

## Levels scheme of $^{147}\text{Eu}$

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In presents work the energies and relative intensities of gamma rays, k conversional electrons and  $X_k$ -rays have been determined with high accuracy. Also multipoles of the following transitions were defined: 297,02(M1,E2); 341,31(E1); 346,28(M1); 506,59(M1,E2); 529,95(M1,E2); 882,09(M1,E2); 983,41(E1); 1399,25(M1,E2); 1676,33 keV (M1,E2).

As a results of analysis of the spectra of positrons two components  $E_{\beta^+} = 1160(13)$  and  $E_{\beta^+} = 933(5)$  keV have been given off. At this point  $Q_{\beta^+} = 2185(5)$  keV. The new coincidences of K 229,29 with transitions: 778,04, 1232,76, 1566,34, 1586,80 and 1676,33 keV were observed.

The spectra of gamma rays, internal conversion electrons (IWC), positrons and e - coincidences have been analysed and on this base the  $^{147}\text{Gd} \rightarrow ^{147}\text{Eu}$  decay scheme was constructed. New levels were introduced in the decay scheme: 1007,40; 1337,70; 1771,94; 1816,06; 1816,46; 1838,82; 1874,69; 1905,05 and 1965,64 keV.

The existence of this levels, which were introduced earlier by assumption, is proved by the analyses of e -coincidences. The quantum characteristics (I) of level 1474,57 keV were determined. In work the levels scheme of  $^{147}\text{Eu}$  is discussed in detail.