

# Monthly Preliminary Report

## MPR



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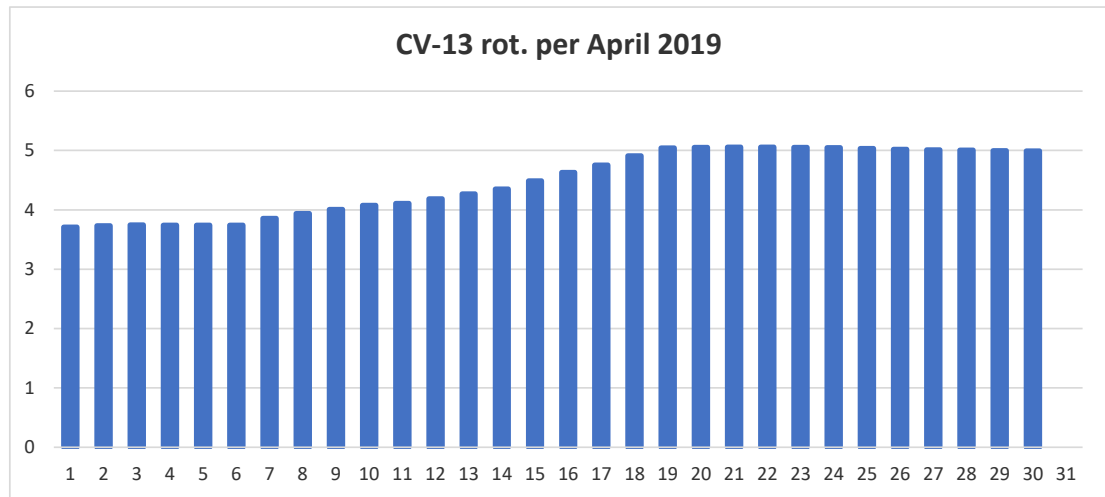
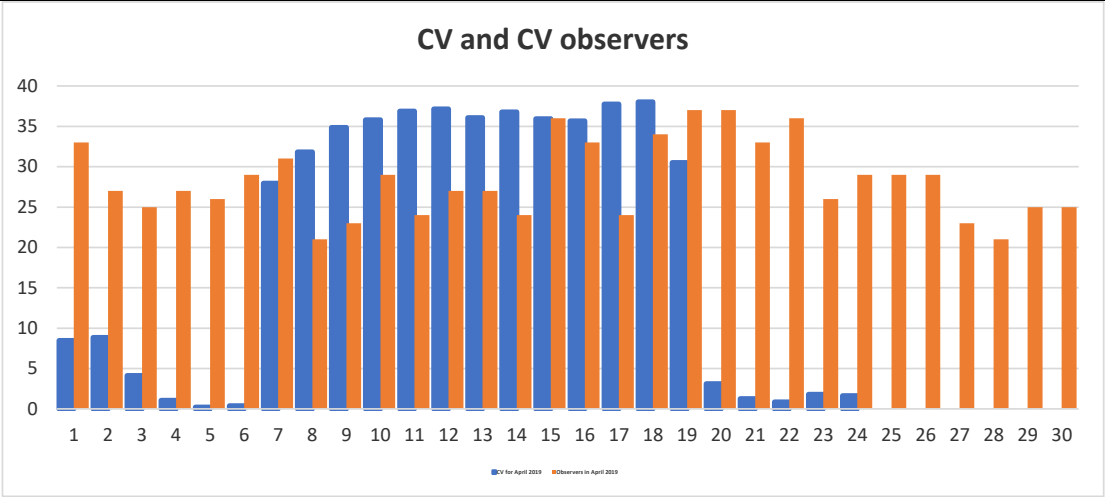
## CV-Helios Network

**Monthly Preliminary Report for April 2019****Solar Cycle 24: Month no. 126****Report id.: cv1904.xls - CV-report no.: 453**

