

$^{102}\text{Nb}$   $\beta^-$  decay (1.3 s) [1976Ah06](#),[1977SeZK](#),[1985Me13](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 1745 (2009)	31-Dec-2008

Parent:  $^{102}\text{Nb}$ :  $E=0.0+x$ ;  $J^\pi=1^+$ ;  $T_{1/2}=1.3$  s 2;  $Q(\beta^-)=7210$  40;  $\% \beta^-$  decay=100.0

[1976Ah06](#): assignment by chemical separation of niobium from  $^{235}\text{U}$ ,  $^{239}\text{Pu}$ ,  $^{249}\text{Cf}(n,F)$ ; measured  $E_\gamma$ ,  $\gamma\gamma$ -coin,  $T_{1/2}$ .

[1977SeZK](#): mass separation of fission fragments; measured  $\gamma\gamma$  angular correlation.

[1985Me13](#): source is a mixture of both 1.3-s and 4.3-s mass-separated  $^{102}\text{Nb}$  fission isomers produced in  $^{235}\text{U}(n,F)$ . Measured: PAC for (296 $\gamma$ -401 $\gamma$ ) cascade. Deduced: g-factor for 296-keV level.

 $^{102}\text{Mo}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	$T_{1/2}$	Comments
0	$0^+$		
296.0 4	$2^+$	125 ps 4	$g=0.42$ 7 ( <a href="#">1985Me13</a> ) $T_{1/2}$ : from <a href="#">1991Li39</a> . g: From PAC for (296 $\gamma$ -400 $\gamma$ ) cascade.
696.6 7	$0^+$		
847.4 4	$2^+$		
1245.0 5	$(3^+)$		

<sup>†</sup> From a least-squares fit to measured gammas.

<sup>‡</sup> From Adopted Levels. The  $\gamma\gamma(\theta)$  results of [1977SeZK](#) are consistent with these values.

 $\gamma(^{102}\text{Mo})$ 

All  $\gamma$  rays show both 1.3-s and 4.3-s components, unless noted otherwise.

$\Delta E$ : Uncertainties estimated by the evaluator.

$E_\gamma$ <sup>†</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
296.0 5	296.0	$2^+$	0	$0^+$	
397.6 5	1245.0	$(3^+)$	847.4	$2^+$	No half-life could be determined for this $\gamma$ -ray. The mass assignment is based on $\gamma\gamma$ -coin measurements.
400.6 5	696.6	$0^+$	296.0	$2^+$	
551.4 5	847.4	$2^+$	296.0	$2^+$	
847.4 5	847.4	$2^+$	0	$0^+$	
949.0 5	1245.0	$(3^+)$	296.0	$2^+$	

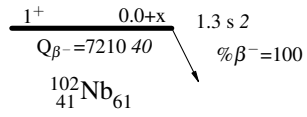
<sup>†</sup> From [1975Ah06](#).

<sup>‡</sup> Uncertainties estimated by the evaluator.

$^{102}\text{Nb} \beta^-$  decay (1.3 s) 1976Ah06,1977SeZK,1985Me13

## Decay Scheme

Legend



● Coincidence

