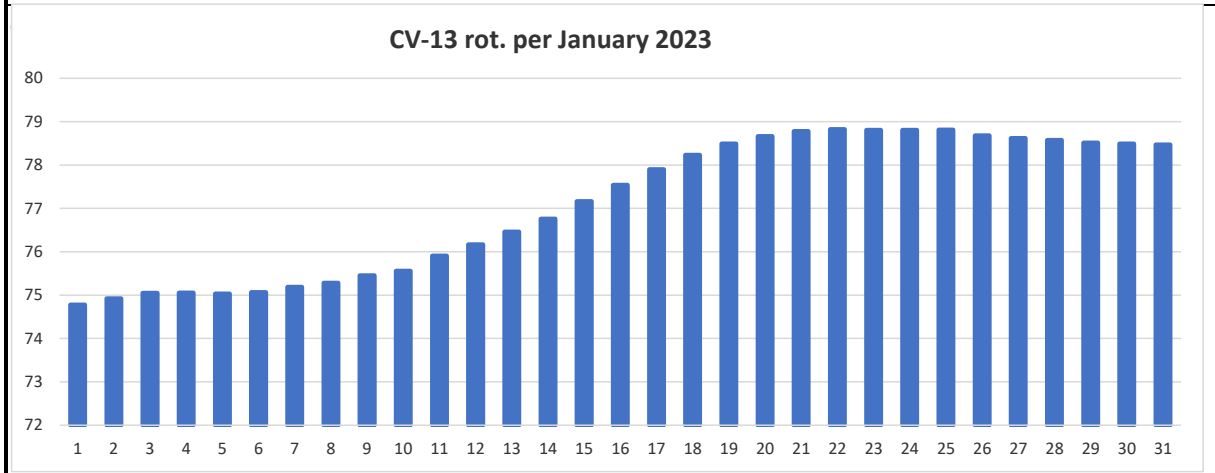
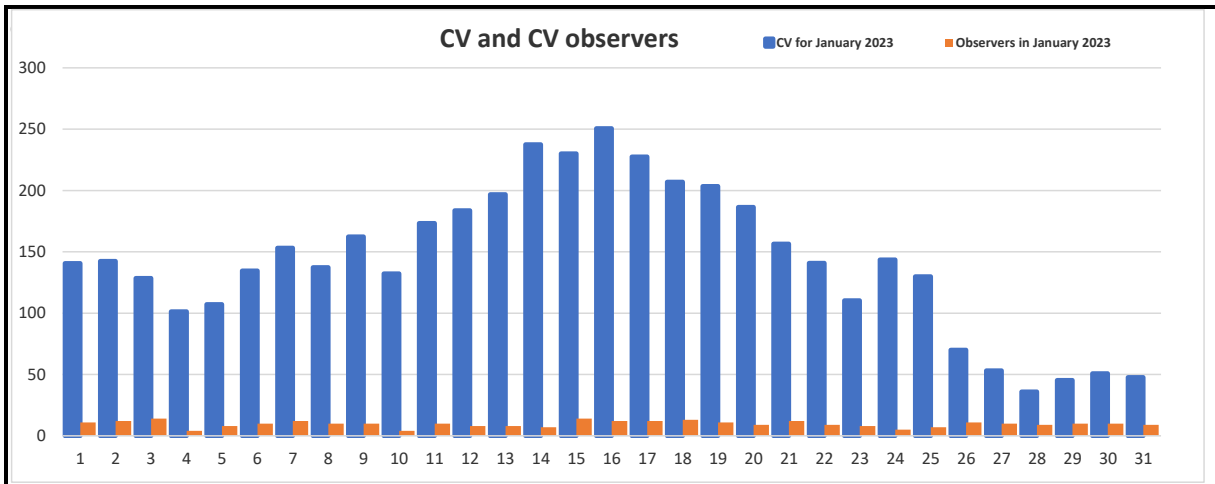


