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Parity violation in few-nucleon systems¹

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Parity-violating interactions between nucleons are the manifestation of an interplay between strong and weak quark-quark interactions at the hadronic level. Because of the short range of the weak interactions, these parity-violating forces provide a unique probe of low-energy strong interactions. In addition, a better understanding of parity violation in nuclei could also shed light on problems in the hadronic weak interactions involving strange quarks. An ongoing experimental program is mapping out the weak component of the nuclear force in few-nucleon systems. Recent theoretical progress in analyzing and interpreting hadronic parity violation in such systems, based on effective field theory methods, will be described.

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