

Newsletter Cosmic Rays / November 2014

November has been a less active month than September and October in terms of solar activity. A number of 118 coronal mass ejections (CMEs) has been spotted, 14 CMEs with angular width 90° < da < 180°, one CME with angular width 180° < da < 270° and one HALO CME recorded in this month, resulting into distinct modulation of the galactic cosmic rays (GCRs) (source: http://sidc.oma.be/cactus/catalog.php).

Nevertheless, November was a very productive month in the sense of solar flares (SFs). A number of 288 C-, M- and X- class solar flares spotted with 270 C-, 17 M- and 1 X- class solar flares. The most energetic one being a X1.6 on 07/11/2014 at 17:26 UT from AR 2205, N17E40 (Fig. 1).

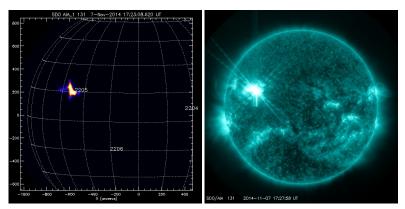


Figure 1: The X1.6 solar flare of 07/11/2014 at 17:26 peak time (from solarmonitor.org)

During this month an important Forbush decrease was recorded by the neutron monitors. This Forbush decrease started on November 11, 2014 with a typical recovery of 10-12 days. This decrease started just after the arrival of the HALO CME which spotted after the X1.6 solar flare, producing a G1 geomagnetic storm. 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.

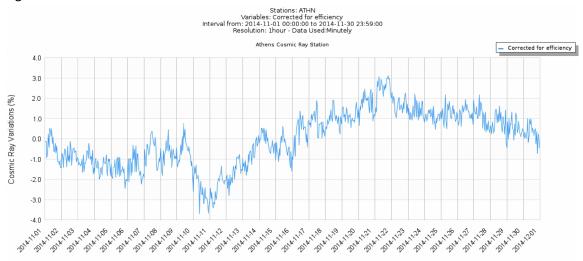


Figure 2: The corrected for efficiency counting rate of the Athens Neutron Monitor Station from 01-30.11.2014 (From multi station service of Athens)

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