

Beam halo tracks from data

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DESY/UniHH Tracker Alignment Meeting

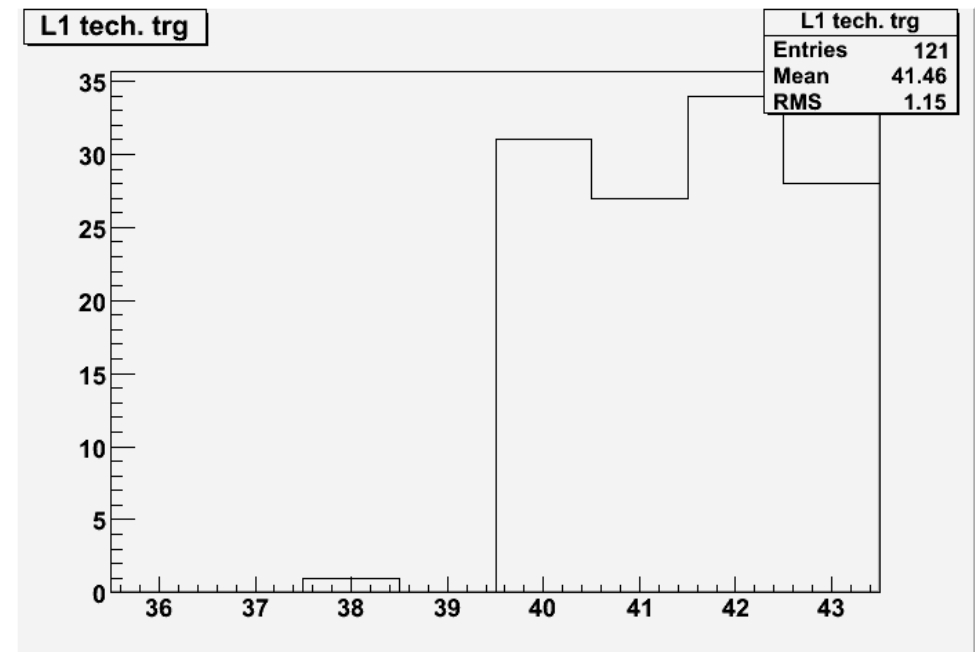
02/02/2010

Data samples and selection

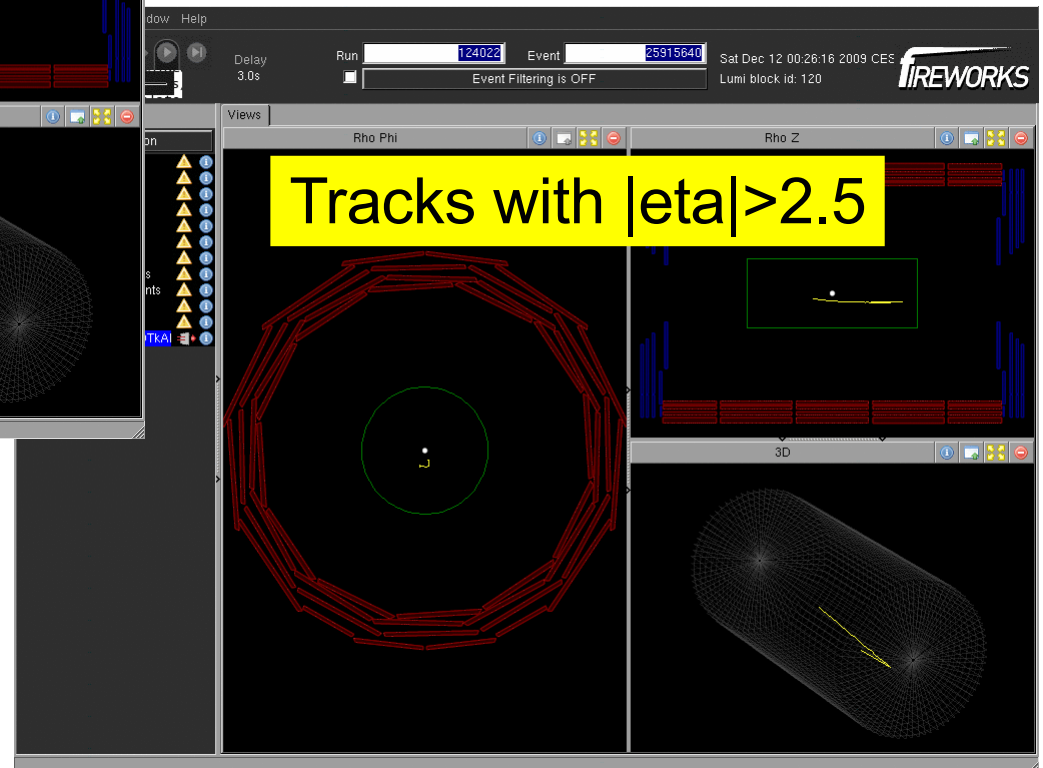
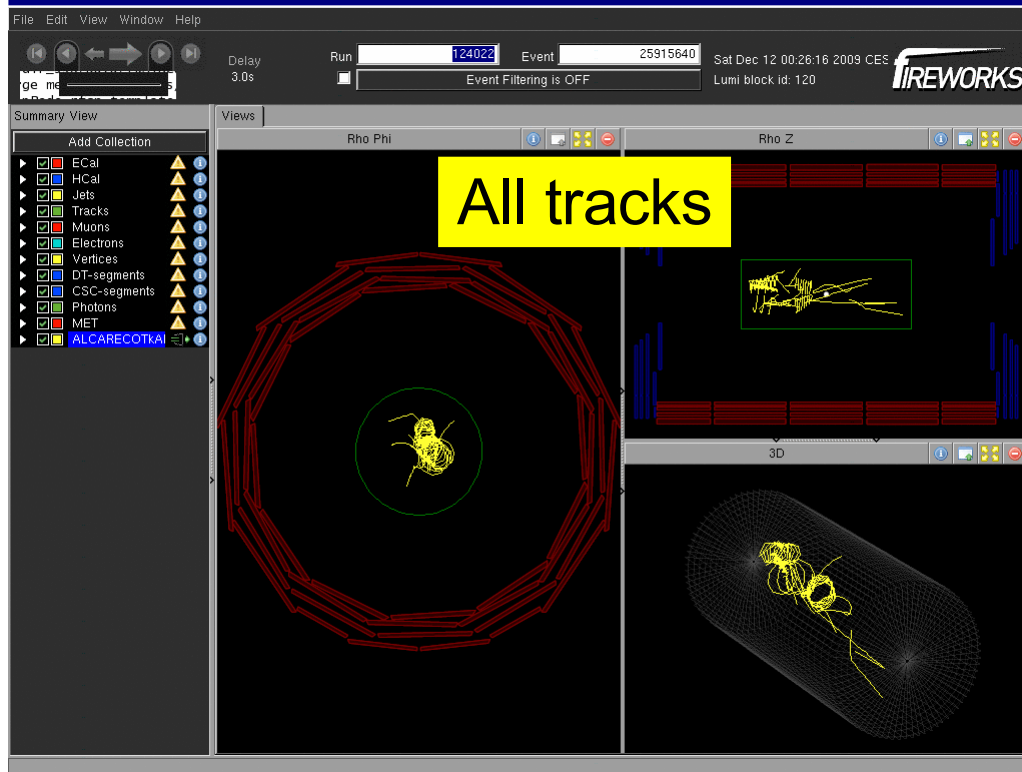
- Runs 124009, 124020, 124022, 124230
 - ALCARECO from E. Migliore:
 - '/store/user/emiglor/ALCARECO/16Dec09/TkAlBeamHalo_124009.root',
 - '/store/user/emiglor/ALCARECO/16Dec09/TkAlBeamHalo_124020.root',
 - '/store/user/emiglor/ALCARECO/16Dec09/TkAlBeamHalo_124022.root',
