^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar	NDS 129, 191 (2015)	28-Feb-2015

1988GoZD, 1990Be50: Reactor fast neutrons; Ge γ, linear polarization.
1978De41: Reactor fast neutrons; Ge G.
1980De07: Reactor fast neutrons; Ge γ, γ(θ).
The decay scheme is that proposed by 1988GoZD and 2012Hi10.
2008Hi17: E=2.0-3.3 MeV beam provided by accelerator at the University of Kentucky. Measured excitations (100 keV steps) Eγ, Iγ, angular distributions using a BGO Compton-suppressed n-type HPGe detector (FWHM=2.1 keV at 1.33 MeV). Measured half-lives using Doppler-shift attenuation method. Study of 2^+ states in connection with fragmentation of mixed-symmetry excitations.
2012Hi10: A neutron beam at E=3.6 MeV provided by the University of Kentucky 7 MV electrostatic accelerator laboratory. Target=^{128}Te. Gamma rays detected by a Compton-suppressed n-type HPGe detector. Measured Eγ, Iγ, γγ-coincidence, γ(θ). Deduced levels, J, π, branching ratio, mixing ratio, B(M1), B(E2), Doppler-shift attenuation factor, $T_{1/2}$. Comparison with interacting boson model (IBM) calculations.
α: Additional information 1.

^{128}Te Levels

E(level)	Jπ	$T_{1/2}$ †	Comments
0.0	0^+		
743.218 *17*	2^+		
1497.021 *22*	4^+		
1519.998 *21*	2^+	1.7 ps *+8−4*	
1811.14 *3*	6^+		
1968.486 *25*	$1^+,2^+,3^+$	209 fs *+17−15*	
1978.80 *3*	0^+	1.4 ps *+12−8*	$T_{1/2}$: from DSAM (2012Hi10).
2027.77 *3*	4^+	0.37 ps *+19−10*	$T_{1/2}$: from DSAM (2012Hi10).
2133.29 *3*	5^-		
2163.547 *25*	3^+	0.57 ps *+16−10*	
2193.48 *3*	2^+	49.9 fs *14*	
2217.95 *3*	$1^+,2^+,3^+$	0.4 ps *+6−5*	$T_{1/2}$: from DSAM (2012Hi10).
2270.33 *3*	$3^+,4^+,5^+$	177 fs *+28−20*	$T_{1/2}$: from DSAM (2012Hi10).
2308.30 *4*	0^+	>1.7 ps	
2337.71 *5*	$(7)^-$		
2352.11 *3*	2^+	137 fs *+10−7*	
2395.92 *3*	4^-		
2405.31 *8*	$(4^+,5,6^+)$		
2426.01 *4*	$3^+,4^+,5^+$	86 fs *+10−8*	$T_{1/2}$: from DSAM (2012Hi10).
2456.75 *21*			E(level): only from 2012Hi10.
2482.22 *7*		0.20 ps *+5−3*	E(level): only from 2012Hi10.
2487.44 *3*	3^+	0.32 ps *+11−7*	
2494.20 *3*	$(3)^-$	236 fs *+28−21*	
2508.06 *4*	2^+	0.37 ps *+6−5*	
2516.64 *6*			E(level): only from 2012Hi10.
2550.52? *3*	3^+	0.18 ps *+4−3*	$T_{1/2}$: from DSAM (2012Hi10).
2571.18 *4*	4,5		
2587.14 *22*			E(level): only from 2012Hi10.
2599.00? *5*			
2630.14 *4*	$1^+,2^+,3^+$	95 fs *10*	$T_{1/2}$: from DSAM (2012Hi10).
2643.28 *6*		0.16 ps *+5−8*	
2655.2 *4*			E(level): only from 2012Hi10.
2665.31 *10*		0.15 ps *+46−8*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2701.0 *3*			E(level): only from 2012Hi10.

