



KoALICE

Plan of the multiplicity dependent Ξ_c^+ analysis

JaeYoon CHO

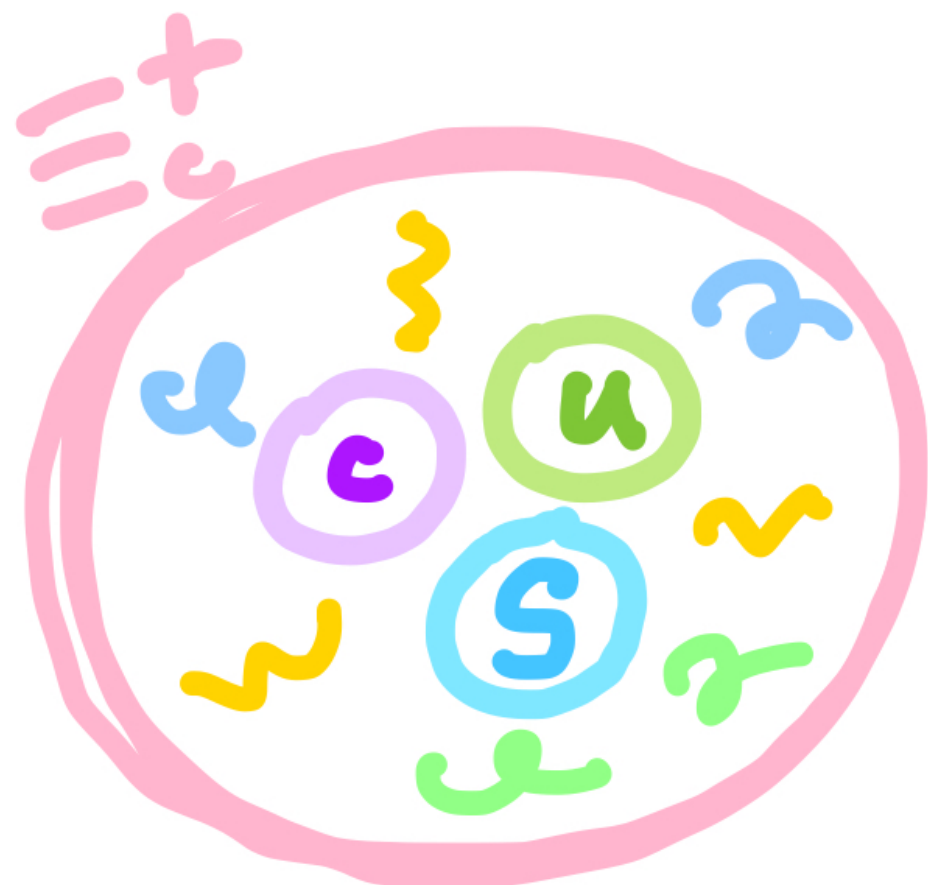
High Energy Nuclear Physics Lab.

