

Contributed Talk //

Active Galactic Nuclei (AGNs)



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We present the results of the multiwavelength study of several blazars at redshift $z > \sim 1$ that have been observed by the High Energy Stereoscopic System (H.E.S.S.) since 2016 in target-of-opportunity observations, triggered by gamma-ray flaring states detected by the Fermi Large Area Telescope (LAT). We collect data from simultaneous observations by the Fermi-LAT, Swift and H.E.S.S. telescopes and model the broadband spectral energy distributions with both leptonic and hadronic models. A detailed analysis, including multi-wavelength modelling, is presented for the flat-spectrum radio quasars CTA102 ($z = 1.032$), PKS 0346-27 ($z = 0.991$) and PKS 1313-333 ($z = 1.210$). PKS 1313-333 and CTA 102 were not detected by H.E.S.S., providing upper limits at > 200 GeV g-rays while PKS 0346-27 was detected. We used single-zone, steady-state leptonic and hadronic models to fit the SEDs of these sources and find that they provide acceptable fits. With the hadronic model, we were able to draw some conclusions on EBL absorption of high redshift blazars, but this is not possible with leptonic models due to the expected intrinsic cut-off at a few GeV, where EBL absorption is still negligible. Keywords: Galaxies: active, radiation mechanism: non-thermal-relativistic process, jets: quasars.

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