Track refitting tests

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Track refitting tests

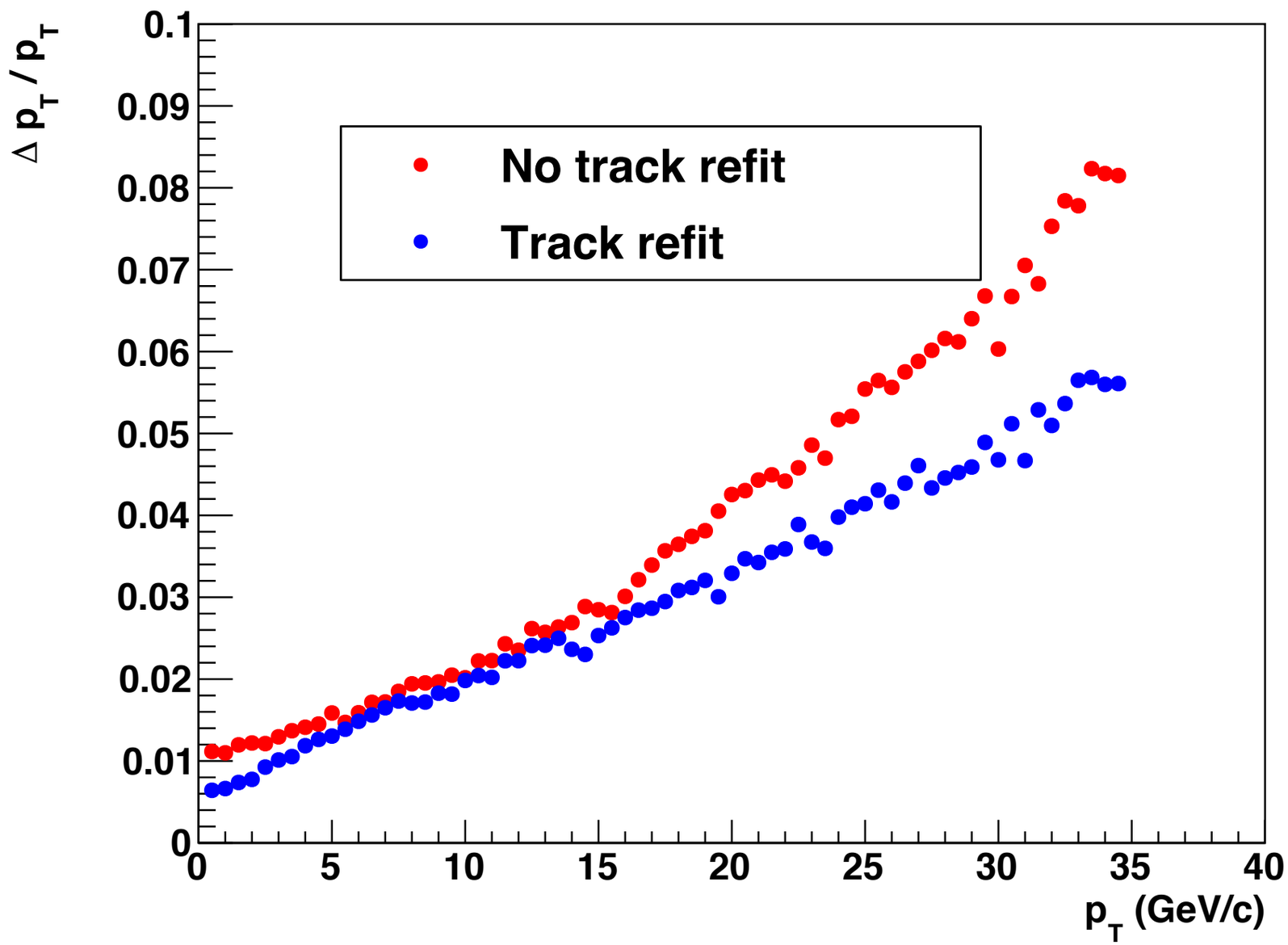
Using 2,000 central Hijing events with 100 embedded pions having p_T = 0.5 - 50 GeV/c.

