

Observations of the Failure of Conservation of Parity and Charge Conjugation in Meson Decays: the Magnetic Moment of the Free Muon*

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Nuclear Emulsion Evidence for Parity Nonconservation in the Decay Chain

$$\pi^+ \rightarrow \mu^+ + e^{+* \dagger}$$

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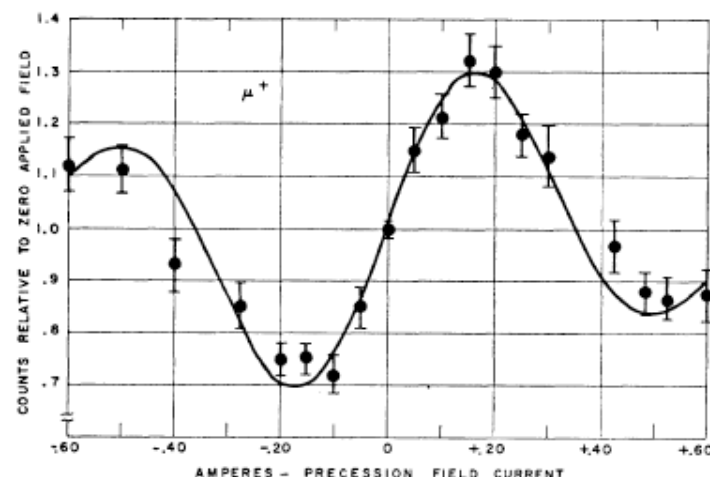


FIG. 2. Variation of gated 3-4 counting rate with magnetizing current. The solid curve is computed from an assumed electron angular distribution $1 - \frac{1}{3} \cos \theta$, with counter and gate-width resolution folded in.

It seems possible that polarized positive and negative muons will become a powerful tool for exploring magnetic fields in nuclei (even in Pb, 2% of the μ^- decay into electrons⁹), atoms, and interatomic regions.