

Solar neutrinos and future experiments

Monday, 12 June 2023 15:00 (20 minutes)

While the LMA-MSW solution has been successful in explaining the flavor conversion of solar neutrinos, there exist tensions between the observed data and theoretical predictions. To address these discrepancies, the possibility of new physics theories such as Non-Standard neutrino Interaction (NSI) and the presence of a sterile neutrino are explored.

I will discuss the sensitivity of future solar neutrinos such as Yemilab to determination of solar neutrino oscillation parameters. Moreover, I will explain how future solar and reactor neutrino experiments are expected to achieve sub-percent precision, allowing for greater sensitivity to Earth's tomography using the day-night asymmetry of solar neutrinos. In this talk I will discuss the sensitivity of future solar experiments the Earth tomography using day-night asymmetry of solar neutrinos and new physics such as NSI and super-light sterile neutrino scenarios.

Secondary category for the parallel session (optional)

BSM Theories

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