

APCTP SEMINAR

Lepton number violation: from neutrinoless double beta decay to collider searches

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Online via ZOOM

Lepton number, which is conserved in all perturbative interactions in the Standard Model (SM) of particle physics, can be violated in many scenarios beyond the SM. In particular, the lepton number violation by two units implies the Majorana nature of neutrinos and vice versa, even though the lepton number violating (LNV) interactions may not give rise to the observed neutrino masses. The seeking for possible LNV interactions at the high-intensity and high-energy frontiers is of particular interest, since it could shed light on neutrino physics and new physics beyond the SM at the TeV scale. In this talk, I will show how lepton number violation responsible for neutrinoless double beta decay, can be differentiated at the LHC in the conventional (prompt) and displaced searches.

■ ZOOM Webinar

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