INHA University



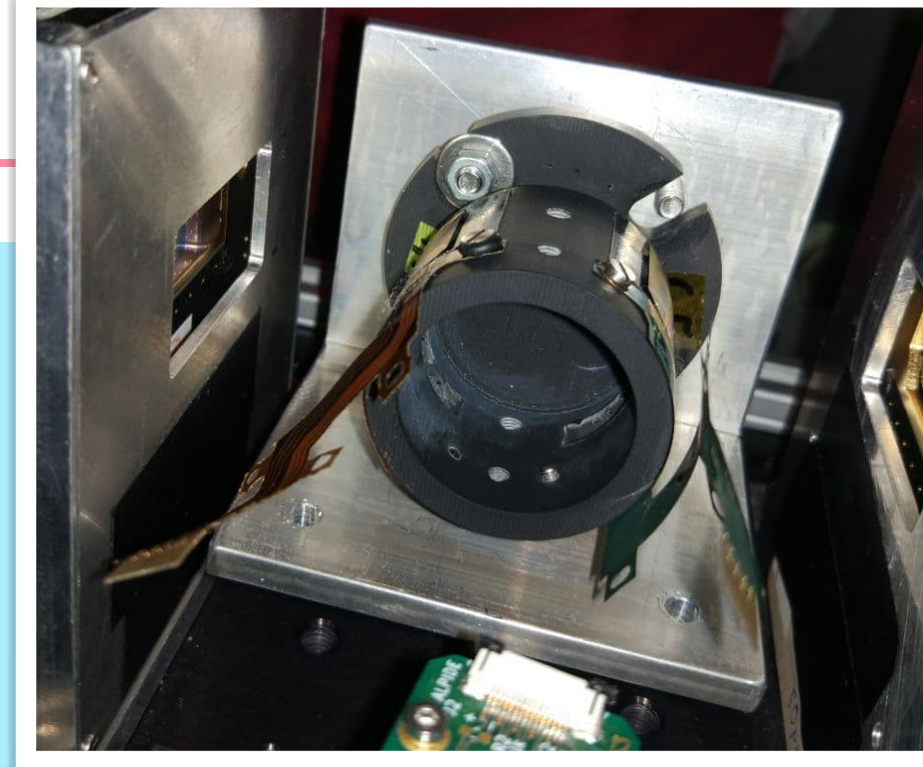
2022 KoALICE Workshop

2022 January 4th



My Activity on 2021

2021



Graduation Admission

2022

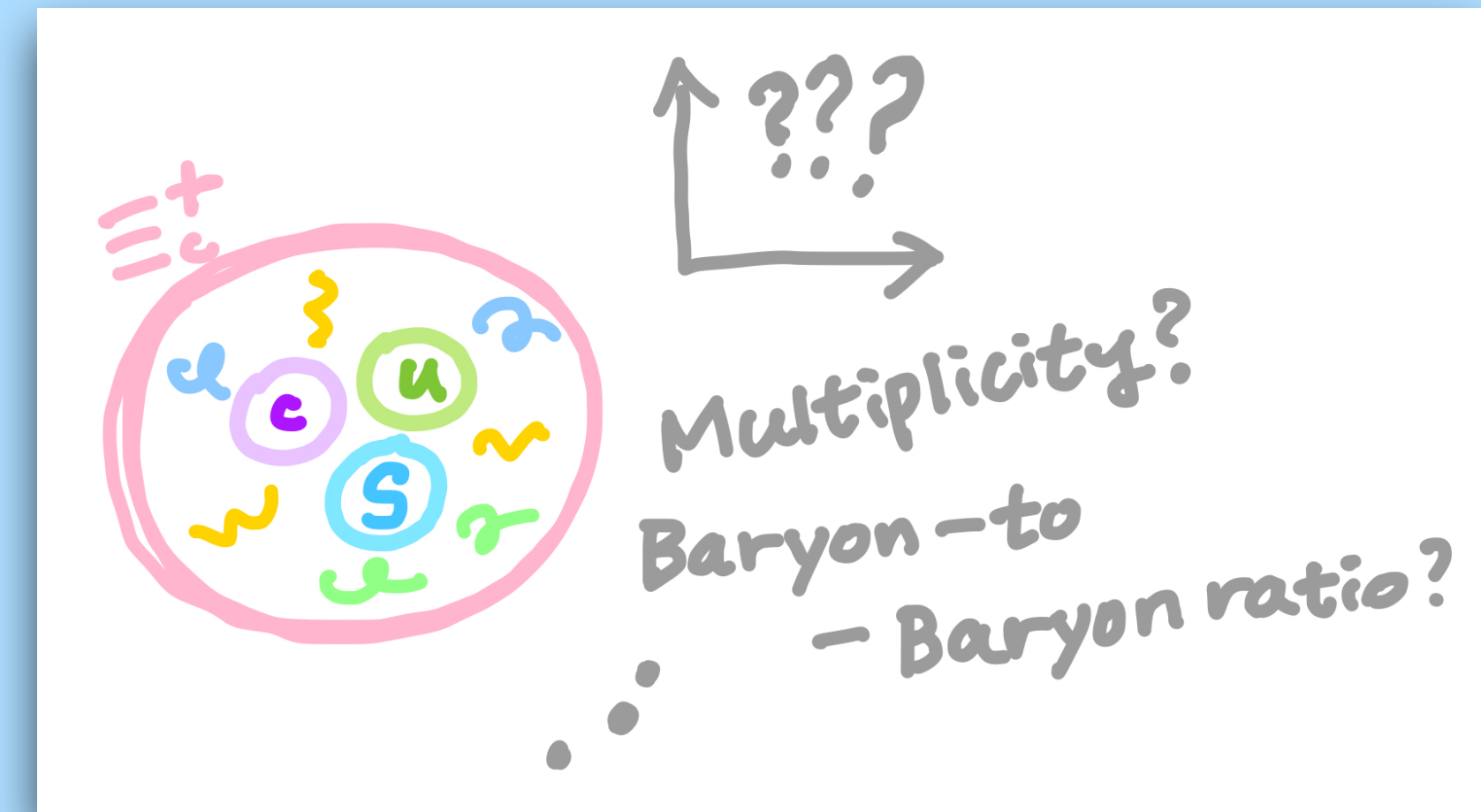
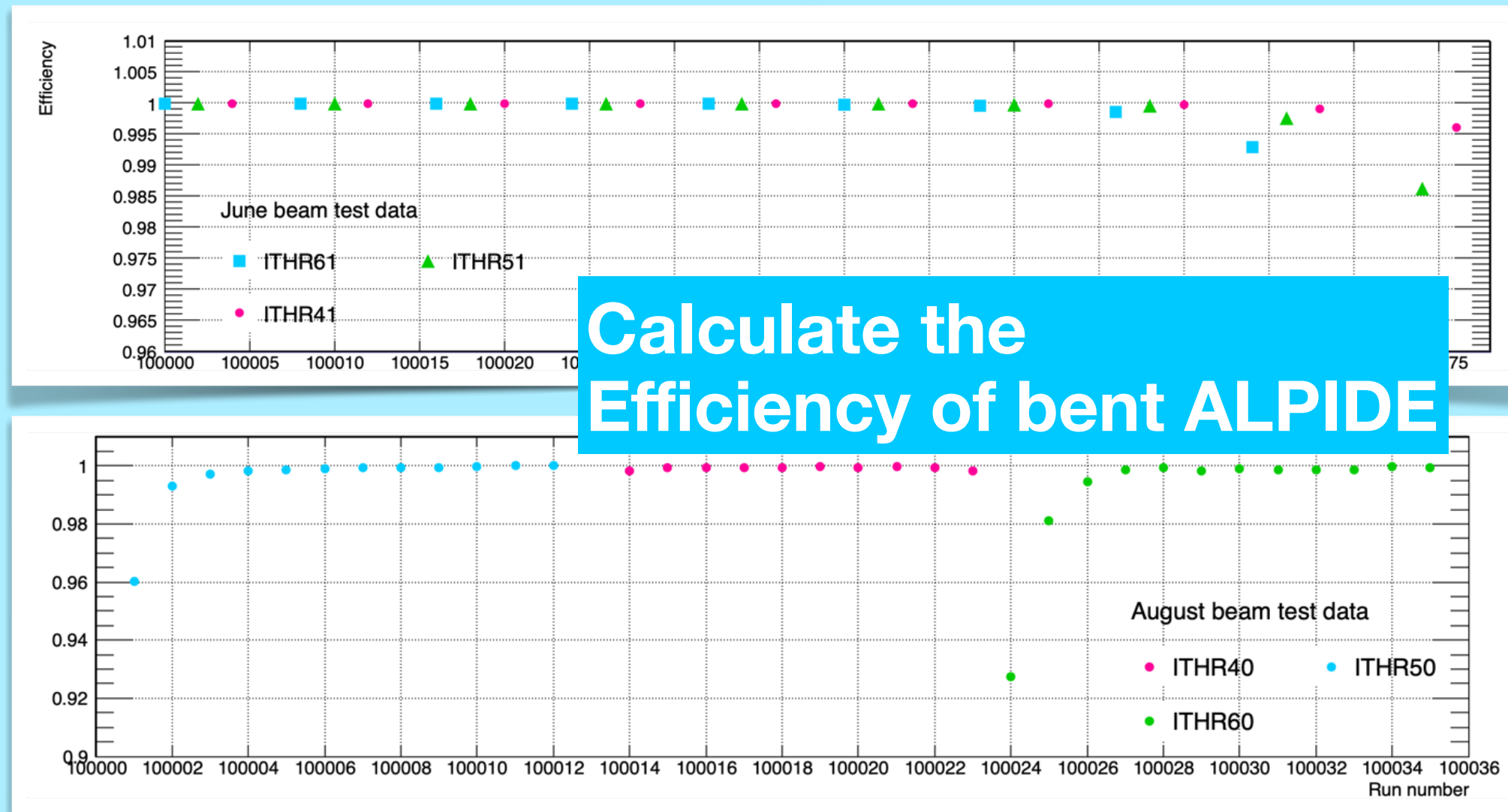
6.

10.

12.

