Monthly Preliminary Report

MPR

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CV-Helios Network

Monthly Preliminary Report for October 2023

Solar Cycle 25: Month no. 47

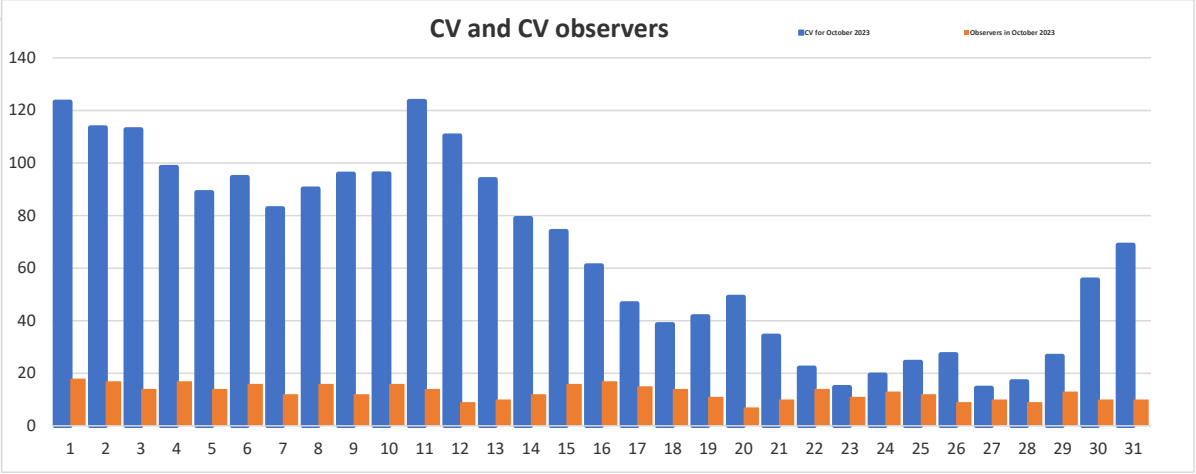
Report id.: cv2310 - CV-report no.: 507

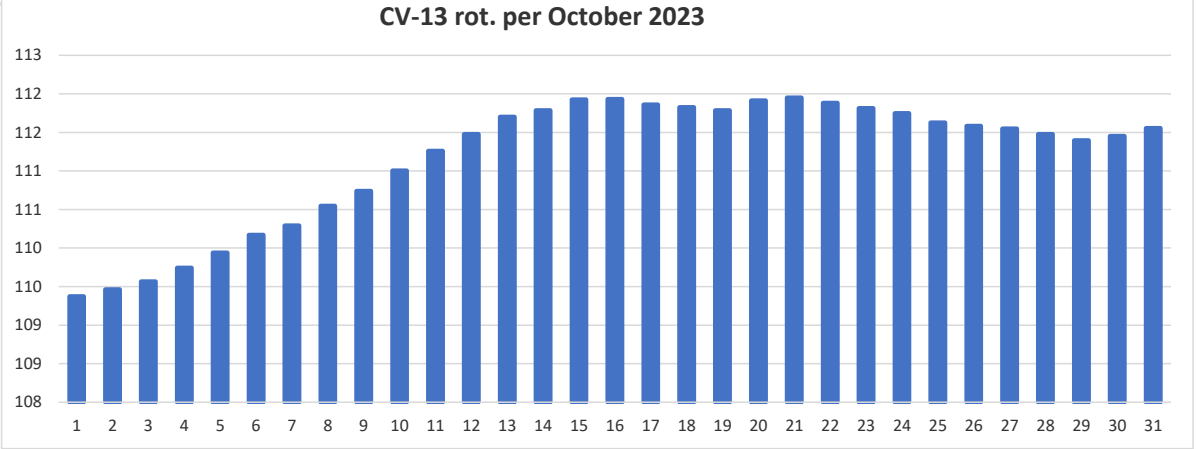
Memno.	Name	Country	CV	Obs	K	Obs. Tot.
CV-001	KJELL INGE MALDE	NORWAY	70,3	16	0,987	9308
CV-010	FRANKY DUBOIS	BELGIUM	61,1	20	0,860	9701
CV-019	ELMAR JUNKER	GERMANY	152,3	8	1,510	3854
CV-023	HARTMUT BRETSCHNEIDE	GERMANY	44,9	22	0,656	5934
CV-040	ROBERTO BATTAIOLA	ITALY	50,0	4	0,874	2141
CV-068	SVEN OVE THIMM	DENMARK	58,8	12	0,713	4299
CV-077	ANDREW JOHNSTON	UNITED KINGDOM	49,5	11	0,637	3689
CV-080	JAN JANSSENS	BELGIUM	63,0	1	0,640	1227
CV-082	PIOTR URBANSKI	POLAND	78,6	17	1,017	5556
CV-086	TOS POLAND	POLAND	72,2	27	0,996	8723
CV-091	GRZEGORZ DALEK	POLAND	72,6	18	1,114	4774
CV-102	PAULO ROBERTO MOSER	BRAZIL	53,0	25	0,816	3102
CV-105	ALEXEY RYBACK	RUSSIA	57,5	6	0,972	3498
CV-122	VLASTISLAV FEIK	CZECH REPUBLIC	68,1	11	0,978	3197
CV-135	GEMA ARAUJO	SPAIN	85,0	30	1,459	7530
CV-136	FAUSTINO GARCIA	SPAIN	58,2	14	0,731	3996
CV-139	JAVIER ALONSO	SPAIN	77,8	13	1,070	4142
CV-151	JEFFREY CARELS	BELGIUM	51,0	20	0,797	3266
CV-171	WALTER JOSE MALUF	BRAZIL	96,0	20	1,793	3030
CV-181	ADAM DERDZIKOWSKI	POLAND	52,3	3	0,664	1203
CV-198	DENIS WALLIAN	FRANCE	128,0	5	1,263	633
CV-204	STEFAN MEISTER	SWITZERLAND	62,5	10	0,845	825
CV-206	TADEUSZ FIGIEL	POLAND	82,6	5	0,944	366
CV-207	ONDREJOV OBS. (AI CAS)	CZECH REPUBLIC	78,6	18	1,088	3826
CV-208	JOHAN NEYS	BELGIUM	86,4	5	0,999	775
