

GlastRelease v17r17LPM

Run Manager Summary

System Tests v17r17LPM

System Tests Report Summary

A couple plots are flagged for the BackGndMixDC2 test in the comparison of v17r17 LPM enabled and v17r16 LPM enabled. (LPM enabled means the system test JO included an extra line, G4Generator.physics_choice="QGSP_BERT_LPM";)

Although G4HadronSim was touched, it is not clear this should have changed anything? However, it is also not clear that if this introduced an issue with finding the hadronic interaction tables, that the difference should be so minor? Depending on the possible energy dependence, the background mix test may not be probing the change effectively.

There is also a system test run for [v17r17](#) using the standard options, but this showed no differences.

Changes

- G4HadronSim - switch to using path to find interaction tables
- HepRepSvc - color tweak, new init param to help with big MC events
- TkrUtil - logging
- EventIntegrity - addresses JIRA GRINF-51, print event id of errors

BackGndMixDC2 Bit Comparison

For the same primary particles generated, we see a few less trigger bits in v17r17, but the changes are very minimal.

The generated particle tables are identical.

The trigger bit frequencies changed very slightly. The new version is in the top box, v17r16 is shown below. Trigger bit frequencies that changed typically decreased by a couple events.

BackGndMixDC2 v17r17 LPM enabled

```
TriggerAlg          INFO Totals triggered/ processed: 40000/40000
      bit frequency: all events
      value count   CNO CALHI CALLO   TKR   ROI
      -----
      0 35641      0    0    0    0    0
      2  661      0    0    0  661    0
      3 2621      0    0    0 2621 2621
      4  220      0    0  220    0    0
      6   68      0    0   68   68    0
      7  418      0    0  418  418  418
     12    4      0    4    4    0    0
     14    6      0    6    6    6    0
     15   41      0   41   41   41   41
     16  154   154    0    0    0    0
     18    7      7    0    0    7    0
     19  104   104    0    0  104  104
     20    8      8    0    8    0    0
     22    6      6    0    6    6    0
     23   31   31    0   31   31   31
     28    2      2    2    2    0    0
     31    8      8    8    8    8    8
      -----
    tot: 40000   320   61   812  3971  3223
```

BackGndMixDC2 v17r16 LPM enabled

TriggerAlg INFO Totals triggered/ processed: 40000/40000

bit frequency: all events

value	count	CNO	CALHI	CALLO	TKR	ROI
0	35634	0	0	0	0	0
2	661	0	0	0	661	0
3	2624	0	0	0	2624	2624
4	221	0	0	221	0	0
6	72	0	0	72	72	0
7	415	0	0	415	415	415
12	6	0	6	6	0	0
14	3	0	3	3	3	0
15	41	0	41	41	41	41
16	157	157	0	0	0	0
18	7	7	0	0	7	0
19	107	107	0	0	107	107
20	9	9	0	9	0	0
22	6	6	0	6	6	0
23	28	28	0	28	28	28
28	2	2	2	2	0	0
31	7	7	7	7	7	7
tot:	40000	323	59	810	3971	3222

BackGndMixDC2 GR v17r16 LPM enabled has a lot of complaints about the gamma levels file.

G4NuclearLevelManager: nuclide (53,129) does not have a gamma levels file
FluxSvc INFO [2009-04-12 23:39:36] 1% complete: event 400, time= 0.00316508686298= launch+
0.00316508686298
G4NuclearLevelManager: nuclide (12,25) does not have a gamma levels file
G4NuclearLevelManager: nuclide (5,11) does not have a gamma levels file
G4NuclearLevelManager: nuclide (28,60) does not have a gamma levels file