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MWL characterization of the blazar S5 0716+714 by MAGIC during its brightest outburst

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S5 0716+714 is a well known BL-Lac object, located at a redshift of $z=0.31$. The discovery in the Very High Energy band (VHE, $E > 100$ GeV) by MAGIC happened in 2008, when Fermi data in the High Energy (HE, 100 MeV $< HE < 100$ GeV) were not yet available. In January 2015 the source went through the brightest optical state ever observed, triggering MAGIC follow-up and a VHE detection with ~ 13 sigma significance (Atel #6999). The availability of simultaneous Fermi-LAT observations allows to constrain the Inverse Compton peak of the spectrum. We will present the preliminary analysis of MAGIC data of the flaring activity in January and February 2015 and discuss the time variability of the spectrum in VHE during this impressive outburst. Multi Wave Length data including the mm/optical/X-ray/HE bands will be reported. Preliminary study on the Extragalactic Background Light absorption will also be shown, with implications on current EBL models.

Collaboration

MAGIC + Fermi + other MWL authors

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