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Newly identified low-lying isomeric state in 80Ga from the beta- decay of 80Zn

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The beta decay of 80Zn was part in systematic studies of neutron rich Zn nuclei. The measurements were performed at the ISOLDE facility at CERN. The beta gated gamma-gamma coincidences provided a significantly modified level scheme for 80Ga compared to the previously reported one. The main goal of our research was to identify excitation energies of two beta decaying states. The new level scheme includes a new low-lying state at 22.4 keV. Properties of the level scheme suggest that the ground state has spin J = 6 and the next excited state has spin J = 3 in agreement with shell model calculation and previous collinear laser spectroscopy measurements.

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