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γ decay of IAS in 71Ge: a new pathway to Gallium anomaly

Inverse beta decay (IBD) is a crucial process historically employed to study neutrinos. For example, discrepancies between measured and expected IBD rates on (^{71}\text{Ga}), the so-called , suggest the possible existence of sterile neutrinos. A recent publication showed that the poorly known associated Nuclear Matrix Element (NME) can be extracted measuring the decay width from the Isobaric Analog State (IAS) in (^{71}\text{Ge}). In this talk, I will present the preliminary results from an experiment carried out in February 2025 at Laboratori Nazionali di Legnaro, aimed at studying the feasibility of this measurement.

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