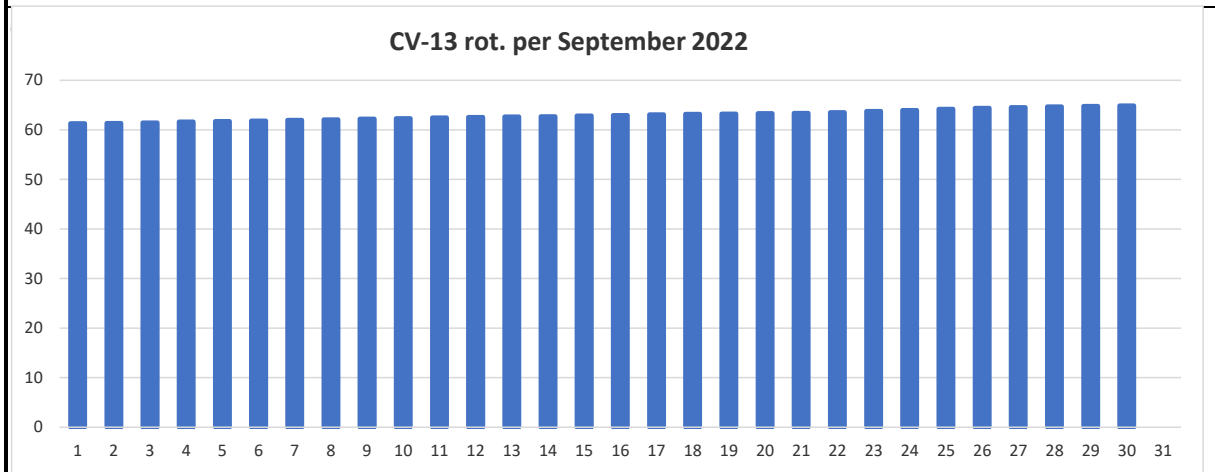
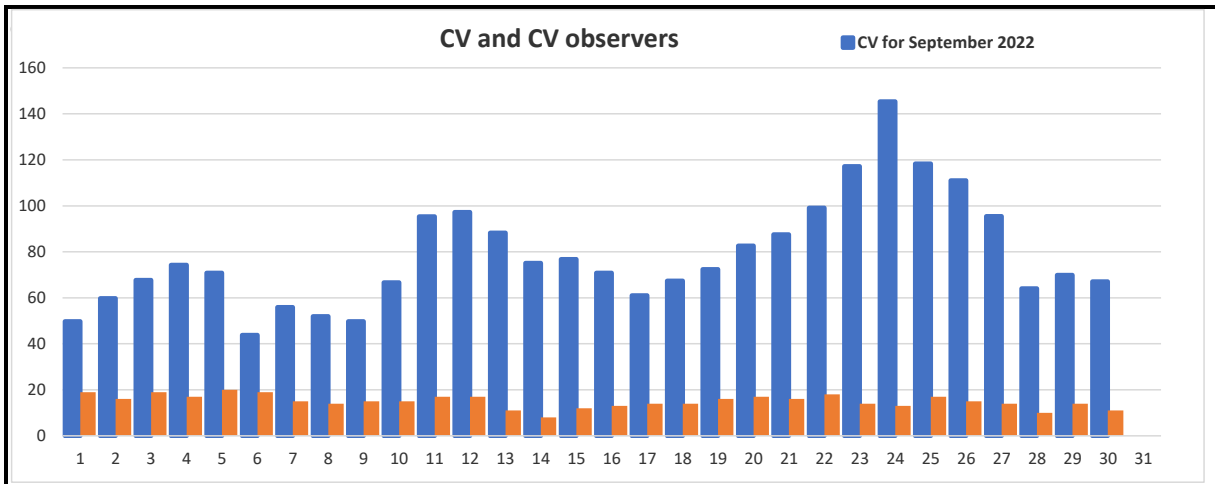