ITS3 beam test of the bent ALPIDE data analysis

E_c^+ Analysis



Recent Ξ_c Analysis in ALICE

Hadronic decay channel

Grazia Luparello @ INFN

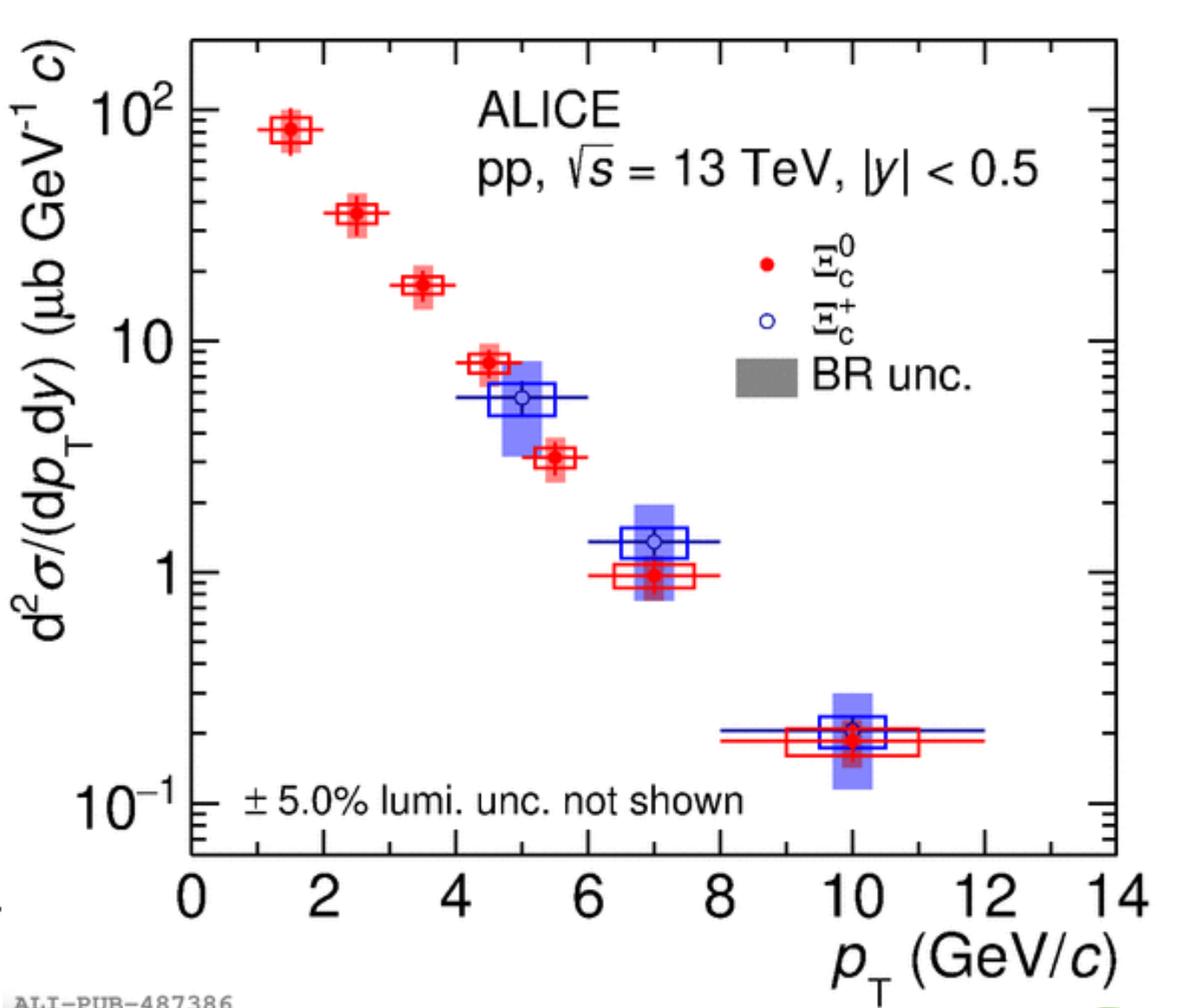
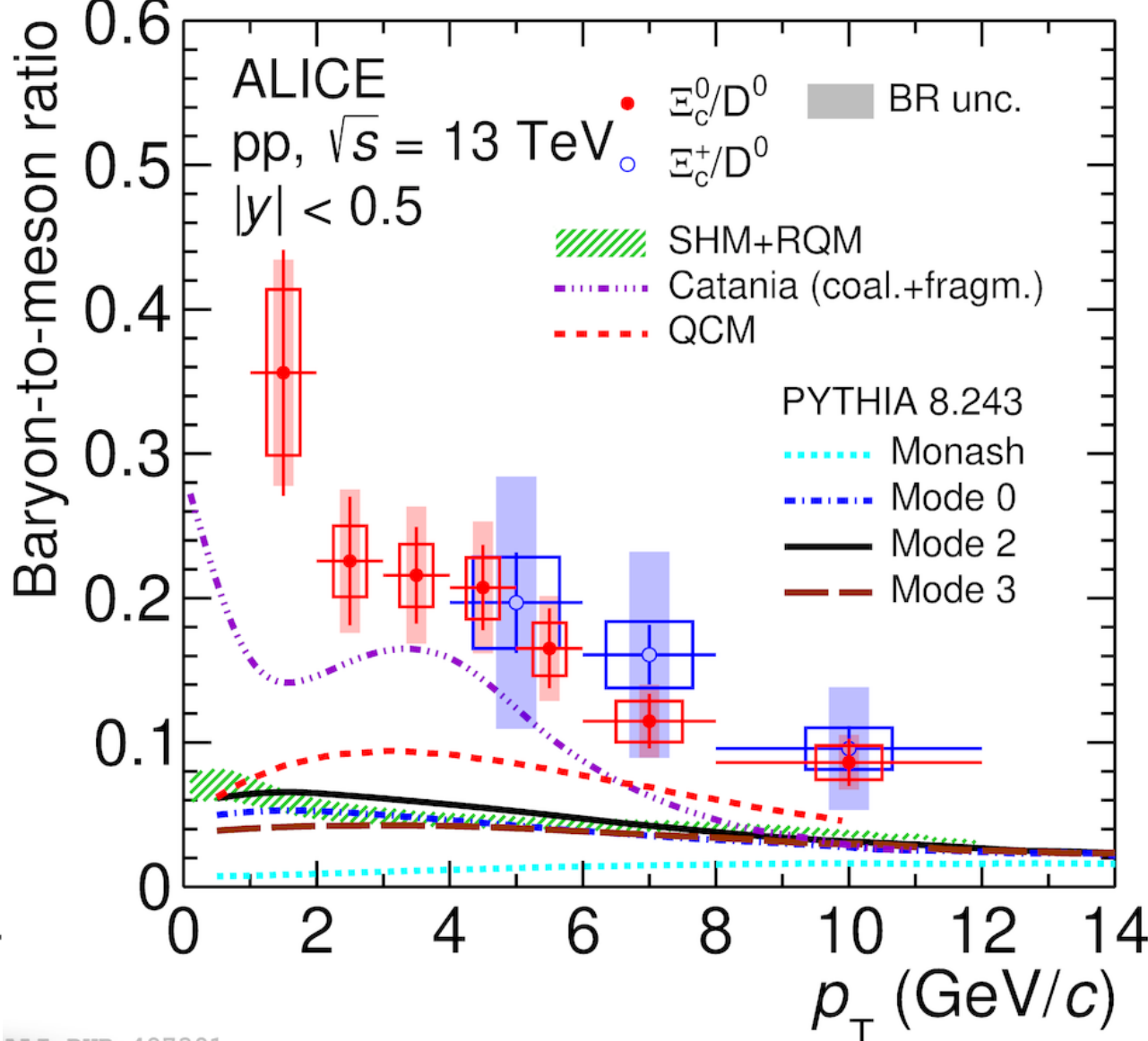
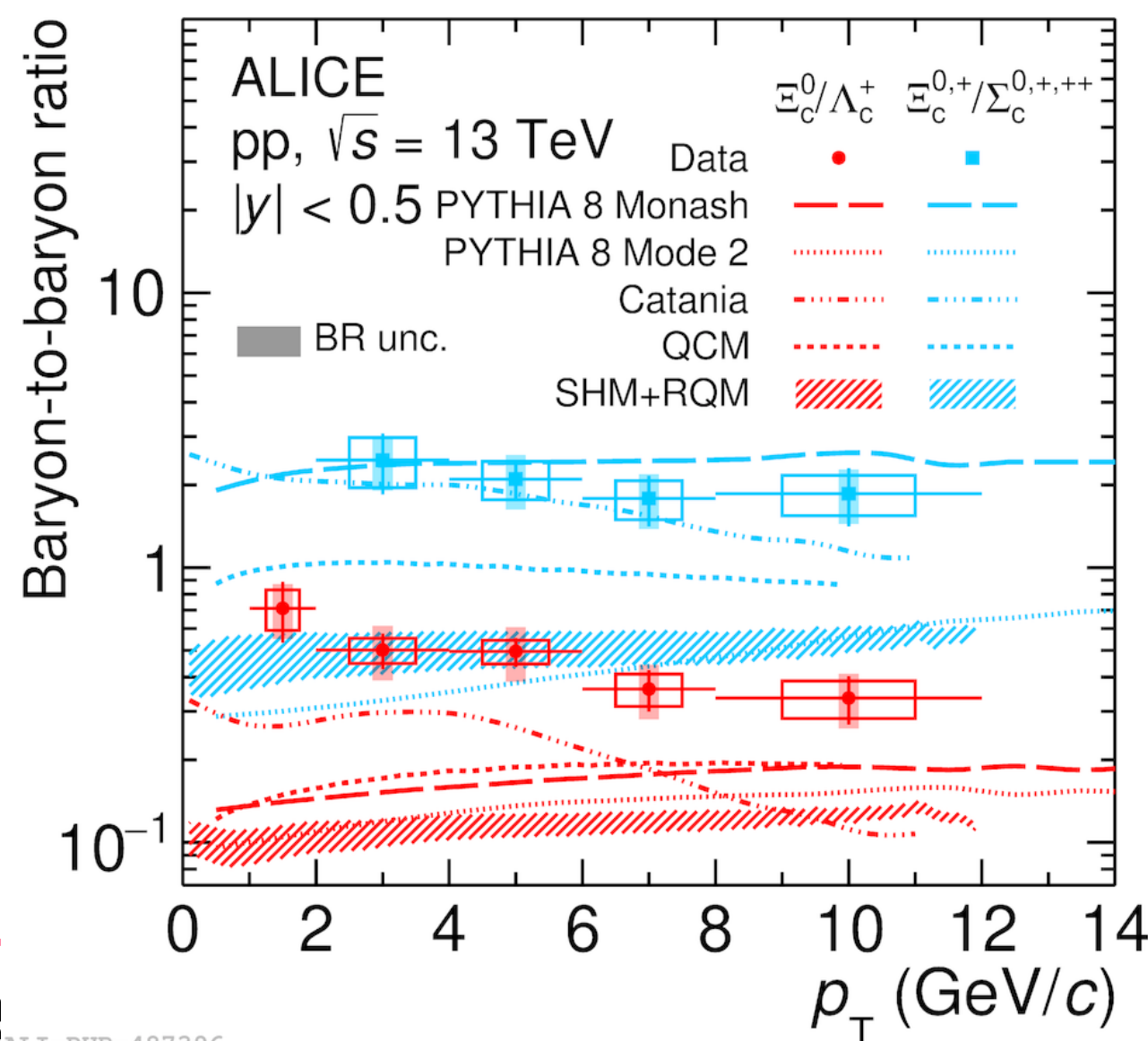
Semileptonic decay channel

