

Workshop on forward physics and high-energy scattering at zero degrees 2017

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ALICE goes forward

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At the LHC, collision final states have been studied principally in the central kinematic region, where, generally, perturbative QCD can be used. However, there is rich soil for measurements in the forward direction, which probe the nucleon structure at small Bjorken- x values where saturation effects are expected.

A full set of saturation probes in the forward rapidity region of ALICE will be presented, starting from global event observables, like multiplicity and energy measurements, to cross section results and studies of inelastic and diffractive processes. Recent results in ultraperipheral collisions will be shown, focusing on heavy-ion results, where the strong electromagnetic fields of the nuclei provide a significant flux of high-energy photons. Several other measurements will be described, giving a comprehensive overview of ALICE capabilities. Theoretical models are particularly challenged in the forward rapidity region, where we deal with softer processes. Therefore, particular attention to model comparisons will be paid during the presentation.

Finally, the hardware upgrades of ALICE in the forward rapidity region will be described towards the end of the talk.

Relevant topics

multiplicities, energy measurements in forward region, saturation, total cross section, diffraction, heavy ions, cosmic ray, hardware and future projects

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