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Subject: Vertex smearing in FairPrimaryGenerator  
Posted by [StefanoSpataro](#) on Thu, 26 May 2011 08:57:52 GMT  
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Dear all,

I have added some vertex smearing to the tdr macros, in order to follow the "shape" of the pellet target:

```
FairPrimaryGenerator* primGen = new FairPrimaryGenerator();  
  
primGen->SetTarget(0., 0.0275.);  
primGen->SmearVertexZ(kTRUE);  
primGen->SetBeam(0., 0., 0.0275, 0.0275);  
primGen->SmearVertexXY(kTRUE);
```

The smearing on XY is done using a gaus function, but the smearing on Z is just an uniform distribution:

```
void FairPrimaryGenerator::MakeVertex()  
...  
if (fSmearVertexZ) vz = gRandom->Uniform(vz - fTargetDz/2.,  
vz + fTargetDz/2.);
```

Is it possible to add a gaus smearing function, so that:

```
if (fSmearVertexZGaus) vz = gRandom->Gaus(vz, fTargetDz);
```

?

I cannot do it by myself because it is on the base folder. We need this change to start the production.

Many thanks in advance.