Update on CED viewer and Multi-Gauss Hits

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LCIO structure

- LCEvent
- Event number
- Run number
- *File number*
- Vector of Hits, as RawCalorimeterHit or CalorimeterHit

RawCalorimeterHits

- Geometry-independent
- Lane, Row, Column
- Stored as a 32-bit word which requires encoding/decoding.
- No implementation of x, y, z
- Unable to be read by CEDviewer

CalorimeterHits

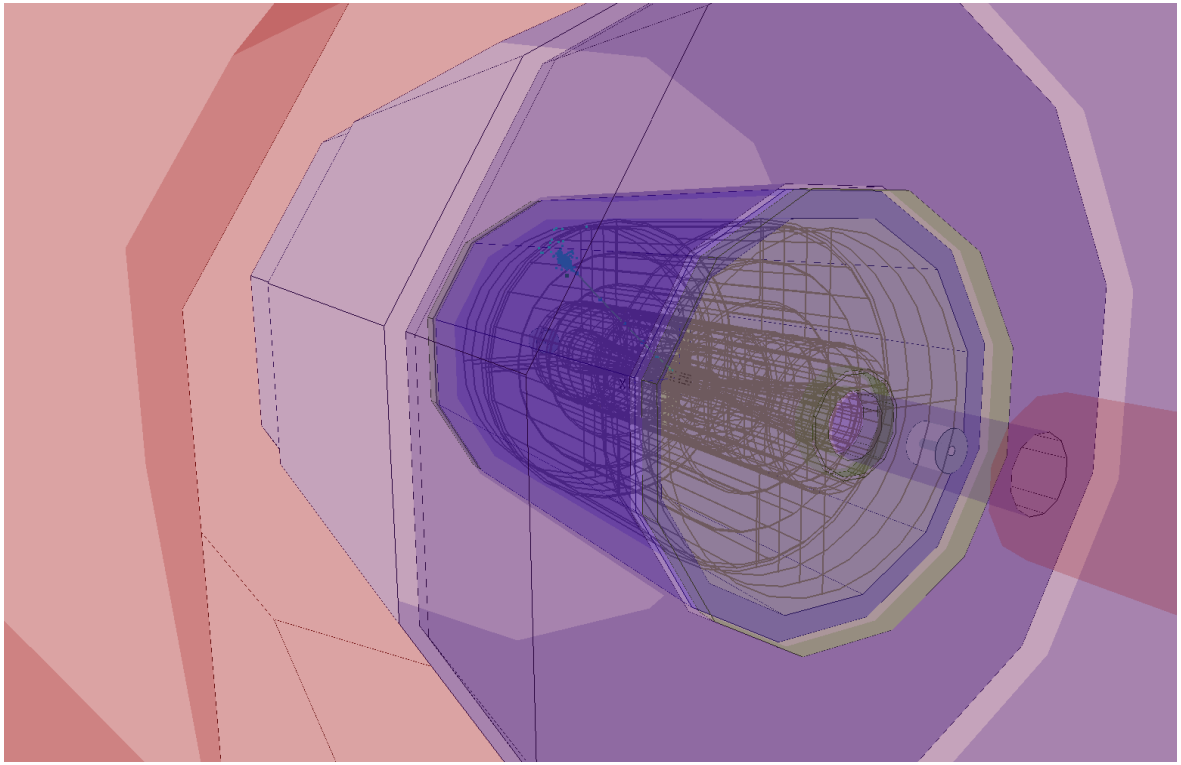
- More detailed description, may include detector geometry
- Lane, Row, Column still stored as 32-bit word
- Includes x, y, z (which may be detector-independent)
- X, y, z may be read by CEDviewer

Converting C, L, R to X, Y, Z

- Have implemented a quick startup loop to go at the start of python script
- Creates 5 1-D vectors:
- Row2X_left, Row2X_right
- Column2X_left, Column2Y_right
- ChipID2Z

CEDviewer

- GEAR.xml (outdated), DD4hep.xml
- LCIO file of hits
- Produces event display:

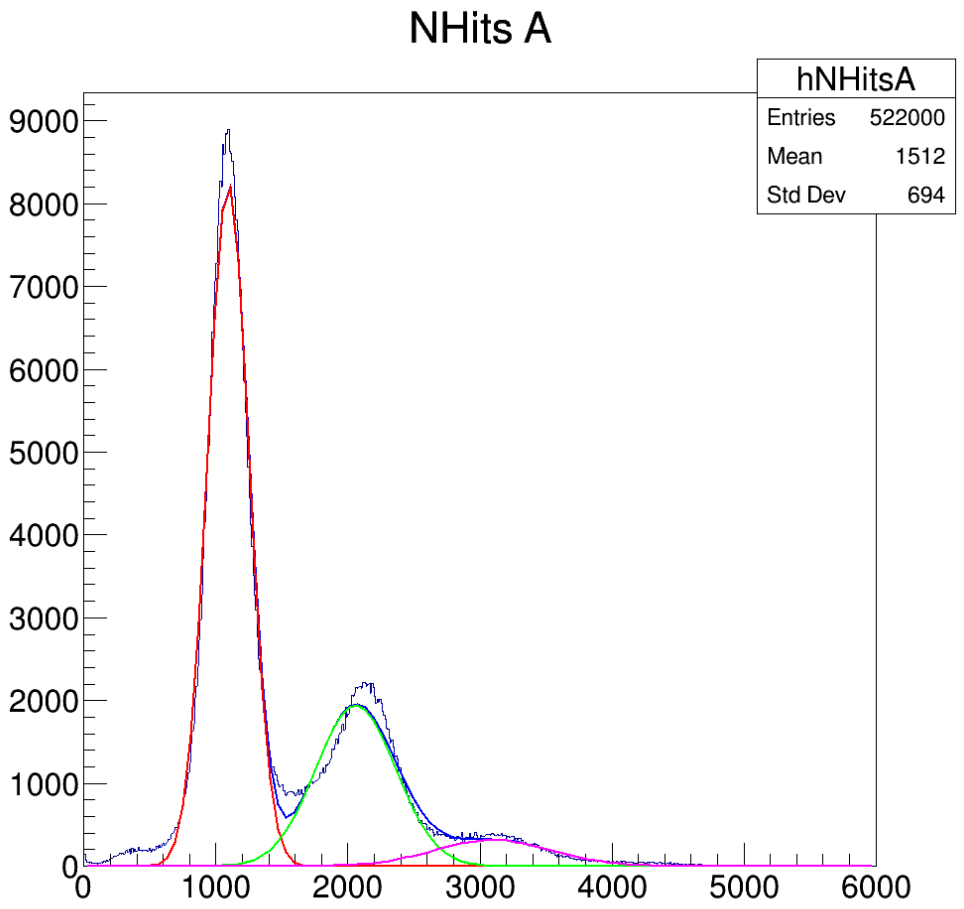


Steps towards:

- Convert root events into LCEvent, RawCalorimeterHit objects in LCIO file
- Create 1-D vectors to transform Lane, Column, Row into x, y, z
- Convert RawCalorimeterHit objects into CalorimeterHit objects
- Use CEDviewer to visualise cylindrical geometry
- Use CEDviewer to visualise given example TB geometry in ILCSoft/lcgeo
- Implement mTower in DD4hep and visualise with CEDviewer

Multi-Gaussian Fits

- Some nicer fits (4GeV):



Multi-Gaussian Fits

- Some others not so nice! (3GeV):