

Search for Scalar Top-Quark Production in the all Hadronic Channel at 13 TeV

A search for top squarks in events with jets and missing transverse momentum is presented. The data were collected in proton-proton collisions at a center-of-mass energy of 13 TeV with the CMS detector at the LHC and correspond to an integrated luminosity of 2.3 fb^{-1} . Events are categorized by the properties of reconstructed jets, the presence of top quark candidates, and missing transverse momentum. No statistically significant excess of events above the expected contribution from standard model processes is observed. Exclusion limits are set in the context of simplified models of top squark pair production.

Summary

A search for top squarks in events with jets and missing transverse momentum is presented. The data were collected in proton-proton collisions at a center-of-mass energy of 13 TeV with the CMS detector at the LHC and correspond to an integrated luminosity of 2.3 fb^{-1} . Events are categorized by the properties of reconstructed jets, the presence of top quark candidates, and missing transverse momentum. No statistically significant excess of events above the expected contribution from standard model processes is observed. Exclusion limits are set in the context of simplified models of top squark pair production.

Primary author: NORBERG, Scarlet Rachel (University of Puerto Rico Department of Physics (PR))

Co-authors: LACROIX, Florent Sylvain (University of California Riverside (US)); LIU, Hongxuan (Baylor University (US)); WEI, Hua (University of California Riverside (US)); HATAKEYAMA, Kenichi (Baylor University (US)); MANDAL, Koushik (National Institute of Science Education and Research (IN)); STROBBE, Nadja (Fermi National Accelerator Lab. (US)); PASTIKA, Nathaniel Joseph (Baylor University (US)); CAVANAUGH, Richard (University of Illinois at Chicago (US)); ELVIRA, Victor Daniel (Fermi National Accelerator Lab. (US)); WU, Zhenbin (University of Illinois at Chicago (US))

Presenter: NORBERG, Scarlet Rachel (University of Puerto Rico Department of Physics (PR))