

## Decaying neutrinos from a galactic supernova

*Monday, 21 September 2020 11:20 (10 minutes)*

A core-collapse supernova (SN) can act as the perfect laboratory to probe fundamental neutrino physics. For example, a future galactic SN will present us with a naturally long baseline to probe new channels of neutrino decay. In this talk, I will discuss the impact of two-body decays of neutrinos on the neutronization burst of a core-collapse SN. Upcoming neutrino experiments like DUNE and Hyper-Kamiokande (HK) can easily detect neutrinos from the burst phase, and impose some of the strongest bounds on such decay channels. Furthermore, a combination of data from DUNE and HK can also distinguish between decaying Dirac neutrinos and decaying Majorana neutrinos.

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