| <b>Results</b>   |             |             |                   |                   |              |              |
|------------------|-------------|-------------|-------------------|-------------------|--------------|--------------|
| Date             | CV          | Obsrvrs     | Regions<br>6 rot. | CV-USAF<br>6-rot. | CV-6 rot.    | CV-13 rot.   |
| 1                | 49,79       | 19          | 4,96              | 83,69             | 76,55        | 61,32        |
| 2                | 59,75       | 16          | 4,98              | 83,99             | 76,84        | 61,33        |
| 3                | 67,74       | 19          | 4,99              | 84,28             | 77,02        | 61,44        |
| 4                | 74,24       | 17          | 4,99              | 84,40             | 77,13        | 61,62        |
| 5                | 70,80       | 20          | 5,01              | 84,43             | 77,17        | 61,76        |
| 6                | 43,84       | 19          | 5,01              | 84,33             | 77,08        | 61,81        |
| 7                | 55,93       | 15          | 5,01              | 84,24             | 76,92        | 61,96        |
| 8                | 51,93       | 14          | 5,00              | 83,89             | 76,36        | 62,09        |
| 9                | 49,80       | 15          | 4,99              | 83,27             | 75,97        | 62,21        |
| 10               | 66,67       | 15          | 5,01              | 82,74             | 75,71        | 62,33        |
| 11               | 95,41       | 17          | 5,03              | 82,19             | 75,61        | 62,46        |
| 12               | 97,24       | 17          | 5,05              | 81,83             | 75,55        | 62,57        |
| 13               | 88,27       | 11          | 5,04              | 81,39             | 75,29        | 62,65        |
| 14               | 75,13       | 8           | 5,01              | 80,97             | 75,03        | 62,72        |
| 15               | 76,83       | 12          | 5,00              | 80,71             | 74,99        | 62,84        |
| 16               | 70,85       | 13          | 4,99              | 80,98             | 74,97        | 62,96        |
| 17               | 61,00       | 14          | 4,99              | 81,10             | 74,99        | 63,09        |
| 18               | 67,36       | 14          | 4,98              | 81,17             | 75,07        | 63,20        |
| 19               | 72,38       | 16          | 4,98              | 81,14             | 75,26        | 63,26        |
| 20               | 82,65       | 17          | 4,98              | 81,68             | 75,78        | 63,32        |
| 21               | 87,56       | 16          | 5,01              | 82,49             | 76,46        | 63,40        |
| 22               | 99,17       | 18          | 5,02              | 83,07             | 77,05        | 63,54        |
| 23               | 117,14      | 14          | 5,05              | 84,01             | 77,75        | 63,76        |
| 24               | 145,38      | 13          | 5,07              | 85,03             | 78,41        | 63,99        |
| 25               | 118,35      | 17          | 5,08              | 85,52             | 79,00        | 64,19        |
| 26               | 111,07      | 15          | 5,09              | 86,20             | 79,40        | 64,38        |
| 27               | 95,50       | 14          | 5,09              | 86,18             | 79,64        | 64,57        |
| 28               | 64,10       | 10          | 5,08              | 85,69             | 79,36        | 64,70        |
| 29               | 69,93       | 14          | 5,07              | 85,32             | 79,01        | 64,80        |
| 30               | 67,09       | 11          | 5,09              | 85,00             | 78,66        | 64,88        |
| Totals/<br>Avrgs | <b>3,96</b> | <b>27,3</b> | <b>0,97</b>       | <b>4,83</b>       | <b>76,80</b> | <b>62,97</b> |



**Latest sunspot regions developments**

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

- 3121-13.10.22-14.10.22-23,5-272,0-2263-20-6-2
- 3120-07.10.22-10.10.22-19,0-61,8-2262-15-3-3
- 3119-07.10.22-14.10.22-28,1-11,4-2262-125-8-20
- 3118-06.10.22-12.10.22-8,6-358,3-2263-20-2-6
- 3117-03.10.22-07.10.22--11,4-81,0-2262-12-2-3
- 3116-03.10.22-14.10.22-29,6-45,3-2262-110-8-14
- 3115-03.10.22-09.10.22--17,9-96,6-2262-77-5-13
- 3114-01.10.22-02.10.22--33,5-99,5-2262-25-7-5
- 3113-30.09.22-05.10.22-16,0-151,7-2262-92-6-15
- 3112-30.09.22-14.10.22-22,5-49,7-2262-475-16-45

