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Long-term VERITAS monitoring of LS I 61 +303 in conjunction with X-ray, and GeV observation campaigns

Tuesday 4 August 2015 16:00 (1 hour)

One of the most enigmatic TeV binary systems, LS I +61 303 exhibits a high degree of modulation from optical to TeV over a single orbit of ~ 26.5 days. LS I +61 303 also exhibits a ~ 4.5 year modulation in radio, X-Ray and GeV emission which is yet to be seen in TeV gamma rays. LS I +61 303 has been observed by both VERITAS (85 GeV-30 TeV) and multi-wavelength partners (optical - GeV). The contemporaneous multi-wavelength dataset enables searches for correlations between emission in these three wavebands; these correlations can further elucidate the astrophysical properties of this system. The construction of a detailed keV-TeV spectral energy distribution from LS I +61 303 can also shed light on the population of accelerated particles producing this emission. The progress on analysis of recent and long-term VERITAS observations of LS I +61 303 in correlation with multi-wavelength observations by Swift (3-10 keV X-ray) and Fermi-LAT (0.3-300 GeV γ -ray) will be presented.

Collaboration

VERITAS

Registration number following "ICRC2015-I"

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