV-Helios Network

Established 15th August 1981