CALCULATION OF *E*λ-TRANSITIONS IN HEAVY NUCLEI

Adamian G.G., Antonenko N.V., Jolos R.V., Malov L.A.
Joint Institute for Nuclear Research, Dubna, Russia
E-mail: malov@theor.jinr.ru

In Ref. [1] the spectra of non-rotational states as well as the structure of these states have been studied in the nuclei of isotonic chains of heavy nuclei based on the microscopic-macroscopic approach and Quasiparticle-Phonon Model [2, 3].

Using the same theoretical formalism, in the present work we consider the decay characteristics of heavy nuclei. The calculated reduced probabilities $B(E\lambda(M\lambda), I^{\pi}K(K=\mu) \rightarrow 0^{+}0)$ of electromagnetic transitions from the vibrational quadrupole or octupole states into the ground state and the energies Q_{α} of alpha-decay are compared with the available experimental data. The calculation does not contain any free parameters. In Table 1, the part of the results obtained is presented for nuclei ^{246}Cm and ^{250}Cf.

$I^{\pi}K(\lambda\mu)$	$E_{\lambda\mu}$ [keV] exp.	theor.	$B(E\lambda, I^{\pi}K \rightarrow 0^{+}0)$ [$e^2fm^{2\lambda}$] exp.	theor.
^{246}Cm(exp.[4]):				
$2^{+}0(20)$	1175	1200	–	60
$2^{+}2(22)$	1124	1300	448	310
$3^{-}0(30)$	1250	1300	$4.76\cdot10^{4}$	$3\cdot10^{4}$
$3^{-}1(31)$	1079	1000	–	$2\cdot10^{4}$
$3^{-}2(32)$	842	900	$3.80\cdot10^{4}$	$3\cdot10^{4}$
$3^{-}3(33)$	–	1400	–	$2\cdot10^{4}$
^{250}Cf(exp.[5]):				
$2^{+}0(20)$	1154	1200	–	120
$2^{+}2(22)$	1032	1300	215	240
$3^{-}0(30)$	1335	1300	$6.57\cdot10^{3}$	$1.8\cdot10^{4}$
$3^{-}1(31)$	1176	1000	$2.76\cdot10^{4}$	$2.7\cdot10^{4}$
$3^{-}2(32)$	872	900	$2.89\cdot10^{4}$	$2.3\cdot10^{4}$
$3^{-}3(33)$	1427	1400	$1.90\cdot10^{4}$	$1.5\cdot10^{4}$

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