

$^{92}\text{Rh} \beta^+ \mathbf{p}$  decay    2012Lo08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114, 1293 (2013)	1-Sep-2013

Parent:  $^{92}\text{Rh}$ : E=0.0;  $J^\pi=(\geq 6^+)$ ;  $T_{1/2}=5.7$  s 1;  $Q(\beta^+\mathbf{p})=5698$  5; % $\beta^+\mathbf{p}$  decay=1.9 1

$^{92}\text{Rh}$ -Q( $\beta^+\mathbf{p}$ ): From 2012Wa38.

$^{92}\text{Rh}$ - $T_{1/2}$ : Measured by 2012Lo08; from decay curves of time correlations between implantations and decay radiation, fitted with Poisson distribution using log-likelihood function with consideration of decay of parent, daughter and grand-daughter. This differs from 4.66 s 25 (2004De40; from time behavior of  $163\gamma$ ,  $340\gamma$ ,  $818\gamma$  and  $919\gamma$  In  $^{92}\text{Ru}$  following  $^{92}\text{Rh}$   $\varepsilon$  decay) and 3.0 s 8 (2001Xu05, 2005Xu04) from  $893\gamma(t)$  following  $\varepsilon\mathbf{p}$  decay, requiring  $893\gamma$ -(2.4-5.0 MeV) $\mathbf{P}$  coin), but is consistent with 5.6 s 5 (2001Ki13) and 5.6 s 3 (2002Ku21); from time-to-digital converter spectrum gated by  $817\gamma$ ,  $865\gamma$  and  $990\gamma$  In  $^{92}\text{Ru}$ ).

$^{92}\text{Rh}$ -J $^\pi$ : From  $^{92}\text{Rh}$  Adopted Levels.

$^{92}\text{Rh}$ -% $\beta^+\mathbf{p}$  decay: % $\beta^+\mathbf{p}$ =1.9 1 (2012Lo08).

$^{92}\text{Rh}$  produced by fragmentation of a 120 MeV/nucleon  $^{112}\text{Sn}$  beam by a 195 mg/cm<sup>2</sup>  $^9\text{Be}$  target at the National Superconducting Cyclotron Laboratory (NSCL); fragments separated by the A1900 Fragment Separator operated In achromatic mode and the Radio Frequency Fragment Separator (RFFS); Kapton wedge At intermediate image of A1900 selected Z; magnetic- and velocity-purified beam traversed 3 Si PIN detectors prior to implantation In double-sided Si strip detector segmented into 1600 pixels; 6 single-sided Si strip detectors and planar Ge detector served As  $\beta$  calorimeter (for  $E\beta\leq 14$  MeV); SeGA segmented Ge array (16 HPGe detectors) arranged In concentric rings, one upstream and one downstream of double-sided Si strip detectors (FWHM 2.5-2.8 keV). Measured  $E\gamma$ ,  $I\gamma$ ,  $\beta$  spectra,  $E(p)$ ,  $I(p)$ ,  $\beta\gamma$ -coin,  $\beta\mathbf{p}$ -coin (1800 events),  $\gamma\beta\mathbf{p}$ -coin, half-life,  $\beta$ -delayed proton emission probability.

No evidence was found for a 2 $^+$  isomer in  $^{92}\text{Rh}$  (2012Lo08).

2012Lo08 do not provide a decay scheme; the scheme given here was constructed by the evaluator in accord with Adopted Levels, Gammas.

 $^{91}\text{Tc}$  Levels

$E(\text{level})^\dagger$	$J^\pi \ddagger$
0.0	(9/2) $^+$
394.4 2	(7/2) $^+$
893.1 2	(13/2 $^+$ )
1097.5 5	(11/2 $^+$ )

$^\dagger$  From  $E\gamma$  (2012Lo08).

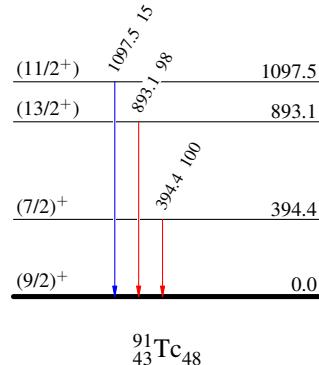
$^\ddagger$  From Adopted Levels.

 $\gamma(^{91}\text{Tc})$ 

$E_\gamma$	$I_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
394.4 2	100 20	394.4	(7/2) $^+$	0.0	(9/2) $^+$	$\gamma$ -gated $T_{1/2}=4$ s 1 (2012Lo08).
893.1 2	98 20	893.1	(13/2 $^+$ )	0.0	(9/2) $^+$	$\gamma$ -gated $T_{1/2}=5$ s 1 (2012Lo08).
1097.5 5	15 10	1097.5	(11/2 $^+$ )	0.0	(9/2) $^+$	

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## Legend

Intensities: Relative  $I_\gamma$  $^{91}_{43}\text{Tc}_{48}$