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Search for a heavy pseudo-scalar decaying into a Z boson and another heavy scalar boson leading to four lepton final states in pp collisions at $\sqrt{s}$ = 13˜TeV with the ATLAS detector

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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 $A \to Z(\to \ell\ell)$ and $H(H \to SS$ or $Sh)$ production in at least four leptons final state will be examined in this search.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

PhD

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