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T2K+NOvA Joint Measurement of Neutrino Oscillation Parameters

Thursday 18 July 2024 11:45 (15 minutes)

T2K and NOvA are two currently active long-baseline neutrino oscillation experiments studying $\nu_\mu/\bar{\nu}_\mu$ disappearance and $\nu_e/\bar{\nu}_e$ appearance in $\nu_\mu/\bar{\nu}_\mu$ accelerator neutrino beams.

This talk presents a joint T2K+NOvA neutrino oscillation analysis within the standard three active neutrino flavor paradigm, which includes each experiment's fully detailed detector simulations and takes advantage of the experiments' complementary oscillation baselines of 295 km and 810 km and neutrino energies around 0.6 GeV and 2 GeV for T2K and NOvA, respectively.

The combination of the differing sensitivities to neutrino oscillation and the T2K+NOvA data could constrain the oscillation parameters better than either experiment alone. Within a unified Bayesian inference, the results from the first T2K+NOvA joint neutrino oscillation measurement will be presented.

Alternate track

I read the instructions above

Yes

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