High-spin states in $^{88}$Kr

N. Fotiades, LANL, A.F. Lisetskiy, Arizona Univ., J.A. Cizewski, Rutgers Univ., R. Krücken, T.U. München, R.M. Clark, P. Fallon, I.Y. Lee, A.O. Macchialvelli, LBNL, J.A. Becker, W. Younes, LLNL — High-spin states in $^{88}$Kr have been studied following the fission of the $^{226}$Th compound nucleus formed in a fusion-evaporation reaction ($^{18}$O at 91 MeV on $^{208}$Pb). The Gammasphere array was used to detect $\gamma$-ray coincidences. High-spin states up to spin (14+) and $\sim$8 MeV excitation energy have been established. The level scheme reported for $^{88}$Kr in the spontaneous fission of $^{248}$Cm [1] has been enriched and extended to higher spin and excitation energies. Differences between the level scheme reported in [1] and that obtained in the present work will be discussed. The observed experimental states are also compared with theoretical shell-model and interacting-boson-model-2 calculations. This work has been supported by the U.S. Department of Energy under Contracts No. DE-AC52-06NA25396 (LANL), W-7405-ENG-48 (LLNL) and AC03-76SF00098 (LBNL) and by the National Science Foundation (Rutgers).


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