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Strangeness production with ALICE at the LHC

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The main goal of the ALICE experiment is to study the physics of strongly interacting matter under extremely high temperature and energy density conditions to investigate the properties of the Quark-Gluon plasma (QGP). The enhanced production of strange hadrons with respect to non-strange particles was historically considered as one of the signatures of QGP formation during the evolution of the system created in heavy-ion collisions. The excellent tracking and particle identification capabilities of the ALICE experiment allow the reconstruction of multi-strange baryons via their weak decay channels over a large range of transverse momentum. In this talk the yields and the relative production rates of strange and multi-strange particles normalized to pions measured in pp, p-Pb, Pb-Pb and Xe-Xe collisions will be presented as a function of particle multiplicity. The strangeness production dependence on the collision energy will also be shown. Results will be compared to QCD-inspired and statistical hadronization model predictions.
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Primary author: Prof. VASILEIOU, Maria (National and Kapodistrian University of Athens)

Presenter: Prof. VASILEIOU, Maria (National and Kapodistrian University of Athens)

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