## Search for diffuse neutrino emission from the Galactic Plane with 7 years of IceCube data.

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The origin of high-energy astrophysical neutrinos measured by the IceCube Neutrino Observatory remains a mystery despite extensive searches for multimessenger correlations. In particular, no point sources have been identified so far. However a likely source for diffuse neutrino emission are cosmic-ray interactions in the galactic plane. Due to the excellent pointing of their track-like signature, muon neutrino induced muons are an ideal channel for measuring spatial correlations. Two methods were developed to test for a spatiallyextended flux from the entire galactic plane, both maximum likelihood fits but with different background estimation techniques. We consider three templates for galactic neutrino emission based primarily on gammaray observations and models that cover a wide range of possibilities. We present constraints from seven years of IceCube Neutrino Observatory muon data on the neutrino flux coming from the galactic plane.

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