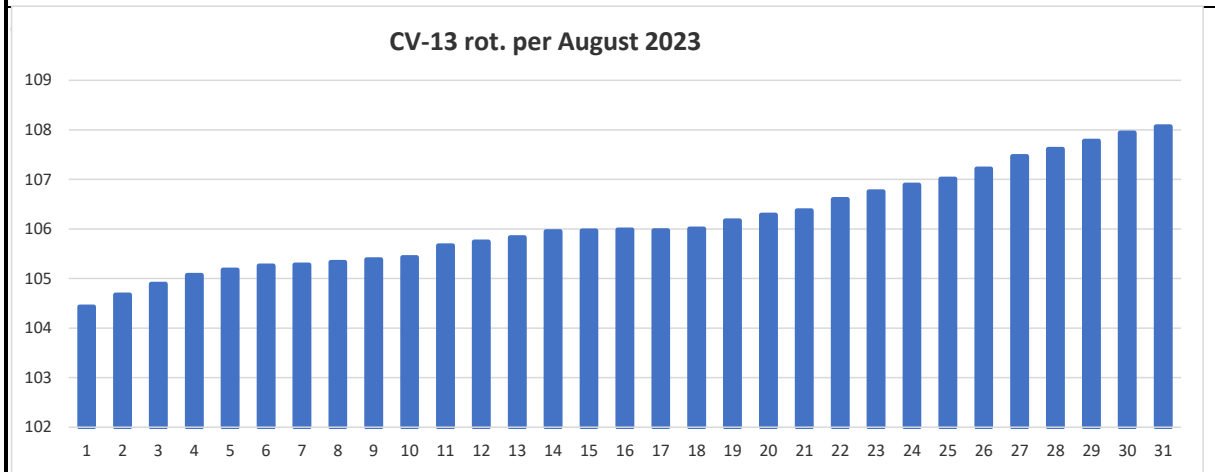
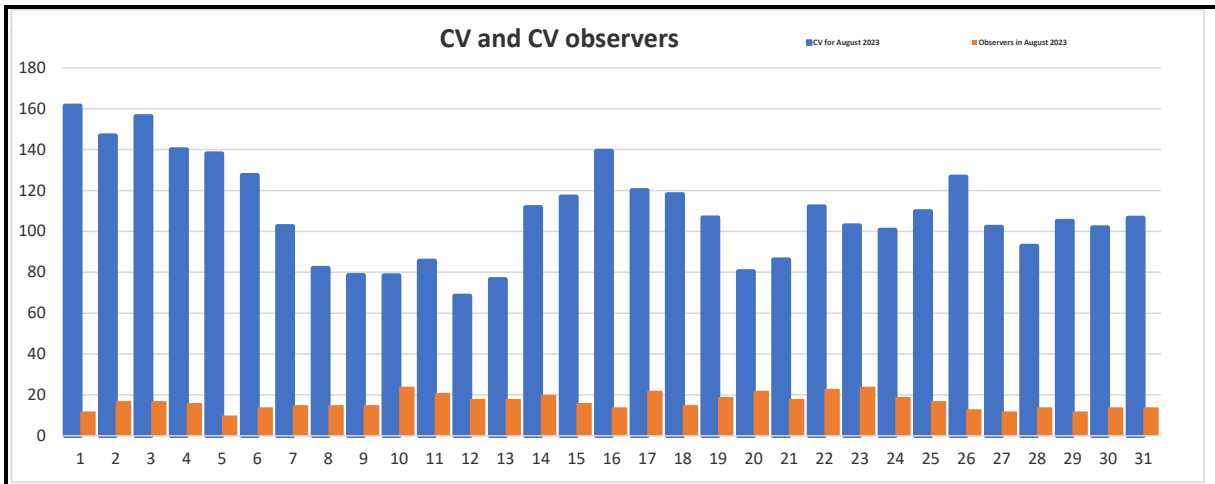


