



Contribution ID: 120

Type: 4th week (Nuclear matter under extreme conditions)

What we learned about heavy-quark hadronization in small and large collision systems

Wednesday, November 6, 2024 2:00 PM (1 hour)

The LHC experiment has provided valuable insights into how charm and beauty quarks hadronize into various mesons and baryons under different collision systems. Contrary to our initial assumption that charm quarks hadronize independently of the collision system, with a universal fragmentation function that can be empirically parameterized, the LHC measurements suggest that additional hadronization mechanisms may need to be considered. In this talk, we will present measurements of heavy-quark hadronization across a range of collision systems, from small to large. We will also discuss various hadronization mechanisms, such as recombination, and their impact on baryon-to-meson ratios. Additionally, we will compare these findings with results from the light hadrons and production inside jets. This results show the critical importance of understanding the hadronization process, which is essential for interpreting results from heavy-ion collision experiments and refining theoretical models that describe these phenomena.

Primary author: KWEON, MinJung (Inha University)

Presenter: KWEON, MinJung (Inha University)

Session Classification: Seminar (4th week)