

Monthly Preliminary Report

MPR

Kjell Inge Malde, Director/Editor
Hunsteinstien 42A, N-4083 Hundvaag NORWAY

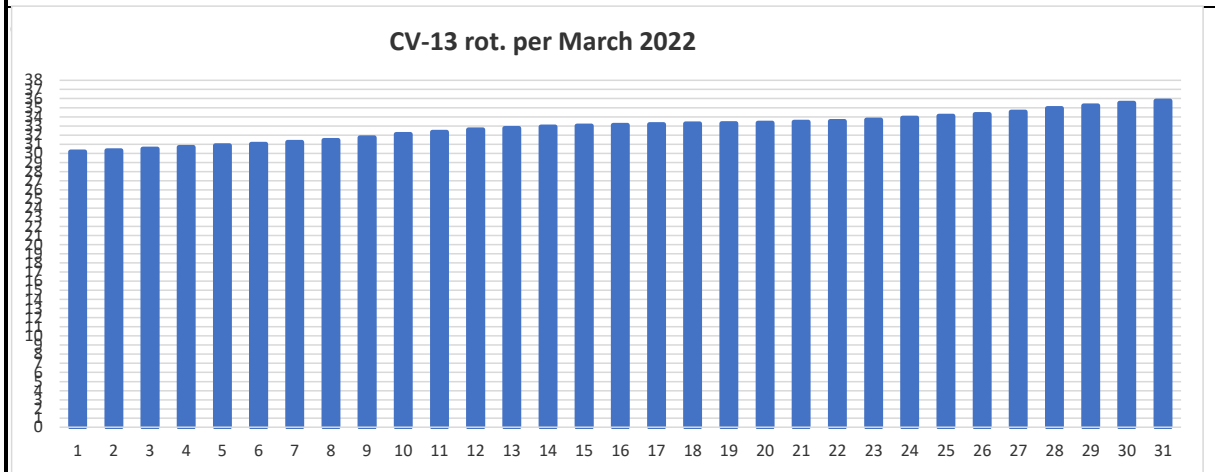
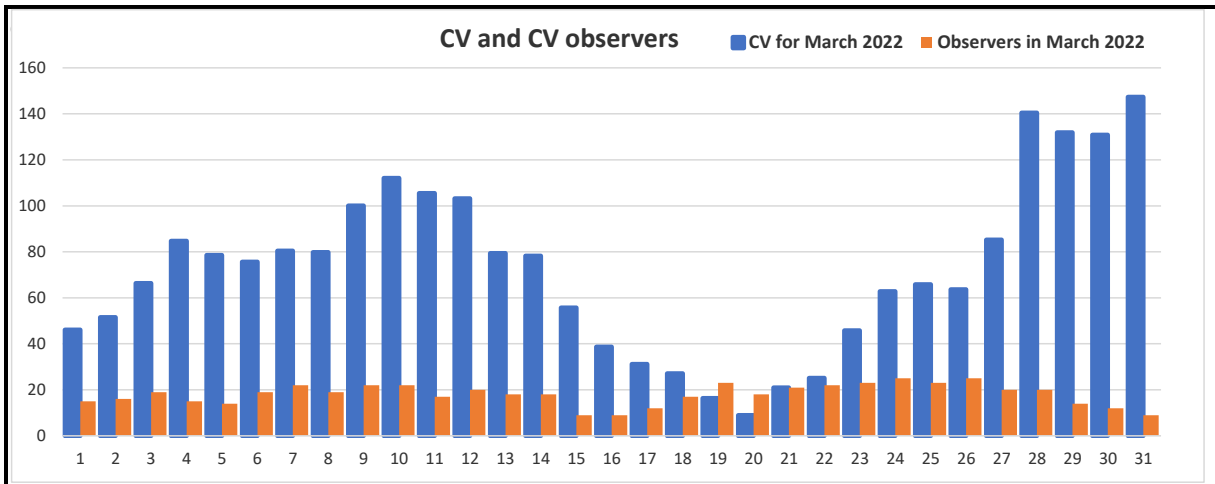
Web: <http://www.cv-helios.net>
Email: cvhelios@gmail.com

