Subject: modifications of simpleEvtGen

Posted by Klaus Götzen   on Thu, 04 Mar 2010 17:46:08 GMT

Hi all,

due to discussions concerning random numbers and granularity of EvtGen I modified simpleEvtGen accordingly and also added a version creating ROOT output instead of ASCII output and a new EvtGen reader PndEvtGenGenerator. In addition I patched PndDpmDirect to also accept a random seed and theta min as parameters.

Modifications are:

- pgenerators/EvtGen/simpleEvtGen.cc

Usage is as before, but as an additional parameter after the beam momentum you can now specify a random seed which is passed to TRandom3 as

./simpleEvtGen <particle> <decfile> <#events> <pbarmom> <seed>

The default value is -1 which actually uses the default built-in random function w/o seed (backward compatibility).

- pgenerators/EvtGen/simpleEvtGenRO.cc

Can be build with 'make; make simpleRO'. Same interface as above, but creates a ROOT file 'evtOutput.root' as output. This is very handy to quickly plot the distributions coming directly from the generator in CINT. In addition it is way faster than the upper one (for whatever reason).

- pgenerators/PndEvtGenGenetor.cxx/h

The EvtGen 'Reader' which digest both ASCII and ROOT output files. Used as:

PndEvtGenGenerator* evtGen = new PndEvtGenGenerator(infile.Data());
primGen->AddGenerator(evtGen);

- pgenerators/PndDpmDirect.cxx/h

Accepts also a random seed and a theta min (relevant for modes 1 and 2 with elastic scattering).

Best wishes,
 Klaus