MAPS ladders, 3 layers
INTT ladders, 4 layers
TPC 60 layers

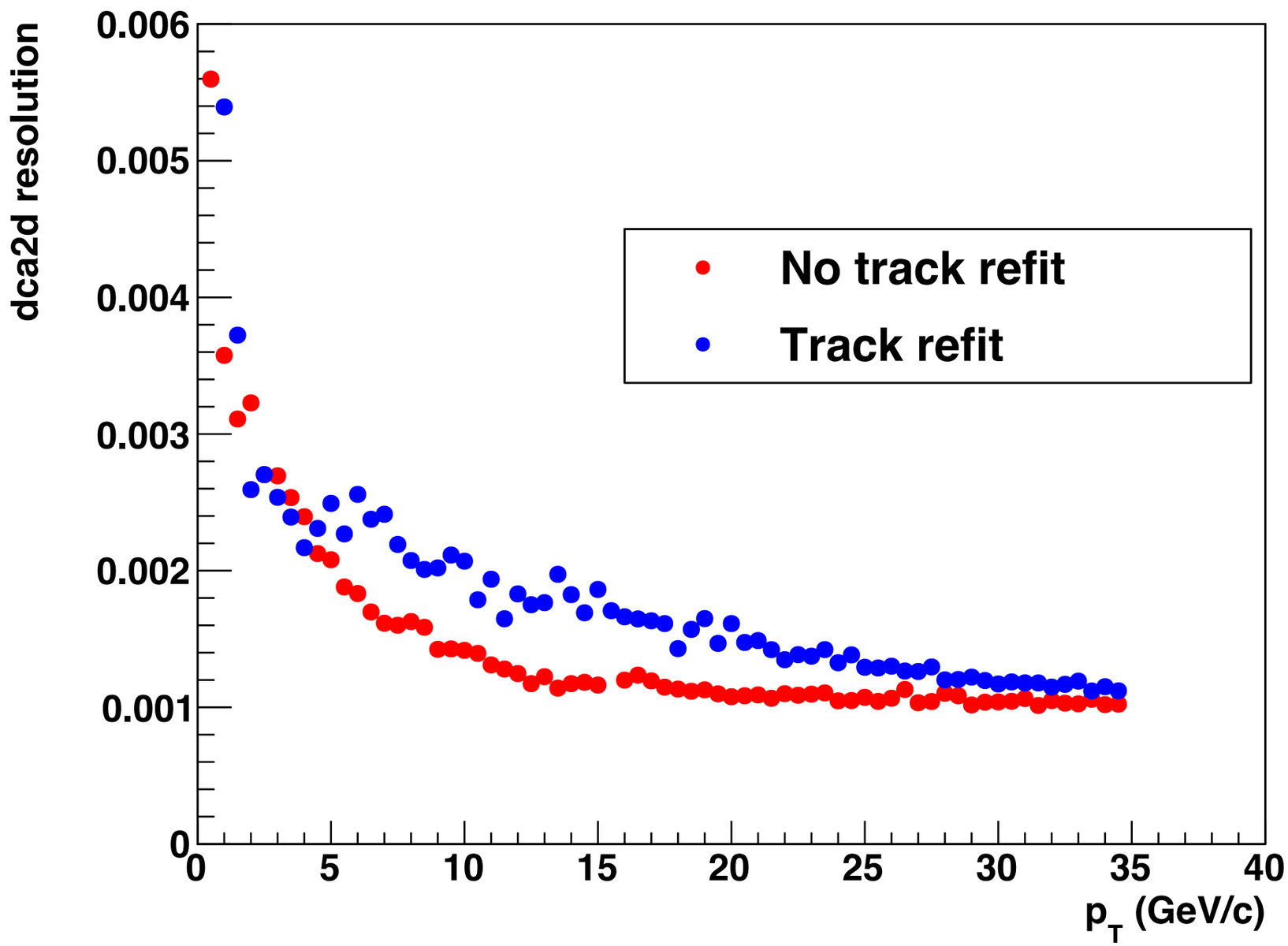
No track refit = default tracking
Track refit = default tracking + track refitter

```
PHG4TrackKalmanFitter *kalman = new PHG4TrackKalmanFitter();

kalman->set_detector_type(PHG4TrackKalmanFitter::LADDER_MAPS_LADDER_IT_TPC);
kalman->set_output_mode(PHG4TrackKalmanFitter::OverwriteOriginalNode);

se->registerSubsystem(kalman);
```

