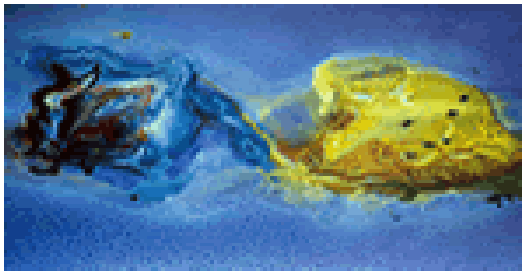

Contribution ID: **91** Type: **Invited talk**

Recent results on strangeness production at the LHC with ALICE

Sunday 5 August 2018 16:40 (30 minutes)

The main goal of the ALICE experiment at the LHC is to study the strongly-interacting hot anddense matter created in ultra-relativistic heavy-ion collisions. In this context, the measurement of strangeness production is one of the most powerful tools to investigate the thermal properties of the deconfined state of QCD matter known as Quark-Gluon Plasma (QGP). Smaller collision systems, such as proton-proton and proton-nucleus, provide reference samples for nucleus-nucleus interactions and allow the unveiling of features attributed to the formation of the QGP.
In this contribution, a systematic set of measurements on strangeness production in Pb-Pb (2.76 and 5.02 TeV), Xe-Xe (5.44 TeV), p-Pb (5.02 TeV) and pp (7 and 13 TeV) collisions will be presented. The relative production rates of strange and multi-strange particles to pions are observed to smoothly increase as a function of event multiplicity in pp and p-Pb, reaching values measured in heavy-ion collisions. Even more remarkably, they are also consistent for different systems and energies at any given multiplicity. In addition, results on baryon to meson ratios in different collision systems, useful to probe particle production mechanisms, will be reported. The intriguing similarities observed across different collision systems provide a greater insight into observables associated to QGP formation. A rather complete experimental picture allows comparisons with phenomenological model calculations and predictions from QCD-inspired event generators.

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