XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 416

Type: Contributed Talk

Exclusive emissions of rho-mesons and the unintegrated gluon distribution

Wednesday, 14 April 2021 12:51 (18 minutes)

Exclusive emissions of vector mesons in forward directions of rapidity offer us a faultless chance to probe the proton structure at small-x. Here, a high-energy factorization formula is established within the Balitsky-Fadin-Kuraev-Lipatov (BKFL), given as the convolution of a impact factor depicting the forward-meson emission and of an unintegrated gluon distribution (UGD) driving the gluon evolution at small-x. Being a nonperturbative quantity, the UGD is not well known and several models for it have been proposed so far. We present recent progresses on the study of exclusive emissions of forward ρ -mesons in lepto-hadronic collisions, showing how osbervables sensitive to different polarization states of the ρ -particle act as discriminators for the existing UGD models.

Primary authors: Dr BOLOGNINO, Andrèe Dafne (Università della Calabria & INFN-Cosenza); CELIBERTO, Francesco Giovanni (ECT*/FBK Trento & INFN-TIFPA); Dr IVANOV, Dmitry Yu. (Sobolev Institute of Mathematics and Novosibirsk State University, Russia); PAPA, Alessandro (Universita' della Calabria & amp; INFN-Cosenza)

Presenter: CELIBERTO, Francesco Giovanni (ECT*/FBK Trento & INFN-TIFPA)

Session Classification: Small-x, Diffraction and Vector Mesons

Track Classification: Small-x, Diffraction and Vector Mesons