

The 8th Asian Triangle Heavy-Ion Conference (ATHIC2021)



Contribution ID: 56

Type: **not specified**

Multi-charmed and exotic hadron production in heavy ion collisions

Sunday, 7 November 2021 13:30 (17 minutes)

We discuss multi-charmed and exotic hadrons in heavy ion collisions by focusing on their production based on both the statistical and coalescence models. Starting from the investigation on estimated yields of multi-charmed hadrons in the statistical hadronization model, we consider transverse momentum distributions of those hadrons produced at quark-hadron phase transition in the coalescence model. We also consider the transverse momentum distribution of charmed exotic hadrons such as $X(3872)$ and recently measured T_{cc} mesons, and show transverse momentum distribution ratios between charmed hadrons. We show that the transverse momentum distribution ratios are closely related to kinds and numbers of quarks as well as the interplay between constituent quarks of those hadrons, and therefore we insist that studying both the transverse momentum distribution and transverse momentum distribution ratios of multi-charmed hadrons provides us with valuable information on charmed hadron production in heavy ion collisions.

Primary author: CHO, Sungtae (Kangwon National University)

Co-author: LEE, Su Houng (Yonsei University)

Presenter: CHO, Sungtae (Kangwon National University)

Session Classification: Contributed Session 3

Track Classification: Track group 1: Theory