



Tau Identification

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Tau identification efficiency

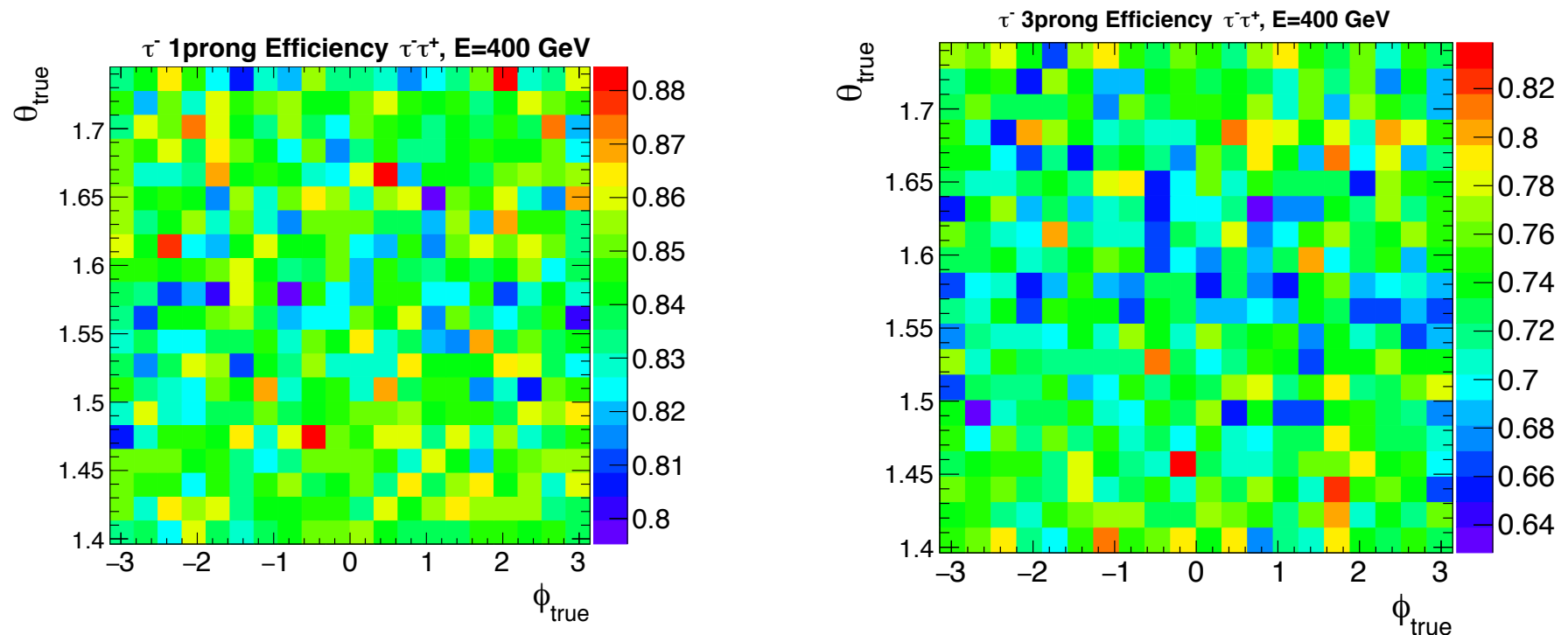


Efficiency for several tau samples: 200, 400, 1000, 2000 GeV

Require angular matching of reconstructed tau jet and MC truth tau jet:

10 degree (very relaxed 30 degree angular cut does hardly do anything)

Require charge matching (hardly any inefficiency <1 %)



Nice efficiencies for low energy samples (100,200 GeV taus)

