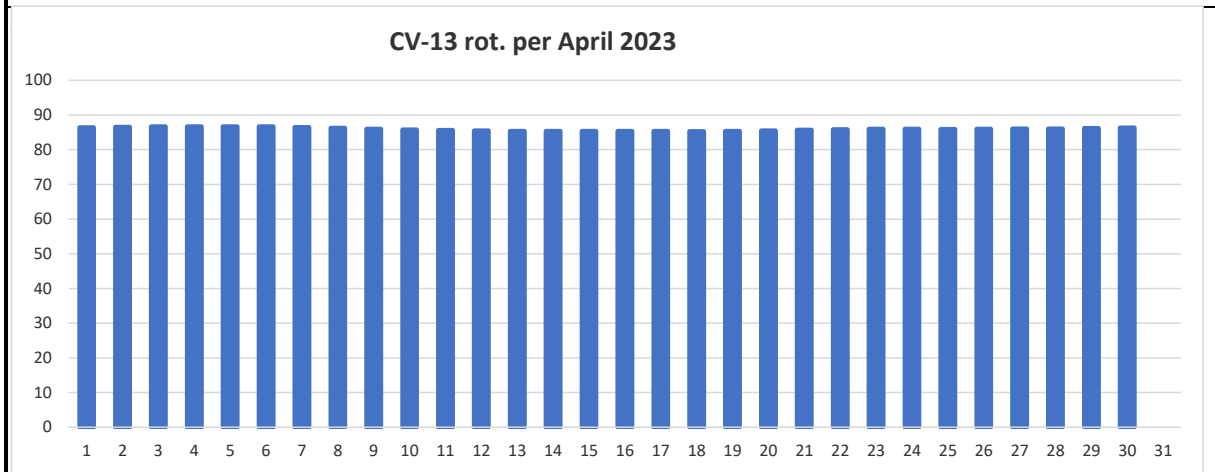
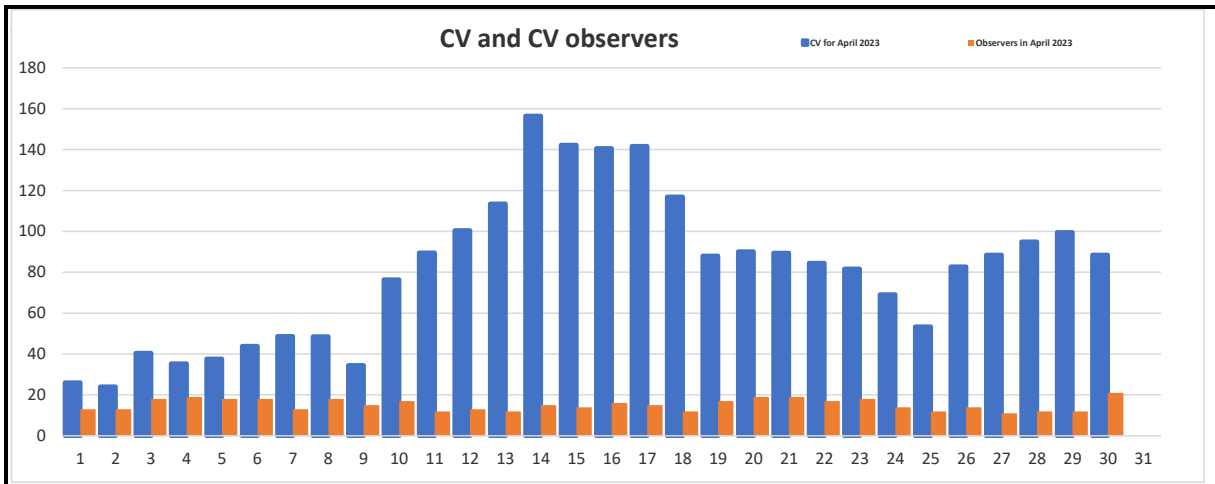




