^{124}Te(^{3}He,d) 1977Li10,1979Sz05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112, 495 (2011)	1-Jan-2010

1977Li10: E=24 MeV, split-pole magnetic spectrograph, FWHM=25 keV, enriched target on a carbon foil, ΔE(level)=2-10 keV.
1979Sz05: E=36 MeV, Q3D magnetic spectrograph, position-sensitive proportional counter, (E)(ΔE), FWHM=13 keV, enriched target, deduced L-values from $\sigma(\theta)$ and $\sigma(^3He,d)/\sigma(\alpha,t)$.
1977Sz01: E=19.52 MeV, semi (E)(ΔE) counter telescope, FWHM=35 keV, enriched target on a carbon foil.

^{125}I Levels

E(level)[†]	L[‡]	(2J+1)C^{2}S[#]	Comments
0.0	2	2.6	
111 *3*	4	4.0	
187 *3*	2	0.30	
243 *3*	0	0.35	
371 *3*	2	0.20	
1005 *3*	2	0.96	
1066 *3*	2	1.3	
1087 *3*	(0)+(5)		(2J+1)C^{2}S: 0.30 if 3s1/2 for L=0 component; 3.3 if 1h11/2 for L=5 component.
1150 *5*			
1198 *3*	2	0.37	
1254 *5*	4		E(level): Doublet (1977Li10). L: From 1979Sz05.
1289 *3*			
1337 *3*	2	0.47	
1381 *3*	2+(0)		L: From 1979Sz05; L=(0)+(2) (1977Li10). (2J+1)C^{2}S: 0.24 if 3s1/2 for L=0 component; 0.48 if 2d3/2 for L=2 component.
1439 *3*			L: L=2 (1977Li10); L=2+(0) (1979Sz05). (2J+1)C^{2}S: 0.30 (1977Li10); <0.080 (1979Sz05).
1481 *3*			
1512 *3*			
1543 *5*			
1580 *5*	(0)		L: From 1979Sz05.
1610 *5*	(0)		L: From 1979Sz05.
1663 *5*	2	0.20	
1690 *5*	0	0.13	
1735 *5*	4		L: From 1979Sz05.
1779 *5*			L: L=0 (1977Li10); L=2 (1979Sz05). (2J+1)C^{2}S: 0.07 (1977Li10); 0.16 if 2d5/2, 0.32 if 2d3/2 (1979Sz05).
1827 *8*			L: L=2 (1977Li10); L=4+(2) (1979Sz05). (2J+1)C^{2}S: 0.18 if 2d3/2, 0.14 if 2d5/2 (1977Li10).
1916 *5*	0	0.20	
1939 *5*	2		(2J+1)C^{2}S: 0.60 if 2d3/2, 0.45 if 2d5/2.
1978 *5*	2		(2J+1)C^{2}S: 0.10 if 2d3/2, 0.07 if 2d5/2.
2031 *5*	2		(2J+1)C^{2}S: 0.12 if 2d3/2, 0.09 if 2d5/2.
2069 *5*	0	0.03	
2142 *5*	0	0.07	
2183 *5*	0	0.07	
2231 *5*	(2)		(2J+1)C^{2}S: 0.25 if 2d3/2, 0.18 if 2d5/2.
2302 *5*	(2)		(2J+1)C^{2}S: 0.09 if 2d3/2, 0.07 if 2d5/2.
2354 *5*	(2)		(2J+1)C^{2}S: 0.10 if 2d3/2, 0.07 if 2d5/2.
2399 *5*	0	0.03	
2438 *5*	2		(2J+1)C^{2}S: 0.07 if 2d3/2, 0.05 if 2d5/2.
2472 *5*	0	0.03	
2517 *8*	2		(2J+1)C^{2}S: 0.12 if 2d3/2, 0.09 if 2d5/2.

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^{124}Te(^{3}He,d) 1977Li10,1979Sz05 (continued)

^{125}I Levels (continued)

E(level)[†]	L[‡]	(2J+1)C^{2}S[#]	Comments
2553 *8*	(2)		(2J+1)C^{2}S: 0.16 if 2d3/2, 0.12 if 2d5/2.
2589 *8*			
2654 *5*	0	0.08	
2694 *8*	0	0.04	
2731 *8*	2		(2J+1)C^{2}S: 0.34 if 2d3/2, 0.25 if 2d5/2.
2796 *8*			
2838 *8*			
2884 *8*			
2932 *8*	0	0.05	
2982 *8*	0	0.14	
3026 *8*			
3060 *8*	0	0.06	
3100 *8*			
3149 *8*	0	0.05	
3195 *10*			
3241 *10*			
3284 *10*			
3312 *10*			
3343 *10*			
3375 *10*			
3413 *10*			
3447 *10*			
3474 *10*			
3500 *10*			
3547 *10*			
3585 *10*	0	0.03	
3621 *10*	0	0.03	
3654 *10*			
3685 *10*			
3728 *10*	0	0.03	
3768 *10*			
3800 *10*			
3829 *10*	0	0.04	
3859 *10*	0	0.03	
3894 *10*	0	0.03	
3930 *10*			
3964 *10*			
4006 *10*			
4042 *10*			
4082 *10*			

[†] From 1977Li10. The authors state that the uncertainties are 2-3 keV for strong levels, increasing to 10 keV for weak levels.

[‡] From 1977Li10, unless otherwise noted; assignments for L=0, 4, 5 are 3s1/2, 1g7/2, 1h11/2, respectively, from shell model; L=2 states are assigned to 2d3/2 (187 keV, 1005 keV, 1439 keV) or 2d5/2 shell model states.

[#] From DWBA; uncertainties ≈15% (1977Li10).