

Phenomenology 2025 Symposium



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The Quark-Lepton Portal

Monday 19 May 2025 17:15 (15 minutes)

Light exotics effective field theory (LEX-EFT) focuses on the idea that there may be light BSM particles that are so far undiscovered. This talk will focus on a specific portal to new physics, the quark-lepton portal. This portal encompasses all possible interactions, up to dimension six, that a quark, lepton, and LEX field (with or without additional SM fields) can have. Within this portal, we can access fields with unusual combinations of baryon and lepton number, along with particles with a wide array of SU(3) and SU(2) charges. The implications of this are large, as there have been very few in-depth studies done on fields with higher representations under these gauge groups. Many of these particles would create very unusual signatures, and the implications of these signatures at both current and future colliders will be discussed.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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Session Classification: Flavor

Track Classification: Quark and Lepton Flavor Physics