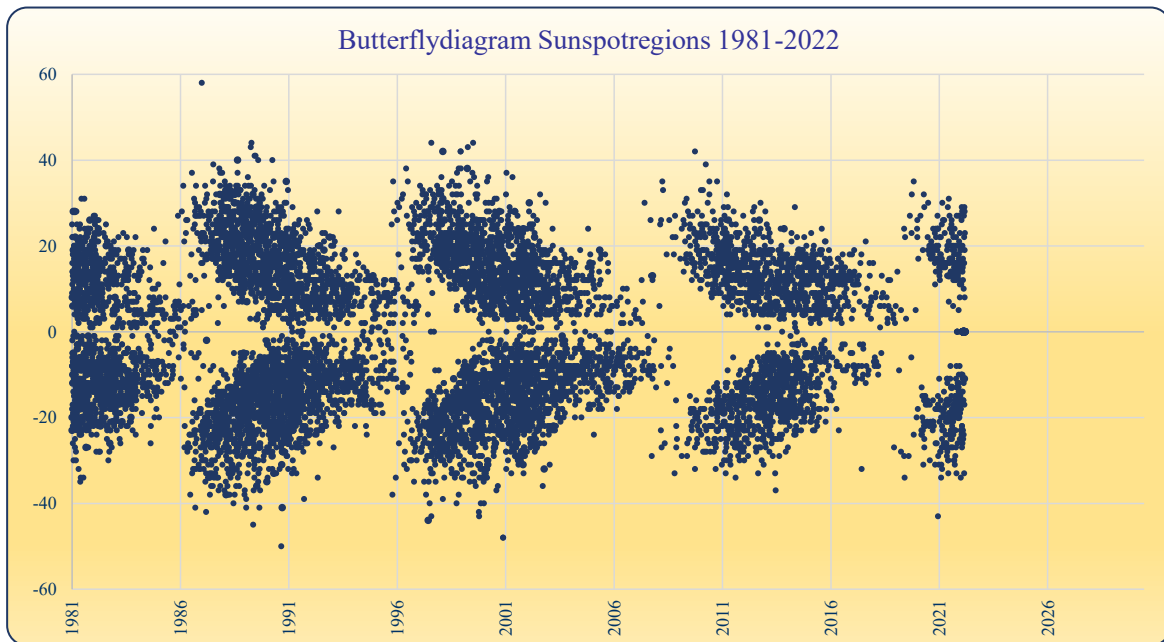
**:Product: Weekly Highlights and Forecasts**

Highlights of Solar and Geomagnetic Activity  
03 - 09 October 2022

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

Solar activity ranged from low to moderate levels during the period. C-class flares were the primary background from 03-09 October due to activity from numerous active regions. More notable were the few M-class flares that occurred during the period. An M2.6 on 03 Oct at 0233 UTC from Region 3112 (N23E46, Fkc/Beta-Gamma-Delta), with an associated Tenflare of 170 sfu, was the first of the reporting period followed by an M4.2 at 1011 UTC from Region 3110 (N18W65, Dai/Beta), which was the largest of the period. Next were an M1.5 at 1111 UTC and a M1.6 at 1530 UTC from Regions 3110 and 3112 respectively. Region 3110 (N18W79, Dai/Beta) continued to be active on 04 Oct with an M1.6 flare at 1308 UTC, which came with an associated Type IV Radio Emission at 1307 UTC. The subsequent CME from this event was determined to be off the Sun-Earth line. Activity simered down slightly 05-06 Oct with only C-class level activity. On 07 Oct Region 3116 (N29W00, Dai/Beta) produced an M1 flare at 1444 UTC. Other notable activity on 07 Oct included an approximately 20 degree long, eruptive filament near the NW limb at Solar activity is expected to be low with a chance for M-class flares and a slight chance for X-class flares 10-15 Oct. Probabilities will decrease slightly 16-17 Oct, but a chance form M-class flares will remain. A slight chance for X-class flares is expected to return on 18 Oct with the return of an old active region. Probabilities will remain elevated through 31 Oct until the aforementioned, anticipated returning region once again exits the

