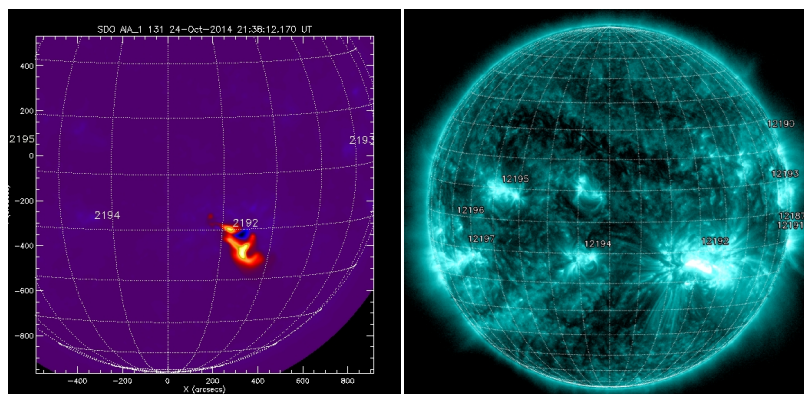


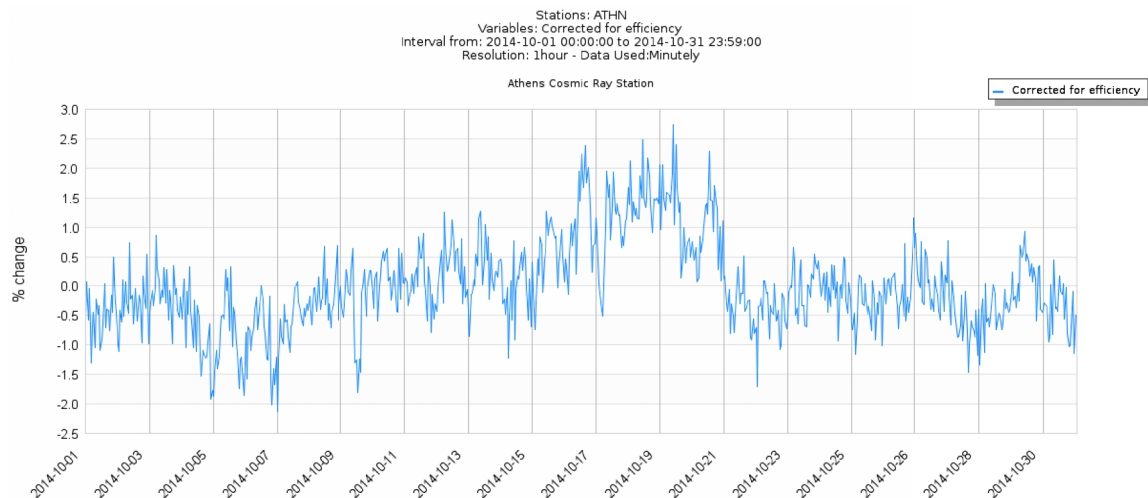
October has been also an active month as September in terms of solar activity. 135 coronal mass ejections (CMEs) have been spotted, 9 CMEs with angular width  $90^\circ < da < 180^\circ$ , 2 CMEs with angular width  $180^\circ < da < 270^\circ$  and 1 HALO CME recorded in this month, resulting into distinct modulation of the galactic cosmic rays (GCRs) (source: <http://sidc.oma.be/cactus/catalog.php>).

October was a most productive month in the sense of solar flares (SFs). 288 C-, M- and X-class solar flares spotted with 238 C-, 44 M- and 6 X- class solar flares. The most energetic one being a X3.1 on 24.10.2014 at 21:40 U.T. from AR 2192, S22W21 (Fig. 1). The AR 2192 was one of the biggest sunspot areas in the last 25 years. It is noteworthy that this AR was very productive for solar flares but without any Earth directed CME.



**Figure 1:** The X3.1 solar flare of 24.10.2014 at 21:40 peak time (from solarmonitor.org)

During this month a series of Forbush decreases were recorded by the neutron monitors. An important Forbush decrease started on October 3, 2014 with a typical recovery of 12-14 days and another one from October 19, 2014. The first one started just after the partial HALO CME at the beginning of the month. The hourly values of the cosmic ray intensity recorded at the Athens neutron monitor station (cut-off rigidity 8.53 GV) are illustrated in Fig. 2.



**Figure 2:** The corrected for efficiency counting rate of the Athens Neutron Monitor Station from 01-31.10.2014 (From multi station service of Athens)

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