

$^{126}\text{Te}(\alpha, n\gamma)$ **1988Zh10, 1981He04, 1979Ir01**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh		NDS 121, 143 (2014)	31-May-2014

1988Zh10: $^{126}\text{Te}(\alpha, n\gamma)$ E=16 MeV, Ge, $\gamma\gamma$ -coin, excit.

1983Lo08: $^{126}\text{Te}(\alpha, n\gamma)$ E=16.2 MeV, Ge, $\gamma(\theta)$.

1981He04: $^{126}\text{Te}(\alpha, n\gamma)$ E=18 MeV, $^{130}\text{Te}(^3\text{He}, 4n\gamma)$ E=24-27 MeV, Ge, ce, $\gamma(\theta)$, $\gamma\gamma$ -coin.

1979Ir01: $^{126}\text{Te}(\alpha, n\gamma)$ E=18 MeV, Ge, $\gamma(\theta)$, $\gamma(\text{linear pol})$.

1978Pa09: $^{126}\text{Te}(\alpha, n\gamma)$ E=16 MeV, Ge.

1970Re01: $^{128}\text{Te}(\alpha, 3n\gamma)$ E=28-43 MeV, Ge, $\gamma(\theta)$.

Evaluators adopt the level scheme from **1988Zh10**, although it is a short note. Authors reported that they found As many As 180 transitions connecting 110 levels, but showed only a part of level scheme without values for I γ and ΔE In E γ . They also showed several band structures giving No detailed discussions. Evaluators consider the level scheme As tentative.

 ^{129}Xe Levels

E(level) [†]	J π [‡]	T _{1/2} [#]	Comments
0.0 [@]	1/2 ⁺		
39.6 ^a 2	3/2 ⁺	0.97 ns 2	
236.14 ^c 3	11/2 ⁻	8.88 d 2	%IT=100
274.28 ^d 19	(9/2 ⁻)		
318.179 ^e 2	3/2 ⁺	67.5 ps 20	
321.711 ^{&} 5	5/2 ⁺	44.0 ps 19	J π : 5/2 ⁺ from $\gamma(\theta)$ and linear polarization.
411.496 2	1/2 ⁺	81 ps 26	
442.20 15	(5/2 ⁺)		
518.7 ^a 2	7/2 ⁺		
525.3 3	(5/2 ⁺)		
572.7 [@] 2	5/2 ⁺	2.0 ps 2	
588.8 2	3/2 ⁺	≤65 ps	J π : 3/2, 5/2 from $\gamma(\theta)$ (1979Ir01).
665.5 ^b 2	7/2 ⁺		
693.0 3	(5/2)		
771.1 4	13/2 ⁻		
822.2 ^{&} 2	9/2 ⁺		
823.1 3	(3/2 ⁺)		
823.3 ^c 4	15/2 ⁻		
868.2 ^e 2	7/2 ⁺		
909.9 3	7/2, 9/2, 11/2		
1022.3 4	7/2 ⁺		
1032.0 ^d 3	(13/2 ⁻)		
1059.6 3	9/2 ⁺		
1089.5 ^a 2	11/2 ⁺		J π : 7/2 ⁺ , 11/2 ⁺ , 13/2 from $\gamma(\theta)$ and linear polarization.
1194.5 3	(9/2, 11/2)		E(level): from Adopted Levels.
1194.6 [@] 3	(9/2)		E(level): from Adopted Levels.
1197.7 3			
1229.9 4	(7/2 ⁺)		E(level): from 1978Pa09 .
			J π : from $\gamma(\theta)$ and linear polarization (1979Ir01).
1241.2 3	(5/2)		
1336.5 ^b 3	(11/2)		
1395.5 6	15/2 ⁻		
1414.3 ^{&} 3	13/2 ⁺		
1430.5 3	(9/2, 11/2)		
1497.2 ^e 3	(11/2)		
1507.2 4	17/2 ⁻		

Continued on next page (footnotes at end of table)

$^{126}\text{Te}(\alpha, n\gamma)$ [1988Zh10](#), [1981He04](#), [1979Ir01](#) (continued) ^{129}Xe Levels (continued)

E(level) [†]	J ^{π‡}	Comments
1539.4 ³	(13/2, 15/2)	
1576.0 ^{c 4}	19/2 ⁻	
1748.7 ³		
1755.3 ³		
1762.5 ^{a 3}	(15/2) ⁺	
1816.0 ^{d 5}	(17/2, 15/2)	
1888.5? ³		E(level): E(level)=1886.5 is given in 1988Zh10 . Corrected by the evaluators assuming E _γ =694.0 from the level as correct.
1972.2 ⁵	17/2 ⁻	
2036.2 ³	(15/2, 13/2)	
2048.6 ^{b 3}	(15/2)	
2064.7 ^{& 4}	17/2 ⁺	
2172.0 ³		
2180.0 ⁵	19/2 ⁻	
2293.1 ⁵	21/2 ⁻	
2307.4 ³		
2433.5 ^{a 3}		
2446.3 ^{c 5}	(23/2) ⁻	
2586.3 ⁵	(23/2) ⁻	E(level): from 1981He04 .