Memno.	Name	Country	CV	Obs	K	Obs. Tot.
CV-001	MALDE, KJELL INGE	NORWAY	17,7	25	1,067	8225
CV-009	BRAUCKHOFF, DIETER	GERMANY	19,1	25	1,151	969
CV-010	DUBOIS, FRANKY	BELGIUM	16,1	27	0,970	8374
CV-019	JUNKER, ELMAR	GERMANY	16,8	12	1,010	3327
CV-020	HOLL, MANFRED	GERMANY	3,8	27	0,228	5212
CV-021	BARNES, HOWARD	NEW ZEALAND	19,8	21	1,195	4180
CV-022	VIERTEL, ANDREAS	GERMANY	17,6	25	1,062	5444
CV-023	BRETSCHNEIDER, HAR	GERMANY	11,3	25	0,683	4777
CV-038	MORALES, GERMAN	BOLIVIA	21,7	27	1,309	6804
CV-040	BATTAIOLA, ROBERTO	ITALY	10,3	6	0,623	1746
CV-041	ROTHERMEL, JENS	GERMANY	20,8	10	1,255	1014
CV-044	SCHRÖDER, GERD	GERMANY	16,2	18	0,975	4168
CV-068	THIMM, SVEN OVE	DENMARK	18,1	19	1,092	3528
CV-077	JOHNSTON, ANDREW	UNITED KINGDOM	20,9	14	1,263	2785
CV-080	JANSSENS, JAN	BELGIUM	17,0	5	1,026	994
CV-082	URBANSKI, PIOTR	POLAND	19,6	28	1,181	4481
CV-086	TOS-POLAND	POLAND	17,7	30	1,066	7111
CV-091	DALEK, GRZEGORZ	POLAND	15,9	26	0,961	3879
CV-103	STEEN, OCTAAF	BELGIUM	16,9	28	1,017	4970
CV-104	MEEUS, LIEVE	BELGIUM	27,0	3	1,629	2206
CV-105	RYBACK, ALEXEY	RUSSIA	22,5	15	1,359	2818
CV-107	LEVENTHAL, MONTY	AUSTRALIA	15,3	23	0,926	4062
CV-116	BJERKGÅRD, TERJE	NORWAY	16,8	10	1,013	867
CV-122	FEIK, VLASTISLAV	CZECH REPUBLIC	14,1	23	0,850	2273
CV-135	ARAUJO, GEMA	SPAIN	19,2	30	1,160	5918