Results						
Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	161,42	12	7,54	116,42	118,18	104,43
2	146,83	17	7,55	116,37	118,23	104,67
3	156,24	17	7,55	116,16	118,42	104,89
4	140,06	16	7,57	116,60	118,53	105,07
5	138,00	10	7,57	116,58	118,66	105,18
6	127,43	14	7,59	116,57	118,74	105,26
7	102,47	15	7,60	116,27	118,60	105,28
8	82,06	15	7,62	115,93	118,34	105,33
9	78,47	15	7,62	115,78	118,16	105,38
10	78,40	24	7,62	115,56	117,91	105,43
11	85,55	21	7,62	115,40	117,89	105,67
12	68,37	18	7,60	115,06	117,79	105,74
13	76,47	18	7,60	114,90	117,68	105,83
14	111,75	20	7,58	114,70	117,66	105,95
15	116,88	16	7,57	114,84	117,77	105,97
16	139,36	14	7,57	114,98	117,82	105,98
17	120,09	22	7,56	114,62	117,72	105,97
18	118,07	15	7,54	114,21	117,56	106,00
19	106,75	19	7,52	113,90	117,44	106,17
20	80,43	22	7,50	113,45	117,10	106,29
21	86,11	18	7,49	113,42	116,92	106,37
22	112,08	23	7,48	113,18	116,89	106,60
23	102,80	24	7,46	113,48	116,91	106,75
24	100,65	19	7,45	113,66	117,04	106,89
25	109,72	17	7,44	114,17	117,24	107,01
26	126,64	13	7,43	114,60	117,70	107,21
27	102,08	12	7,41	115,07	118,11	107,47
28	92,79	14	7,41	115,74	118,50	107,61
29	105,08	12	7,43	115,66	118,93	107,78
30	101,86	14	7,43	115,74	119,01	107,94
31	106,60	14	7,42	115,80	119,02	108,07
Totals/ Avrgs	3,96	27,3	0,97	4,83	117,95	106,14



Latest sunspot regions developments

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

00.01.1900	3395,03.08.23,12.08.23,15.08.23,13,330,2274,180,DAI,22
Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV	3397,07.08.23,13.08.23,17.08.23,18,305,2274,120,DAO,19
3380,23.07.23,02.08.23,04.08.23,-11,125,2273,430,DKC,55	00.01.1900
3387,27.07.23,06.08.23,08.08.23,21,69,2273,140,DSI,28	
3392,31.07.23,04.08.23,10.08.23,9,39,2273,200,DAO,19	
3394,03.08.23,09.08.23,14.08.23,-23,343,2274,270,DHO,49	

:Product: Weekly Highlights and Forecasts

Highlights of Solar and Geomagnetic Activity
04 - 10 September 2023

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

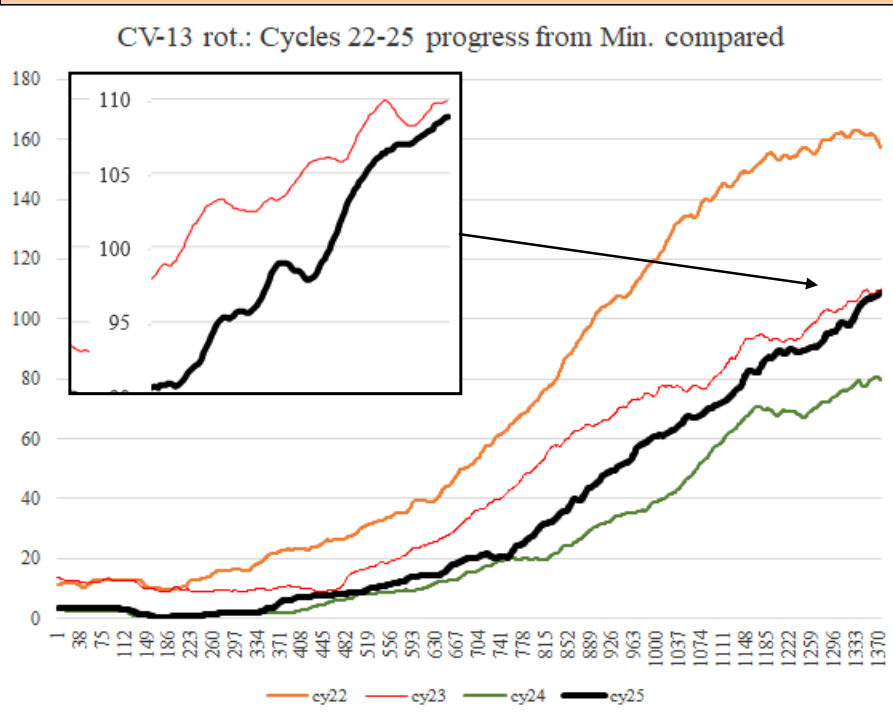
Solar activity ranged from low to moderate levels R1/Minor. Low levels were observed on 04, 06 and 08-10 Sep. Moderate levels occurred on 05 and 07 Sep. On 05 Sep, Region 3421 (N15, L=343, class/area Eai220 on 07 Sep) produced 3 M-class flares, the largest an M2.0/2n at 05/0812 UTC. This region also produced 21 C-class flares. On 07 Sep, Region 3425 (N23, L=246, class/area Dai/140 on 08 Sep) produced an M2.1/1b at 07/1909 UTC. Associated with this flare was a 1,238 sfu Type II Sweep. Region 3425 also produced 9 C-class flares. The largest region on the disk was Region 3423 (N16, L=279, Ekc/380 on 10 Sep). This region produced 8 C-class flares. During the period, numerous CMEs were detected on both the front and back side. None were determined to be Earth-directed.

