

October 2016 has been a very active month in the sense of geomagnetic activity. A number of 59 CMEs has been spotted, with only 2 CMEs with angular width $90^\circ < \alpha < 180^\circ$ resulting into distinct modulation of the galactic cosmic rays (source: <http://sidc.oma.be/cactus/catalog.php>). October was a very quiet month in the production rate of solar flares (SFs). A number of only 4 SFs were spotted, the most energetic one being a C4.2 on 17/10/2016 at 00:08 UT (start time) from the site with coordinates: S15W88 (Fig. 1).

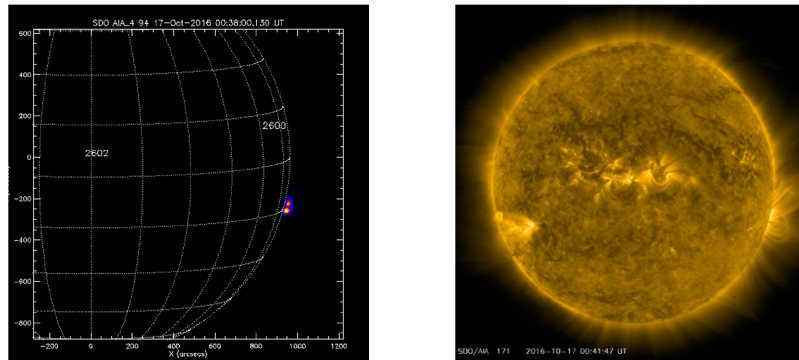
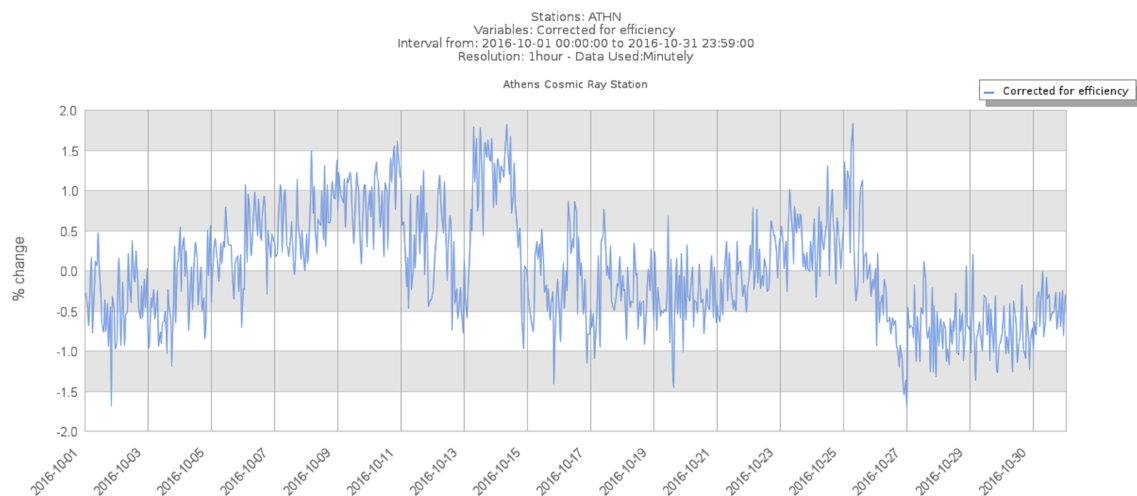


Figure 1: The C4.2 SF of 17/10/2016 at 00:37 UT peak time (from <http://www.lmsal.com/solarsoft> and <http://sdo.gsfc.nasa.gov/data/aiahmi/>)

The interaction of high speed streams of solar wind from large coronal holes with Earth's magnetosphere on October 1-5, 13-17 and 24-30 had as a result a series of geomagnetic storms varying from G1 up to G3. Especially, the Oct. 13-14 storm is associated also with the arrival of a faint CME as a result of an eruption of a magnetic filament on Oct. 8. The results of these events were spotted on the cosmic ray intensity as a series of Forbush decreases during this month, recorded at Athens Neutron Monitor Station (cut-off rigidity 8.53 GV) with amplitudes varied from 2.5% up to 3.5% (Fig. 2).



Data retrieved via NMDB are the property of the individual data providers. These data are free for non commercial use to within the restrictions imposed by the providers. If you use such data for your research or applications, please acknowledge the origin by a sentence like 'We acknowledge the NMDB database (www.nmdb.eu) founded under the European Union's FP7 programme (contract no. 213007), and the PIs of individual neutron monitors for providing data.'

Figure 2: Hourly corrected for pressure and efficiency values of the cosmic ray intensity recorded at Athens Neutron Monitor Station from 01-31/10/2016 (From the multi station data service of Athens NM Station).