^{126}Te(^{3}He,d),(α,t) 1979Sz05

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. Hashizume	NDS 112, 1647 (2011)	1-Oct-2009

1979Sz05: E(^{3}He)=36 MeV, FWHM=13 MeV, θ=3°−32°.
1979Sz05: E(α)=36 MeV, FWHM=8 keV, θ=12°, 15°.
Other: 1968Au01 E(^{3}He)=25 MeV; magnetic spectrograph, FWHM≈25 keV; enriched target 98-99%.

For both reactions: Q3D magnetic spectrograph, three-wire (ΔE, E, veto) position-sensitive proportional counter; enriched target 95-99%

^{127}I Levels

E(level)[†]	L[@]	S[&]	Comments
0.0	2	1.00	S: if $2d_{5/2}$.
58 *4*	4	1.95	S: av of 1.93 (α,t) and 1.96 (^{3}He,d).
204 *4*	2	0.15	S: av of 0.13 (α,t) and 0.17 (^{3}He,d).
295[‡] *4*			
378 *4*	0	0.41	S: av of 0.21 (α,t) and 0.60 (^{3}He,d).
421 *4*	2	0.20	S: if $2d_{5/2}$, av of 0.19 (α,t) and 0.20 (^{3}He,d).
473[‡] *4*			
632[‡] *4*	(4)	0.04	
745[‡] *4*			
831[‡] *4*			
883[‡] *4*			
993 *4*	2	0.62	S: other: 0.31 if $2d_{5/2}$.
1046 *6*	4	0.25	S: av of 0.23 (α,t) and 0.26 (^{3}He,d).
1097 *6*	2	0.58	S: if $2d_{5/2}$, value is av 0.60 (α,t) and 0.55 (^{3}He,d). Other: if $2d_{3/2}$, 1.20 (α,t) and 1.10 (^{3}He,d).
1125 *6*	0	0.22	S: av of 0.24 (α,t) and 0.20 (^{3}He,d).
1235 *6*	5	1.54	S: av of 1.40 (α,t) and 1.68 in (^{3}He,d).
1274 *6*	4	0.44	S: av 0.45 (α,t) and 0.43 (^{3}He,d).
1319[‡] *6*	(4)	0.01	
1342[‡] *6*	(4)	0.02	
1375[‡] *6*			
1402 *6*	2	0.36	S: av of 0.38 (α,t) and 0.34 (^{3}He,d); if $2d_{5/2}$, 0.19 (α,t) and 0.17 (^{3}He,d).
1441 *6*	2+0	0.24	S: av of 0.24 (α,t): 0.28 (^{3}He,d) for L=2 component; 0.25 for L=0 component (^{3}He,d).
1507[#] *6*	2	0.01	S: if $2d_{5/2}$.
1555 *6*	2+(0)	0.11	S: av of 0.10 (α,t) and 0.12 (^{3}He,d) if $2d_{5/2}$ for L=2 component; 0.23 for L=0 component (^{3}He,d).
1569[‡] *6*	4	0.02	
1657 *6*	2	0.14	S: from (α,t).
1696[‡] *6*			
1719[‡] *6*			
1792 *8*	(0)	0.18	S: av 0f 0.20 (α,t) and 0.15 (^{3}He,d).
1836[#] *8*			
1864 *8*	(2)	0.05	S: av of 0.05 (α,t) and 0.07 (^{3}He,d).
1873[#] *8*			
1886 *8*	2	0.14	S: av of 0.14 (α,t) and 0.10 (^{3}He,d).
1913 *8*	(0)	0.15	S: from (^{3}He,d).
1978[#] *8*			
2060[#] *8*			

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^{126}Te(^{3}He,d),(α,t) 1979Sz05 (continued)

^{127}I Levels (continued)

E(level)[†]	L[@]	S[&]	Comments
2136 *8*	(2)	0.07	S: av of 0.08 (α,t) and 0.06 (^{3}He,d).
2168 *8*	2	0.05	S: from (^{3}He,d).
2233[‡] *8*			
2256[‡] *8*			
2318[#] *8*			
2359[#] *8*			
2406[#] *8*			
2431[#] *8*			
2456[#] *8*			
2496[#] *8*			
2524[#] *8*			
2611[#] *8*			
2641[#] *8*			
2689[#] *8*			
2735[#] *8*			
2752[#] *8*			
2792[#] *8*			
2816[#] *8*			
2849[#] *8*			
2894[#] *8*			
2947[#] *8*			
2997[#] *8*			
3010[#] *8*			
3102[#] *8*			
3126[#] *8*			
3218[#] *8*			
3283[#] *8*			
3335[#] *8*			
3372[#] *8*			
3404[#] *8*			

[†] Av of (α,t) and (^{3}He,d), except as noted.
[‡] Not observed in (^{3}He,α).
[#] From (^{3}He,d), not observed in (α,t).
[@] Deduced from $\sigma(\theta)$ and $\sigma(^{3}\text{He,d})/\sigma(\alpha,t)$.
[&] C^2S. Values are av of (α,t) and (^{3}He,d), and are relative to C^2S(g.s.)=1.00. Authors assumed $3s_{1/2}$ for L=0, $2d_{3/2}$ for L=2, $1g_{7/2}$ for L=4, and $1h_{11/2}$ for L=5, unless otherwise noted.