Monthly graph



The Butterfly Diagram  
1981-2022  
Solar cycles 21 - 25

Highlights September 2022

Solar activity has become more average and number of regions are slowly increasing.  
 The CV 13-rot. ctrd. avgs. are now higher than for solar cycle 24 at the same time of progress!  
 The CV-Int. 13-rot. avrgs. is now ahead with 63 percent compared to same date in cycle 24!  
 Sunspot region production at Month 34 is good. A total of 326 regions this cycle per mid Sep. 2022.  
 (147 regions North and 179 regions South). At the same time solar cycle 24 produced 282 regions.

SUNSPOT REGIONS EXCEEDING 100 mvh in September 2022

Region,First date,Max.date,Last date,Lat.,Long.,Rot.,Max.mvh,Max class,Max CV  
 3092,01.09.22,02.09.22,13.09.22,-11,95,2260,170,CAO,8  
 3094,02.09.22,02.09.22,12.09.22,20,69,2260,120,HSX,10  
 3096,06.09.22,08.09.22,13.09.22,17,23,2260,130,DSO,25  
 3098,08.09.22,14.09.22,16.09.22,18,51,2260,860,EHC,59  
 3100,10.09.22,17.09.22,20.09.22,-24,352,2262,190,ESO,26  
 3102,13.09.22,18.09.22,24.09.22,-26,298,2262,320,EKI,47  
 3105,19.09.22,22.09.22,30.09.22,-17,210,2262,490,DKI,46  
 3107,21.09.22,24.09.22,02.10.22,-25,192,2262,240,FAI,24  
 3110,23.09.22,25.09.22,05.10.22,16,160,22  
 3111,27.09.

| Date       | Strongest flare | Date       | Strongest fl:Date | Strongest flare |
|------------|-----------------|------------|-------------------|-----------------|
| 04.09.2022 | M1.1            | 06.09.2022 | M1.1              | 11.09.2022 M1.7 |
| 13.09.2022 | M1.7            | 13.09.2022 | M1.1              | 15.09.2022 M1.1 |
| 15.09.2022 | M7.9            | 16.09.2022 | M2.6              | 17.09.2022 M7.9 |
| 18.09.2022 | M2.6            | 19.09.2022 | M1.1              | 20.09.2022 M1.0 |
| 21.09.2022 | M1.1            | 22.09.2022 | M1.0              | 22.09.2022 M1.7 |
| 24.09.2022 | M1.7            | 29.09.2022 | M2.9              | 01.10.2022 M2.9 |

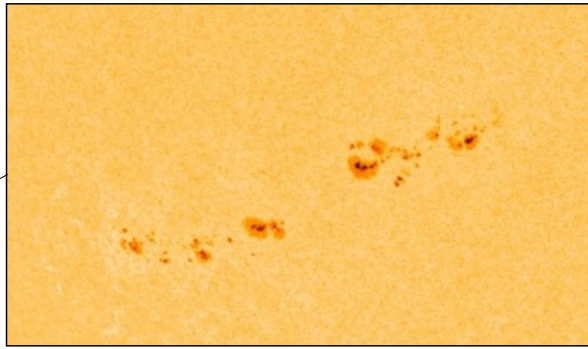
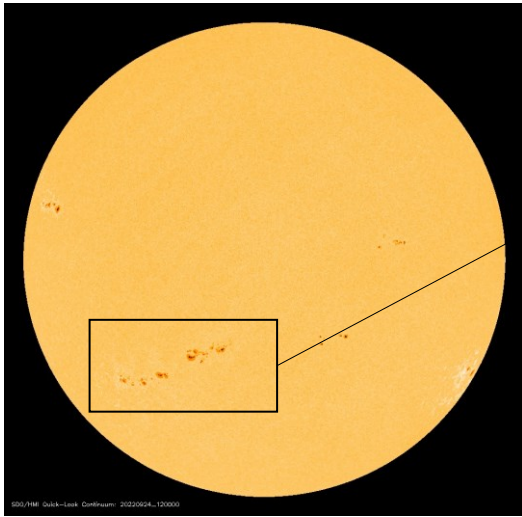
We reckon there have passed 1030 days (solar flux 1067 days) of the new cycle by this issue.  
 The prospects for a solar cycle much higher than no. 24 certainly is good!

