Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Search for the inverse fission of uranium[1] W. LOVELAND, R. YANEZ, J. BECKERMAN, M. LEONARD, G. PETTERSSON, Oregon State University, C.J. GROSS, D. SHAPIRA, J.F. LIANG, Z. KOHLEY, R.L. VARNER, Oak Ridge National Laboratory — A search for the "inverse fission" of uranium has been made. Two "inverse fission" reactions were studied, the reaction of ^{124}Sn + ^{100}Mo and the reaction of ^{132}Sn + ^{100}Mo. In the former case, evaporation residues were searched for using (a) in-beam α-spectroscopy, (b) post-irradiation α-spectroscopy and (c) in-beam detection of recoiling evaporation residues while in the latter case, the evaporation residue, ^{230}U was searched for using post irradiation radio-analytical techniques. Data acquisition and analysis is on-going with expected upper limits or production cross sections of < 1 microbarn. The implications of these results for determining the fusion probability, P_{CN}, in the collisions of massive nuclei are discussed.

[1]This work was supported in part by the USDOE Office of Nuclear Physics under Grant DE-FG06-97ER41026 and Contract No. DE-AC02-06CH11357.

W. Loveland
Oregon State University

Date submitted: 20 Jun 2011 Electronic form version 1.4