 - '/store/user/emiglor/ALCARECO/16Dec09/TkAlBeamHalo_124230.root',
 - # events: 84751 (selected by PhysDecl bit) → 231213 tracks

L1 trigger bits

- Runs 124009, 124020, 124022, 124230:
 - 84751 evts after physDecl bit
 - L1 bits 36||37||38||39||42||43 (beam halo + beam splash): 42 events
 - L1 bits 36||37||38||39 (beam halo only): 1 event!
- Only event triggered:
 - Run=124022 Evt=25915640



Run=124022 Evt=25915640

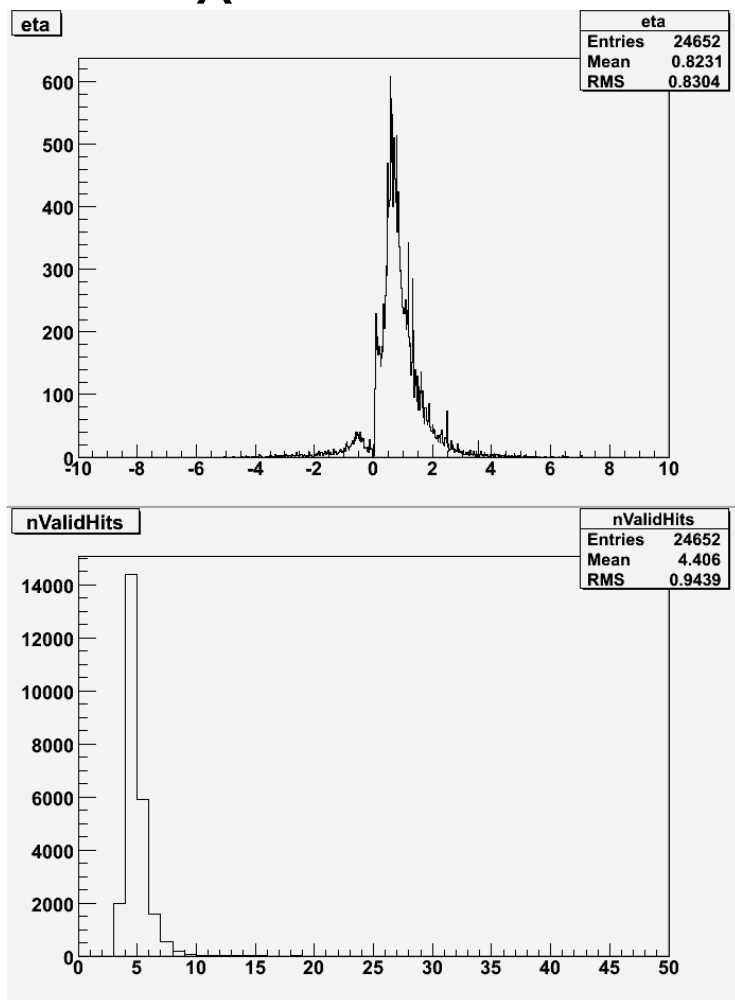


Attempts to select BH tracks...

