March 2019 has been a more active month in the sense of solar activity. A number of 17 CMEs has been spotted (source http://sidc.oma.be/cactus/catalog.php) with angular width w < 90° and one CME has angular width 90° < 180°. 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 also a more active month in the sense of proton flux levels of solar flares (SFs). 13 solar flares with magnitude > C1.0 was recorded during this period. The most energetic solar flare was a C5.6 noticed on 21/03/2019, 03:12 UT peak time from AR2736 with coordinates N08W34 (Fig. 1).

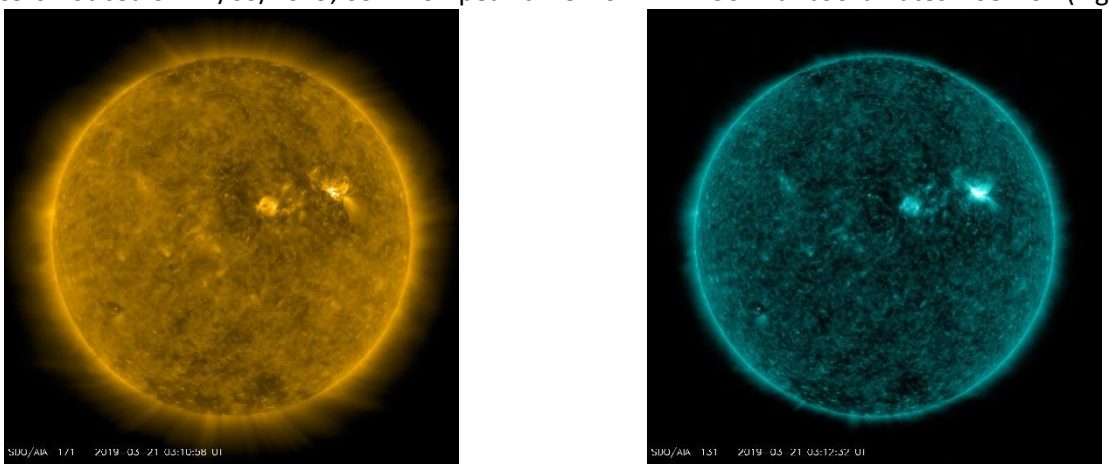

Figure 1: The C5.6 solar flare of 21/03/2019 at 03:12 UT peak time (from https://sdo.gsfc.nasa.gov/data/aiahmi/)

March was more active month in the sense of geomagnetic activity in contrary to February. The interaction of high-speed solar wind streams from coronal holes on March 1-2 and 16-17 triggered minor geomagnetic storms of G1 level. Active conditions noticed also on March 31 as a result of the interaction of a high-speed solar wind streams from coronal holes with Earth's magnetosphere.

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 3.0% (Fig. 2).

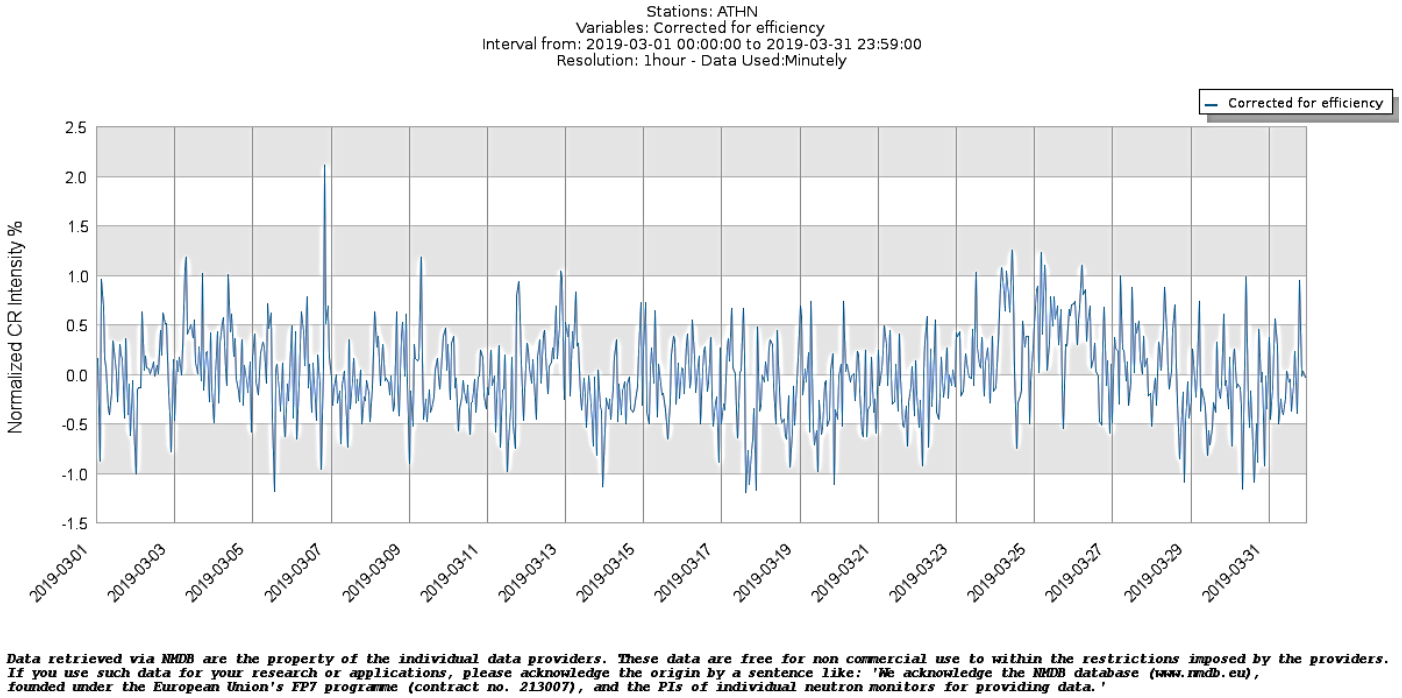

Figure 2: Hourly corrected for pressure and efficiency values of the cosmic ray intensity recorded by Athens Neutron Monitor Station from 01-31/03/2019 (From the multi station data service of Athens NM Station)

Contact: *Prof. H. Mavromichalaki*
Email: emavromi@phys.uoa.gr
http://cosray.phys.uoa.gr

Prepared by: *Dr. Evangelos Paouris*
Email: evpaouris@phys.uoa.gr
http://cosray.phys.uoa.gr