

# Monthly Preliminary Report

## MPR



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Volume 40 Number 1

MPR no. 462

January 2020

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## CV-Helios Network

### Monthly Preliminary Report for January 2020

Solar Cycle 24: Month no. 135

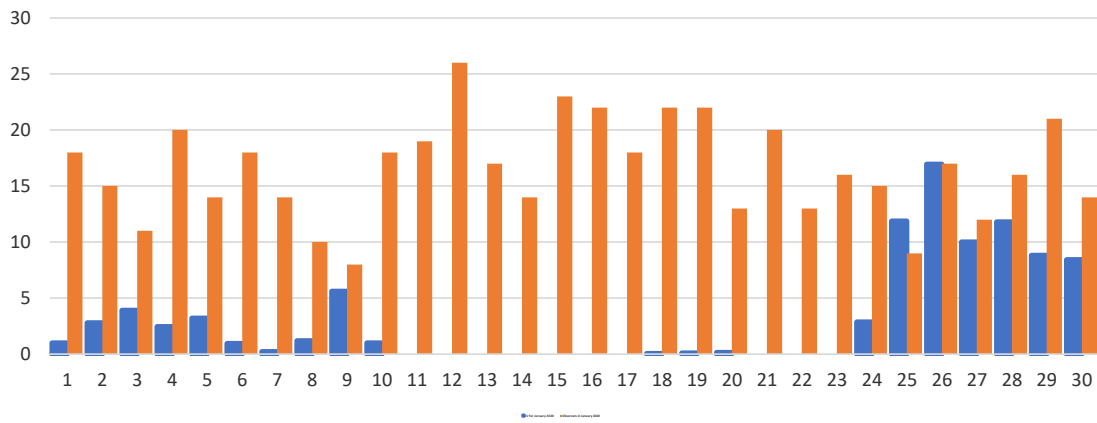
Report id.: cv2001 - CV-report no.: 462

Memno.	Name	Country	CV	Obs	K	Obs. Tot.
CV-001	MALDE, KJELL INGE	NORWAY	1,3	13	0,475	8399
CV-009	BRAUCKHOFF, DIETER	GERMANY	2,7	22	0,991	1191
CV-010	DUBOIS, FRANKY	BELGIUM	2,5	17	0,919	8593
CV-019	JUNKER, ELMAR	GERMANY	4,4	12	1,605	3398
CV-021	BARNES, HOWARD	NEW ZEALAND	3,9	14	1,402	4299
CV-022	VIERTEL, ANDREAS	GERMANY	1,0	8	0,363	5566
CV-023	BRETSCHNEIDER, HAR	GERMANY	2,7	20	0,981	4975
CV-038	MORALES, GERMAN	BOLIVIA	6,0	26	2,181	7052
CV-040	BATTAIOLA, ROBERTO	ITALY	3,8	6	1,393	1776
CV-041	ROTHERMEL, JENS	GERMANY	0,0	4	0,000	1073
CV-044	SCHRÖDER, GERD	GERMANY	1,6	20	0,581	4298
CV-068	THIMM, SVEN OVE	DENMARK	1,4	5	0,509	3593
CV-077	JOHNSTON, ANDREW	UNITED KINGDOM	1,8	14	0,649	2940
CV-080	JANSSENS, JAN	BELGIUM	0,0	1	0,000	1021
CV-082	URBANSKI, PIOTR	POLAND	1,8	13	0,643	4664
CV-086	TOS-POLAND	POLAND	4,1	31	1,501	7387
CV-091	DALEK, GRZEGORZ	POLAND	1,1	13	0,391	4042
CV-103	STEEN, OCTAAF	BELGIUM	3,3	19	1,205	5206
CV-105	RYBACK, ALEXEY	RUSSIA	7,0	3	2,544	2907
CV-107	LEVENTHAL, MONTY	AUSTRALIA	5,0	12	1,817	4225
CV-122	FEIK, VLASTISLAV	CZECH REPUBLIC	2,6	15	0,945	2448
CV-135	ARAUJO, GEMA	SPAIN	3,2	30	1,175	6190
CV-136	GARCÍA, FAUSTINO	SPAIN	0,8	15	0,291	3239
CV-139	ALONSO, JAVIER	SPAIN	4,3	16	1,567	3350
CV-151	CARELS, JEFFREY	BELGIUM	2,3	13	0,839	2549