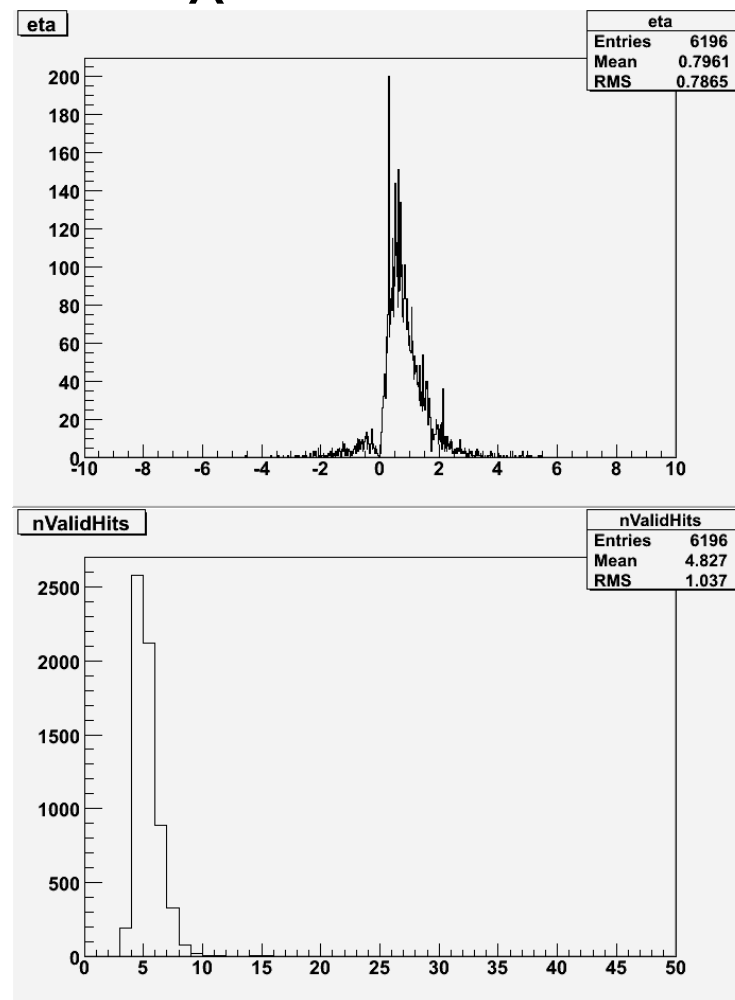
- Chi2 cut
- dZ cut
- $|\eta|$ cut
- Hit distributions
- ...

