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Gravitational Wave and Multimessenger Searches with AMON JAMES DELAUNAY, Pennsylvania State Univ, AMON TEAM — The Astrophysical Multimessenger Observatory Network (AMON) is connecting observatories around the world in order to enable real-time coincidence searches across all four astrophysical messengers (neutrinos, cosmic rays, photons, and gravitational waves). AMON analyses deliberately extend into the "sub-threshold" regimes of these experiments, and are conceived so as to enable near real-time alerts, and rapid follow-up observations, in search of associated transient or variable counterparts. Current analysis efforts include a coincidence search using sub-threshold gravitational wave events from LIGO and sub-threshold gamma-ray data from high-energy satellites. This search is designed to be applied in the future to aLIGO + VIRGO real-time sub-threshold event streams so as to generate real-time multimessenger alerts and enable rapid follow-up observations. In this presentation I will give preliminary details about the analysis being used to search for coincident gravitational wave + gamma-ray (GW + gamma) transients, with a specific focus on using sub-threshold gamma-ray data from Swift's Burst Alert Telescope.

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