CLIC_ILD_CDR TPC Tracking

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This Short Talk
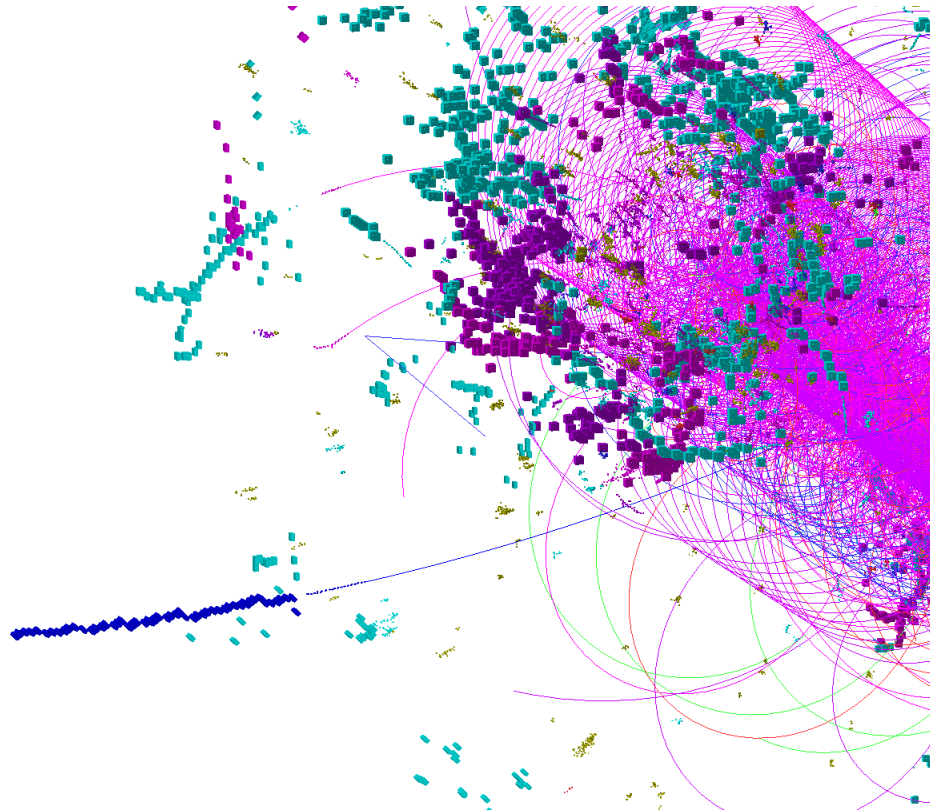
Very Much Work in Progress: ALL VERY PRELIMINARY

★ **Preliminaries:**
- **All run with OverlayTiming processor**
  - **full bunch train of gamma gamma to hadrons background**
- **Main questions**
  - **limitations of LEP TPC reconstruction**
  - **what is true limitation**

★ **Try to reconstruct full bunch train**
- **Only gamma-gamma background**
- **1.8E6 TPC hits**
- **Underestimate of true occupancy**
- **LEP tracking code gives up**
    - **even with mods, to common blocks need < 100000 hits**
- **non-negligible voxel occupancy in inner parts of TPC**
- **Reconstruction strategies**
    - **divide TPC into two halves in z**
    - **run CurlKillerProcessor**
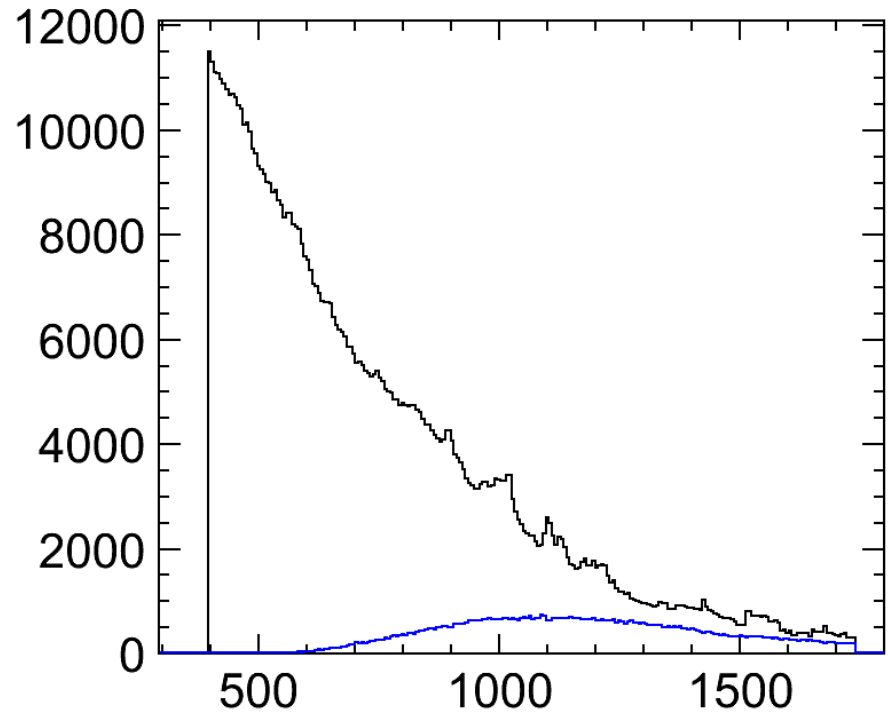   - **ignore inner part of TPC for track PatRec**

