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Type: **Invited**

Nucleon and pion structure in Minkowski space

Friday, 29 November 2024 10:00 (30 minutes)

I will review the application of few-body methods to explore the structure of light hadrons in Minkowski space. The description of the nucleon and pion are based on the solution of the Bethe-Salpeter equation in Minkowski space built with phenomenological kernels. For the proton, we will show results obtained with the projection onto the light-front of the Faddeev-Bethe-Salpeter equation, including the valence parton distribution and the image of the valence state on the null-plane. The results for the pion structure observables are computed from the solution of the Bethe-Salpeter equation in Minkowski space using the Nakanishi integral representation. Results for the pion charge form factor, including higher Fock-components will be shown, and compared to the valence one. We found that the charge radius of the higher Fock components is about a half femtometer. The image of the pion valence state onto the null-plane will be presented, as well as results for the PDF and transverse momentum distributions. Some future prospects of research along these lines will be provided.

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