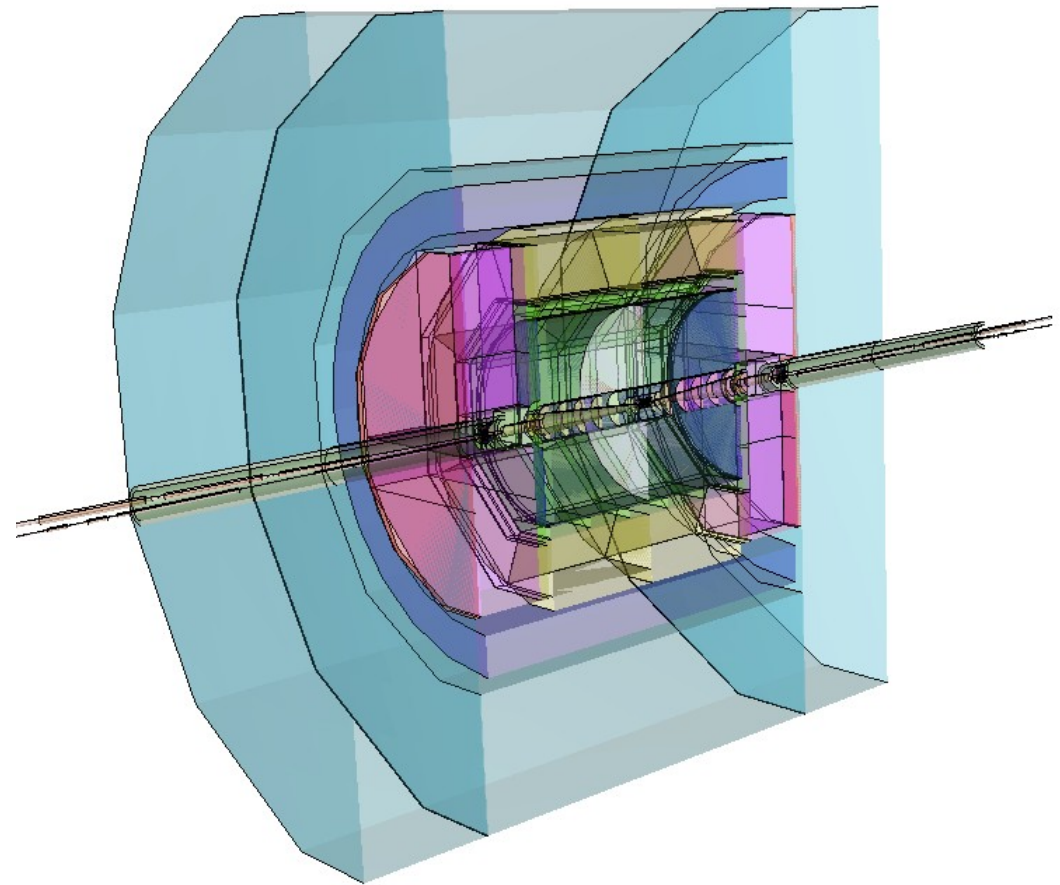


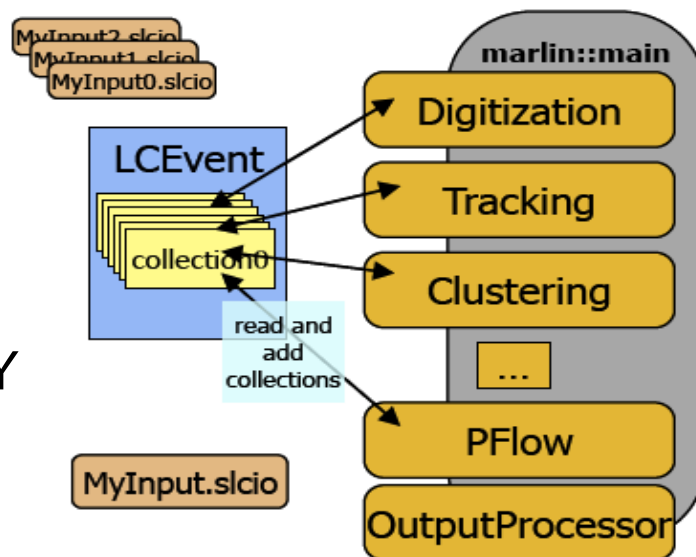
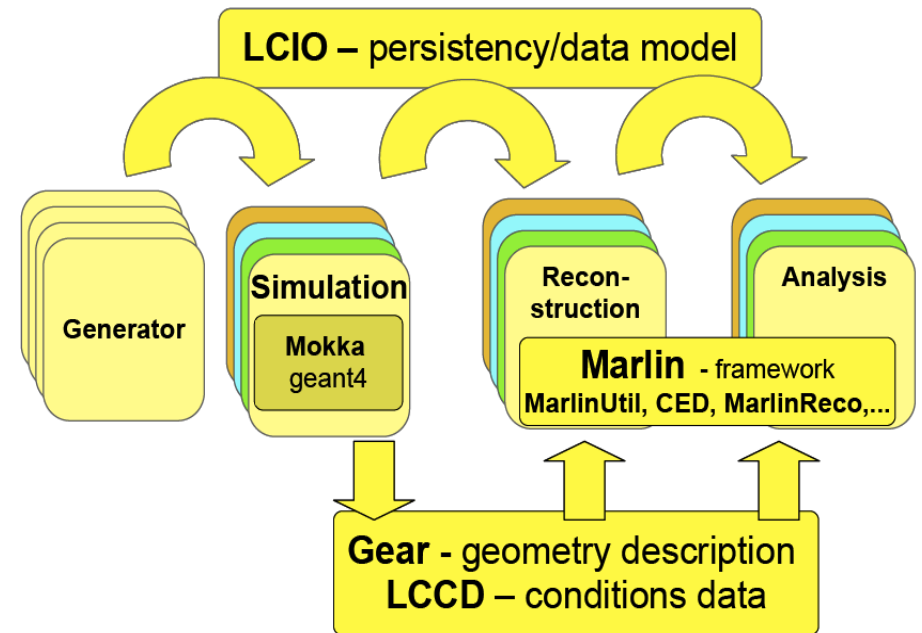
ILC Software Activities @ DESY

- Core Software Tools
- Simulation & Reconstruction
 - Monte Carlo production
- Future Plans



ILC Core Software Tools

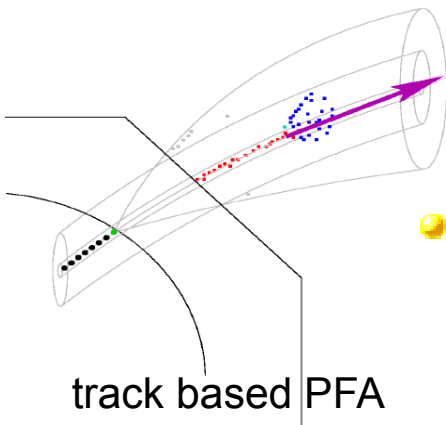
- **LCIO** (DESY/SLAC)
 - international standard for persistency format / event data model
- **Marlin**
