

Newsletter Cosmic Rays / July 2015

July 2015 has been a quiet month in the sense of solar activity. A number of 117 CMEs have been spotted as in June, with 9 CMEs with angular width 90° < da < 180° and 1 HALO CME resulting into distinct modulation of the galactic cosmic rays (source: http://sidc.oma.be/cactus/catalog.php). July was very quiet in the production rate of solar flares (SFs). A number of only 53 C- and M-class SFs spotted with 50 C- and 3 M-class SFs, the most energetic one being a M1.7 on 06/07/2015 at 20:40 UT from the AR 12381, N13E34 (Fig. 1).

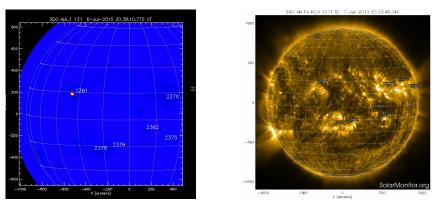


Figure 1: The M1.7 solar flare of 06/07/2015 at 20:40 peak time (from solarmonitor.org)

The interaction of high speed streams of solar wind with Earth's magnetosphere on July 4th and July 13th had as a result two geomagnetic storms G2 and G1 respectively. The result of these events spotted on the cosmic ray intensity as two Forbush decreases. A small Forbush decrease is spotted in 4th of July with a recovery of 4 days and a bigger one on 13th of July 2015 with a recovery phase of about 10 days. 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.

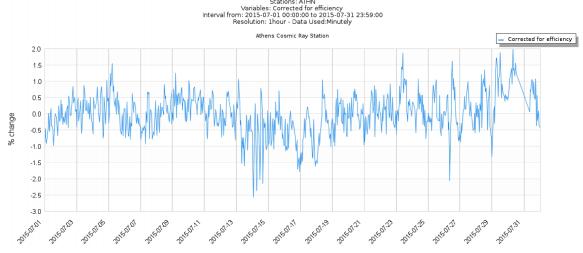


Figure 2: The corrected for pressure and efficiency counting rate of the Athens Neutron Monitor Station from 01-31/07/2015 (From multi station service of Athens CR Station).

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