

$^{130}\text{Te}(\gamma, \gamma')$ **1969Sc13, 1997Sc15, 1974Wo05**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93, 33 (2001)	11-May-2001

1969Sc13 (also **1970Sc27**): $E_\gamma=7538$ keV, Ni(n, γ) source, natural Te target.

1969ScZX (same group as **1969Sc13**): $E_\gamma=7637$ keV, Cu(n, γ) source.

1997Sc15 (also **1997Sc25**): $E_\gamma(\text{max})=5500$ keV. Measured E_γ , $I_\gamma(\theta)$. γ rays measured with EUROBALL cluster (seven HPGe detectors) at 130° relative to the beam direction and a single HPGe detector at 90° .

1974Wo05: $E_\gamma=7637$ keV, Cu(n, γ) source, enriched Te target.

 ^{130}Te Levels

E(level) [†]	J^π [‡]	Comments
0.0	0^+	
840		
1588		
1888		
1967		
2194		
2606		
2688.7 2	1	
2743.5 [#] 2	1	
3567.7 [#] 3	(1,2)	
4531.6 [#] 4	(1,2)	
7538	1	$\Gamma_\gamma=0.24$ eV 6, $\Gamma_{\gamma 0}=0.05$ eV 1 (1970Sc27).
7637	1^-	E(level): from 1969ScZX . $\Gamma_\gamma=0.06$ eV 3, $\Gamma_{\gamma 0}=0.03$ eV 1 (1974Wo05). $\Gamma_{\gamma 0}/\Gamma_\gamma=0.45$ 10 (1974Wo05), 0.41 7 (1969ScZX). J^π : from $\gamma(\theta)$ and $\gamma(\text{lin pol})$ (1974Wo05).

[†] From least-squares adjustment to E_γ 's.

[‡] From $\gamma(\theta)$ for excited states.

[#] From **1997Sc15**.

 $\gamma(^{130}\text{Te})$

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
748		1588		840		
840		840		0.0	0^+	
1849 ^{bc}		2688.7	1	840		$I_\gamma(1849)/I_\gamma(2689)=<0.5$ (1997Sc15).
1903 ^{bc}		2743.5	1	840		$I_\gamma(1903)/I_\gamma(2743)=<0.4$ (1997Sc15).
2688.6 ^b 2		2688.7	1	0.0	0^+	
2728 ^{bc}		3567.7	(1,2)	840		$I_\gamma(2728)/I_\gamma(3568)=<0.25$ (1997Sc15).
2743.4 ^b 2		2743.5	1	0.0	0^+	
3567.6 ^b 3		3567.7	(1,2)	0.0	0^+	
3691 ^{bc}		4531.6	(1,2)	840		$I_\gamma(3691)/I_\gamma(4531)=<0.1$ (1997Sc15).
^x 4192 6	12 4					
4531.4 ^b 4		4531.6	(1,2)	0.0	0^+	
^x 4656 6	9 4					
4856 6	14 5	7538	1	2688.7	1	
4932 6	14 5	7538	1	2606		
5344 6	18 4	7538	1	2194		

Continued on next page (footnotes at end of table)

$^{130}\text{Te}(\gamma, \gamma')$ **1969Sc13, 1997Sc15, 1974Wo05** (continued) $\gamma(^{130}\text{Te})$ (continued)

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
^x 5486 6	6 2						
5571 6	14 3	7538	1	1967			
5650 6	13 3	7538	1	1888			
^x 5719 6	5 2						
5749 ^a		7637	1 ⁻	1888			
5950 6	125 20	7538	1	1588		D	
^x 6010 6	7 2						E_γ : 6012 in $E_\gamma=7637$ (1969ScZX).
6049 ^a		7637	1 ⁻	1588			
^x 6108 ^{#&} 6	12 3						
^x 6314 6	6 2						
6698 6	113 10	7538	1	840		D	
6797 ^a		7637	1 ⁻	840			
^x 6838 [@] 6	38 5					D	
^x 7015 [#] 6	2 1						
7538 6	100	7538	1	0.0 0 ⁺		D	
7637 ^a		7637	1 ⁻	0.0 0 ⁺		E1	$A_2=0.48$ 4, polarization asymmetry=1.12 4 (1974Wo05).
^x 8535 [@] 6	51 5					D	

[†] From 1969Sc13, unless otherwise stated.[‡] From $\gamma(\theta)$.

Complex peak.

[@] Resonance level. Assignment to the specific Te isotope is unknown.

& Probable resonance level.

^a From 1969ScZX.^b From 1997Sc15.^c Placement of transition in the level scheme is uncertain.^x γ ray not placed in level scheme.