CV-214	IGOR GRAGEDA MENDEZ	BOLIVIA	64,5	26	0,900	1317
CV-215	ARNAUD MENGUS	FRANCE	78,3	6	0,984	361
CV-219	KANDILLI OBSERVATORY	TURKEY	60,8	25	0,953	987
CV-222	MILENA NIEMCZYK	POLAND	81,0	11	0,878	83

Totals	Observers	Days	CV	No	K
	29	**31**	**72,24**	**409**	**0,970**

Results

Date	CV	Obsrvrs	Regions 6 rot.	CV-USAF 6-rot.	CV-6 rot.	CV-13 rot.
1	123,26	18	7,81	121,52	121,92	109,37
2	113,50	17	7,82	121,69	122,09	109,46
3	112,73	14	7,84	121,85	122,31	109,57
4	98,44	17	7,85	122,06	122,45	109,74
5	88,79	14	7,87	122,18	122,60	109,94
6	94,59	16	7,90	122,38	122,82	110,17
7	82,67	12	7,91	122,39	122,89	110,29
8	90,18	16	7,93	122,38	122,88	110,55
9	95,83	12	7,94	122,28	122,89	110,74
10	95,94	16	7,96	122,34	122,85	111,00
11	123,57	14	7,98	122,72	123,15	111,26
12	110,40	9	8,00	122,49	123,31	111,48
13	93,73	10	7,98	121,78	123,20	111,70
14	79,00	12	7,98	121,03	122,72	111,79
15	74,00	16	7,96	120,31	122,25	111,93
16	61,00	17	7,98	119,62	121,83	111,93
17	46,56	15	7,96	118,85	121,42	111,86
18	38,60	14	7,95	118,10	121,03	111,83
19	41,64	11	7,94	117,48	120,75	111,78
20	49,00	7	7,88	116,56	120,46	111,91
21	34,20	10	7,87	115,85	120,10	111,95
22	22,07	14	7,84	114,97	119,57	111,88
23	14,64	11	7,79	114,38	119,16	111,81
24	19,38	13	7,76	113,86	118,91	111,75
25	24,25	12	7,73	113,59	118,74	111,63
26	27,22	9	7,72	113,37	118,68	111,58
27	14,40	10	7,71	113,21	118,72	111,55
28	16,89	9	7,70	112,74	118,66	111,48
29	26,54	13	7,67	112,26	118,33	111,40
30	55,60	10	7,63	111,77	118,02	111,45
31	68,80	10	7,62	111,21	117,71	111,56
Totals/ Avrgs	**3,96**	**27,3**	**0,97**	**4,83**	**121,05**	**111,17**





