

## **Pauli Blocking, Nuclear Excitations and the Coulomb Sum Rule in Electron and Neutrino Scattering on Nuclei**

Reliable modeling of quasielastic lepton scattering on nuclei is of great interest to neutrino oscillations experiments, especially at low values of momentum transfer  $Q$ . We use the Coulomb Sum Rule (in conjunction with electron scattering data including nuclear elastic form factors, nuclear excitation form factors and quasielastic scattering) at low values of  $Q$  to determine the suppression of the quasielastic cross section from all sources in a model independent way. The Coulomb Sum Rule (CSM) accounts for Pauli blocking contribution as well as all other sources of suppression. We compare the results to three models: (1) An analytic calculation of the average Pauli blocking suppression for a Relativistic Fermi Gas (RFG). (2) The average Pauli suppression from the genie  $\nu_2$  Monte Carlo (MC) generator, and (3) a calculation of Pauli suppression using a superscaling model.

### **Working group**

WG2

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