[†] From Adopted Levels.[‡] For band structure, assignments are from side feeding excitation functions and their slopes ([1988Zh10](#)). Positive-parity bands are described by core plus quasiparticle model and negative-parity bands are reproduced by triaxial-rotor model ([1981He04](#)).

From Adopted Levels.

@ Band(A): $\nu s_{1/2}, \alpha = +1/2$.& Band(B): $\nu d_{3/2}, \alpha = +1/2$.^a Band(C): $\nu d_{3/2}, \alpha = -1/2$.^b Band(D): $\nu g_{7/2}, \alpha = -1/2$.^c Band(E): $\nu h_{11/2}, \alpha = -1/2$. Possible projection=j In triaxial-rotor model.^d Band(F): $\nu h_{11/2}, \alpha = +1/2$. Possible projection=j-1 In triaxial-rotor model.^e Band(G): $\nu d_{5/2}$.

$\gamma(^{129}\text{Xe})$									
E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.#	δ @	α &	Comments
(38.1)		274.28	(9/2 ⁻)	236.14	11/2 ⁻				E_γ : γ not observed. Expected from systematics of odd Xe nuclei.
(39.6 2)		39.6	3/2 ⁺	0.0	1/2 ⁺				E_γ : γ not observed. Deduced from E_γ differences deexciting 318.2 and 321.8 levels.
146.8 3	1.2 4	665.5	7/2 ⁺	518.7	7/2 ⁺				$A_2=-0.01$ 3, $A_4=-0.02$ 4 (1983Lo08). $\alpha(K)=13.67$ 21; $\alpha(L)=5.24$ 8; $\alpha(M)=1.183$ 18 $\alpha(N)=0.242$ 4; $\alpha(O)=0.0269$ 4 E_γ : from 1981He04.
156.7 2		822.2	9/2 ⁺	665.5	7/2 ⁺				
167.7 3		693.0	(5/2)	525.3	(5/2) ⁺				
177.3 2		588.8	3/2 ⁺	411.496	1/2 ⁺				
196.5 2		236.14	11/2 ⁻	39.6	3/2 ⁺	M4		20.4	$A_2=-0.01$ 3, $A_4=-0.02$ 4 (1983Lo08). $\alpha(K)=13.67$ 21; $\alpha(L)=5.24$ 8; $\alpha(M)=1.183$ 18 $\alpha(N)=0.242$ 4; $\alpha(O)=0.0269$ 4 E_γ : from 1981He04.
196.9 2	10 1	518.7	7/2 ⁺	321.711	5/2 ⁺	(M1(+E2))	-0.03 11	0.1248 20	$\alpha(K)=0.1073$ 16; $\alpha(L)=0.0140$ 4; $\alpha(M)=0.00284$ 7 $\alpha(N)=0.000587$ 14; $\alpha(O)=7.34 \times 10^{-5}$ 15 $A_2=-0.16$ 3, $A_4=-0.05$ 4 (1981He04). E_γ : E_γ value missing in 1988Zh10. Deduced by the evaluators.
