GlastRelease v6r1p2

This is the commentary for v6r1p2.

The following refers to changes between v6r1p2 and v6r0.

CPU time increase

The cpu time has increased by a factor of ~2-3 since v6r0. This seems to be energy dependent, the 100 MeV gamma's and AllGamma are more strongly affected than the 10 GeV gammas.

Number of Tracks and Vertices

The number of fit tracks/event and vertices/event has increased. The vertex z position distribution for the gamma-ray tests indicates a lot more fit vertices in the thick section. The number of events with at least one fit track has remained constant (so we are tending to add more tracks to events that already had one).

Track Energy distribution

The Kalman energy distribution has changed (TKRTRKENERGY). The distribution for 1 GeV muons now peaks at 690 MeV, it used to peak at 1.1 GeV.

Geant4 warning messages (also present in v6r0)

We get a lot (thousands) of the following error message in the 10 GeV gamma test.

WARNING - G4Navigator::ComputeStep()
Track stuck, not moving for 10 steps
in volume ~~cellHorWall~~ at point (-198.3515973,-242.93,-47.49482927)
direction: (0.05840947296,-3.059690999e-12,-0.9982927093).
Potential geometry or navigation problem !
Trying pushing it of 9e-10 mm ...
ERROR - G4Navigator::ComputeStep()
Track stuck, not moving for 25 steps
in volume ~~cellHorWall~~ at point (-198.3428359,-242.93,-47.64457318)
direction: (0.05840947296,-3.059690999e-12,-0.9982927093).

G4Exception : StuckTrack
issued by : G4Navigator::ComputeStep()
Stuck Track: potential geometry or navigation problem.

ERROR - G4Navigator::ComputeStep()
Track stuck, not moving for 26 steps
in volume ~~cellHorWall~~ at point (-198.3422518,-242.93,-47.65455611)
direction: (0.05840947296,-3.059690999e-12,-0.9982927093).

CalFailureModeSvc error message (also present in v6r0)

The following message crops up. This does not actually cause a problem for the system tests because they do not use CalFailureModeSvc.

CalDigiAlg ERROR service_i: can not locate service CalFailureModeSvc