The greater than 10 MeV protons at geosynchronous orbit were slightly enhanced on 06-07 Sep due to M-class activity on 05 Sep.

Solar activity is expected to be at low to moderate levels through the forecast period. M-class flaring (R1-R2/Minor-Moderate) is expected to dominate from 15-28 Sep when old Region 3413 (N10, L=099) returns to the visible disk.

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 August 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 August 2023

The solar activity is still rising though many regions have been of 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 505 for August correspond to 22nd February 2002 (day 1375), and the 13-rot. Average is not just 1,14 CV-units off. When it comes to the 6-rotation averages we have now passed cycle 23 with 6,53 CV units! A total of 679 regions this cycle per end September 2023 (330 regions North and 349 regions South). At the same time solar cycle 24 produced 534 regions (217 north and 317 south)

Region	First date	Max.date	Last date	Lat.	Long.	Rot.	Max.mvh	Max class	Max CV
3380	23.07.23	02.08.23	04.08.23	-11	125	2273	430	DKC	55
3387	27.07.23	06.08.23	08.08.23	21	69	2273	140	DSI	28
3392	31.07.23	04.08.23	10.08.23	9	39	2273	200	DAO	19
3394	03.08.23	09.08.23	14.08.23	-23	343	2274	270	DHO	49
3395	03.08.23	12.08.23	15.08.23	13	330	2274	180	DAI	22
3397	07.08.23	13.08.23	17.08.23	18	305	2274	120	DAO	19

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

As mentioned in last issue, we might reach max. CV-levels at near or just over 300. It now seems that prediction mix of 6 and 13 rotation averages may indicate maximum 23.06.2025 (+/- 113d) as a time of maximum for the CV-I (but still, may be one rotation later). Updates will come.

We reckon there have passed 1365 days (solar flux 1402 days) of the new cycle by this issue. We may see a continued production of large regions and major solar flares and CME's too!

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

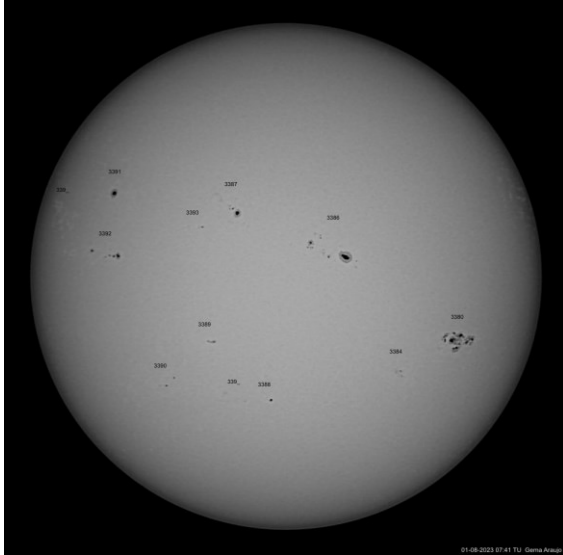
Stay tuned and observe the solar disk from now on!
Please remember you are always welcome to contribute with drawings and photos!

