

Update on solar oscillations at Super-Kamiokande.

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Super-Kamiokande, a 50 kton water Cherenkov underground neutrino detector, has been instrumental in studying neutrinos across a wide energy range, from a few MeV to hundreds of GeV. Alongside SNO, Super-Kamiokande has played a pivotal role in providing evidence for solar neutrino oscillations. Specifically, the detection of Boron-8 neutrinos highlighted the deficit in the observed neutrino flux compared to the predictions of solar models. Since then, the Super-Kamiokande collaboration has been regularly sharing updates on various signatures and parameters related to solar oscillations. Most notably, the exclusion of other oscillation parameters, particularly the Small Mixing Angle and vacuum oscillations, and the evidence supporting the Large Mixing Angle solution, as well as the day/night flux difference attributed to the earth's matter electro-neutrino regeneration in the Earth. This presentation will provide an overview of the latest advancements in solar oscillations at Super-Kamiokande.

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