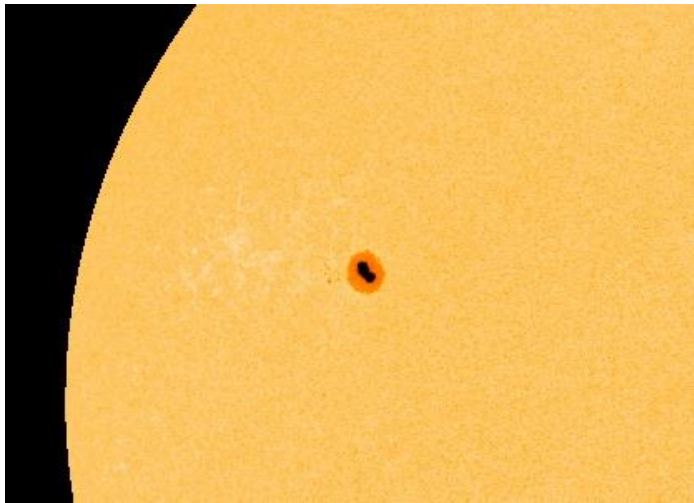


Volume 39 Number 4		MPR no. 453		April 2019		ISSN 2535-3780	
<b>Results</b>							*CV-USAF prepared via data from Joint USDC/NOAA, SWPC/USAF
Date	CV	Obsrvrs	*USAF-CV	std.dev.	CV-6 rot.	CV-13 rot.	
1	8,48	33	5	2,46	3,22	3,71	
2	8,85	27	8	0,60	3,31	3,73	
3	4,12	25	2	1,50	3,34	3,74	
4	1,07	27	0	0,76	3,34	3,74	
5	0,23	26	0	0,16	3,33	3,74	
6	0,38	29	0	0,27	3,32	3,74	
7	27,94	31	10	12,68	3,61	3,85	
8	31,81	21	40	5,79	3,85	3,94	
9	34,87	23	41	4,33	4,11	4,01	
10	35,79	29	41	3,68	4,45	4,07	
11	36,88	24	40	2,21	4,71	4,11	
12	37,15	27	41	2,72	5,02	4,19	
13	36,07	27	41	3,48	5,33	4,27	
14	36,79	24	40	2,27	5,60	4,35	
15	35,94	36	40	2,87	6,01	4,49	
16	35,67	33	40	3,06	6,39	4,63	
17	37,75	24	42	3,01	6,70	4,75	
18	38,03	34	45	4,93	7,10	4,91	
19	30,51	37	42	8,12	7,42	5,04	
20	3,11	37	1	1,49	7,41	5,05	
21	1,27	33	0	0,90	7,39	5,06	
22	0,86	36	0	0,61	7,35	5,06	
23	1,81	26	0	1,28	7,36	5,05	
24	1,62	29	0	1,15	7,36	5,05	
25	0,00	29	0	0,00	7,32	5,03	
26	0,00	29	0	0,00	7,29	5,02	
27	0,00	23	0	0,00	7,29	5,01	
28	0,00	21	0	0,00	7,26	5,01	
29	0,00	25	0	0,00	7,22	5,00	
30	0,00	25	0	0,00	7,16	4,99	
Totals/ Avrgs	16,23	28,3	16,74	2,34	6,46	16,13	



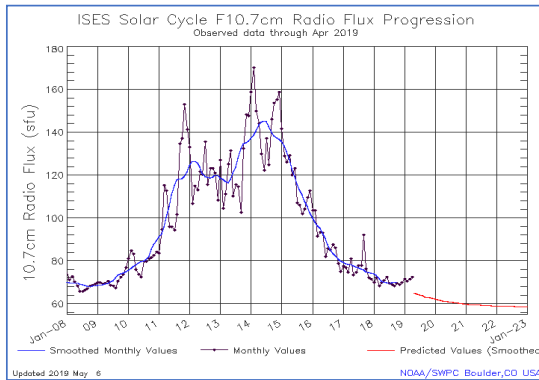
Volume 39 Number 4	MPR no. 453	April 2019	ISSN 2535-3780
<b>Solar Region Summary for April 2019</b>			
<u>Reg.-First day-Last day-Lat.-Lon.-Rot.-Area-Lgth.-CVtot.-class14d</u>			
2737-31.03.19-03.04.19-N12-59-2215-10-33-4,3-BXO-CRO-CAO-BXO			
2738-07.04.19-19.04.19-N06-298-2215-300-3-38,0-HSX-HHX-CHO-CHO-HHX-CHO-CHO-HHX-HHX-HHX-HHX-HHX			
2739-17.04.19-20.04.19-N05-256-2216-10-3-2,5-BXO-CRO-BXO-AXX			
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<b>:Product: Weekly Highlights and Forecasts</b>			
:Issued: 2019 May 13 0226 UTC			
# Prepared by the US Dept. of Commerce, NOAA, Space Weather Prediction Center			
# Product description and SWPC contact on the Web			
# <a href="https://www.swpc.noaa.gov/content/subscription-services">https://www.swpc.noaa.gov/content/subscription-services</a>			
#			
#           Weekly Highlights and Forecasts			
#			
Highlights of Solar and Geomagnetic Activity			
06 - 12 May 2019			
<p>Solar activity was at low levels on 06, 07, and 09 May due to C-class flare activity from Region 2740 (N08, L=307 class/area Dho/280 on 05 May. The largest of the flares was a C9.9/1N at 06/0510 UTC. Mutiple eruptions were observed in coronagraph imagery, but only the halo CME from 06 May was geoeffective. The assymetric halo CME was first observed in SOHO LASCO C2 imagery at 06/2348 UTC. Additionally, a partial halo CME was first observed in LASCO C2 imagery at 12/2036 UTC and is determined to be Earth-directed and arrive at Earth on 17 May. Solar activity was at very low levels for the remainder of the summary period.</p>			
<p>No proton events were observed at geosynchronous orbit.</p>			
<p>The greater than 2 MeV electron flux at geosynchronous orbit reached high levels on 07, 11, and 12 May. Normal to moderate levels were observed throughout the remainder of the period.</p>			

