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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 December 24 09:33UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 23.12.2024 at 23:00 UTC was 238 sfu.
The background X-Ray flux is at the class C2.6 level.
Three M-class solar flares were produced on December 23 and the largest was the M8.9.
AR3932 erupted on December 23 at 11:12 UT peak time producing a M8.9-Class solar flare and a radio blackout of category R2.
No obviously Earth directed CMEs were observed in available LASCO imagery on December 18-20.
A coronal hole (CH1263) at southern hemisphere rotated across the central meridian on December 19-20.
---CME arrival forecast
A CME was observed on December 23 at 11:36 UT.The source is associated with the M8.9 solar flare This CME is expected to reach Earth between on December 25 at 21:42 UT and on December 26 at 05:21 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 623 Km/s on December 23 at 14:15 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 -6 nT on December 23 at 16:30 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 quiet levels with Kp=2.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to unsettled levels on December 24, at quiet to minor storm (G1) levels on December 25 due to the effects of the CME observed on December 23 and at quiet to active levels on December 26.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 24.12.2024 | 10 | Quiet to Unsettled |
| 25.12.2024 | 25 | Quiet to Minor storm (G1) |
| 26.12.2024 | 12 | Quiet to Active |

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