

## High energy DIS neutrino cross section using 10 years of IceCube data

*Monday, 25 May 2026 17:00 (15 minutes)*

I would like to give a talk on my measurement of the high energy DIS neutrino cross section using 10 years of IceCube data. This is a mature result approaching publication, but has not yet been shown to the wider community. The neutrino cross section is a shared model parameter and systematic uncertainty for neutrino telescopes. Even with FASER's measurements up to a few TeV, a gap exists between IceCube's initial 1 year measurement, starting around 10 TeV. My result unifies the beamline (FASER) and legacy IceCube measurements with an expanded suite of systematic uncertainties, vastly increased statistics, and overall reduced uncertainties at the sub-10% levels up to neutrinos energies of 200 TeV and a factor 2 increase in sensitivity between 200 TeV to 10 PeV.

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**Session Classification:** Topical Sessions

**Track Classification:** Higher Level Data Analysis