

Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Quantum Monte Carlo calculations of electromagnetic transitions in light nuclei SAORI PASTORE, University of South Carolina, ROBER WIRINGA, Argonne National Laboratory, ROCCO SCHIAVILLA, Old Dominion University and Jefferson Laboratory, STEVEN PIEPER, Argonne National Laboratory — Recently, we presented ab initio quantum Monte Carlo calculations of magnetic moments and M1 transitions in $A \leq 10$ nuclei, which include two-body meson-exchange currents' contributions of one- and two-pion range, derived from chiral effective field. These corrections are found to always improve the theoretical predictions, leading to a very good agreement with the experimental data. Here, we report on a study, carried out within the same framework, of M1 transitions in low-lying states of ^8Be . We also present a number of E2 transition calculations, evaluated in impulse approximation, with emphasis on transitions involving the ^8Be resonant excited states at ~ 3 MeV and ~ 11 MeV.

Saori Pastore
University of South Carolina

Date submitted: 18 Jun 2014

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