

# Phenomenology 2023 Symposium



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## High-energy neutrino cross sections

*Monday, 8 May 2023 15:45 (15 minutes)*

We present predictions of the cross section of ultrahigh-energy neutrino-nucleon scattering. The calculations are based on CT18NNLO parton distribution functions and their uncertainties. For the highest energies, we extrapolate the PDFs to small  $x$  according to several assumptions, which affect the uncertainties at such high energies. The results can be applied to astrophysical neutrino observatories, such as IceCube currently, and proposed future detectors.

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