<b>Results</b>						
Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	26,00	13	6,69	103,71	100,21	86,41
2	24,08	13	6,70	103,73	100,45	86,57
3	40,44	18	6,70	103,84	100,47	86,65
4	35,26	19	6,70	103,90	100,38	86,70
5	37,67	18	6,68	103,91	100,43	86,69
6	43,83	18	6,67	103,87	100,28	86,66
7	48,69	13	6,65	103,87	100,50	86,48
8	48,56	18	6,63	103,77	100,39	86,23
9	34,47	15	6,62	103,68	100,09	85,96
10	76,35	17	6,61	104,01	100,18	85,80
11	89,50	12	6,60	104,27	100,27	85,66
12	100,46	13	6,62	104,65	100,70	85,50
13	113,50	12	6,65	105,15	101,16	85,39
14	156,47	15	6,66	105,52	101,90	85,38
15	142,29	14	6,69	105,97	102,42	85,38
16	140,63	16	6,71	106,55	103,04	85,39
17	141,73	15	6,73	107,12	103,45	85,33
18	116,92	12	6,73	107,49	103,73	85,28
19	88,00	17	6,74	107,57	103,90	85,35
20	90,11	19	6,74	107,52	103,94	85,51
21	89,42	19	6,74	107,60	104,07	85,67
22	84,47	17	6,74	107,66	104,25	85,83
23	81,67	18	6,75	107,77	104,46	85,96
24	69,14	14	6,77	107,77	104,58	85,96
25	53,42	12	6,79	107,51	104,55	85,92
26	82,79	14	6,80	107,39	104,60	85,95
27	88,55	11	6,82	107,18	104,51	86,04
28	95,00	12	6,83	107,20	104,58	86,07
29	99,58	12	6,82	107,13	104,71	86,19
30	88,48	21	6,83	107,39	104,88	86,34
Totals/ Avrgs	<b>3,96</b>	<b>27,3</b>	<b>0,97</b>	<b>4,83</b>	<b>102,44</b>	<b>85,94</b>



**Latest sunspot regions developments**

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

A total of 552 regions this cycle per mid Apr. 2023 (267 regions North and 285 regions South). 3273,09.04.23,10.04.23,16.04.23,9,115,2269,120,DSO,25

At the same time solar cycle 24 produced 446 regions. 3279,12.04.23,13.04.23,24.04.23,-20,36,2269,230,DAI,22

00.01.1900 3280,13.04.23,15.04.23,17.04.23,-8,116,2269,240,DSI,28

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

3270,02.04.23,03.04.23,08.04.23,-23,238,2269,140,DAI,22

3272,06.04.23,09.04.23,19.04.23,-22,103,2269,280,EAI,23

**:Product: Weekly Highlights and Forecasts**

Highlights of Solar and Geomagnetic Activity  
08 - 14 May 2023

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

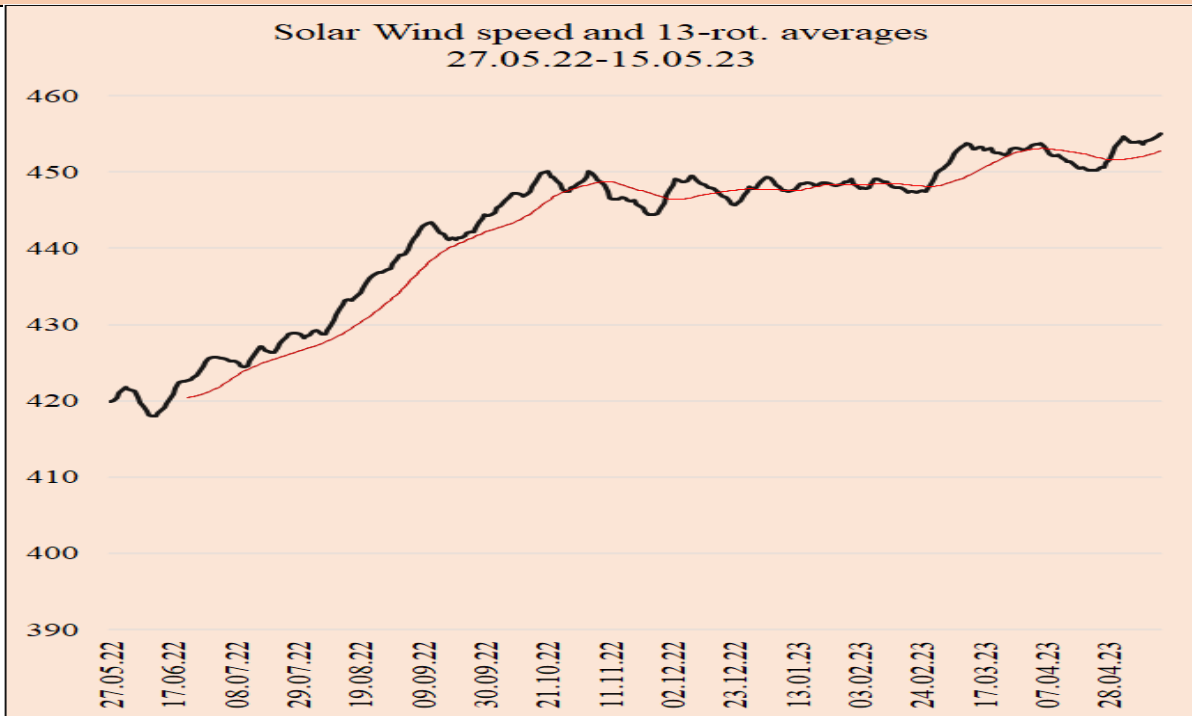
Solar activity reached high levels on 09 May and moderate levels on 08, 10, and 11 May. In total, nine M-class flares were observed from three sunspot regions this period. Region 3296 (N15, L=140, class/area=Ekc/290 on 10 May) was the most active sunspot region and produced two R2 (Moderate) events and four R1 (Minor) events. Region 3294 (S07, L=125, class/area=Cso/130 on 11 May) produced two R1 events and Region 3293 (N13, L=149, class/area=Dhc/290 on 03 May) produced a single R1 event. Two solar energetic particle (SEP) events associated with this weeks activity were observed as were multiple Earth-directed CMEs; see below for more information.

