

$^{155}\text{Lu}$   $\alpha$  decay (68 ms) [1997Da07](#),[1996Pa01](#),[1991To08](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 110, 1 (2009)	20-Nov-2008

Parent:  $^{155}\text{Lu}$ :  $E=0$ ;  $J^\pi=11/2^-$ ;  $T_{1/2}=68$  ms  $I$ ;  $Q(\alpha)=5802.7$  26;  $\% \alpha$  decay=90 2

$^{155}\text{Lu}$ -Energy,  $J^\pi$ ,  $T_{1/2}$  and related comments are taken from A=155 evaluation ([2005Re01](#)).

$^{155}\text{Lu}$ - $T_{1/2}$ : weighted average of: 67 ms 7 ([1991To08](#)); 70 ms 6 ([1979Ho10](#)); 70 ms 2 ([1996Pa01](#)); 63 ms 2 ([1997Da07](#)); and 70 ms 6 ([1989Ho12](#)). [1991To09](#), from the same group as [1991To08](#), report  $T_{1/2}=66$  ms 7. [1996Pa01](#) report an uncertainty of 1 ms for their value, but the evaluator has increased it to 2 ms so that it will contribute no more than 50% to the weighted average.

$^{155}\text{Lu}$ - $J^\pi$ : member of a sequence, headed by  $^{167}\text{Ir}$ , of favored  $\alpha$  transitions connecting  $\pi$   $h_{11/2}$  states ([1997Da07](#)).

$^{155}\text{Lu}$ - $\% \alpha$  decay:  $\%A=90$  2 ([1997Da07](#)). Others: 81 9 ([1996Pa01](#)), 79 4 ([1979Ho10](#)).

Other major references: [1993Li34](#), [1989Ho12](#), [1979Ho10](#).

Others: [1965Ma14](#), [1981HoZM](#), [1982Du15](#).

Source produced by bombarding a number of targets in the Zr-Sn, Fe-Mo, and V-Ni region with  $^{58}\text{Ni}$ ,  $^{92}\text{Mo}$ ,  $^{107}\text{Ag}$  beams. Using a velocity filter, and implantation method with position-time correlation technique they performed isotope identification, half-life and  $\alpha$  branching ratio measurements.

$E\alpha=5655$  5 ([1996Pa01](#)), 5648 5 ([1993Li34](#)), 5648 5 ([1991To08](#)), 5647 5 ([1989Ho12](#)), 5656 6 ([1981HoZM](#)).

$T_{1/2}=70$  ms  $I$  ([1996Pa01](#)), 66 ms 7 ([1991To08](#)), 70 ms 6 ([1979Ho10](#),[1989Ho12](#)). Weighted average=70 ms  $I$ .

[Additional information 1](#).

 $^{151}\text{Tm}$  Levels

E(level)	$J^\pi$	Comments
0.0	(11/2 <sup>-</sup> )	$J^\pi$ : from 'Adopted Levels'.

 $\alpha$  radiations

$E\alpha$	E(level)	Comments
5650 3	0.0	$E\alpha$ : from weighted average of values from <a href="#">1996Pa01</a> , <a href="#">1993Li34</a> , <a href="#">1991To08</a> , and <a href="#">1989Ho12</a> .