Subject: Re: Bug in PndEmcHitProducer
Posted by M.Babai on Wed, 14 Apr 2010 09:40:14 GMT
View Forum Message <> Reply to Message

Hi!,

This problem is now solved and the corrected code is available in trunk.
In the original code the following was declared and used without proper initialization:

```
map<Int_t, Float_t> fTrackEnergy;
map<Int_t, Float_t> fTrackTime;  //time of first point
map<Int_t, std::vector <Int_t> > fTrackMcTruth;  //McTruth
fTrackEnergy.clear();
fTrackTime.clear();
fTrackMcTruth.clear();
.........
.........
point  = (PndEmcPoint*) fPointArray->At(iPoint);
fTrackEnergy[point->GetDetectorID()] += point->GetEnergyLoss();
point_time=point ->GetTime();
if (point_time < fTrackTime[point->GetDetectorID()])
    fTrackTime[point->GetDetectorID()] = point_time;
```

In the lines above we can see a comparison and a "+=" operation on not initialized member of the map which has(might have) an undefined state.
Another point, which is (in this case) a matter of taste and beauty, is the declaration of:
PndEmcPoint* point = NULL;
map<Int_t, Float_t>::const_iterator p;
outside the loop. In this case they are not leading into wrong computations but potentially they can, as their values are changed inside the loop.

Greets,
/M