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CV-Helios Network
Monthly Preliminary Report for March 2022
Solar Cycle 25: Month no. 28
Report id.: cv2203 - CV-report no.: 488

| Memno. | Name | Country | CV | Obs | K | Obs. Tot. |
|--------|------------------------|-------------------|--------------------|------------------|-------------------|-----------|
| CV-001 | KJELL INGE MALDE | NORWAY | 89,8 | 26 | 1,259 | 8904 |
| CV-010 | FRANKY DUBOIS | BELGIUM | 68,4 | 25 | 0,958 | 9235 |
| CV-019 | ELMAR JUNKER | GERMANY | 106,4 | 14 | 1,491 | 3692 |
| CV-020 | MANFRED HOLL | GERMANY | 46,6 | 29 | 0,652 | 5820 |
| CV-023 | HARTMUT BRETSCHNEIDER | GERMANY | 52,2 | 22 | 0,732 | 5526 |
| CV-040 | ROBERTO BATAIOLA | ITALY | 74,6 | 14 | 1,045 | 2004 |
| CV-068 | SVEN OVE THIMM | DENMARK | 45,1 | 30 | 0,632 | 3979 |
| CV-077 | ANDREW JOHNSTON | UNITED KINGDOM | 72,3 | 20 | 1,013 | 3399 |
| CV-080 | JAN JANSSENS | BELGIUM | 73,4 | 7 | 1,029 | 1145 |
| CV-082 | PIOTR URBANSKI | POLAND | 65,3 | 23 | 0,916 | 5159 |
| CV-086 | TOS POLAND | POLAND | 76,8 | 31 | 1,077 | 8148 |
| CV-091 | GRZEGORZ DALEK | POLAND | 80,1 | 23 | 1,122 | 4524 |
| CV-102 | PAULO ROBERTO MOSER | BRAZIL | 74,6 | 26 | 1,046 | 2602 |
| CV-105 | ALEXEY RYBACK | RUSSIA | 84,4 | 14 | 1,182 | 3235 |
| CV-107 | MONTY LEVENTHAL | AUSTRALIA | 53,0 | 7 | 0,743 | 4668 |
| CV-122 | VLASTISLAV FEIK | CZECH REPUBLIC | 49,7 | 23 | 0,696 | 2944 |
| CV-135 | GEMA ARAUJO | SPAIN | 81,3 | 30 | 1,139 | 6961 |
| CV-136 | FAUSTINO GARCIA | SPAIN | 48,4 | 11 | 0,678 | 3699 |
| CV-139 | JAVIER ALONSO | SPAIN | 92,8 | 17 | 1,300 | 3811 |
| CV-151 | JEFFREY CARELS | BELGIUM | 62,3 | 21 | 0,874 | 3006 |
| CV-171 | WALTER JOSE MALUF | BRAZIL | 97,3 | 22 | 1,363 | 2695 |
| CV-181 | ADAM DERDZIKOWSKI | POLAND | 51,8 | 4 | 0,725 | 1007 |
| CV-204 | STEFAN MEISTER | SWITZERLAND | 69,0 | 25 | 0,967 | 600 |
| CV-205 | TOM MANGELSDORF | UNITED STATES | 76,5 | 2 | 1,072 | 47 |
| CV-206 | TADEUSZ FIGIEL | POLAND | 62,4 | 12 | 0,875 | 293 |
| CV-207 | ONDREJOV OBS. (AI CAS) | CZECH REPUBLIC | 97,4 | 23 | 1,366 | 3483 |
| CV-208 | JOHAN NEYS | BELGIUM | 65,2 | 12 | 0,913 | 576 |
| CV-214 | IGOR GRAGEDA | BOLIVIA | 70,7 | 22 | 0,991 | 827 |
| CV-215 | ARNAUD MENGUS | FRANCE | 42,8 | 6 | 0,600 | 257 |
| CV-219 | KANDILLI OBSERVATORY | TURKEY | 59,9 | 17 | 0,840 | 553 |
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| | | | | | | |
| Totals | Observers 30 | Days 31 | CV 69,68 | No 558 | K 0,977 | |

