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H.E.S.S. discovery of very-high-energy gamma-ray emission of PKS 1440-389

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Blazars are the most abundant class of known extragalactic very-high-energy (VHE, E>100 GeV) gamma-ray sources. However, one of the biggest difficulties in investigating their VHE emission resides in their limited number, since less then 60 of them are known by now.

In this contribution we report on the H.E.S.S. observations of the BL Lac object PKS 1440-389. This source has been selected as target for H.E.S.S. based on its high-energy gamma-ray properties measured by Fermi-LAT. The extrapolation of this bright, hard-spectrum gamma-ray blazar into the VHE regime made a detection on a relatively short time scale very likely, despite its uncertain redshift. H.E.S.S. observations were carried out with the 4-telescope array from March to May 2012 and resulted in a clear detection of the source. Contemporaneous multi-wavelength data will be used to construct its spectral energy distribution and we will discuss possible emission mechanisms explaining the observed broad-band emission of PKS 1440-389.

Collaboration

H.E.S.S.

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