

Spectroscopy of the transfermium nuclei ^{251}Md

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The study of very heavy nuclei beyond the Fermium isotopes has attracted a strong interest in recent years. Due to the strong Coulomb repulsion, these nuclei are only stabilized by shell effects. After the first successful studies of even-even nuclei where collective properties have been deduced, the spectroscopy of odd-A isotopes is the next step needed to understand the single-particle properties in this mass region. Due to the relatively high cross section, the nucleus ^{251}Md is the best odd-Z candidate.

In order to study the nucleus ^{251}Md ($Z=101$), three experiments have recently been performed at the university of Jyväskylä: by prompt electron spectroscopy using the electron detector SACRED, by prompt gamma spectroscopy with the new JUROGAM array, and by alpha, electron and gamma spectroscopy after the alpha decay of ^{255}Lr using the GREAT detector. The first results of these experiments will be presented.