Tau identification efficiency: issue at high energies

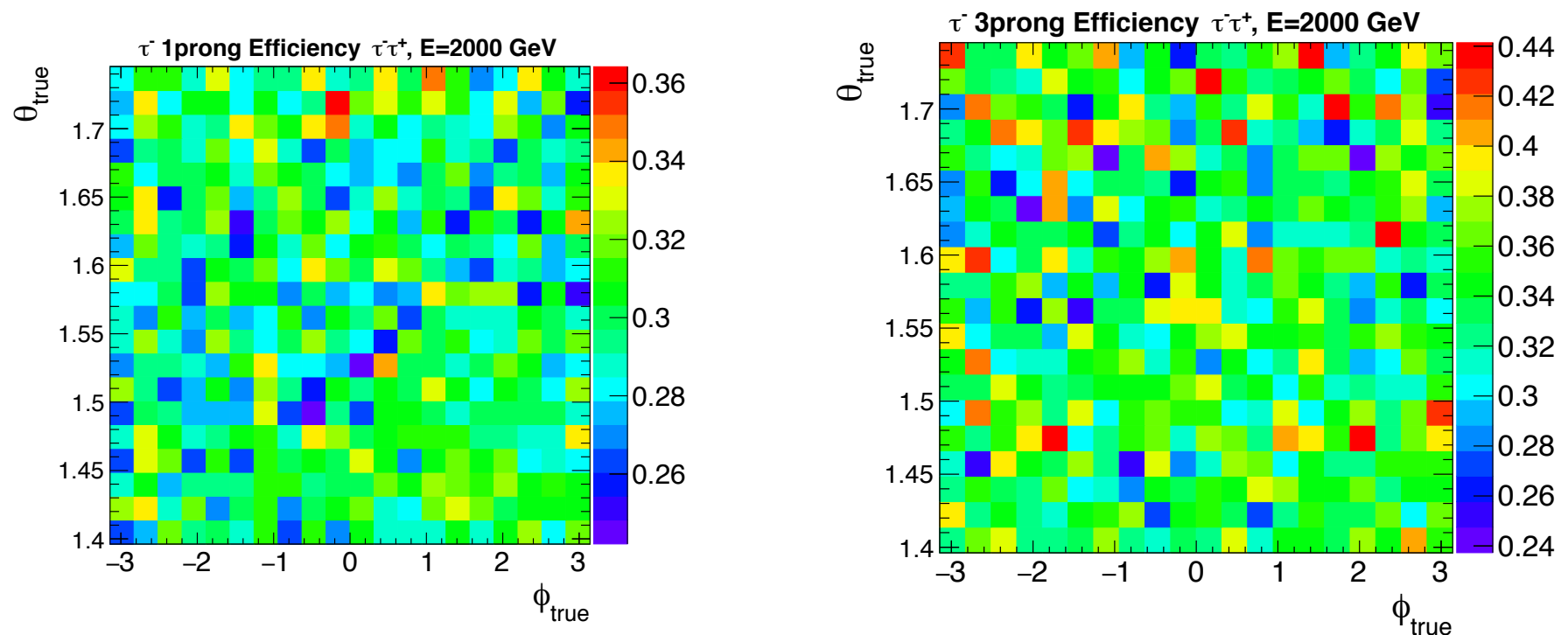


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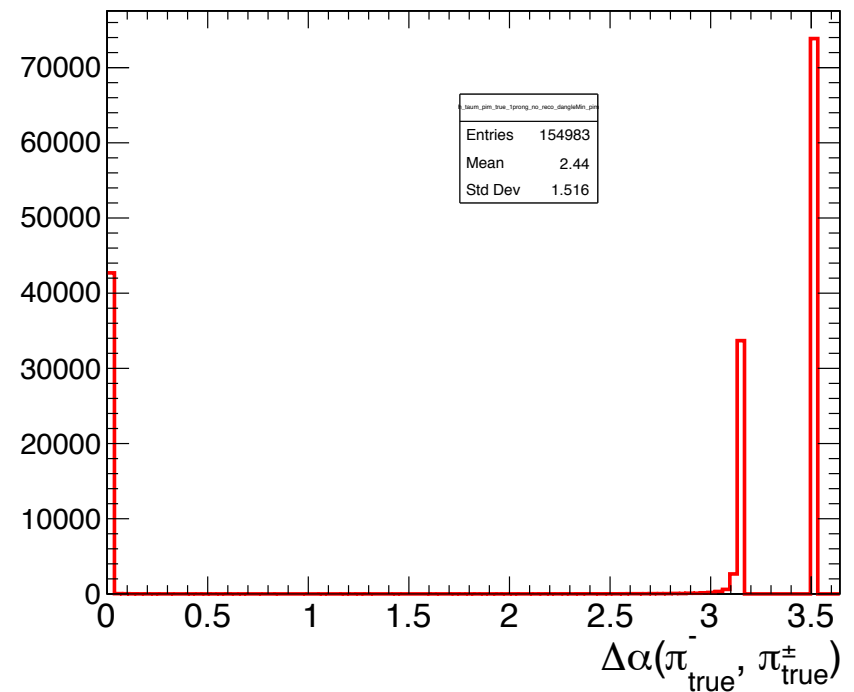
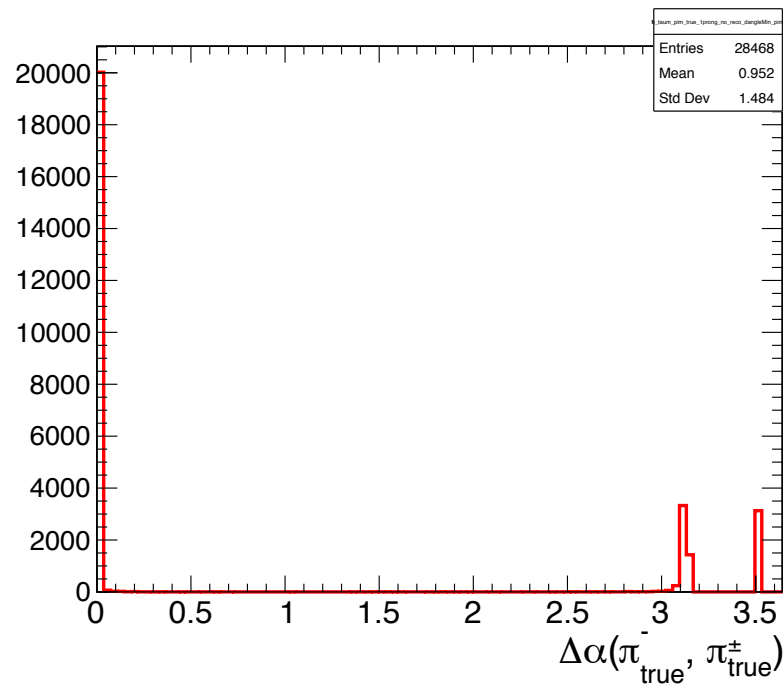


