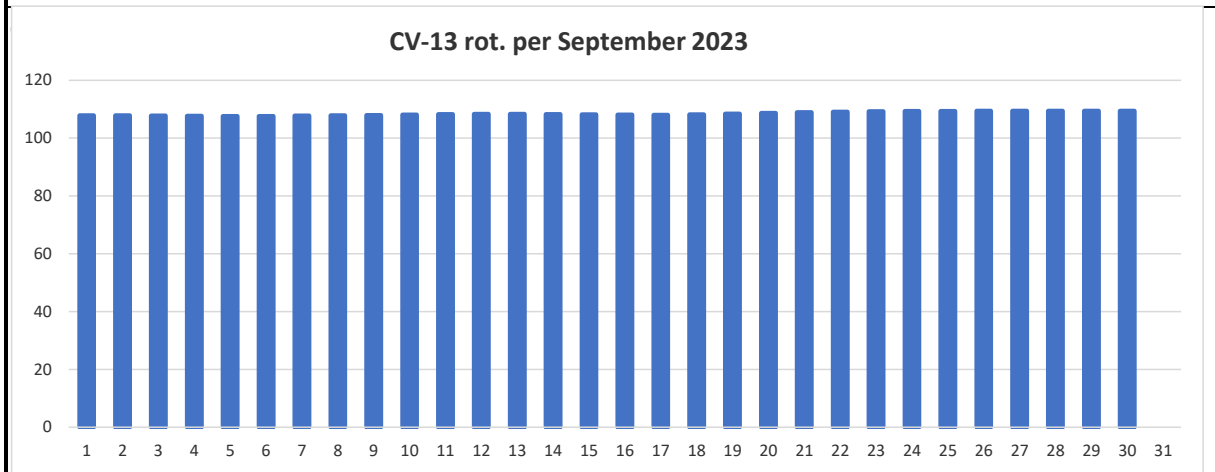
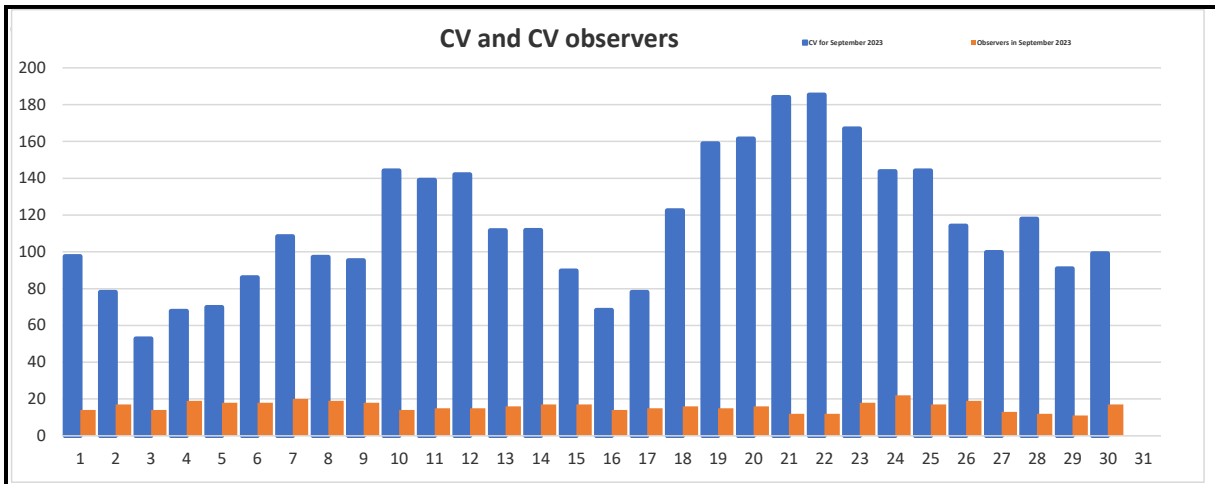




