

# CHIRALITY, WOBBLING AND CHIRAL WOBBLERS

Umesh Garg<sup>1\*</sup>

<sup>1</sup>*Physics Department, University of Notre Dame, Notre Dame, IN 46556, USA*

## Introduction

Chirality in nuclei is now well established, both theoretically and experimentally, as an interesting consequence of triaxiality in nuclei. Another essential characteristic of triaxial nuclei is wobbling, first observed in the  $A \sim 160$  region almost contemporaneously with experimental observation of nuclear chirality. A few years ago, wobbling was observed in the nucleus  $^{135}\text{Pr}$ , opening a new region for detailed investigation of this phenomenon. Since then, both "transverse" and "longitudinal" wobbling have been observed in other nuclei in the  $A \sim 130$  region. In our recent work at Gammasphere, wobbling has now been identified in a new region of nuclei ( $A \sim 190$ ). Furthermore, for the first time, we may have

\*Electronic address: [garg@nd.edu](mailto:garg@nd.edu)

observed both chirality and wobbling in the same nucleus—a chiral wobblers.

In this talk I will present results on wobbling in the  $A \sim 130$  and  $A \sim 190$  regions, and discuss the intriguing possibility of a chiral wobblers in the nucleus  $^{135}\text{Pr}$ .

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## References

- [1] Announcement Poster and Website, DAE Symp. **vv**, ppp (yyyy).
- [2] Int. Symp. on Nucl. Phys. **vv**, ppp (yyyy).