\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*
Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 October 08 07:17UTC
Prepared by the Athens Space Weather Forecasting Center
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 07.10.2024 at 23:00 UTC was 277 sfu.
The background X-Ray flux is at the class C7.6 level.
AR3842 erupted on October 07 at 19:13 UT peak time producing a X2.2 class solar flare and a radio blackout of category R3.
No obviously Earth directed CMEs were observed in available LASCO imagery on October 05-06.
A small equatorial coronal hole (CH1245) was in an Earth facing position on October 04.
---CME arrival forecast
A CME was observed on October 03 at 12:48 UT. The source was the X9.0 flare. This CME was expected to reach Earth between on October 05 at 21:50 UT and on October 06 at 06:40 UT according to EAM predictions.
Another CME was observed on October 03 at 20:36 UT, associated with an M6.7 class flare from AR3843. This CME was expected to reach Earth between on October 06 at 15:58 UT and on October 06 at 17:40 UT according to EAM predictions.

**II. Solar Energetic Particle Events**
Protons and electrons fluxes are quiet.

**III. Interplanetary and Geomagnetic conditions**
The solar wind speed measured by ACE satellite reached the max value 530 Km/s on October 07 at 11:30 UT during the last 24 hours.
The solar wind speed from STEREO A was detected 500 Km/s during the last 24 hours.
The vertical component of IMF Bz reached the max value -16 nT on October 08 at 03:20 UT during the last 24 hours.
The geomagnetic field was at unsettled to strong storm (G3) levels during the last 24 hours.
The Kp index now is at strong storm (G3) levels with Kp=5.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to moderate storm (G2) levels on October 08 due to the continuous effects of CMEs and at quiet to unsettled levels on October 09-10.

|  |  |  |
| --- | --- | --- |
| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 08.10.2024 | 30 | Quiet to Moderate Storm (G2) |
| 09.10.2024 | 12 | Quiet to Unsettled |
| 10.10.2024 | 12 | Quiet to Unsettled |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*
Athens Space Weather Forecasting Center
Physics Department, National & Kapodistrian University of Athens
Athens Neutron Monitor Station A.NE.MO.S
Tel.: +30 210 727 6901
email: spaceweather@phys.uoa.gr
URL: http://spaceweather.phys.uoa.gr
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*