Monthly Preliminary Report

MPR

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CV-Helios Network

Monthly Preliminary Report for February 2023

Solar Cycle 25: Month no. 39

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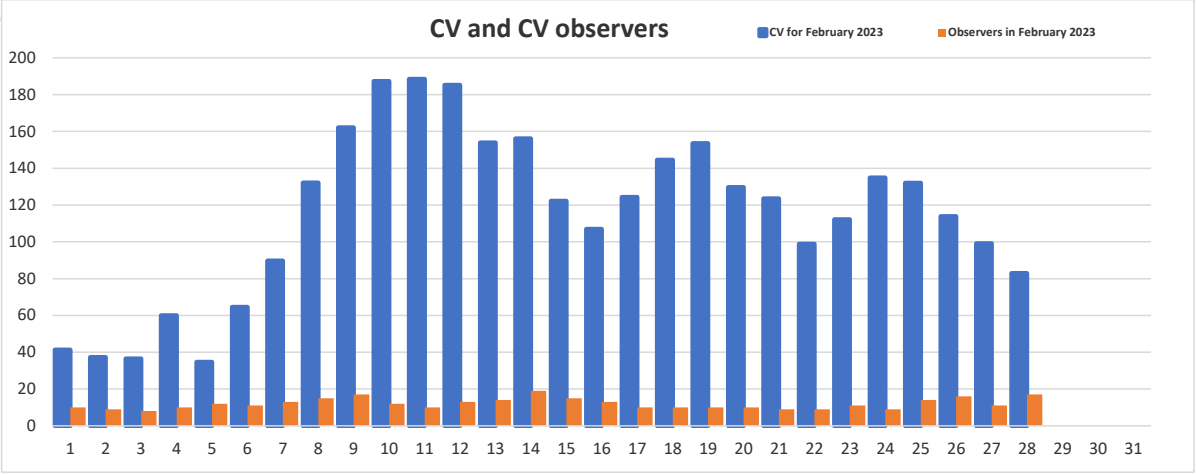
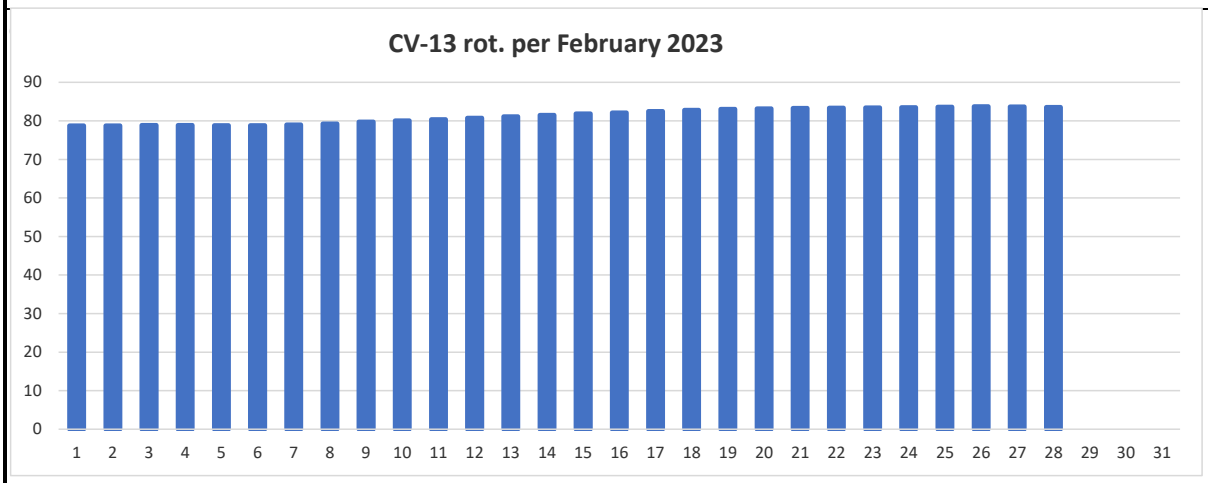
Memno.	Name	Country	CV	Obs	K	Obs. Tot.
CV-001	KJELL INGE MALDE	NORWAY	133,3	18	1,123	9124
CV-010	FRANKY DUBOIS	BELGIUM	89,7	20	0,755	9507
CV-019	ELMAR JUNKER	GERMANY	210,6	8	1,775	3780
CV-023	HARTMUT BRETSCHNEIDE	GERMANY	77,5	12	0,653	5746
CV-040	ROBERTO BATTAIOLA	ITALY	169,3	9	1,427	2085
CV-068	SVEN OVE THIMM	DENMARK	71,0	10	0,598	4151
CV-077	ANDREW JOHNSTON	UNITED KINGDOM	103,6	8	0,873	3575
CV-080	JAN JANSSENS	BELGIUM	87,0	3	0,733	1197
CV-082	PIOTR URBANSKI	POLAND	126,6	13	1,067	5364
CV-086	TOS POLAND	POLAND	126,4	28	1,065	8482
CV-091	GRZEGORZ DALEK	POLAND	108,7	9	0,916	4695
CV-102	PAULO ROBERTO MOSER	BRAZIL	97,6	24	0,822	2884
CV-105	ALEXEY RYBACK	RUSSIA	109,2	12	0,920	3377
CV-122	VLASTISLAV FEIK	CZECH REPUBLIC	90,5	11	0,763	3105
CV-135	GEMA ARAUJO	SPAIN	132,2	28	1,114	7288
CV-136	FAUSTINO GARCIA	SPAIN	89,7	14	0,756	3857
CV-139	JAVIER ALONSO	SPAIN	140,3	16	1,182	4001
CV-151	JEFFREY CARELS	BELGIUM	121,1	9	1,020	3142
CV-171	WALTER JOSE MALUF	BRAZIL	240,0	5	2,022	2872
CV-181	ADAM DERDZIKOWSKI	POLAND	94,5	2	0,796	1090
CV-204	STEFAN MEISTER	SWITZERLAND	97,4	5	0,821	738
CV-206	TADEUSZ FIGIEL	POLAND	101,8	4	0,857	335
CV-207	ONDREJOV OBS. (AI CAS)	CZECH REPUBLIC	147,8	8	1,245	3685
CV-208	JOHAN NEYS	BELGIUM	127,8	6	1,077	682
CV-214	IGOR GRAGEDA MENDEZ	BOLIVIA	112,8	22	0,951	1114
CV-215	ARNAUD MENGUS	FRANCE	122,8	6	1,035	314
CV-219	KANDILLI OBSERVATORY	TURKEY	118,1	16	0,995	804
CV-220	MICHEL FRANGEUL	FRANCE	101,5	11	0,855	79

