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## Beta Spectra Shape Studies for the Prediction of Reactor Antineutrino Spectra

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Predictions of the spectra of nuclear reactors' electron antineutrinos do not coincide with the measurements [1]. These differences are known as the "Reactor Antineutrino Anomaly" and the spectral "bump" [2]. The e-shape collaboration looks for solutions for these problems via the improvement of relevant nuclear models used in the calculation of antineutrino spectra from reactors [3]. The collaboration uses the summation method [4] to calculate predictions of reactors' antineutrino spectra due to its improved results over other methods, and electron  $\Delta E$ -E detectors to measure the beta spectra of relevant contributors to the antineutrino spectra [5]. Measurements of beta shapes were conducted at IGISOL-4 because the facility has a double Penning trap (JYFLTRAP) that produces isotopically clean radioactive beams of the isotopes of interest. This work presents the analysis of the Rb-92 beta spectrum measured at the facility during the I233 experiment.

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- [3] A. Algora, et al., Eur. Phys. J. A 57 (2021) pg. 85.
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- [5] V. Guadilla, et al., arXiv preprint, arXiv:2305.13832 (2023).

### Abstract

**Primary author(s)** : Dr. GUSTAVO, Alcalá (IFIC); Dr. ALEJANDRO, Algora (IFIC/CSIC)

**Co-author(s)** : E-SHAPE COLLABORATION; IGISOL COLLABORATION

**Presenter(s)** : Dr. GUSTAVO, Alcalá (IFIC)

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