Abstract Submitted
for the TSS18 Meeting of
The American Physical Society

Machine learning to identify top quarks for BSM searches[1]
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— Many scenarios of physics beyond the standard model lead to final states involving a top quark, and its identification can play an important role. I will present a tagging method to identify tops quarks that decay into 3 separately resolved hadronic jets. This method complements other types of top quark identification, and is especially helpful in the case of low momentum top quarks. The tagger makes use of a neural network with both Recurrent Neural Network (RNN) and Dense Neural Network (DNN) elements. This tagger is applied in a search for supersymmetric particles in events with multiple top quarks and missing transverse energy. The search is based on proton-proton collisions collected with the CMS detector at the CERN LHC at a center of mass energy of 13 TeV.

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Date submitted: 01 Mar 2018   Electronic form version 1.4