The greater than 10 MeV proton flux reached S1 (Minor) storm levels in two distinct SEP events. The first SEP event followed a pair of long-duration M1 flares (at 07/2234 UTC and 07/2323 UTC) from Region 3296 and reached S1 levels at 08/1240 UTC, reached a peak of 38 pfu at 09/0150 UTC, and ended at 09/1235 UTC. The second SEP event followed an M4 flare at 09/1858 UTC from Region 3296 and reached S1 Solar activity is expected to be low to moderate throughout the outlook period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 23 May-02 Jun, with normal to

## Monthly graph



The above graphic show a complete daily 13 rot. averaged Solar wind speed for the last year.

## Highlights April 2023

The sun has been crackling with lots of new regions and with it lots of activity last month.

Solar activity has been several times at high levels in April 2023.

The CV-I 6 rot. average is now very close to the max CV-I 6-rot. For max cycle 24! In fact:

On 24 March 2014 the highest average was achieved and per 30 Apr 2023 we are now less than 3,5 CV.units away!

Regarding the solar Flux, the maximum value 6-rot. for cycle 24 was 155,1 pfu. on max date 4 April 2014.

Solar cycle 25 passed that value already on 30 April 2023 and is still rising!

A total of 552 regions this cycle per mid Apr. 2023 (267 regions North and 285 regions South).

At the same time solar cycle 24 produced 446 regions.

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

3270,02.04.23,03.04.23,08.04.23,-23,238,2269,140,DAI,22

3272,06.04.23,09.04.23,19.04.23,-22,103,2269,280,EAI,23

3273,09.04.23,10.04.23,16.04.23,9,115,2269,120,DSO,25

3279,12.04.23,13.04.23,24.04.23,-20,36,2269,230,DAI,22

3280,13.04.23,15.04.23,17.04.23,-8,116,2269,240,DSI,28

3281,13.04.23,14.04.23,23.04.23,-23,17,2269,350,DKO,43

3282,14.04.23,16.04.23,24.04.23,11,24,2269,530,EKI,47

3285,21.04.23,27.04.23,03.05.23,-17,272,2270,240,EKI,47

3288,25.04.23,30.04.23,03.05.23,-23,267,2270,420,,

3289,25.04.23,30.04.23,04.05.23,20,215,2270,220,,

We reckon t

April continue production of lots of large regions and major solar flares and CME's to

Solar Max.: Our latest and final prediction to occur late July 2025, earliest possible may be April 2025.

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!

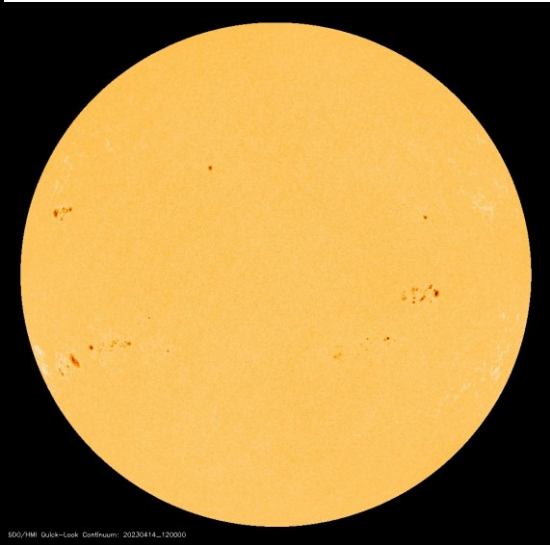
TAKE A SURVEY:

