



Contribution ID: 80

Type: **Oral Contribution**

## Beta-decay spectroscopy of neutron-deficient nuclei

*Wednesday 26 October 2022 17:30 (25 minutes)*

A systematic study of neutron-deficient nuclei has been carried out by decay spectroscopy experiments with implanted radioactive ion beams (RIBs) at GANIL and RIKEN. Beta decay has a direct access to the absolute values of the Fermi and Gamow-Teller transition strengths. The comparison with complementary charge exchange reactions, such as the ( $^3\text{He},t$ ) reaction performed on the mirror stable targets at RCNP Osaka, allows us the investigation of fundamental questions related to the role of isospin in atomic nuclei. We have obtained remarkable results [1-5], among which the discovery of the exotic  $\beta$ -delayed  $\gamma$ -proton decay in  $^{56}\text{Zn}$  [1] and the first observation of the  $2^+$  isomer in  $^{52}\text{Co}$  [3]. These studies were extended to higher masses and more extreme nuclear conditions at RIKEN thanks to the high-intensity RIBs available. An overview of the most important results will be presented, together with the new results on  $^{60}\text{Ge}$  and  $^{62}\text{Ge}$  [5] obtained from the RIKEN experiment.

[1] S.E.A. Orrigo et al., Phys. Rev. Lett. 112, 222501 (2014).

[2] S.E.A. Orrigo et al., Phys. Rev. C 93, 044336 (2016).

[3] S.E.A. Orrigo et al., Phys. Rev. C 94, 044315 (2016).

[4] L. Kucuk, S.E.A. Orrigo et al., Eur. Phys. J. A 53 (2017).

[5] S.E.A. Orrigo et al., Phys. Rev. C 103, 014324 (2021).

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**Session Classification:** P2 Nuclear Structure, Spectroscopy, and Dynamics

**Track Classification:** P2 Nuclear Structure, Spectroscopy, and Dynamics