

Abstract Submitted
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Feeding of isomers of stable $70 < Z < 80$ isotopes in neutron induced reactions N. FOTIADES, M. DEVLIN, R.O. NELSON, T. KAWANO, S. HOLLOWAY, P. TALOU, M.B. CHADWICK, LANL, J.A. BECKER, P.E. GARRETT, LLNL — The $(n, n'\gamma)$ reactions on stable Au, Ir and Lu isotopes were used to determine the feeding of the $11/2^-$ isomers in ^{191}Ir , ^{193}Ir and ^{197}Au and, more recently, of the 1^- isomer in ^{176}Lu , an odd-odd nucleus. The data were taken in four separate experiments, one for each isotope, using the GEANIE spectrometer comprised of 26 Ge detectors. The pulsed neutron source of the LANSCE/WNR facility provided neutrons with incident energies from 1 to 300 MeV, determined using the time-of-flight technique. The experimental results for ^{191}Ir , ^{193}Ir and ^{197}Au were compared with theoretical predictions from the GNASH reaction model, a step that is essential to take into account the weak γ rays feeding the isomers and not observed experimentally. GNASH reaction model calculations in ^{176}Lu are in progress. Results from all four experiments will be discussed. This work was performed under the auspices of the U.S. DOE in part by the University of California, Los Alamos National Laboratory (LANL) under Contract W-7405-ENG-36, and in part by Los Alamos National Security, LLC, LANL under Contract DE-AC52-06NA25396, and in part by the University of California, Lawrence Livermore National Laboratory (LLNL) under Contract W-7405-ENG-48 and in part by Livermore National Security, LLC, LLNL under Contract DE-AC52-07NA27344.

Ronald Nelson
LANL

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