

¹²⁸Te(p,t) 2010BIZY,1971SeZE

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	H. Iimura, J. Katakura, S. Ohya		NDS 180, 1 (2022)	1-Oct-2021

2010BIZY,2010BI06: E=23 MeV, 99.2% enriched target. Measured triton spectra and σ using the Yale split-pole magnetic spectrograph and a gas-filled focal plane detector. FWHM \approx 30 keV. Uncertainty of \pm 4 keV from one of the authors (B. Kay (priv. com.).

1971SeZE: E=17 MeV, enriched target, Enge split-pole spectrometer, $\Delta E=10-15$ keV.

1974Ma22,1976Ma21: E=51.9 MeV, enriched metallic target, broad-range magnetic spectrometer.

¹²⁶Te Levels

Normalized strength=cross section corrected for DWBA-dependence and normalized to the g.s. transition in ¹³⁰Te (2010BI06).

E(level) [†] #	L ^a	d σ /d Ω (mb/sr) ^{&}	Comments
0	0	4.21	Normalized strength=1.21 (2010BI06). $\sigma(5^\circ)/\sigma(17^\circ)=90$.
659 4		0.09	E(level): deviates by 7 keV from the adopted value of 666.3.
1361 4		0.005	
1420 4		0.02	
1780 [‡]			
1870 4	0	0.06	Normalized strength=0.02 (2010BI06). $\sigma(5^\circ)/\sigma(17^\circ)=20$.
2011@ 4		0.02	
2049@ 4		0.006	
2183@ 4		0.04	
2190 [‡]			
2217@ 4	5	0.04	
2312 4		0.03	
2391@ 4	3	0.09	
2420@ 4		0.16	E(level),d σ /d Ω (mb/sr): unresolved from 2391 group, but cross section could be extracted at 5° by line-fitting procedure.
2500 4	7	0.02	
2510 [‡]			
2538 4		0.02	
2582 4		0.15	Normalized strength=0.04 (2010BI06). $\sigma(5^\circ)/\sigma(17^\circ)=21$. J^π : Angular distribution in 2010BIZY suggests dominance by L=0 transirion. E(level),d σ /d Ω (mb/sr): Three states at 2577.8, 2578.5 and 2585.5 keV could contribute to d σ /d Ω (mb/sr).
2642 4		0.02	
2680 [‡]			
2745 4		0.03	E(level),d σ /d Ω (mb/sr): Probably several unresolved states, such as states at 2731.1 and 2765.8 keV may contribute to d σ /d Ω (mb/sr).
2770 [‡]			
2798 4		0.03	E(level),d σ /d Ω (mb/sr): Probably several unresolved states, such as states at 2782.7, 2811.6 and 2812.89 keV may contribute to d σ /d Ω (mb/sr).
2820 [‡]			
2850 [‡]			
2882 4		0.01	E(level),d σ /d Ω (mb/sr): may include the state at 2897.9 keV.
2910 [‡]			
2937 4		0.02	E(level): may correspond to the state at 2929.5 keV.

Continued on next page (footnotes at end of table)

$^{128}\text{Te}(\text{p,t})$ 2010BIZY,1971SeZE (continued) ^{126}Te Levels (continued)

<u>E(level)^{†#}</u>	<u>dσ/dΩ (mb/sr)^{&}</u>	<u>Comments</u>
2960 [‡]		
2970 [‡]		
3004 4	0.03	E(level),dσ/dΩ (mb/sr): probably several unresolved states, such as states at 2995.9, 2999.4 and 3015.58 keV may contribute to dσ/dΩ (mb/sr).
3020 [‡]		
3042 4	0.02	
3090 [‡]		
3140 [‡]		
3150 [‡]		
3200 [‡]		
3230 [‡]		
3250 [‡]		
3270 [‡]		
3330 [‡]		
3350 [‡]		

[†] From 2010BIZY measured at 5° unless otherwise noted.

[‡] From 1971SeZE.

[#] Measured values in 2010BIZY at 5°. Uncertainty of ±4 keV from e-mail reply of June 22, 2010 from one of the authors (B. Kay) of 2010BI06.

[@] 2011+2049, 2183+2217 and 2391+2420 form unresolved peaks.

[&] from 2010BIZY. The values are at 5°, corresponding cross sections at other angles are given above in a table. Statistical uncertainty is >10% for cross sections ≤0.06 mb/sr. For higher cross sections, statistical uncertainties are not significant. Systematic uncertainty=7%. Angular distribution measurements are reported in 2010BI06, 2010BIZY.

^a From 1976Ma21 and 1971SeZE.