Abstract Submitted
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Isospin dependence study of potassium hypernuclei via the high-resolution mass spectroscopy at JLab.[1] SHO NAGAO, SATOSHI NAKAMURA, Tohoku University, FRANCO GARIBALDI, INFN, PETE MARKOWITZ , JOERG REINHOLD, FIU, LIGUANG TANG, JLab, GUIDO GUIDO, INFN, JLAB HYPERNUCLEAR COLLABORATION — Investigation of the ΛN interaction in the nuclear medium is essential to describe a core structure of the neutron stars whose mass is around two solar mass. JLab E12-15-008 aims to measure the first experimental data about the ΛNN isospin dependent force via the (e,e'K+) reaction spectroscopy of 40 and 48 potassium hypernuclear isotopes. We have constructed new magnets named Particle Charge Separator (PCS) to achieve the high mass resolution and the high hypernuclear yield simultaneously. Accuracy of Lambda binding energies is expected to be <100 keV, that is enough energy to separate the isotope dependence of Potassium hypernuclei. I will introduce the physics motivation, expected results, and preparation status of the potassium hypernuclear experiment.

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