

Competing structures in ^{186}Pb nucleus

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In the atomic nucleus, the interplay between single-particle motion, collectivity and pairing is seen as a rich tapestry of coexisting nuclear shapes and exotic excitations. One of the richest regions is formed by very neutron-deficient nuclei with the proton number Z close to the magic 82 and the neutron number N close to 104 midshell [1-3]. A considerable body of both theoretical and experimental evidence has been gathered for coexisting configurations possessing different shapes in this region, yet there are many open questions to be answered. In this presentation, our new experimental findings on ^{186}Pb obtained employing simultaneous in-beam g-ray and electron spectroscopy using the SAGE spectrometer [4] will be discussed.

[1] J.L. Wood et al., Phys. Rep. 215, 101 (1992).

[2] K. Heyde et al., Phys. Rev. C 44, 2216 (1991).

[3] R. Julin et al., J. Phys. G 27 R109 (2001).

[4] J. Ojala et al., to be published

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