Abstract Submitted
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Rare Higgs Decays into Z Boson and Upsilon Meson[1] JESSE HARRIS, University of Tennessee, CMS CERN COLLABORATION — Rare decays of the Higgs boson are promising laboratories to search for physics beyond the standard model (BSM). Such BSM physics might alter Yukawa couplings to lighter quarks and add loop diagrams, possibly resulting in higher decay rates than predicted by the standard model. For the first time the decay of the Higgs boson into a Z boson and Upsilon states are searched, where the Y(1S), Y(2S) and Y(3S) states are combined. A data sample of proton-proton collisions collected at a center-of-mass energy of 13 TeV with the Compact Muon Solenoid detector at the Large Hadron Collider that corresponds to an integrated luminosity of about 137 fb−1 is used. I will present the search and implications for future searches of BSM signatures at high luminosity.

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