

<sup>95</sup>Mo( $\alpha,2n\gamma$ ) 1976BrYE,1978HsZY

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 111, 525 (2010)	19-Nov-2009

Unless otherwise noted, all information is taken from the tentative level scheme proposed by 1976BrYE.

<sup>97</sup>Ru Levels

1976BrYE: E( $\alpha$ )=17-30 MeV; measured E $\gamma$ ,  $\gamma\gamma$ ,  $\gamma(\theta)$ , excit.

1978HsZY: unpublished work, quoted in 1980Bu01 (same authors as in 1976BrYE).

1979HeZQ: measured  $\gamma(t)$ .

1982Di18: E( $\alpha$ )=26 MeV; measured g-factor by the time differential perturbed angular distribution method.

E(level)	J $^{\pi}$ <sup>†</sup>	T <sub>1/2</sub>	Comments
0.0	5/2 <sup>+</sup>		
189.4	5/2 <sup>+</sup>		J $^{\pi}$ : adopted value J $^{\pi}$ =3/2 <sup>+</sup> .
421.5	7/2 <sup>+</sup>		
810.9 <sup>‡</sup>	7/2 <sup>+</sup>		
840.5	7/2 <sup>+</sup>		
879.1	9/2 <sup>+</sup>		
1199.3	11/2 <sup>+</sup>		
1595.9	11/2		
1619.7	11/2 <sup>+</sup>		
1651.5 <sup>‡</sup>	9/2 <sup>+</sup>		
1826.6	13/2 <sup>+</sup>		
1845.9	15/2 <sup>+</sup>		
1879.7	11/2		
1953.9 <sup>‡</sup>	11/2 <sup>+</sup> , (15/2 <sup>+</sup> )		
2269.3 <sup>‡</sup>	15/2		
2545.7	17/2 <sup>+</sup>		
2599.6	17/2 <sup>+</sup>		
2697.9 <sup>‡</sup>	15/2 <sup>+</sup>		
2739.4	21/2 <sup>+</sup>	7.8 ns 2	g: 0.88 8; consistent with Configuration= $((\pi g_{9/2}8^+)(\nu d_{5/2})$ ) (1982Di18). T <sub>1/2</sub> : from 1979HeZQ.
2759.6	19/2 <sup>+</sup>		
3048.5 <sup>‡</sup>	15/2 <sup>+</sup> , 17/2 <sup>+</sup>		
3400.7 <sup>‡</sup>	19/2 <sup>+</sup> , (15/2 <sup>+</sup> )		
3481.7	21/2 <sup>+</sup>		
3671.4	25/2 <sup>+</sup>		
4264.7	27/2 <sup>+</sup> , 29/2 <sup>+</sup>		

<sup>†</sup> Spin assignments proposed by 1976BrYE (can Be different from J $^{\pi}$ 's In Adopted Levels, Gammas dataset).

<sup>‡</sup> Not included in Adopted Levels.

$\gamma(^{97}\text{Ru})$

E $\gamma$ <sup>†</sup>	E <sub>i</sub> (level)	J <sub>i</sub> $^{\pi}$	E <sub>f</sub>	J <sub>f</sub> $^{\pi}$	Mult. <sup>‡</sup>	$\delta$ <sup>‡</sup>
189.4	189.4	5/2 <sup>+</sup>	0.0	5/2 <sup>+</sup>	M1+E2	0.96
193.7	2739.4	21/2 <sup>+</sup>	2545.7	17/2 <sup>+</sup>	E2	
320.1	1199.3	11/2 <sup>+</sup>	879.1	9/2 <sup>+</sup>	M1+E2	0.13
389.3 <sup>#</sup>	810.9	7/2 <sup>+</sup>	421.5	7/2 <sup>+</sup>		

Continued on next page (footnotes at end of table)

$^{95}\text{Mo}(\alpha,2n\gamma)$  **1976BrYE,1978HsZY** (continued) $\gamma(^{97}\text{Ru})$  (continued)

$E_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>‡</sup>	$\delta^\ddagger$
421.6	421.5	7/2 <sup>+</sup>	0.0	5/2 <sup>+</sup>	M1	
457.4	879.1	9/2 <sup>+</sup>	421.5	7/2 <sup>+</sup>	M1+E2	0.27
593.3	4264.7	27/2 <sup>+</sup> ,29/2 <sup>+</sup>	3671.4	25/2 <sup>+</sup>		
646.4	1845.9	15/2 <sup>+</sup>	1199.3	11/2 <sup>+</sup>	E2	
673.4	2269.3	15/2	1595.9	11/2		
699.8	2545.7	17/2 <sup>+</sup>	1845.9	15/2 <sup>+</sup>	M1+E2	0.16
702.8	3400.7	19/2 <sup>+</sup> , (15/2 <sup>+</sup> )	2697.9	15/2 <sup>+</sup>		
716.8	1595.9	11/2	879.1	9/2 <sup>+</sup>		
754.5	1953.9	11/2 <sup>+</sup> , (15/2 <sup>+</sup> )	1199.3	11/2 <sup>+</sup>		
773.0	2599.6	17/2 <sup>+</sup>	1826.6	13/2 <sup>+</sup>		
777.7	1199.3	11/2 <sup>+</sup>	421.5	7/2 <sup>+</sup>	E2	
840.5	840.5	7/2 <sup>+</sup>	0.0	5/2 <sup>+</sup>		
871.3	2697.9	15/2 <sup>+</sup>	1826.6	13/2 <sup>+</sup>		
879.1	879.1	9/2 <sup>+</sup>	0.0	5/2 <sup>+</sup>	E2	
882.1	3481.7	21/2 <sup>+</sup>	2599.6	17/2 <sup>+</sup>		
913.7	2759.6	19/2 <sup>+</sup>	1845.9	15/2 <sup>+</sup>		
932.0	3671.4	25/2 <sup>+</sup>	2739.4	21/2 <sup>+</sup>		
947.4	1826.6	13/2 <sup>+</sup>	879.1	9/2 <sup>+</sup>		
1000.5	1879.7	11/2	879.1	9/2 <sup>+</sup>		
1198.1	1619.7	11/2 <sup>+</sup>	421.5	7/2 <sup>+</sup>		
1202.6	3048.5	15/2 <sup>+</sup> , 17/2 <sup>+</sup>	1845.9	15/2 <sup>+</sup>		
1229.9	1651.5	9/2 <sup>+</sup>	421.5	7/2 <sup>+</sup>		

<sup>†</sup> From 1976BrYE.

<sup>‡</sup> From 1978HsZY ( $\delta^2$  quoted, sign not given).

# Placement of transition in the level scheme is uncertain.

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Legend

## Level Scheme

-----▶  $\gamma$  Decay (Uncertain)