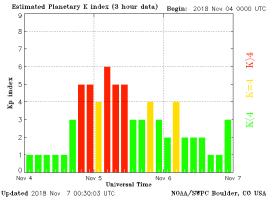


## **Newsletter Cosmic Rays / November 2018**

November 2018 has been a very quiet month in the sense of solar activity. A number of only 4 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. November 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.

November was a more active month in the sense of geomagnetic activity in contrary to October. The interaction of a high-speed solar wind stream from coronal holes on November 4-5 triggered a moderate geomagnetic storm of G2 level (Fig. 1). Active conditions noticed also on November 8-10 as a result of the interaction of a high-speed solar wind streams from coronal holes with Earth's magnetosphere.



**Figure 1:** The Kp index values during the moderate G2 geomagnetic storm of November 4-5. (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).

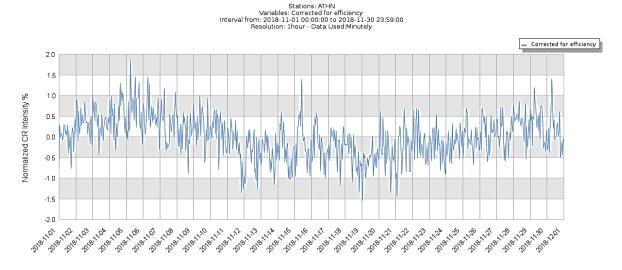


Figure 2: Hourly corrected for pressure and efficiency values of the cosmic ray intensity recorded by Athens Neutron

Monitor Station from 01-30/11/2018 (From the multi station data service of Athens NM Station)

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