

Newsletter Cosmic Rays / September 2018

September 2018 has been a very quiet month in the sense of solar activity. A number of only 7 CMEs has been spotted (source http://sidc.oma.be/cactus/catalog.php) with angular width $w < 90^\circ$. These CMEs together with the high-speed streams of solar wind for this month resulted to a distinct modulation of the galactic cosmic rays. September was also a very quiet month in the sense of proton flux levels of solar flares (SFs). No solar flare with magnitude > C1.0 was recorded during this period.

September was also less active month in the sense of geomagnetic activity in contrary to August. The interaction of a high-speed solar wind stream from coronal holes on September 10-11 triggered a moderate geomagnetic storm of G2 level (Fig. 1). Minor storm (G1) conditions noticed also on September 13 and 22 and active conditions noticed also on September 5 as a result of the interaction of a high-speed solar wind streams from coronal holes.

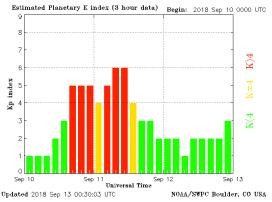


Figure 1: The Kp index values during the moderate G2 geomagnetic storm of September 10-11. (from ftp://ftp.swpc.noaa.gov/pub/warehouse/2018/2018 plots/kp/)

The results of these events during this month were spotted on the cosmic ray intensity as Forbush effects, recorded at Athens Neutron Monitor Station (cut-off rigidity 8.53 GV) with amplitudes varied from 1% up to almost 2% (Fig. 2).

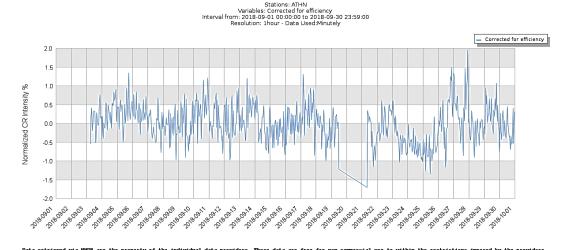


Figure 2: Hourly corrected for pressure and efficiency values of the cosmic ray intensity recorded by Athens Neutron

Monitor Station from 01-30/09/2018

(From the multi-station data social of Athens NIA Station)

(From the multi station data service of Athens NM Station)

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