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^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

^{128}Te Levels (continued)

E(level)	Jπ	$T_{1/2}$ †	Comments
2706.65 *4*	1+,2+,3+	80 fs *6*	$T_{1/2}$: from DSAM (2012Hi10).
2712.23? *4*	1+,2+,3+	162 fs *11*	
2718.80 *12*			E(level): only from 2012Hi10.
2736.24 *13*			E(level): only from 2012Hi10.
2748.66 *4*	3+	0.71 ps *+53−21*	$T_{1/2}$: from DSAM (2012Hi10).
2749.57 *21*			E(level): only from 2012Hi10.
2762.06 *9*	3−,4−,5−,6−,7−		
2763.97 *10*		16.6 fs *21*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2776.86 *6*			E(level): only from 2012Hi10.
2820.71 *5*	(1,2+)	150 fs *+19−17*	$T_{1/2}$: from DSAM (2012Hi10).
2830.66 *9*		0.29 ps *+13−8*	$T_{1/2}$: from DSAM (2012Hi10). E(level): only from 2012Hi10.
2851.91 *6*	(4+,5,6+)	91 fs *+67−33*	
2861.92 *17*			E(level): only from 2012Hi10.
2869.00? *8*	(1,2+)	0.28 ps *+13−7*	$T_{1/2}$: from DSAM (2012Hi10).
2884.51 *6*	1+,2+,3+	0.39 ps *3*	$T_{1/2}$: from DSAM (2012Hi10).
2885.02 *13*	5	98 fs *+40−26*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2891.46 *7*	2+	187 fs *+29−24*	$T_{1/2}$: from DSAM (2012Hi10).
2904.42 *11*		0.67 ps *+48−35*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2912.78 *6*		1.1 ps *+23−5*	$T_{1/2}$: from DSAM (2012Hi10).
2921.56 *14*		1.2 ps *+23−8*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2931.86? *5*	3+,4+,5+		
2952.6 *17*			E(level): only from 2012Hi10.
2954.87 *6*		0.7 ps *+12−3*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2969.0 *3*			E(level): only from 2012Hi10.
2983.32? *5*	3+	111 fs *+31−22*	$T_{1/2}$: from DSAM (2012Hi10).
2985.53 *10*		0.3 ps *+9−2*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
2997.49 *15*		102 fs *+20−21*	$T_{1/2}$: from DSAM (2012Hi10). E(level): only from 2012Hi10.
2997.8 *3*			E(level): only from 2012Hi10.
3030.11 *8*	1,2+	0.90 ps *+60−42*	$T_{1/2}$: from DSAM (2012Hi10).
3038.73 *13*			E(level): only from 2012Hi10.
3048.45 *17*			E(level): only from 2012Hi10.
3054.50 *10*		274 fs *+17−12*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
3067.15 *6*	3	274 fs *+17−12*	$T_{1/2}$: from DSAM (2012Hi10).
3071.60 *11*		130 fs *+40−28*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
3091.1 *3*			E(level): only from 2012Hi10.
3097.6 *3*			E(level): only from 2012Hi10.
3100.42 *9*	1,2,3	117 fs *+33−24*	$T_{1/2}$: from DSAM (2012Hi10).
3101.29 *9*		0.21 ps *+20−8*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
3104.40? *17*		113 fs *+22−17*	$T_{1/2}$: from DSAM (2012Hi10).
3125.40? *5*			
3135.80 *23*		0.24 ps *+35−10*	E(level): only from 2012Hi10. $T_{1/2}$: from DSAM (2012Hi10).
3137.43 *19*	2+	121 fs *+29−21*	$T_{1/2}$: from DSAM (2012Hi10).
3139.9 *3*	2,3		E(level): only from 2012Hi10.
3146.4 *9*			E(level): only from 2012Hi10.
3148.35 *10*		0.26 ps *+12−6*	$T_{1/2}$: from DSAM (2012Hi10).

