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**A data driven method to estimate high MET tail in QCD events**  
ELIF ASLI ALBAYRAK, University of Iowa, CMS COLLABORATION — High pt multijet events with large missing energy is one of the important signature that will be used for supersymmetry discovery at LHC. Applying various analysis requirements in a cut-based study can reduce many Standard Model backgrounds. This channel, however, is vulnerable to fake missing energy that comes from mismeasured jets. Especially events which are produced by QCD processes will have fake missing energy, and rate of such events will be very high due to QCD cross-section. Even after optimized analysis cuts, QCD events will remain as a substantial background to this channel. In the early phases of LHC, studies based on Monte Carlo to estimate the fake missing energy from QCD events will not be reliable, thus, the use of data driven methods are imperative. In this talk we will present an estimation method for large missing transverse energy events in QCD background based on data for SUSY multi-jet and missing energy. This method is based on missing transverse energy projection fraction where mismeasured jet and low missing transverse momentum vectors are used to estimate high tail in missing transverse energy.

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