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Study of neutrino oscillations with accelerator and atmospheric neutrinos

Saturday 5 July 2025 10:00 (30 minutes)

The current status of the neutrino oscillations will be revived in the talk. An emphasis will be put on a search for CP violation in the leptonic sector of the Standard Model and measurements of the CP violating phase \delta_CP. The results obtained with accelerator neutrinos in the long baseline experiments T2K and NOvA, as well as measurements with atmospheric neutrinos in the SuperKamiokande experiment will be presented. The recent progress in the study of the neutrino mass ordering will be discussed. Further perspectives of the current oscillation experiments will be briefly outlined. The next generation neutrino experiments HyperKamiokande and DUNE have a very extensive scientific program with the main goal of discovering of CP violation and measuring of \delta_CP. Both experiments can also determine the neutrino mass ordering. The current status, progress, and prospects in construction and commissioning of HyperKamiokande and DUNE with neutrino beams will be presented.

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