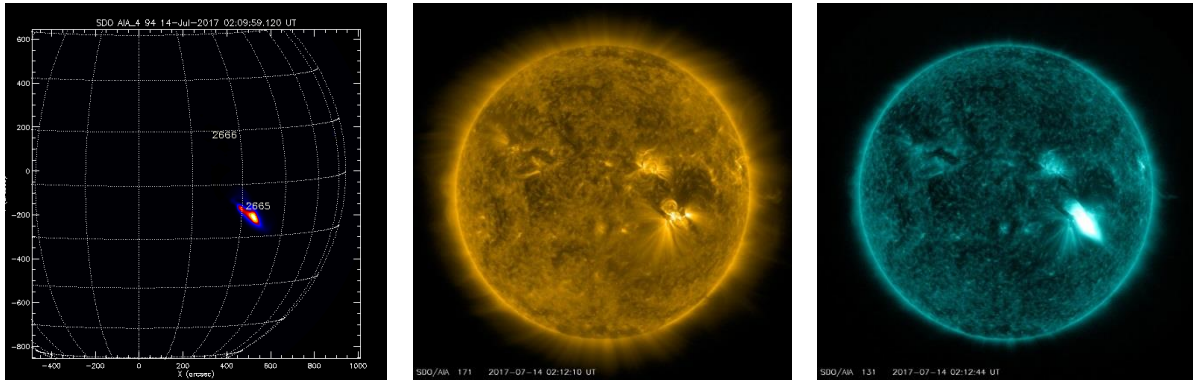


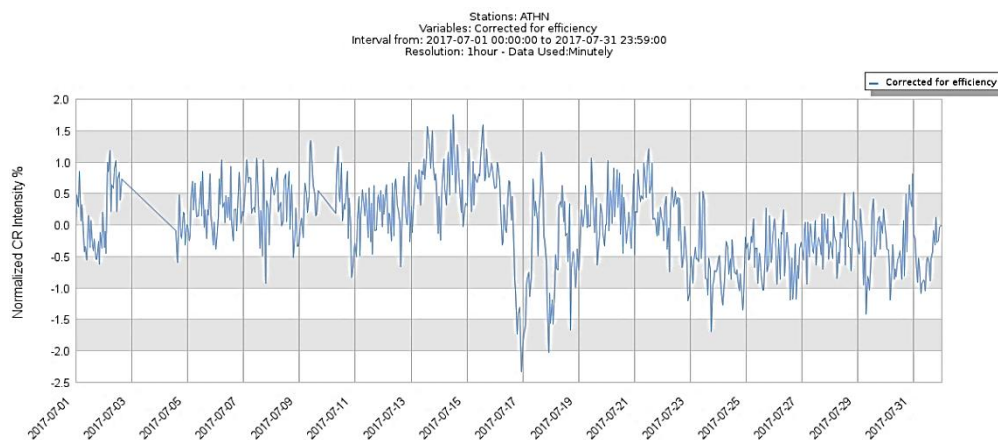
July 2017 has been a less active month in the sense of geomagnetic activity. A number of 44 CMEs has been spotted, with 2 CMEs with angular width  $90^\circ < w < 180^\circ$ , 1 CME with angular width  $180^\circ < w < 270^\circ$  and 1 HALO CME resulting into distinct modulation of the galactic cosmic rays (source: <http://sidc.oma.be/cactus/catalog.php>). July was a more active month in the sense of proton flux levels of solar flares (SFs). A number of 40 SFs were spotted, the most energetic one being a M2.4 on 14/07/2017 at 01:07 UT (start time) from AR2665 with coordinates S09W33 (Fig. 1).



**Figure 1:** The M2.4 SF of 14/07/2017 at 02:09 UT peak time (from <http://www.lmsal.com/solarsoft> and <http://sdo.gsfc.nasa.gov/data/aiami/>)

This active region (AR2665) except this powerful solar flare was produced also a HALO CME which was noticed on July 14<sup>th</sup> at 01:36 UT. The shock driven by this CME arrived on Earth on July 16<sup>th</sup> at 05:14 UT. The arrival of this shock was predicted successfully by the empirical acceleration model at the Athens Space Weather Forecasting Center available at CME Scoreboard (<https://kauai.ccmc.gsfc.nasa.gov/CMEscoreboard/>).

The interaction of CMEs with Earth's magnetosphere on July 01-02 and 16-17 triggered two geomagnetic storms of G1 and G2 levels, respectively. Also the interaction of high speed streams of solar wind from coronal holes on July 9 and 21-26 was triggered geomagnetic storms of G1 level. The results of these events were spotted on the cosmic ray intensity as Forbush decreases during this month, recorded at Athens Neutron Monitor Station (cut-off rigidity 8.53 GV) with amplitudes varied from 1.5% 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 01-31/07/2017 (From the multi station data service of Athens NM Station).