

Abstract Submitted  
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**Measuring the High Energy Astrophysical Neutrino Flux with IceCube** AUSTIN SCHNEIDER, University of Wisconsin - Madison — The IceCube neutrino observatory has established the existence of an astrophysical diffuse neutrino component above 100 TeV. This discovery was made using the high-energy starting event sample, which uses the outer layer of instrumented volume as a veto to significantly reduce atmospheric background. We present the latest astrophysical neutrino flux measurement using high-energy starting events, extending the sample by 1.5 years for a total of 7.5 years. This new analysis updates the event properties with newer models of light transport in the glacial ice, and has an improved systematic treatment. We also report on the compatibility of our observations with detailed isotropic flux models proposed in the literature as well as the standard generic models such as single, double power-law scenarios.

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