Image Reports



April 2019's regions

Region 2740 was April 2019's big surprise and 2nd return! This region, return of AR 2736 (N06-298), here max 350mvh on 2019 April 10 (1630 UTC), travelled all the way from east to west and apparently did not decay at all. The classifications for the region kept up at a HHX or CHO throughout the entire transit! *More in next issue!*



The recent activity on the sun has sent the Flux 10,7 cm 2800 MHz measured at Penticton, Canada, upwards. Theory is that the levels experienced March-May 2019 will end. All forecasts point to a minimum March/April 2020.

< Solar Flux + predictions

No new Awards this month

New member:

CV-213 LAURENT, DIRK  
BELGIUM  
Joined: 14.05.2019

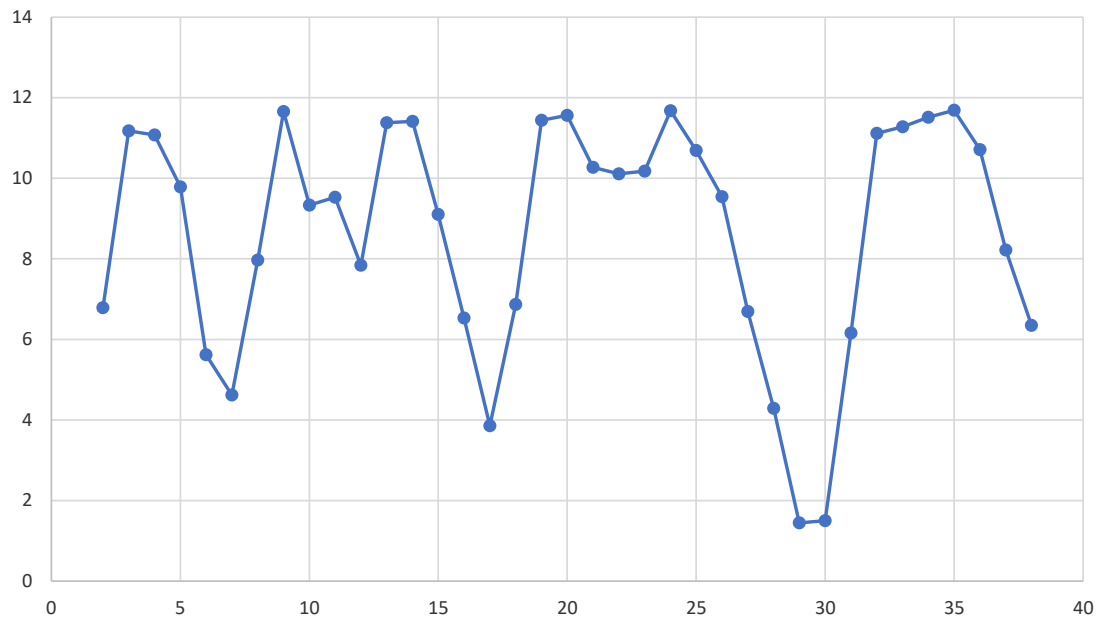
Welcome to CV-Helios Network!

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 is expected to occur between November 2019/May 2020. Latest: Predicted minimum April 2020. Value: Approx. 2008/2009 low values.

STDEV for CV-I vs. CV-USAF 1981-2018





**CV-Helios Network**  
**- over 36 years in solar amateur astronomy service!**

There are now 11030 entries registered  
containing 175427 CV-observations!

**This MPR issued 15th May 2019**



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(NOTE! from Dec 2018 a **SECURE** site)

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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: 21.05.2019 10:13 UTC