Kruger2018: Discovery Physics at the LHC



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Recent ALICE results on jets and photons

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The ALICE experiment at the LHC is dedicated to measurements of high-energy nucleus-nucleus collisions to study strongly interacting matter under conditions of extreme density and temperature, where the creation of a quark-gluon plasma state of matter is expected. It also performs measurements in proton-proton and proton-nucleus to provide reference measurement for the understanding of the initial state and possible modifications in cold nuclear matter, as well as to understand the onset of collective phenomena.

This talk will present recent results of the ALICE experiment on hard (high Q2) and electromagnetic probes. More specifically, the jet yield, hadron-jet correlations, and the shape and substructure of jets in pp and Pb-Pb will be discussed. Furthermore, the measurement of the direct photon yield in pp and p-A collisions and the final results of direct photon elliptic flow in Pb-Pb collisions at 2.76 TeV will be presented. These observables yield information on in-medium parton-energy loss and parton shower modifications, and on thermal electromagnetic radiation, and by this constrain the dynamics of the system and its transport properties.

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