p_T resolution comparison

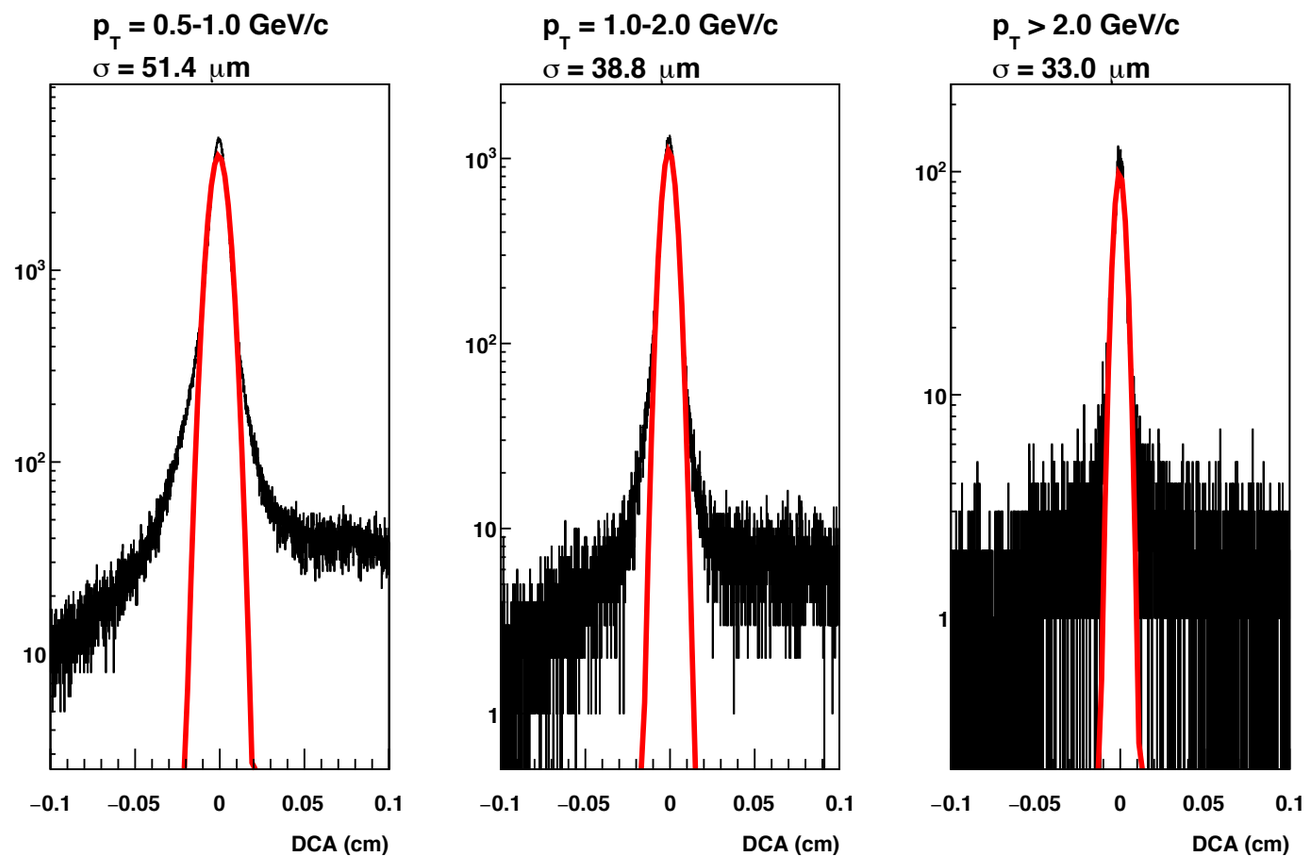


DCA resolution comparison

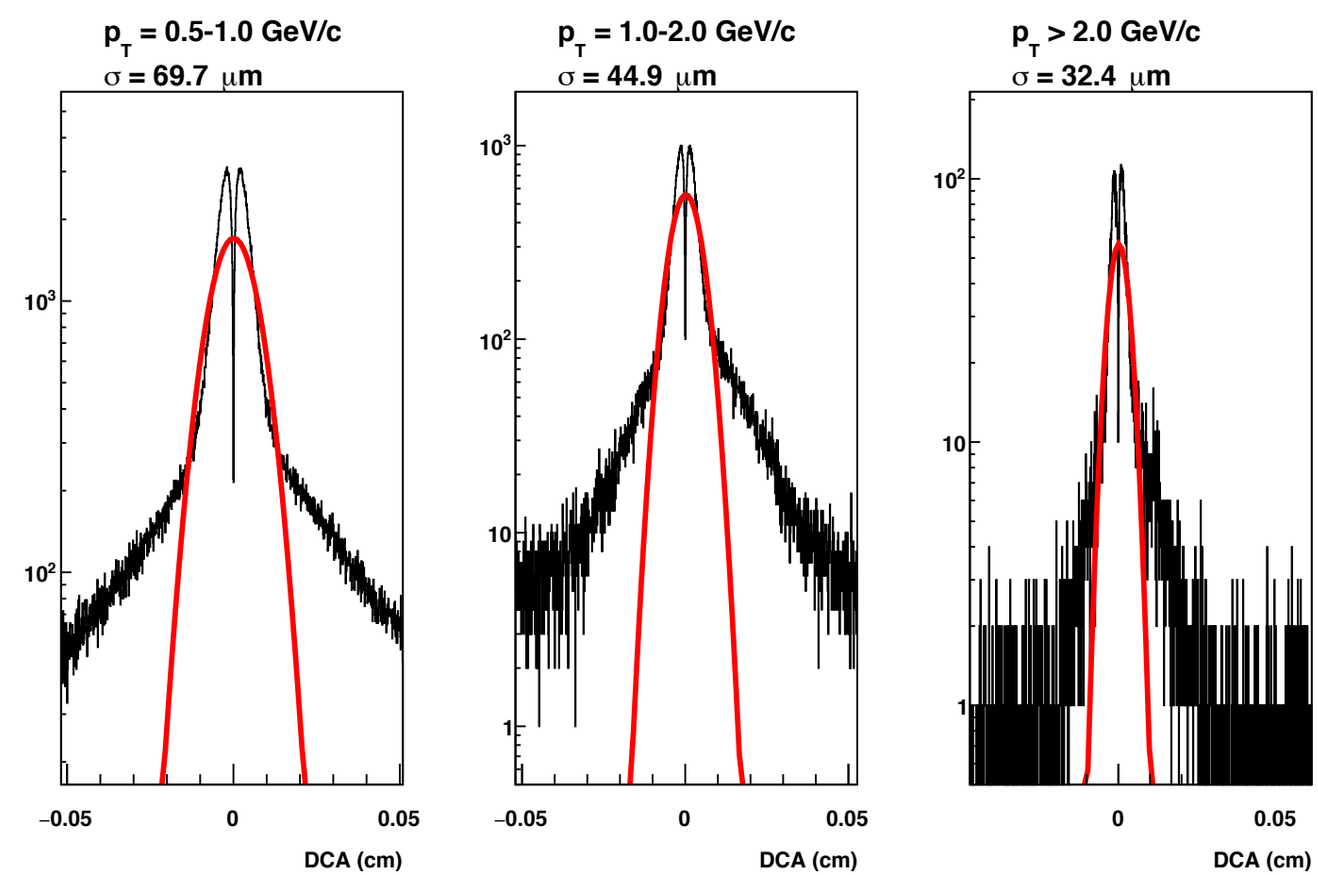


DCA distribution comparison

No track refit:

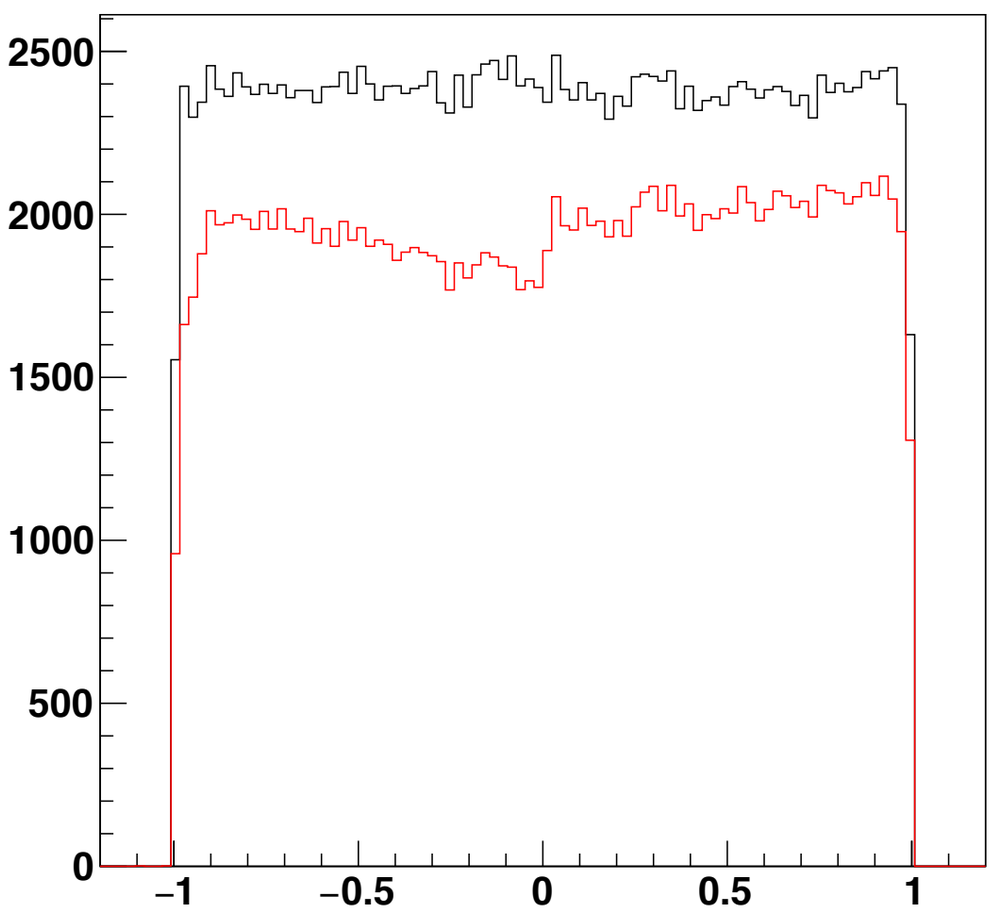


Track refit:
Note double peak

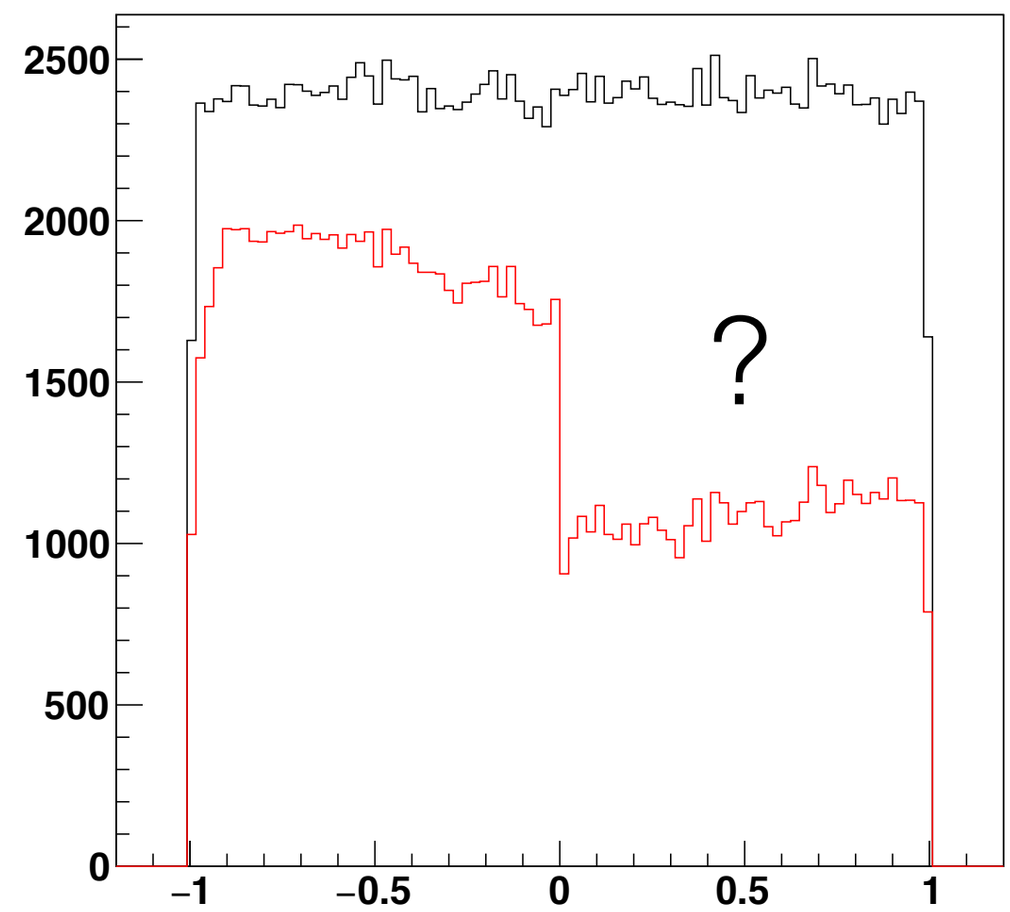


η distribution comparison

