## 2019 Meeting of the Division of Particles & Fields of the American Physical Society



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## Rare Higgs Decays into Quarkonia Pairs

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Rare decays of the Higgs boson to mesons are a promising laboratory to study couplings to lighter quarks and physics beyond the standard model. A search for decays of the Higgs and the Z boson to pairs of  $J/\psi$  and Y resonances with subsequent decays of the mesons into muon pairs is performed with the Compact Muon Solenoid detector at the Large Hadron Collider (LHC). A data sample of proton-proton collisions collected in 2017 at a center-of-mass energy of 13 TeV is used. I will present results of this search and implications for future searches of beyond standard model signatures at high luminosity.

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