Chi2 cut

- $10 < \chi^2 < 20 \rightarrow 24652$ trks

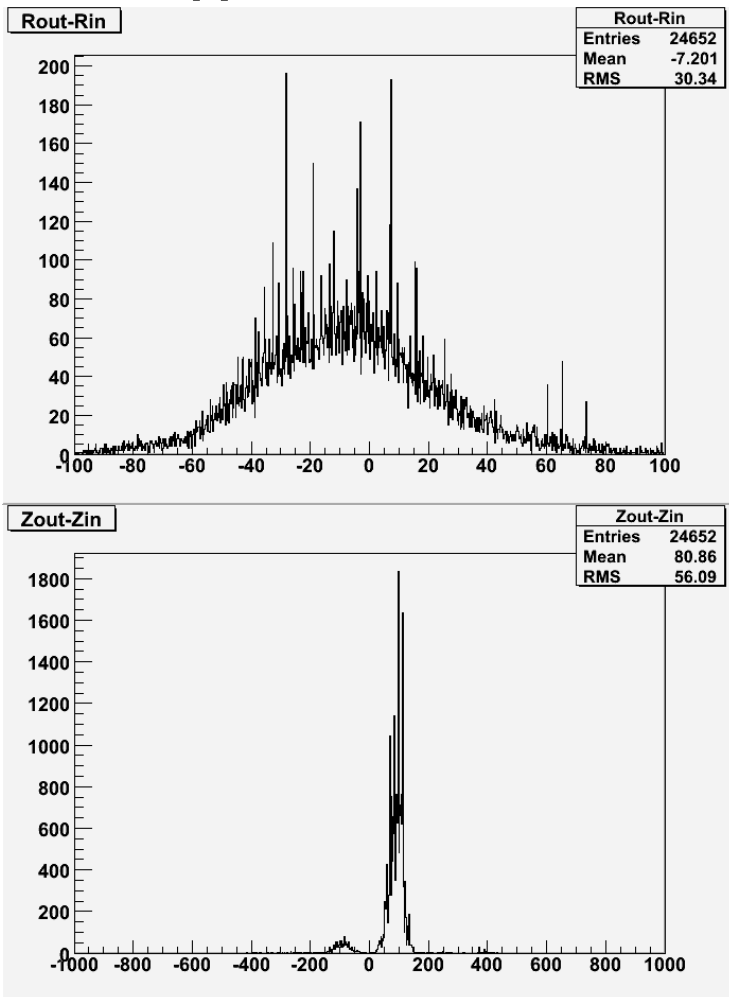


- $90 < \chi^2 < 100 \rightarrow 6196$ trks

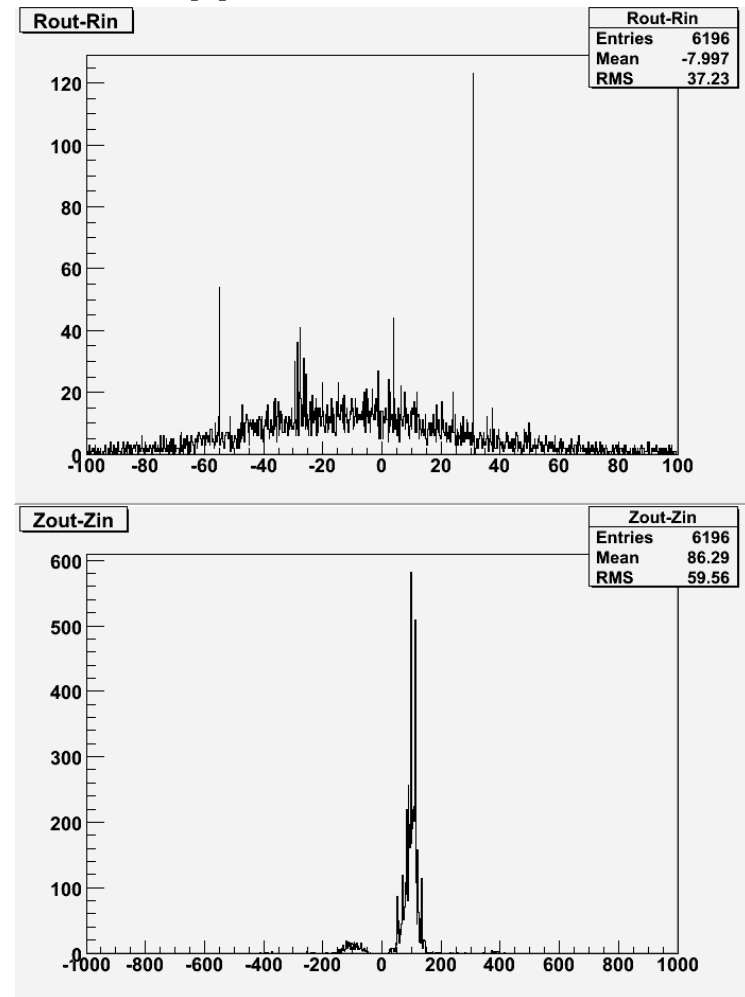


Chi2 cut

