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Inelastic Axial and Vector Structure Functions for Electron- and Neutrino- Nucleon Scattering 2021 Update

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We report on an update (2021) of a phenomelogical model for inelastic neutrino- and electron-nucleon scattering cross sections using effective leading order parton distribution functions with a new scaling variable ξ_w. Non-perturbative effects are well described using the ξ_w scaling variable in combination with multiplicative K factors at low Q^2. The model describes all inelastic charged lepton-nucleon scattering data (HERA/NMC/BCDMS/SLAC/JLab) ranging from very high Q^2 to very low Q^2 and down to the $Q^2 = 0$ photo-production region. The model has been developed to be used in analysis of neutrino oscillation experiments in the few
GeV region. The 2021 update accounts for the difference between axial and vector structure function which brings it into better agreement with existing inelastic neutrino-nucleon scattering measurements.

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