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New limits on non-standard neutrino interaction parameters from Borexino solar neutrino data

Non-standard neutrino interactions (NSI) may occur at production, propagation and detection of solar neutrinos affecting their survival probability and interaction cross sections. In this analysis, we consider flavor-diagonal neutral current NSI and study their impact on the solar neutrino spectral shapes and the interaction rates using the Borexino Phase-II data. Results on the NSI coupling constants obtained in the present study do not indicate new physics, nonetheless improving the global constraints on NSI parameters.

Mini-abstract

Improved limits on non-standard neutrino interactions with Borexino

Experiment/Collaboration

Borexino

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