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
3116,03.10.22,10.10.22,14.10.22,30,45,2262,210,DAO,19
3119,07.10.22,10.10.22,17.10.22,28,11,2262,180,DAI,22
3124,16.10.22,18.10.22,19.10.22,-35,328,2263,180,DSO,25
3126,19.10.22,25.10.22,27.10.22,-10,232,2263,160,DAI,22
3131,24.10.22,27.10.22,05.11.22,23,111,2263,190,CSO,11
3133,25.10.22,28.10.22,31.10.22,26,94,2263,140,DAO,19
3135,28.10.22,31.10.22,09.11.22,26,63,2263,190,EAO,20

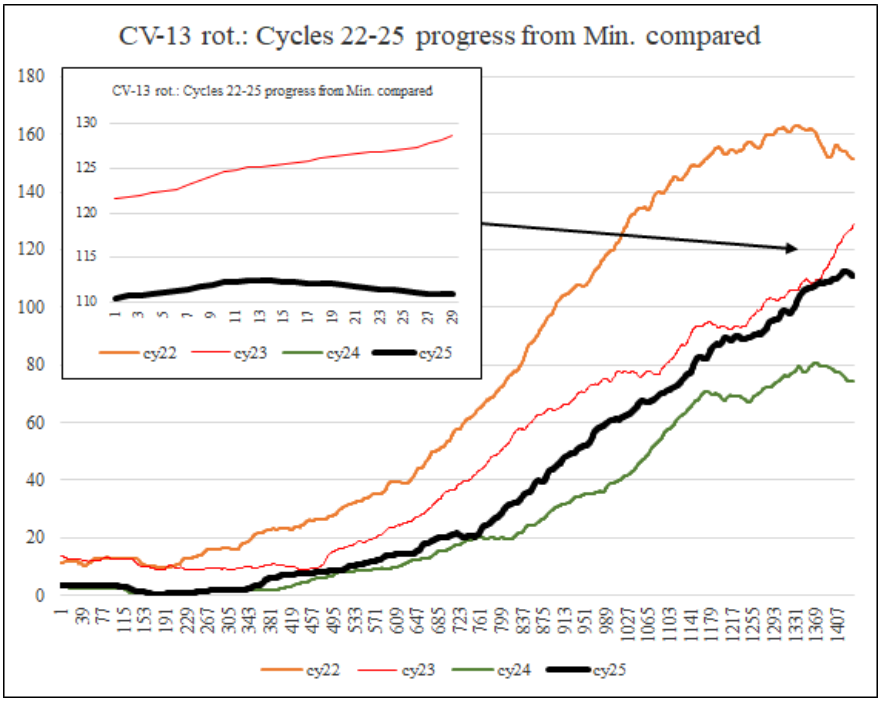
:Product: Weekly Highlights and Forecasts

