

Gordon Research Seminar in Particle Physics: Pushing the Frontiers of Particle Physics During the LHC Run II Era

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Nonstandard neutrino interactions at the MOMENT

The proposed MuOn-decay MEdium baseline NeuTrino beam experiment (MOMENT) is one of the neutrino experiments to measure the unknown 3-flavour parameter CP-violating phase. We consider the discovery reach of leptonic CP violation at MOMENT confronting with Non-standard neutrino Interactions (NSIs). We find that NSIs can induce bias in CP-violating phase measurements. We are able to exclude larger parameter regions induced by source and detector NSIs at the MOMENT. Furthermore, we compare the constraints for NSI parameters at MOMENT with limits expected from future superbeam experiments like T2HKK and DUNE.

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Session Classification: Poster Session