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## Type-II see-saw: searching the LHC elusive low-mass triplet-like Higgses at $e^-e^+$ colliders

Monday 12 December 2022 14:00 (1 hour)

While the triplet-like Higgses up to a few hundred GeV masses are already excluded for a vast region of the model parameter space from the LHC searches, strikingly, there is a region of this parameter space that is beyond the reach of the existing LHC searches, and doubly/singly-charged and neutral Higgses as light as 200 GeV or even lighter are allowed by the LHC data. We study several search strategies targeting different parts of this LHC elusive parameter space at two configurations of  $e^-e^+$  colliders — 500 GeV and 1 TeV centre of mass energies. We find that a vast region of this parameter space could be probed with  $5\sigma$  discovery with the early  $e^-e^+$  colliders' data.

### Session

Beyond the Standard Model

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