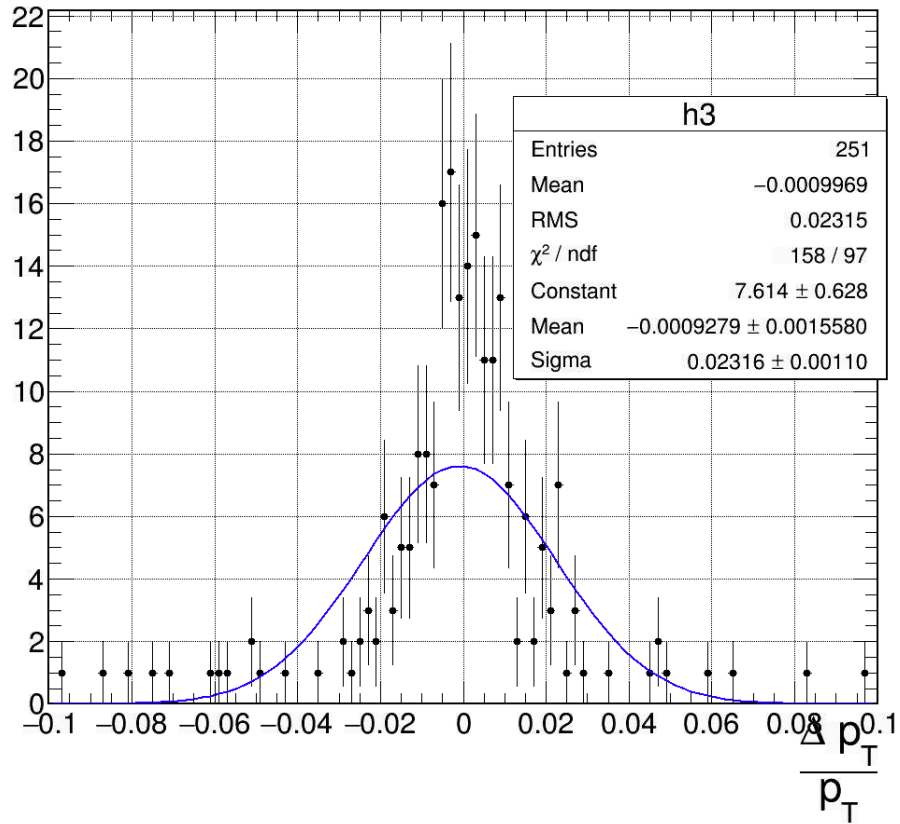


Bias caused by binned likelihood fitting

$g_{pT} > 4.5$ & $g_{pT} < 5.5$



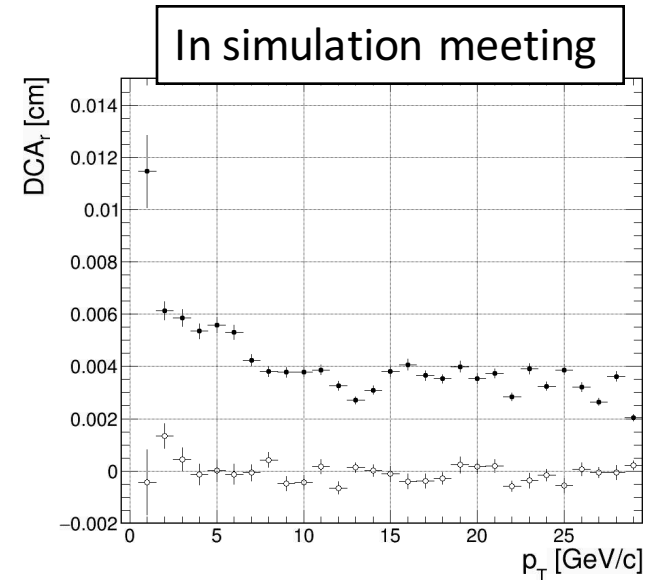
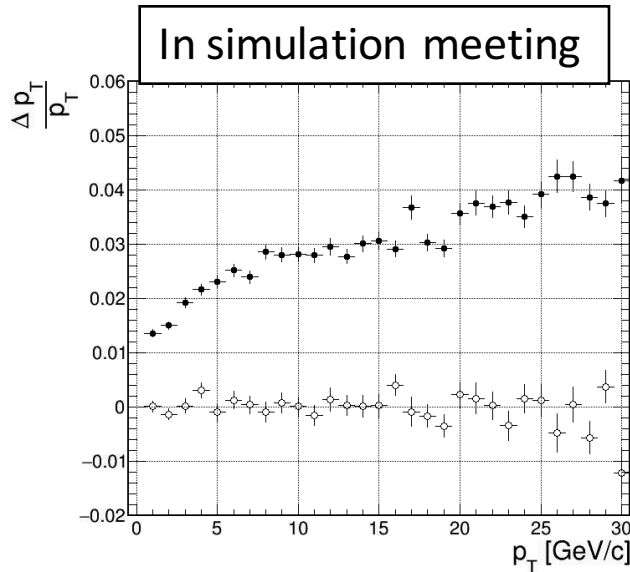
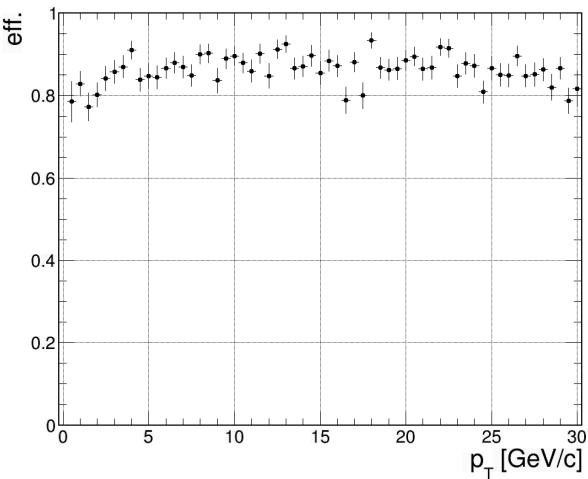
Example showing bias caused by grass and binned likelihood fitting

Central Hijing test - 2017-05-23 - In simulation meeting

- Assuming initial vertexing resolution 100 micron
- Seeding: 5/7 TPC {7, 15, 25, 35, 45, 55, 66}
- Outside-in propagation
- Search win: 5 σ
- $\chi^2 < 20$

```
===== Timers: =====  
Seeding time:                19.0723 sec  
- Seeds Cleanup:             0.0169507 sec  
Pattern recognition time:    50.0373 sec  
- Track Translation time:    32.5845 sec  
- Cluster searching time:    0.11208 sec  
- Encoding time:             0.00652307 sec  
- Map iteration:             0.08886 sec  
- Kalman updater time:      7.92678 sec
```

Full fitting: ~ 2min



Central Hijing test - 2017-05-23 - corrected

- Assuming initial vertexing resolution 100 micron
- Seeding: 5/7 TPC {7, 15, 25, 35, 45, 55, 66}
- Outside-in propagation
- Search win: 5σ
- $\chi^2 < 20$

```
===== Timers: =====  
Seeding time:                19.0723 sec  
- Seeds Cleanup:             0.0169507 sec  
Pattern recognition time:    50.0373 sec  
- Track Translation time:    32.5845 sec  
- Cluster searching time:    0.11208 sec  
- Encoding time:             0.00652307 sec  
- Map iteration:             0.08886 sec  
- Kalman updater time:      7.92678 sec
```

Full fitting: ~ 2min

