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# KMI Lecture

Tuesday, March 4, 2014

10:30-12:00, 13:30-15:00, 15:30-17:00

KMI Science Symposia (ES635)

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“The Color Glass Condensate effective theory  
and its applications to heavy ion collisions”

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## Abstract:

In this series of lectures, I will present the Color Glass Condensate, an effective theory based on Quantum Chromodynamics and designed to describe the regime of large color fields and large gluon densities that prevail in high energy hadrons and nuclei. The focus of this presentation will be oriented towards the applications to heavy ion collisions. The following topics will be discussed:

- Hadron wave function at high energy, parton evolution
- Gluon saturation and non-linear effects
- Color Glass Condensate effective description
- JIMWLK and BK equations, initial state factorization
- Description of the first moments after the collision