

January 2024 was an active month in the sense of solar activity. A number of 202 coronal mass ejections (CMEs) has been spotted, 18 CMEs with angular width $90^\circ < da < 180^\circ$, one CME with angular width $180^\circ < da < 270^\circ$ and one HALO CME recorded in this month (source: <http://sidc.oma.be/cactus/catalog.php>), resulting into distinct modulation of the galactic cosmic rays (GCRs). A number of 30 M-class and none X-class solar flares were spotted this month (<https://solarmonitor.org>), the most energetic one being an M6.8 flare on 29.01.2024 at 04:38 UT (peak time) from the AR 3536 (Figure 1).

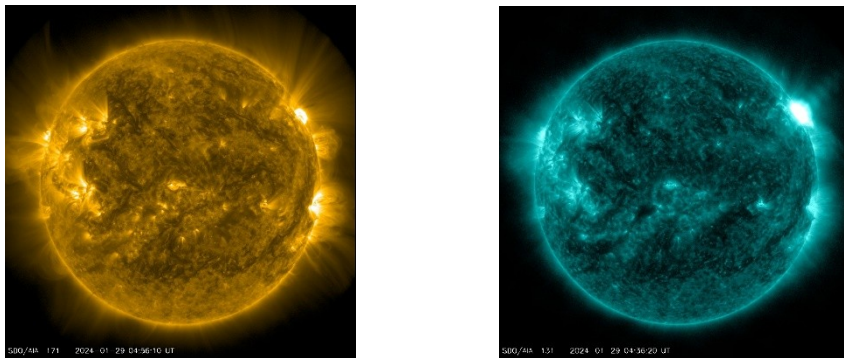


Figure 1: The M6.8 solar flare of 29/01/2024 at 04:38 UT peak time (from <https://sdo.gsfc.nasa.gov/data/aiahmi/>)

January was not an active month in the sense of geomagnetic activity as the Kp index values never reached storm levels. Active conditions noticed on January 01, 22, and 24 (http://wwwapp3.gfzpotdam.de/kp_index/pqlyymm.pdf) as a result of the interaction of a high-speed solar wind streams from coronal holes with Earth's magnetosphere or from weak effects of CMEs. The results of these events during this month were spotted on the cosmic ray intensity, recorded at Athens Neutron Monitor Station (cut-off rigidity 8.53 GV)

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