



Contribution ID: 53

Type: **Contributed Oral Presentation**

## Two-Phonon Octupole excitation in $^{96}\text{Zr}$

*Tuesday, 27 May 2025 09:10 (15 minutes)*

We present the preliminary analysis of an experiment performed at INFN LNL in November 2023 aimed at studying the two-octupole phonon collectivity in Zr. The goal of the experiment was to perform a  $\alpha$ -decay branching ratio measurement from the  $6^+$  to the  $3^-$  state, so as to extract the  $B(E3; 6^+ \rightarrow 3^-)$  value. If large, this parameter would indicate for the level to be a member of the  $3^- \otimes 3^-$  multiplet. The state was populated via the  $^{96}\text{Zr}(p,p')^{96}\text{Zr}$  proton inelastic scattering and the scattered protons were measured in the SAURON Double-Sided Silicon Strip detector. These were used to select the reaction channel of interest, in coincidence with the rays in the AGATA array.

**Primary authors:** STRAMACCIONI, Damiano (University of Padova and INFN Laboratori Nazionali di Legnaro); Dr VALIENTE-DOBÓN, José Javier (INFN Laboratori Nazionali di Legnaro)

**Presenter:** STRAMACCIONI, Damiano (University of Padova and INFN Laboratori Nazionali di Legnaro)

**Session Classification:** Parallel Session

**Track Classification:** Nuclear Structure