

## Celebrating 20 years of Swift Discoveries



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# Multiwavelength Follow-up Observations of Astrophysical Neutrino Events

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On September 22, 2017, the IceCube Neutrino Observatory detected a high-energy neutrino of potential astrophysical origin which was found by follow-up electromagnetic observations to spatially and temporally coincide with the flaring state of a known blazar, TXS 0506+056. Since then, several additional neutrino events have been found in spatial correlation with known high-energy sources. Multiwavelength follow-up observations of astrophysical neutrino events such as these, and the continued monitoring of previously identified sources such as TXS 0506+056 are imperative in finding sources of the diffuse neutrino flux detected by IceCube as well as the origins of high-energy cosmic rays. Because of its rapid response times, the Neil Gehrels Swift Observatory is especially well-suited for time sensitive observations such as these. Here, we present results from Swift XRT and UVOT observations of astrophysical neutrino candidate events with potential gamma-ray counterparts, as well observations performed by the Neutron Star Interior Composition Explorer (NICER), NuSTAR, and the Fermi Gamma-ray Space Telescope.

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