234.3 3		823.1	(3/2 ⁺)	588.8	3/2 ⁺				Reported only by 1979Ir01 and 1978Pa09. $A_2=-0.20$ 3, $A_4=-0.06$ 4 (1979Ir01). A_2 is negative (1981He04). $A_2=-0.17$ 11, $A_4=-0.30$ 16 (1983Lo08). $A_2=-0.22$ 4, $A_4=+0.02$ 5 (1979Ir01). $\alpha(K)=0.0429$ 7; $\alpha(L)=0.0063$ 9; $\alpha(M)=0.00130$ 18 $\alpha(N)=0.00027$ 4; $\alpha(O)=3.2 \times 10^{-5}$ 3 $A_2=+0.18$ 16, $A_4=-0.03$ 2 (1983Lo08). $A_2=+0.13$ 2, $A_4=-0.01$ 2 (1981He04). $A_2=+0.20$ 2, $A_4=0.00$ 2, POL=+0.36 3 (1979Ir01). $\alpha(K)=0.0414$ 7; $\alpha(L)=0.0060$ 7; $\alpha(M)=0.00122$ 15 $\alpha(N)=0.00025$ 3; $\alpha(O)=3.03 \times 10^{-5}$ 25 $A_2=-0.39$ 1, $A_4=+0.02$ 2 (1983Lo08). $A_2=-0.34$ 3, $A_4=-0.01$ 4 (1981He04). $A_2=-0.40$ 1, $A_4=+0.02$ 1, POL=+0.09 1 (1979Ir01).
249.5 2		822.2	9/2 ⁺	572.7	5/2 ⁺				
250.8 3		693.0	(5/2)	442.20	(5/2) ⁺				
250.9 2		572.7	5/2 ⁺	321.711	5/2 ⁺				
254.5 2		572.7	5/2 ⁺	318.179	3/2 ⁺				
267.0 2		588.8	3/2 ⁺	321.711	5/2 ⁺	D+Q			
267.3 2	3.0 9	1089.5	11/2 ⁺	822.2	9/2 ⁺	D			
270.6 2		588.8	3/2 ⁺	318.179	3/2 ⁺	D+Q			$\alpha(K)=0.0429$ 7; $\alpha(L)=0.0063$ 9; $\alpha(M)=0.00130$ 18 $\alpha(N)=0.00027$ 4; $\alpha(O)=3.2 \times 10^{-5}$ 3 $A_2=+0.18$ 16, $A_4=-0.03$ 2 (1983Lo08). $A_2=+0.13$ 2, $A_4=-0.01$ 2 (1981He04). $A_2=+0.20$ 2, $A_4=0.00$ 2, POL=+0.36 3 (1979Ir01). $\alpha(K)=0.0414$ 7; $\alpha(L)=0.0060$ 7; $\alpha(M)=0.00122$ 15 $\alpha(N)=0.00025$ 3; $\alpha(O)=3.03 \times 10^{-5}$ 25 $A_2=-0.39$ 1, $A_4=+0.02$ 2 (1983Lo08). $A_2=-0.34$ 3, $A_4=-0.01$ 4 (1981He04). $A_2=-0.40$ 1, $A_4=+0.02$ 1, POL=+0.09 1 (1979Ir01).
278.6 2	15.8 16	318.179	3/2 ⁺	39.6	3/2 ⁺	M1+E2	+0.8 +10-5	0.0509 16	
282.2 2	80 8	321.711	5/2 ⁺	39.6	3/2 ⁺	M1+E2	-0.7 +4-7	0.0488 13	
^x 302.4 2	0.5								$\alpha(K)=0.0340$ 5; $\alpha(L)=0.00445$ 9; $\alpha(M)=0.000903$ 19 $\alpha(N)=0.000187$ 4; $\alpha(O)=2.33 \times 10^{-5}$ 4 $A_2=-0.38$ 3, $A_4=-0.03$ 5 (1981He04). $A_2=-0.52$ 2, $A_4=+0.05$ 3, POL=-0.23 8 (1979Ir01). $\alpha(K)=0.0293$ 9; $\alpha(L)=0.0044$ 5; $\alpha(M)=0.00090$ 11 $\alpha(N)=0.000183$ 20; $\alpha(O)=2.19 \times 10^{-5}$ 15
303.5 2	12.2 12	822.2	9/2 ⁺	518.7	7/2 ⁺	M1+E2	-0.25 +9-10	0.0396	
318.2 2	23.2 23	318.179	3/2 ⁺	0.0	1/2 ⁺	M1+E2	-1.1 +13-22	0.0348 6	

