Cosmic Rays and Neutrinos in the Multi-Messenger Era



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Neutrino cross section from TeV to EeV

Neutrino telescopes have the potential to advance our knowledge of both astronomy and particle physics. The interpretation of the measured event rates from these experiments depends on knowledge of the interaction cross section of neutrinos. At high energies, the cross section is dominated by deep inelastic scattering off matter nucleons and scattering on atomic electrons via the Glashow resonance. In this poster we present an overview of the neutrino cross-section models used in the TeV and EeV energy regimes; the former is used to constrain the galactic neutrino flux or BSM scenarios (dark matter, sterile neutrinos, NSI, etc.), while the latter will be explored by a new generation of radio detectors during the next decade.

Related session

Particle physics with neutrinos

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