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## Prospects for New Discoveries Through Precision Measurements at e<sup>+</sup>e<sup>-</sup> Colliders

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We systematically study potential effects of BSM physics in the  $e^+e^- \rightarrow ZH$  process. To this end, we include all relevant dimension-6 Standard Model Effective Field Theory operators and work to next-to-leading order (NLO) accuracy in the electro-weak coupling. We consider both polarized and unpolarized electron and positron beams and present results for  $\sqrt{s} = 240, 365$  and  $500$  GeV and emphasize observables where the NLO predictions differ significantly from the leading order (LO) results. At NLO, a sensitivity arises to operators that do not contribute at tree level, such as the Higgs trilinear coupling, CP violating operators, dimension-6 operators involving the top quark or anomalous Higgs-Z boson couplings, among many others. We compare the prospects of future  $e^+e^-$  colliders to explore these new physics effects with measurements from the LHC, electron EDMs (for CP violating operators), and Z pole measurements.

**Primary authors:** Dr ASTERIADIS, Konstantin (University of Regensburg); Dr GIARDINO, Pier Paolo (University "Autonoma" of Madrid); Dr SZAFRON, Robert (Brookhaven National Laboratory); Dr DAWSON, Sally (Brookhaven National Laboratory)

**Presenter:** Dr GIARDINO, Pier Paolo (University "Autonoma" of Madrid)

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