Dr. Jeremy Wilkinson (INFN Bologna)

Charmed baryon production measured by ALICE at the LHC

Abstract: The production of open heavy-flavour (charm and beauty) particles is one of the key observables in heavy-ion physics. Their large masses mean that they are produced at early times in the collision, and so precise measurements can help to probe the Quark-Gluon Plasma (QGP) that is expected to form in ultrarelativistic heavy-ion collisions. The observation of charmed baryons is of particular interest. A modification of the baryon-to-meson ratios has been observed for light-flavour particles, which can potentially be explained by quark coalescence and recombination models. Measurements of this quantity in the charm sector, and theoretical understanding of the results, will therefore shed further light on the hadronisation mechanisms present in the QGP. This talk will present recent measurements of charmed baryon production by the ALICE Collaboration at the LHC in pp, p-Pb and Pb-Pb collisions. In particular, the measurements of Λ_c baryons in all three collision systems will be shown, as well as the first measurements of Ξ_c production in pp collisions at the LHC.

Venerdì 19 ottobre 2018, ore 11:30

Aula Teorici 2nd piano, via Irnerio