Abstract Submitted
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The β decay studies of ^{75}Cu using LeRIBSS[1] S. ILYUSHKIN, J. WINGER, K. RYKACZEWSKI, C. GROSS, J. BATCHELDER, L. CARTEGNI, I. DARBY, R. GRZYWACZ, J. HAMILTON, A. KORGUL, W. KROLAS, S. LIDDICK, C. MAZZOCCHI, S. PADGETT, A. PIECHACZEK, M. RAJABALI, D. SHAPIRA, E. ZGANJAR — The β decay of ^{75}Cu ($t_{1/2} = 1.222(8)$ s) to levels in ^{75}Zn has been studied at the Holifield Radioactive Ion Beam Facility at Oak Ridge National Laboratory. The $\gamma\gamma$ and $\beta\gamma$ data were collected using the Low-energy Radioactive Ion Beam Spectroscopy Station making use of the high-resolution isobar separator. This resulted in considerable information on the previously unknown level structure of ^{75}Zn with some 120 γ-ray transitions placed in a level scheme containing 59 levels including two states above the neutron separation energy. A previously unknown $1/2^-$ isomeric state at 127 keV is proposed. In addition, spins and parities of several states are proposed based on the observed decay pattern. These states can be explained in terms of coupling neutrons in the $1g_{9/2}$ and $2p_{1/2}$ orbitals to protons in the $1g_{5/2}$ and $2p_{3/2}$ orbitals. Results of β decay studies of ^{75}Cu will be presented.

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Sergey Ilyushkin
Mississippi State University

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