Results						
Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	140,64	11	5,16	78,19	75,18	74,78
2	142,50	12	5,15	78,58	75,55	74,92
3	128,43	14	5,13	79,02	75,89	75,05
4	101,25	4	5,13	79,24	76,07	75,06
5	107,25	8	5,12	79,59	76,34	75,03
6	134,50	10	5,12	80,10	76,74	75,06
7	153,08	12	5,13	80,76	77,50	75,19
8	137,40	10	5,14	81,37	78,15	75,28
9	162,30	10	5,16	82,25	78,82	75,45
10	132,25	4	5,20	83,34	79,17	75,56
11	173,30	10	5,21	84,40	79,79	75,91
12	183,75	8	5,24	85,24	80,51	76,16
13	196,88	8	5,29	86,50	81,25	76,46
14	237,43	7	5,34	87,71	82,04	76,76
15	230,00	14	5,37	88,96	83,17	77,16
16	250,58	12	5,40	90,23	84,11	77,54
17	227,58	12	5,43	91,21	84,97	77,90
18	207,00	13	5,45	92,11	85,74	78,23
19	203,36	11	5,48	93,09	86,53	78,49
20	186,44	9	5,51	93,96	87,25	78,66
21	156,42	12	5,54	94,77	87,84	78,78
22	140,78	9	5,57	95,39	88,31	78,82
23	110,38	8	5,58	95,88	88,51	78,81
24	143,60	5	5,59	96,24	88,61	78,81
25	129,86	7	5,61	96,59	88,79	78,81
26	70,00	11	5,63	96,46	88,66	78,68
27	53,20	10	5,62	96,34	88,47	78,62
28	35,89	9	5,63	95,95	88,23	78,58
29	45,40	10	5,63	95,82	88,21	78,51
30	50,90	10	5,63	95,80	88,24	78,49
31	47,78	9	5,64	95,90	88,35	78,47
Totals/ Avrgs	3,96	27,3	0,97	4,83	83,13	77,10



Latest sunspot regions developments

Reg.-First-Last-Lat.-Long.-Rot.-Area-Lgth.-CV-max.	
3179,29.12.22,02.01.23,04.01.23,14,43,2265,380,DKO,43	3186,10.01.23,13.01.23,21.01.23,25,169,2266,500,EKI,47
3180,30.12.22,03.01.23,10.01.23,18,309,2266,240,DSI,28	3190,13.01.23,18.01.23,25.01.23,-14,121,2266,950,EKI,47
3181,01.01.23,09.01.23,13.01.23,-19,280,2266,700,EKC,56	3191,13.01.23,16.01.23,23.01.23,11,130,2266,360,DKC,55
3182,05.01.23,09.01.23,17.01.23,-17,228,2266,950,EKC,56	3192,13.01.23,18.01.23,25.01.23,17,118,2266,420,FKI,48
3183,05.01.23,07.01.23,11.01.23,-17,309,2266,200,DSO,25	3194,15.01.23,23.01.23,24.01.23,-24,132,2266,140,DAO,19
3184,08.01.23,11.01.23,21.01.23,-13,180,2266,730,EKC,56	3207,30.01.23,31.01.23,06.02.23,-13,255,2267,130,CAO,8