- $10 < \chi^2 < 20 \rightarrow 24652$ trks

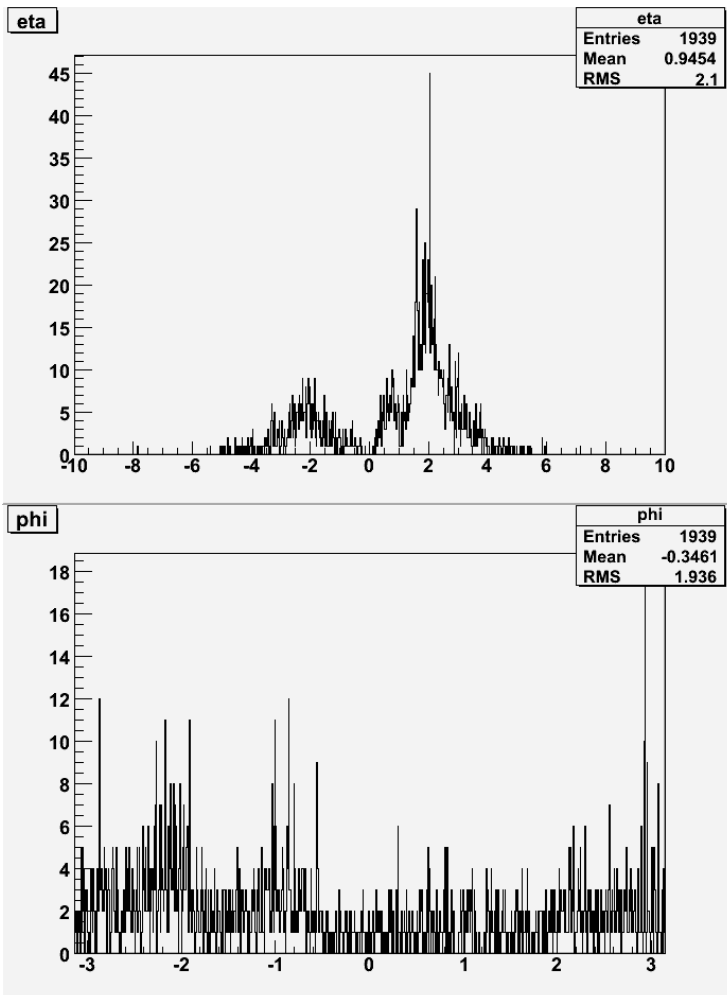


- $90 < \chi^2 < 100 \rightarrow 6196$ trks

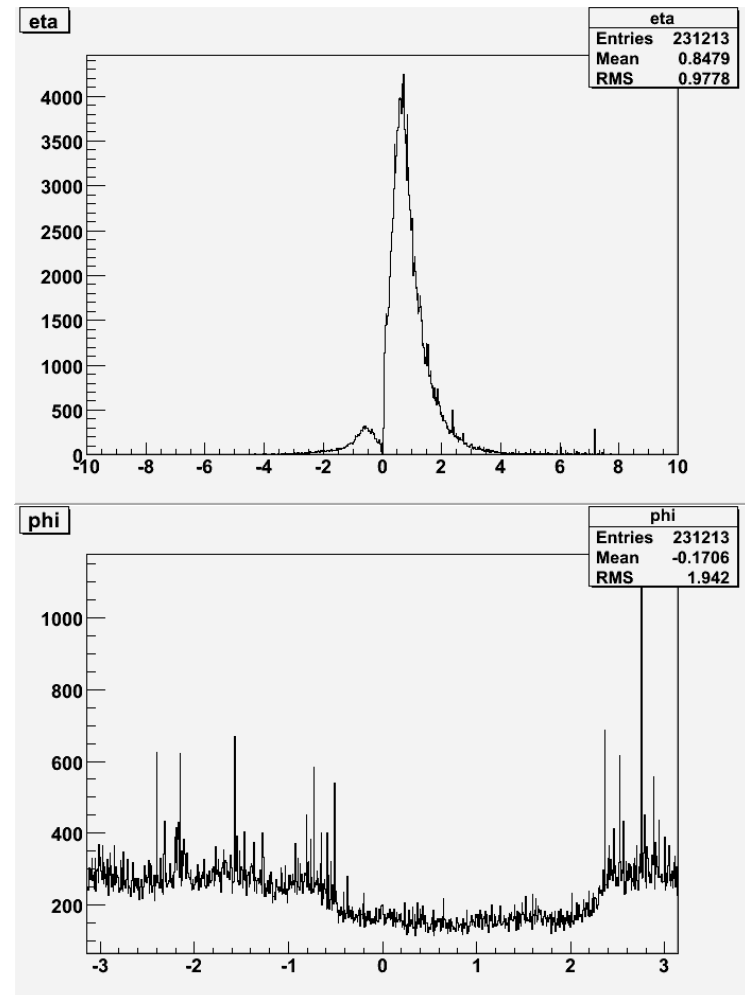


dZ cut

- $dZ > 200\text{cm} \rightarrow 1939$ trks

