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Multiplicities of Hadrons Within Jets at STAR[1] SUZANNE WHEELER, JIM DRACHENBERG[2], Lamar University, STAR COLLABORATION — Jet measurements have long been tools used to understand QCD phenomena. There is still much to be learned from the production of hadrons inside of jets. In particular, hadron yields within jets from proton-proton collisions have been proposed as a way to unearth more information on gluon fragmentation functions. In 2011, the STAR experiment at RHIC collected 23 pb^{-1} of data from proton-proton collisions at $\sqrt{s} = 500$ GeV. The jets of most interest for gluon fragmentation functions are those with transverse momentum around 6-15 GeV/c. Large acceptance charged particle tracking and electromagnetic calorimetry make STAR an excellent jet detector. Time-of-flight and specific energy loss in the tracking system allow particle identification on the various types of hadrons within the jets, e.g., distinguishing pions from kaons and protons. An integral part of analyzing the data collected is understanding how the finite resolutions of the various detector subsystems influence the measured jet and hadron kinematics. For this reason, Monte Carlo simulations can be used to track the shifting of the hadron and jet kinematics between the generator level and the detector reconstruction level. The status of this analysis will be presented.

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