ID contributo: **95** Tipo: **Oral presentation**

Upsilon production in pp and pA collisions from RHIC to the LHC

giovedì 31 maggio 2012 17:50 (20 minuti)

In the first part, I will discuss the impact of QCD corrections on the P_T differential cross section for Upsilon production in pp collisions at RHIC, Tevatron and LHC energies, as well as the behaviour of the differential cross section in rapidity. I will discuss the very good agreement between the parameter-free predictions of the Colour-Singlet Model and the first LHC data, especially in the region of low transverse momenta, which is the most relevant one for heavy-ion studies. I will also discuss predictions for the polarisation to be compared with the forthcoming LHC results. In the second part, I will discuss the nuclear-matter effects on Upsilon production at RHIC and the LHC in proton-nucleus and, by extension, in nucleus-nucleus collisions. We will argue that (i) the Upsilon break-up probability can be neglected in a first approximation, (ii) the gluon shadowing and antishadowing are not strong enough to describe forward RHIC data, (iii) the backward data hints at a gluon EMC effect, likely stronger than the quark one, (iv) fractional energy loss provides a very convincing explanation for the Upsilon suppression seen by PHENIX in the forward region. Following these discussions, outlooks for the LHC pPb run will be presented.

Autore principale: LANSBERG, Jean-Philippe (IPNO - Paris-Sud U. - CNRS/IN2P3)

Relatore: LANSBERG, Jean-Philippe (IPNO - Paris-Sud U. - CNRS/IN2P3)

Classifica Sessioni: Parallel VA: Quarkonia