$^{126}\text{Te}(\alpha, n\gamma)$ **1988Zh10,1981He04,1979Ir01** (continued)

$\gamma(^{129}\text{Xe})$ (continued)									Comments
E_γ †	I_γ ‡	E_i (level)	J_i^π	E_f	J_f^π	Mult. #	δ @	α &	
321.8 2	23.4 23	321.711	5/2 ⁺	0.0	1/2 ⁺	E2		0.0334	$A_2=-0.12$ 13, $A_4=0.00$ 2 (1983Lo08). $A_2=-0.10$ 4, $A_4=+0.02$ 6 (1981He04). $A_2=-0.12$ 2, $A_4=0.00$ 2, POL=+0.26 3 (1979Ir01). $\alpha(K)=0.0277$ 4; $\alpha(L)=0.00460$ 7; $\alpha(M)=0.000951$ 14 $\alpha(N)=0.000193$ 3; $\alpha(O)=2.23\times 10^{-5}$ 4 $A_2=+0.19$ 1, $A_4=-0.02$ 1 (1983Lo08). $A_2=+0.17$ 4, $A_4=-0.01$ 5 (1981He04). $A_2=+0.18$ 1, $A_4=0.00$ 1, POL=+0.26 5, $\delta(M3/E2)=+0.03$ +5-4 (1979Ir01).
324.8 3 343.7 2	9.2 28	1414.3 665.5	13/2 ⁺ 7/2 ⁺	1089.5 321.711	11/2 ⁺ 5/2 ⁺	M1+E2	+3.1 +13-9	0.0273	$\alpha(K)=0.0228$ 4; $\alpha(L)=0.00362$ 7; $\alpha(M)=0.000746$ 14 $\alpha(N)=0.000152$ 3; $\alpha(O)=1.78\times 10^{-5}$ 3 $A_2=+0.53$ 2, $A_4=-0.01$ 3 (1983Lo08). $A_2=+0.25$ 2, $A_4=+0.09$ 3 (1981He04). $A_2=+0.46$ 2, $A_4=+0.03$ 2, POL=-0.22 9 (1979Ir01).
347.3 2	12.4 12	665.5	7/2 ⁺	318.179	3/2 ⁺	E2		0.0263	$\alpha(K)=0.0219$ 3; $\alpha(L)=0.00354$ 5; $\alpha(M)=0.000730$ 11 $\alpha(N)=0.0001485$ 21; $\alpha(O)=1.730\times 10^{-5}$ 25 $A_2=+0.26$ 3, $A_4=-0.08$ 4 (1983Lo08). $A_2=+0.17$ 5, $A_4=0.06$ 6 (1981He04). $A_2=+0.21$ 2, $A_4=-0.04$ 2, POL=+0.43 6, $\delta(M3/E2)=0.11$ +3-9 (1979Ir01).
348.0 3 371.9 2		1762.5 411.496	(15/2) ⁺ 1/2 ⁺	1414.3 39.6	13/2 ⁺ 3/2 ⁺				$A_2=-0.02$ 2, $A_4=-0.09$ 2 (1983Lo08). $A_2=-0.03$ 4, $A_4=-0.06$ 5 (1979Ir01).
391.1 3 394.1 2 398.4 3 402.6 2	4.0 12 16.1 16	665.5 1059.6 1430.5 442.20	7/2 ⁺ 9/2 ⁺ (9/2,11/2) (5/2) ⁺	274.28 665.5 1032.0 39.6	(9/2) ⁻ 7/2 ⁺ (13/2) ⁻ 3/2 ⁺	D+Q D(+Q)	0.0 +3-4		$A_2=-0.13$ 2, $A_4=+0.10$ 4 (1983Lo08). $A_2=-0.06$ 2, $A_4=0.00$ 3 (1983Lo08). $A_2=-0.08$ 8, $A_4=0.00$ 11 (1981He04). E_γ : from 1981He04.
406.2 2 411.5 2	10.6 11	2586.3 411.496	(23/2) ⁻ 1/2 ⁺	2180.0 0.0	19/2 ⁻ 1/2 ⁺	M1			$A_2=-0.41$ 5, $A_4=-0.28$ 8 (1983Lo08). For $J^\pi(411$ level)=1/2 ⁺ , isotropic $\gamma(\theta)$ is expected. $A_2=-0.01$ 4, $A_4=+0.01$ 4, POL=-0.05 2 (1979Ir01).
411.6 3 420.5 2 442.2 3 479.1 2	4.3 13 100 10	823.1 1816.0 442.20 518.7	(3/2) ⁺ (17/2,15/2) (5/2) ⁺ 7/2 ⁺	411.496 1395.5 0.0 39.6	1/2 ⁺ 15/2 ⁻ 1/2 ⁺ 3/2 ⁺	E2		0.01012	$\alpha(K)=0.00855$ 12; $\alpha(L)=0.001254$ 18; $\alpha(M)=0.000257$ 4 $\alpha(N)=5.25\times 10^{-5}$ 8; $\alpha(O)=6.28\times 10^{-6}$ 9 $A_2=+0.21$ 3, $A_4=-0.02$ 4 (1981He04). $A_2=+0.27$ 1, $A_4=-0.08$ 1, POL=+0.42 2, $\delta(M3/E2)=+0.01$ +2-4 (1979Ir01).
485.7 2	19.2 19	525.3	(5/2) ⁺	39.6	3/2 ⁺	(M1+E2)	-0.14 7	0.01192 18	$A_2=-0.38$ 3, $A_4=+0.2$ 4 (1983Lo08). $A_2=-0.18$ 2, $A_4=-0.01$ 2 (1981He04). $A_2=+0.18$ 3, $A_4=-0.03$ 5 (1981He04).
500.4 2	56 6	822.2	9/2 ⁺	321.711	5/2 ⁺	E2			

$\gamma(^{129}\text{Xe})$ (continued)