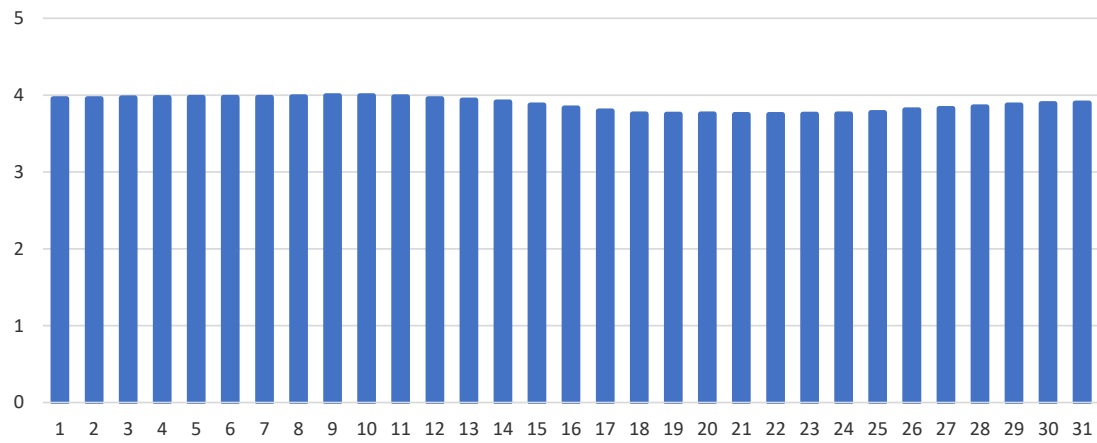
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Memno.	Name	Country	CV	Obs	K	Obs. Tot.	
CV-171	MALUF, WALTER JOSE	BRAZIL	4,3	21	1,575	2070	
CV-177	BACKER, HENDRIK DE	BELGIUM	2,4	18	0,888	1508	
CV-181	DERDZIKOWSKI, ADAM	POLAND	3,0	1	1,090	884	
CV-190	VERBOVEN, RUBEN	BELGIUM	1,2	6	0,424	212	
CV-201	BASU, SANTANU	INDIA	0,0	22	0,000	401	
CV-203	DEMEULENAERE, IVO	BELGIUM	0,6	9	0,202	434	
CV-204	MEISTER, STEFAN	SWITZERLAND	2,0	1	0,727	272	
CV-207	ONDREJOV OBS. (AI CA	CZECH REPUBLIC	0,7	13	0,252	5020	
CV-208	NEYS, JOHAN	BELGIUM	5,5	4	1,999	255	
CV-209	MORAES, CAIO CRESPO	BRAZIL	0,5	2	0,182	513	
CV-210	BOURGEOIS, JEAN	BELGIUM	1,6	8	0,591	430	
CV-211	CEUNINCK, EDWIN DE	BELGIUM	1,8	12	0,666	326	
CV-212	ZAPATA MORALES, ANTON	SPAIN	0,5	2	0,182	215	
CV-213	LAURENT, DIRK	BELGIUM	4,4	7	1,609	170	
CV-214	GRAGEDA, IGOR	BOLIVIA	2,4	21	0,865	140	
<b>Totals</b>	<b>Observers</b>	<b>Days</b>	<b>CV</b>	<b>No</b>	<b>K</b>		
	<b>40</b>	<b>31</b>	<b>2,49</b>	<b>509</b>	<b>0,905</b>		

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<b>Results</b>						*CV-USAF prepared via data from Joint USDC/NOAA, SWPC/USAF	
						Prelim. MIN	
Date	CV	Obsvrs	Regions 6 rot.	* CV-USAF 6 rot.	CV-6 rot.	CV-13 rot.	
1	1,00	18	0,08	0,17	0,15	3,95	
2	2,80	15	0,08	0,18	0,15	3,95	
3	3,91	11	0,09	0,19	0,17	3,96	
4	2,45	20	0,09	0,20	0,18	3,97	
5	3,21	14	0,10	0,20	0,20	3,97	
6	0,94	18	0,10	0,21	0,20	3,97	
7	0,21	14	0,10	0,21	0,20	3,97	
8	1,20	10	0,10	0,21	0,21	3,98	
9	5,63	8	0,11	0,24	0,22	3,99	
10	1,00	18	0,12	0,24	0,23	3,99	
11	0,00	19	0,12	0,24	0,23	3,98	
12	0,00	26	0,12	0,24	0,23	3,95	
13	0,00	17	0,12	0,24	0,23	3,93	
14	0,00	14	0,12	0,24	0,23	3,91	
15	0,00	23	0,12	0,24	0,23	3,87	
16	0,00	22	0,11	0,23	0,23	3,83	
17	0,00	18	0,10	0,23	0,22	3,79	
18	0,05	22	0,10	0,23	0,22	3,76	
19	0,09	22	0,10	0,23	0,22	3,75	
20	0,15	13	0,10	0,23	0,22	3,75	
21	0,00	20	0,10	0,23	0,22	3,75	
22	0,00	13	0,10	0,23	0,22	3,75	
23	0,00	16	0,10	0,23	0,23	3,75	
24	2,87	15	0,11	0,24	0,24	3,75	
25	11,89	9	0,12	0,25	0,28	3,77	
26	16,94	17	0,12	0,30	0,37	3,81	
27	10,00	12	0,13	0,37	0,41	3,82	
28	11,81	16	0,13	0,43	0,47	3,85	
29	8,81	21	0,14	0,49	0,53	3,87	
30	8,43	14	0,15	0,55	0,57	3,89	
31	3,00	14	0,15	0,55	0,58	3,90	
Totals/ Avrgs	<b>3,11</b>	<b>16,4</b>	<b>0,87</b>	<b>2,13</b>	<b>0,27</b>	<b>3,88</b>	

