

Introduction of my previous works

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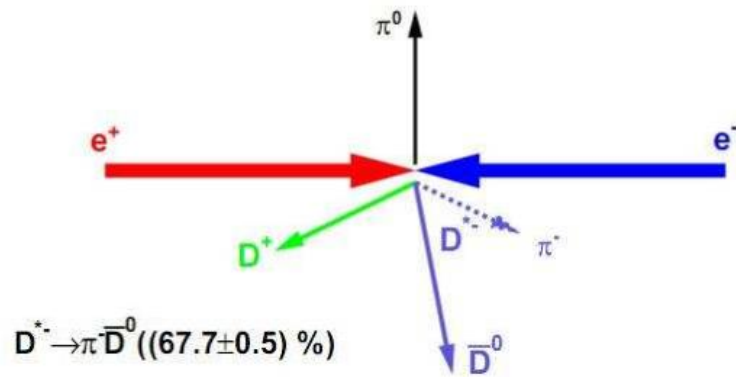
2017.9.29

Outline

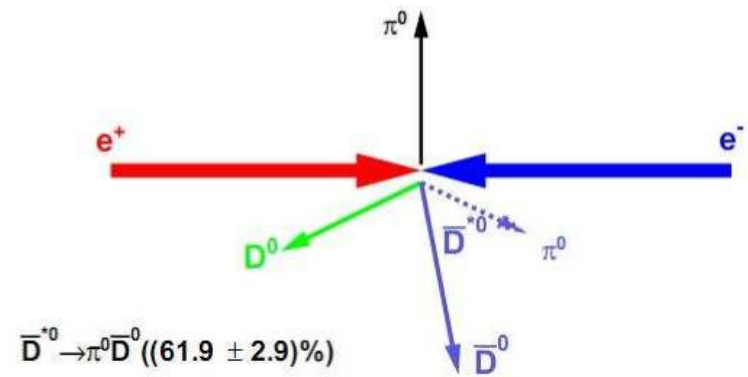
- What I did before
 - Physics analysis
 - Software services
- Personal skills and interests

Neutral Zc study

(a) $e^+e^- \rightarrow \pi^0 D^+ D^{*-}$



(b) $e^+e^- \rightarrow \pi^0 D^0 D^{*0}$



Neutral Zc study

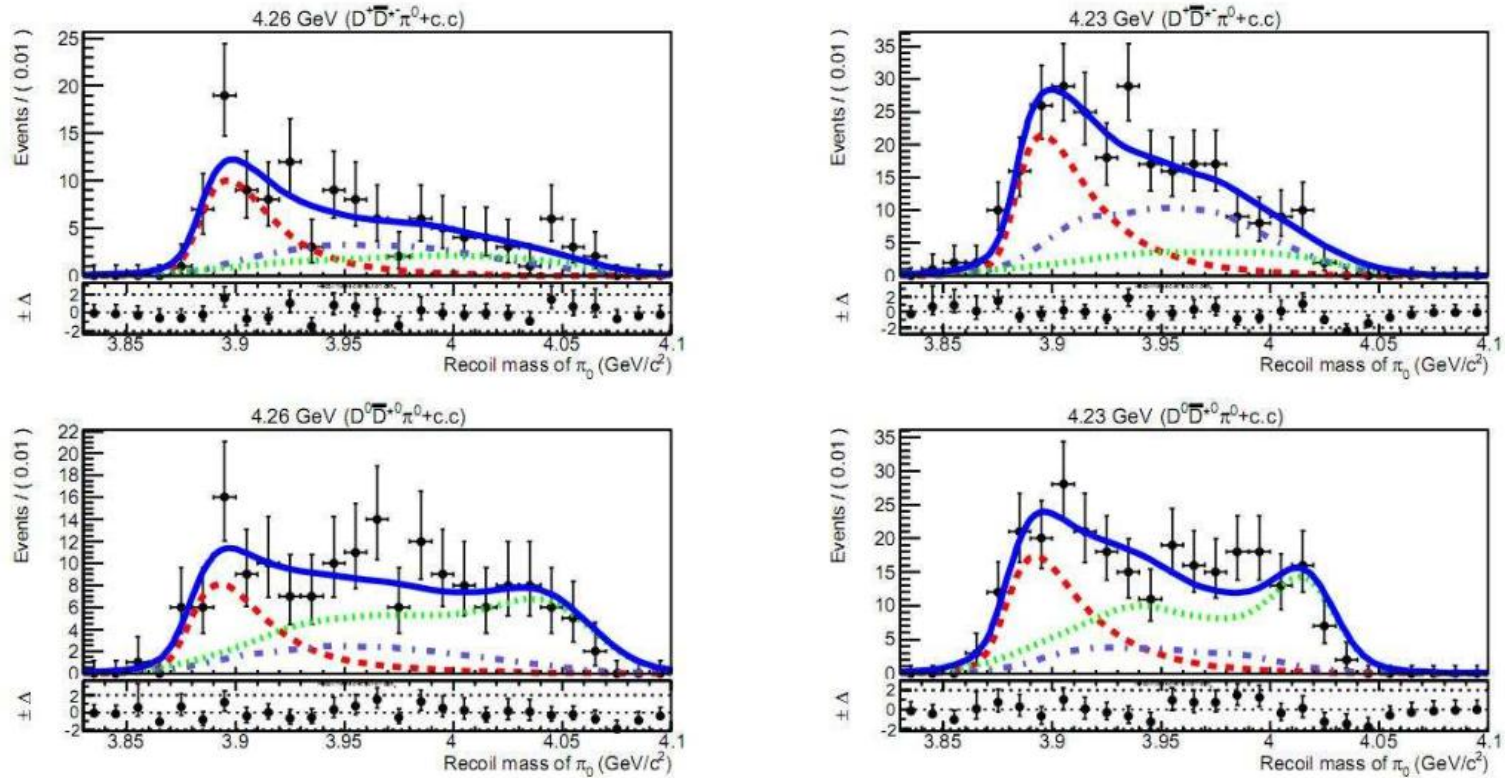
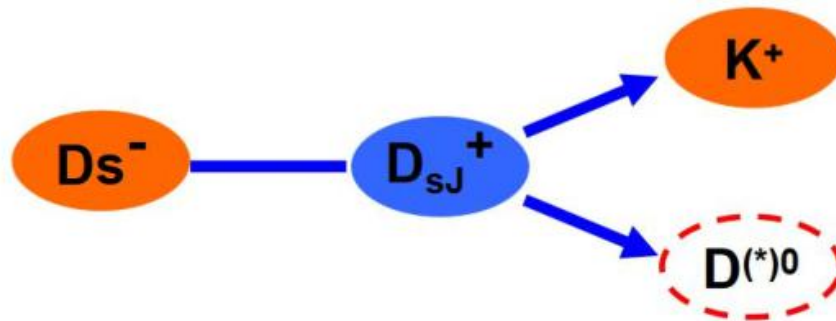