E_γ †	I_γ ‡	E_i (level)	J_i^π	E_f	J_f^π	Mult. #	$\delta^@$	Comments
								$A_2=+0.26$ 1, $A_4=-0.06$ 1, POL=+0.47 3, $\delta(\text{M3/E2})=+0.09$ 2 (1979Ir01).
504.2 3		1197.7		693.0	(5/2)			
504.9 3		823.1	(3/2 ⁺)	318.179	3/2 ⁺	(M1+E2)		$A_2=-0.11$ 6, $A_4=-0.09$ 9, POL=+0.32 7 (1979Ir01).
521.3 3		1430.5	(9/2,11/2)	909.9	7/2,9/2,11/2			
533.1 2		572.7	5/2 ⁺	39.6	3/2 ⁺			
535.1 2	72 7	771.1	13/2 ⁻	236.14	11/2 ⁻	(M1+E2)	-0.5 +2-16	$A_2=-0.65$ 5, $A_4=-0.09$ 8 (1981He04).
546.2 2	11 3	868.2	7/2 ⁺	321.711	5/2 ⁺	M1+E2		$A_2=-0.05$ 2, $A_4=-0.07$ 2 (1983Lo08).
								$A_2=-0.11$ 2, $A_4=-0.01$ 2, POL=+0.42 9 (1979Ir01).
549.2 2		588.8	3/2 ⁺	39.6	3/2 ⁺			
550.0 2	14 5	868.2	7/2 ⁺	318.179	3/2 ⁺	Q		$A_2=+0.21$ 2, $A_4=-0.04$ 2 (1983Lo08).
570.8 2	55 6	1089.5	11/2 ⁺	518.7	7/2 ⁺	E2		$A_2=+0.27$ 3, $A_4=-0.06$ 4 (1981He04).
								$A_2=+0.27$ 1, $A_4=-0.07$ 1, POL=0.42 6 (1979Ir01).
572.7 2		572.7	5/2 ⁺	0.0	1/2 ⁺			
576.7 2	5.5 17	1972.2	17/2 ⁻	1395.5	15/2 ⁻	(M1+E2)	-2.6 +17-45	$A_2=-0.57$ 15, $A_4=+0.15$ 24 (1981He04).
580.1 2	5.9 18	1022.3	7/2 ⁺	442.20	(5/2) ⁺	(M1+E2)	-1.2 +9-7	$A_2=-0.68$ 3, $A_4=+0.11$ 4 (1983Lo08).
								$A_2=-0.43$ 3, $A_4=+0.12$ 5 (1981He04).
^x 585.0 2	6.0							
587.2 2	225 23	823.3	15/2 ⁻	236.14	11/2 ⁻	(Q)		$A_2=+0.26$ 4, $A_4=-0.02$ 6 (1981He04).
588.8 2		588.8	3/2 ⁺	0.0	1/2 ⁺			
592.1 2	41 4	1414.3	13/2 ⁺	822.2	9/2 ⁺	Q		$A_2=+0.29$ 2, $A_4=-0.07$ 3 (1981He04).
604.0 2	18.4 18	2180.0	19/2 ⁻	1576.0	19/2 ⁻	(M1+E2)	-0.14 +9-7	$A_2=+0.32$ 2, $A_4=-0.01$ 2 (1981He04).
621.9 3		1194.6	(9/2)	572.7	5/2 ⁺			
624.4 2	32 3	1395.5	15/2 ⁻	771.1	13/2 ⁻	(M1+E2)	-1.2 +7-5	$A_2=-0.80$ 5, $A_4=+0.12$ 8 (1981He04).
629.0 3		1497.2	(11/2)	868.2	7/2 ⁺			
634.2 3		909.9	7/2,9/2,11/2	274.28	(9/2 ⁻)			
650.4 2	22.2 22	2064.7	17/2 ⁺	1414.3	13/2 ⁺	Q		$A_2=+0.24$ 4, $A_4=-0.07$ 6 (1981He04).
653.4 3		693.0	(5/2)	39.6	3/2 ⁺			
659.3 3		1430.5	(9/2,11/2)	771.1	13/2 ⁻			
671.0 3		1336.5	(11/2)	665.5	7/2 ⁺			
671.2 3		2433.5		1762.5	(15/2) ⁺			
671.9 3		1197.7		525.3	(5/2) ⁺			
672.3 3		909.9	7/2,9/2,11/2	236.14	11/2 ⁻			
672.8 2	24.0 24	1762.5	(15/2) ⁺	1089.5	11/2 ⁺	(Q)		$A_2=+0.11$ 6, $A_4=+0.05$ 8 (1981He04).
675.8 3		1194.5	(9/2,11/2)	518.7	7/2 ⁺			
683.9 2	29 3	1507.2	17/2 ⁻	823.3	15/2 ⁻	(M1+E2)	-1.5 3	$A_2=-0.77$ 3, $A_4=+0.08$ 4 (1981He04).
689.1 3		1748.7		1059.6	9/2 ⁺			
694.0 ^a 3		1888.5?		1194.5	(9/2,11/2)			
711.2 3		1229.9	(7/2) ⁺	518.7	7/2 ⁺	M1		E_γ : from 1978Pa09.
								$A_2=+0.36$ 6, $A_4=-0.08$ 6, POL=-0.36 8 (1979Ir01).
712.1 3		2048.6	(15/2)	1336.5	(11/2)			
716.1 3		1539.4	(13/2,15/2)	823.3	15/2 ⁻			
717.1 2	9.1 27	2293.1	21/2 ⁻	1576.0	19/2 ⁻	(M1+E2)	-1.9 5	$A_2=-0.76$ 5, $A_4=+0.20$ 7 (1981He04).

