Abstract Submitted
for the NWS06 Meeting of
The American Physical Society

Neutron Capture Cross Sections of Tellurium Isotopes MICAH EASTMAN, KENNETH KRANE, Department of Physics, Oregon State University, Corvallis OR 97331 — Neutron capture by the stable even-mass Te isotopes (A = 120 to 130) produces in the neighboring odd-neutron isotopes a low-spin ground state (1/2 or 3/2) and a high-spin (11/2) isomeric state. By irradiating samples of natural isotopic Te in our reactor, we have measured the neutron capture cross sections for all of the odd-mass radioactive ground states and isomers produced in the capture process. By using Cd-shielded and unshielded irradiations, we have been able to obtain both the effective thermal cross sections and the resonance integrals. Comparison with similar neutron capture processes in Sn isotopes leads to interesting systematic effects, especially among the thermal cross sections of the low-spin and high-spin states.

Kenneth Krane
Department of Physics, Oregon State University, Corvallis OR 97331

Date submitted: 20 Apr 2006 Electronic form version 1.4