

December has been at the same levels as November in terms of solar activity. A number of 112 coronal mass ejections (CMEs) has been spotted, 7 CMEs with angular width $90^\circ < da < 180^\circ$, one CME with angular width $180^\circ < da < 270^\circ$ and none HALO CME recorded in this month, resulting into distinct modulation of the galactic cosmic rays (GCRs) (source: <http://sidc.oma.be/cactus/catalog.php>).

December was a less productive month in the sense of solar flares (SFs). A number of 266 C-, M- and X- class solar flares spotted with 247 C-, 18 M- and 1 X-class solar flares. The most energetic one being a X1.8 on 20/12/2014 at 00:28 UT from AR 2242, S19W29 (Fig. 1).

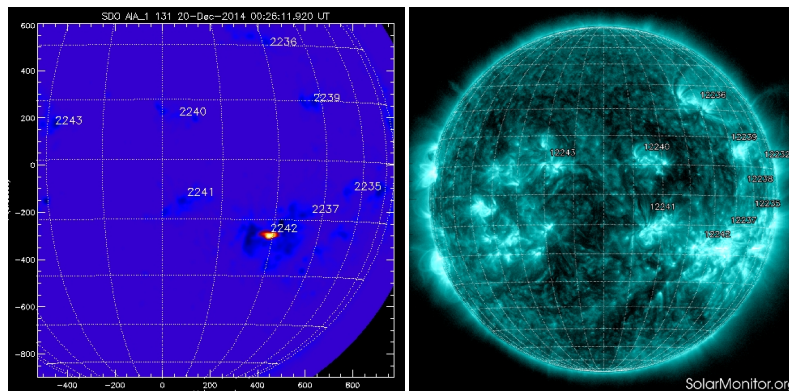


Figure 1: The X1.8 solar flare of 20/12/2014 at 00:28 peak time (from solarmonitor.org)

During this month a series of Forbush decreases were recorded by the neutron monitors. The first one consists the continuity of a great Forbush decrease started on 21-22 November 2014. This decrease is the result of the arrival of a fast stream of solar wind producing a G1 geomagnetic storm. A second important Forbush decrease started on December 22 as a result of the arrival of a CME which produced after the M9-class solar flare of December 17. The hourly values of the cosmic ray intensity recorded at the Athens neutron monitor station (cut-off rigidity 8.53 GV) are illustrated in Fig. 2.

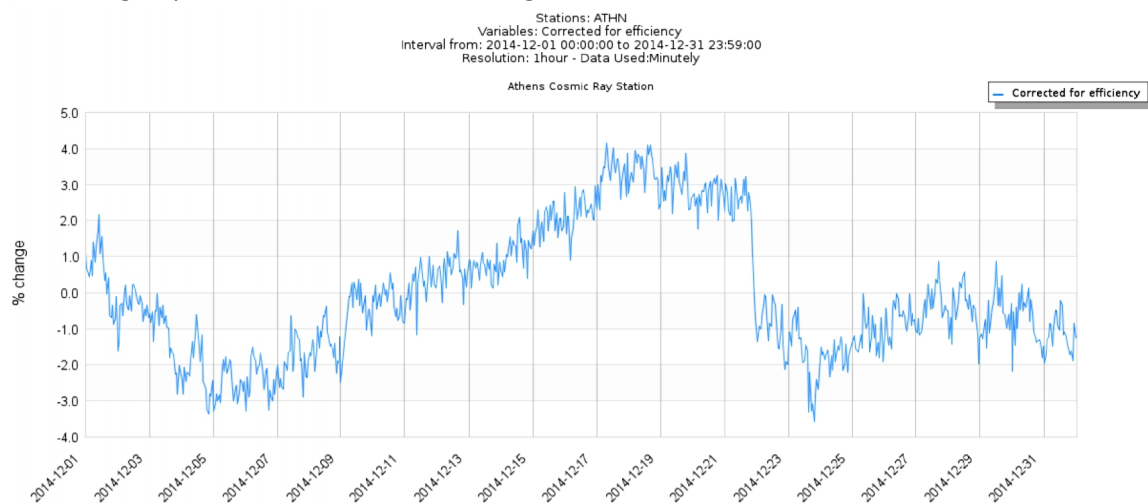


Figure 2: The corrected for efficiency counting rate of the Athens Neutron Monitor Station from 01-31.12.2014 (From multi station service of Athens)

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