<b>Results</b>						
Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	97,53	14	7,42	116,18	118,18	107,86
2	78,17	17	7,41	116,30	117,97	107,80
3	52,87	14	7,42	116,35	117,78	107,72
4	67,79	19	7,42	116,23	117,48	107,64
5	69,84	18	7,42	115,96	117,04	107,60
6	86,11	18	7,41	115,82	116,77	107,61
7	108,38	20	7,41	115,45	116,66	107,75
8	97,20	19	7,40	115,26	116,43	107,82
9	95,32	18	7,37	115,30	116,22	107,91
10	144,13	14	7,37	115,90	116,47	108,09
11	139,06	15	7,40	116,45	116,78	108,23
12	142,00	15	7,44	117,04	117,30	108,35
13	111,69	16	7,45	117,55	117,72	108,34
14	111,71	17	7,46	118,05	118,25	108,27
15	89,78	17	7,48	118,38	118,72	108,17
16	68,33	14	7,51	118,62	119,07	108,06
17	78,13	15	7,53	118,75	119,31	108,03
18	122,41	16	7,57	119,49	119,69	108,16
19	158,88	15	7,62	120,13	120,37	108,43
20	161,41	16	7,68	120,93	121,11	108,68
21	184,00	12	7,71	121,42	121,62	108,88
22	185,31	12	7,76	121,70	122,03	109,06
23	166,94	18	7,79	122,06	122,40	109,20
24	143,68	22	7,80	122,29	122,56	109,28
25	144,17	17	7,81	122,26	122,51	109,36
26	114,10	19	7,82	122,16	122,34	109,38
27	99,79	13	7,82	121,82	122,13	109,37
28	117,92	12	7,80	121,54	122,02	109,39
29	90,83	11	7,80	121,26	121,94	109,38
30	99,06	17	7,80	121,31	122,04	109,38
Totals/ Avrgs	<b>3,96</b>	<b>27,3</b>	<b>0,97</b>	<b>4,83</b>	<b>119,36</b>	<b>108,44</b>



**Latest sunspot regions developments**

Reg.-First-Last-Lat.-Long.-Rot.-Area-Lgth.-CV-max.

Region	First date	Max. date	Last date	Lat.,	Long.,	Rot.,	Max.mvh,	Max class,	Max CV
3436	17.09.23	20.09.23	21.09.23	20	195	2275	220	DAI	22
3437	18.09.23	20.09.23	23.09.23	-18	175	2275	190	DAI	22
3421	03.09.23	06.09.23	11.09.23	14	343	2275	220	DAI	22
3423	04.09.23	11.09.23	15.09.23	16	282	2275	420	EKC	56
3425	06.09.23	08.09.23	20.09.23	23	247	2275	140	DAI	22
3435	16.09.23	20.09.23	29.09.23	9	105	2275	300	DKI	46

**:Product: Weekly Highlights and Forecasts**

Highlights of Solar and Geomagnetic Activity  
02 - 08 October 2023

<http://services.swpc.noaa.gov/text/weekly.txt>

Solar activity was at low to moderate levels. Moderate levels were observed on 02 Oct due to an M1.9/1n (R1-Minor) flare at 02/1249 UTC from Region 3455 (N25, L=274, class/area=Cro/020 on 02 Oct, the strongest of the period. Moderate levels were again observed on 07 Oct due to an M1.7/Sb flare at 07/1806 UTC from Region 3406 (S10, L=232, class/area=Dai/080 on 08 Oct). Associated with the event was Type II radio sweep and a narrow, faint CME that was headed east of the Sun-Earth line. The remaining 15 numbered active regions were either quiet to only produced C-class (below R1-Minor) activity.

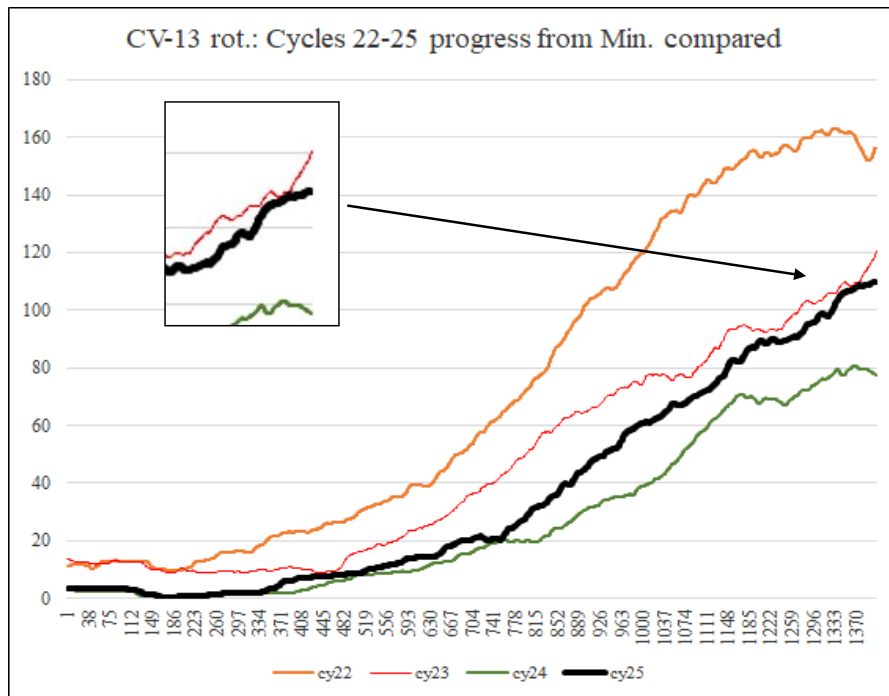
No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached high levels on 03 Oct and was moderate for the remainder of the reporting period.

