



Heavy Ion Forum

SPEAKER: Mark Strikman
TITLE: **Leading twist nuclear shadowing: theory, observations, perspectives**
DATE: Fri 25/10/2013 11:00
PLACE: TH Conference Room

ABSTRACT

Use of the QCD factorization theorems for inclusive and diffractive cross sections and the S-channel unitarity allowed us to develop the theory of the leading twist (LT) shadowing and make predictions for nuclear pdfs, various small x nuclear hard phenomena as well as to estimate uncertainties of these predictions. Complementarity of the space-time pictures of LT shadowing in the fast and rest frames of the nucleus is explained. We argue that the recent ALICE data on coherent and incoherent production of J/ψ test both the overall strength of LT shadowing and the presence of the large fluctuations of the gluon fields responsible for the shadowing. Perspectives of future studies of LT shadowing phenomena at the LHC are outlined as well as possible strategies for looking for break up of the LT approximation and onset of the black disk regime.