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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 phenomenological model for inelastic neutrino- and electron-nucleon scattering cross sections using effective leading order parton distribution functions with a new scaling variable  $\xi_w$ . Non-perturbative effects are well described using the  $\xi_w$  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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