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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 July 22 09:07UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 21.07.2024 at 23:00 UTC was 198 sfu.
The background X-Ray flux is at the class C2.3 level.
Four M-class solar flares were produced on July 21 and the biggest was the M3.2.
AR3744 erupted on July 21 at 23:28 UT peak time producing a M3.2 class solar flare and a radio blackout of category R1.
---CME arrival forecast
A CME was observed on July 21 at 16:48 UT. The source is an M1.0 flare from AR 3757. This CME was expected to reach Earth on July 24 between 09:20 UT and 13:30 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 337 Km/s on July 21 at 09:55 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 -5 nT on July 22 at 05:15 UT during the last 24 hours.
The geomagnetic field was at quiet levels during the last 24 hours.
The Kp index now is at quiet levels with Kp=1.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to unsettled level on July 22-23 and at quiet to active or minor storm (G1) levels on July 24 due to the CME observed on July 21.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 22.07.2024 | 08 | Quiet to Unsettled |
| 23.07.2024 | 10 | Quiet to Unsettled |
| 24.07.2024 | 15 | Quiet to Minor storm (G1) |

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