Highlights of Solar and Geomagnetic Activity
06 - 12 November 2023

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

Solar activity ranged from low to moderate levels. Low levels were observed on 06-10 Nov and again on 12 Nov. Moderate levels (R1/Minor) were observed on 11 Nov due to an isolated M1.2/Sf flare at 11/1729 UTC from Region 3477 (S15, L=227, class/area Cko/350 on 05 Nov). Other activity included an eruption centered near S15W15 around 09/1115 UTC. An associated CME was first observed in SOHO/LASCO C2 imagery at 09/1148 UTC as an asymmetric halo. Modelling of the CME had an arrival around 11/2000 UTC. Another CME was associated with an eruption near Region 3484 (S15, L=215, class/area Cai/080 on 12 Nov) occurring at 10/1900 UTC. The associated CME was observed off the WSW limb beginning at 10/2000 UTC. Modelling of the CME suggested a possible grazing influence late on 15 Nov.

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 October 2023 we can still compete with solar cycle 23, though we are now about 18 CV-I units below!
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 October 2023

The solar activity in October 2023 has come to a great pause, though
the solar activity is rising slowly and many regions have been of very modest sizes.
The 6 rot. average was setback about 3,5 months to 114,8 by end October,
but the 13 rot. average was only setback about 4 weeks to 110,9 by last month end.
Report-end this MPR 507 for October show we are now about 18 CV-units 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).
Predictions may indicate an upward trend for December and especially January 2024.
Situation nowadays with low activity sure would need a good uplift now!

Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV
3116,03.10.22,10.10.22,14.10.22,30,45,2262,210,DAO,19
3119,07.10.22,10.10.22,17.10.22,28,11,2262,180,DAI,22
3124,16.10.22,18.10.22,19.10.22,-35,328,2263,180,DSO,25
3126,19.10.22,25.10.22,27.10.22,-10,232,2263,160,DAI,22
3131,24.10.22,27.10.22,05.11.22,23,111,2263,190,CSO,11
3133,25.10.22,28.10.22,31.10.22,26,94,2263,140,DAO,19
3135,28.10.22,31.10.22,09.11.22,26,63,2263,190,EAO,20
3450,27.09.23,02.10.23,07.10.23,-19,331,2276,220,EAC,32
We expect a major upgoing of CV-I totals later on this year.
3452,01.10.23,02.10.23,11.10.23,10,304,2276,240,DAI,22
3460,07.10.23,10.10.23,16.10.23,-10,233,2276,140,DAI,22
3465,11.10.23,15.10.23,19.10.23,10,146,2276,240,HAX,7
3468,16.10.23,17.10.23,26.10.23,-10,81,2276,130,HAX,7

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 1426 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!

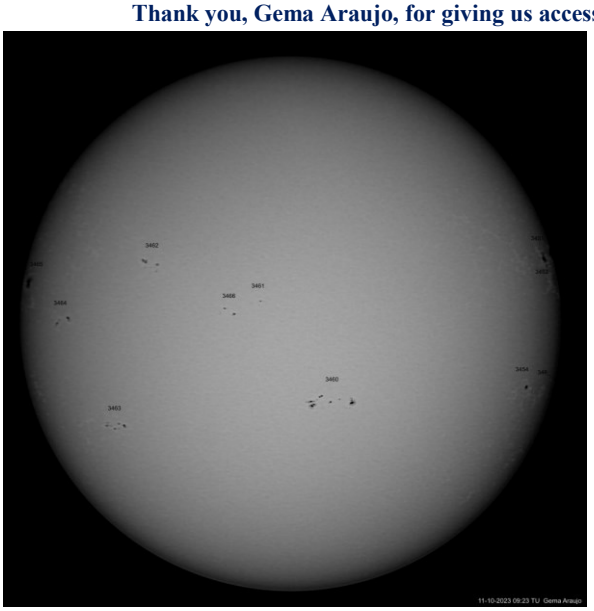
Solar Flux onset: OCCURED 30 September 2022. Stay tuned and observe the solar disk from now on!
Please remember you are always welcome to contribute with drawings and photos!