¹²⁶Te(α ,n γ) [1988Zh10](#),[1981He04](#),[1979Ir01](#) (continued)

$\gamma(^{129}\text{Xe})$ (continued)

$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [#]	Comments
733.0 3		1755.3		1022.3	7/2 ⁺		
736.0 3		1507.2	17/2 ⁻	771.1	13/2 ⁻		
752.7 2	73 7	1576.0	19/2 ⁻	823.3	15/2 ⁻		
754.8 3		1197.7		442.20	(5/2) ⁺		
757.8 3		1032.0	(13/2 ⁻)	274.28	(9/2 ⁻)		
784.0 3		1816.0	(17/2,15/2)	1032.0	(13/2 ⁻)		
785.4 3		1059.6	9/2 ⁺	274.28	(9/2 ⁻)		
795.9 3		1032.0	(13/2 ⁻)	236.14	11/2 ⁻		
817.1 3		1336.5	(11/2)	518.7	7/2 ⁺		
829.7 3		1241.2	(5/2)	411.496	1/2 ⁺		
^x 864.7 2	4.6						
870.4 2	26.2 26	2446.3	(23/2 ⁻)	1576.0	19/2 ⁻	(Q)	A ₂ =+0.11 9, A ₄ =+0.05 13 (1981He04).
^x 906.4 2	4.7						
^x 946.0 2	7.1						
992.8 3		1816.0	(17/2,15/2)	823.3	15/2 ⁻		
1110.2 3		2307.4		1197.7			
1213.1 3		2036.2	(15/2,13/2)	823.3	15/2 ⁻		
1265.1 3		2036.2	(15/2,13/2)	771.1	13/2 ⁻		E _γ : missing in 1988Zh10 . Deduced by the evaluators.
1348.9 3		2172.0		823.3	15/2 ⁻		

[†] From [1988Zh10](#), unless otherwise noted. Unplaced γ rays are from [1983Lo08](#).

[‡] From [1981He04](#) at angle 125° to the beam.

[#] Multipolarities were deduced from $\gamma(\theta)$ ([1983Lo08](#)); and linear polarization data from [1979Ir01](#), unless otherwise noted. Mult=(M1+E2) is assigned based on RUL when there is significant mixture of dipole and quadrupole transitions, and (E2) is expected for most quadrupole transitions.

[@] From [1981He04](#), unless otherwise noted. Because [1979Ir01](#) adopted Rose-Brink convention, their sign was reversed by the evaluators.

[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

^a Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

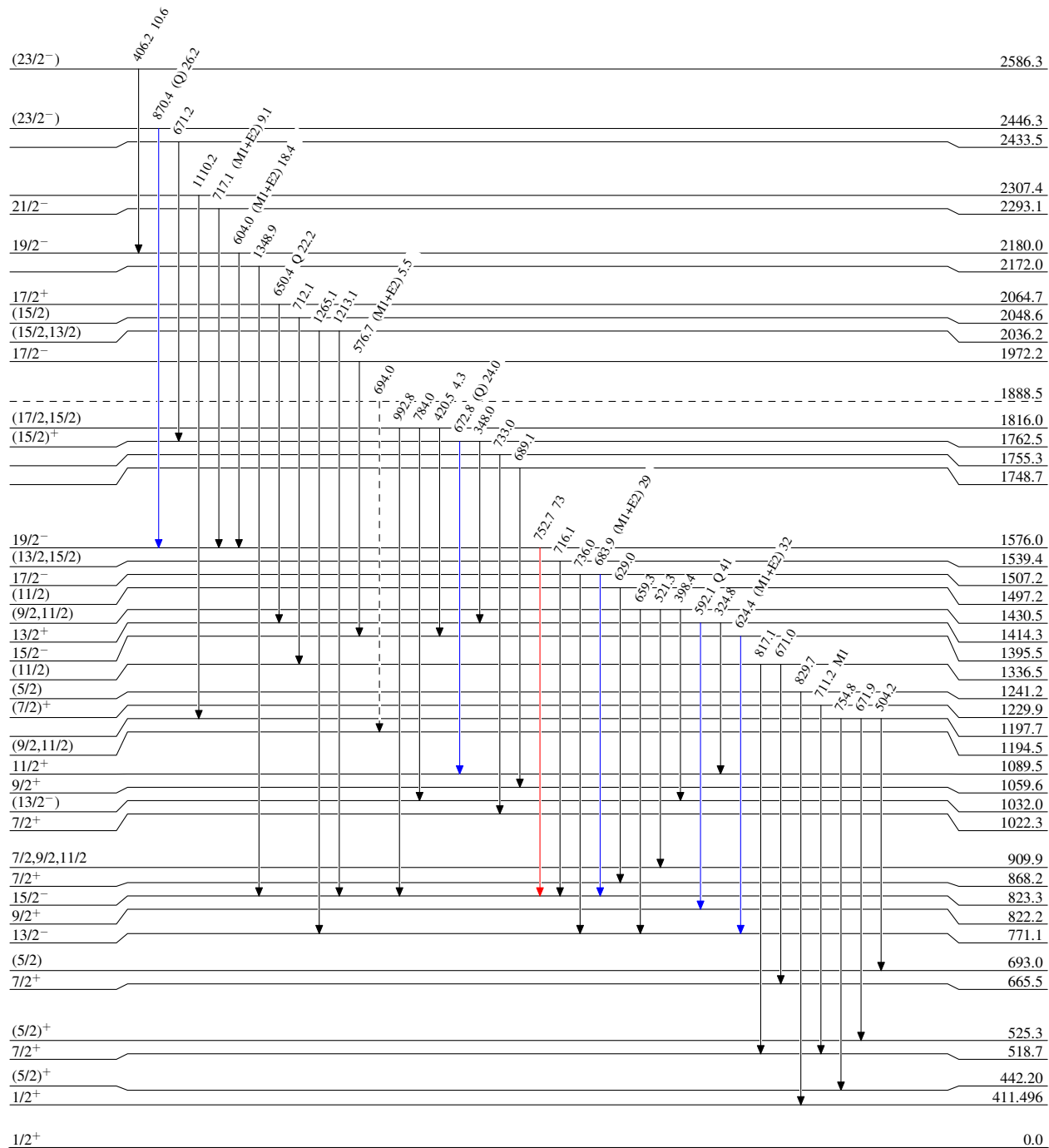
$^{126}\text{Te}(\alpha, n\gamma)$ 1988Zh10,1981He04,1979Ir01

