Kruger 2022: Discovery Physics at the LHC



Contribution ID: 37

Type: Oral

A search for a heavy pseudoscalar that decays into a Z boson and another heavy scalar boson, leading to four lepton final states in pp collisions at \sqrt{s} = 13~TeV.

A search for a heavy resonance pseudo-scalar, A, decaying into a Z boson and another heavy scalar boson, H, is carried out at the LHC using a data sample corresponding to an integrated luminosity of 139 fb⁻1 from proton-proton collisions at \sqrt{s} = 13-TeV. In these studies, the scalars H will decay to two scalars S or an S and a Standard Model Higgs boson H via an effective model. The $A \rightarrow Z(\rightarrow \ell \ell)$ and $H(H \rightarrow SS \text{ or } Sh)$ production in at least four leptons final state will be examined in this search.

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