DIS 2015 - XXIII. International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 155

Type: not specified

Extracting the d/u ratio with the Self Organizing Maps Algorithm

Wednesday 29 April 2015 14:00 (25 minutes)

I will discuss the application of an alternative type of neural network, the Self-Organizing Maps (SOMs), to extract parton distribution functions from various hard scattering processes. SOMs provide a complementary algorithm to NNPDFs yielding a parametrization that is free from the bias implicit in choosing specific analytic forms. At the same time it enables us to extrapolate to kinematical regions where data are not available. I will show in particular the extraction using SOMs of the ratio d/u in the x=1 limit.

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Session Classification: WG1 Structure Functions and Parton Densities

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