
Subject: Re: back-propagation with GEANE

Posted by [Anastasia Karavdina](#) on Wed, 19 May 2010 16:58:35 GMT

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Hello Stefano!

This is the code, that I used:

```
PndMCTrack* myTrack = (PndMCTrack*)(fMCTracks->At(0));

//Get Start point and momentum from MC
PndSdsMCPoint* mcPoint = (PndSdsMCPoint*)(fMCHits->At(0));
StartPos = mcPoint->GetPosition();
TVector3 MCmom;
mcPoint->Momentum(MCmom);
StartMom = TVector3(MCmom.X(),MCmom.Y(),MCmom.Z());

StartPosErr = TVector3(0,0,0);
StartMomErr = TVector3(0,0,0);

//Charge and PDGCode of particle
Int_t PDGCode = myTrack->GetPdgCode();
TDatabasePDG *fdbPDG= TDatabasePDG::Instance();
TParticlePDG *fParticle= fdbPDG->GetParticle(PDGCode);
Double_t fCharge= fParticle->Charge();

TClonesArray& clref1 = *fTrackParIni;
Int_t size1 = clref1.GetEntriesFast();
FairTrackParP *fStart =
    new (clref1[size1]) FairTrackParP(StartPos, StartMom, StartPosErr, StartMomErr, fCharge,
    StartO, StartU, StartV);

TClonesArray& clref = *fTrackParGeane;
Int_t size = clref.GetEntriesFast();
FairTrackParP *fRes = new(clref[size]) FairTrackParP();

//Set origin of coordinate in intial point of track (0,0,0)
TVector3 vtx = myTrack->GetStartVertex();
fPro->SetPoint(vtx);
fPro->BackTrackToVirtualPlaneAtPCA(1);//1 means "closest approach to point"
fPro->Propagate(fStart, fRes, PDGCode);

new((*fTrackParFinal)[i]) FairTrackParP(*(fRes)); //save Track
```
