\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
Product: Daily Forecast of Geomagnetic Activity  
Issued: 2024 December 25 09:22UTC  
Prepared by the Athens Space Weather Forecasting Center  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
  
**I. Solar activity**  
*--Current Status*  
Solar Flux (10.7cm) measured on 24.12.2024 at 23:00 UTC was 259 sfu.  
The background X-Ray flux is at the class C4.3 level.  
Seven M-class solar flares were produced on December 24.  
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 618 Km/s on December 24 at 13:50 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 -5 nT on December 25 at 02:45 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 quiet levels with Kp=2.  
  
**IV. 3-day Geomagnetic Activity Forecast**  
The geomagnetic field is expected to be at quiet to minor storm (G1) levels on December 25 due to the effects of the CME observed on December 23, at quiet to active levels on December 26 and at quiet to unsettled levels on December 27.

|  |  |  |
| --- | --- | --- |
| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 25.12.2024 | 20 | Quiet to Minor storm (G1) |
| 26.12.2024 | 20 | Quiet to Active |
| 27.12.2024 | 10 | Quiet to Unsettled |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  
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  
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*