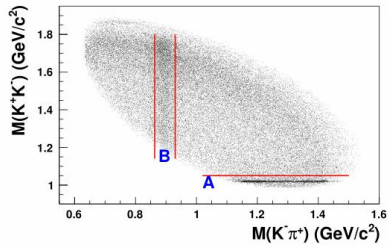
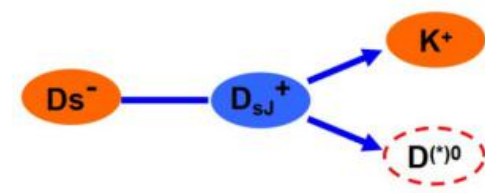
Figure 4.14 Simultaneous fit. The left two plots are data at 4.26 GeV and the right two plots are at 4.23 GeV; the top plots belongs to $D^+ D^{*-0} \pi^0$, and the bottom two belongs to $D^0 \bar{D}^{*0} \pi^0$ process.

D_{sJ} study

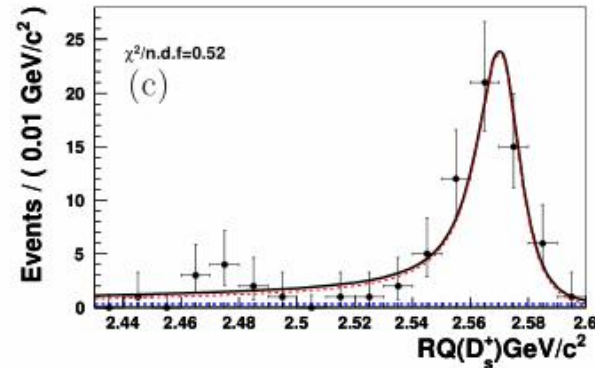
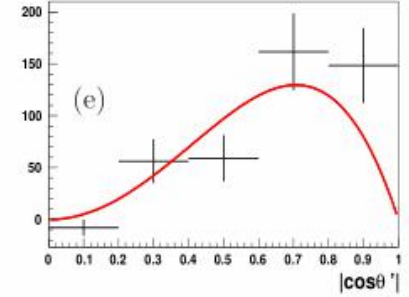
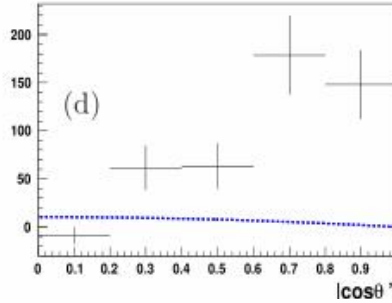
