Subject: [OK] Tracking parametrization
Posted by Klaus Götzen on Wed, 09 Apr 2014 08:37:53 GMT
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Hi,

I put now the sophisticated parametrization to the FsmSimpleTracker class with (reference to Susannas talk)

- dphi(p) according to p. 10
- dtheta(p) -> p. 9
- dp/p(p) -> p. 6
- for p<0.6: eff(p) -> p. 8.

They can be switched on by putting negative parameter values for pRes, thtRes, phiRes (the values given are then simply ignored if <0) and efficiency, where the efficiency is multiplied with a function shaped like that from p.8, scaling the eff value for 0<p<0.6 with a factor between 0.55 and 1.0.

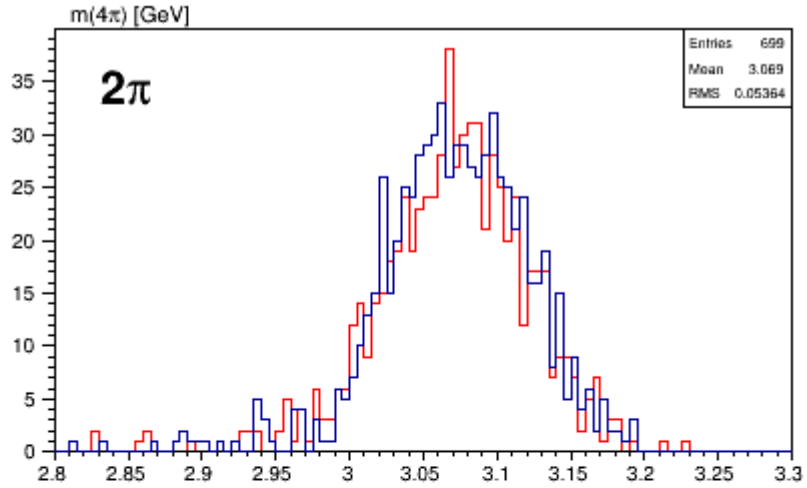
However, from a quick check concerning the channels we discussed on Monday I observed, that a flat tracking efficiency of 85% already looks pretty good for 2pi, 4pi, and J/psi pi+ pi- channel. The eta_c ->phi phi channel is still inconstistent for both the sophisticated and the flat approach, where the flat values even look a bit more similar to full sim results, which is also true for the J/psi. In the figure, the red plots are from flat values, blue are from parametrization. In the J/psi plot, magenta corresponds to full sim. There the flat fast and full sim plots are basically identical with eff_trk = 85%.

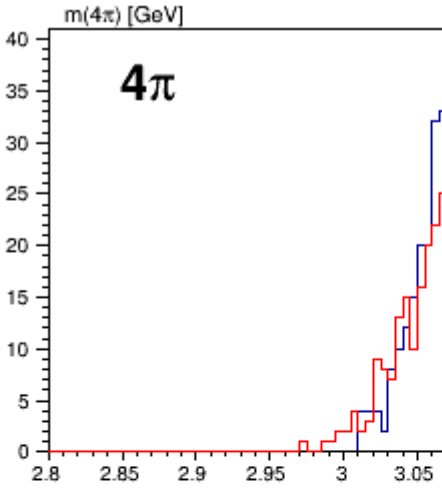
So, our proposal is to keep the flat values as default.

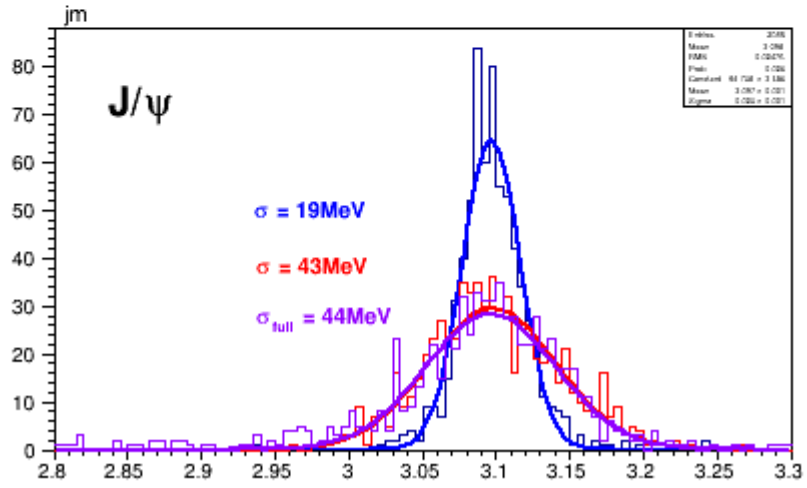
Best,
Klaus

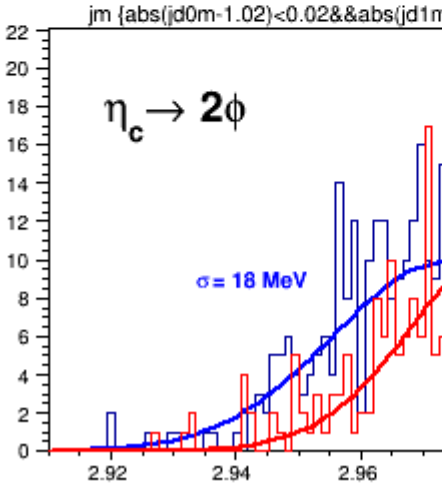
File Attachments

1) flat_vs_para.gif, downloaded 1284 times


m(4π) [GeV]
2π
Entries 699
Mean 3.069
RMS 0.05364


m(4π) [GeV]
4π


jm
J/ψ
σ = 19MeV
σ = 43MeV
σ full = 44MeV


jm {abs(jd0m-1.02)<0.02&&abs(jd1m
ηc→ 2φ
σ = 18 MeV