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

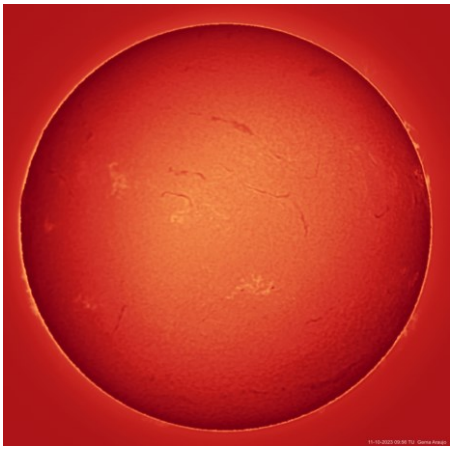
Pictures from last month - Observer contributions, etc.

Photo courtesy: Thanks to CV-135 Gema Araujo, Spain **Highlights October 2023**

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



Left: Photo from CV-135 Gema Araujo, Spain from 11 October 2023.
Picture below in H-alpha taken on 27 September 2023.



Awards this month 1

Award no.: 161 to CV-171 WALTER JOSE MALUF date 15 September 2023 milestone 3000 CV-obs.!
CONGRATULATIONS!

New members: **Welcome to:**

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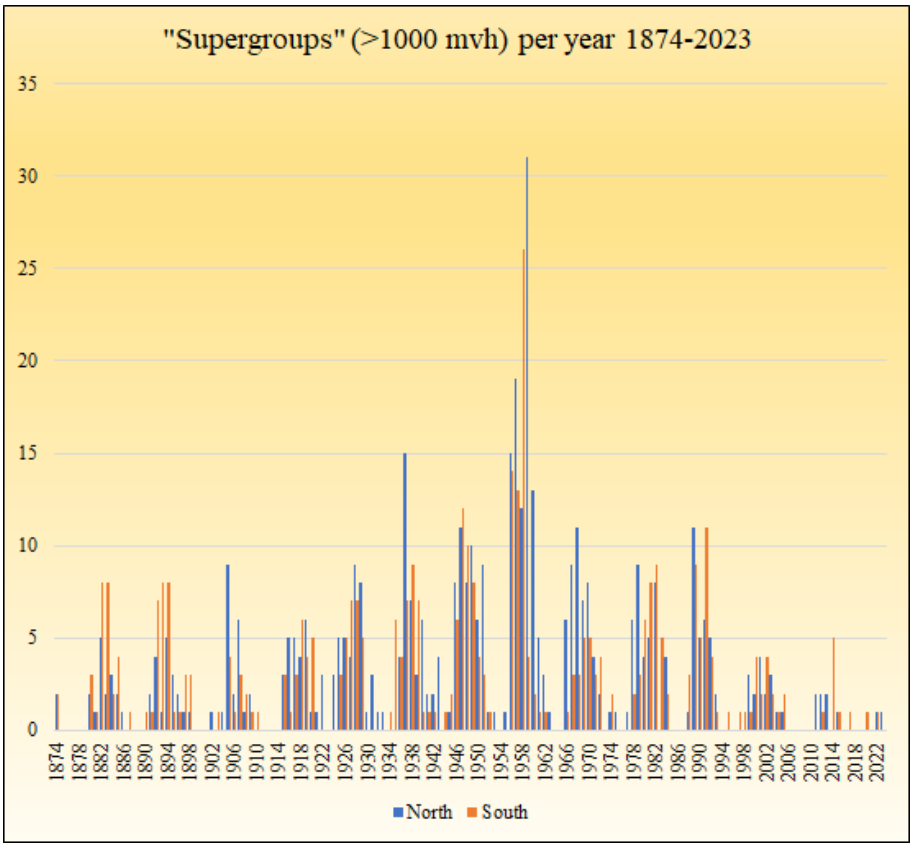
We are now 52 active members (last 12 mo.)