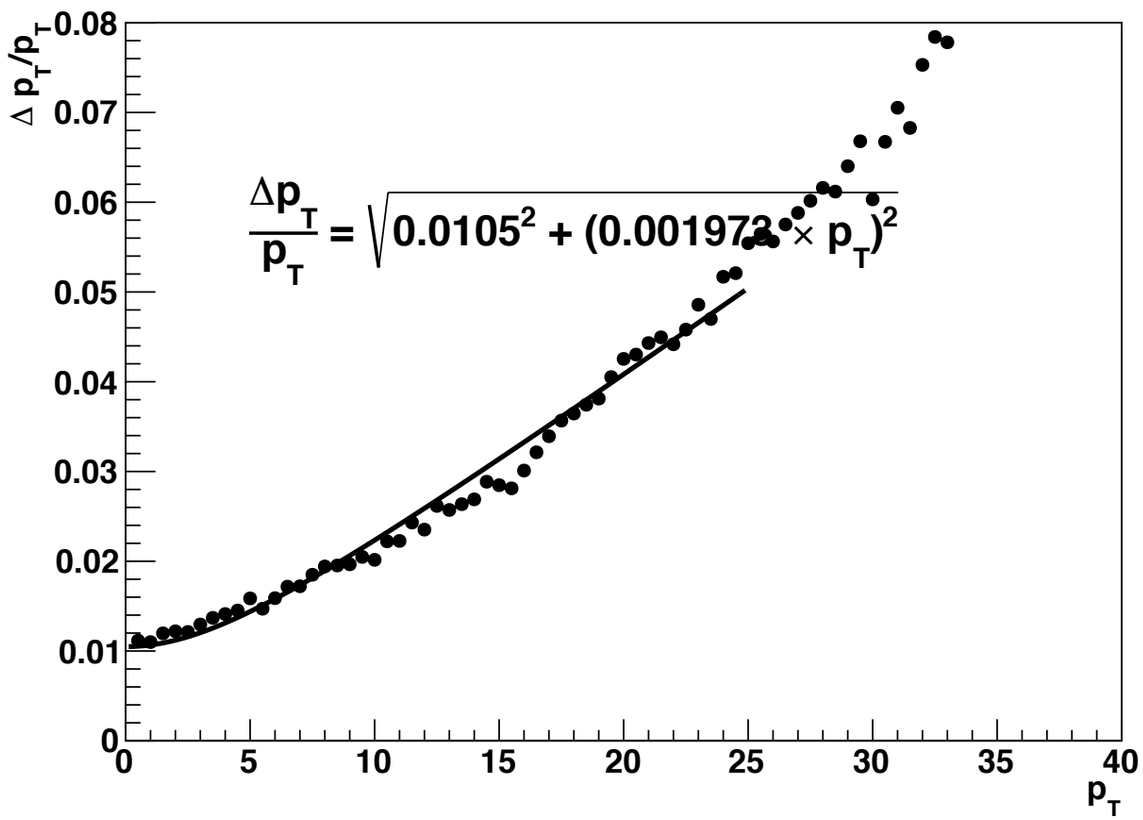
No track refit

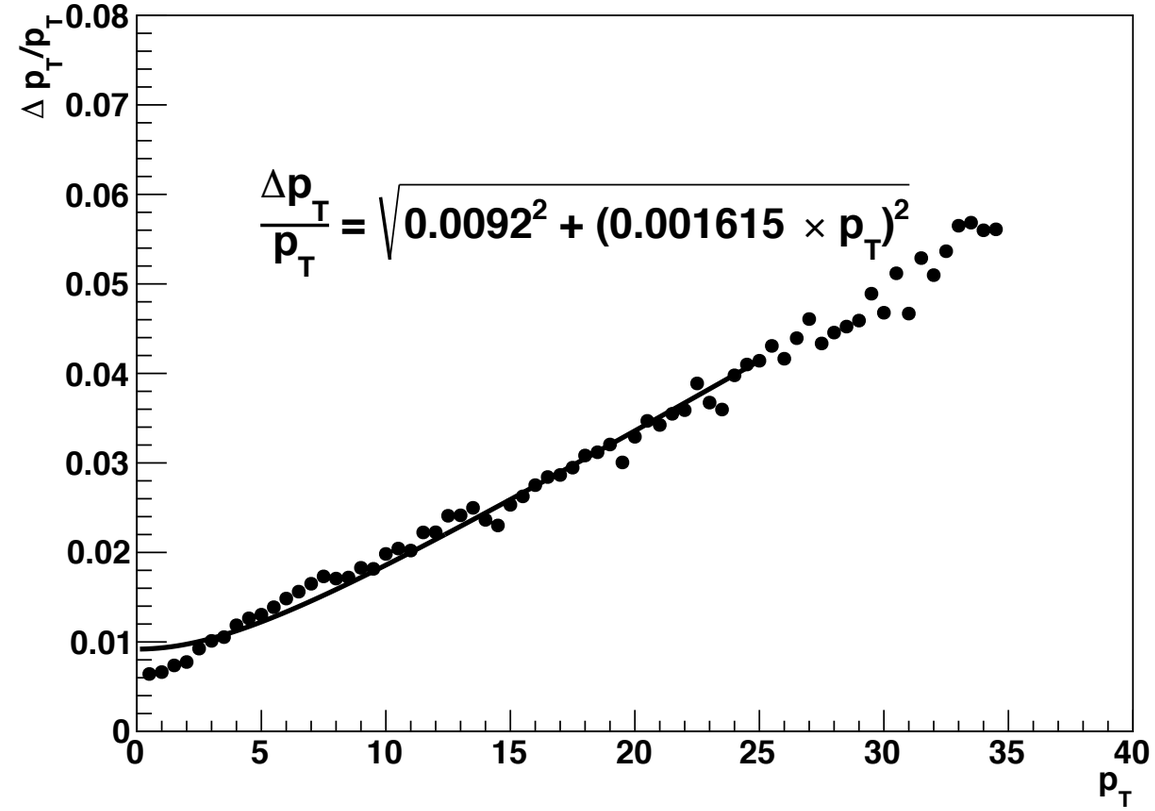


Track refit



Fits to p_T resolution

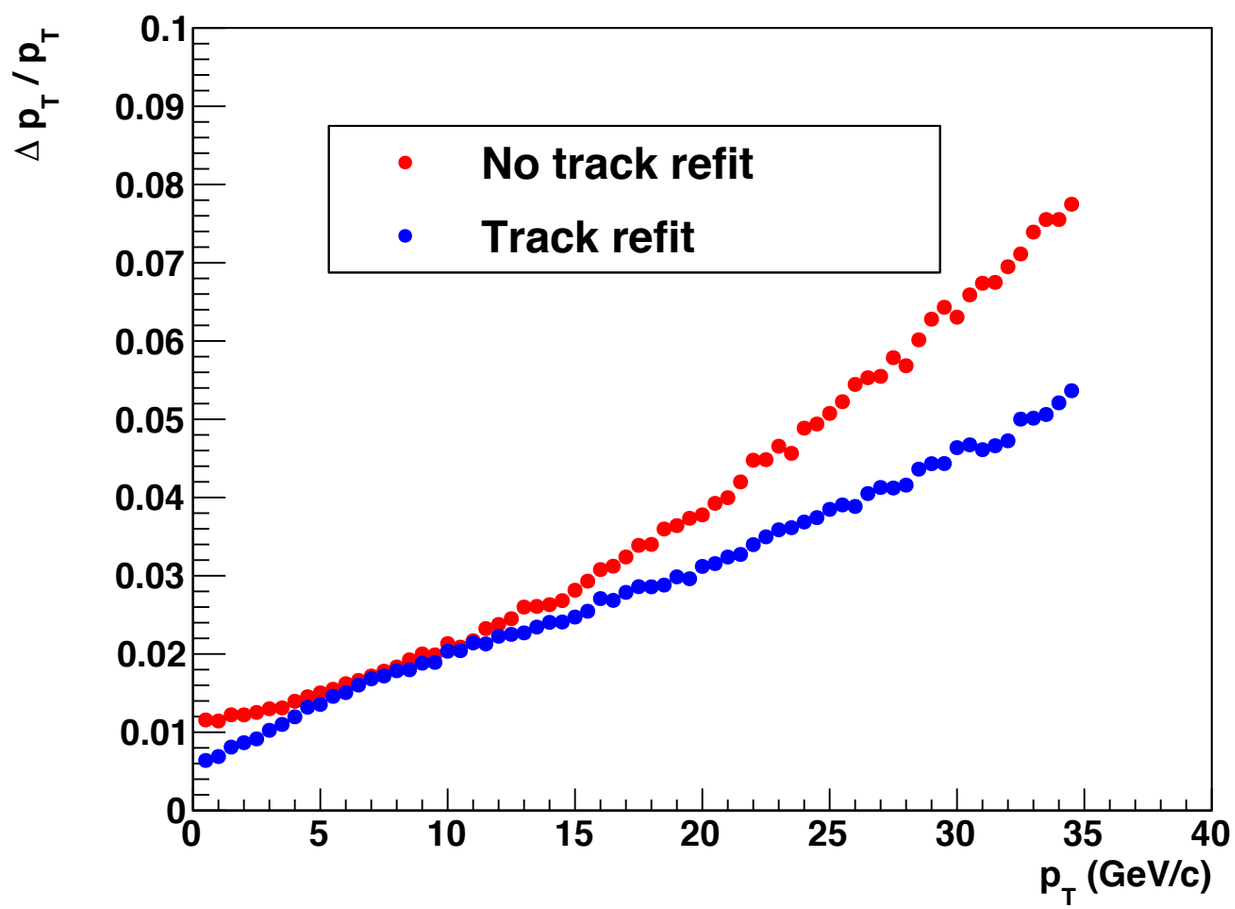


