

$^{89}\text{Y}(^3\text{He,t})$ 1975Gr11

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 114, 1 (2013)	20-Oct-2012

$J^\pi(^{89}\text{Y g.s. target})=1/2^-$.

1975Gr11: E=25 MeV. Measured $\sigma(\theta)$, DWBA analysis, FWHM=38 keV.

Others:

1971Hi11: E=33 MeV. Measured $\sigma(\theta)$, FWHM=30 keV, DWBA analysis of seven groups at 0, 590, 1450, 1510, 1740, 1870 and 8000.

1983El05 (also 1983Ga15): E=0.6, 1.2, 2 GeV. Measured $\sigma(\theta)$, deduced isobar resonance effects and spin-isospin excitations. At 2

GeV, a strong excitation of Δ resonance is observed while low-excitation-energy regions are dominated by spin-isospin excitations.

Additional information 1.

 ^{89}Zr Levels

E(level)	$J^\pi^\dagger$	L	Comments
0	$9/2^+$	3	
592 4	$1/2^-$	2	1975Gr11 conclude that this state is not a pure antianalog state (as concluded from L=1 by 1971Hi11), since with L=2, this population of this state in $(^3\text{He,t})$ involves spin-flip (S=1) through configuration= $(\pi g_{9/2} \otimes \nu g_{9/2}^{-1})_{1+} \otimes \pi p_{1/2}$. Dominant configuration= $(\pi g_{9/2}^2)_{0+} \otimes \nu p_{1/2}^{-1}$.
1100 4		2	
1456 6		2	
1518 6		3	Identified (1971Hi11) as antianalog state of 910, $9/2^+$ in ^{89}Y .
1605 17			
1746 9		2	L: 1 (1971Hi11).
1868 6		2	
2112 12			
2152 12		4	
2226 7		4	
2297 8		4	
2493 11			
2585 11			
2615 7		(6)	
2736 9		4	
2784 15		3	
2820 9		4	
2906 9			
2932 9		3	
3023 7			
3049 7		4	
3106 4		2	
3144 19			
3214 13		4	
3266 10			
3524 10			
8000	$1/2^-$	0	E(level),L: from 1971Hi11, identified as IAS of $^{89}\text{Y g.s.}$.

† From Adopted Levels.