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Product: Daily Forecast of Geomagnetic Activity
Issued: 2023 December 17 08:20UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 16.12.2023 at 23:00 UTC was 149 sfu.
The background X-Ray flux is at the class C2.0 level.
No obviously Earth directed CMEs were observed in available LASCO imagery on December 10-12.
A coronal hole (CH1193) at northern hemisphere was Earth facing on December 14-16.
---CME arrival forecast
A full halo CME was observed on December 14 at 17:38 UT. The source is a X2.8 class solar flare from AR13514 (N05W54) peaking on December 14 at 17:02 UT. This CME is expected to reach Earth between on December 16 at 17:09 UT and on December 17 at 07:35 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 533 Km/s on December 17 at 07:55 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 -7 nT on December 16 at 20:35 UT during the last 24 hours.
The geomagnetic field was at quiet to active levels during the last 24 hours.
The Kp index now is at active levels with Kp=4.
The Dst index reached the value -51 nT on December 17 at 08:00 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 December 17 due to effects from CMEs observed on December 14 and at quiet to active levels on December 18-19 due to the effect of coronal hole high speed stream.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 17.12.2023 | 30 | Quiet to Minor storm (G1) |
| 18.12.2023 | 15 | Quiet to Active |
| 19.12.2023 | 12 | Quiet to Active |

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