

$\delta(k_0' - k_0 + p_0' - p_0)$ to integrate over $d\cos\theta$

we obtain $\frac{d\sigma}{dt_N} \xrightarrow{|Q^2| = 2m_N t_N} \frac{d\sigma}{dQ^2}$

$$\frac{d\sigma}{dQ^2} = \frac{G^2}{2\pi} \left[\frac{1}{2} y^2 \frac{G_H^2}{\dots} + \left(1 - y - \frac{m_N}{2k_0} y \right) \frac{\frac{G_E^2}{\dots} + \frac{k_0}{2m_N} y \frac{G_H^2}{\dots}}{1 + \frac{k_0}{2m_N} y} \right. \\ \left. + \left(\frac{1}{2} y^2 + 1 - y + \frac{m_N}{2k_0} y \right) \frac{F_A^2}{\dots} \pm 2y \left(1 - \frac{1}{2} y \right) \frac{G_H^2}{\dots} \frac{F_A^2}{\dots} \right]$$

with $y = \frac{P \cdot Q}{P \cdot k} = \frac{lQ^2}{2P \cdot k}$

and $G_E = F_1 - lQ^2/4m_p^2 F_2$, $G_M = F_1 + F_2$

(for CC similar expression with additional terms in m_e)

All three form factors G_H^2 , G_E^2 and F_A^2 enter

→ terms in F_A^2 are dominant

→ knowing F_A^{CC} from CC scattering measurements
one can extract F_A^S

→ G_E^S have little effect, but must be known → PV
electron scattering