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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 September 14 09:41UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 13.09.2024 at 23:00 UTC was 186 sfu.
The background X-Ray flux is at the class C5.5 level.
Eleven M-class solar flares were produced on September 13 and the largest was the M5.3 flare.
AR3811 erupted on September 13 at 06:56 UT peak time producing a M5.3 class solar flare and a radio blackout of category R2.
No obviously Earth directed CMEs were observed in available LASCO imagery on September 11-12.
A coronal hole (CH1241) at southern hemisphere rotated into an Earth facing position on September 12-13.
---CME arrival forecast
A CME was observed on September 10 at 00:23 UT associated with a long duration M1.2 class flare from AR3814. This CME was expected to reach Earth on September 12 between at 16:45 UT and 20:45 UT.
Another CME was observed on September 13 at 10:12 UT. This CME could reach Earth on September 16 between at 01:37 UT and 06;15 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 535 Km/s on September 13 at 15:25 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 -9 nT on September 13 at 19:30 UT during the last 24 hours.
The geomagnetic field was at unsettled to moderate storm (G2) 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 minor storm (G1) levels on September 14 and 16 due to the effects of CMEs and at quiet to unsettled levels on September 15.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 14.09.2024 | 25 | Quiet to Minor storm (G1) |
| 15.09.2024 | 12 | Quiet to Unsettled |
| 16.09.2024 | 20 | Quiet to Minor storm (G1) |

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