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Status of tests and releases for Sim08


Last update on : 18 Mar 2013

Generators

1). Test very latest version of Pythia 6 with CTEQ6L.

Require new production of min bias and inclusive b with Gauss v43r4 (new Pythia6 427, i.e. Sim07a)  Productions min bias and inclusive b ready, to be looked at by Marco A.


2). As 1. but also with latest version of EvtGen,

Require new production of min bias and inclusive b with Gauss v44r4 (i.e. Sim07b)  Productions min bias and inclusive b ready, to be looked at by Marco A.

3). Modify script for generator statistics to use xml summary instead of log files

 Person needed to work on this


4). Check fixes for Pythia8.

Requires new production with either Gauss v43r4 or v44r4. I proposed to use Gauss v44r4 so that we check that the connection to the new EvtGen works fine.  Productions min bias and inclusive b ready, looked at by Aurelien.


5). Test very latest version of Pythia8 175. This requires the new release of Gauss early next week (based on latest LHCb).

 Productions min bias and inclusive b with Gauss v45r0 and new particle table requested. To be produced.


6). Continue tests with EvtGen, reports expected by working groups.

Recommended to use Gauss v45r0 and latest DBASE.  Reports by RD, Charm, B2OC, B2CC, BnoC, Onia, Semileptons  Work on Pythia8 options for EW and Exotica groups.

7). Test new particle property table.

 New tag dddb-20130312 (for 2011) and dddb-20130312-1 (for 2012) ready be used together with Gauss v45r0: requires changes in LbPythia8 that are in this release.

8.) Test new decay.dec with PDG2012.

 Being prepared. Michal looking into it, to be ready this week.

9). Understand crashes in productions and nightlies in Photospp from new EvtGen

✔ Reason is when > 10 photons produced. John put protection after Patrick suggestion. In Gauss v45r1 in nightlies. Aurelien tested and crash is gone.

Geant4 and detectors simulation

10). Check EM physics with new G4

✔ Stand alone studies reported at simulation meetings by Nigel and Peter. No difference in dE/dx for different options. High failure rate reported in production by Vladimir with pgun EmOpt3. ❌ Proposal of studies to understand Brem effects MC10 vs MC11 with Dave Ward. Not blocking for Sim08

11). Verify calibration of calorimeters with latest Geant4.

💡 Requires particle gun productions with calo only. XDIGI files? Prepared Boole options exist in AppConfig since now the containers are no longer written out. Productions ready to be checked by Patrick and Alexandra.

12). Check timing for EmNoCuts (candidate) and EmLHCb.

❌ Vladimir to provide numbers. Not blocking for Sim08.

13). Corrections for G4 dE/dx in Silicon trackers in Boole.

✔ David H. and Mark T. confirmed existing values are valid

14). Corrections for momentum resolution with G4 dE/dx in Brunel.

✔ Maurizio M. is checking is difference in correction for MC11 due to different value of property set. He will prepare options to put in AppConfig.

15). Check of IP with new G4

✔ David H. reported that with new G4 and latest VELO RF in DBASE the MSc has slightly improved, particularly at low momentum. To be checked against studies for MC11 where only RF foil was modified. No differences observed between EmNoCuts and EmLHCb.

16). Check of cross sections and multiplicities in LHEP and FTFP

✔ Studies by Jimmy and Luca reported at Simulation Meetings. Absolute cross sections better for FTFP against data. Also gamma produced in hadronic interactions. 💡 Should check on detectors multiplicities. Inclusive b will be produced with this for RICH studies and can be used to check all detectors multiplicities. Should use Gauss v45r1 that is being prepared in nightly.

17). Tests to check impact of asymmetry on physics with LHEP and FTFP.

✔ Productions of signal with Gauss v43r4 + LHEP ready and v43r4 + FTFP almost done. Jeroen will look into these productions early this week.

18). Investigate reason of high rate of stalled jobs with FTFP.

☹ Need to understand if we can start the production even if this is not solved. BUT this is not sustainable so must understand where it comes from. Investigate also with G4 team. Also few crashes. Must be fixed asap, but should not block the start of Sim08.

19). Prepare released of G4 v95r2p2 (identical to v95r2p1 but built against latest Gaudi).

☑ Done by Nigel. Used by Gauss v45r0.

Framework and processing

20). Prepare options in AppConfig for Beam 2012 and 2011

💡 Gloria collected information and preparing them for release taking into account beam offset

21). Check possible problem in setting sigma(z) of beam

☹ Reported by Massi that it seems that the value is options is assumed to be bunch length instead of sigma(z). Need to check and in case fix it.

22). Prepare whole processing pass: Gauss, Boole, Moore, Brunel, DaVinci and test with no writing of HepMC.



- Gauss v45r0 ok (to be replaced by v45r1 end of the week)
- Boole v26r2 ok - released
- Moore v14r8p1 ok - released
- Brunel v43r2p6 fixed issue with Calo digit linkers. Fix issue with PV monitor, to be prepared in nightly.
- DaVinci should be ok.
- Dbase tags for 2011 and 2012 ok - released (may have a new one mid of the week for SIMCOND)

Upgrade

The list of tasks and preparations for the Upgrade can be found in a dedicated page

This topic: LHCb > PreparationSim08

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