Contribution ID: **490** Type: **Parallel session talk**

Closing in on the origin of strangeness enhancement in hadronic collisions with ALICE

Monday 21 August 2023 16:45 (15 minutes)

The study of strange particle production in heavy-ion collisions plays an important role in understanding the dynamics of the strongly interacting system created in the collision. The enhanced production of strange hadrons in heavy-ion collisions relative to that in pp collisions is historically one of the signatures of the formation of the quark-gluon plasma. The study of strangeness production in small collision systems is also of great interest. One of the main challenges in hadron physics is the understanding of the origin of the increase of (multi)strange hadron yields relative to pion yields with increasing charged-particle multiplicity observed in pp and p-Pb collision systems, a feature that is reminiscent of the heavy-ion phenomenology.

In this talk, new results on multiple productions of strange hadrons in pp collisions are presented. In addition, recent measurements on the production of (multi)strange hadrons in small collision systems as a function of multiplicity and effective energy are shown. These results are discussed in the context of state-of-the-art phenomenological models.

Collaboration / Activity

ALICE

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Session Classification: T05 Ultra-Relativistic Nuclear Collisions

Track Classification: Ultra-Relativistic Nuclear Collisions