Abstract Submitted
for the APR21 Meeting of
The American Physical Society

**Searching for Non-Standard Interactions Through IceCube Neutrino Fluxes** GRANT PARKER, University of Texas at Arlington, ICECUBE COLLABORATION — The IceCube neutrino observatory is a kiloton-scale Cherenkov detector located several kilometers beneath the surface of the South Pole. Sensitive to atmospheric and astrophysical neutrino signals of energies on the order of GeV to PeV, IceCube has the capacity to investigate theorized neutrino-nucleus interactions not described by the Standard Model (non-standard interactions, or NSI). This is possible through analysis of deviations from predicted neutrino fluxes in patterns that can be derived from a generalized NSI model. One such analysis uses 8 years of data within the energy range of 500 GeV to 10 TeV, and we report here the methods and progress of the project.

Grant Parker
University of Texas at Arlington

Date submitted: 08 Jan 2021 Electronic form version 1.4