Contribution ID: **56**   Type: **not specified**

An analytical approach to Froissart bound in a proton structure function

Monday 11 December 2017 12:15 (15 minutes)

We review the analytical description of Froissart saturation condition in a transverse-momentum-dependent parton distribution function of a self-similarity based proton structure function $F_{2}(x,Q^{2})$ at small x. Saturating the Froissart bound refers to an energy dependence of the total cross-section rising no more rapidly than $\ln^{2} s$, where s is the square of cms energy. Our study shows that such a slow growth is not compatible with self-similarity based proton structure function which has a power law growth in $1/x$.

Authors: Dr JAHAN, Akbari (North Eastern Regional Institute of Science and Technology); Prof. CHOUDHURY, Dilip Kumar (Gauhati University)

Presenter: Dr JAHAN, Akbari (North Eastern Regional Institute of Science and Technology)

Session Classification: WG4: Small-x and Diffraction