Totals	Observers	Days	CV	No	K
	28	**28**	**119,60**	**337**	**1,008**

Results

Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	41,30	10	5,65	95,96	89,41	78,75
2	37,33	9	5,66	95,86	89,53	78,78
3	36,50	8	5,67	95,72	89,66	78,85
4	60,00	10	5,68	95,56	89,63	78,87
5	34,67	12	5,67	95,01	89,17	78,83
6	64,55	11	5,70	94,67	88,76	78,84
7	89,77	13	5,71	94,30	88,49	78,98
8	132,07	15	5,74	94,80	88,65	79,23
9	162,18	17	5,76	95,26	89,43	79,72
10	187,25	12	5,82	96,08	90,32	80,06
11	188,50	10	5,88	97,05	91,02	80,38
12	185,15	13	5,93	97,94	91,91	80,75
13	153,86	14	5,99	98,91	92,57	81,10
14	156,11	19	6,04	99,61	93,33	81,51
15	122,27	15	6,08	100,14	93,67	81,85
16	107,00	13	6,09	100,14	93,99	82,13
17	124,30	10	6,10	100,74	94,64	82,50
18	144,50	10	6,12	101,20	95,19	82,81
19	153,50	10	6,13	101,73	95,78	83,03
20	129,60	10	6,15	102,56	96,27	83,20
21	123,56	9	6,15	102,84	96,63	83,31
22	98,89	9	6,14	103,18	96,67	83,33
23	112,18	11	6,12	103,24	96,74	83,39
24	134,89	9	6,12	103,50	96,98	83,50
25	131,93	14	6,14	103,78	97,29	83,63
26	113,88	16	6,15	103,82	97,55	83,72
27	99,09	11	6,17	103,59	97,71	83,68
28	82,88	17	6,19	103,68	97,87	83,56
Totals/ Avrgs	**3,96**	**27,3**	**0,97**	**4,83**	**93,17**	**81,37**





Latest sunspot regions developments

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

3214,06.02.23,12.02.23,16.02.23,12,206,2267,390,DKI,46
3216,06.02.23,08.02.23,19.02.23,24,167,2267,250,DKO,43
3217,08.02.23,12.02.23,21.02.23,-10,138,2267,400,DKI,46
3220,09.02.23,11.02.23,23.02.23,-14,122,2267,150,HSX,10
3226,13.02.23,14.02.23,23.02.23,11,114,2267,480,DKI,46
3229,16.02.23,17.02.23,28.02.23,26,34,2267,400,DKO,43
3230,18.02.23,22.02.23,02.03.23,-23,9,2267,120,DSO,25
3234,20.02.23,28.02.23,04.03.23,25,342,2268,860,FKC,57
3236,23.02.23,27.02.23,03.03.23,-27,355,2268,140,CSO,11

