

# Structure evolution towards $^{78}\text{Ni}$ : challenges in the interpretation of hard-won experimental data solved by simple means

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Considerable efforts have been recently deployed in order to reach experimentally the region in the immediate vicinity of  $^{78}\text{Ni}$  to assess the doubly magic character of this very neutron rich nucleus. The PARRNe ISOL device has been operating at IPN Orsay since more than a decade. Originally conceived as a test bench for R&D studies in the framework of the SPIRAL2 project, the performance of the setup has proven suitable to undertake a physics research program on the evolution of  $N=50$  towards  $^{78}\text{Ni}$  by beta-decay studies. Though data remain relatively scarce, a global picture of the structure in this very neutron/proton asymmetric region is now emerging and shell model calculations in the natural valence space of  $^{78}\text{Ni}$  are being developed. In this talk, I will present how experimental evidence found in beta-decay studies integrates in the more global body of data coming from different experimental approaches. It allows in particular a glimpse to the evolution of the proton and neutron effective energy sequences - as well as to the evolution of the  $N=50$  gap itself and its implication on the observed structures. The microscopic origin of these observed evolutions remains subject to debate.

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