

The cross section can be divided into three main contributions, coming from the QE, Δ and N^* , and DIS regions, or corresponding to the production, in the final state, of no pions, 1π and $n\pi$, respectively.

QE region:

from the single nucleon point of view the description of the cross section is based on form-factors \rightarrow need accurate parameterizations.

Inclusion of nuclear effects requires treatment of initial bound state and final state interactions \rightarrow see later

^{very naive} Delta region:

at the single nucleon level one needs to describe the process

$$\nu + N \rightarrow l + \Delta / N^* \rightarrow l + \pi + N'$$