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## $\alpha$ -decays of even-even actinides and superheavy nuclei to the first rotational $2^+$ states of daughter nuclei

The alpha-decays of even-even isotopes of actinides and superheavy nuclei to the ground  $0^+$  and first  $2^+$  states of their daughter nuclei are studied. The conditions for the maximum intensity of alpha-decay from the ground state to the lowest  $2^+$  state are analyzed in detail based on existing experimental data. For the alpha-decays of heavy nuclei up to Og, the half-lives and population probabilities of the  $0^+$  and  $2^+$  states of the daughter nucleus are described and predicted employing the preformed cluster model.

### Notes

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