

Decay Of High-Spin Isomers Into Odd-Odd Holmium Nuclei With $A= 160,158,156$.

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The report discusses experimental and theoretical problems of describing high-spin isomers in the beta decay of nuclei. The experiments were carried out within the framework of the Energy-Transmutation program at JINR accelerators and at the YASNAPP experimental complex, created on the basis of the JINR nuclear power Plant phasotron, in “on-line” and “off-line” modes.

The experiments used large-volume HPGe detectors (efficiency 20% - 70%) and planar HPGe detectors (O30mm x 3mm).

In the nuclei of 156,158,160, the lifetimes of 5 levels and half-lives of high-spin isomers were measured. :
 $T_{1/2}^{9+} 160m2Ho = 3.2 \pm 0.2s$, $T_{1/2}^{9+} 158m2Ho = 21min$, $T_{1/2}^{9+} 156m2Ho = 7.25 \pm 0.35min$.

The figure shows a fragment of the decay of a high-spin isomer in the $156No$ nucleus.

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