PacMC status and plans

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- Recent developments
- Plans

Recent Developments

- Decay in Flight
  - Probably resolved issues that prevented to activate the simulation of the decays in flight in the last release
  - Mike S. added truncation of the hits for the decaying particle and avoided dependency on customized GfiBase package
- Material Interactions
  - Dave implemented the routine to simulate the particles generated in a material interaction: bremsstrahlung and conversion

Recent Developments

- Tagging
  - Added a tcl procedure to configure tagging
- Redesign of Reconstruction sequence
  - Replaced static maps with a global truth matching map stored in the event
  - Separated
    - Event Initialization (maps etc..)
    - Simulation (PacSimTrack)
    - Reconstruction (TrkRecoTrk, AbsRecoCalo)
    - BtaCandidate creation

Plans

- Consequences of redesign
  - BtaCandidates are created using the reconstruction objects (TrkRecoTrk and AbsRecoCalo) =>
    - should be able to use the Ghit-like truth matching of reconstructed objects
    - Should be able to create UsrData
  - Charged tracks can have not only a TrkRecoTrk but also an EMC cluster associated
  - Have now a Trk-Cluster map needed to simulate cluster overlap in the EMC Pattern recognition effects (hit confusion, hit efficiency) can be inserted between the Simulation and the Reconstruction step

Plans (II)

- Enable BGF emulation
  - Already have a module inherited from PravdaMC
- Test tagging

Summary

- Developments
  - Decay in Flight
  - Material Interaction
  - Tagging
  - Redesign of Reconstruction sequence
- Plans
  - Ghit-like Truth Matching
  - BGF emulation
  - Tagging
  - Infrastructure for pattern recognition effects