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Subject: Vertex fitter for eta\_c analysis

Posted by [Dima Melnychuk](#) on Wed, 13 Jul 2011 14:31:04 GMT

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Dear colleagues,

I would like to inform you that Elisa has found a bug in my eta\_c analysis macro related to usage of vertex fitter and after correction it gives reasonable results in the sense of mass distribution.

Using PndKinVtxFitter eta\_c and phi mass looks like

And for comparison using 4C kinematics fit

So in both cases mass resolution looks almost identical.

In case of 4C-fit daughter particles are not updated after the fit, i.e. it shouldn't modify the shape of mass distribution, but for vertex fit daughter particles are updated and I would expect bigger improvement/difference of at least eta\_c mass, but it's not the case.

And I didn't look yet how position of the vertex is reconstructed, i.e. (reconstructed - MonteCarlo).

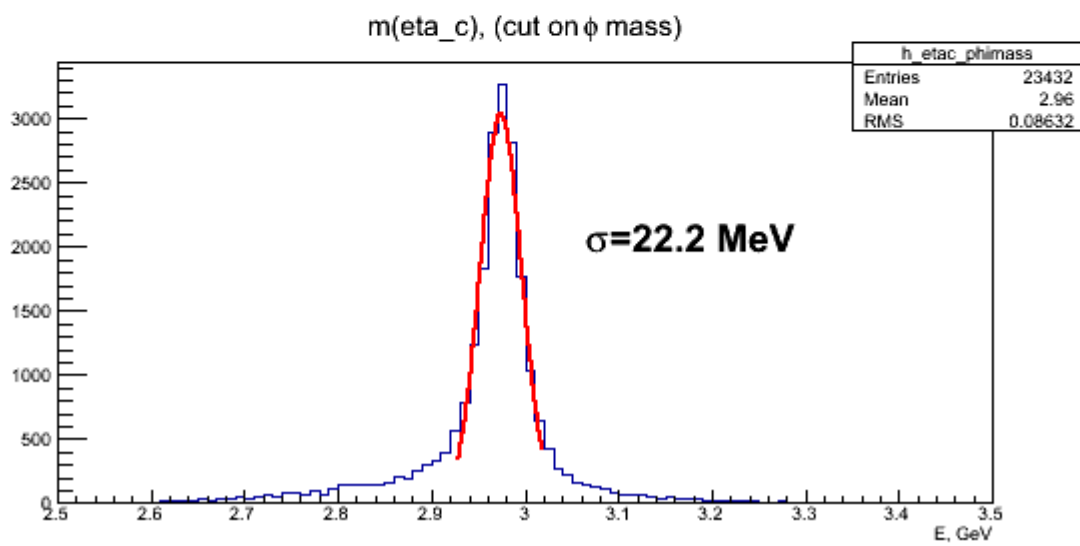
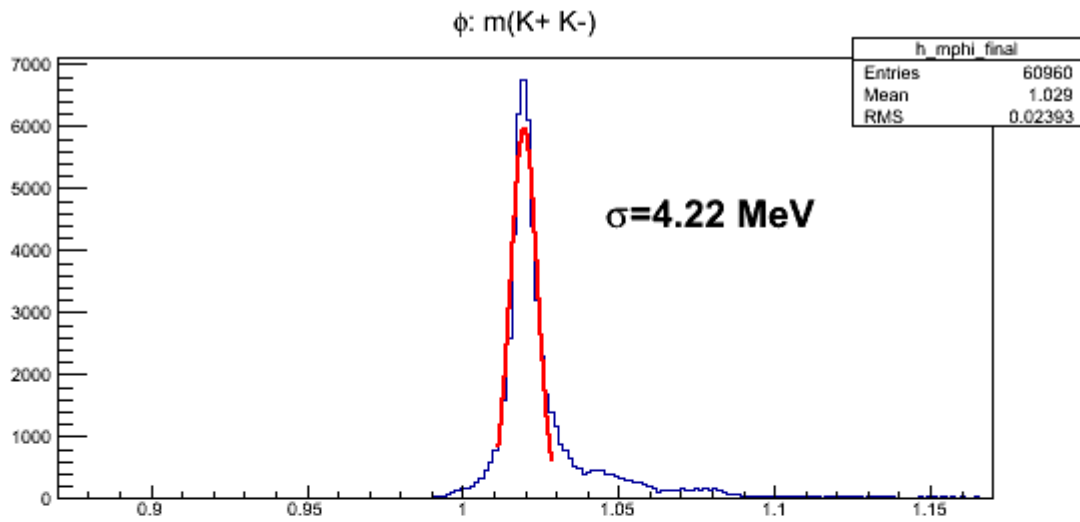
But in principle now both fitters could be used in analysis.

Dima

#### File Attachments

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1) [m\\_etac\\_stt\\_vtx.png](#), downloaded 610 times



2) [m\\_etac\\_stt\\_4c.png](#), downloaded 563 times

