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Subject: Kalman in lhetrack

Posted by [StefanoSpataro](#) on Fri, 26 Sep 2008 14:50:02 GMT

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Dear all,  
now a Kalman Filter is also provided with lhetrack code, so for TPC+MVD and STT+MVD.

Let me show the difference between lhetrack fit for muons at 1GeV and genfit refit.

TPC+MVD:

STT+MVD:

...

...

in practice there are no strong differences.

You can find some macros on how to run it, after the standard sim/digi/recom in tutorials/lhetrack:

- \* run\_kalman\_tpc.C
- \* run\_kalman\_stt.C
- \* plot\_kalman\_tpc.C
- \* plot\_kalman\_stt.C

At the moment, in the code you can see that three iterations are performed and even smoothing:

Toggle Spoiler

```
PndLheKalmanTask* lheKalman = new PndLheKalmanTask();  
  lheKalman->SetVerbose(iVerbose);  
  lheKalman->SetGeane(kTRUE);  
  lheKalman->SetSmooth(kTRUE);  
  lheKalman->SetNumIterations(3);  
  fRun->AddTask(lheKalman);
```

You can switch ON/OFF or play with these parameters.

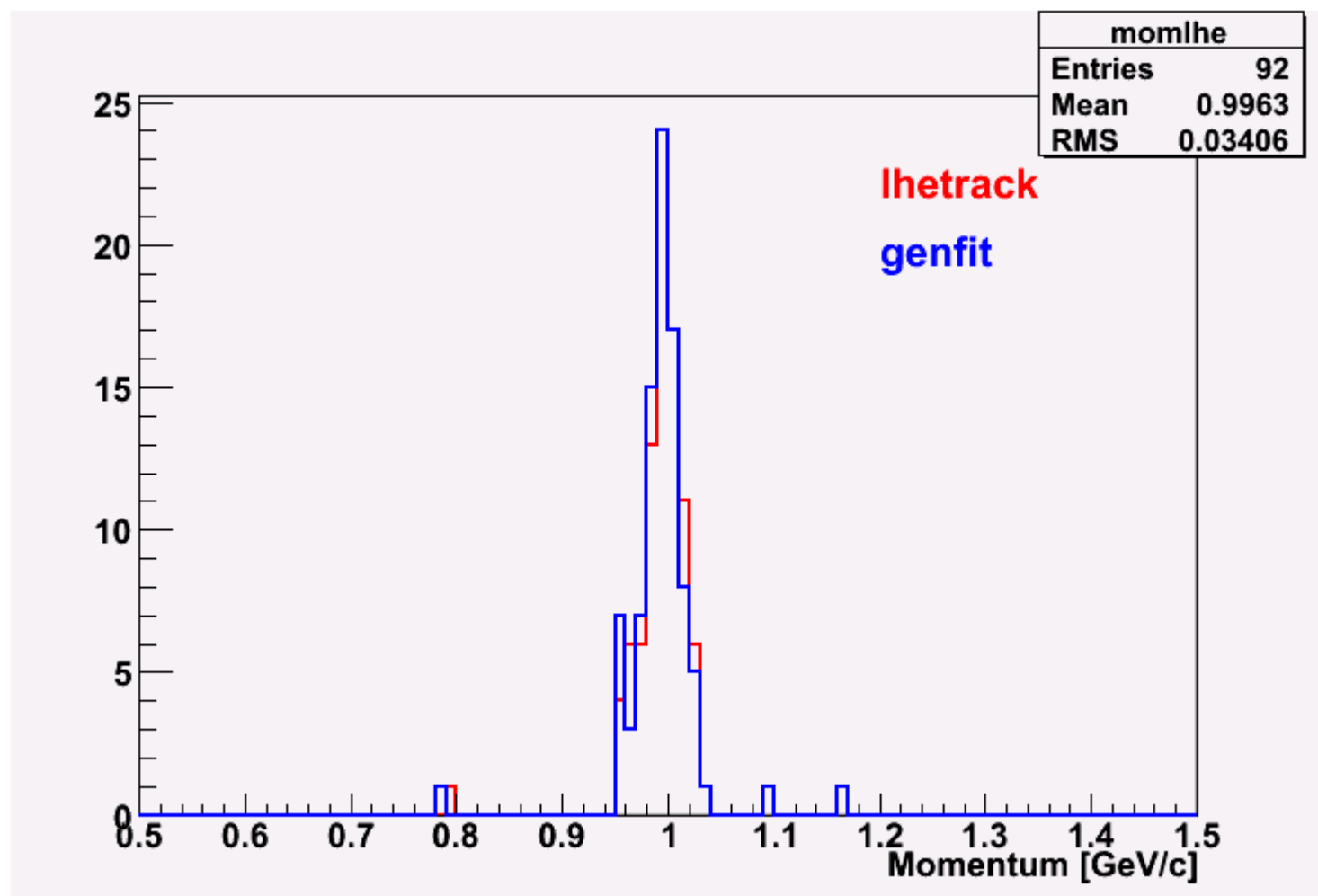
Probably fixes will be needed, but at least it seems to work.

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## File Attachments

1) [kalman\\_tpc.gif](#), downloaded 1024 times

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2) [kalman\\_stt.gif](#), downloaded 1055 times