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

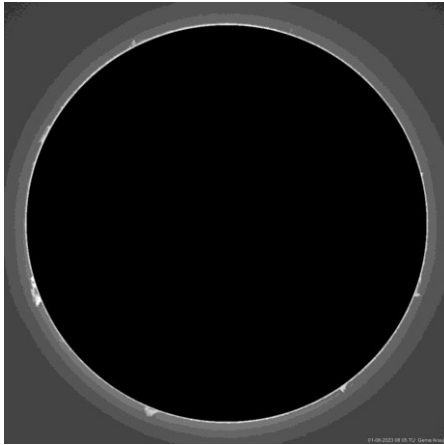
Pictures from last month - Observer contributions, etc.

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

Highlights August 2023



Left: Photo from CV-135 Gema Araujo, Spain from 01 August 2023.
On this day she saw 12 sunspot regions and the CV was measured to 197 (CV-HN: 161)



Right: H α -photo same date

Awards this month

0

none



New members:

Welcome to:

0

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

Number of sunspot regions visible per day, percentage of total and per cycle

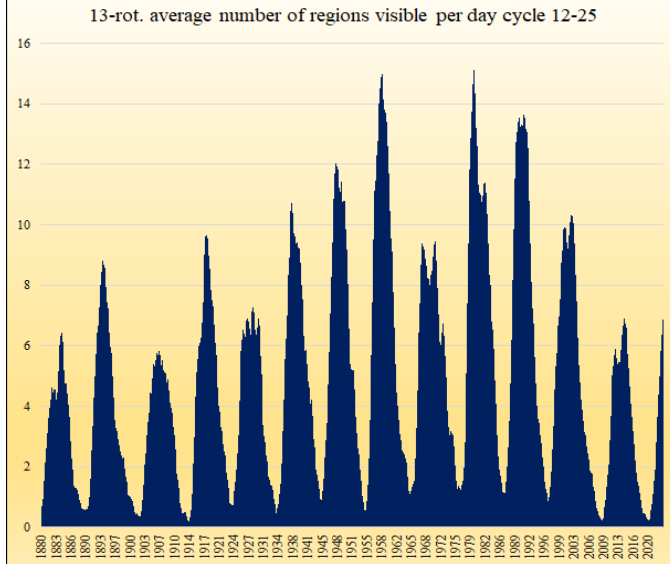
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	921	681	1171	587	434	370	363	364	313	293	214	631	999	286	7627
1	794	671	646	517	521	486	376	451	511	406	324	610	646	193	7152
2	553	519	602	381	502	397	362	370	476	360	288	520	450	185	5965
3	423	386	488	347	406	341	284	311	381	228	304	433	409	106	4847
4	424	374	400	303	345	291	253	260	367	176	292	353	389	109	4336
5	329	314	339	319	295	329	242	165	326	149	256	308	342	128	3841
6	243	310	291	286	271	334	251	173	352	196	187	253	275	97	3519
7	154	261	198	260	237	291	238	139	324	193	153	255	224	86	3013
8	77	174	128	195	209	246	226	163	310	208	174	270	148	62	2590
9	58	135	69	174	165	165	187	156	277	199	175	251	95	45	2151
10	44	94	50	129	98	149	218	187	225	215	175	213	56	26	1879
11	13	71	29	100	62	122	162	189	153	214	167	149	14	12	1457
12	13	40	11	52	33	86	141	180	95	187	148	138	6	7	1137
13	3	26	6	40	19	70	102	183	69	191	169	84	2	4	968
14	2	16	4	29	15	54	72	153	27	137	129	53	2	1	694
15		5		8	5	29	61	122	21	112	104	22			489
16		7	1	11	7	21	45	73	16	88	74	11			354
17		8	1	12	2	7	32	87	5	63	65	7			289
18		2		2	3	6	25	63	3	54	60	3			221
19						6	8	28	3	23	29	1			98
20				2		6	12	25	1	17	21				84
21				1		1	6	8		10	16				42
22				1			1	11		12	10				35
23						1		4		2	3				10
24						1				1	1				3
25								2		2	2				6
26						1				1	1				3
	4051	4094	4434	3756	3629	3810	3667	3867	4255	3737	3541	4565	4057	1347	52810

