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Shape coexistence in ^{68}Ni S. SUCHYTA, S. LIDDICK, M. BENNET, N. LARSON, C. PROKOP, S. QUINN, A. SPYROU, MSU/NSCL, A. CHEMEY, A. SIMON, NSCL, T. OTSUKA, MSU/NSCL/CNS/U of T, Y. TSUNODA, U of T, N. SHIMIZU, CNS/U of T, M. HONMA, CMS/U of A, Y. UTSUNO, JAEA, V. TRIPATH, J. VONMOSS, FSU — ^{68}Ni has been a focus of recent work aiming to understand the apparent rapid development of collectivity along neutron-rich N =40 nuclei, but despite many studies, is not entirely understood. The decay of the first excited 0^+ state in ^{68}Ni was investigated at the NSCL. Ions of ^{68}Co were implanted into a planar germanium double-sided strip detector (GeDSSD). The beta decay of ^{68}Co populated the first excited 0^+ state in ^{68}Ni and within hundreds of nanoseconds the decay of the first excited 0^+ state was measured in the GeDSSD. Both the energy of the first excited 0^+ state and the electric monopole transition strength from the first excited 0^+ state were precisely determined. Comparisons to Monte Carlo Shell Model calculations suggest shape coexistence between spherical ground and oblate first excited 0^+ states in ^{68}Ni. The experimental results and theoretical interpretation will be presented.

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