



Multimessenger studies with the VERITAS Atmospheric Cherenkov Telescope (15' + 5')

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Multimessenger astronomy is an emerging area of study in high-energy astrophysics aimed at combining observations from instruments sensitive to different “cosmic messengers”; neutrinos, photons, cosmic rays, and potentially gravitational waves. The VERITAS gamma-ray observatory has an active multimessenger program, currently focused on studying the connection between very high energy gamma-rays and the astrophysical neutrino flux recently discovered by IceCube. As both gamma-rays and neutrinos are produced in hadronic interactions, it is expected that a joint study of both messenger channels could reveal powerful cosmic-ray accelerators and probe their properties. We present an overview and recent results from the VERITAS multimessenger program and discuss prospects for combined studies with other multimessenger facilities, such as the aLIGO gravitational wave observatory, that could benefit from the synergy between the VERITAS, HAWC, and Fermi gamma-ray instruments.

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