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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 October 12 06:20UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 11.10.2024 at 23:00 UTC was 214 sfu.
The background X-Ray flux is at the class Α0.0 level.
Two M-class solar flares were produced on October 11 and the biggest event was an M2.1 flare.
AR3854 erupted on October 11 at 16:33 UT peak time producing a M2.1 class solar flare and a radio blackout of category R1.
No obviously Earth directed CMEs were observed in available LASCO imagery on October 10-11.
A small northern hemisphere coronal hole (CH1246) will likely rotate into an Earth facing position on October 12-13.
---CME arrival forecast
A CME was observed on October 07 at 20:48 UT. This CME was 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 was expected to 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. The SPE was ended on October 11 at 03:15 UT.

**III. Interplanetary and Geomagnetic conditions**
The solar wind speed measured by ACE satellite reached the max value 768 Km/s on October 11 at 12:05 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 -20 nT on October 11 at 07:25 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 quiet levels with Kp=2.
The Dst index reached the value -273 nT on October 11 at 07:00 UT during the last 24 hours.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to minor storm (G1) levels on October 12 and at quiet to unsettled levels on October 13-14.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 12.10.2024 | 25 | Quiet to Minor storm (G1) |
| 13.10.2024 | 12 | Quiet to Unsettled |
| 14.10.2024 | 12 | Quiet to Unsettled |

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