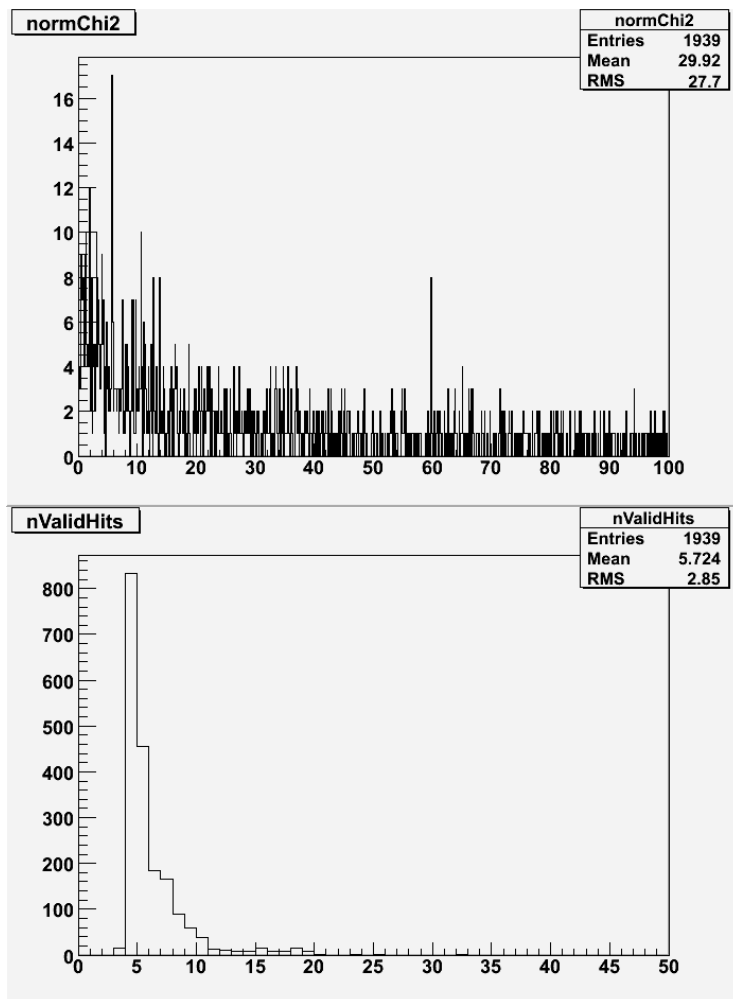


- No dZ cut $\rightarrow 231213$ trks

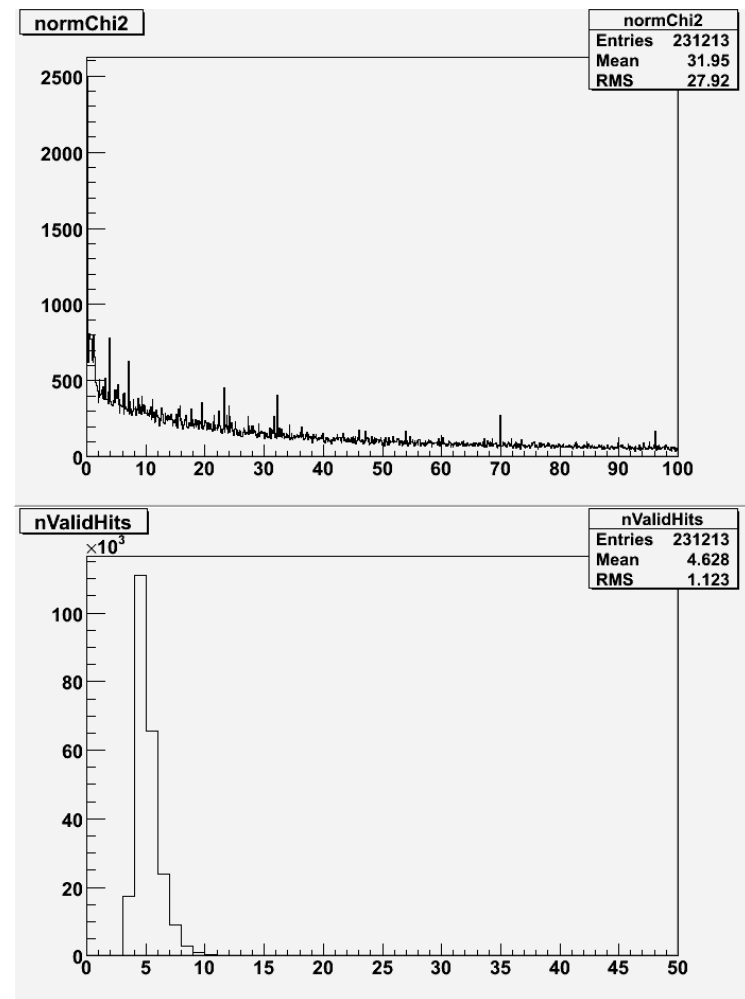


dZ cut

- dZ > 200cm → 1939 trks

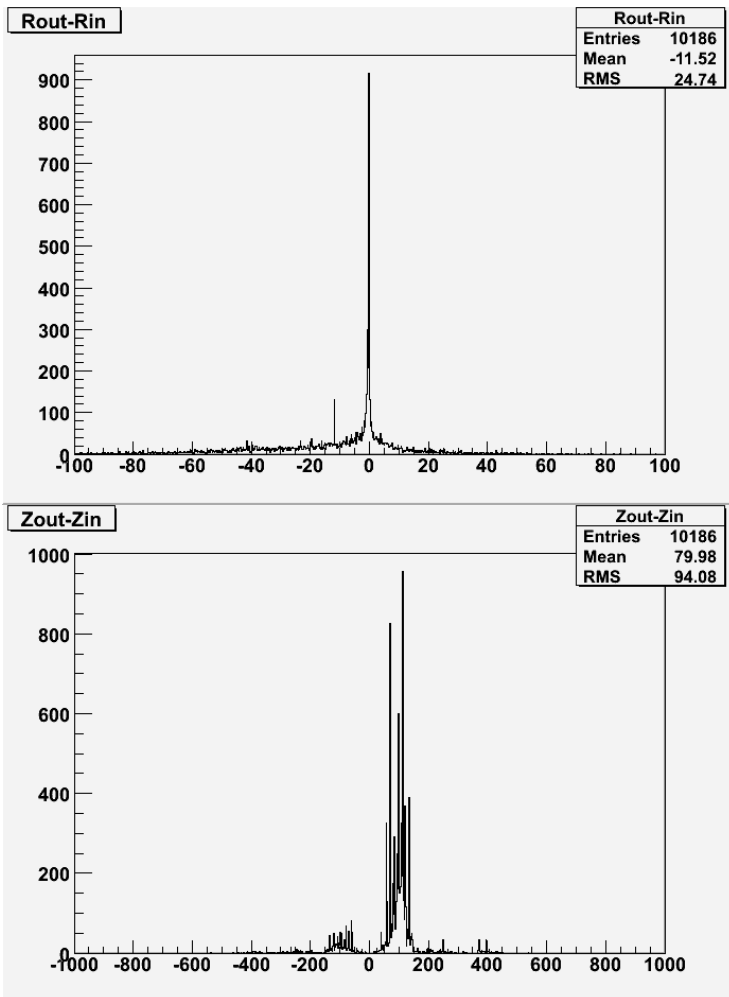


- No dZ cut → 231213 trks

