

## Newsletter Cosmic Rays / June 2014

June has been a relatively quiet month in terms of solar activity but more active than May. 188 coronal mass ejections have been spotted, 11 coronal mass ejections (CMEs) with angular width 90° < da < 180°, 4 with da > 180° and 3 HALO CMEs recorded in this month, resulting into distinct modulation of the galactic cosmic rays (GCRs) (source: http://sidc.oma.be/cactus/catalog.php).

The Sun has not been really productive in the sense of solar flares (SFs) either. 180 C, M and X class solar flares spotted with 163 C, 14 M and 3 X class solar flares. The most energetic one being a X2.2 on 10.06.2014 11:44 U.T. from AR2087, S19E81 (Figure 1):

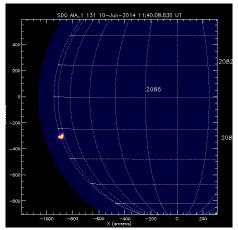
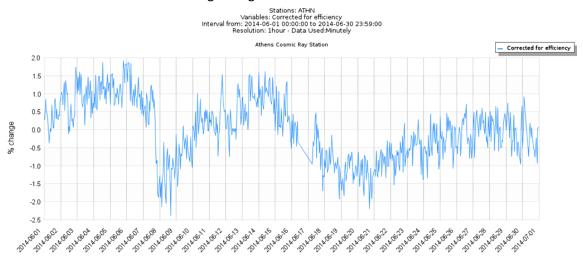


Figure 1: The X2.2 solar flare of 10.06.2014 (from solarmonitor.org)

From Figure 2 it is clear that the GCRs at Athens neutron monitor (NM) modulated by sporadic CMEs. A Forbush decrease was recorded by the Athens NM which started on June 8 with a slow recovery after almost a week (Figure 2) as a result of a CME which occurred on 15:24 of June 4<sup>th</sup> and caused a G2 geomagnetic storm on June 8<sup>th</sup>.



**Figure 2:** The corrected for efficiency counting rate of the Athens Neutron Monitor Station from 01-30.06.2014 (from multi station service of Athens).

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