

Synergies between very high energy facilities and Rubin-LSST

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Observations in the high-energy domain have proven to be key for the multiwavelength characterization and modeling of various transients, including gamma-ray bursts, gravitational wave and high-energy neutrino counterparts, tidal disruption events, and AGNs, including blazars. Gamma-ray facilities currently operational, both ground-based such as MAGIC, LST-1, H.E.S.S., and VERITAS, as well as space-based such as Fermi/LAT, along with those under construction like the Cherenkov Telescope Array Observatory (CTAO) and ASTRI, serve as ideal complements to the Rubin-LSST, facilitating the comprehensive study of high-energy transients within a multi-frequency and multi-messenger framework. We will delineate how these facilities can augment the LSST survey. To foster these synergies, INAF has proposed the in-kind project “Non-Directable SW contribution for the TVS SC: A Bridge from Gamma to Optical,” which aims to facilitate cross-matching of high-energy events detected by X-ray and Gamma-ray facilities with LSST data and enable multiwavelength analysis.

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