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Poster Session
Submission of Abstract

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Title of the Poster: Neutrino masses and ordering via multimessenger astronomy

Abstract: We define the theoretical framework and deduce the conditions under which multi- messenger astronomy can provide useful information about neutrino masses and their ordering. The framework uses time differences between the arrival of neutrinos and the other light messenger, i.e. the graviton, emitted in astrophysical catastrophes. We also provide a preliminary feasibility study elucidating the experimental reach and challenges for planned neutrino detectors such as Hyper-Kamiokande as well as future several megaton detectors. This study shows that future experiments can be useful in testing independently the cosmological bounds on absolute neutrino masses. Concretely the success of such measurements depends crucially on the available rate of astrophysical events and further requires development of high resolution timing besides the advocated need of megaton size detectors.
Summary: neutrinos, gravitational waves.