Abstract Submitted
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Nuclear structure studies of 195Au and 196Au[1] ARMEN GYURJINYAN, ANTHONY BATTAGLIA, CLARK CASARELLA, ANDREW NYSTROM, KEVIN SIEGL, KARL SMITH, MALLORY SMITH, SABRINA STRAUSS, WANPENG TAN, ANI APRAHAMIAN, University of Notre Dame — The Interacting Boson Model (IBM) theory is widely used to describe nuclear structure of heavy even-even nuclei. The model was extended to odd-A and odd-odd nuclei structure studies with supersummetric transformations. The best quartet of nuclei to test the supersymmetry transformations is ^{194}Pt, ^{195}Pt, ^{195}Au and ^{196}Au. The IBM describe the well-known spectra of ^{194}Pt, and then the supersymmetric transformations can predict low-lying levels with negative parity in ^{195}Pt, ^{195}Au, ^{196}Au. We used ^{195}Pt(p,n), ^{196}Pt(p,n) and ^{196}Pt(p,2n) reactions to produce ^{195}Au and ^{196}Au at the University of Notre Dame Nuclear Science Laboratory. The beam was 7.75MeV and 12 MeV bunched proton beam respectively. The conversion electron spectroscopy was carried out using the ICEBall array mini-orange detectors and two high purity germanium detectors with 109% efficiency for gamma spectroscopy. The results of experiment will be presented.

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