:Product: Weekly Highlights and Forecasts

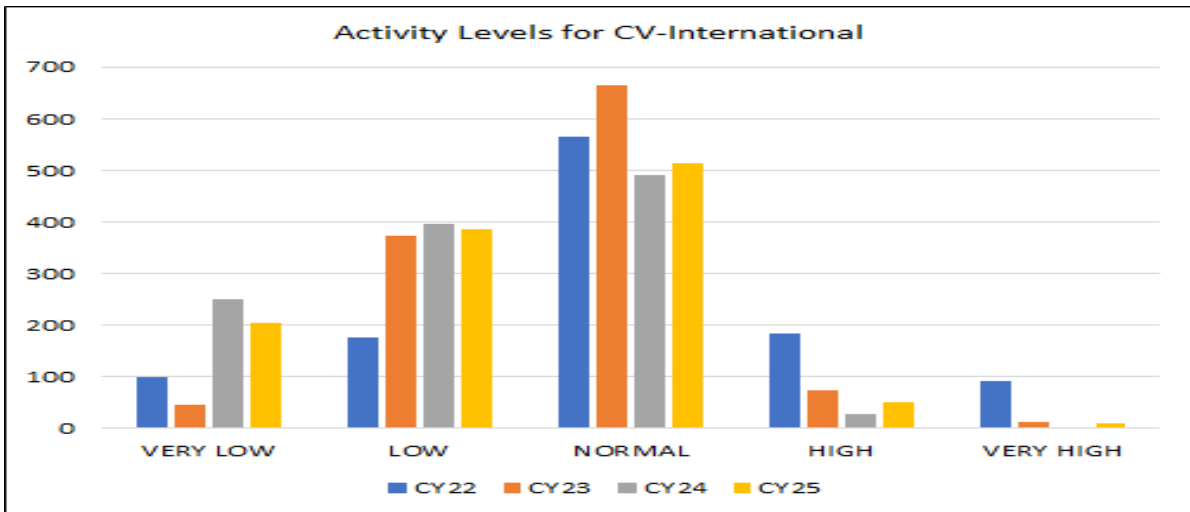
Highlights of Solar and Geomagnetic Activity
 06 - 12 February 2023 <http://services.swpc.noaa.gov/text/weekly.txt>

Solar activity was at low to high levels during the period. Numerous C-class flares were observed from Regions 3211 (S17, L=295, class/area Dao/100 on 06 Feb), 3213 (N30, L=223, class/area Fki/480 on 12 Feb) and 3214 (N12, L=205, class/area Dki/380 on 11 Feb). 07 Feb experienced R1-R2 (Minor-Moderate) activity with M-class activity from Region 3213 to include an M6.3 observed at 07/2307 UTC. R1 (Minor) levels occurred on 08 Feb from Region 3213 and 3217 (S12, L=137, class/area Dki/400 on 12 Feb). 09 Feb witnessed six total R1 (Minor) flares from Regions 3213 and 3217. Of note was an M1.1/Sf at 09/0717 UTC from Region 3217 with associated Type II (672 km/s) and Type IV radio emissions and an M2.8 from Region 3217 at 09/0907 UTC with associated Type II (453 km/s) and Type IV radio emissions.

Solar activity is expected to be at low to M-class flare activity (R1-R2, Minor-Moderate) levels throughout the outlook period.

No proton events are expected at geosynchronous orbit. However, a chance for a proton event exists throughout the period from the more complex, magnetically active regions.

Monthly graph



LEVEL	CATEGORY	COUNT	CV-I	PERCENT
Level 1	VERY LOW	1585	0,0-0,1	11,5%
Level 2	LOW	3120	0,1-18,0	22,8%
Level 3	NORMAL	6857	18,0-129,6	50,0%
Level 4	HIGH	1440	129,6-185,0	10,5%
Level 5	VERY HIGH	713	185,0 -	5,2%

The above graphic show Levels of solar activity as experience thru CV-I numbers where all CV-I are divided equally into 5 Levels. Level 5 up until this cycle-date; Cycle 24: 0 days, cycle 25: 9 days!

Highlights January 2023

Solar activity has been several times at high levels in January 2023. The CV-I (prelim.) was at 250,6 on January 16, the highest single day value since 29 Oct 2003! The number of regions reached a long-time high with 13 on one day 14 Feb 23! This is the highest number since (only once in 2013), and back in 2002! A total of 433 regions this cycle per mid Feb. 2023 (206 regions North and 227 regions South). At the same time solar cycle 24 produced 387 regions.

Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV
 3179,29.12.22,02.01.23,04.01.23,14,43,2265,380,DKO,43
 3180,30.12.22,03.01.23,10.01.23,18,309,2266,240,DSI,28
 3181,01.01.23,09.01.23,13.01.23,-19,280,2266,700,EKC,56
 3182,05.01.23,09.01.23,17.01.23,-17,228,2266,950,EKC,56
 3183,05.01.23,07.01.23,11.01.23,-17,309,2266,200,DSO,25
 3184,08.01.23,11.01.23,21.01.23,-13,180,2266,730,EKC,56
 3186,10.01.23,13.01.23,21.01.23,25,169,2266,500,EKI,47
 3190,13.01.23,18.01.23,25.01.23,-14,121,2266,950,EKI,47
 3191,13.01.23,16.01.23,23.01.23,11,130,2266,360,DKC,55
 3192,13.01.23,18.01.23,25.01.23,17,118,2266,420,FKI,48
 3194,15.01.23,23.01.23,24.01.23,-24,132,2266,140,DAO,19
 3207,30.01.23,31.01.23,06.02.23,-13,255,2267,130,CAO,8