### CV and CV observers



### CV-13 rot. per January 2020



**Solar Region Summary for January 2020**

Reg.-First day-Last day-Lat.-Lon.-Rot.-Area-Lgth.-CVtot.-class14d

2755-02.01.20-06.01.20-S35-353-2225-20-3-1,4-BXO-BXO-AXX-AXX-AXX

2756-09.01.20-10.01.20-N22-17-2226-30-4-3,0-CRO-AXX

2757-24.01.20-01.02.20-N04-85-2226-10-3-6,4-BXO-BXO-CAO-CSO-HSX-HSX-HSX-HRX-AXX

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**:Product: Weekly Highlights and Forecasts**

:Issued: 2020 Feb 10 0203 UTC

# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center

# Product description and SWPC contact on the Web

# <https://www.swpc.noaa.gov/content/subscription-services>

#

# Weekly Highlights and Forecasts

#

Highlights of Solar and Geomagnetic Activity

03 - 09 February 2020

Solar activity was very low. The visible disk remained spotless and no Earth-directed CMEs were observed in available coronagraph imagery.

No proton events were observed at geosynchronous orbit.

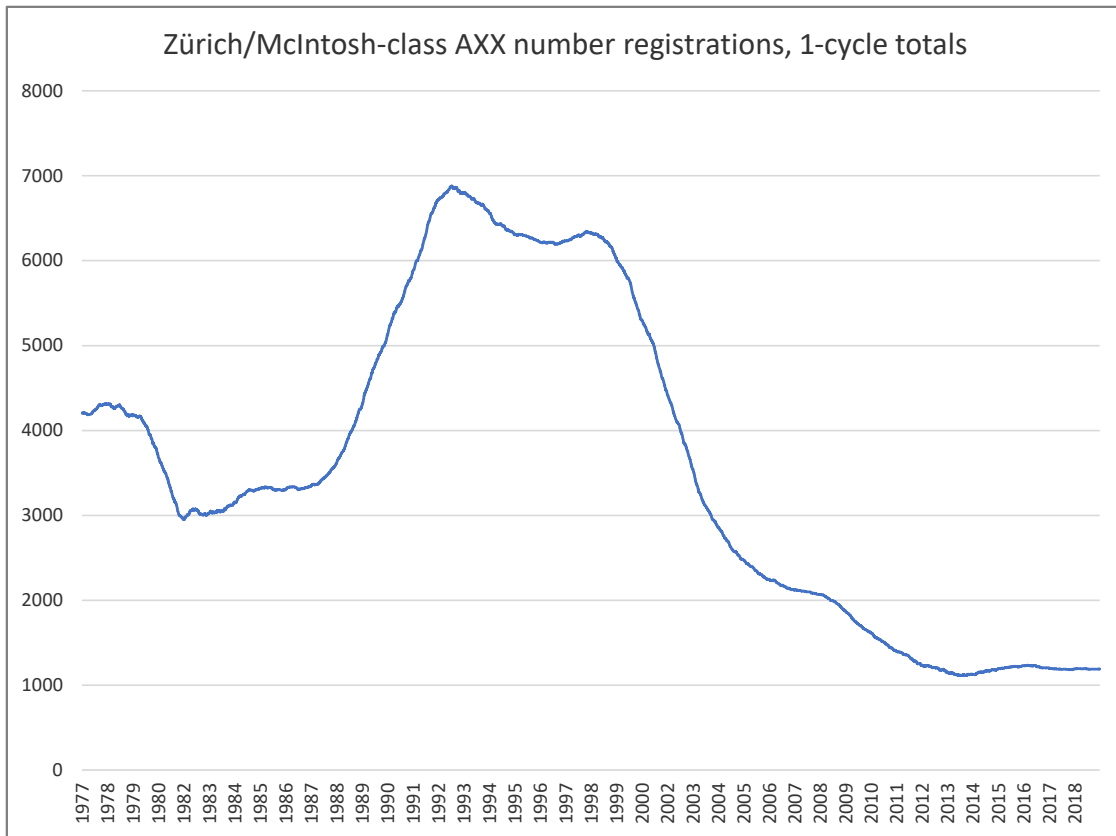
The greater than 2 MeV electron flux at geosynchronous orbit was between normal to high levels. High levels were reached on 08-09 Feb in response to a negative polarity CH HSS. Normal to moderate levels were observed for the remainder of the summary period.

