Subject: Bug in Geane?
Posted by Anonymous Poster on Thu, 01 May 2008 21:30:23 GMT

Hi,

I have I encountered starnge behaviour in geane, which is keeping me from continuing my work on genfit. I would be greatful, if someone could look at this and try to find out, where it goes wrong.

Here is how you can reproduce the bug:

-update trackrep and genfit
-include genfit/pocaTest in your global CMakeLists.txt
- make install
- run the macro genfit/pocaTest/runTest.C (runs task POCAtestTask4.cxx)

This does one extrapolation, which goes wrong. It should be simple. Here is the output of the testTask:

DetPlane: O(0.1,0.2,0) u(-0.8165,0.4082,0.4082) v(0,-0.7071,0.7071) n(0.5774,0.5774,0.5774)

TVector3 A 3D physics vector (x,y,z)=(0.100000,0.200000,0.000000)
(rho,theta,phi)=(0.223607,90.000000,63.434949)
TVector3 A 3D physics vector (x,y,z)=(1.154701,1.154701,1.154701)
(rho,theta,phi)=(2.000000,54.735610,45.000000)
DetPlane: O(1.255,1.355,1.155) u(-0.8165,0.4082,0.4082) v(0,-0.7071,0.7071)
n(0.5774,0.5774,0.5774)

5x1 matrix is as follows

```
      |    0   |
------------------
  0 |     -0.5
  1 |       0
  2 |       0
  3 |       0
  4 |       0
```

CbmGeaneUtil::FromSDToMars-1
CbmGeaneUtil::FromSDToMars-1

5x1 matrix is as follows

```
      |    0   |
------------------
  0 |    -0.5011
  1 |     0.6446
  2 |    -0.2032
  3 |     559.7
  4 |     828.4
```

############

The two prints at the end are the state vector before and after the extrapolation. Please have a look into the task though.

I really want to point out that we made quite a lot of progress. There are these mean bugs which we have to chase. But the basics are coming together for real tracking, more and more.

Oh, here is one more thought, what might be supicious: In the GeaneTrackRep ctor, there is something like "protect against x,y=0,0" or so. Well the way we initialize the track rep now, this always occurs. Please have a look and a thought about this problem.

Thanks you very much!

Bye, Christian