

Abstract Submitted
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Charge radius of neutron deficient ^{54}Ni and constraints on slope parameter L in the neutron equation of state¹ S.V. PINEDA, NSCL/Dept. of Chemistry,MSU, D. ROSSI, Institut fr Kernphysik,T.U.Darmstadt, K. KENIG, B.A. BROWN, NSCL/Dept. of Physics and Astronomy,MSU, J.D. HOLT, TRIUMF, A. INCORVATI, NSCL/Dept. of Physics and Astronomy,MSU, J. KRMER, Institut fr Kernphysik,T.U.Darmstadt, A. KLOSE, Dept. of Chemistry, Augustana Univ., J.D. LANTIS, NSCL/Dept. of Chemistry,MSU, Y. LIU, Physics Division,ORNL, B. MAA, Institut fr Kernphysik,T.U.Darmstadt, A. MILLER, K. MINAMISONO, NSCL/Dept. of Physics and Astronomy,MSU, W. NRTERSUSER, Institut fr Kernphysik,T.U.Darmstadt, R. POWEL, NSCL/Dept. of Physics and Astronomy,MSU, M. PEARSON, TRIUMF, A. SCHWENK, Institut fr Kernphysik,T.U.Darmstadt/GSI/ Max-Plank-Institute fr Kernphysik, F. SOMMER, Institut fr Kernphysik,T.U.Darmstadt, C. SUMITHRARACHCHI, NSCL,MSU — The charge radius of ^{54}Ni was determined using collinear laser spectroscopy at the BEam COoling and LAser spectroscopy facility. The ^{54}Ni radius is critical to determine the slope L of symmetry energy in the nuclear equation of state. The linear correlation between the difference of charge radii of mirror nuclei ΔR_{mirr} and L is used to set constraint on L using the charge radii of proposed ^{54}Ni and its mirror partner ^{54}Fe , whose radius is also known. Details of the experiment and the progress of data analysis will be discussed.

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