Contribution ID: **150** Type: **Oral presentation**

Top quark pair production in Heavy Ion Collisions with the ATLAS experiment

Monday 23 September 2024 14:20 (20 minutes)

Measurements of top quarks in heavy-ion collisions are expected to provide novel probes of nuclear modifications to parton distribution functions as well as to bring unique information about the evolution of strongly interacting mat- ter. We report the observation of the top-quark pair production in proton-lead collisions at the centre-of-mass energy of 8.16 TeV in the ATLAS experiment at the LHC. Top-quark pair production is measured in the lepton+jets and the dilepton channels, with a significance well above 5 standard deviations in each channel separately. The results from the measurement of the nuclear modifica- tion factor RpA are also presented. If available, results from the measurement of top-quark production in Pb+Pb collisions will be presented and discussed.

Category

Experiment

Collaboration

ATLAS

Authors: GRABOWSKA-BOLD, Iwona (AGH University of Krakow (PL)); POTEPA, Patrycja Anna (AGH University of Krakow (PL))

Presenter: POTEPA, Patrycja Anna (AGH University of Krakow (PL))

Session Classification: Parallel 3: nPDF

Track Classification: 5. Nuclear PDFs, saturation, and early time dynamics