



## Roles of Wave Functions in the Electroproduction of Vector Mesons

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Elastic vector meson electroproduction is calculated through integrals of the overlap product of photon and vector meson wave functions, multiplied by the amplitude for the scattering of  $q\bar{q}$  dipole pairs off the proton. In this nonperturbative QCD calculation, for sizes of the overlap functions that are smaller than the typical ranges of the interaction of the dipoles with the proton, the amplitudes factorize, with overlap strengths (integration

extended over the light front coordinates describing the  $q\bar{q}$  dipoles) containing all  $Q^2$  dependence of the observables. This factorization is important in the description of the experimental data for all S-wave vector mesons.

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