

## Proxy-SU(3) symmetry in heavy nuclei: Prolate dominance and prolate-oblate shape transition

**S. Sarantopoulou<sup>1</sup>, D. Bonatsos<sup>1</sup>, I.E. Assimakis<sup>1</sup>, N. Minkov<sup>2</sup>,  
A. Martinou<sup>1</sup>, R.B. Cakirli<sup>3</sup>, R.F. Casten<sup>4,5</sup>, K. Blaum<sup>6</sup>**

<sup>1</sup>Institute of Nuclear and Particle Physics, National Centre for Scientific Research “Demokritos”, GR-15310 Aghia Paraskevi, Attiki, Greece

<sup>2</sup>Institute of Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences, 72 Tzarigrad Road, 1784 Sofia, Bulgaria

<sup>3</sup>Department of Physics, University of Istanbul, 34134 Istanbul, Turkey

<sup>4</sup>Wright Laboratory, Yale University, New Haven, Connecticut 06520, USA

<sup>5</sup>Facility for Rare Isotope Beams, 640 South Shaw Lane, Michigan State University, East Lansing, MI 48824 USA

<sup>6</sup>Max-Planck-Institut für Kernphysik, Saupfercheckweg 1, D-69117 Heidelberg, Germany

### Abstract

Using a new approximate analytic parameter-free proxy-SU(3) scheme, we make simple predictions for the global feature of prolate dominance and the locus of the prolate-oblate shape transition and compare these with empirical data.

### References

- [1] D. Bonatsos, I. E. Assimakis, N. Minkov, A. Martinou, S. Sarantopoulou, R. B. Cakirli, R. F. Casten, and K. Blaum, *Phys. Rev. C* **95** (2017) 064326.