Subject: Test of muon momentum resolution with Jan14 release
Posted by binsong on Wed, 12 Feb 2014 16:54:22 GMT
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Dear all,

I have checked the momentum resolution of muon for two angles with the new release (p = 1GeV/c, theta = 15deg and theta = 60 deg).

the result at Barrel region is normal, deltap/p = 1.56%, comparable to the result from TDR.

But, for the Forward region, I found deltap/p = 2.1%, very different from the TDR result which is about 1.5%.

Then, I also checked them with the apr13 release, both of them seem correct.

Has anyone some idea, why the momentum resolution in forward between apr13 and jan14 changes a lot?

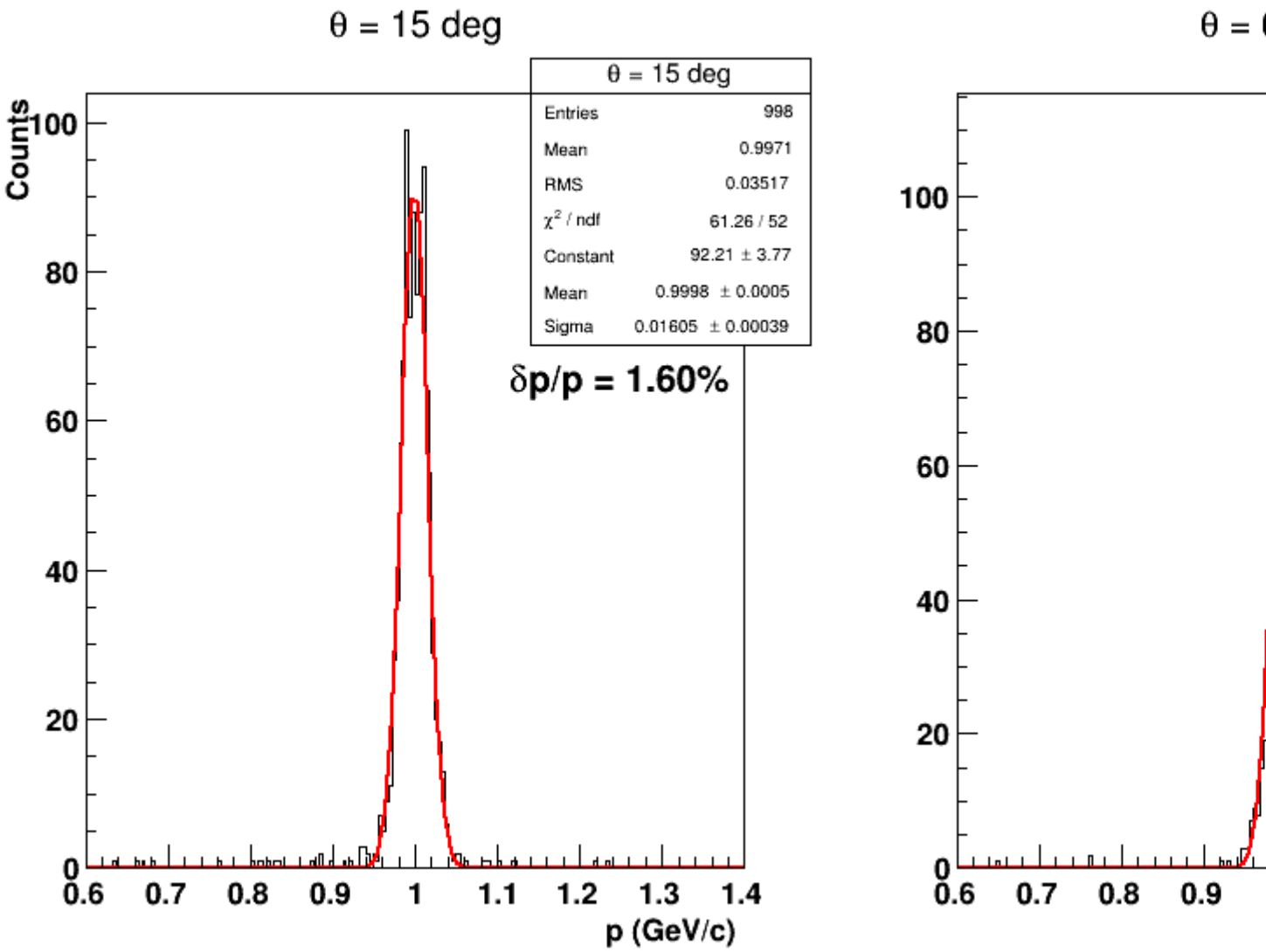
Binsong

Subject: Re: Test of muon momentum resolution with Jan14 release
Posted by Susanna Costanza on Mon, 17 Feb 2014 10:17:43 GMT
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Dear Binsong,
I've downloaded the jan14 release and I simulated two sets of 1000 events with a momentum of 1 GeV/c; one set was generated at theta = 15 deg and the other one at theta = 60 deg.
For both data sets, I obtain nearly the same resolution: 1.60% at 15 deg and 1.62% at 60 deg, as shown in the plot attached.
So I don't see any difference with respect to the TDR results.
Are you using the macros in the macro/run directory?
Cheers,
Susanna

