Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich, Balraj Singh	NDS 111,1211 (2010)	12-Apr-2010

$Q(\beta^-)=4.68\times10^3$ *7*; $S(n)=6.02\times10^3$ *10*; $S(p)=9.40\times10^3$ *syst*; $Q(\alpha)=-2.51\times10^3$ *8* 2012Wa38

Note: Current evaluation has used the following Q record $ 4690 70 *6050* syst 9160 syst −2200 syst 2009AuZZ,2007Ha57.

$Q(\beta^-)$: From 2007Ha57, total-absorption γ spectroscopy, using a BGO detector, followed by on-line isotope separation. From the evaluations of 2009AuZZ and 2003Au03, $Q(\beta^-)=4860$ *590*, from systematics.

S(n),S(p),$Q(\alpha)$: from 2009AuZZ, 2003Au03. The uncertainties, also from systematics, for these quantities are: for S(n), 590; for S(p), 710; and, for $Q(\alpha)$, 540 (2009AuZZ,2003Au03).

Additional information 1.

Eu isotope produced from p-induced fission of ^{238}U, followed by on-line isotope separation. Assignment to Eu based on observation of Gd K x-rays in the mass-163 fraction.

2007Ha57 (also 2006SaZS): source prepared by ^{238}U(p,F) at E(p)=32 MeV at JAEA facility. Fission products were ionized and separated online using Tokai-ISOL mass separator. Measured $Q(\beta^-)$ using total absorption gamma-ray spectrometer of BGO detector. Deduced mass excess=−56740 *100* (2007Ha57), value includes systematic predictions of 2003Au03. Other: mass excess=−56630 *500* (syst,2009AuZZ,2003Au03).

^{163}Eu Levels

E(level)	$T_{1/2}$	Comments
0.0	7.7 s *4*	$\%\beta^-=100$ J^π: $5/2^+$ from the systematics of the odd-mass Eu isotopes (2003Au02). $T_{1/2}$: weighted average (by the evaluators) of 7.3 s *4*, 8.0 s *8*, 10.0 s *11* and 7.9 s *11*, from the decay of the 85.8 and 191.2 γ's, measured using two different Ge detectors (2006SaZS). From a weighted average of these data, these authors report $T_{1/2}$=7.8 s *5*. $\%\beta^-$: Value assumed by the evaluators.