**New results on shape coexistence in the light Pb region** JANNE PAKARINEN, Department of Physics, University of Jyväskylä, JYFL COLLABORATION, IKP, KÖLN COLLABORATION — Experimental evidence for shape-coexisting configurations has been observed in Pb isotopes close to the neutron mid-shell. These structures intrude down to energies close to the spherical ground state and can be associated with intruder 2p-2h and 4p-4h proton shell-model excitations across the $Z=82$ energy gap [1], resulting in a unique shape-triplet in $^{186}$Pb [2]. In-beam $\gamma\gamma$ coincidence data have been collected for $^{186}$Pb by combining the JUROGAM Ge-detector array and the GREAT spectrometer with the RITU gas-filled recoil separator for Recoil-Decay Tagging measurements. In addition to the known prolate yrast band in $^{186}$Pb, these data have enabled three new bands to be identified [3]. Complementary results were provided in Recoil Distance Doppler-Shift lifetime measurements, where the electromagnetic transition properties of the lowest yrast states were measured [4]. In this contribution, the results of latest experiments employing these techniques will be presented and their implications for intruder structures will be discussed.


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