

Reading outline

θ - τ and Co decay \Rightarrow parity violation.

Observation of e helicity $\Rightarrow 1 - \gamma_5$ factor in lepton current.

Indirect determination of neutrino helicity $\Rightarrow \gamma_\mu(1 - \gamma_5)$ in lepton current.

Lorentz invariance $\Rightarrow G_V \gamma_\mu + G_A \gamma_\mu \gamma_5$ for hadron current.

^{14}O decay $\Rightarrow G_V$ value.

Neutron β decay $\Rightarrow |G_V/G_A|$ value.

Polarized neutron β decay \Rightarrow sign of G_A .

$$\left[\bar{\psi}_p \gamma_\mu (1 - g_A \gamma_5) \psi_n \right] \left[\bar{\psi}_e \gamma^\mu (1 - \gamma_5) \psi_\nu \right]$$

Muon decay \Rightarrow universality.

Pion decay \Rightarrow value of f_π and SSB of chiral symmetry.

Suppression of $\Delta S \neq 0$ decays \Rightarrow CKM matrix.

$$\bar{U} \gamma_\mu (1 - \gamma_5) V D \quad D = \begin{pmatrix} d \\ s \\ b \end{pmatrix}$$