Monitoring the non-thermal Universe 2018



Contribution ID: 16 Type: Oral + Poster

Implications of the VHE gamma-ray outburst of PKS 1510-089 in May 2016

Wednesday, September 19, 2018 4:55 PM (20 minutes)

PKS 1510-089 is one of only a handful of flat spectrum radio quasars detected in very high energy (VHE, E > 100 GeV) gamma rays. Since the first detection in 2009, the source has been monitored VHE. Here, we present one special event that is a direct result of the monitoring effort. In May 2016, a major VHE gamma-ray flare was observed from PKS 1510-089 by the H.E.S.S. and MAGIC telescopes. Within \sim 5h of observations the VHE gamma-ray flux changed by an order of magnitude showing short-term variability features for the first time. Despite a soft intrinsic spectrum and strong absorption in the extragalactic background light, the high flux of the source allowed us to measure the gamma-ray spectrum up to the energy of 0.7 TeV. We report on the results of these observations as well as of the supporting observations performed in the optical and GeV range. We also discuss implications for the interpretation of the observed emission.

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Session Classification: Gamma-Ray