

PROPERTIES OF ODD ISOTOPE ^{147}Eu NUCLEUS

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Spectra of γ -rays and electrons of internal Conversion (EIC) in the process of $^{147}\text{Gd} \rightarrow ^{147}\text{Eu}$ decay have been investigated. A number of new unsufficiently intensive gamma-transitions was revealed, and they were placed into the decay scheme:

Gamma-transitions of ^{147}Eu

In previous papers the basic experimental results, connected with the investigation of K_{α} -, β -radiation, electrons of internal conversion (EIC) and spectra of positrons (β^+) were published.

The present paper reports on new data and analysis of spectra of γ -rays, EIC and positrons. There revealed a number of new unsufficiently intensive γ -transitions, and a part of them is placed into the scheme of $^{147}\text{Gd} \rightarrow ^{147}\text{Eu}$ decay.

Experimental values of the coefficient of internal conversion (CIC) were compared with the theoretical calculations, and multiplicities of ^{147}Eu γ -transitions were identified. In the process of calculation of an error in determination of a relative intensity of K-conversion electrons, gamma-rays, and a coefficient of scale connection. As a result, we determined the multiplicities of the following unsufficiently intensive transitions:

E (E), keV	I (I)	I _k (I _k)	k (k)	L	E _i	E _f
	arb. units					
537,68(8)	0,15(3)	-	-	-	-	-
548,78(6)	0,14(2)	0,018(5)	0,019(6)	M1,E2	-	-
647,01(1)	0,12(2)	-	-	-	-	-
737,45(12)	0,10(1)	0,003(1)	0,045	M1,E2	1806,55	1069,246
751,81(13)	0,28(4)	0,024(7)	0,013(4)	M1	1874,69	1122,714
834,58(6)	0,021(7)	-	-	-	1696,30	861,640
918,15(24)	0,07(2)	-	-	-	-	-
936,98(23)	0,06(1)	-	-	-	-	-
948,29(5)	0,16(1)	-	-	-	-	-
976,8(3)	0,042(8)	-	-	-	1838,82	861,646
1017,85(4)	0,18(1)	-	-	-	-	-

The obtained results are original. In this paper we discuss the quantum characteristics of the excited states of ^{147}Eu nucleus.