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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 December 16 08:37UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 15.12.2024 at 23:00 UTC was 172 sfu.
The background X-Ray flux is at the class C1.9 level.
AR3920 erupted on December 15 at 20:24 UT peak time producing a M3.1-Class solar flare and a radio blackout of category R1.
No obviously Earth directed CMEs were observed in available LASCO imagery on December 11-13.
A coronal hole (CH1262) at northern hemisphere was in an Earth facing position on December 11.
---CME arrival forecast
A CME was observed on December 15 at 02:12 UT. This CME is expected to reach Earth on December 18 between at 05:47 UT and at 21:38 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 446 Km/s on December 15 at 20:00 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 -8 nT on December 15 at 12:25 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 unsettled levels on December 16-17 and at quiet to active levels on December 18.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 16.12.2024 | 08 | Quiet to Unsettled |
| 17.12.2024 | 08 | Quiet to Unsettled |
| 18.12.2024 | 15 | Quiet to Active |

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