| Results | | | | | | |
|------------------|-------------|-------------|-------------------|-------------------|--------------|--------------|
| Date | CV | Obsrvrs | Regions 6 rot. | CV-USAF 6-rot. | CV-6 rot. | CV-13 rot. |
| 1 | 46,13 | 15 | 3,54 | 51,45 | 45,12 | 30,17 |
| 2 | 51,56 | 16 | 3,57 | 51,62 | 45,38 | 30,31 |
| 3 | 66,32 | 19 | 3,59 | 51,91 | 45,67 | 30,49 |
| 4 | 84,67 | 15 | 3,60 | 52,10 | 45,86 | 30,69 |
| 5 | 78,57 | 14 | 3,61 | 52,16 | 45,95 | 30,85 |
| 6 | 75,63 | 19 | 3,62 | 52,47 | 46,12 | 31,02 |
| 7 | 80,41 | 22 | 3,62 | 52,80 | 46,42 | 31,23 |
| 8 | 79,84 | 19 | 3,64 | 53,29 | 46,74 | 31,44 |
| 9 | 100,05 | 22 | 3,65 | 53,91 | 47,29 | 31,73 |
| 10 | 112,05 | 22 | 3,68 | 54,63 | 48,01 | 32,08 |
| 11 | 105,53 | 17 | 3,68 | 55,35 | 48,53 | 32,32 |
| 12 | 103,15 | 20 | 3,69 | 55,63 | 48,90 | 32,58 |
| 13 | 79,44 | 18 | 3,70 | 56,01 | 49,00 | 32,74 |
| 14 | 78,28 | 18 | 3,72 | 56,03 | 49,14 | 32,90 |
| 15 | 55,67 | 9 | 3,73 | 56,00 | 49,15 | 33,01 |
| 16 | 38,67 | 9 | 3,73 | 55,91 | 49,23 | 33,08 |
| 17 | 31,17 | 12 | 3,74 | 55,68 | 49,19 | 33,17 |
| 18 | 27,06 | 17 | 3,74 | 55,69 | 49,09 | 33,25 |
| 19 | 16,35 | 23 | 3,74 | 55,66 | 48,91 | 33,29 |
| 20 | 9,00 | 18 | 3,75 | 55,58 | 48,80 | 33,34 |
| 21 | 21,00 | 21 | 3,76 | 55,59 | 48,72 | 33,42 |
| 22 | 25,14 | 22 | 3,76 | 55,43 | 48,59 | 33,52 |
| 23 | 45,78 | 23 | 3,76 | 55,29 | 48,60 | 33,68 |
| 24 | 62,84 | 25 | 3,76 | 55,39 | 48,81 | 33,89 |
| 25 | 65,83 | 23 | 3,76 | 55,58 | 49,07 | 34,10 |
| 26 | 63,60 | 25 | 3,77 | 55,69 | 49,31 | 34,28 |
| 27 | 85,20 | 20 | 3,79 | 55,96 | 49,68 | 34,54 |
| 28 | 140,50 | 20 | 3,82 | 56,41 | 50,57 | 34,94 |
| 29 | 131,93 | 14 | 3,86 | 57,30 | 51,26 | 35,23 |
| 30 | 130,83 | 12 | 3,88 | 58,18 | 51,89 | 35,51 |
| 31 | 147,33 | 9 | 3,90 | 59,13 | 52,50 | 35,75 |
| Totals/ Avrgs | 3,96 | 27,3 | 0,97 | 4,83 | 48,44 | 32,86 |



Product: Weekly Highlights and Forecasts

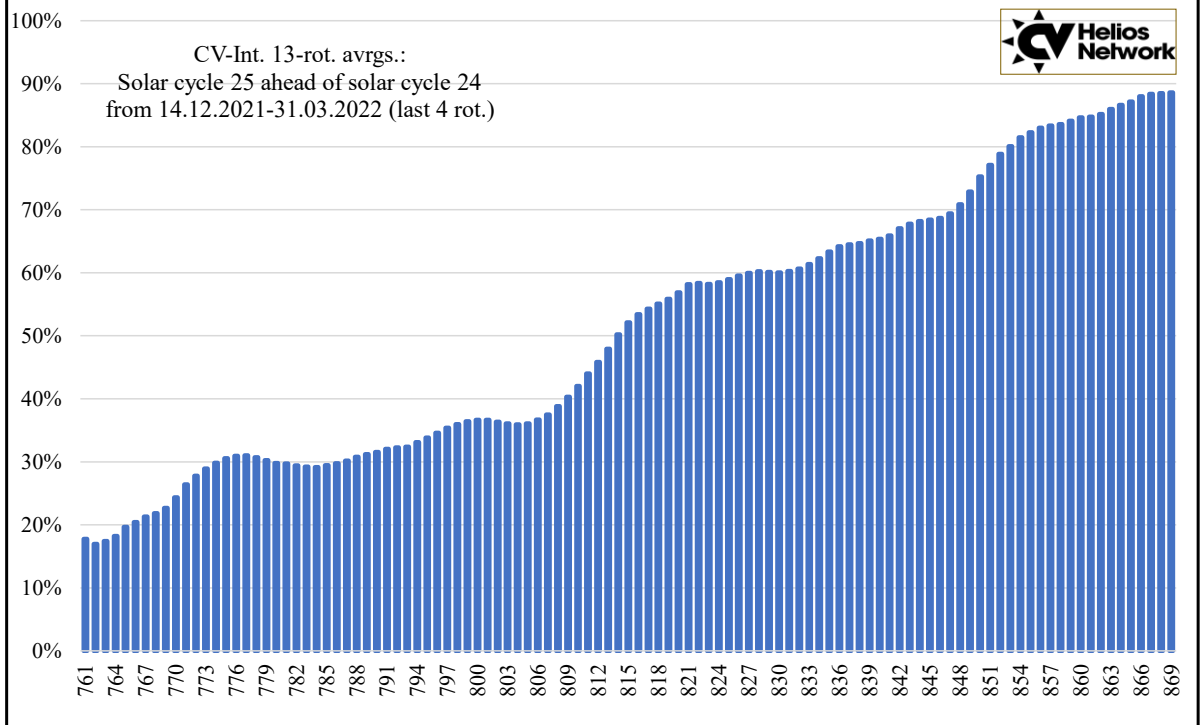
Highlights of Solar and Geomagnetic Activity
04 - 10 April 2022

