

Abstract Submitted
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Evidence for a smooth onset of deformation in the neutron-rich Kr isotopes¹ MICHAEL ALBERS, Argonne National Laboratory, N. WARR, A. BLAZHEV, J. JOLIE, Institute for Nuclear Physics, University of Cologne, K. NOMURA, Department of Physics, University of Tokyo, D. MUECHER, Physics Department E12, TU Munich, MINIBALL IS485 COLLABORATION — The aim of this work was to investigate the behaviour of the even-even $Z=36$ (Kr) isotopes in the phase transition region around $A=100$ by determining the energies of the 2_1^+ states and their E2 decay transition strengths to the ground state in ^{94}Kr ($N=58$) and ^{96}Kr ($N=60$). Information on the energies of the first excited 2^+ states exist only for the Kr isotopes up to $N=58$. For $N=60$, contradictory results on this observable were published recently. To clarify this contradiction several experimental runs were performed at the REX-ISOLDE facility at CERN, utilizing the high-efficiency MINIBALL γ -ray spectrometer and analyzing the emitted γ -rays and scattered particles after the Coulomb-excitation reactions. The results of these experiments will be presented and discussed in the framework of the proton-neutron interacting boson model based on the constrained Hartree-Fock-Bogoliubov approach using the microscopic Gogny-D1M energy density functional.

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