Hadronic decay channel

Jinjoo & Jianhui Zhu @ CCNU/GSI



Measurement of Ξ_c^+ and Ξ_c^0 in p-p collision at 13TeV



Ξ_c Analysis in ALICE

Hadronic decay channel

Grazia Luparello @ INFN

Semileptonic
decay channel

Hadronic
decay channel

Jinjoo & Jianhui Zhu @ CCNU/GSI

Under studying

Measurement of Ξ_c^+ and Ξ_c^0 in p-p collision at 13TeV

“As a function of multiplicity”

JaeYoon

Hadronic
decay channel

**Dr. Chong Kim
& Prof. Sanghoon Lim**

Semileptonic decay channel

Xic weekly meeting

INHA

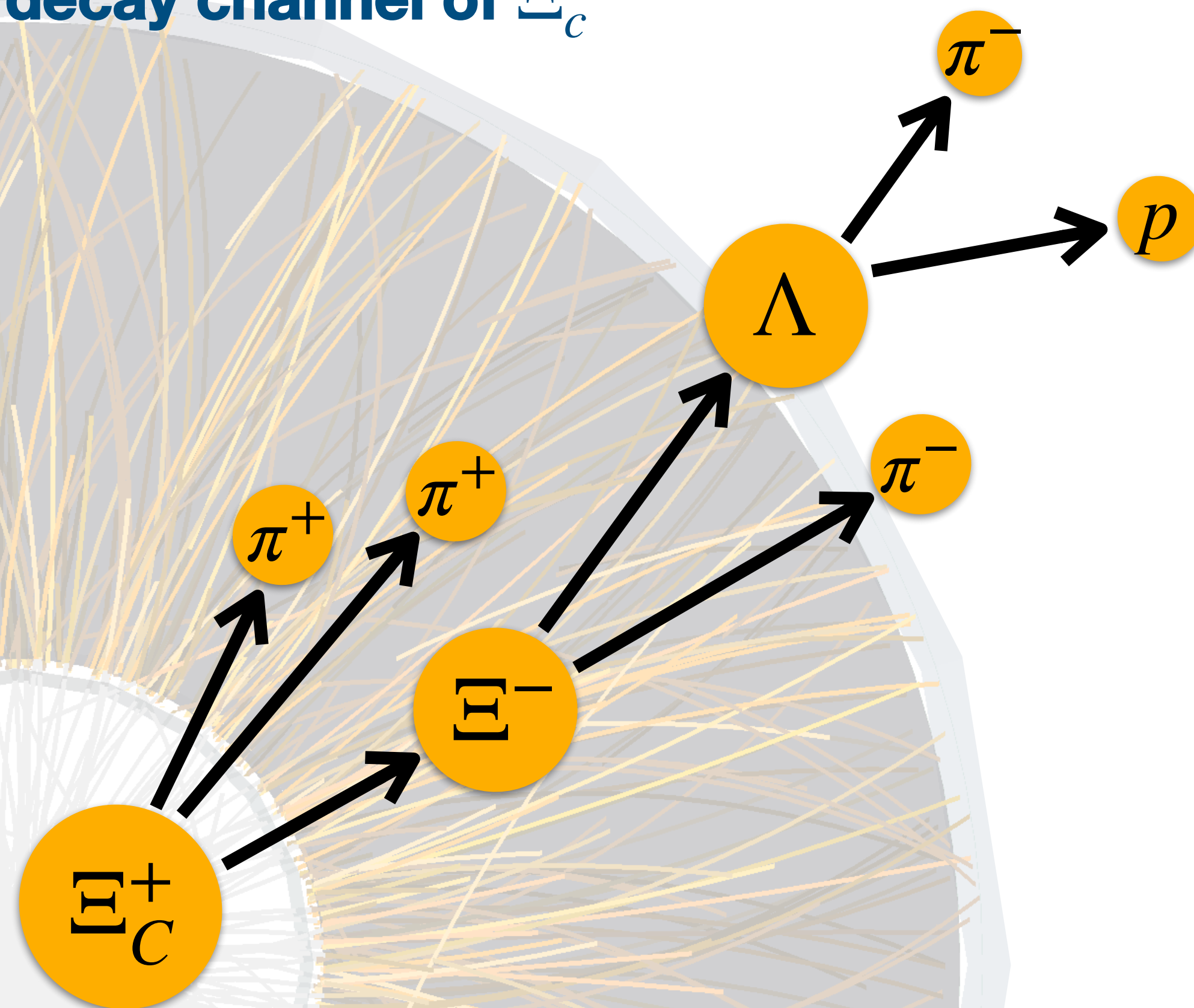
Prof. MinJung Kweon , Dr. Jeongsu Bok,
Jinjoo, JaeYoon