Solar activity was at low levels through the period with numerous C-class flares observed. Rgn 2978 (S19, L=011, class/area Eko/670 on 30 Mar) produced a majority of the C-class activity with the largest event a C4 observed at 10/0241 UTC. Additional C-class activity was observed from Rgns 2967 (N20, L=075, class/area Eho/530 on 26 Mar), 2979 (S22, L=030, class/area Azz/030 on 29 Mar), 2982 (S20, L=334, class/area Bxo/040 on 04 Apr), 2983 (N20, L=328, class/area Hsx/040 on 02 Apr) and 2985 (S20, L=289, class/area Hax/050 on 05 Apr). During the period, numerous filament eruptions were observed on 03, 04 and 07 Apr that impacted Earth on 06-10 Apr. More details below.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 04-07 Apr with a peak flux of 3,920 pfu observed on 04 Apr. Low to moderate levels were observed on 08-10 Apr.

Monthly graph



Solar Cycle 25's ahead measured as CV-Int. numbers

News March 2022

Solar activity is low to average and number of regions are slowly increasing. The CV 13-rot. centered averages are now considerably higher than for solar cycle 24 at the same time of progress from minimum!
 The CV-Int. 13-rot. avrgs. is now ahead with 50,8 percent (!) compared to same date in cycle 24 (16.02.11)!
 Sunspot region production at Month 26 is still good. A total of 237 regions this cycle per mid April 2022.
 At the same time solar cycle produced 162 regions.

List of 6 significant sunspot regions exceeding 50 mvh developing in March 2022:

The LARGEST SUNSPOT REGIONS (>=100 mvh) 01.10-30.10 were:

Reg.-First-Last--Lat.-Long.-Rot.-Area - ZMcl-history

- 2954: 20.02-04.03 Lat N17, Lo 118 Rt. 2254 83 m., CV 10,0, HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX
- 2955: 21.02-05.03 Lat N15, Lo 107 Rt. 2254 76 m., CV 10,0, HSX HSX CSO CSO HSX HSX HSX HSX HSX HSX HSX HSX HSX HSX
- 2957: 27.02-11.03 Lat S15, Lo 037 Rt. 2254 133 m., CV 17,9, BXO BXO CRO EAI DSO DAO DAI EAI DSO DSO HSX HSX HSX
- 2960: 03.03-15.03 Lat S20, Lo 335 Rt. 2255 318 m., CV 40,2, DAO DHO DKI DHI EHI EHI EHO EHO DHO CHO CHO HSX HSX
- 2964: 08.03-12.03 Lat S26, Lo 010 Rt. 2254 54 m., CV 22,6, DRO DSO DSO DSO DSO
- 2965: 08.03-20.03 Lat N24, Lo 265 Rt. 2255 347 m., CV 31,5, DAO EKI EKI EKI FKI FKI FKI FAI FAI FAO FAO CAO CAO

| FLARE PRODUCTIONS IN | | March 2022 | |
|----------------------|-----------------|------------|-----------------|
| Date | Strongest flare | Date | Strongest flare |
| 02.03.2022 | M2.0 | 28.03.2022 | M4.0 |
| 11.03.2022 | M2.3 | 29.03.2022 | M2.2 |
| 14.03.2022 | M2.0 | 30.03.2022 | X1.3 |
| 15.03.2022 | M1.5 | 31.03.2022 | M9.67 |
| 25.03.2022 | M1.4 | | |

