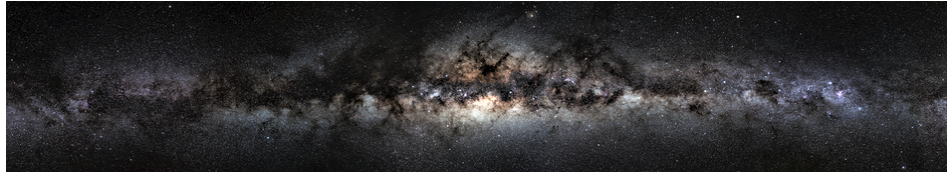


# Dark Sectors of Astroparticle Physics (AstroDark-2021): Axions, Neutrinos, Black Holes and Gravitational Waves



Contribution ID: 68

Type: Oral

## Unstable Cosmic Neutrino Capture on Tritium

*Thursday, 9 December 2021 12:32 (18 minutes)*

We forecast constraints on neutrino decay via capture of the Cosmic Neutrino Background (CvB) on tritium, with emphasis on the PTOLEMY-type experiment. Although direct observations of the CvB are still in their very early stages, future direct observations of the CvB will impose significant constraints on a neutrino lifetime in the region of the age of the universe. We discuss the would-be observed spectra for unstable neutrinos, and the constraints on a neutrino lifetime in cosmic neutrino capture on tritium, and the required energy resolution and exposure. This presentation is based on arXiv: 2109.02900.

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