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^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

^{128}Te Levels (continued)

E(level)	J^π	$T_{1/2}$ †	Comments
			E(level): only from 2012Hi10.
3150.84 *19*	$(6)^+$		E(level): only from 2012Hi10.
3166.51 *18*	3^-		E(level): only from 2012Hi10.
3184.84 *13*		51 fs *8*	$T_{1/2}$: from DSAM (2012Hi10).
3188.2 *4*		0.10 ps *+12−5*	$T_{1/2}$: from DSAM (2012Hi10).
			E(level): only from 2012Hi10.
3195.6 *11*			E(level): only from 2012Hi10.
3199.1 *17*			E(level): only from 2012Hi10.
3216.59 *19*		76 fs *+83−35*	$T_{1/2}$: from DSAM (2012Hi10).
			E(level): only from 2012Hi10.
3219.3 *4*			E(level): only from 2012Hi10.
3221.4 *3*			E(level): only from 2012Hi10.
3249.4 *4*			E(level): only from 2012Hi10.
3251.0 *4*			E(level): only from 2012Hi10.
3255.0 *4*			E(level): only from 2012Hi10.
3286.3 *4*			E(level): only from 2012Hi10.
3296.46? *8*	$(2^+,3,4^+)$		
3296.9 *4*			E(level): only from 2012Hi10.
3303.8 *4*			E(level): only from 2012Hi10.
3607.42? *11*			
3731.72? *7*			
3838.4? *5*	$(1,2^+)$		
4063.11? *17*			

† From DSAM (2008Hi17) unless otherwise stated.

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
175.27 *4*	0.22 *3*	2571.18	4,5	2395.92	4^-	D+Q	+0.06 *+7−15*	0.144 *1*	α(K)=0.124 *1*; α(L)=0.0160 *3*; α(M)=0.00317 *7*; α(N+..)=0.00076 *2* Mult.,δ: from γ(θ) (2012Hi10).
232.43 *9*	0.15 *2*	2395.92	4^-	2163.547	3^+	E1+M2	−0.15 *+10−12*	0.026 *15*	α(K)=0.022 *13*; α(L)=0.0030 *20*; α(M)=0.0006 *4*; α(N)=0.00012 *8*; α(O)=1.2×10^{-5} *9*
[x]244.77 *10*	0.11 *2*								
249.24 *9*	0.10 *2*	2217.95	$1^+,2^+,3^+$	1968.486	$1^+,2^+,3^+$				
249.9 *6*		2587.14		2337.71	$(7)^-$				Eγ: only from 2012Hi10.
262.63 *2*	2.47 *6*	2395.92	4^-	2133.29	5^-	M1+E2	+0.263 *19*	0.0491	α(K)=0.0422 *6*; α(L)=0.00549 *9*; α(M)=0.001097 *17*; α(N)=0.000217 *4*; α(O)=2.33×10^{-5} *4* δ: +0.40 *+15−11* from γ(θ) (2012Hi10).
314.12 *2*	3.25 *7*	1811.14	6^+	1497.021	4^+	E2		0.0333	α(K)=0.0278 *4*; α(L)=0.00442 *7*; α(M)=0.000895 *13*; α(N)=0.0001733 *25*; α(O)=1.721×10^{-5} *24*
323.46 *21*		2456.75		2133.29	5^-				Eγ: only from 2012Hi10.
353.65 *21*		2749.57		2395.92	4^-	D+Q	+0.06 *+7−6*	0.0225	α(K)=0.0195; α(L)=0.00244 *1*; α(M)=0.00048; α(N+..)=0.00012 Eγ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
357.2[&] *4*		2762.06	$3^-,4^-,5^-,6^-,7^-$	2405.31	$(4^+,5,6^+)$				Eγ: only from 2012Hi10, tentative placement.
368.16 *8*	0.18 *3*	2395.92	4^-	2027.77	4^+	E1+M2	−0.12 *11*	0.007 *3*	α(K)=0.0057 *23*; α(L)=0.0007 *4*; α(M)=0.00014 *7*
380.66 *23*		2776.86		2395.92	4^-				Eγ: only from 2012Hi10.
398.31 *8*	0.20 *3*	2426.01	$3^+,4^+,5^+$	2027.77	4^+	M1+E2	+1.18 *20*	0.01615 *24*	α(K)=0.01378 *22*; α(L)=0.00190 *4*; α(M)=0.000381 *7*; α(N)=7.48×10^{-5} *13*; α(O)=7.82×10^{-6} *12* B(E2)(W.u.)=1.8×10^3 *+4−5*; B(M1)(W.u.)=0.30 *+8−9* δ: +0.63 *+30−54* from γ(θ) (2012Hi10).
437.86 *4*	0.53 *4*	2571.18	4,5	2133.29	5^-	D+Q	−0.40 *+11−7*	0.0130 *1*	α(K)=0.0112 *1*; α(L)=0.00142; α(M)=0.00028 Mult.,δ: from γ(θ) (2012Hi10), other: +2.3 *5* or −0.56 *9* (1988GoZD).
448.8 *3*	0.016 *7*	1968.486	$1^+,2^+,3^+$	1519.998	2^+				
453.78 *23*		2587.14		2133.29	5^-				Eγ: only from 2012Hi10.
467.71 *23*		3038.73		2571.18	4,5	D+Q	−0.9 *+4−8*		Eγ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
526.25[&] *13*	0.055 *7*	2494.20	$(3)^-$	1968.486	$1^+,2^+,3^+$				Eγ: tentative placement in 2012Hi10, doublet. Iγ: calculated from branching ratios in 2012Hi10 by evaluator.
526.57 *4*	0.63 *4*	2337.71	$(7)^-$	1811.14	6^+	E1+M2	+0.025 *28*	0.00237 *7*	α(K)=0.00206 *6*; α(L)=0.000250 *7*;

