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Is the Cosmic Neutrino Background Within Reach of Future Neutrino Telescopes?

The cosmic neutrino background is the last missing piece of the early Universe's thermal history. Its direct detection would be a monumental milestone for the fields of cosmology and particle physics. We recently proposed that cosmic rays can scatter off the cosmic neutrino background throughout the history of the Universe, yielding a flux of relic neutrinos boosted to high-energies. Here I will discuss the feasibility of this proposal, clarifying which astrophysical and experimental conditions would allow us to detect the cosmic neutrino background with future (ultra) high-energy neutrino telescopes.

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