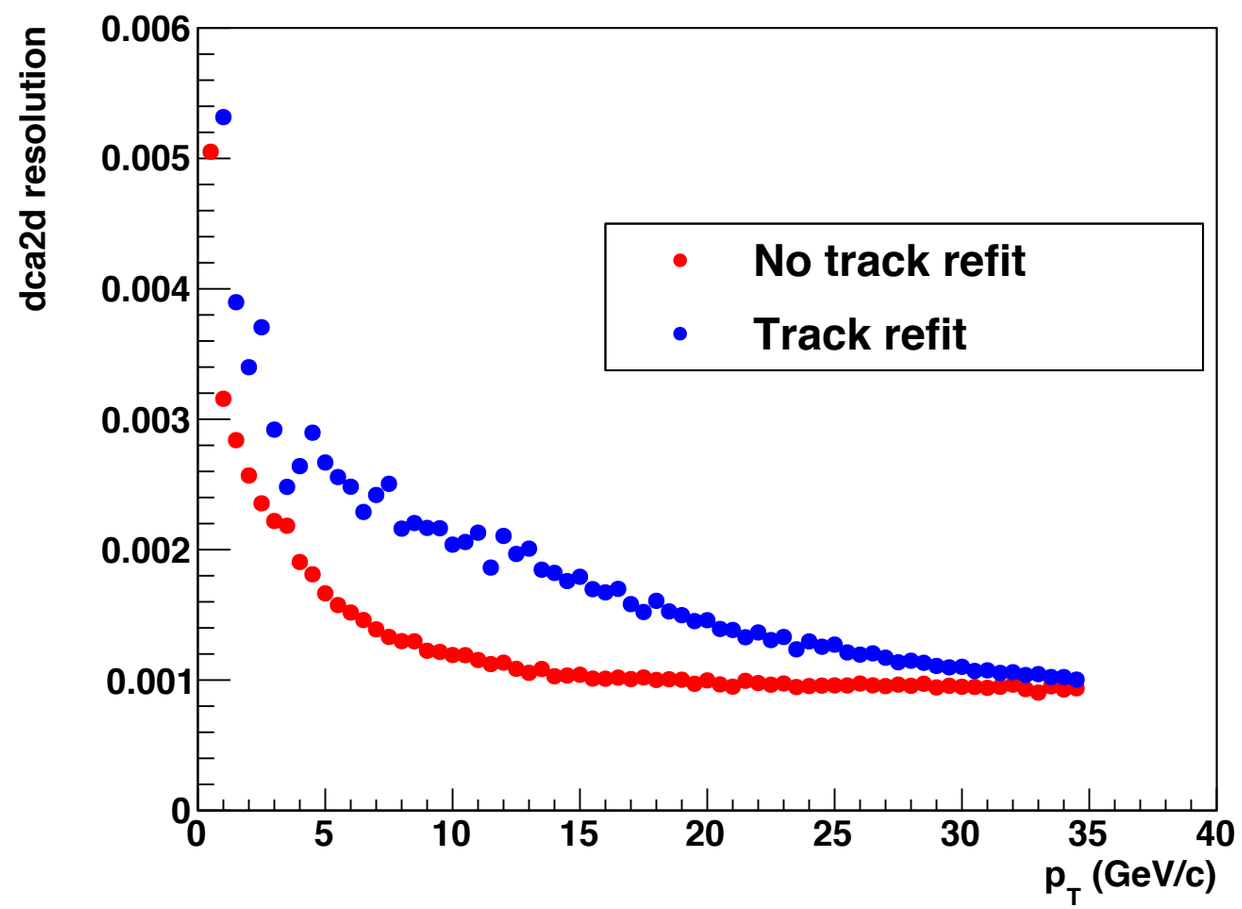


p_T resolution with 100 pion events

The same 100 pion events as were embedded in Hijing events