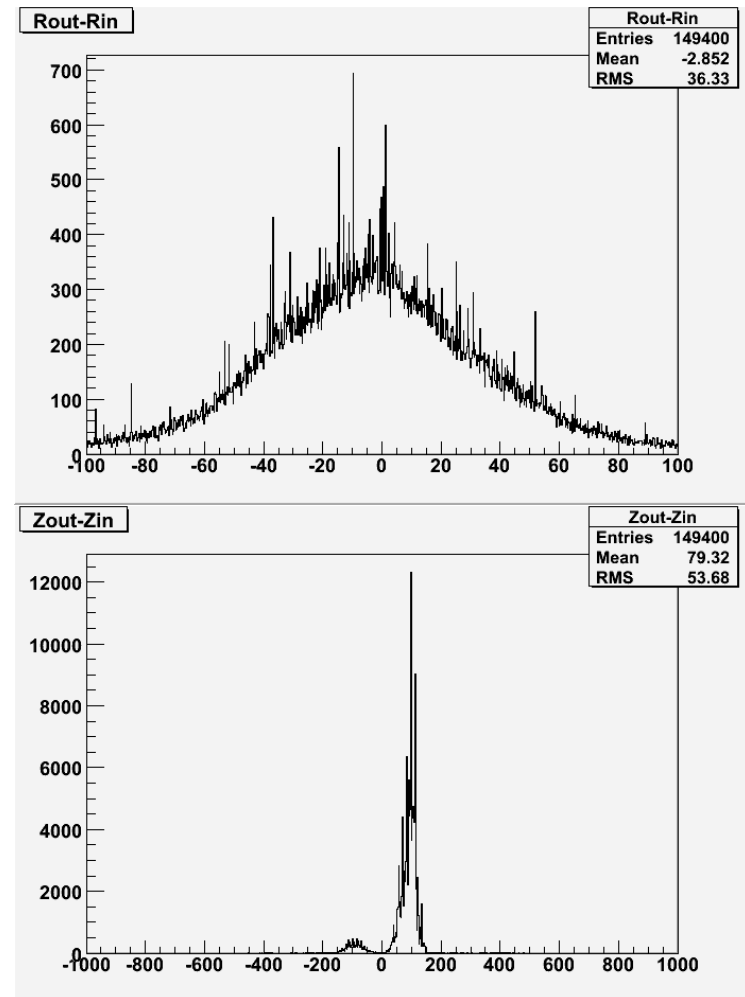


eta cut

- $|\eta| > 2.5 \rightarrow 10186$ trks

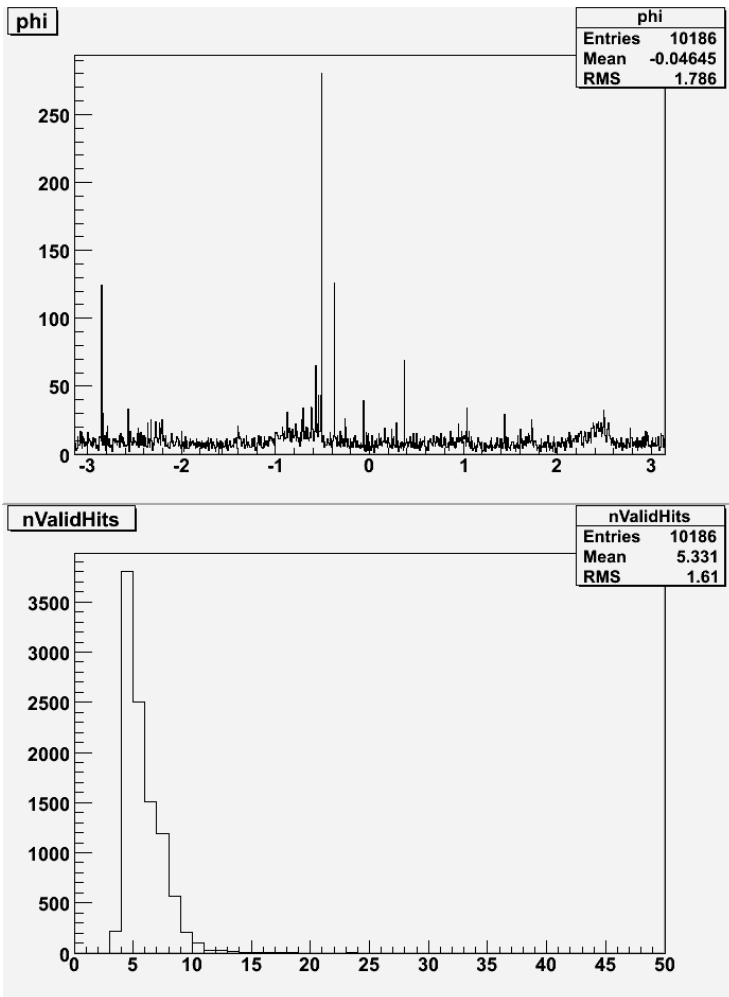


- $|\eta| < 1 \rightarrow 149400$ trks

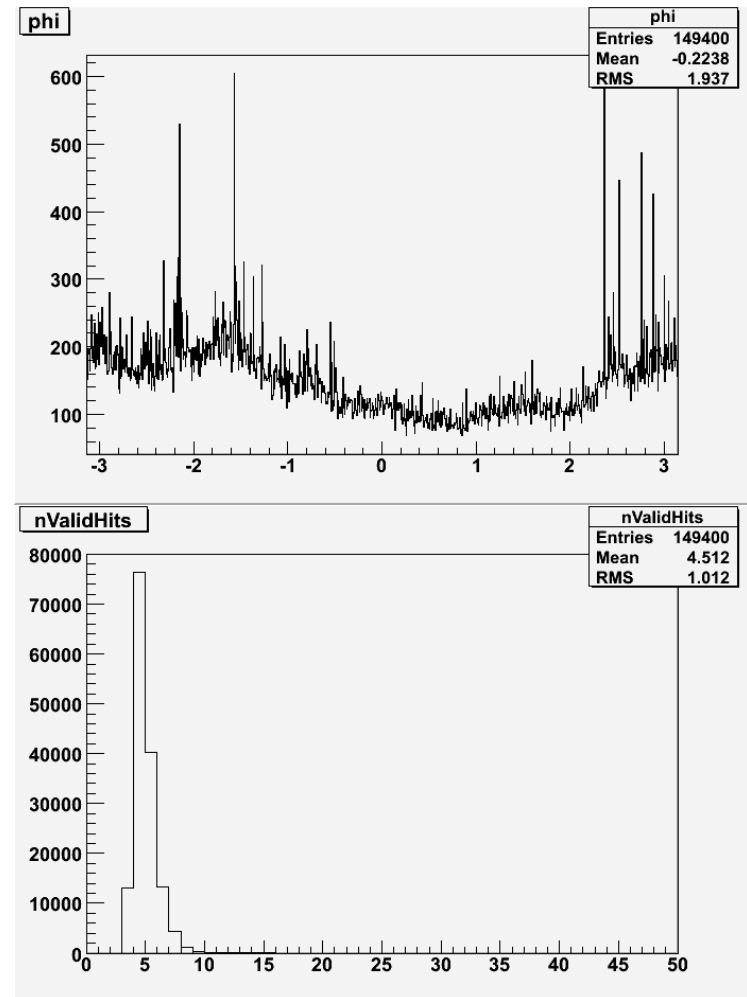