PNU

Prof. Sanghoon Lim, Dr. Chong Kim,
Sujung

Analysis steps

◆ Hadronic decay channel of Ξ_c^+



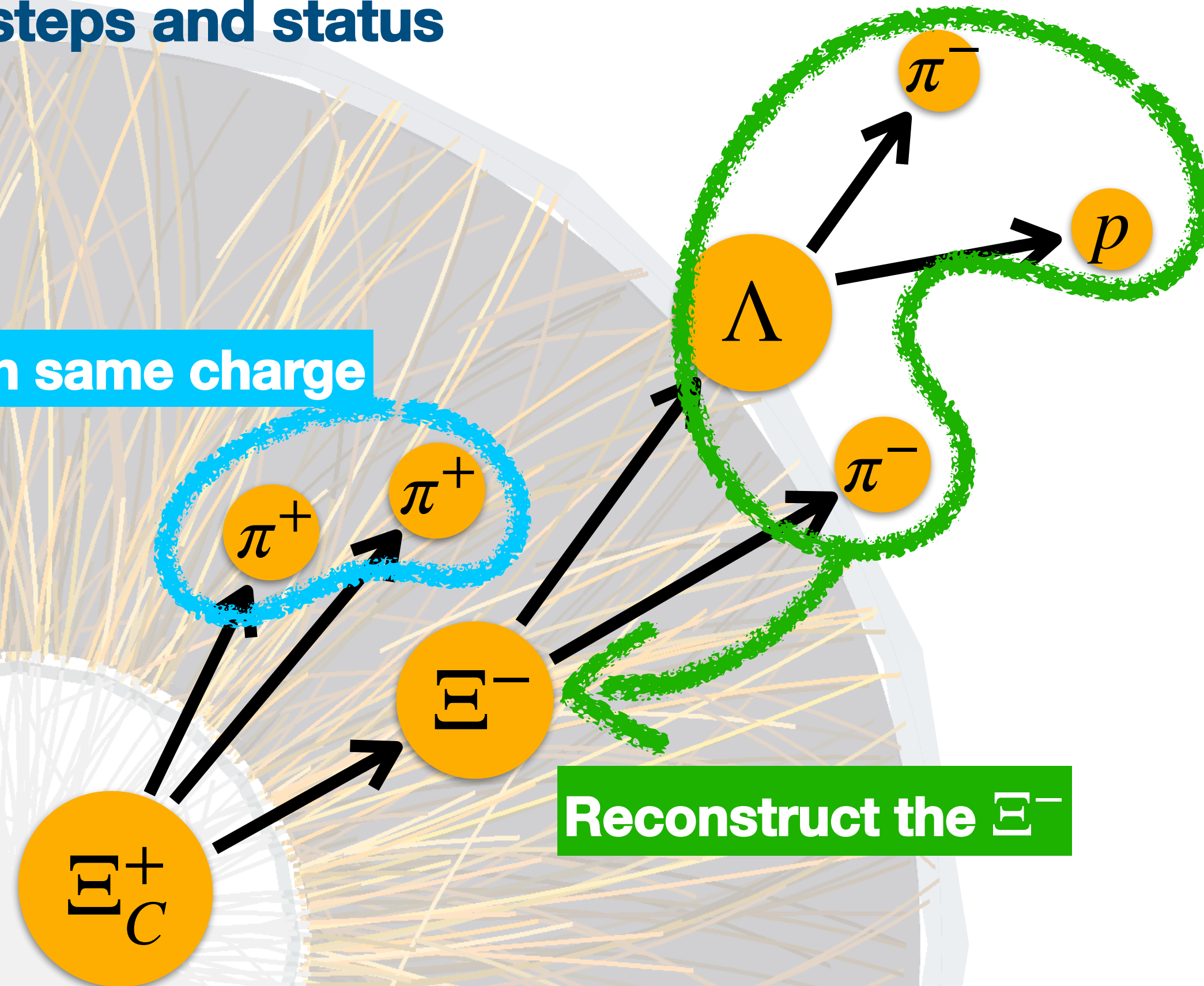
◆ Analysis step

- Select the Ξ_c^+
 - Select the π^+
 - Select the Ξ^-
 - Combine the Ξ^- with the two π^+
 - Reconstruct the secondary vertex
 - Recalculate the primary vertex
 - Topological selections of Ξ_c^+
- Efficiency calculation
- Estimate the systematic uncertainties
- Expand by multiplicity?