in the earlier tests.

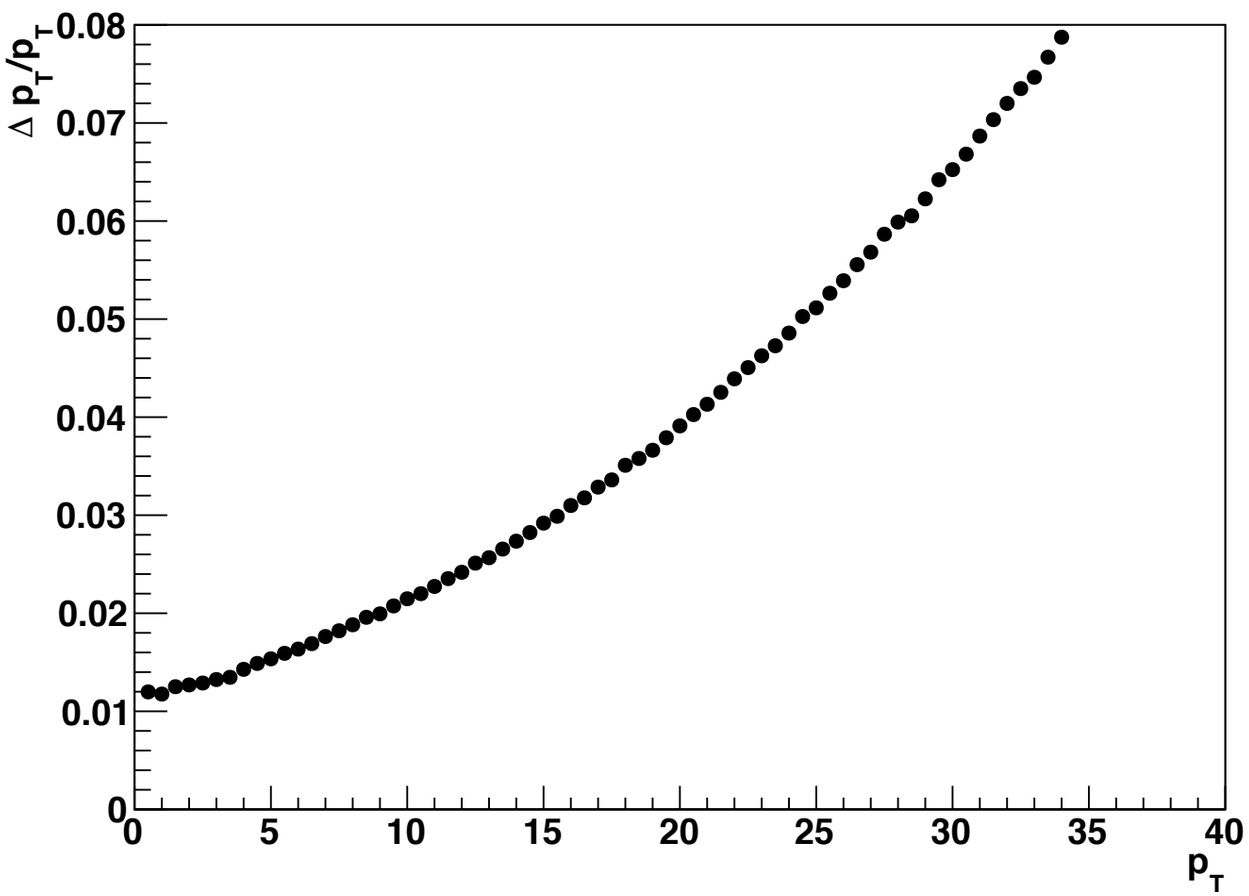
Gives very similar results as those where the 100 pions were embedded in Hijing events.