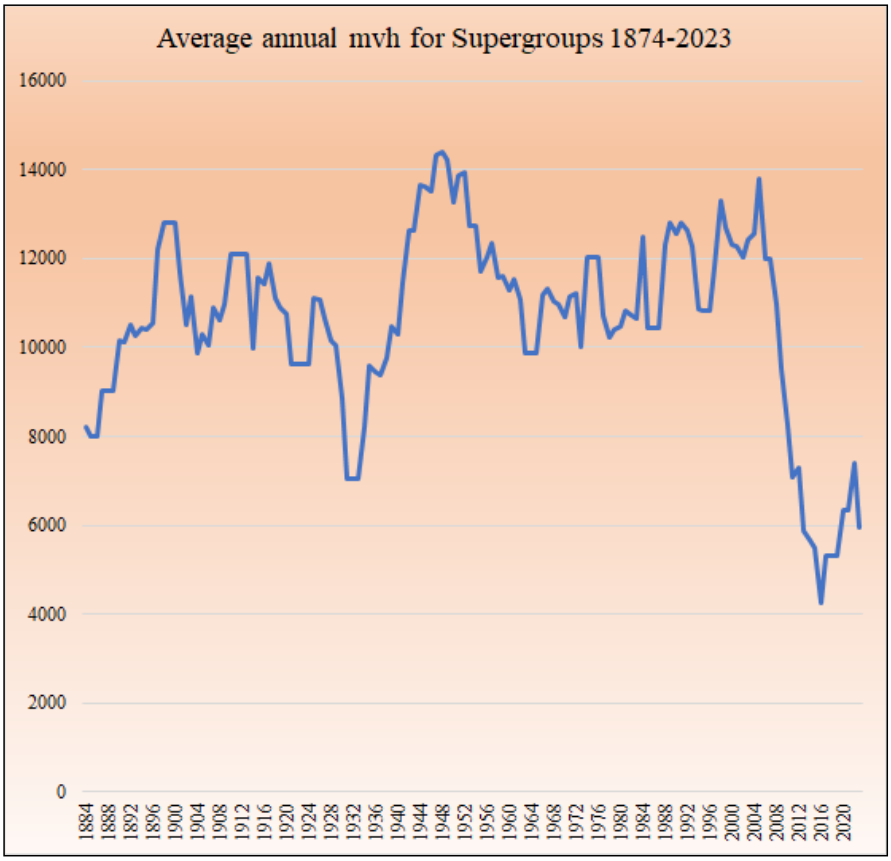
RGO-USAF Supergroups (>1000 mvh) 1874-2023



Upon calculating the result from the RGO (Royal Greenwich Observatory) - USAF (US Air Force stations) from their daily listing of sunspot regions from May 1874 until now.
Data give the daily mvh (millionths of the visible hemisphere) for each group and every day.
From this list, over 250.000 datalines, we have filtered out regions that exceed 1000 mvh to name them "Supergroups".
In this period we can pick up 858 regions that meet this criteria, shown in the graphic above.
In the year 1959 there were as much as 35 supergroups.
The graphic above show the distribution between northern and southern hemispheres.
Since the start of solar cycle 25 in December 2019 we have so far seen only 4!
Solar cycle 19 (April 1954 to June 1964) had the highest number of Supergroups with 161!

Data from the RGO/USAF.

Latitude distribution RGO-USAF 1874-2023



Exploring a solar cycle with the most numerous amount of Supergroups, does not neccessarily mean it contains the largest ones overall.
The graphic above show the average mvh (above 1000 mvh) in one cycle average for those groups.
Eventhough here, we can see that the average mvh of supergroups have declined a lot from about the beginning of solar cycle 24 (2008).
There were also a "minimum" occurring around year 1933.

Data from the RGO/USAF

Discover the Sun! (solarcyclescience.com)(Dr. Lisa Upton and Dr. David Hathaway.)
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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
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: 1 day 02 hours 09 minutes
and average macrotime used for one registration is 33,26 seconds

CV-Helios Network
- over 42 years in solar amateur astronomy service!

There are now 13100 registrations made, containing 211393 CV-observations!
Last 12 months 5735 CV-observations from 40 observers originating from 17 countries

Editorial close: 15.11.2023 19:00 UTC

CV-Helios Network

This MPR issued from Tenerife, Spain