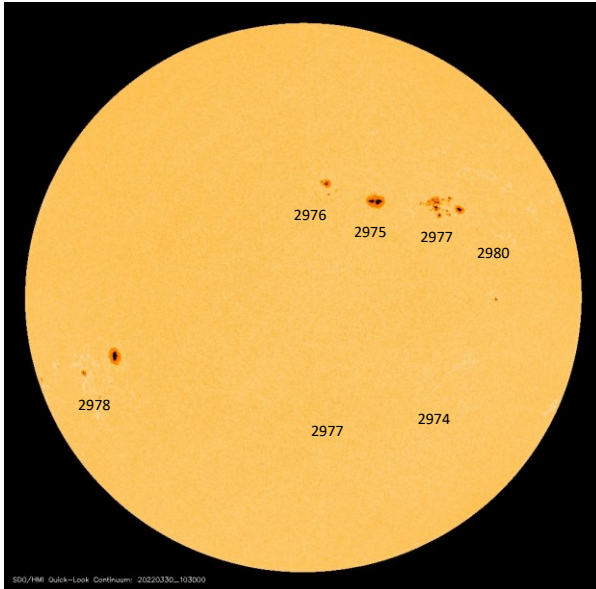
We reckon there have passed 884 days of the new cycle by this issue.
 The prospects for a solar cycle much higher than no. 24 certainly is good!

Solar Max.: Our latest prediction to occur late July 2025, earliest possibility April 2025.
 Solar Flux onset expected late this year. The P-Index, rise/fall data from solar flux,
 The predicted great activity in January 2022 and until March 2022 proved right.
 Stay tuned and observe the solar disk from now on!

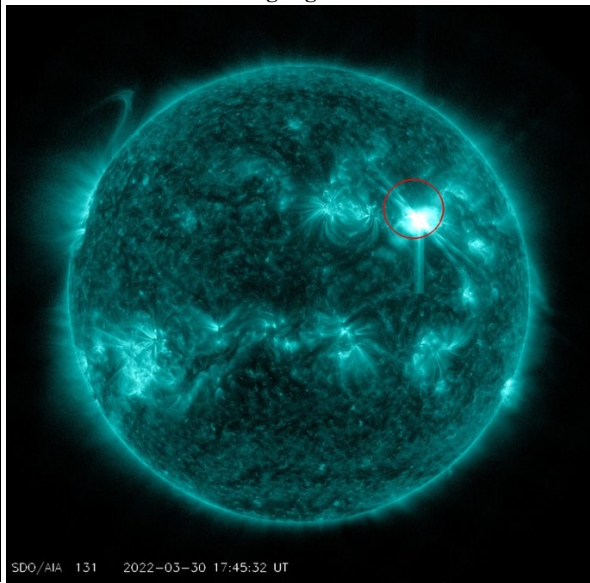
Please remember you are always welcome to contribute with drawings and photos!

Preliminary total number for year 2021 is 7327 CV-observations from 49 observers! Thanks to all of you!
 The Annual Report for 2021 was released on April 10 after some programming errors.

Pictures from last month - Observer contributions, etc.



Highlights March 2022



The most active day, 30th Mar 2022. CV-I highest since 15 Jan 2015. Note X-flare!

photo courtesy SDO/HMI NOAA gov

Awards this month

1

Award no.: 147 to CV-151 JEFFREY CARELS date 22 March 2022 milestone 3000 CV-obs.!
CONGRATULATIONS!

Congratulations!




New members:

Welcome to:

none

We are now 51 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! | |
| <u>SUBMISSIONS OF CV-OBSERVATIONS</u> | |
| 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: 0 day 10 hours 40 minutes | |
| CV-Helios Network - over 40 years in solar amateur astronomy service! There are now Entries reg.: 12412 entries registered containing 199738 CV-observations! Last 12 months 7262 CV-observations from 48 observers originating from 18 countries | |
| Editorial close: 22.04.2022 17:57 UTC | |
|  CV-Helios Network | |