

Abstract Submitted  
for the 4CF17 Meeting of  
The American Physical Society

**Search for supersymmetry using boosted Higgs Bosons and missing transverse momentum in proton-proton collisions at 13 TeV** FRANK JENSEN, Univ of Colorado - Boulder — CMS results at 8 and 13 TeV have placed bounds on gluino, squark, and electroweakino production in supersymmetric extensions to the Standard Model. As potentially new particles are pushed to larger masses the products of their decay will generically be imparted with large momenta. Certain classes of models predict boosted objects, such as high  $p_T$  Higgs or gauge bosons, in association with missing energy from sparticles escaping detection. A new analysis strategy using jet substructure techniques is applied to enhance sensitivity to models where a boosted object can be contained in a single large jet. We will describe an analysis looking for evidence of supersymmetry in events with missing energy and boosted Higgs (decaying to b-quarks) or Z bosons in the final state. A search using the 35.9/fb of data collected at the CMS experiment during 2016 will be presented.

Frank Jensen  
Univ of Colorado - Boulder

Date submitted: 20 Sep 2017

Electronic form version 1.4