Legend

Level Scheme

Intensities: Relative I_γ

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ γ Decay (Uncertain)



81 ps 26

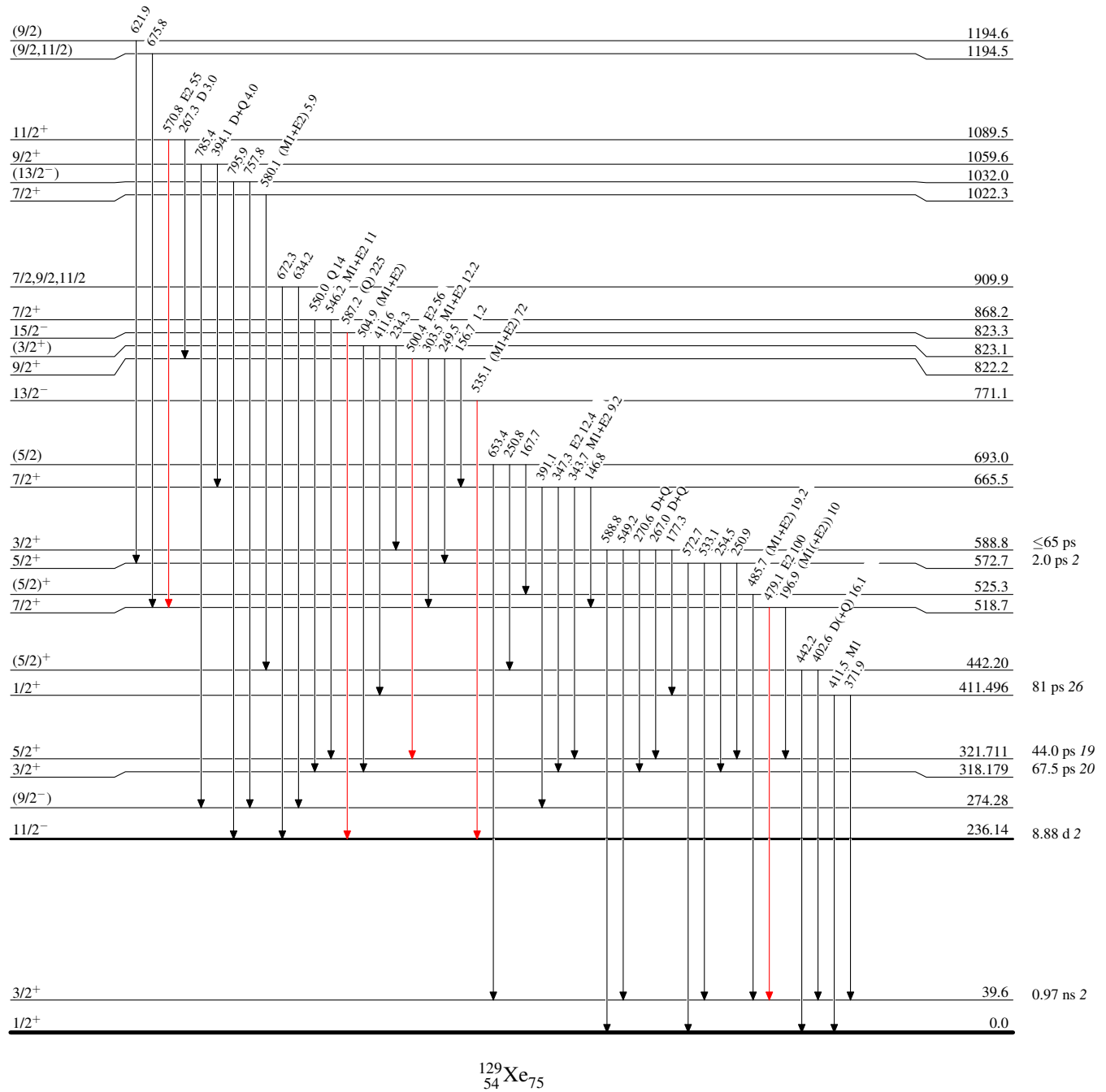
$^{126}\text{Te}(\alpha, n\gamma)$ 1988Zh10,1981He04,1979Ir01

