

## Search for exotic decay of the Higgs boson $H \rightarrow Z a \rightarrow 4\ell gg$

A search for the exotic decay of the Higgs boson to a Z boson and a light pseudoscalar particle, decaying, respectively, to two leptons and two photons, is presented. The search is based on proton-proton collision data at a center-of-mass energy of  $\sqrt{s} = 13$  TeV, collected by the CMS detector and corresponding to an integrated luminosity of 138 fb<sup>-1</sup>. The analysis probes pseudoscalar masses  $m_a$  between 1 and 30 GeV, leading to two pairs of well-isolated leptons and photons. Upper limits at 95% confidence level are set on the product of the Higgs boson production cross section and its branching to two leptons and two photons. Limits on axion-like particle models are also reported.

**Presenter:** WANG, Zebing

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