Subject: Re: Influence of the reduced B-field on the track reconstruction
Posted by Gianluigi Boca on Sun, 23 Mar 2014 19:48:26 GMT
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Hi Donghee,
I put in svn a new version of the Pattern Recognition class PndTrkTracking2.cxx and .h;
the field now is not hardcoded anymore (set at 2 Tesla) but rather extracted using

FairRunAna::Instance()->GetField()

(thanks Stefano for giving me the recipe).
Therefore now the momentum values obtained from Pattern Recognition and given as input to the Kalman filter are correct for every magnetic field you use.

Please rerun your Macro and see wht happens now

Gianluigi

Donghee Kang wrote on Sat, 22 March 2014 00:50Hi Stefano,

I try to see the effect of reduced B-field, which was intensively discussed during this week.
Two plots are produced to compare the momentum resolution with two diffrent field map configurations for "FULL" and "HALF".
Simulation has been made with single Muon particle with momentum range starting from 0.3 GeV upto 2 GeV, and scan theta between 10 and 148 degree.
PANDAroot Jan14 has been used and simulation codes are attached to cross check.
The pull distributions of momentum for p=0.3 GeV and both Half and Full field map configurations cases are also attached to make sure the fit procedure. (Gauss+Pol(3) has been used.)

The momentum resolution with half field map is factor 2 times worser than FULL field map.
If you want to check the analysis code, please let me know, I will send you.

Best wishes,
Donghee