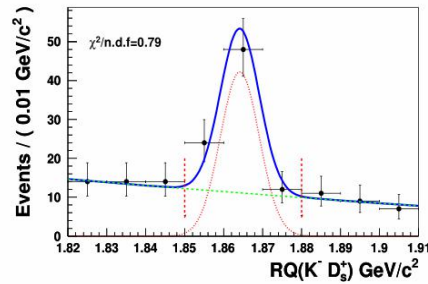
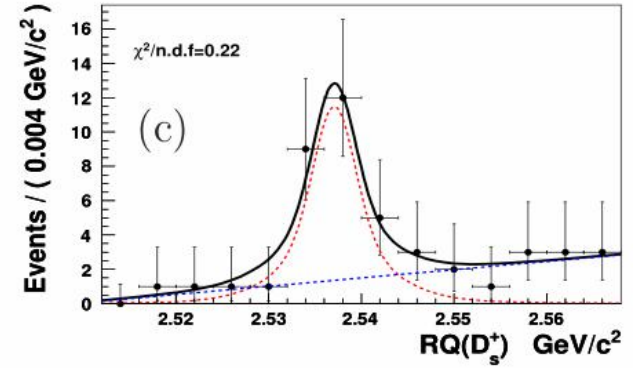
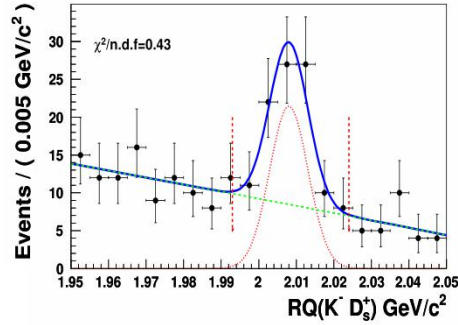
partial reconstruction method



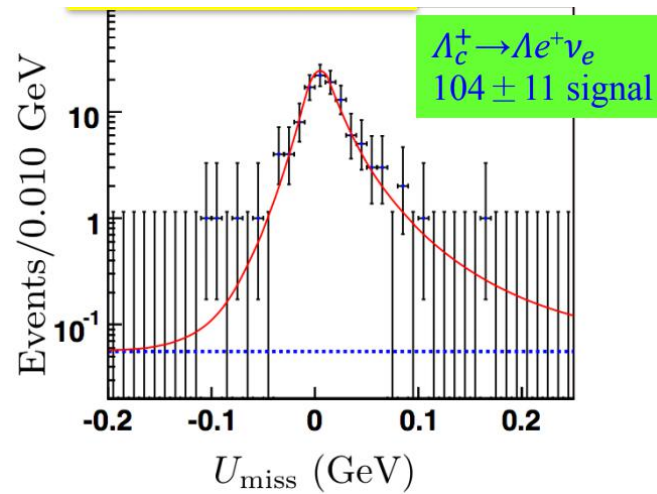
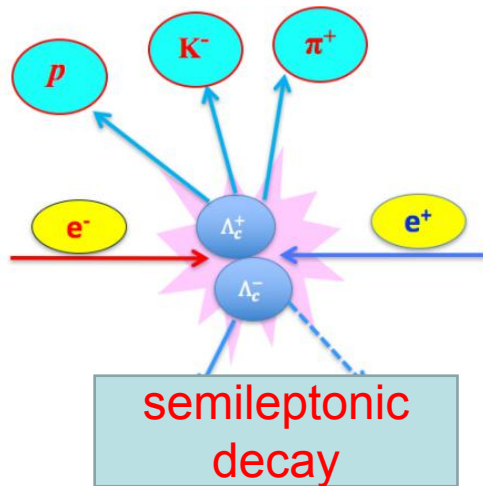
DsJ study



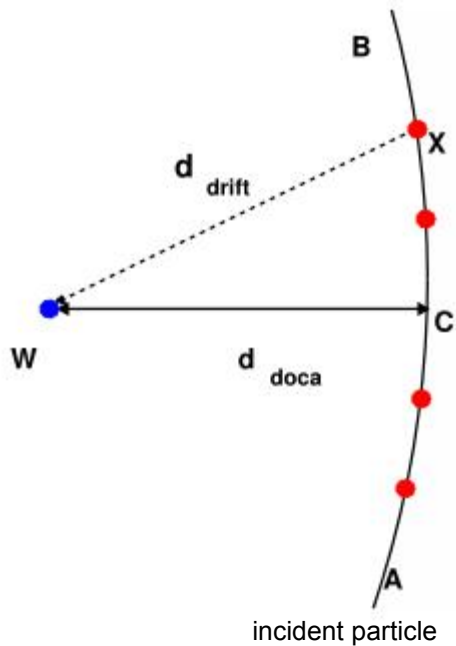
(a) Scatter plot of $M(K^+K^-)$ versus $M(K^-\pi^+)$ in the process of $D_s^+ \rightarrow K^+K^-\pi^+$ in data.



