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**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  $^{186}\text{Pb}$  [2]. In-beam  $\gamma\gamma$  coincidence data have been collected for  $^{186}\text{Pb}$  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  $^{186}\text{Pb}$ , 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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- [2] A. Andreyev, Nature **405**, 430 (2001).
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Janne Pakarinen  
Department of Physics, University of Jyväskylä

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