

Nonperturbative approach towards emergent hadron structure and mass at JLab 22

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Understanding the strong interaction dynamics, which triggers the emergence of hadron mass (EHM), presents a challenging problem within the Standard Model of particle physics. Experimental extraction of electromagnetic and transition form factors of mesons and baryons for increasingly larger virtual photon four-momentum squared (i.e., photon virtuality,) as well as their more complete three-dimensional image provides a unique opportunity to improve our understanding of the intricacies and working of the EHM. Significant progress in the use of continuum Schwinger function methods offers opportunities of making testable predictions for charting out the large Q^2 evolution of these form factors and the generalized parton distributions for the 22 GeV upgrade of the Thomas Jefferson National Accelerator Facility. I would present a brief overview of some of the progress in this direction.

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