 - core application framework for reconstruction & data analysis
- **GEAR**
 - geometry package f. reconstruction
- **LCCD**
 - conditions data toolkit
- **CED**
 - event display
- manpower: 3FTEs @ DESY



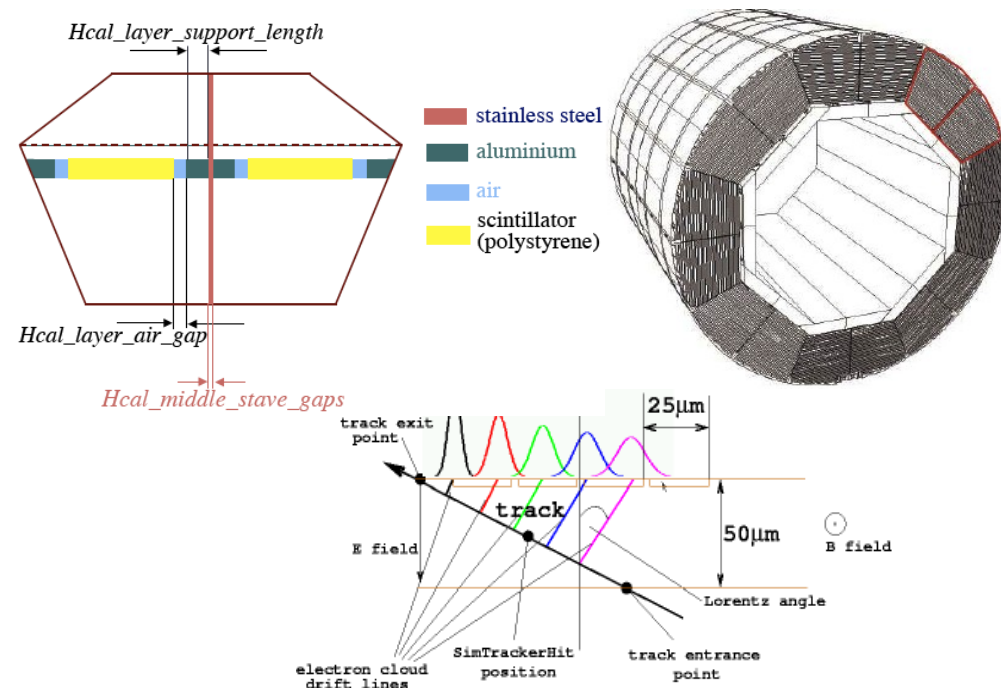
- complete framework used in
 - **ILD detector concept** studies
 - **Calice** calo testbeam
 - **LC-TPC**
 - EUDET - **Pixel Telescope**
- synergies between testbeam and global detector optimization

