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Prediction of top-quark and W boson backgrounds in a search for supersymmetry with b-tagged jets at CMS KRISTEN FLOWERS, University of California, Santa Barbara, CMS COLLABORATION — Data-driven methods are presented for predicting major sources of standard model backgrounds in a search for supersymmetry at CMS. The data sample is selected from proton-proton collisions with significant hadronic transverse energy, one or more b-tagged jets, and missing transverse energy (MET). Such events can arise in SUSY models with production of top or bottom squarks. The main SM backgrounds for this search involve the production of top-quarks and W bosons where a charged lepton was produced but not observed or identified. We describe methods for predicting the MET spectrum of these backgrounds. These predictions are compared with observations in data and with simulations of gluino production.

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