

Abstract Submitted  
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**Isomer Spectroscopy of the Heaviest Elements** RODERICK CLARK, Lawrence Berkeley National Laboratory — A new generation of experiments on the structure and properties of the heaviest elements is being performed in laboratories around the world. These studies are addressing fundamental questions such as the maximum mass and charge that a nucleus can attain. Long-lived high-K isomers are found in the region of prolate-deformed trans-fermium nuclei and by studying their decay one can learn about the single-particle structure, pairing correlations, and excitation modes of the heaviest nuclei. Recent decay spectroscopy experiments using the Berkeley Gas-Filled Separator (BGS) at the 88-Inch Cyclotron of the Lawrence Berkeley National Laboratory have yielded a wealth of detailed new information on many nuclei in the trans-fermium region. I will discuss these new results and their implications.

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