Contribution ID: **470** Type: **Parallel session talk**

Top quark and quarkonia production in heavy-ion collisions with the ATLAS experiment

Friday 19 July 2024 17:19 (17 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 and will be complemented by an overview of the most recent quarkonia measurements with ATLAS.

Alternate track

1. Top Quark and Electroweak Physics

I read the instructions above

Yes

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Session Classification: Heavy Ions

Track Classification: 07. Heavy Ions