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Subject: Bug in PndGenfitAdapters

Posted by [StefanoSpataro](#) on Wed, 27 Oct 2010 09:33:29 GMT

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Exploring the warnings, I have found something very interesting. This is one of the main reasons why I stress that it is important to remove all the warnings, even if they are just warnings!

In particular:

[ 80%] Building CXX object

GenfitTools/adapters/CMakeFiles/genfitAdapters.dir/PndGenfitAdapters.o

/home/spataro/test/trunk/GenfitTools/adapters/PndGenfitAdapters.cxx: In function

`GFTrackCand\* PndTrackCand2GenfitTrackCand(PndTrackCand\*)':

/home/spataro/test/trunk/GenfitTools/adapters/PndGenfitAdapters.cxx:36: warning: passing  
`Double\_t' for converting 4 of `void GFTrackCand::addHit(unsigned int, unsigned int, double,  
unsigned int)'

Linking CXX shared library ../../lib/libgenfitAdapters.so

[ 80%] Built target genfitAdapters

If you check PndGenfitAdapters.cxx line 36 you find:

```
retVal->addHit(candHit.GetDetId(),candHit.GetHitId(),0,candHit.GetRho());
```

In reality, the correct GFTrackCand::addHit function is:

```
void addHit(unsigned int detId, unsigned int hitId, double rho=0., unsigned int planeId=0);
```

Then, in the adapter the order criterion "rho" is switched with the detector plane "planeId". We are giving always the same rho=0, and giving rho as plane id!!

Before committing the correction, I would like to ask to genfit expert if this is correct and in particular if this could affect the kalman global fit performances.

Many thanks.

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Subject: Re: Bug in PndGenfitAdapters

Posted by [Anonymous Poster](#) on Wed, 27 Oct 2010 12:04:10 GMT

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Hi Stefano,

you are right, this is a bug. The call in the adapter should be:

```
retVal->addHit(candHit.GetDetId(),candHit.GetHitId(),candHit.GetRho(),0);
```

The planeId parameter has no relevance for the Kalman filter of GENFIT. I do not think that this bug had any bad effects so far, but it should be fixed nevertheless.

Could you change the code, please?

Cheers, Christian

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Subject: Re: Bug in PndGenfitAdapters

Posted by [StefanoSpataro](#) on Wed, 27 Oct 2010 15:42:45 GMT

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Hi,

I have committed the fix.

My doubts were not about the plane id, but from the fact that the code was giving always "0" as rho parameter. Is genfit using that number to sort hits or not? In that case, the rho for all the hits was exactly the same -> no sorting (I suppose).

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