

Abstract Submitted
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Accurate nuclear charge radii measurements of neutron-deficient nickel isotopes¹ K. KOENIG, NSCL, MSU, D. ROSSI, F. SOMMER, IKP, TU Darmstadt, B. A. BROWN, NSCL/Dept. of Physics and Astronomy, MSU, R. DE GROOTE, Dept. of Physics, University of Jyvaeskylae, N. EVRETT, NSCL/Dept. of Physics and Astronomy, MSU, D. GARAND, NSCL, MSU, P. IMGRAM, IKP, TU Darmstadt, A. KLOSE, Dept. of Chemistry, Augustana University, J. KRAEMER, IKP, TU Darmstadt, J. LANTIS, NSCL/Dept. of Chemistry, MSU, Y. LIU, FRIB, MSU, B. MAASS, IKP, TU Darmstadt, P. MANTICA, FRIB/Dept. of Chemistry, MSU, A. MILLER, K. MINAMISONO, NSCL/Dept. of Physics and Astronomy, MSU, W. NAZAREWICZ, FRIB/Dept. of Physics and Astronomy, MSU, W. NOERTERSHAEUSER, IKP, TU Darmstadt, M. PEARSON, TRIUMF, S. PINEDA, NSCL/Dept. of Chemistry, MSU, R. POWEL, NSCL/Dept. of Physics and Astronomy, MSU, P.-G. REINHARD, ITP II, Universitt Erlangen-Nrnberg, E. ROMEO-ROMERO, Physics Division, ORNL, A. SCHWENK, IKP, TU Darmstadt, A. TEIGELHOEFER, TRIUMF — Charge radii of neutron deficient ^{54,55,56}Ni isotopes have been determined at the BEam COoler and LAser spectroscopy facility at NSCL to address the soft nature of doubly-magic ⁵⁶Ni. A novel approach was taken to precisely calibrate the Ni beam energy, which allowed us to accurately measure the isotope shifts relative to stable ⁶⁰Ni, from which the charge radii were deduced. Details of the calibration procedure and the obtained charge radii will be discussed.

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