Contribution ID: **161** Type: **Parallel Session keynote talk (by invitation only)**

Weak charge distribution of 208Pb

Wednesday, 20 October 2021 11:15 (25 minutes)

While the electromagnetic charge distribution of protons inside nuclei has been well determined using electron scattering experiments, significant progress still needs to be made to reach the same level of precision for neutrons. The parity violating asymmetry in longitudinally polarized elastic electron-nucleus scattering is sensitive to the neutron RMS radius. The PREX-2 collaboration has completed a measurement using this technique looking at the neutron-rich ^{208}Pb nucleus. The clean theoretical connection between the parity violating asymmetry and other parameters of the nuclear equation of state allows for comparisons with other measurements (such as neutron star radii). In this talk we will present the recently published high precision result from data collected in 2019 using the CEBAF accelerator at Jefferson Lab.

Primary author: GAL, Ciprian (Stony Brook University)

Presenter: JONES, Donald (Temple University)

Session Classification: Spin in Nuclear Reactions and Nuclei

Track Classification: Parallel Sessions: Spin in Nuclear Reactions and Nuclei