Contribution ID: **688** Type: **Parallel session talk**

Neutrino Oscillation Analysis with Combined Data from Super-Kamiokande and T2K

Thursday 18 July 2024 11:15 (15 minutes)

The nature of the neutrino mass ordering and whether neutrino oscillations violate CP symmetry remain among several open questions surrounding PMNS mixing. At present no single experiment has the ability to resolve these issues. Atmospheric neutrino data at Super-Kamiokande (Super-K) and accelerator neutrino data from T2K, however, offer complementary sensitivity to these puzzles. As both neutrino sources are observed at the same detector, Super-K, there is a clear benefit to analyzing the data sets together. This presentation will report results from the first such combined analysis, which utilizes unified uncertainty models of both neutrino interactions and the detector response. Combined constraints on open questions in the PMNS paradigm, including studies of the mass ordering and CP violation, using 3244.4 days of Super-K atmospheric neutrino data combined with beam neutrino data corresponding to 36e20 protons-on-target from T2K's first 10 run periods will be presented.

Alternate track

I read the instructions above

Yes

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