

The Neutrino Magnetic Moment Portal: Terrestrial Experiments and Astrophysical Probes

Thursday 13 April 2023 14:52 (22 minutes)

Sterile neutrinos are well-motivated extension of the Standard Model. In this talk I will focus on the interaction between sterile neutrinos and light active neutrinos through the magnetic moment portal. I will show that strong constraints can be derived from SN1987A through the non-observation of active neutrinos and photons produced from sterile neutrino decays. Furthermore, sensitivity projections for several present and near-future experiments such as Fermi-LAT, e-ASTROGAM, DUNE and Hyper-Kamiokande will be shown for the future galactic supernova event.

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