Geomagnetic field activity ranged from quiet to active levels.

Active levels were observed on 06-07 Feb in response to the onset of a negative polarity CH HSS, with wind speeds reaching a max near 650 km/s on 07 Feb. As wind speeds declined, unsettled conditions were observed on 08-09 Feb. Another isolated period of unsettled was observed on 04 Feb in response to sustained southward Bz. The

CV-I vs CV-USAF graph

Solar minimum approaching



MOST COMMON: Lowest class, AXX (CV=1) is the most common class of all times.  
 Result from 16699 registrations of type AXX class Zurich/McIntosh, 1977-2019.

[Awards this month](#)

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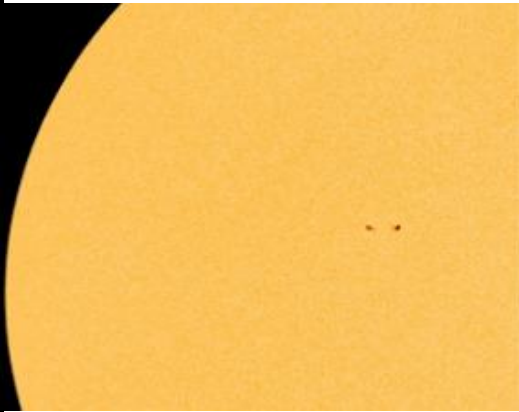
[New member:](#)

We are now 47 active members (last 12 mo.)

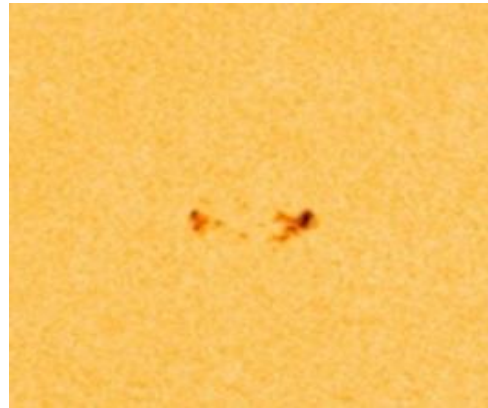
**Please check out [www.cv-helios.net/cvrep2.html](http://www.cv-helios.net/cvrep2.html) for updates of files!**

**MINIMUM Cycle 24/25 was expected to occur between November 2019/May 2020.**  
 Latest: **MINIMUM MAY HAVE OCCURRED** END DEC. 2019. See page 10 for more.

## January 2020 news



Reg. 2757 N04 85  
left - and right close up  
(rot. 2225)  
Both belonging to old cycle 24



In January 2020 there were 3 regions  
Small region 2755 (S35) lasted for 5 days  
Small region 2756 (N22) lasted for 2 days

Sun was blank for 16 days

A preliminary low on Adj. Solar Flux on 2019 Dec 22 & 2020 Jan 06. More news later.

### Solar Coordinates

Daily list of Solar Ephemeris for 2020 available at:

[Daily list of Solar Ephemeris for 2020](#)

Here you can see Today's Po, Bo, Lo, Rotation no., RA and Dec.  
for the year 2020.

### Calculating CV

For your convenience and security, use the mif2002,  
<https://www.cv-helios.net/mif2002.xls>  
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:

<https://www.cv-helios.net/cgi/data/datlist.txt> 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](mailto:cvhelios@gmail.com)

**SUBMISSIONS OF CV-OBSERVATIONS**

Please go to: <https://www.cv-helios.net/observations/index.html>

Log on to:

<https://www.cv-helios.net/observations/index.html>

login

solaris

password

cvheliosobs

Submission before 15th of proceeding month 18:00 UTC.

MPR issue 15th of month 2000 UTC. Good luck CV-observing!



