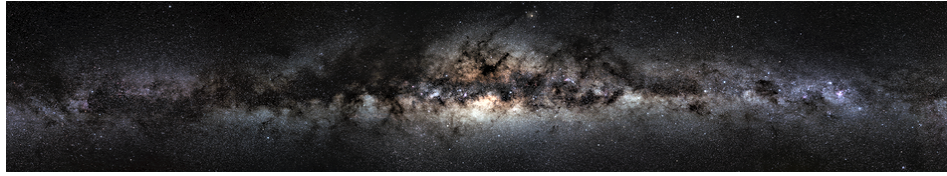


Dark Sectors of Astroparticle Physics (AstroDark-2021): Axions, Neutrinos, Black Holes and Gravitational Waves



Contribution ID: 87

Type: **Oral**

New Neutrino Interactions at COHERENT

Thursday, 9 December 2021 13:08 (18 minutes)

A possible sub-leading effect originating from new physics beyond the Standard Model may affect the propagation of neutrinos. In this talk, we shall discuss the potential to probe light extra gauge Z boson inducing neutrino non-standard interactions (NSIs) in the coherent-elastic neutrino-nucleus scattering (CEvNS) experiments. Also, we shall explore the possibility of having a fermionic dark matter candidate within $U(1)'$ models for CEvNS experiments in light of the latest COHERENT data and the current and future dark matter direct detection experiments. Finally, the potential to probe “general neutrino interactions”, exotic new physics interactions beyond the Standard Model interactions will also be presented.

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Session Classification: Parallel 2: Neutrinos