Contribution ID: **19**   Type: **not specified**

Recent results on Quarkonia at forward rapidity with ALICE at the LHC

Wednesday, 10 July 2019 14:10 (40 minutes)

ALICE is the experiment specifically designed for the study of the Quark-Gluon Plasma (QGP) in heavy-ion collisions at the CERN LHC. Heavy-ion collisions help us to understand quarkonium suppression and regeneration mechanisms in the presence of the QGP. However, a modification of heavy quarkonium production can also take place in proton-nucleus collisions, where a QGP is not expected to be created and only cold nuclear matter (CNM) effects, such as nuclear absorption, parton shadowing and parton energy loss in initial and final states occur. The study of proton-nucleus collisions is therefore important to disentangle the effects of QGP from the CNM ones, and to provide essential input to understand nucleus-nucleus collisions. Finally, proton-proton collisions give insight to the different quarkonium production mechanisms and provide the baseline for the nuclear modification factor of quarkonium production in proton-nucleus and nucleus-nucleus collisions.

ALICE has produced a large amount of results on quarkonia both at forward and mid rapidity at various energies and colliding systems (pp, p-Pb, Pb-Pb and Xe-Xe) during the LHC Run1 and Run2 periods. In this talk, recent results on multiplicity dependent study of quarkonia in pp and p-Pb collisions will be discussed. Latest ALICE results of quarkonium nuclear modification factor, elliptic flow and polarization using the 2018 Pb-Pb data sample will also be presented. The results will be compared with other LHC results and theoretical predictions.

Primary author: PAUL, Biswarup (Istituto Nazionale di Fisica Nucleare)

Presenter: PAUL, Biswarup (Istituto Nazionale di Fisica Nucleare)