

Abstract Submitted
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Structure of $^{74-76}\text{Cu}$ and $^{71-73}\text{Ni}$ from β -decay studies¹ MUSTAFA RAJABALI, R. GRZYWACZ, S.N. LIDDICK, C. MAZZOCCHI, C. BINGHAM, I. DARBY, University of Tennessee, J. BATCHELDER, K. RYKACZEWSKI, ORNL, P. MANTICA, T. BAUMANN, T. GINTER, NSCL, M. PFUTZNER, K. MIERNIK, W. KROLAS, University of Warsaw and Polish Academy of Science, S.V. ILYUSHKIN, J. WINGER, Mississippi State University — The low-energy excited states in $^{74-76}\text{Cu}$ and $^{71-73}\text{Ni}$ were populated through the beta decay of $^{74-76}\text{Ni}$ and $^{71-73}\text{Co}$ isotopes respectively. The experiment was performed at the NSCL at MSU. The parent isotopes were obtained from the fragmentation of ^{86}Kr beam, at 140 AMeV, on a Be target. The experimental setup consisted primarily of a thick Double-sided Silicon Strip Detector for the correlation of implanted ions with their subsequent beta decays and the NSCL Segmented Germanium Array (SeGA) to monitor the emitted gamma rays. All detectors were read out with a new digital data acquisition system. Results from this experiment are interpreted using shell model with residual interactions which takes into account the monopole migration of single particle proton levels near ^{78}Ni . Expected strong hindrance of M1 transitions was observed in $^{71-73}\text{Ni}$. The observed decay of ^{76}Ni gives a first insight into the possible decay pattern of ^{78}Ni .

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