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Coulomb corrections for charged current events

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The Coulomb field of a nucleus exerts a force on charged leptons produced in charged-current neutrino nucleus interactions. Quantum mechanically this results in a distorted lepton wavefunction which can modify cross sections and have other phenomenological implications. In this talk we discuss recent progress on an analytic theory of Coulomb corrections for high energy charged current scattering events. We highlight how an Eikonal expansion can be used to recover, and systematically improve, certain phenomenological ansatzes used in the literature.

Primary authors: PLESTID, Ryan (University of Kentucky); Prof. HILL, Richard J (University of Kentucky and Fermilab); TOMALAK, Oleksandr (University of Kentucky)

Presenter: PLESTID, Ryan (University of Kentucky)

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