



SPEAKER: Kai Schweda

TITLE: **Closing in on parton energy loss with charged particle spectra in Xe-Xe and Pb-Pb collisions with ALICE**

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PLACE: 500-1-001 - Main Auditorium

## ABSTRACT

The Large Hadron Collider (LHC) produced for the first time collisions of xenon nuclei at a center-of-mass energy of 5.44 TeV during a pilot run with 6 hours of stable beams in October 2017. This allows for studying the dependence of particle production on the collision system size where xenon neatly bridges the gap between data from pp, p-Pb and Pb-Pb collisions. We report measured transverse momentum ( $p_T$ ) spectra of charged particles with the ALICE apparatus at the LHC. The kinematic range  $0.15 < p_T < 50$  GeV/c and  $|\eta| < 0.8$  is covered. Results are presented in nine classes of collision centrality in the 0-80% range. For comparison, a pp reference at the collision energy of 5.44 TeV is obtained by interpolating between existing pp measurements at 5.02 and 7 TeV. The nuclear modification factor in Xe-Xe collisions is compared to Pb-Pb collisions at 5.02 TeV and 2.76 TeV, showing remarkable similarity at  $p_T > 10$  GeV/c. The comparison of the measured nuclear modification values in the two colliding systems provides insight in the path length dependence of medium-induced parton energy loss. These results are compared to model calculations.