Efficiency decrease by over 50 %

Tau identification efficiency: where is the issue \rightarrow pion identification



We seem to loose pions at very high energies

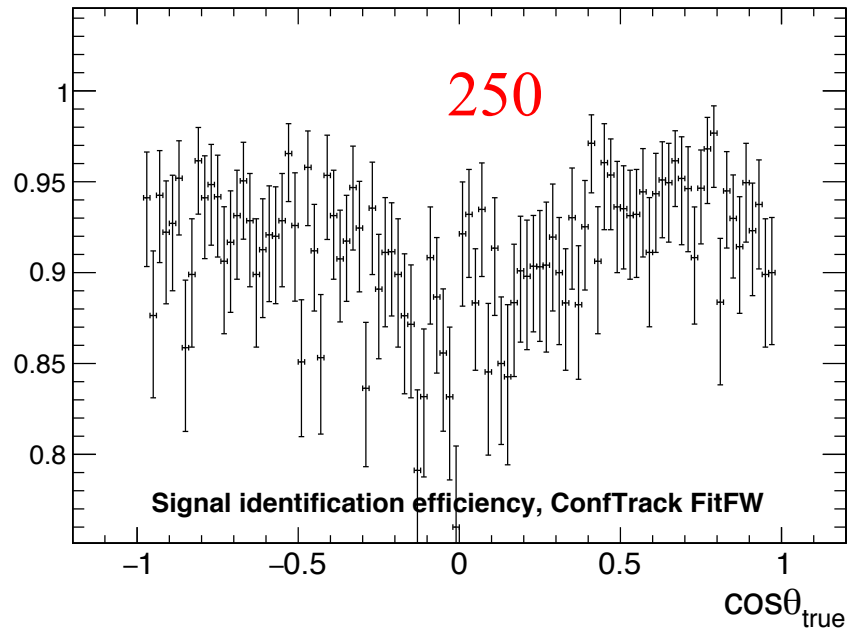


Pions at high energies

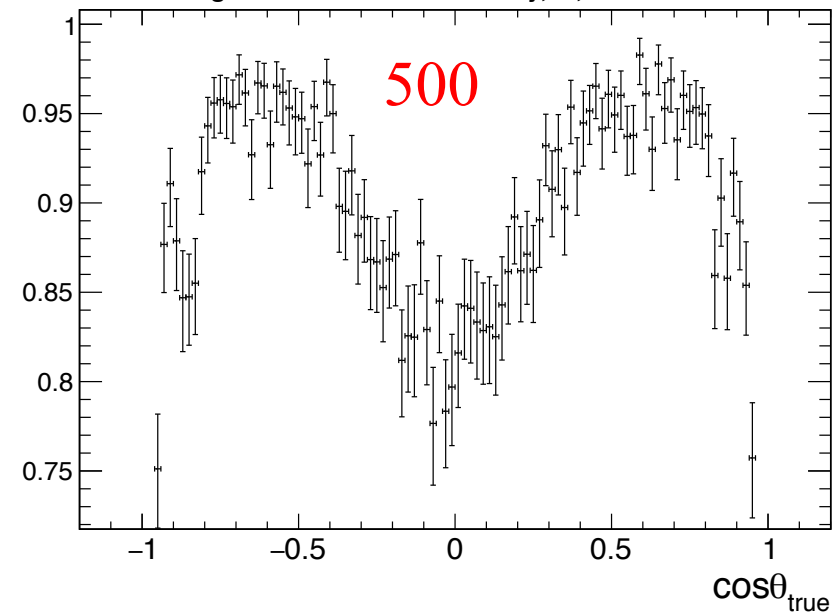
250 and 500 GeV identification efficiency



