Fast-Timing Measurements in ^{103,105}Pd

D. Ivanova[1], **S. Lalkovski**[1], **S. Kisyov**[1], **N. Mărginean**[2], **D. Balabanski**[3], **D. Bucurescu**[2], **R.B. Cakirli**[4,5], **M.P. Carpenter**[6], **R. Casten**[7], **Gh. Căta-Danil**[2], **I. Căta-Danil**[2], **D. Deleanu**[2], **D. Filipescu**[2], **J. Gheorghe**[2], **D. Ghiţă**[2], **T. Glodariu**[2], **F.G. Kondev**[8], **R. Mărginean**[2], **C. Mihai**[2], **A. Negret**[2], **S. Pascu**[2], **T. Sava**[2], **E. Stefanova**[3], **L. Stroe**[2], **G. Suliman**[2], **R. Suvaila**[2], **N.V. Zamfir**[2]

[1]Faculty of Physics, University of Sofia "St. Kliment Ohridski", Sofia, Bulgaria
[2]National Institute for Physics and Nuclear Engineering "Horia Hulubei", Magurele, Romania
[3]Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Science, Sofia, Bulgaria
[4]Max-Planck-Institut für Kernphysik, Saupfercheckweg 1, D-69117 Heidelberg, Germany
[5]Department of Physics, University of Istanbul, Istanbul, Turkey
[6]Physics Division, Argonne National Laboratory, Argonne, Illinois, 60439, USA
[7]WNSL, Yale University, New Haven, CT, USA
[8]Nuclear Engineering Division, Argonne National Laboratory, Argonne, Illinois 60439, USA

The odd-mass ^{103,105}Pd nuclei were studied via ^{94,96}Zr(^{12,13}C, 3nγ) fusion/evaporation reactions. The beam was provided by NIPNE-Magurele at energies of $\approx$50 MeV. Emitted γ-rays were detected by a mixed multi-detector system [1], comprising 8 HPGe and 11 $LaBr_3$:Ce detectors. The structure of the low-lying excited states in ^{103,105}Pd and their decay pattern is the focus of the present work, which follows previous studies in the odd-mass ^{103,105,107}Cd nuclei [2]. Results on new and re-evaluated half-lives in ^{103,105}Pd will be presented and discussed.

References

[1] N. Mărginean, D.L. Balabanski, D. Bucurescu, S. Lalkovski, L. Atanasova, G. Căta-Danil, I. Căta-Danil, J.M. Daugas, D. Deleanu, P. Detistov, G. Deyanova, D. Filipescu, G. Georgiev, D. Ghiţă, K.A. Gladnishki, R. Lozeva, T. Glodariu, M. Ivaşcu, S. Kisyov, C. Mihai, R. Mărginean, A. Negret, S. Pascu, D. Radulov, T. Sava, L. Stroe, G. Suliman, N.V. Zamfir, *Eur. Phys. J.* **A46** (2010) 329-336.

[2] S. Kisyov, S. Lalkovski, N. Mărginean, D. Bucurescu, L. Atanasova, D.L. Balabanski, Gh. Căta-Danil, I. Căta-Danil, J.-M. Daugas, D. Deleanu, P. Detistov, D. Filipescu, G. Georgiev, D. Ghiţă, T. Glodariu, J. Jolie, D.S. Judson, R. Lozeva, R. Mărginean, C. Mihai, A. Negret, S. Pascu, D. Radulov, J.-M. Régis, M. Rudigier, T. Sava, L. Stroe, G. Suliman, N.V. Zamfir, K.O. Zell, M. Zhekova, *Phys. Rev. C* **84** (2011) 014324.