Simulation & Reconstruction

- **simulation** (Mokka - geant4)
- engineering level description of subdetector geometries
- **reconstruction** (**MarlinReco**)
- digitization algorithms (detector R&D)
- track finding/fitting
- ParticleFlow algorithms (PFA)
- kinematic fitting
- analysis tools
- both for ILD detector and test beam



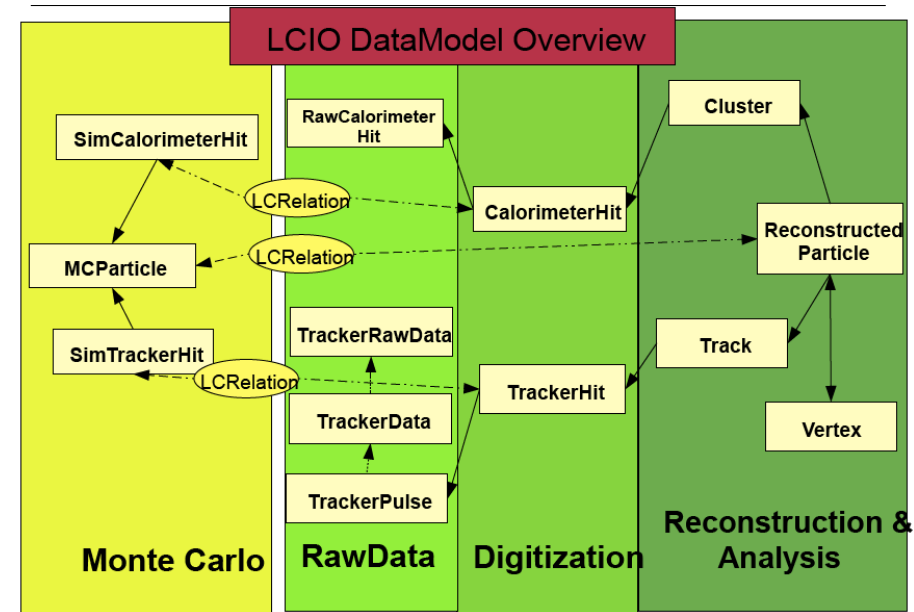
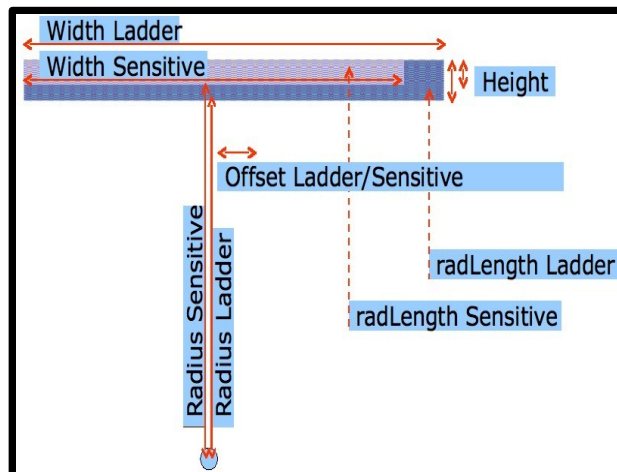
- manpower:
4-5 FTEs @ DESY



- software infrastructure for massive Monte Carlo production and data analysis on the **Grid**
- job submission, data catalogues,
- massive MC production for LOI:
 - 45 M events / 60 Tbyte
 - fully simulated & reconstructed

Future Plans for ILC Software

- DESY will continue to maintain and further improve ILC software
 - core software tools
 - simulation and reconstruction
 - according to user requests
 - keep doing this in **international collaboration**
 - e.g. interest from CLIC, SuperBelle
- > need proper funding for manpower



- improve **LCIO**
- I/O performance
- event data model
- generic data
- develop better **geometry tools**
- functionality, performance
- misalignment,...