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Shape coexistence in 96,98Sr

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Neutron rich 96,98Sr isotopes were investigated by safe Coulomb excitation of radioactive beams at the REX-ISOLDE facility. Reduced transition probabilities and spectroscopic quadrupole moments have been extracted from the differential Coulomb excitation cross

sections. These results allow for the first time to draw definite conclusions about the shape coexistence of highly deformed prolate and spherical configurations. In particular, a very small mixing between the coexisting states is observed, contrary to other mass regions where strong mixing is the rule. Experimental results will be compared to beyond-mean-field calculations using the Gogny D1S interaction in a five-dimensional collective Hamiltonian (5DCH) formalism, which reproduce the shape change at N=60.

Primary authors: CLEMENT, Emmanuel (GANIL); ZIELINSKA, Magdalena (CEA Saclay)

Co-authors: GOERGEN, Andreas (U); GOUTTE, Heloise (CEA); LIBERT, Jean (CEA/DAM); PERU, Sophie

(CEA); HILAIRE, Stephane (CEA/DAM); KORTEN, Wolfram (CEA Saclay)

Presenter: ZIELINSKA, Magdalena (CEA Saclay)

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