



Contribution ID: 130

Type: Oral Presentation

A gauge invariant truncation of JIMWLK

Thursday, 6 July 2017 11:30 (20 minutes)

The Colour Glass Condensate captures QCD in its applications to high energy collider experiments in the spirit of an effective field theory using Wilson-lines and their correlators as the active degrees of freedom. The energy-dependence of these correlators is given by the JIMWLK equation which, when applied to a given correlator, generates an infinite tower of coupled equations referred to as a Balitsky hierarchy.

In this talk, I present a general method for truncating any Balitsky hierarchy in terms of energy-dependent colour structure functions analogous to the parametrization of hadronic cross-sections in terms of hadronic structure functions within the parton model. I also discuss the properties of these colour structure functions which are universal; they are constrained by group theoretic considerations independently of the Balitsky hierarchy being considered.

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

MSc

Main supervisor (name and email) and his / her institution

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Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

Yes

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Session Classification: Theoretical and Computational Physics 1

Track Classification: Track G - Theoretical and Computational Physics