

Obtaining Requirements for the Future ATLAS Event Filter Tracking System

Gregory Penn, on behalf of the ATLAS collaboration

Yale University (gregory.penn@yale.edu)



Context: ATLAS is in design stage for future (HL-LHC) Event Filter (EF) system

Study Objective: Relate performance of EF tracking to performance of object reconstruction and identification algorithms

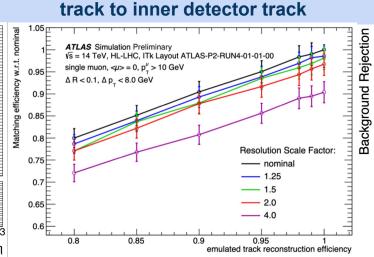
Main Method: Parametrize EF tracking performance as different track reconstruction efficiencies and track parameter resolutions

Results: Multiple studies with emulated EF tracks are presented, serves as basis for future EF Tracking design

Tau track classification

Efficiency p resolution SF = 10 0.75 / Nom 0.95 Reco Tau n

Matching of muon spectrometer track to inner detector track



Mutli-jet vertexing