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^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
									α(M)=4.96×10^{-5} *15*; α(N)=9.8×10^{-6} *3*; α(O)=1.06×10^{-6} *3*
530.75 *2*	2.50 *8*	2027.77	4$^+$	1497.021	4$^+$	M1+E2	−0.24 *2*	0.00806	α(K)=0.00698 *10*; α(L)=0.000869 *13*; α(M)=0.0001729 *25*; α(N)=3.42×10^{-5} *5*; α(O)=3.73×10^{-6} *6* B(E2)(W.u.)=33 *+11−18*; B(M1)(W.u.)=0.24 *+7−13* δ: −0.16 *+10−6* (2012Hi10).
532.02 *10*		2665.31		2133.29	5$^-$				E_γ: only from 2012Hi10.
555.24 *8*	0.027 *9*	2748.66	3$^+$	2193.48	2$^+$				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
567.67 *32*		2701.0		2133.29	5$^-$	D+Q	+0.19 *+57−35*	0.0070 *4*	α(K)=0.0060 *4*; α(L)=0.00074 *3* E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
589.61 *9*		2985.53		2395.92	4$^-$				E_γ: only from 2012Hi10.
593.5[&] *5*		2405.31	(4$^+$,5,6$^+$)	1811.14	6$^+$				E_γ: tentative placement (2012Hi10).
602.95 *13*		2736.24		2133.29	5$^-$				E_γ: only from 2012Hi10.
628.75 *9*	0.19 *3*	2762.06	3$^-$,4$^-$,5$^-$,6$^-$,7$^-$	2133.29	5$^-$				
636.26 *2*	7.5 *2*	2133.29	5$^-$	1497.021	4$^+$	E1+M2	+0.020 *6*	1.54×10^{-3}	α(K)=0.001343 *19*; α(L)=0.0001622 *24*; α(M)=3.21×10^{-5} *5*; α(N)=6.34×10^{-6} *9*; α(O)=6.87×10^{-7} *10*
643.56 *2*	1.11 *3*	2163.547	3$^+$	1519.998	2$^+$	M1+E2	+3.8 *4*	0.00419	α(K)=0.00360 *6*; α(L)=0.000477 *7*; α(M)=9.53×10^{-5} *14*; α(N)=1.87×10^{-5} *3*; α(O)=1.98×10^{-6} *3* B(E2)(W.u.)=92 *+17−26*; B(M1)(W.u.)=0.0039 *+11−14* δ: 3.9 *+13−4* or 0.43 *+17−13* from γ(θ) (2012Hi10).
643.58 *5*		2776.86		2133.29	5$^-$				E_γ: only from 2012Hi10, doublet.
645.8 *3*		3139.9	2,3	2494.20	(3)$^-$	D+Q	+0.6 *+24−9*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
666.48	0.65	2163.547	3$^+$	1497.021	4$^+$	M1+E2	+0.59 *+14−12*	0.00446 *11*	α(K)=0.00386 *10*; α(L)=0.000482 *10*; α(M)=9.60×10^{-5} *19*; α(N)=1.90×10^{-5} *4*; α(O)=2.06×10^{-6} *5* B(E2)(W.u.)=12 *+5−6*; B(M1)(W.u.)=0.024 *+6−8* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
675.8[&] *5*		2869.00?	(1,2$^+$)	2193.48	2$^+$				E_γ: only from 2012Hi10, tentative placement.
691.70 *71*		2718.80		2027.77	4$^+$				E_γ: only from 2012Hi10.
697.97 *6*	0.13 *2*	2217.95	1$^+$,2$^+$,3$^+$	1519.998	2$^+$				
719.5 *3*	0.09 *2*	2912.78		2193.48	2$^+$				
728.63 *17*		2861.92		2133.29	5$^-$	D+Q	−1.7 *+7−9*	0.00327 *20*	α(K)=0.00279 *18*; α(L)=0.00036 *2*