Raw TPC xy profile
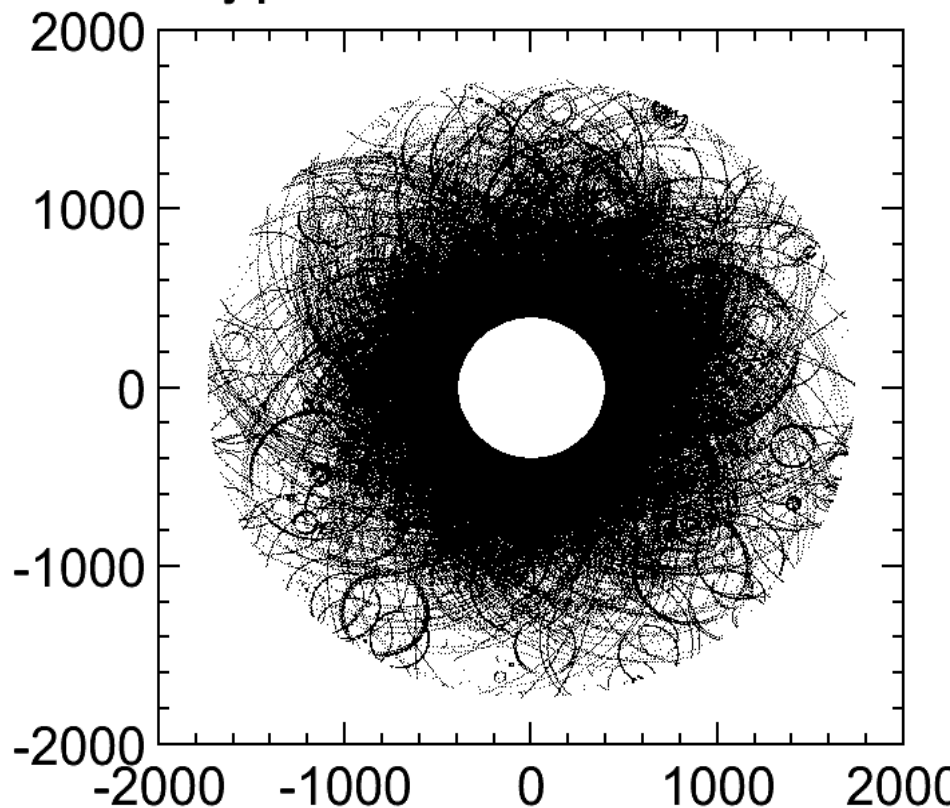
★ **For example:**

(z>0, multiplicityCut=2)

- **Only 10 % of hits used in Patrec**
- **LEPTracking runs ~ few minutes**
- **700 TPC tracks**
- **but, inner part of TPC not used**

Raw TPC Radial profile

Raw TPC Radial profile

★ **For example (slicing in z):**
(0<z<500, multiplicityCut=5, binW=5)

- **25 % of hits used in Patrec**
- **450 TPC tracks**
- **inner part of TPC partly used**
- **no feel for efficiency etc.**