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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 September 13 07:39UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 12.09.2024 at 23:00 UTC was 201 sfu.
The background X-Ray flux is at the class M2.1 level.
Five M-class and one X-class solar flares were produced on September 12.
X1.3 flare was erupted on September 12 at 09:43 UT peak time producing a radio blackout of category R3.
No obviously Earth directed CMEs were observed in available LASCO imagery on September 05-06.
A coronal hole (CH1241) at southern hemisphere will rotate into an Earth facing position on September 12-13.
---CME arrival forecast
A CME was observed on September 08 at 01:36 UT. This CME was expecting to reach Earth on September 11 between 00:41 UT and 03:19 UT according to EAM predictions.
Another CME was observed on September 10 at 00:23 UT associated with a long duration M1.2 class flare from AR3814. This CME is expected to reach Earth on September 12 between at 16:45 UT and 20:45 UT.

**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 605 Km/s on September 12 at 18:05 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 -22 nT on September 12 at 17:45 UT during the last 24 hours.
The geomagnetic field was at quiet to strong (G3) levels during the last 24 hours.
The Kp index now is at minor storm (G1) levels with Kp=4.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to moderate storm (G2) levels on September 13 due to the CME observed on September 10, at quiet to active levels on September 14 and at quiet to unsettled levels on September 15.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 13.09.2024 | 30 | Quiet to moderate (G2) |
| 14.09.2024 | 25 | Quiet to Active |
| 15.09.2024 | 10 | 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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