Analysis steps

◆ Analysis steps and status

Two pion with same charge

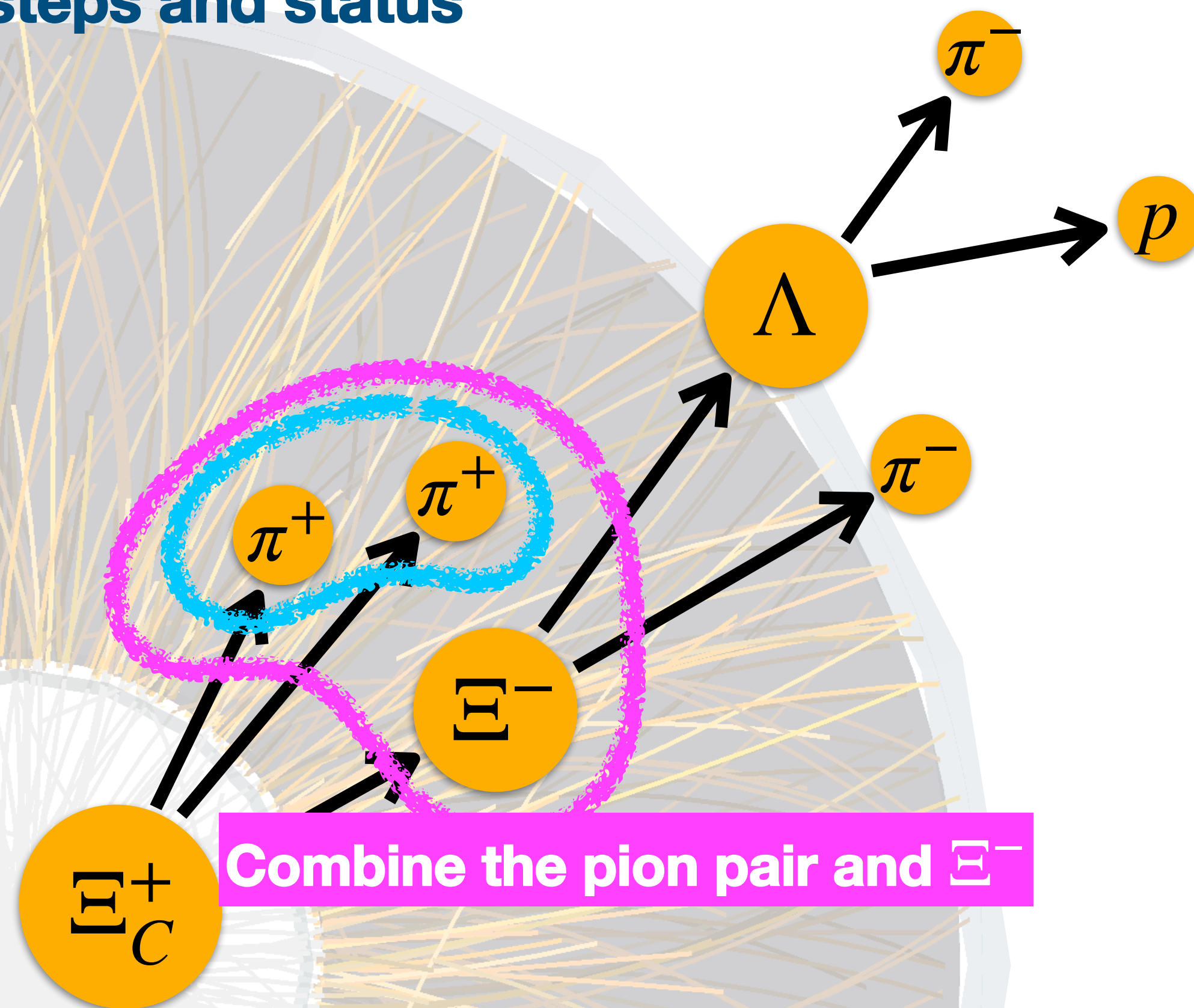


◆ Analysis step

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Analysis steps

◆ Analysis steps and status

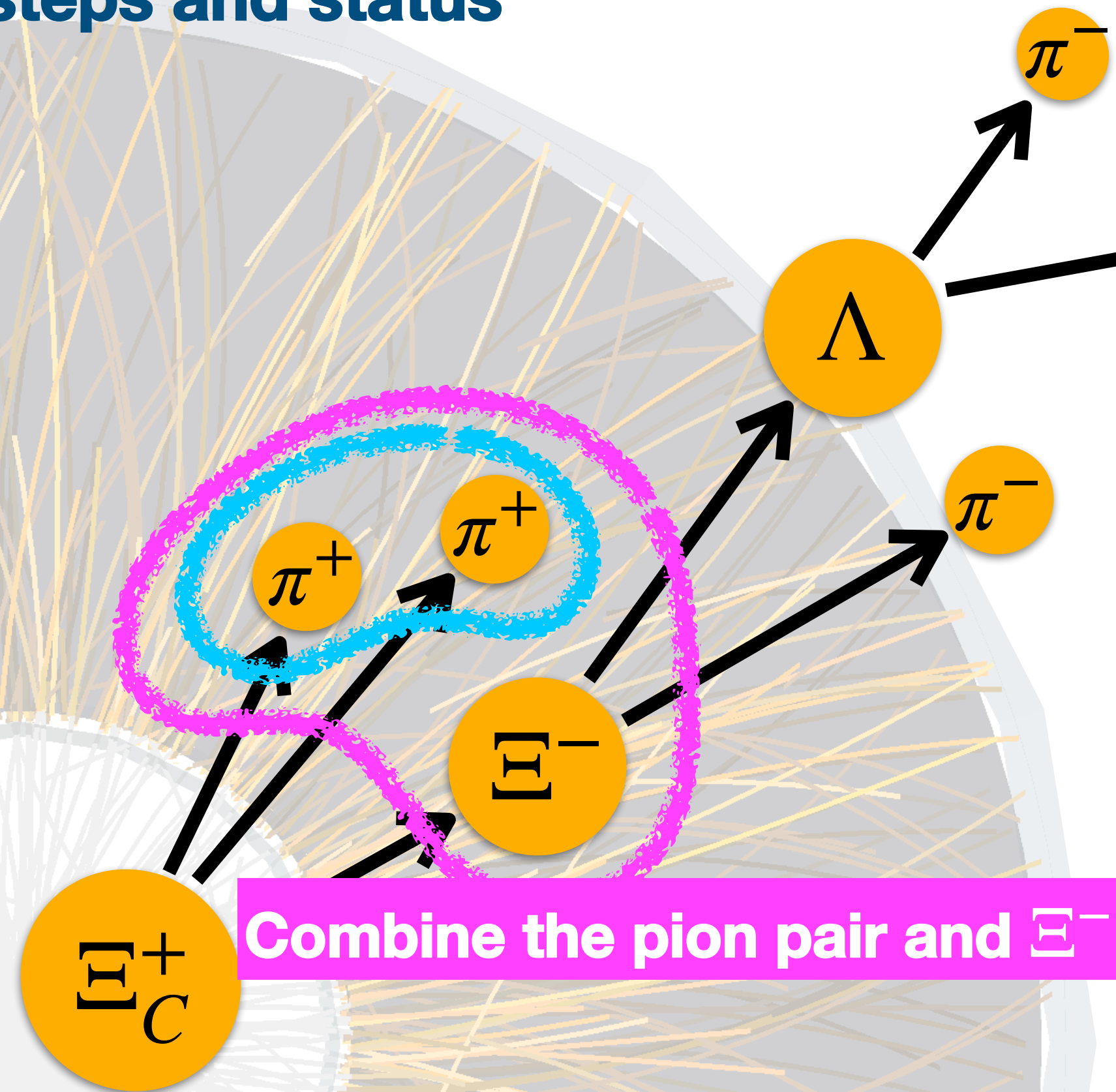


◆ Analysis step

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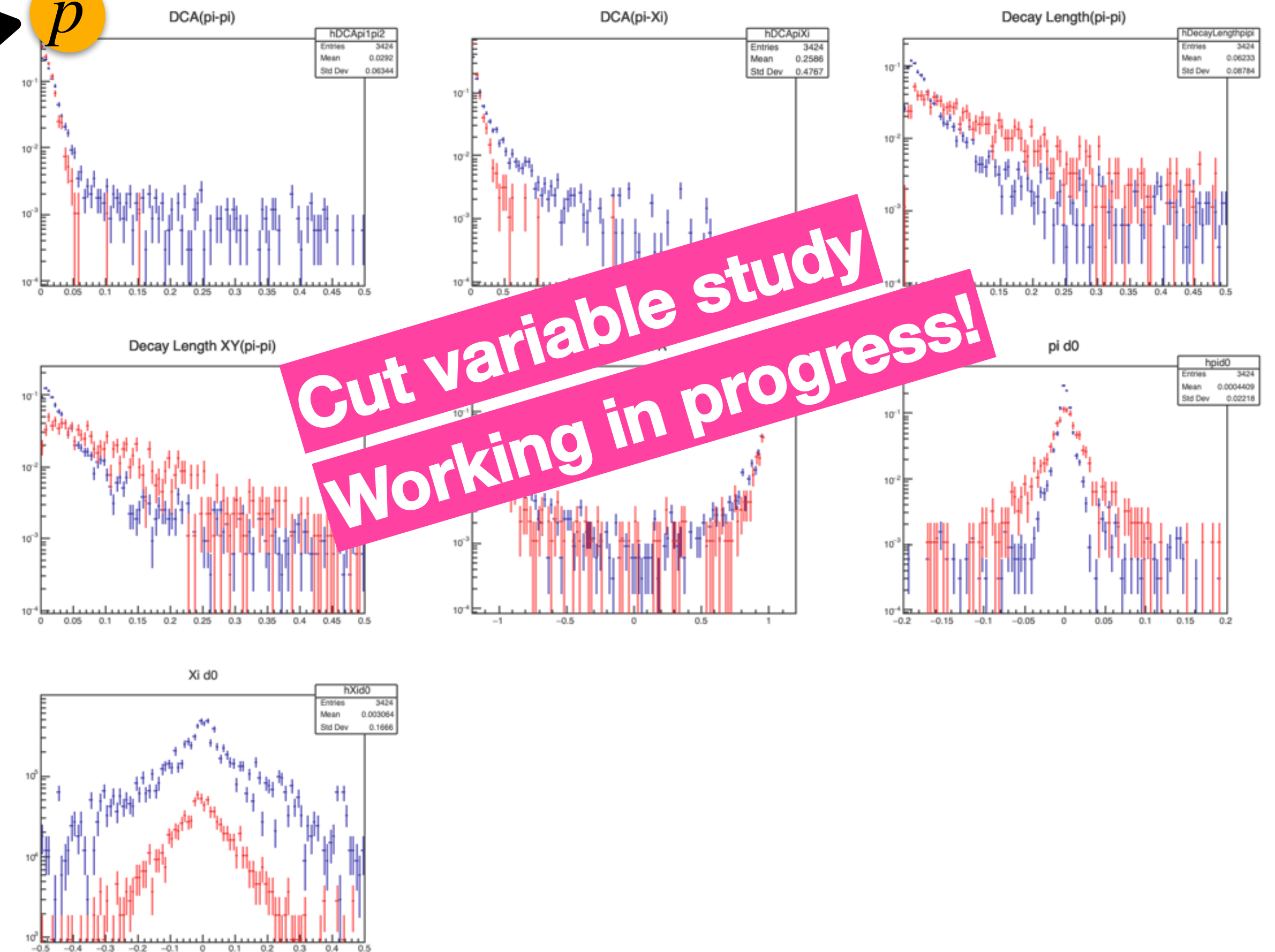
Analysis steps