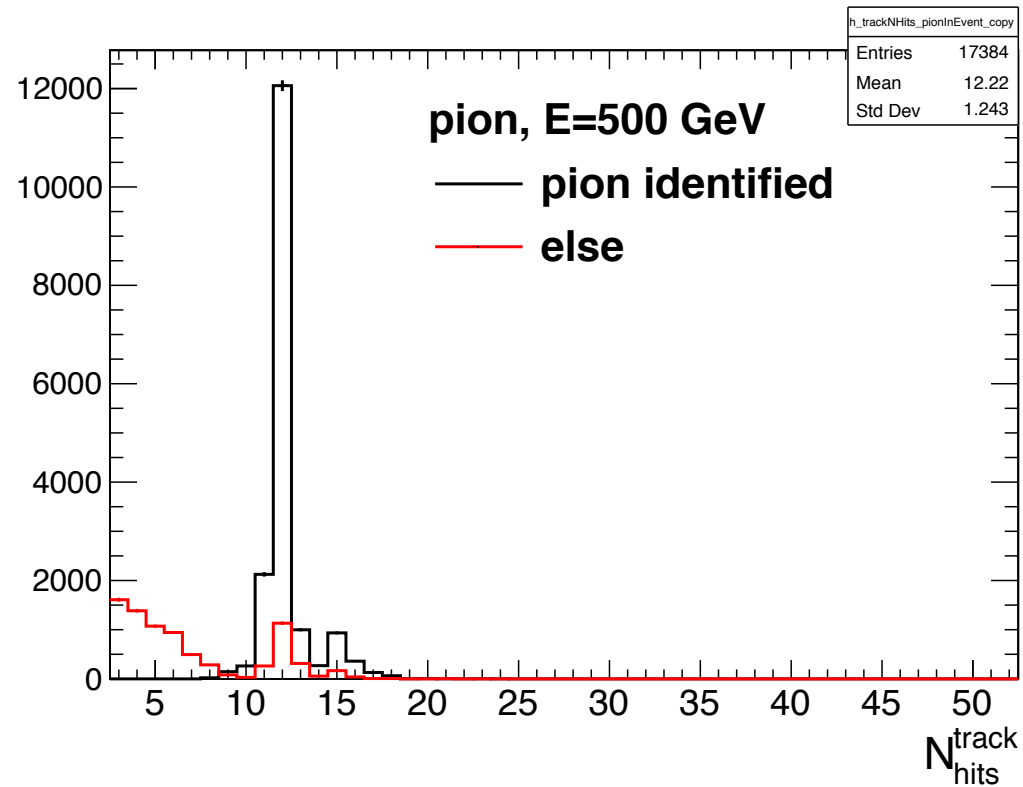
signal particle identification efficiency, π^- , E=250 GeV



