The T-Violating Effective Chiral Lagrangian WILLIAM HOCKINGS, UBIRAJARA VAN KOLCK, University of Arizona — At quark level, there are numerous sources of T violation that generate T-odd interactions among hadrons, with the form of the interactions determined by the chiral symmetry properties of the sources. These sources include the QCD $\bar{\theta}$ term, the quark electric and chromoelectric dipole moments, and other terms that are formally of dimension six and higher. We present a method to construct the corresponding T-violating effective chiral Lagrangian, in which we eliminate by field redefinitions the terms that would lead to vacuum instability. As an illustration of the uses of this Lagrangian, we present a calculation of the electric dipole form factor of the nucleon in leading order in an expansion in powers of momenta and quark masses.

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