◆ Analysis steps and status



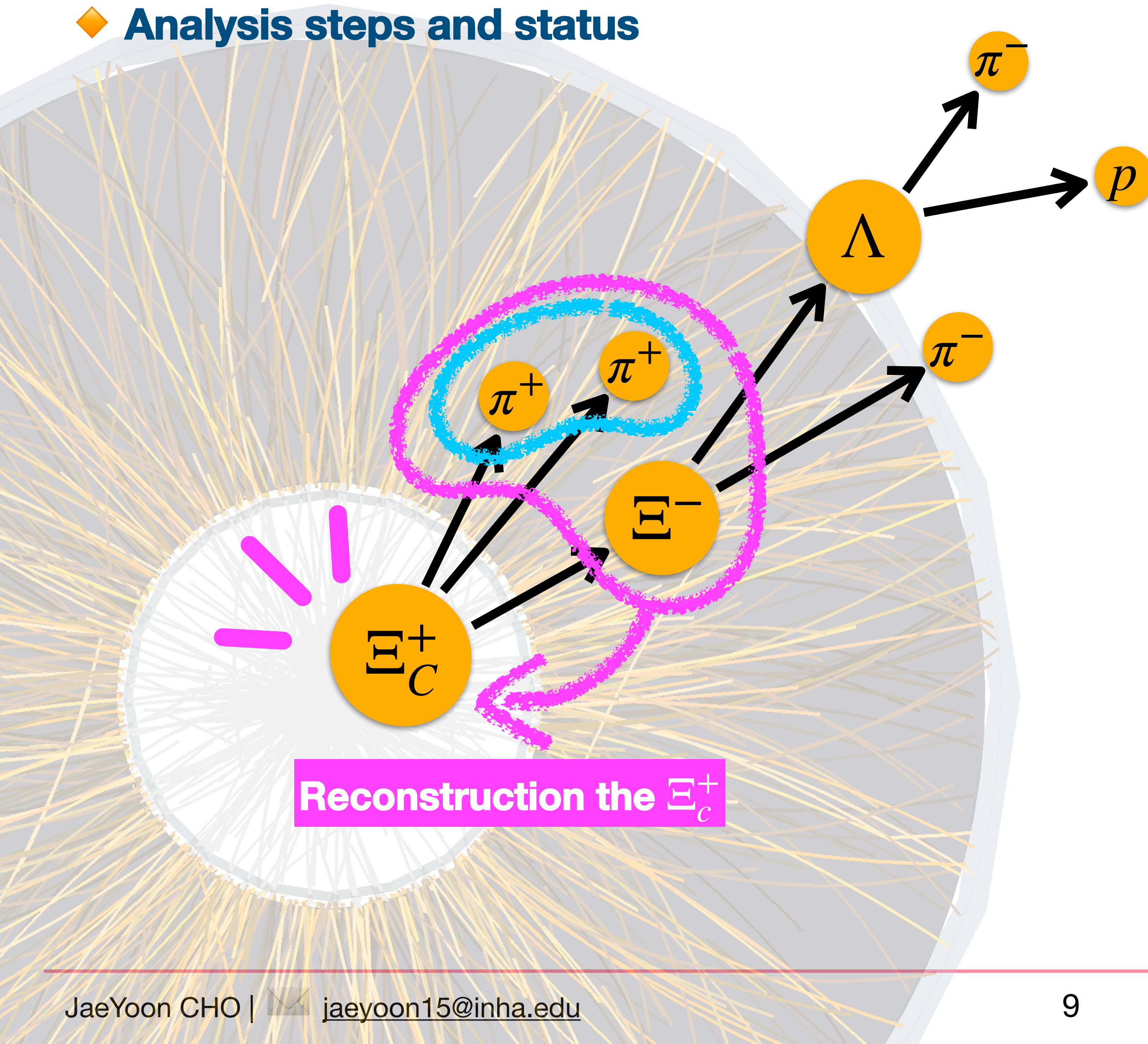
◆ Analysis step

- Select the Ξ_c^+



Analysis steps

◆ Analysis steps and status

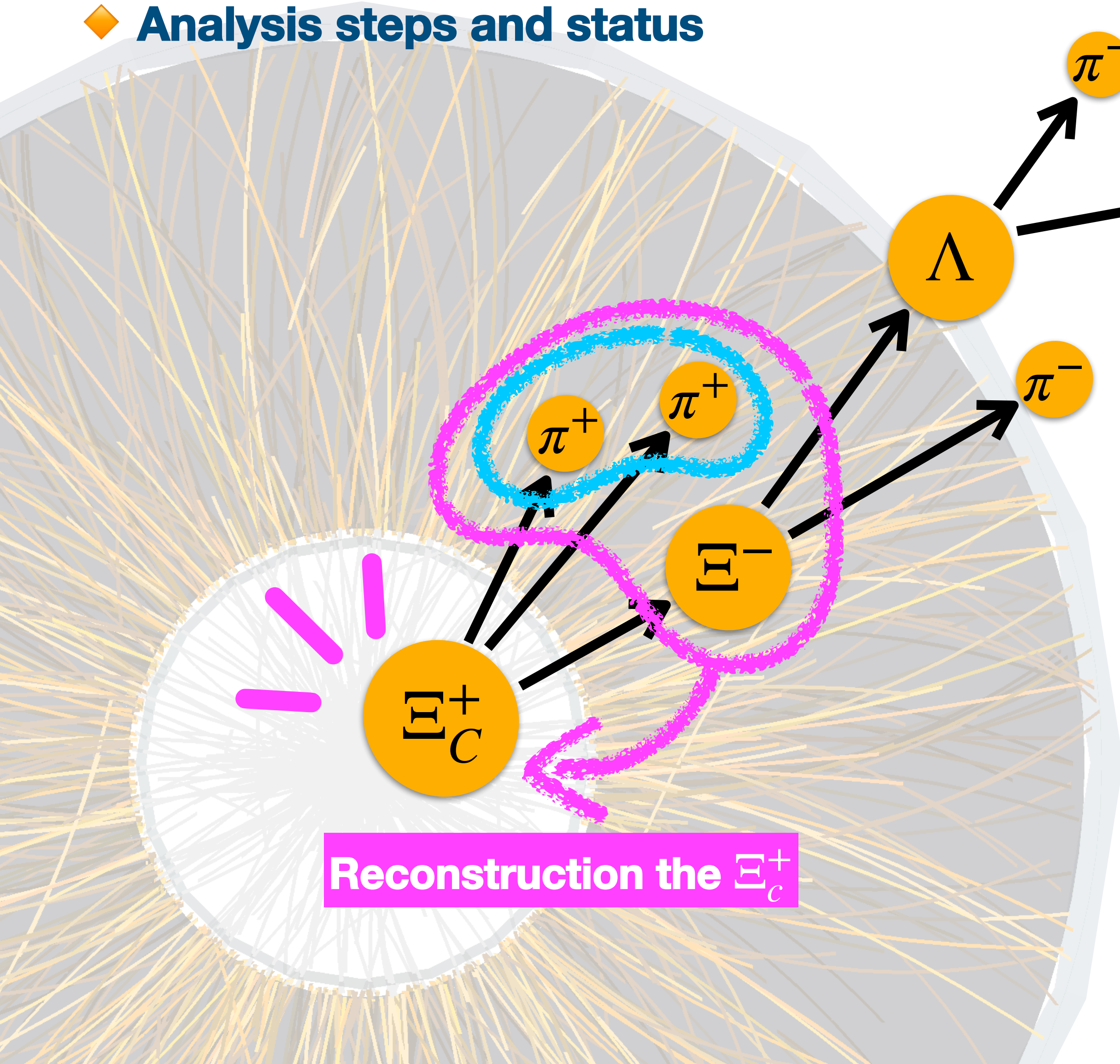


◆ Analysis step

- Select the Ξ_c^+
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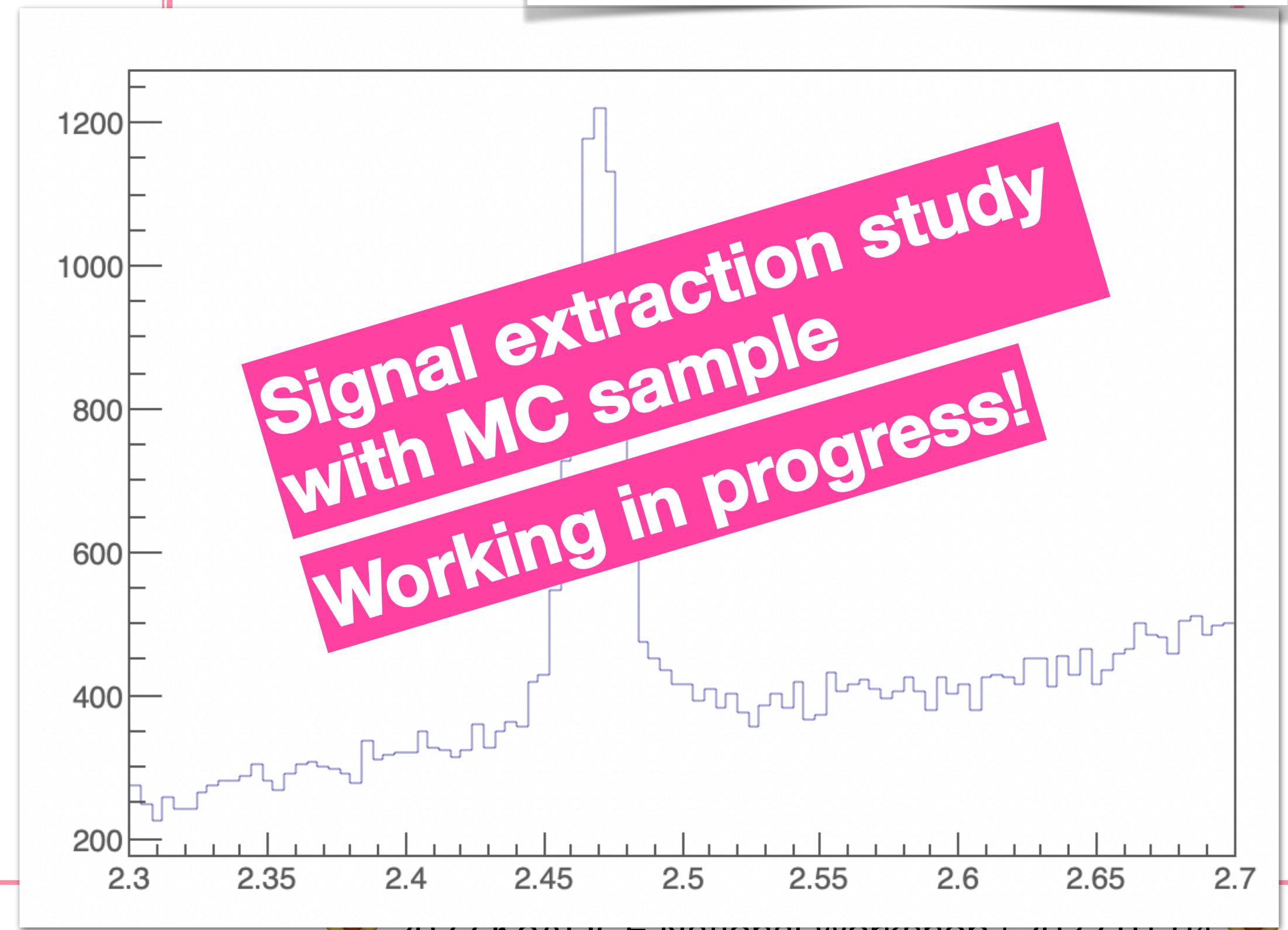
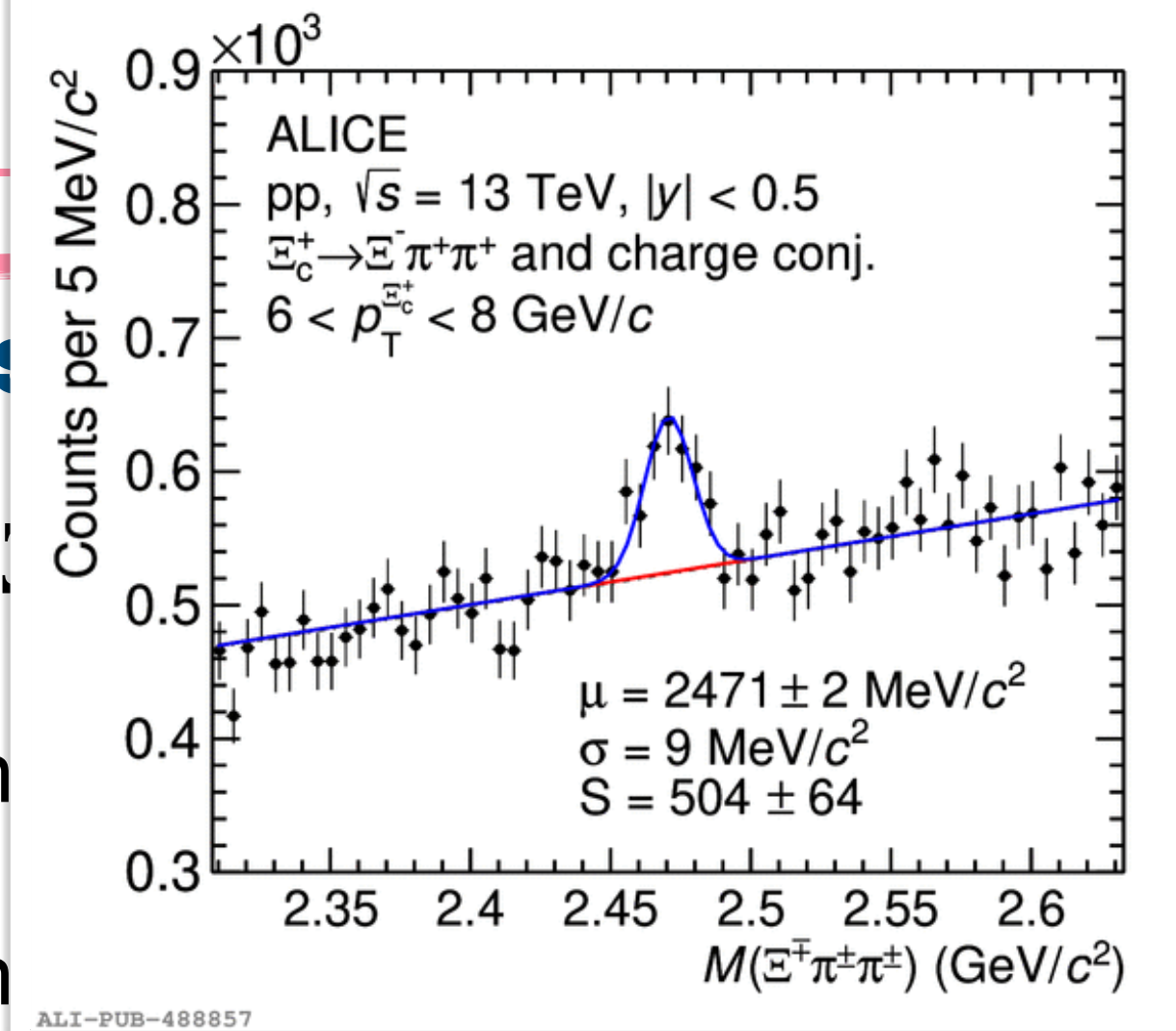
Analysis steps

Analysis steps and status



Analysis steps

- Select the ...
- Select the ...
- Select the ...



Summary

◆ Status & Plan of my analysis

- Reproducing the previous Ξ_c^+ analysis is ongoing now.
- Short term target : Reproduce the previous Ξ_c^+ analysis
- Long term target : Investigate the multiplicity dependent of the Ξ_c^+ → need more discussion!

Will be done soon!



◆ Other things

- Global shift
 - 2021. 08. 18 ~ 2021. 08. 23
 - 2021. 10. 12 ~ 2021. 10. 16
- Service work
 - QC FEE post processing macro development

THANK YOU! 🌟
& HAPPY NEW YEAR ☺

Backup

Multiplicity dependence of Λ_c/D_0

