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Recent Results from T2K and Future Prospects (18' + 2')

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Merging the following abstracts:

The T2K long-baseline neutrino oscillation experiment has been running in anti-neutrino mode since 2014 and recently released anti-neutrino oscillation results. These results have been updated with further data and now include the full three-flavour anti-neutrino oscillation analysis. We will present these new results and compare them with the neutrino oscillation results, giving the most sensitive comparison to date. The three-flavour neutrino and anti-neutrino results are used to obtain world-leading measurements of δ_{CP} , θ_{23} and Δm_{223} .

The T2K long-baseline neutrino experiment is in the process of proposing a follow-up experiment, T2K2, with higher beam intensity, upgraded detectors and improved sensitivity to neutrino properties. The anticipated sensitivity and reach of T2K2 will be discussed in this talk, as well as possible detector upgrades. In particular, the sensitivity should allow for a 3σ discovery of CP violation in the case of maximum CP violation, after 10 years of data-taking.

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