

Abstract Submitted  
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**Neutron Density distributions in  $^{204,206,208}\text{Pb}$  observed via polarized proton elastic scattering at 300MeV** YOSHIHIKO IWAO, HARUTAKA SAKAGUCHI, TESTUYA MURAKAMI, YUSUKE YASUDA, SATORU TERASHIMA, ZYUZO ZENIHIRO, TAKASHI EMORI, Department of Physics, Kyoto University, MASARU YOSOI, Research Center for Nuclear Physics (RCNP), Osaka University, HIROYUKI TAKEDA, Institute of Physical and Chemical Research (RIKEN), MASATOSHI ITOH, Department of Physics, Tohoku University, HIDETOMO YOSHIDA, Research and Development Center for Higher Education, Kyushu University, MAKOTO UCHIDA, Department of Physics, Tokyo Institute of Technology — Neutron skin thickness, the difference of root mean square radii of neutron and proton distributions, for  $^{208}\text{Pb}$  provide a key role to discern various effective interactions used in Skyrme Hartree-Fock (SHF) and Relativistic Mean Field (RMF) models. We performed an experiment of elastic scattering of 300MeV polarized protons off  $^{204,206,208}\text{Pb}$  at RCNP and extracted their neutron density distributions in the framework of the relativistic impulse approximation (RIA) with medium modified NN interactions. We will report the results of the neutron skin thicknesses together with the nuclear incompressibility.

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