Abstract Submitted
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**Off-line production of transition-metal ions at BECOLA**[1] CALEB RYDER, National Superconducting Cyclotron Laboratory, HILLARY ASBERRY, JUSTIN HARRIS, PAUL MANTICA, National Superconducting Cyclotron Laboratory, Michigan State University Dept. of Chemistry, KEI MINAMISONO, National Superconducting Cyclotron Laboratory, Michigan State University Dept. of Physics, DOMINIC ROSSI, National Superconducting Cyclotron Laboratory, RYAN STRUM, National Superconducting Cyclotron Laboratory, Michigan State University Dept. of Physics, APRIL SMITH, Saint Vincent College — Collinear laser spectroscopy (CLS) of stable reference beams produced using off-line methods is critical in CLS experiments for calibrating the beam energy during experimental runs, developing atomic laser excitation schemes and reliably deducing nuclear properties from hyperfine spectra collected from on-line beams of radioisotopes. The BEam COoler and LAser Spectroscopy (BECOLA) facility [1] at the National Superconducting Cyclotron Laboratory at Michigan State University employs several ion sources for off-line stable beam production, each specializing in ion generation from specific materials. The focus of this talk will be on the Penning Ionization Gauge (PIG) ion source [2], a plasma sputtering source that has been recently implemented at BECOLA to readily produce transition metal ion beams.

[1] K. Minamisono et al., Nucl. Instrum. Methods Phys. Res. A 709, 85 (2013).
[2] Z. Nouri et al., Nucl. Instrum. Methods Phys. Res. A 614,174 (2010).

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