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Product: Daily Forecast of Geomagnetic Activity
Issued: 2024 October 09 08:50UTC
Prepared by the Athens Space Weather Forecasting Center
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**I. Solar activity**
*--Current Status*
Solar Flux (10.7cm) measured on 08.10.2024 at 23:00 UTC was 225 sfu.
The background X-Ray flux is at the class C6.2 level.
AR3842 erupted on October 08 at 08:51 UT peak time producing a M1.2 class solar flare and a radio blackout of category R1.
No obviously Earth directed CMEs were observed in available LASCO imagery on October 05-06.
---CME arrival forecast
A CME was observed on October 03 at 12:48 UT. The source was the X9.0 flare. This CME was expected to reach Earth between on October 05 at 21:50 UT and on October 06 at 06:40 UT according to EAM predictions.
A CME was observed on October 03 at 20:36 UT, associated with an M6.7 class flare from AR3843. This CME was expected to reach Earth between on October 06 at 15:58 UT and on October 06 at 17:40 UT according to EAM predictions.
Another CME was observed on October 07 at 20:48 UT. This CME is expected to reach Earth between on October 10 at 23:32 UT and on October 11 at 12:08 UT.

**II. Solar Energetic Particle Events**
GOES Proton Flux for particles with energies above 10 MeV exceed the SWPC 10 MeV warning threshold on October 09 at 05:00. A solar radiation storm of level S2 was also observed.

**III. Interplanetary and Geomagnetic conditions**
The solar wind speed measured by ACE satellite reached the max value 485 Km/s on October 09 at 06:00 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 -10 nT on October 08 at 18:15 UT during the last 24 hours.

The geomagnetic field was at active to moderate storm (G2) levels during the last 24 hours.

The Kp index now is at minor storm (G1) levels with Kp=5.

**IV. 3-day Geomagnetic Activity Forecast**
The geomagnetic field is expected to be at quiet to active levels on October 09, at quiet to unsettled levels on October 10 and at quiet to minor storm (G1) levels on October 11.

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| **Date** | **Ap index forecast** | **Geomagnetic Activity level** |
| 09.10.2024 | 12 | Quiet to Active |
| 10.10.2024 | 10 | Quiet to Unsettled |
| 11.10.2024 | 18 | Quiet to Minor storm (G1) |

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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
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