Solar activity is expected to be low with a chance for moderate conditions through the outlook period due to the flare potential from active regions currently on the visible disk and regions that have produced moderate activity that expected to return from the Sun's farside.

No proton events are expected at geosynchronous orbit.

## Progress Solar Cycle no. 25



It is apparent that the stage and rise of solar cycle 25 now can be compared to solar cycle 23 (1996-2008). At the time of issue CV-I for last day of September 2023 we can definitely compete with solar cycle 23! See enlarged view. Solar cycle 25 has now long gone superseded solar cycle 24 (2008-2019) at the same stage of development.

Further updates in the following issues of MPR.

The above graphic show CV-Int. levels solar cycle 25 compared to same stage previous cycles 21-24.

## Highlights September 2023

The solar activity is still rising though many regions have been of very modest sizes.

However, both CV-I 6 and 13 rotational averages have reached interesting values.

The 6-rot. averages have now superseded cycle 24, and the first time this happened was on 01 May this year!

Report-end this MPR 506 for September correspond to 24th March 2002 (day 1405),

and the 6-rot. Average has now turned and compared to cycle 23 we are about 9 CV-units under.

When it comes to the 6-rotation averages we are now a little below cycle 23!

A total of 713 regions this cycle per end October 2023 (353 regions North and 360 regions South).

At the same time solar cycle 24 produced 561 regions (.230 north and 331 south)

Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV

3421,03.09.23,06.09.23,11.09.23,14,343,2275,220,DAI,22

3423,04.09.23,11.09.23,15.09.23,16,282,2275,420,EKC,56

3425,06.09.23,08.09.23,20.09.23,23,247,2275,140,DAI,22

3435,16.09.23,20.09.23,29.09.23,9,105,2275,300,DKI,46

3436,17.09.23,20.09.23,21.09.23,20,195,2275,220,DAI,22

3437,18.09.23,20.09.23,23.09.23,-18,175,2275,190,DAI,22

3443,21.09.23,23.09.23,26.09.23,28,147,2275,260,DKI,46

3445,22.09.23,25.09.23,30.09.23,-14,75,2275,220,DAI,22

We expect a major upgoing of CV-I totals later on this year.

3448,25.09.23,27.09.23,07.10.23,13,354,2276,130,HSX,10

3449,26.09.23,29.09.23,03.10.23,15,10,2275,120,CSI,12

It now seems that prediction mix of 6 and 13 rotation averages may indicate maximum 14.08.2025 (+/- 2 rot.) as a time of maximum for the CV-I (but still, may be one rotation later). Updates will come.

We reckon there have passed 1395 days (solar flux 1432 days) of the new cycle by this issue.

We may see a continued production of smaller regions for a while

but by the end of year expect more active periods!

Solar Flux onset: OCCURED 30 September 2022, the Onset 13 rot. ctrd. Occurred 18 Mar 2023.

Stay tuned and observe the solar disk from now on!

Please remember you are always welcome to contribute with drawings and photos!

TAKE A SURVEY:

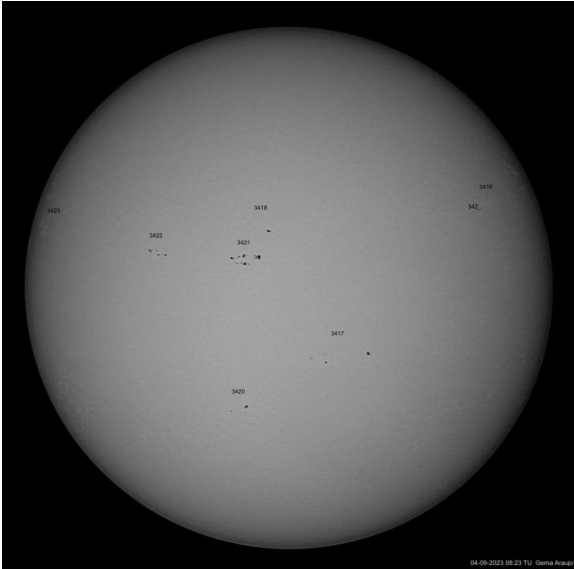
**Here is a Survey of hmiigr SOHO solar images 2022.**

