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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 July 21 07:52UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 20.07.2024 at 23:00 UTC was 207 sfu.
The background X-Ray flux is at the class C2.7 level.
Two M-class solar flares were produced on July 20.
No obviously Earth directed CMEs were observed in available LASCO imagery on July 14-16.
A coronal hole (CH1232) at northern hemisphere rotated across the central meridian on July 14-16.
---CME arrival forecast
A CME was observed on July 16 at 23:12 UT. The source is an M1.9 flare from AR 3744. This CME was expected to reach Earth on July 20 between 00:54 UT and 09:21 UT according to EAM predictions.
Another CME was observed on July 17 at 07:48 UT. This CME was expected to reach Earth between on July 19 at 18: 46 UT and on July 20 at 02:47 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 367 Km/s on July 20 at 15:05 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 -3 nT on July 20 at 15:05 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 active or minor storm (G1) levels on July 21 due to the CMEs and at quiet to unsettled level on July 22-23.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 21.07.2024 | 15 | Quiet to Minor storm (G1) |
| 22.07.2024 | 19 | Quiet to Unsettled |
| 23.07.2024 | 08 | Quiet to Unsettled |

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