We reckon there have passed 1153 days (solar flux 1190 days) of the new cycle by this issue. The prospec

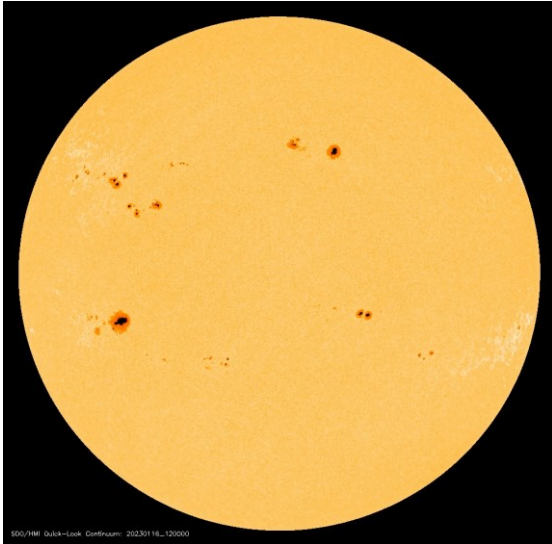
February now produces lots of big regions and solar flares too!
 Solar Max.: Our latest and final prediction to occur late July 2025, earliest possible may be April 2025.
 Solar Flux onset: OCCURED 30 September 2022, the Onset 13 rot. ctrd. will occur during last part of 2022.

Stay tuned and observe the solar disk from now on!
 Please remember you are always welcome to contribute with drawings and photos!

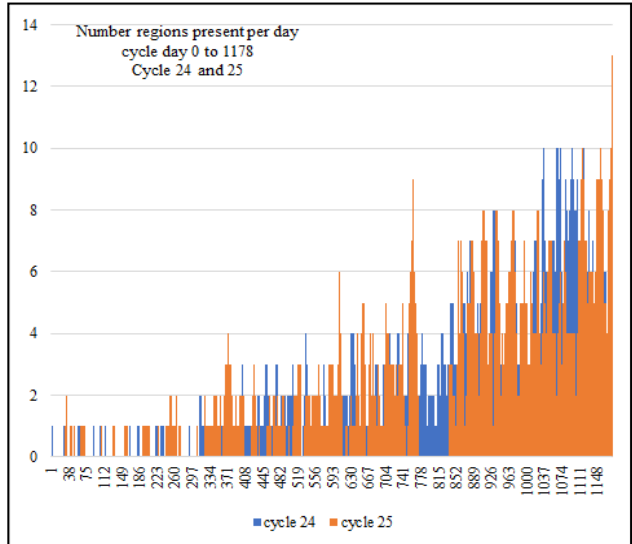
TAKE A SURVEY:
Here is a Survey of hmiigr SOHO solar images 2022.
<https://www.cv-helios.net/helios/cv/web/2022/Video2022.mov>

Pictures from last month - Observer contributions, etc.

photo courtesy SDO/HMI NOAA gov



Highlights January 2023/January 2023



Left: The top CV-I day of January 2023: SOHO image "hmiigr" 16 Jan 2023.

Right: Number of sunspot regions cy24/cy25 compared.

Awards this month

0


none



New members:

Welcome to:

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

Solar Coordinates	New from April 2020
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, 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 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!	
<u>SUBMISSIONS OF CV-OBSERVATIONS</u>	
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: 0 day 16 hours 30 minutes and Average macrotime used for one registration is 13,53 seconds	
CV-Helios Network - over 41 years in solar amateur astronomy service!	
There are now Entries reg.: 12815 entries registered containing 206738 CV-observations! Last 12 months 6115 CV-observations from 41 observers originating from 17 countries	
Editorial close: 15.02.2023 18:51 UTC	
 CV-Helios Network	