eta cut

- $|\eta| > 2.5 \rightarrow 10186$ trks

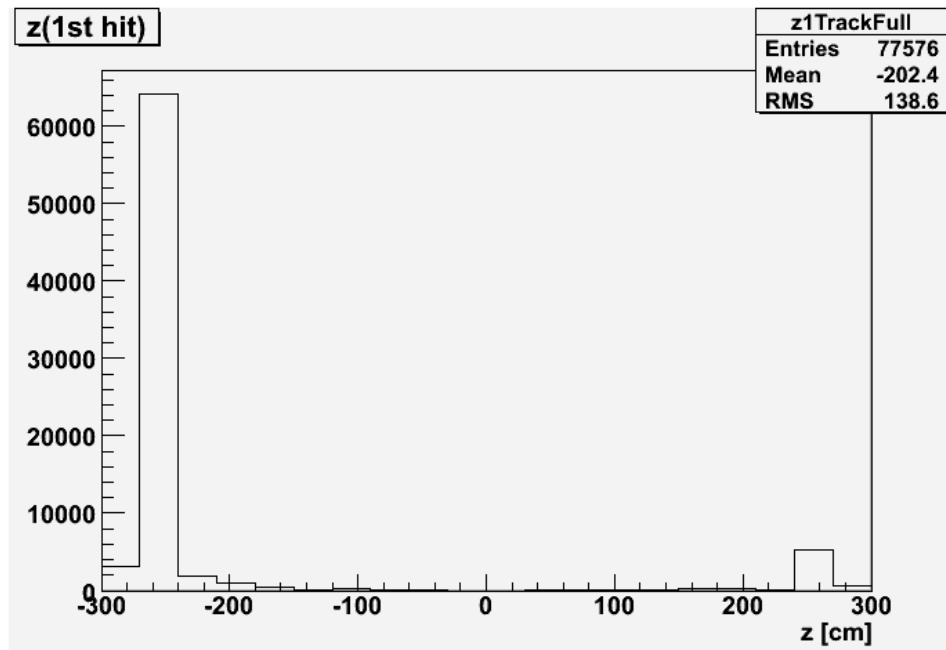


- $|\eta| < 1 \rightarrow 149400$ trks



Hit maps

- From Pede job
 - NormChi2<50: 77576 trks



02/02/2010

A. Pa