The table above show number of times regions visible on one single day divided into their respective cycles.
 Over 14,5% of days between January 1879 and start September 2023. 286 days out of solar cycle 25's 1347 days were spotless.

The graphic on the right show the 13-rotational average number of regions visible per day.

The 13-rot. average was nearly 15 regions visible every day in the years 1958 and 1979.

Data from the RGO/USAF.



Number of sunspot regions visible per day, percentage of total and per cycle

	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
	22,7 %	16,6 %	26,4 %	15,6 %	12,0 %	9,7 %	9,9 %	9,4 %	7,4 %	7,8 %	6,0 %	13,8 %	24,6 %	21,2 %	14,52 %
1	19,6 %	16,4 %	14,6 %	13,8 %	14,4 %	12,8 %	10,3 %	11,7 %	12,0 %	10,9 %	9,1 %	13,4 %	15,9 %	14,3 %	13,50 %
2	13,7 %	12,7 %	13,6 %	10,1 %	13,8 %	10,4 %	9,9 %	9,6 %	11,2 %	9,6 %	8,1 %	11,4 %	11,1 %	13,7 %	11,35 %
3	10,4 %	9,4 %	11,0 %	9,2 %	11,2 %	9,0 %	7,7 %	8,0 %	9,0 %	6,1 %	8,6 %	9,5 %	10,1 %	7,9 %	9,08 %
4	10,5 %	9,1 %	9,0 %	8,1 %	9,5 %	7,6 %	6,9 %	6,7 %	8,6 %	4,7 %	8,2 %	7,7 %	9,6 %	8,1 %	8,18 %
5	8,1 %	7,7 %	7,6 %	8,5 %	8,1 %	8,6 %	6,6 %	4,3 %	7,7 %	4,0 %	7,2 %	6,7 %	8,4 %	9,5 %	7,37 %
6	6,0 %	7,6 %	6,6 %	7,6 %	7,5 %	8,8 %	6,8 %	4,5 %	8,3 %	5,2 %	5,3 %	5,5 %	6,8 %	7,2 %	6,69 %
7	3,8 %	6,4 %	4,5 %	6,9 %	6,5 %	7,6 %	6,5 %	3,6 %	7,6 %	5,2 %	4,3 %	5,6 %	5,5 %	6,4 %	5,74 %
8	1,9 %	4,3 %	2,9 %	5,2 %	5,8 %	6,5 %	6,2 %	4,2 %	7,3 %	5,6 %	4,9 %	5,9 %	3,6 %	4,6 %	4,91 %
9	1,4 %	3,3 %	1,6 %	4,6 %	4,5 %	4,3 %	5,1 %	4,0 %	6,5 %	5,3 %	4,9 %	5,5 %	2,3 %	3,3 %	4,06 %
10	1,1 %	2,3 %	1,1 %	3,4 %	2,7 %	3,9 %	5,9 %	4,8 %	5,3 %	5,8 %	4,9 %	4,7 %	1,4 %	1,9 %	3,52 %
11	0,3 %	1,7 %	0,7 %	2,7 %	1,7 %	3,2 %	4,4 %	4,9 %	3,6 %	4,7 %	4,7 %	3,3 %	0,3 %	0,9 %	2,72 %
12	0,3 %	1,0 %	0,2 %	1,4 %	0,9 %	2,3 %	3,8 %	4,7 %	2,2 %	5,0 %	4,2 %	3,0 %	0,1 %	0,5 %	2,12 %
13	0,1 %	0,6 %	0,1 %	1,1 %	0,5 %	1,8 %	2,8 %	4,7 %	1,6 %	5,1 %	4,8 %	1,8 %	0,0 %	0,3 %	1,82 %
14	0,0 %	0,4 %	0,1 %	0,8 %	0,4 %	1,4 %	2,0 %	4,0 %	0,6 %	3,7 %	3,6 %	1,2 %	0,0 %	0,1 %	1,31 %
15		0,1 %		0,2 %	0,1 %	0,8 %	1,7 %	3,2 %	0,5 %	3,0 %	2,9 %	0,5 %			0,93 %
16		0,2 %	0,0 %	0,3 %	0,2 %	0,6 %	1,2 %	1,9 %	0,4 %	2,4 %	2,1 %	0,2 %			0,67 %
17		0,2 %	0,0 %	0,3 %	0,1 %	0,2 %	0,9 %	2,2 %	0,1 %	1,7 %	1,8 %	0,2 %			0,55 %
18		0,0 %		0,1 %	0,1 %	0,2 %	0,7 %	1,6 %	0,1 %	1,4 %	1,7 %	0,1 %			0,42 %
19						0,2 %	0,2 %	0,7 %	0,1 %	0,6 %	0,8 %	0,0 %			0,19 %
20				0,1 %		0,2 %	0,3 %	0,6 %	0,0 %	0,5 %	0,6 %				0,16 %
21				0,0 %		0,0 %	0,2 %	0,2 %		0,3 %	0,5 %				0,08 %
22				0,0 %			0,0 %	0,3 %		0,3 %	0,3 %				0,07 %
23						0,0 %		0,1 %		0,1 %	0,1 %				0,02 %
24						0,0 %				0,0 %	0,0 %				0,01 %
25								0,1 %		0,1 %	0,1 %				0,01 %
26						0,0 %				0,0 %	0,0 %				0,01 %
	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

