Abstract Submitted
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New Analysis of Levels in ^{153}Pr J.H. HAMILTON, J.K. HWANG, E.H. WANG, A.V. RAMAYYA, Vanderbilt University, A. NAVIN, M. REJMUND, A. LEMASSON, S. BHATTACHARYYA, GANIL, S.H. LIU, ORAU, N.T. BREWER, University of Tennessee, Y.X. LUO, J.O. RASMUSSEN, LBNL, S.J. ZHU, Tsinghua University, G.M. TER-AKOPIAN, YU. OGANESSIAN, JINR — Previous levels assigned to ^{153}Pr [1] have recently been called into question and different transitions have been assigned to ^{153}Pr [2]. Recently prompt gamma-rays in coincidence with isotopically-identified fission fragments using VAMOS++ and EXOGAM, produced using ^{238}U on a ^{9}Be target, at an energy around the Coulomb barrier have been reported [3]. We have combined the $\gamma-\gamma-\gamma-\gamma$ data from ^{252}Cf (SF) and those from the in beam mass and Z-gated spectra to assign transitions and levels in ^{153}Pr. In contrast to the recent work [2], the transitions and levels previously assigned to ^{153}Pr have been confirmed by the M-Z gated spectra. As described in our other abstract, the levels assigned to ^{153}Pr [2] are now assigned to ^{151}Pr. The new evidences for the mass assignment to the transitions will be presented.

[1] J. K. Hwang *et al.*, Phys. Rev. C **82**, 034308 (2010)
[2] T. Malkiewicz *et al.*, Phys. Rev. C **85**, 044314 (2012)
[3] A. Navin et al. (submitted); A. Navin, 5th Int. Conf. on "***Fission and properties of neutron-rich nuclei, Sanibel 2012***," World Scientific, in press.

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