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

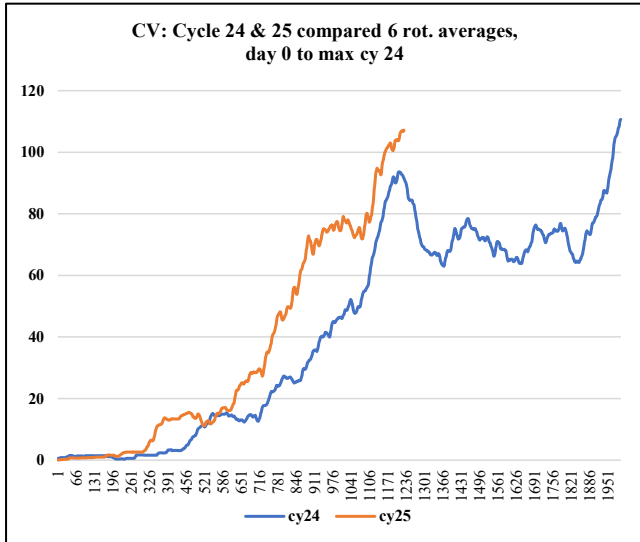
<https://www.cv-helios.net/helios/cv/web/2022/Video2022.mov>

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

photo courtesy SDO/HMI NOAA gov



**Highlights April 2023**



Left: The top CV-I day of April 2023: SOHO image "hmiigr" 14 Apr 2023.

Right: Cycles cy24/cy25 progress compared.

**Awards this month**

0

none



**New members:**


**Welcome to:**

CV-221 JON ADAMS, England

13 Apr 2023

Welcome to our New Member!

We are now 49 active members (last 12 mo.)

<b>Solar Coordinates</b>	New from April 2020
Daily list of Solar Ephemeris available at: <a href="#">Daily list of Solar Ephemeris and SDO on grid</a> Here you can see Today's Po, Bo, Lo, Rotation no., RA and Dec. and adjusted SOHO-picture on grid.	
<b>Calculating CV</b>	
For your convenience and security, use the mif2021, <a href="https://www.cv-helios.net/mif2021.xlsx">https://www.cv-helios.net/mif2021.xlsx</a> the Monthly Input Form, which you can use for all of your next reportings!	
<b>Monitor MPR daily progress</b>	
<b>CV-Helios Network: Monitor MPR progress as entries are made!</b> Monitor your submissions as they are registered: <a href="https://cv-helios.net/helios/cv/web/mprpost.html">https://cv-helios.net/helios/cv/web/mprpost.html</a> 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	
<b>Registration data</b>	
Check if your CV-observations have been registered (please allow up to 24 hrs): <a href="https://www.cv-helios.net/helios/cv/web/datlist.htm">https://www.cv-helios.net/helios/cv/web/datlist.htm</a> <a href="https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm">https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm</a> for checking of Entries Summary	
<b>CONTRIBUTE WITH YOUR PHOTOS AND OTHER OF INTEREST!</b>	
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: <a href="mailto:cvhelios@gmail.com">cvhelios@gmail.com</a>	
<b>Please check out <a href="http://www.cv-helios.net/cvrep2.html">www.cv-helios.net/cvrep2.html</a> for updates of files!</b>	
<b><u>SUBMISSIONS OF CV-OBSERVATIONS</u></b>	
Log on to: <a href="https://www.cv-helios.net/observations/index.html">https://www.cv-helios.net/observations/index.html</a> <a href="#">Classification Help</a> login solaris password cvheliosobs <a href="#">Monthly Input Form as excel</a> Submission before 15th of proceeding month 18:00 UTC. (password: cvhelios) MPR issue 15th of proceeding month 2000 UTC. Good luck CV-observing!	
<b>Average received to registered time: 0 day 11 hours 20 minutes  and Average macrotime used for one registration is 18,82 seconds</b>	
<b>CV-Helios Network  - over 41 years in solar amateur astronomy service!</b>	
There are now Entries reg.: 12902 entries registered containing 207995 CV-observations! Last 12 months 5738 CV-observations from 39 observers originating from 17 countries	
<b>Editorial close: 15.05.2023 14:14 UTC</b>	
 <b>CV-Helios Network</b>	