

ICHEP2012



Contribution ID: 121

Type: **Parallel Sessions**

Solar neutrino results from Super-Kamiokande

Friday 6 July 2012 09:45 (15 minutes)

Recent results of the Super-Kamiokande (SK) solar neutrino measurements are presented. The main goal of SK's solar analysis is to observe the MSW effect, i.e. a solar neutrino energy spectrum distortion induced by matter in the Sun, and a day/night solar neutrino flux asymmetry induced by matter in the Earth.

Thanks to the improvement of the detector's water circulation system, low energy background levels have been reduced and clear solar neutrino signals are seen even for 4.0-4.5MeV electron kinetic energy range, along with some indications of a signal even down to 3.5-4.0MeV.

The combined energy spectrum and day/night solar neutrino flux from phase I to phase IV in SK will be presented. A global oscillation analysis has been carried out using SK-I, II, III, and IV data and combining these results with the results of other solar neutrino experiments as well as the KamLAND reactor experiment. The results of this global analysis will also be presented.

Author: Dr KOSHIO, Yusuke (Kamioka observatory ICRR University of Tokyo (JP))

Presenter: Dr KOSHIO, Yusuke (Kamioka observatory ICRR University of Tokyo (JP))

Session Classification: Room 220 - Neutrinos / QCD, Jets, Parton Distributions - TR6

Track Classification: Track 8. Neutrinos