



Contribution ID: 40

Type: **not specified**

## Leptoproduction of $\rho$ -mesons as discriminator for the unintegrated gluon distribution in the proton

The gluon content of the proton, in the high-energy regime, is embodied by the unintegrated gluon distribution (UGD), which describes the probability that a gluon can be emitted by a colliding proton, with a given longitudinal momentum fraction and transverse momentum.

The UGD, which is formulated within the  $k_T$ -factorization approach, has universal validity and several models for it have been proposed so far.

We will show that the polarized  $\rho$ -meson leptoproduction at HERA is a not trivial textfield for discriminating among existing models of UGD.

**Authors:** BOLOGNINO, Andr e Dafne (U. of Calabria & INFN Cosenza); Dr CELIBERTO, Francesco Giovanni (IFT UAM-CSIC, Madrid); IVANOV, Dmitry; PAPA, Alessandro (U. of Calabria & INFN Cosenza)

**Track Classification:** Low-x, PDFs and hadronic final state