

Non-Standard Interactions: oscillation versus scattering data

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In presence of non-standard neutrino interactions the neutrino flavor evolution equation is affected by a degeneracy which leads to the so-called LMA-Dark solution. It requires a solar mixing angle in the second octant and implies an ambiguity in the neutrino mass ordering. In this work, we explore the possibilities for resolving this degeneracy using a combination of oscillation results with past data from scattering experiments (CHARM and NuTeV). We also simulate future data from the COHERENT experiment and study the constraints that could be derived from its combination with current oscillation bounds.

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