

VHE Gamma-ray Searches for Astrophysical Neutrino Sources: VERITAS Status and Prospects for CTA

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Neutrino astronomy is an emerging area of study in high-energy astrophysics, and astrophysical neutrinos are natural cousins of very high energy (VHE; $E > 100$ GeV) gamma rays. The VERITAS gamma-ray observatory has an active program of follow-up observations in the directions of high-energy neutrinos detected by IceCube which are potentially astrophysical, including prompt alerts, and the planned Cherenkov Telescope Array (CTA) has similar plans. Since both neutrinos and gamma rays are produced in hadronic interactions, a joint study of both channels could reinforce the hadronic origin of the gamma rays, revealing high-power cosmic-ray accelerators and probing their properties. We present recent results from the VERITAS follow-up program and prospects for CTA.

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