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IceCube Search for Galactic Neutrino Sources using the HAWC 2HWC Catalog

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We present prospects for IceCube to detect neutrino emission from Galactic TeV gamma-ray sources outlined in the HAWC Observatory's recently published 2HWC catalog. We do this by evaluating the sensitivity of two analyses using IceCube data. The first is a stacked analysis of promising point sources from the catalog which are chosen based on their high TeV photon fluxes and lack of association with known pulsar wind nebula. Here we assume the highest energy photons originate from the decay of charged pions produced by hadronic interactions at each source. The second is a template analysis using the full Galactic plane morphology measured by HAWC. This morphology should trace neutrino emission if pion decay predominantly occurs in the environment surrounding identified HAWC sources.

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