

The Electron Ion Collider User Group Meeting



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Nucleon Distribution Amplitudes

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In the past few years, our understanding of the meson internal structure in terms of the 1D distribution amplitudes have scored many progresses. For instance, in the case of the pion, the Dyson-Schwinger equations have allowed to compute within a non-perturbative framework, the pion distribution amplitudes which are significantly different from the asymptotic one. This allows to bring back together the measurements of the pion form factors and our perturbative understanding of the latter in terms of distribution amplitudes. Even if they may be less known, the nucleon distributions amplitudes can also be related the nucleon form factors in the perturbative regime. Therefore, based on what happened for the pion, reliable description of the nucleon form factor cannot be done in this framework with the asymptotic distribution amplitude. I will here describe how one can compute these distribution amplitudes non-perturbatively in the continuum, what they tell us about the nucleon content, and which effects they can have on the form factor at high Q^2 .

Presenter: MEZRAG, Cédric

Session Classification: Novel Observables