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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 October 05 06:00UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 04.10.2024 at 23:00 UTC was 291sfu.
The background X-Ray flux is at the class A0.0 level.
Five M-class solar flares were produced on October 04 and the largest was the M4.0.
AR3842 erupted on October 04 at 04:55 UT peak time producing a M4.0 class solar flare and a radio blackout of category R1.
No obviously Earth directed CMEs were observed in available LASCO imagery on October 02.
A small equatorial coronal hole (CH1245) will rotate into an Earth facing position on October 04-05.
---CME arrival forecast
A CME was observed on October 01 at 23:09 UT, associated with an X7.1-class flare from AR3842. This CME is expected to reach Earth between on October 04 at 22:35 UT and on October 05 at 02:41 UT according to EAM predictions.
Another CME was observed on October 03 at 12:48 UT. The source was the X9.0 flare. This CME is expected to reach Earth between on October 05 at 21:50 UT and on October 06 at 06:40 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 429 Km/s on October 05 at 05:40 UT during the last 24 hours.
The solar wind speed from STEREO A was detected 400 Km/s during the last 24 hours.
The vertical component of IMF Bz reached the max value -7 nT on October 04 at 15:45 UT during the last 24 hours.
The geomagnetic field was at quiet to unsettled levels during the last 24 hours.
The Kp index now is at unsettled levels with Kp=3.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to strong storm (G3) levels with a chance of severe storm (G4) on October 05-06 due to the effects of CMEs on October 01 and 03 and at unsettled to minor storm (G1) levels on October 07.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 05.10.2024 | 60 | Quiet to Strong storm (G3) |
| 06.10.2024 | 65 | Quiet to Strong storm (G3) |
| 07.10.2024 | 20 | Unsettled to Minor storm (G1) |

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