File Attachments

1) resolution_1GeV.png, downloaded 1052 times



Subject: Re: Test of muon momentum resolution with Jan14 release
Posted by binsong on Mon, 17 Feb 2014 12:32:14 GMT
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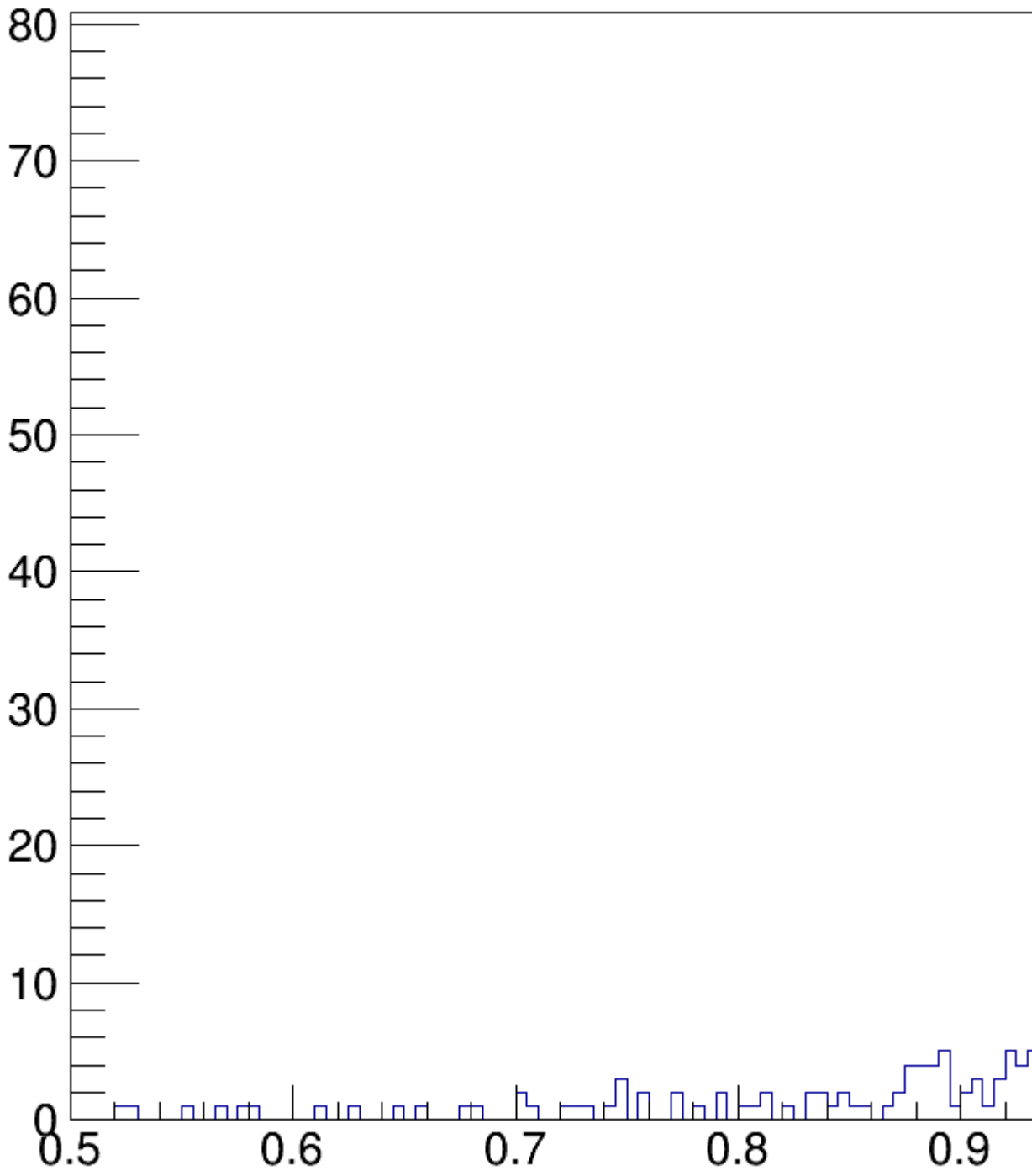
hi Susanna,
Thanks for your answer. The revision I used is 23659, external package is dec13, and the macro in macro/run.

But the result for 15deg is different with yours.

My delta p / p is 2.2%.

Cheers

File Attachments
1) mom_mu_15deg.png, downloaded 1014 times



Subject: Re: Test of muon momentum resolution with Jan14 release
Posted by Susanna Costanza on Mon, 17 Feb 2014 12:43:21 GMT

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I'm still using the apr13 release of the external packages.
I'll install the dec13 release and I'll let you know if/how my results change.

Susanna

Subject: Re: Test of muon momentum resolution with Jan14 release
Posted by StefanoSpataro on Mon, 17 Feb 2014 15:29:38 GMT
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Hi,
why are you using dec13? It was never announced since it has bugs inside, in this case geane is not working properly.
Please try again with apr13 externals.