GlastRelease v15r47p12gr06

System Tests Report Summary

A few notable differences over all tests for comparison with GR v15r47p12, the previous L1 proc release. These all arose from a change in seed handling in GlastSvc to switch from an event to run seed for MC generation.

Note that the triggerAlg.mask string update now allows "0xffffffff" to specify no trigger requirement. Specifying -1 produced odd behavior on certain systems. The system test JO now do not include any explicit trigger mask and take the default from ConfigSvc. This caused no discernible change in the system test outputs.

Changes

- Gleam,Trigger - update to use string representation to avoid int conversion oddities in triggerAlg.mask
- AnalysisNtuple, CalRecon - remove stale variables and tools, fix init of FT1EventClass
- CalRecon - removal of outdated energy methods
- GlastSvc - change to seeding to default to one seed per run
- IExternal/Geant4Runtime - Rebuild of g4 to set G4_NO_VERBOSE and G4_NO_STORE_TRAJECTORY
- LdfConverter - EvtMax==0 to read in full file

Testing seed change in GlastSvc

GlastRandomSvc.autoSeed = false; // per run random seed, new default
vs
GlastRandomSvc.autoSeed = true; // per event random seed, old default

The change to seed determination in GlastSvc is the cause of the differences in several system test distributions. Most notably CalColumn, hit distributions in the Tracker by layer or depth, and integrating and position hits. In other words, the events are different just because of the MC seeding.

A limited test of reversting of this to the previous behavior removed all differences. See System Tests v15r47p12gr06C for the comparison of the AllGamma and BackGndMixDC2 tests using the previous seed method.

Here is one comparison example for both GR v1547p12gr06 with the new seed behavior and for the former behavior (gr06C).