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Solar neutrino oscillations and the recent results of Borexino and SNO

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The present contribution reviews the latest results of the solar neutrino experiments Borexino and SNO and their impact on the standard solar model and the global analysis of neutrino oscillations: The Borexino result on the Be-7 neutrino survival probability gives, for the first time, experimental evidence of vacuum neutrino oscillations at sub-MeV energies, backing up the MSW-LMA oscillation scenario. Nevertheless, the search for non-standard effects in the transition region from vacuum to matter-dominated oscillations in the energy regime from 1 to 5 MeV is still on-going: Both Borexino and SNO have by now published analyses of the B-8 neutrino flux below 5 MeV that provide mutually consistent but not conclusive results regarding oscillation models. The prospects of Borexino for an analysis of the B-8 neutrino flux below the present threshold of 3 MeV and for a first-time direct measurement of the pep neutrino line at 1.4 MeV in energy will be outlined.

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