

## Saturation effects in p-A collisions at the LHC with the ALICE muon spectrometer

*lundi 22 février 2010 11:25 (35 minutes)*

At very high energies or small values of Bjorken  $x$ , the increase of parton density in hadronic matter is expected to lead to a saturated partonic distribution regime. It has been suggested that such an initial state effect, expected to be present before the Quark Gluon Plasma phase, has been observed in heavy-ion collisions at RHIC energies. The study of high partonic density effects in QCD can be formulated in terms of an effective field theory, the Color Glass Condensate (CGC). This theoretical framework is used in particular to describe the new kinematic regime that is accessible at the LHC in p-A collisions.

In this talk the principal features of the high density regime will be described, together with a brief look at the experimental observations for saturation effects obtained at RHIC energies. Special attention will be given to the prospects of observing saturation effects at the LHC in p-A collisions with the ALICE experiment. In particular, heavy flavour and quarkonia production will be discussed in terms of physics performance studies of the ALICE Muon Forward Spectrometer.

**Author:** HADJIDAKIS, Cynthia (IPN)

**Orateur:** HADJIDAKIS, Cynthia (IPN)

**Classification de Session:** nPDF and saturation