:Product: Weekly Highlights and Forecasts

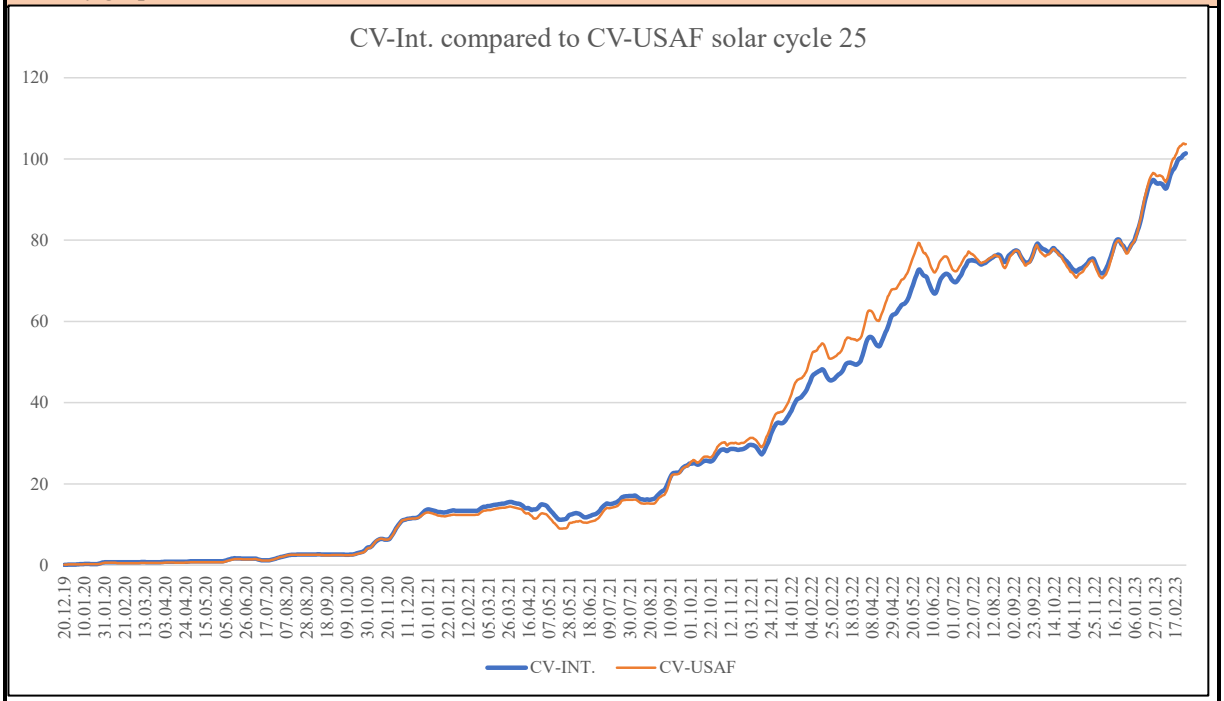
Highlights of Solar and Geomagnetic Activity
06 - 12 March 2023

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

Solar activity ranged from low to high levels. There were five M-class (R1-R2 Minor-Moderate) flares over the reporting period. The largest was an M5.8/2n (R2) flare from Region 3243 (N18, L=306, class/area=Dao/110 on 05 Mar). Associated with the event was a Type II radio sweep, a Tenflare and a CME signature in SOHO/LASCO imagery. The ejecta was analyzed and determined to not contain an Earth-directed component. Region 3242 (N10, L=218, class/area=Esc/300 on 07 Mar) and Region 3245 (S23, L=196, class/area=Dhi/440 on 08 Mar) also produced M-class (R1) events. The remaining 11 other spotted regions were either quiet or only produced C-class events.

Other activity included three filament eruptions. The first was a SW quadrant eruption near S20W50, beginning around 10/1600 UTC. The second was just south of the first, which began erupting around 11/1648 UTC. Both were analyzed and modeled. Although they were mostly oriented to the SW of Earth, the potential for a glancing
Solar activity is expected to be at low levels with a slight chance for M-class (R1-R2 Minor - Moderate) flares over the outlook period. This is due to multiple regions that have either produced M-class activity already or are sufficiently complex to produce M-class activity currently being on the visible disk or expected to return to the visible disk during the outlook period.

Monthly graph



The above graphic show CV-I compared to CV-USAF for solar cycle 25.
At present CV-I has a "K-Index" of 0,974 compared to CV-USAF for the present solar cycle.

Highlights February 2023

Solar activity has been several times at high levels in February 2023.
The CV-I 6 rot. Average reached over 100 for the first time from 21 Feb 2023.

A total of 446 regions this cycle per mid Feb. 2023 (213 regions North and 233 regions South).
At the same time solar cycle 24 produced 410 regions.

Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV
3213,06.02.23,12.02.23,15.02.23,30,225,2267,480,FKI,48
3214,06.02.23,12.02.23,16.02.23,12,206,2267,390,DKI,46
3216,06.02.23,08.02.23,19.02.23,24,167,2267,250,DKO,43
3217,08.02.23,12.02.23,21.02.23,-10,138,2267,400,DKI,46
3220,09.02.23,11.02.23,23.02.23,-14,122,2267,150,HSX,10
3226,13.02.23,14.02.23,23.02.23,11,114,2267,480,DKI,46
3229,16.02.23,17.02.23,28.02.23,26,34,2267,400,DKO,43
3230,18.02.23,22.02.23,02.03.23,-23,9,2267,120,DSO,25
3234,20.02.23,28.02.23,04.03.23,25,342,2268,860,FKC,57
3236,23.02.23,27.02.23,03.03.23,-27,355,2268,140,CSO,11

Sun has continued producing lots of small regions through February.
Region producing is already at nearly 22 percent over solar cycle 24 at th
On the average region producing, solar cycle 25 is now 95 percent of solar cycle 23!
Solar cycle 23 had a max avaerage of 9,8 regions in August 2000.

We reckon there have passed 1181 days (solar flux 1218 days) of the new cycle by this issue.
The prospec

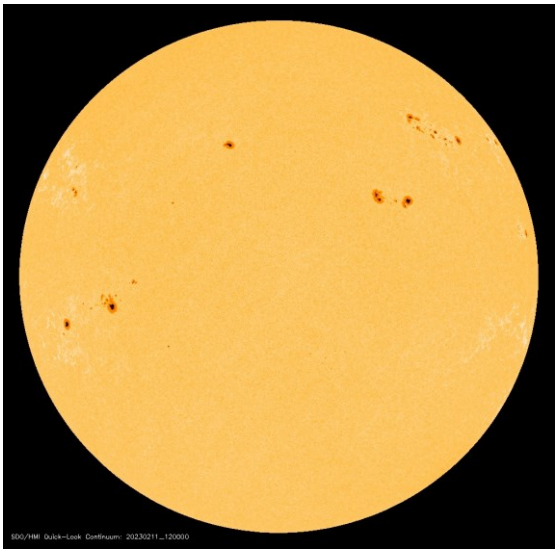
February now produces lots of big regions and solar flares too!
Solar Max.: Our latest and final prediction to occur late July 2025, earliest possible may be April 2025.
Solar Flux onset: OCCURED 30 September 2022, the Onset 13 rot. ctrd. Occurred 18 Mar 2023.

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

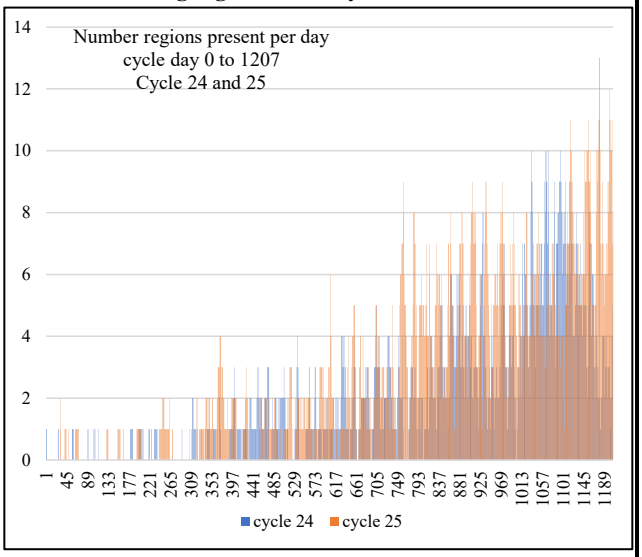
TAKE A SURVEY:
Here is a Survey of hmiigr SOHO solar images 2022.
https://www.cv-helios.net/helios/cv/web/2022/Video2022.mov

Pictures from last month - Observer contributions, etc.

photo courtesy SDO/HMI NOAA gov



Highlights February 2023



Left: The top CV-I day of February 2023: SOHO image "hmiigr" 11 Feb 2023.
Right: Number of sunspot regions cy24/cy25 compared.

Awards this month 1

Award no.: 158 to CV-139 JAVIER ALONSO date 23 February 2023 milestone 4000 CV-obs.!
CONGRATULATIONS!

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!

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
(password: cvhelios)

Submission before 15th of proceeding month 18:00 UTC.
MPR issue 15th of proceeding month 2000 UTC. Good luck CV-observing!

Average received to registered time: 0 day 12 hours 49 minutes
and Average macrotime used for one registration is 12,15 seconds

CV-Helios Network
- over 41 years in solar amateur astronomy service!

There are now Entries reg.: 12844 entries registered
containing 207098 CV-observations!
Last 12 months 5964 CV-observations from 39 observers originating from 17 countries

Editorial close: 15.03.2023 18:13 UTC

CV-Helios Network