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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 October 11 06:58UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 10.10.2024 at 23:00 UTC was 216 sfu.
The background X-Ray flux is at the class C2.3 level.
Four M-class solar flares were produced on October 10 and the biggest event was an M3.0 flare.
AR3844 erupted on October 10 at 22:30 UT peak time producing a M3.0 class solar flare and a radio blackout of category R1.
No obviously Earth directed CMEs were observed in available LASCO imagery on October 10.
---CME arrival forecast
A CME was observed on October 07 at 20:48 UT. This CME is expected to reach Earth between on October 10 at 23:32 UT and on October 11 at 12:08 UT according to EAM predictions.
Another CME was observed on October 09 at 02:12 UT, associated with an X1.8 class flare from AR3848. This CME could reach Earth between on October 10 at 10:50 UT and on October 11 at 09:06 UT according to EAM predictions.

**II. Solar Energetic Particle Events**
GOES Proton Flux for particles with energies above 10 MeV exceed the SWPC 10 MeV warning threshold on October 09 at 05:00. A solar radiation storm of level S3 was also observed.

**III. Interplanetary and Geomagnetic conditions**
The solar wind speed measured by ACE satellite reached the max value 786 Km/s on October 10 at 22:10 UT during the last 24 hours.
The solar wind speed from STEREO A was detected 600 Km/s during the last 24 hours.
The vertical component of IMF Bz reached the max value -44 nT on October 10 at 22:00 UT during the last 24 hours.
The geomagnetic field was at quiet to severe storm (G4) levels during the last 24 hours.
The Kp index now is at severe storm (G4) levels with Kp=8.
The Dst index reached the value -335 nT on October 11 at 02:00 UT during the last 24 hours.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at minor storm (G1) to severe storm (G4) levels on October 11, at active to minor storm (G1) levels on October 12 due to the continuous effect of CMEs and at quiet to unsettled levels on October 13.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 11.10.2024 | 120 | Minor Storm (G1) to Severe Storm (G4) |
| 12.10.2024 | 40 | Active to Minor storm (G1) |
| 13.10.2024 | 15 | Quiet to Unsettled |

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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
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