Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Coupled-cluster calculations of neutrinoless double-beta decay in ^{48}Ca[1] SAMUEL NOVARIO, Los Alamos National Laboratory, PETER GYSBERS, TRIUMF; University of British Columbia, JON ENGEL, University of North Carolina, GAUTE HAGEN, Oak Ridge National Laboratory; University of Tennessee, GUSTAV JANSEN, TITUS MORRIS, Oak Ridge National Laboratory, PETR NAVRTIL, TRIUMF, THOMAS PAPENBROCK, University of Tennessee; Oak Ridge National Laboratory, SOFIA QUAGLIONI, Lawrence Livermore National Laboratory — We use coupled-cluster theory and nuclear interactions from chiral effective field theory to compute the nuclear matrix element for the neutrinoless double-beta decay of ^{48}Ca. Benchmarks with the no-core shell model in several light nuclei and in the traditional shell model in the pf shell inform us about the accuracy of our approach. For ^{48}Ca we find a relatively small matrix element. We also compute the nuclear matrix element for the two-neutrino double-beta decay of ^{48}Ca and find agreement with data when using a quenching factor deduced from two-body currents in the recent ab-initio calculation of the Ikeda sum-rule in ^{48}Ca [Gysbers *et al.*, Nature Physics **15**, 428-431 (2019)]. Work available as [S. J. Novario, P. Gysbers, J. Engel, G. Hagen, G. R. Jansen, T. D. Morris, P. Navrtil, T. Papenbrock, S. Quaglioni, arXiv:2008.09696].

[1]US Department of Energy under Contract Nos. DE-FG02-96ER40963, DE-FG02-97ER41019, and DE-SC0008499

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Date submitted: 08 Jan 2021 Electronic form version 1.4