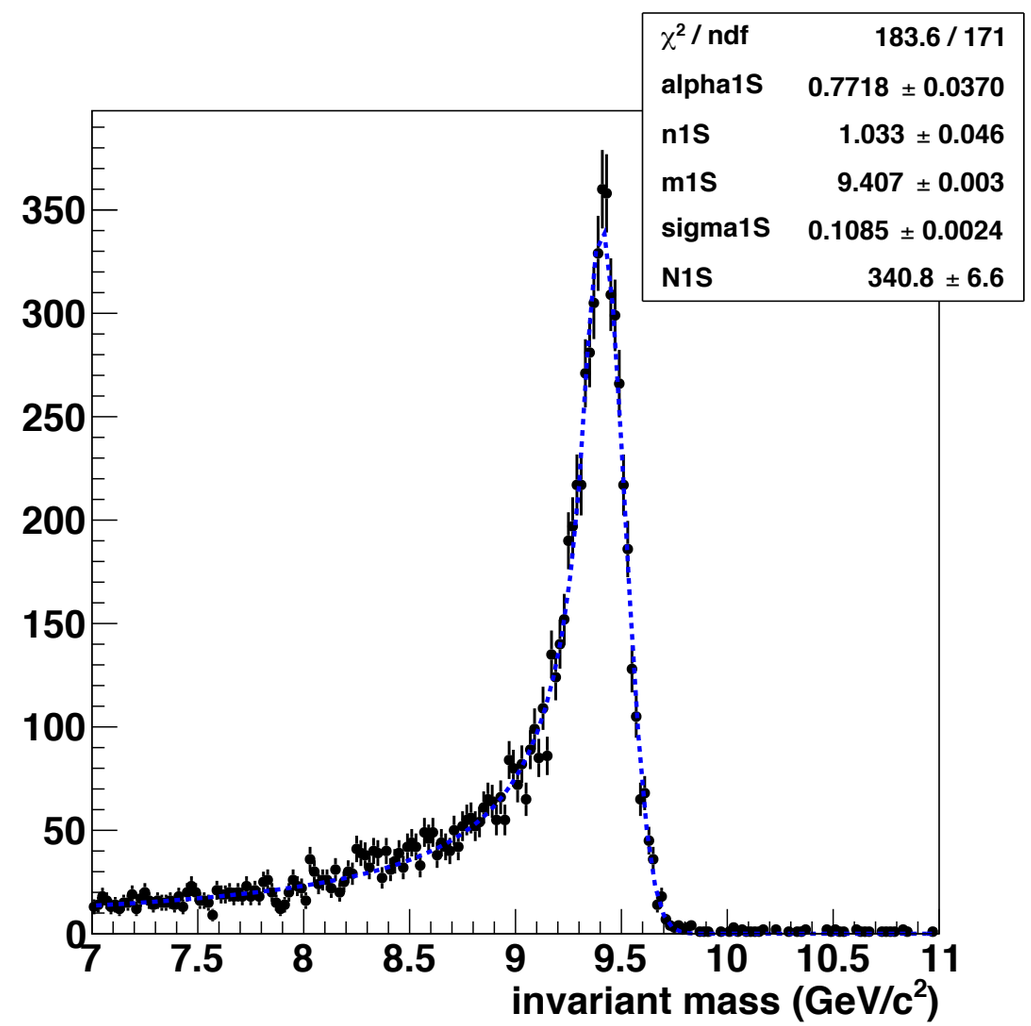


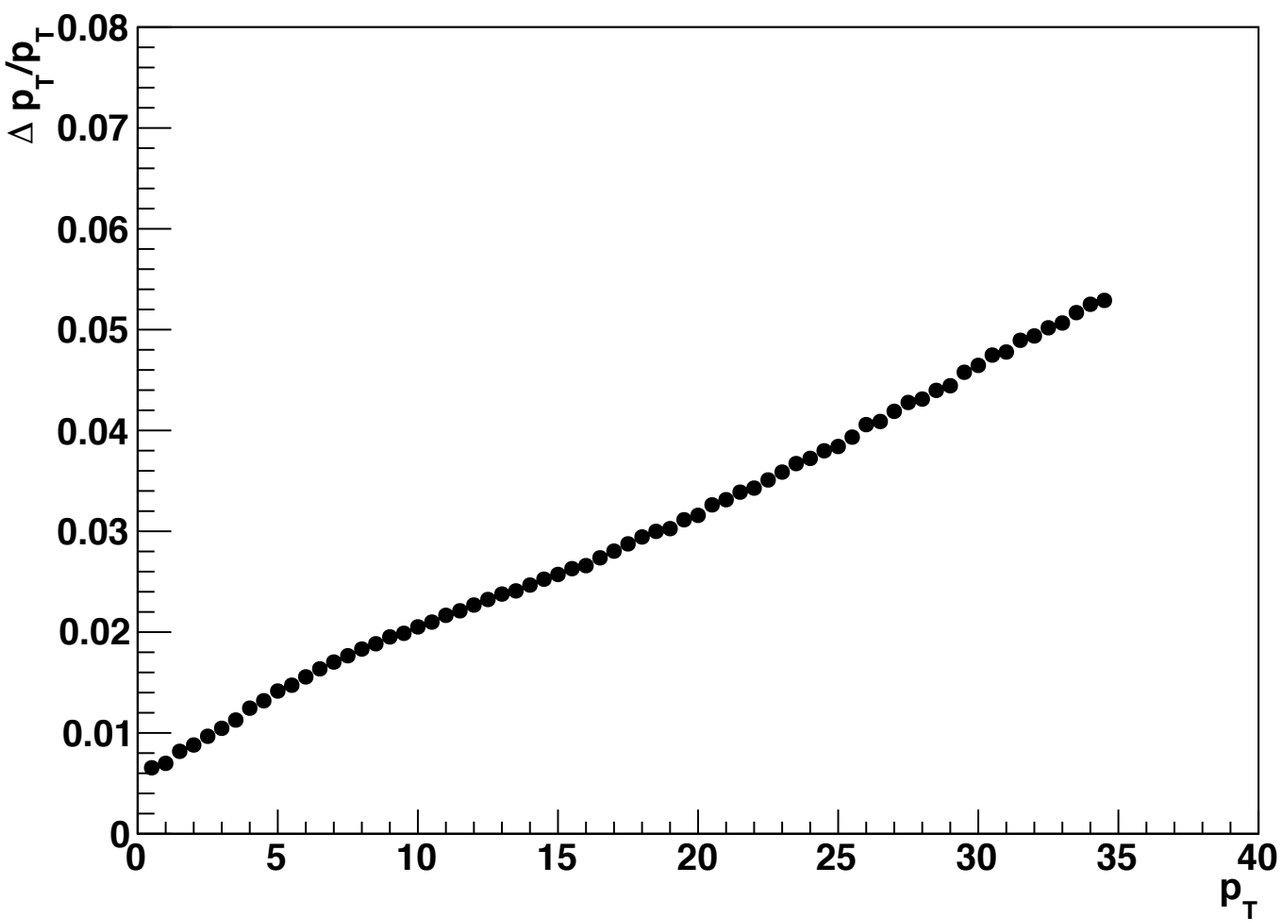
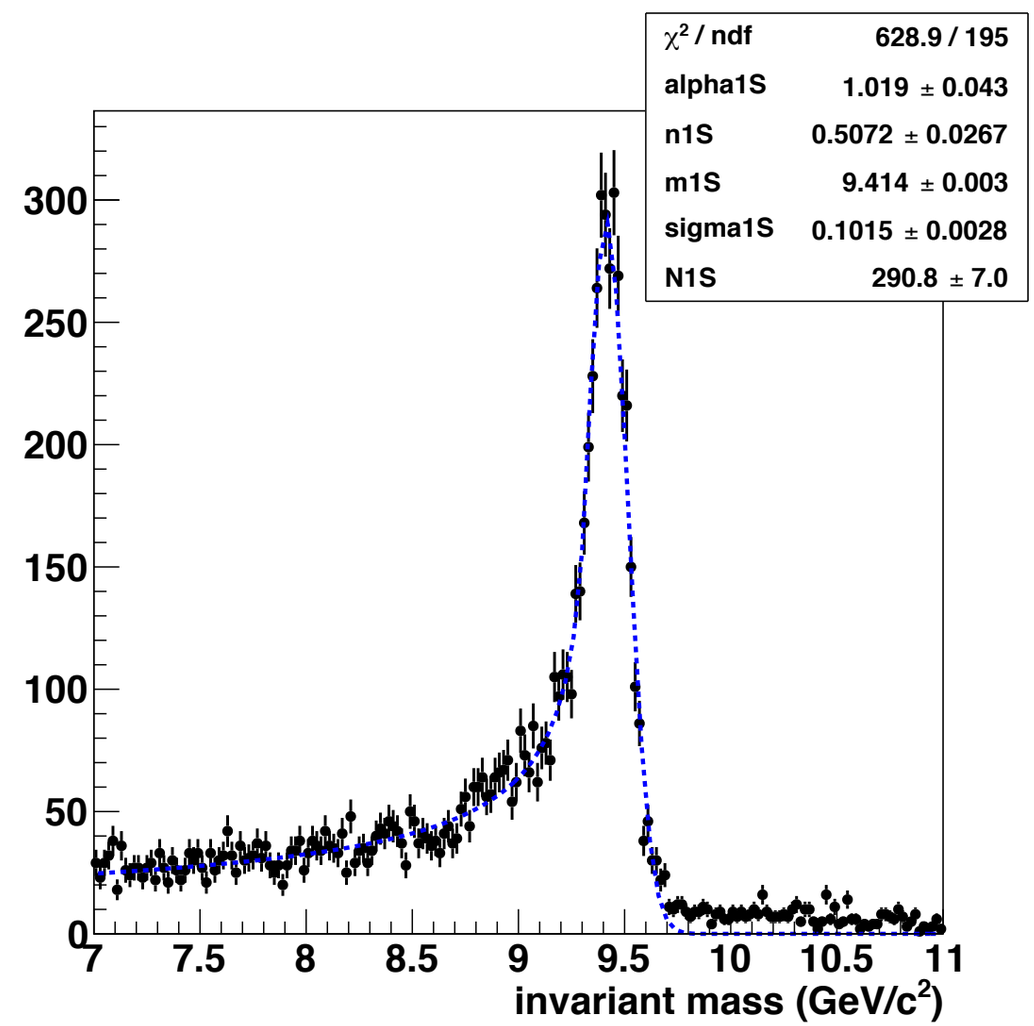


Upsilons embedded in 100 pion events

With no refitting:





Upsilons embedded in 100 pion events

With refitting: