

Abstract Submitted
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First Calculation of Nuclear Parity Violation from Lattice QCD

JOSEPH WASEM, Lawrence Livermore National Laboratory — While parity violating phenomena have been known and observed for several decades little is known about the flavor-conserving, parity violating interaction between quarks. The primary example of this interaction is the small parity violating interaction between nucleons. The large QCD background for this interaction makes both experimental extractions and theoretical predictions difficult. Here we report on results from a lattice QCD calculation of $h_{\pi NN}$, the leading-order momentum-independent parity violating coupling between pions and nucleons. This is the first calculation of this quantity directly from QCD.

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