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SST-1M observation of Markarian 421

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Markarian 421 (Mrk 421) is one of the closest and brightest high-frequency peaked blazars, located at a redshift of z = 0.031. It is a strong source of gamma rays, and its broadband emission has been extensively studied over the years through multi-wavelength observations from various telescopes.

Mrk 421 has been a target of observational campaigns conducted by the SST-1M telescopes –two single-mirror small-size Cherenkov telescopes at Ondrejov Observatory, Prague, Czech Republic. These telescopes operate in mono and stereoscopic modes, utilizing the Imaging Atmospheric Cherenkov Technique (IACT) to detect Very High Energy (VHE) gamma rays in the 1–300 TeV energy range.

In this study, we present recent SST-1M observations, data analysis, and the results of physical modeling of Mrk 421's emission mechanisms, as well as a comparative analysis with previous studies.

Collaboration(s)

SST-1M Collaboration

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