Pacrat Status

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PacSim Updates

- Particle interactions in mater
  - Interaction probability given by rad (int) length
  - EM (Had) showers for e, γ (K_L, ...) in 'thick' materials
  - Compton, conversion, brems, etc. in 'thin' materials
  - No secondary generation yet
- Tuning of scattering, Energy loss (A. Suzuki)
  - http://dnbmac3.lbl.gov/~brownd/SuperB/tracking
- Outer detector modeling in PacCylDetector
  - Coil (0 field outside), Ifr iron + RPC
  - PacSimTrack traj is helix inside, linear outside
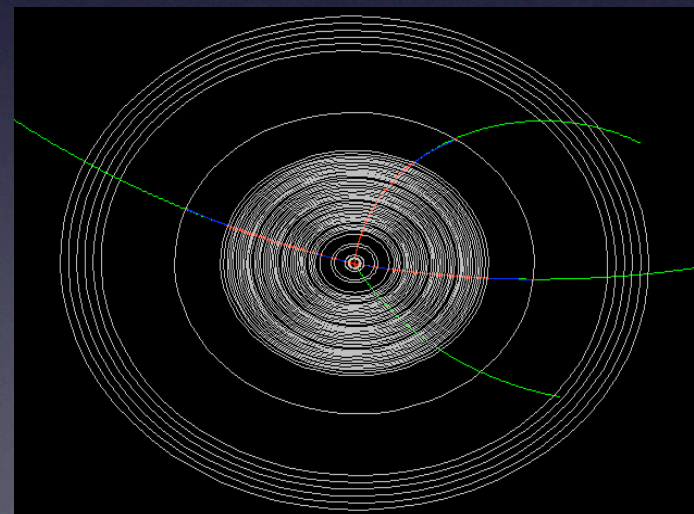 - Hits scored in outer layers for muons

PacDisplay (A. Suzuki)

- Now a module in PravdaMC
- Display gen, sim, reco particles, hits
- Looking into using TGL
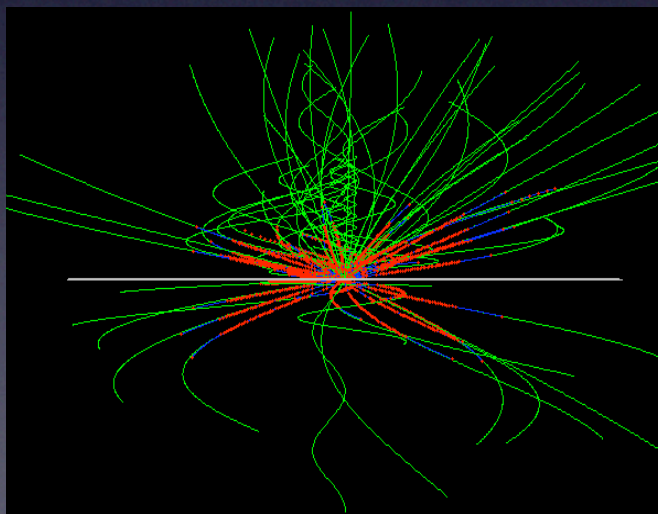
10 events overlaid   1 event

Other Status

- MC truth matching for charged tracks
  - Same classes as full simulation
- SuperB BaBar packages all in 24.3.3c except
  - DetectorModel V01-04-08
- SvnTools (J. Anderson)
  - Basic tools should be ready by next week
- XML configuration (I. Gaponenko)
  - Design complete, first implementation in progress
  - Integration with GDML will be a separate step

PacSim, PacDetctor, PacTrk Ready for 1st release (?)

- Known missing pieces

  - Planar geometry Detector Elements

  - Conical geometry Detector Elements

  - Configuration interface for overlaps and gaps

    - Coming with XML parser

  - dE/dx simulation

  - Documentation

Beyond the 1st release

- PravdaMC invokes Pacrat measurement simulation inside BtaCandiadte construction

  - Adding objects to the event is difficult

  - Simulating pat. rec. confusion is impossible

- PravdaMC package includes extraneous code

  - non-Pacrat options

  - Full detector initialization

  - Full physics sequence

- A new package, module, sequence is needed

  - PacratMC