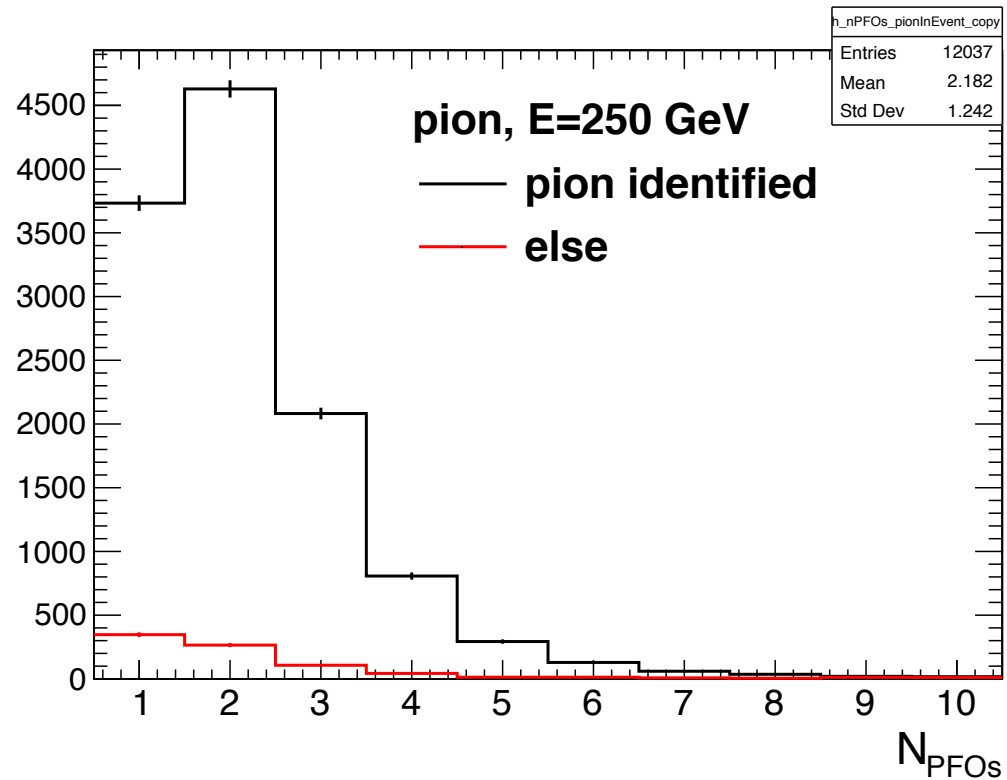
signal identification efficiency, π^- , E=500 GeV



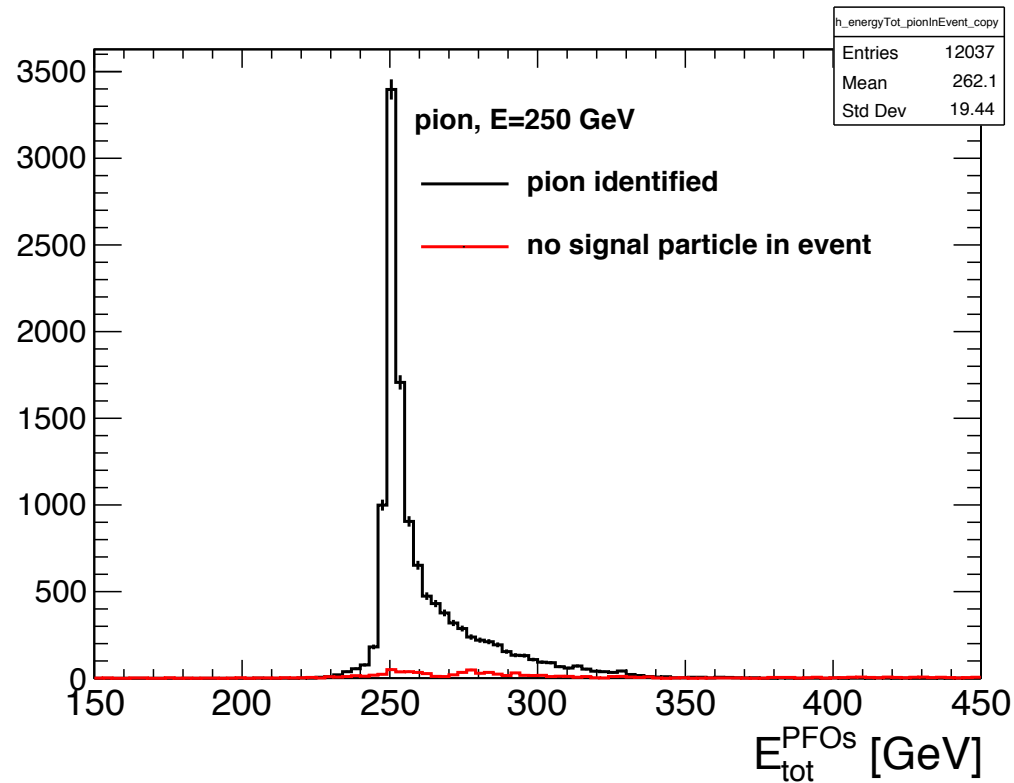
Pions at high energies loose hits



Pions at high energies split into multiple particles



Pions at high energies split into multiple particles: too high energy



Pions at high energies

too many clusters, energy deposit in Calo OK