Solar Max.: Our latest and final prediction to occur late July 2025, earliest possible may be April 2025.  
 Solar Flux onset: OCCURED 30 September 2022, the Onset 13 rot. ctrd. will occur during October 2022.

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

**Pictures from last month - Observer contributions, etc.**

**Highlights September 2022**



Regions 3107 and 3105 magnified

SOHO image 24 September 2022.  
photo courtesy SDO/HMI NOAA gov

**Awards this month**

0

none




**New members:**

**Welcome to:**

**CV-220 MICHEL FRANGEUL, France**

Welcome to CV-Helios Network!

We are now 50 active members (last 12 mo.)

|  |                     |
|--|---------------------|
| <b>Solar Coordinates</b>   | New from April 2020 |
| Daily list of Solar Ephemeris available at:<br><a href="#">Daily list of Solar Ephemeris and SDO on grid</a><br>Here you can see Today's Po, Bo, Lo, Rotation no., RA and Dec. and adjusted SOHO-picture on grid.  |                     |
| <b>Calculating CV</b>  |                     |
| For your convenience and security, use the mif2021,<br><a href="https://www.cv-helios.net/mif2021.xlsx">https://www.cv-helios.net/mif2021.xlsx</a><br>the Monthly Input Form, which you can use for all of your next reportings!   |                     |
| <b>Monitor MPR daily progress</b>  |                     |
| <b>CV-Helios Network: Monitor MPR progress as entries are made!</b><br>Monitor your submissions as they are registered:<br><a href="https://cv-helios.net/helios/cv/web/mprpost.html">https://cv-helios.net/helios/cv/web/mprpost.html</a><br>The data are available fresh from about 10:00 UTC until local midnight.<br>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 |                     |
| <b>Registration data</b>   |                     |
| Check if your CV-observations have been registered (please allow up to 24 hrs):<br><a href="https://www.cv-helios.net/helios/cv/web/datlist.htm">https://www.cv-helios.net/helios/cv/web/datlist.htm</a><br><a href="https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm">https://www.cv-helios.net/helios/cv/web/cvobsmonth.htm</a> for checking of Entries Summary  |                     |
| <b>CONTRIBUTE WITH YOUR PHOTOS AND OTHER OF INTEREST!</b>  |                     |
| We would like YOU to contribute with drawings or photos from last month<br>Also any other contribution that may have an interest for our observers.<br>Please send by email to:<br><a href="mailto:cvhelios@gmail.com">cvhelios@gmail.com</a>  |                     |
| <b>Please check out <a href="http://www.cv-helios.net/cvrep2.html">www.cv-helios.net/cvrep2.html</a> for updates of files!</b>   |                     |
| <b><u>SUBMISSIONS OF CV-OBSERVATIONS</u></b>   |                     |
| Log on to:<br><a href="https://www.cv-helios.net/observations/index.html">https://www.cv-helios.net/observations/index.html</a> <a href="#">Classification Help</a><br>login solaris<br>password cvheliosobs <a href="#">Monthly Input Form as excel</a><br>Submission before 15th of proceeding month 18:00 UTC. (password: cvhelios)<br>MPR issue 15th of proceeding month 2000 UTC. Good luck CV-observing!   |                     |
| <b>Average received to registered time: 0 day 08 hours 45 minutes</b>  |                     |
| <b>CV-Helios Network</b><br><b>- over 41 years in solar amateur astronomy service!</b><br><br>There are now Entries reg.: 12685 entries registered<br>containing 205013 CV-observations!<br>Last 12 months 6354 CV-observations from 45 observers originating from 18 countries  |                     |
| <b>Editorial close: 15.10.2022 16:54 UTC</b>   |                     |
| <br><b>CV-Helios Network</b>  |                     |