

## The T2K Oscillation Analysis and Future Prospects

*Wednesday 14 July 2021 14:45 (15 minutes)*

T2K has been accumulating data corresponding to  $3.6 \times 10^{21}$  POT over the past 10 years. It has been studying neutrino oscillations by observing a disappearance of muon flavored (anti)neutrinos and the appearance of electron flavored (anti)neutrinos in an accelerator-generated neutrino beam sent across Japan. In particular, the collaboration has recently published the first substantial 3-sigma constraints on the CP-violating phase,  $\delta_{CP}$ , in an April 2020 Nature article. The results from this analysis have since been updated to include 34% more neutrino mode data and significant improvements to the neutrino interaction and flux models. This talk will present the analysis that led to these new results and discuss some future prospects for joint analyses between T2K and other experiments (NO $\nu$ A and Super-Kamiokande) measuring neutrino oscillation parameters.

### Are you are a member of the APS Division of Particles and Fields?

No

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