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## Energy dependence of particle production and $R_{AA}$ in Pb–Pb collisions with ALICE

*Tuesday, May 15, 2018 6:00 PM (30 minutes)*

In late 2015 the ALICE collaboration recorded Pb–Pb and pp collisions at  $\sqrt{s_{NN}} (\sqrt{s}) = 5.02$  TeV.

The availability of data at the highest energy ever achieved in laboratory for heavy-ion collisions together with a pp reference at the same energy opens up the possibility for a detailed study of the nuclear modification factors ( $R_{AA}$ ) of identified particles.

The excellent particle identification capabilities of the ALICE experiment allow to measure the production of pions, kaons and protons over a wide range of transverse-momenta ( $p_T$ ).

Particle ratios as a function of the collision centrality are compared to previous results at lower energy to investigate the dynamics of particle production.

In light of the new set of results, a discussion of the latest model predictions of light flavor particle production is presented.

Finally, to quantify the effect of the energy loss in the QCD medium created in the collision, the nuclear modification factors ( $R_{AA}$ ) are computed and compared with results obtained at lower energy.

### Collaboration

ALICE

### Content type

Experiment

### Centralised submission by Collaboration

Presenter name already specified

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