Newsletter Cosmic Rays / March 2018

March 2018 has been a more active month in the sense of geomagnetic activity. A number of 21 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. March was a less active month in the sense of proton flux levels of solar flares (SFs) in contrary to February. A number of only two solar flares with magnitude > C1.0, was recorded during this period. The most energetic solar flare was a C4.6 noticed on 30/03/2018, 08:01UT (peak time) with coordinates S10E71 (Fig. 1).

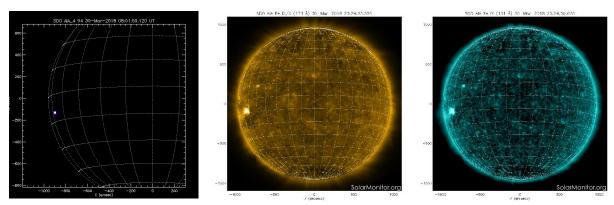
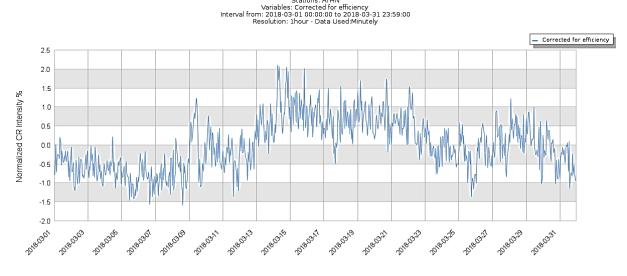


Figure 1: The C4.6 solar flare of 30/03/2018 at 08:01 UT peak time (from http://www.lmsal.com/solarsoft and https://www.solarmonitor.org)

The interaction of a high-speed solar wind stream from a coronal hole on March 18 triggered a geomagnetic storm of G2 level. Active conditions noticed also on March 9-10, 14-17, 23 and 25-26. 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 3.5% (Fig. 2).



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

Monitor Station from 01-31/03/2018 (From the multi station data service of Athens NM Station)