<https://www.cv-helios.net/helios/cv/web/2022/Video2022.mov>

**Pictures from last month - Observer contributions, etc.**

Photo courtesy: Thanks to CV-135 Gema Araujo, Spain

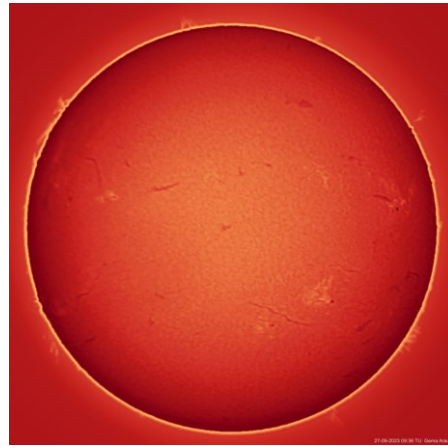
**Thank you, Gema Araujo, for giving us access to your large collection of solar images**



**Highlights September 2023**

Left: Photo from CV-135 Gema Araujo, Spain from 21 September 2023.

Picture below in H-alpha taken on 27 September 2023.



**Awards this month**

0

none



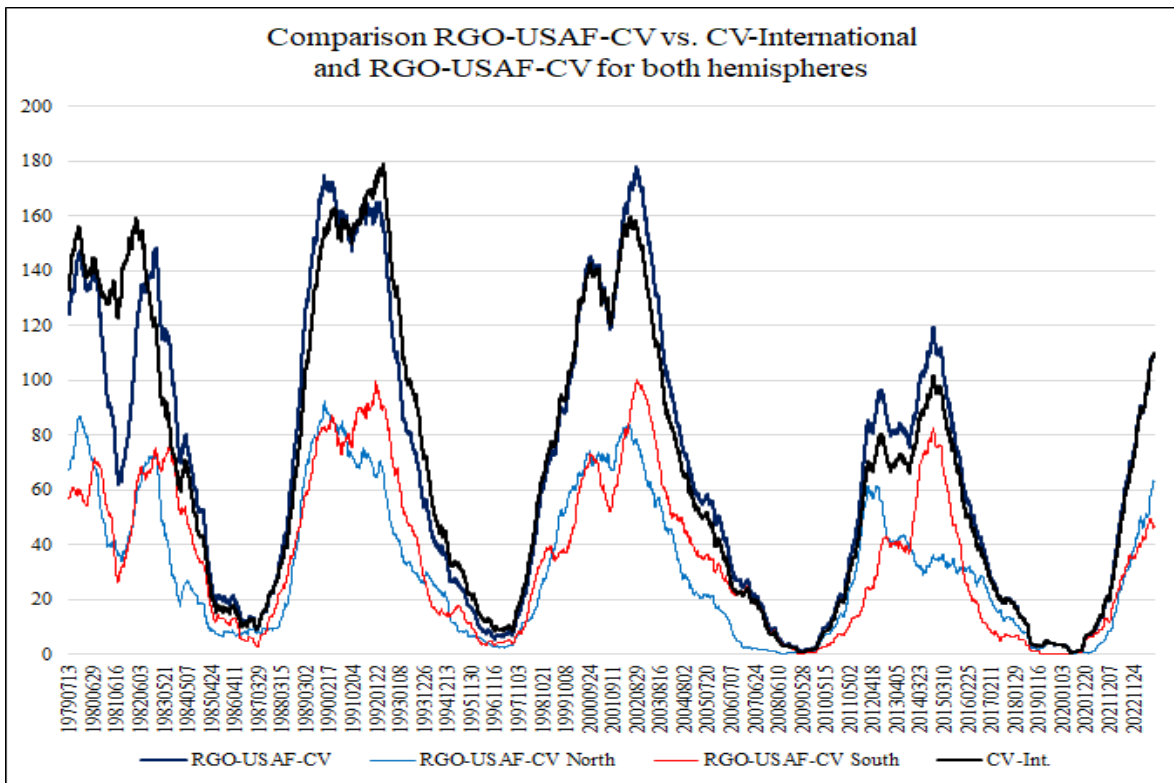
**New members:**

**Welcome to:**

0

We are now 52 active members (last 12 mo.)

Comparison RGO-USAF-CV vs. CV-International



The graphic above show the result from calculating the RGO (Royal Greenwich Observatory) - USAF (US Air Force stations) from their classifications onto the CV-system.

