

First spectroscopy of Cr-66, Fe-70 and Fe-72 in the N=40 Island of Inversion

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We look back on the first ever SEASTAR campaign at RIBF, in 2014, using the DALI 2 γ -ray detector array and the MINOS device, and more especially focus on the measurement of the first 2^+ and 4^+ states of ^{66}Cr and $^{70,72}\text{Fe}$ via in-beam γ -ray spectroscopy after a (p,2p) knockout reaction. Experimental results and their interpretation within the shell model showed an extension of the island of inversion at N=40 for more neutron-rich isotopes towards N=50, and paved the way to extend our knowledge in this neutron-rich region of the nuclear chart.

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