

OBSERVATION AND QUADRUPOLE-MOMENT MEASUREMENTS OF THE FIRST SUPERDEFORMED BAND IN THE A ~ 60 MASS REGION¹

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A high-spin rotational cascade of six γ rays has been observed in ^{62}Zn . The quadrupole moment of $2.7_{-0.5}^{+0.7}$ eb measured for this band corresponds to a deformation $\beta_2 = 0.45 +_{-0.07}^{+0.10}$. The properties of this band are in excellent agreement with calculations that predict high-spin superdeformed bands in ^{62}Zn with deformations $\beta_2 = 0.41 - 0.49$. These results establish a new region of superdeformation for nuclei with neutron and proton numbers $N, Z \approx 30-32$.

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