Subject: Urgent fixes in FairGeanePro.cxx needed
Posted by Anonymous Poster on Tue, 31 Mar 2009 13:26:38 GMT
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Dear Geane experts,

we found other floating point exceptions in FairGeanePro.cxx. I made a list of all divisions that need to be protected against division by zero. Thi is very important and in my opinion the main source of of instabilities in our tracking software. Please let me know about your progress. As I imagine error handling could be difficult in these cases, I want to suggest to use exceptions for that since they are so easy to use.

Cheers, Christian

line number and content:

```
762:  a= 1./(x2-x1).Mag();
884:  xpR[1] = 0.5*(xp32[0]*xp3[0]/xp3[1]+ xp3[1]);
919:  it = t.SolveQuartic(d3/d4,d2/d4,d1/d4,d0/d4,sol4);
977:  Angle = TMath::ACos((x1-xR).Dot(Pfinal-xR)/((x1-xR).Mag()*(Pfinal-xR).Mag()));
982:  Double_t epsi = Radius*(1.-TMath::Cos(0.5*(x3-x1).Mag()/Radius));
1048:  m1 = 1./x21.Mag();
1064:  m3 = 1./e3.Mag();
1096:  xpR[1] = 0.5*(xp32[0]*xp3[0]/xp3[1]+ xp3[1]);
1104:  Rt = Radius/(wpt-xpR).Mag();
1127:  Angle = TMath::ACos((x1-xR).Dot(Pfinal-xR)/((x1-xR).Mag()*(Pfinal-xR).Mag()));
1131:  Double_t epsi = Radius*(1.-TMath::Cos(0.5*(x3-x1).Mag()/Radius));
```