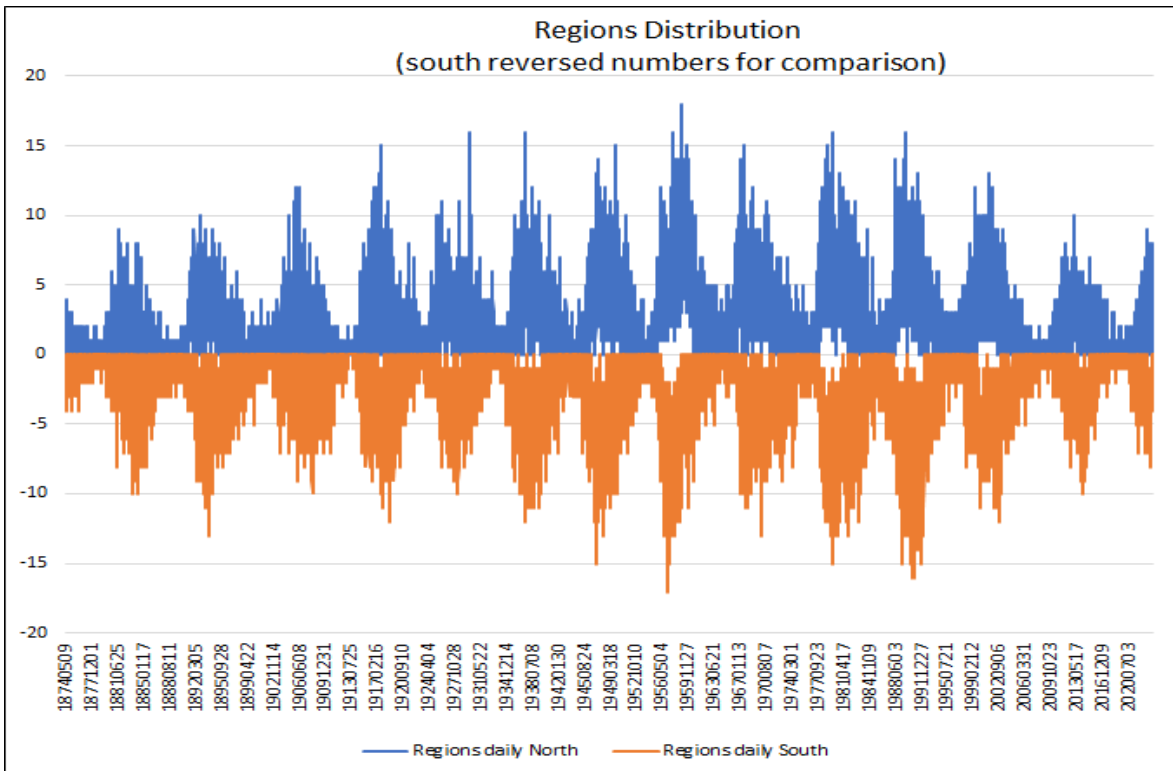
Here are also the two hemispheres calculated in, and clearly show the distance between a North-maximum and a South-maximum.

The graphic above and all calculations have taken several weeks to prepare, but are now almost ready at a point to publish on CV-Helios Network's webpages. Stay tuned for update.

The RGO-USAF text-tables go all the way back to May 9, 1874 and are fulfilled up to date.

Data from the RGO/USAF.

## Latitude distribution RGO-USAF 1874-2023



The graphic above show the sunspot region distribution between North and South solar hemispheres in the period May 9, 1874 until October 02, 2023.

The South-numbers have been reversed in order to compare properly North and South.

When it comes to number of regions visible per day, and compared to, perhaps the best shot at it, we might be able to see as much as approximately 19 regions present at one day when we are approaching solar maximum summer of 2025.

Data from the RGO/USAF

[Discover the Sun! \(solarcyclescience.com\)](https://solarcyclescience.com/)([Dr. Lisa Upton](#) and [Dr. David Hathaway](#).)

**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 your convenience and security, use the mif2021,

**NEW form for classifications released soon!**

<https://www.cv-helios.net/mif2021.xlsx>

the Monthly Input Form, which you can use 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 about 10:00 UTC until local midnight.

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>

for checking of Entries Summary

<https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm>

**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](mailto:cvhelios@gmail.com)

[Please check out www.cv-helios.net/cvrep2.html](http://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>

[Classification Help](#)

login

solaris

password

cvheliosobs

[Monthly Input Form as excel](#)

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: 2 day 03 hours 10 minutes  
and average macrotime used for one registration is 17,98 seconds**

**CV-Helios Network**

**- over 42 years in solar amateur astronomy service!**

There are now number of Entries registered: 13069

containing 210952 CV-observations!

Last 12 months 5846 CV-observations from 40 observers originating from 17 countries

**Editorial close: 20.10.2023 08:02 UTC**



**CV-Helios Network**

This MPR issued from Tenerife, Spain