

## Phenomenology 2020 Symposium



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# Neutral and Doubly-Charged Scalars at Future Lepton Colliders

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Many new physics scenarios beyond the Standard Model (BSM) often necessitate the existence of new neutral and/or charged scalar fields, which might couple to the SM charged leptons and thus give some BSM signals while evading all existing constraints. We show that future lepton colliders provide a clean environment to probe these BSM including some interesting lepton flavor violating (LFV) signals. We study the distributions of the final state leptons to distinguish the BSM contributions from neutral and doublycharged scalars each other, as well as from the irreducible SM background at future lepton colliders, such as ILC and CLIC.

## Summary

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