

Generalising Moments Analysis for Electroproduction

Tuesday 9 December 2025 15:00 (30 minutes)

The Electron Ion Collider (EIC) is a proposed future collider in which the next generation of hadron spectroscopy experiments are set to take place. During electroproduction, resonances are produced through the exchange of a virtual photon, which gives greater detail on different production mechanisms compared to that of a real photon. The EIC will also have access to polarised electron and proton beams, providing the opportunity to investigate the physics of resonances by using the polarisation information to access otherwise inaccessible observables, such as cross-sections. To accommodate this, we will have to update the current electroproduction formalism to include a generalised moments analysis. In this presentation, first I will review the current electroproduction formalism and the moments analysis for photoproduction, then the derivation of this new generalisation for electroproduction, finally I shall provide an outline of the future of this project.

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