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Precision Measurement of the Internal Conversion Coefficient of 119Sn Isomer<sup>1</sup> MOLLY MAGUIRE, Cyclotron Institute, Texas A&M University (REU student from Reed College), N. NICA, J.C. HARDY, Cyclotron Institute, Texas A&M University — We made a preliminary measurement of the K-shell internal conversion coefficient,  $\alpha_K$ , for the 65.7 keV  $M_4$  transition from <sup>119m</sup>Sn, with the result 1645±27. This result agrees with 1618, the value obtained with the "Frozen Orbital" method to describe the electron vacancy when calculating the ICC. If the vacancy is not included, the calculated value of the ICC is 1544, nearly four standard deviations away from our preliminary result. Our value was achieved by a measurement of the  $\gamma$ -ray and K x-rays from <sup>119m</sup>Sn with an efficiency-calibrated high-purity Germanium detector. However, work is still needed to include the effects of scattering in our detector's efficiency calibration in the range of the K x-rays. Despite this, our preliminary measurement indicates better agreement with the calculation that includes the vacancy, as is physically expected.

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