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$

 $^{129}_{54}\text{Xe}_{75}$

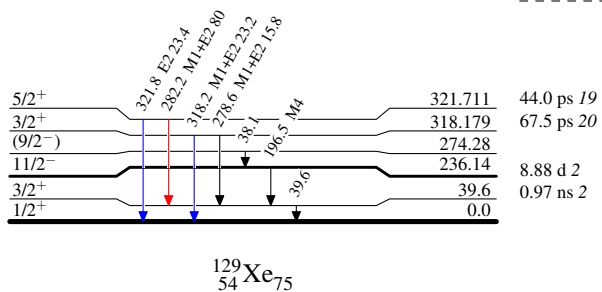
$^{126}\text{Te}(\alpha, n\gamma)$ 1988Zh10,1981He04,1979Ir01

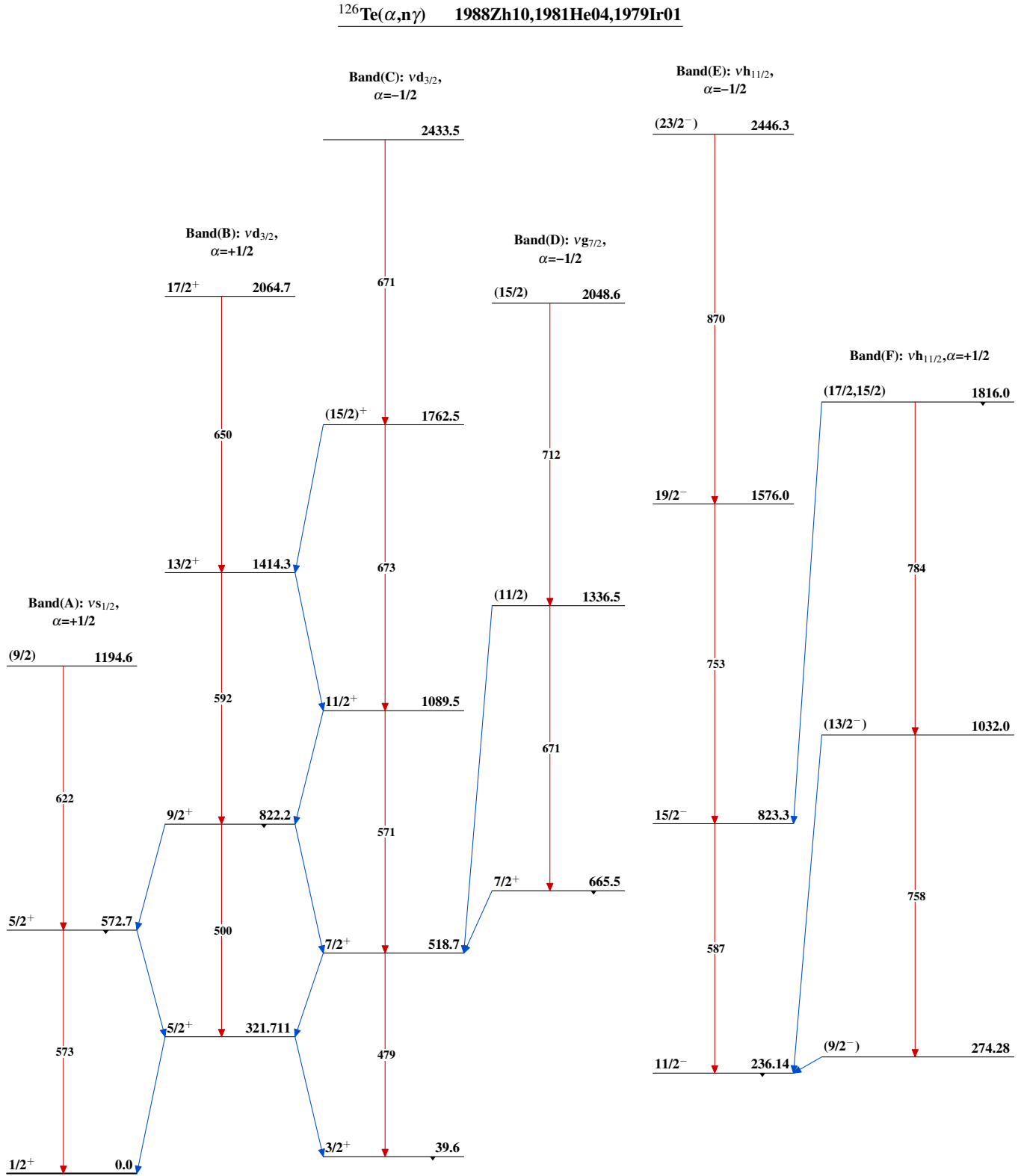
Level Scheme (continued)

 Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\max}$
- $I_\gamma < 10\% \times I_\gamma^{\max}$
- $I_\gamma > 10\% \times I_\gamma^{\max}$
- - - γ Decay (Uncertain)





$^{126}\text{Te}(\alpha, n\gamma)$ 1988Zh10,1981He04,1979Ir01 (continued)

