

# High-Spin Spectroscopy of $^{124,125,126}\text{Xe}$

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High-spin states in the  $^{124,125,126}\text{Xe}$  have been populated in the  $^{82}\text{Se}(^{48}\text{Ca},xn)^{130-x}\text{Xe}$  reaction at a beam energy of 206 MeV. The beam was provided by the ATLAS accelerator at Argonne National Laboratory and  $\gamma$ -ray coincidences were measured with the GAMMASPHERE spectrometer array. The main goal of the experiment was to search for hyperdeformation in Xe nuclei [1], but the data also contain rich spectroscopic information on normal-deformed states. More than 10 long bands extending into the spin region of  $\sim 60 \hbar$  were identified in  $^{125}\text{Xe}$  and  $^{126}\text{Xe}$ . In  $^{125}\text{Xe}$ , previously known rotational bands at low spins [2] are confirmed. Several of the high-spin bands are connected to the normal-deformed structures but several are still floating. Earlier known structures in  $^{124}\text{Xe}$  [3,4] are confirmed and a new side band was found. Irregular structures on top of the yrast band are identified as a fingerprint of band termination. Possible configuration assignments of the different structures will be discussed.

## References:

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