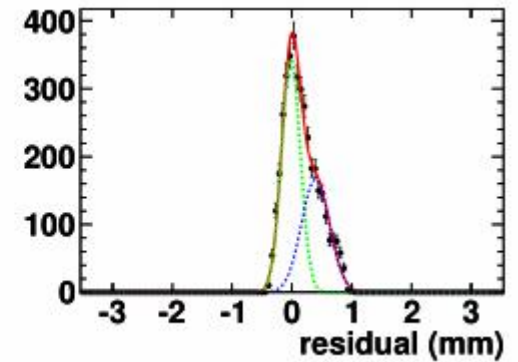
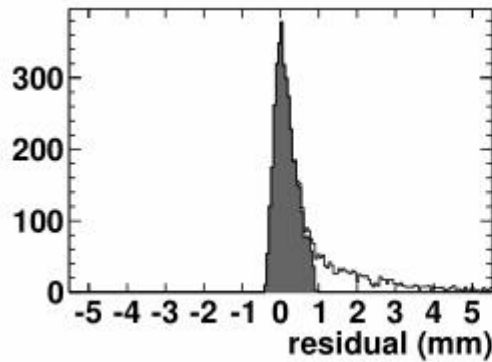
Lambda_c study



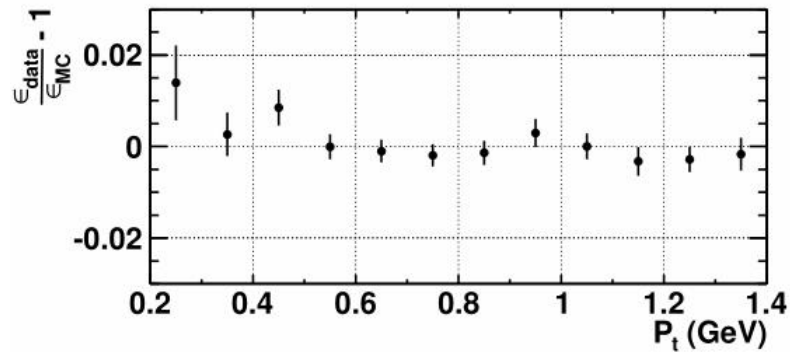
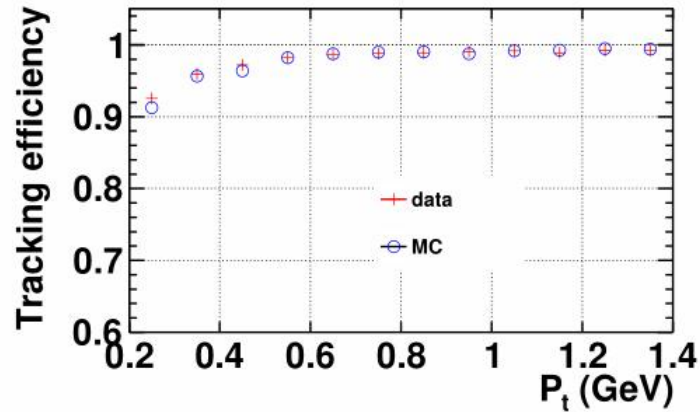
MDC T-channel simulation tunning



digitization model



Performance



$J/\psi \rightarrow \pi^+ \pi^- \pi^0$ process

Comparison of momentum resolutions between two models.

	Previous/MeV	New/MeV
σ_{data}	7.827 ± 0.013	7.827 ± 0.013
σ_{MC}	7.097 ± 0.011	7.639 ± 0.035
$\frac{\sigma_{MC}}{\sigma_{data}} - 1(\%)$	-9.33 ± 0.21	-2.40 ± 0.48

Contributions in these works

- **Neutral Zc study:**

- event selection & optimization
- some systematic uncertainties
- fitting
- help with replying referee's questions

- **DsJ study:**

- whole process

- **Lambda_c semileptonic study**

- event selection
- generating samples
- some cross checks

- **MDC tuning**

- two papers published
- **paper1:**
 - diff. on tracking eff. reached 1% level;
 - published by me, but started and also a lot of studies did by another contributor.
- **paper2**
 - diff. on tracking eff. reached 0.5% level
 - agreement on momentum distribution improves a lot
- **another work**
 - further improved model in paper2.
 - a lot of man power could be saved

Personal skills and interests

- Physics analysis
- MDC softwares
 - Geant4, etc.
- Programming
 - python, Cpp, shell
- Playing with Linux
- web
 - building website and related techniques:
 - PHP, HTML, CSS,
 - MySQL(not expert)
 - JavaScript(not expert)

THANKS