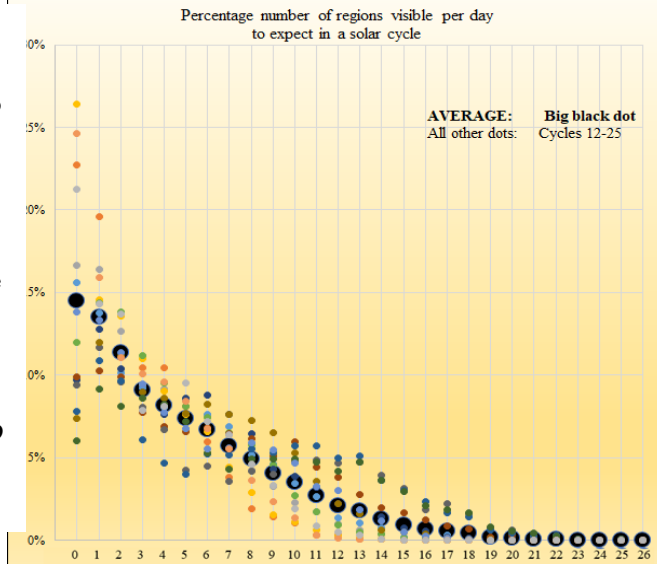
Table and graphic:
Percentage number of sunspot regions visible per day to expect in a solar cycle.

Data consist of longtable daily observations published for RGO/USAF for the period January 1879 to start September 2023.

The average is 4,75 regions visible per day for the entire period of years in investigation.

Maximum number of regions visible on one single day last occurred 25 August 1991 when there were 26!

Estimated for solar cycle 25 is a maximum of approx. 19 or less regions visible per day (year 2025).



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

[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: 1 day 17 hours 10 minutes
and average macrotime used for one registration is 26,14 seconds**

CV-Helios Network

- over 42 years in solar amateur astronomy service!

There are now number of Entries registered: 13032

containing 210327 CV-observations!

Last 12 months 5764 CV-observations from 40 observers originating from 17 countries

Editorial close: 15.09.2023 11:48 UTC



CV-Helios Network