
Subject: Re: PndBoxGenerator -> distributions uniform in $1/p$
Posted by [Stefano Spataro](#) on Fri, 20 Jul 2007 11:59:10 GMT
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Hello,

I added in PndBoxGenerator a new option, in order to have distributions uniform in $1/p$ (sometimes it can be useful).

It works as the CosTheta function, so (example):

```
PndBoxGenerator* boxGen = new PndBoxGenerator(13, 1);  
boxGen->SetPRange(0.1,15.);  
boxGen->SetPhiRange(0., 360.);  
boxGen->SetThetaRange(1., 12.);  
boxGen->SetXYZ(0., 0., 0.);  
primGen->AddGenerator(boxGen);
```

generates particles with a uniform distribution over p in the fixed range, while if you add the `boxGen->SetInverseP()` function:

```
PndBoxGenerator* boxGen = new PndBoxGenerator(13, 1);  
boxGen->SetPRange(0.1,15.);  
boxGen->SetInverseP();  
boxGen->SetPhiRange(0., 360.);  
boxGen->SetThetaRange(1., 12.);  
boxGen->SetXYZ(0., 0., 0.);  
primGen->AddGenerator(boxGen);
```

you will have a distribution in the same range BUT uniform in $1/p$. It works even with pt range (so uniform in $1/pt$).

Enjoy.

P.S. meanwhile I corrected a missing initialization in the constructor, and some for CbmBoxGenerator.
