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## Search for a heavy pseudoscalar boson decaying to a Z and a Higgs boson at $\sqrt{s}=13\text{ TeV}$ (Article) [\(Open Access\)](#)

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### Abstract

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A search is presented for a heavy pseudoscalar boson  $A$  decaying to a  $Z$  boson and a Higgs boson with mass of  $125\text{ GeV}$ . In the final state considered, the Higgs boson decays to a bottom quark and antiquark, and the  $Z$  boson decays either into a pair of electrons, muons, or neutrinos. The analysis is performed using a data sample corresponding to an integrated luminosity of  $35.9\text{ fb}^{-1}$  collected in 2016 by the CMS experiment at the LHC from proton–proton collisions at a center-of-mass energy of  $13\text{ TeV}$ . The data are found to be consistent with the background expectations. Exclusion limits are set in the context of two-Higgs-doublet models in the  $A$  boson mass range between  $225$  and  $1000\text{ GeV}$ . © 2019, CERN for the benefit of the CMS collaboration.

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