Per January 2020: Registration time average last 40 entries: 11 hours 20 minutes

**CV-Helios Network**

**- over 38 years in solar amateur astronomy service!**

There are now 11395 entries registered  
containing 181593 CV-observations!

**This MPR issued 15th February 2020**



**CV-Helios Network**

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<https://www.cv-helios.net>

Worldwide Amateur Solar Observing Network  
Magnetic Sunspot Classifications Zürich/McIntosh system  
CV - Classification Values (Malde/1981) - numeric system  
Serving Amateur Solar Astronomy since 1981

Editorial close: 15.02.2020 17:22 UTC



**SUNSPOTREGIONS IN THE YEAR 2019**

<b>Region</b>	<b>First date</b>	<b>Z/Mcl-classifications</b>
<b>2732</b>	01.01.2019	BXO-DRO-CAO-CAO-BXO-BXO-----
<b>2733</b>	22.01.2019	CRO-CRO-DRO-DRI-DSI-DSO-CSO-CSO-CAO-----
<b>2734</b>	05.03.2019	CRO-CRO-CAO-HAX-HSX-HSX-AXX-AXX-----
<b>2735</b>	18.03.2019	BXO-CRO-AXX-AXX-----
<b>2736</b>	20.03.2019	DAC-DAC-EKI-EKI-DSO-----
<b>2737</b>	31.03.2019	BXO-CRO-CAO-BXO-----
<b>2738</b>	07.04.2019	HSX-HHX-CHO-CHO-HHX-CHO-CHO-HHX-HHX-HHX-HHX-HHX-
<b>2739</b>	17.04.2019	BXO-CRO-BXO-AXX-----
<b>2740</b>	03.05.2019	HHX-HHX-DHO-CSO-CSO-CAO-CAO-HAX-HAX-HAX-HAX-AXX--
<b>2741</b>	06.05.2019	HSX-HSX-HSX-HSX-HSX-HSX-HSX-HSX-HSX-HSX-HAX-HAX-
<b>2742</b>	24.06.2019	AXX-----
<b>2743</b>	24.06.2019	AXX-AXX-AXX-AXX-----
<b>2744</b>	07.07.2019	BXO-----
<b>2745</b>	22.07.2019	AXX-BXO-----
<b>2746</b>		-----
<b>2747</b>	06.08.2019	AXX-----
<b>2748</b>	01.09.2019	BXO-HSX-----
<b>2749</b>	01.10.2019	AXX-AXX-----
<b>2750</b>	01.11.2019	AXX-----
<b>2751</b>	02.11.2019	BXO-----
<b>2752</b>		-----
<b>2753</b>	23.12.2019	BXO-BXO-AXX-----
<b>2754</b>	24.12.2019	BXO-AXX-----

preliminary listing

22 regions

**SUNSPOT MINIMUM MAY HAVE OCCURRED**

Following closely day-by-day several indices of the very lowest numbers a very preliminary statement has been made by the author of this bulletin.

There should be an over 80% confidence that solar minimum have occurred. The actual dates varies quite a bit, but may seem the average day of minimum may have been around 2019 December 20.

The fact that we have already experienced some groups from the new cycle 25 should give indications that minimum at least is well underway.

The following are the results trying to find a preliminary minimum date:

<b>CV-6 rot. "0"-days:</b>	<b>19 DEC 2019</b>	max 142 days spotless	=86,6%
<b>CV-13 rot. "0"-days:</b>	<b>21 DEC 2019</b>	max 232 days spotless	=65,5%
<b>CV-I 6 rot:</b>	<b>20 DEC 2019</b>		
<b>CV-I 13 rot.:</b>	<b>20 DEC 2019</b>		
<b>CV-I 1 cycle (10,95 yr.):</b>	<b>21 DEC 2019</b>		
<b>Solar Flux 6 rot. adj.:</b>	<b>22 DEC 2019 or 06 JAN 2020</b>		
<b>Solar Flux 13 rot. adj.:</b>	<b>24 OCT 2019</b>		

We have also checked the database at sidc for data on Relative numbers in order to receive further indications:

<b>RI-I 6 rot.:</b>	<b>20 DEC 2019</b>		
<b>RI-I 13 rot.:</b>	<b>24 DEC 2019 or 21 JAN 2020</b>		
<b>RI-I 6 rot. "0"-days:</b>	<b>21 DEC 2019</b>	max 152 days spotless	=92,7%
<b>RI-I 13 rot. "0"-days:</b>	<b>24 DEC 2019</b>	max 268 days spotless	=75,7%

More updates next MPR

CV-Helios Network 2020 Feb 15