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Neutrinos from captured dark matter in galactic distribution of stars

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Sub-GeV neutrinos produced in a stellar core may emerge from main sequence stars, white dwarfs and brown dwarfs producing possible observable signals of dark matter capture. A distribution of these stars near the Milky Way galactic center will produce a neutrino flux that can be probed at Earth based neutrino observatories like Super-Kamiokande and Hyper-Kamiokande. In this talk we demonstrate that this can provide a handle to probe dark matter masses in the 200 MeV – 2 GeV mass scales that compares favourably with present day direct detection bounds

Author: RAY, Tirtha Sankar (Indian Institute of Technology Kharagpur, India)

Presenter: RAY, Tirtha Sankar (Indian Institute of Technology Kharagpur, India)

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