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^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
743.22 *2*	100	743.218	2^+	0.0	0^+	E2		0.00288	E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10). α(K)=0.00248 *4*; α(L)=0.000322 *5*; α(M)=6.44×10^{-5} *9*; α(N)=1.266×10^{-5} *18*; α(O)=1.347×10^{-6} *19*
753.82 *2*	24.0 *5*	1497.021	4^+	743.218	2^+	E2		0.00278	α(K)=0.00239 *4*; α(L)=0.000311 *5*; α(M)=6.21×10^{-5} *9*; α(N)=1.221×10^{-5} *17*; α(O)=1.299×10^{-6} *19*
760.16 *12*	0.042 *12*	2571.18	4,5	1811.14	6^+				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
773.31 *2*	1.37 *4*	2270.33	3^+,4^+,5^+	1497.021	4^+	M1+E2	+0.25 +*15*−*8*	0.00327 *8*	α(K)=0.00283 *7*; α(L)=0.000348 *7*; α(M)=6.91×10^{-5} *14*; α(N)=1.37×10^{-5} *3*; α(O)=1.50×10^{-6} *4* B(E2)(W.u.)=18 +*20*−*18*; B(M1)(W.u.)=0.25 +*4*−*5* δ: +0.22 +*51*−*13* from γ(θ) (2012Hi10).
776.75 *2*	12.8 *3*	1519.998	2^+	743.218	2^+	M1+E2	+4.7 *2*	0.00262	α(K)=0.00225 *4*; α(L)=0.000291 *4*; α(M)=5.80×10^{-5} *9*; α(N)=1.142×10^{-5} *16*; α(O)=1.219×10^{-6} *17* B(E2)(W.u.)=28 +*7*−*14*; B(M1)(W.u.)=0.0012 +*3*−*6* δ: +3.1 *8* or −0.09 +*12*−*7* from 2008Hi17.
780.24 *7*	0.182 *20*	2748.66	3^+	1968.486	1^+,2^+,3^+	M1+E2	−0.29 +*13*−*18*	0.00319 *9*	α(K)=0.00276 *8*; α(L)=0.000339 *8*; α(M)=6.74×10^{-5} *16*; α(N)=1.34×10^{-5} *3*; α(O)=1.46×10^{-6} *4* B(E2)(W.u.)=1.1 +*10*−*11*; B(M1)(W.u.)=0.012 +*4*−*9* E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator. Mult.,δ: from γ(θ) (2012Hi10) and RUL.
787.86 *4*	0.37 *3*	2599.00?		1811.14	6^+			0.0029 *4*	δ: +0.52 *8* or +1.7 +*3*−*2* (1988GoZD).
788.29 *8*	0.132 *13*	2308.30	0^+	1519.998	2^+				E_γ: Doublet (2012Hi10). E_γ: from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
802.82 *10*		2830.66		2027.77	4^+	D+Q	0.0 +*18*−*3*	0.0028 *4*	α(K)=0.0024 *3*; α(L)=0.00029 *3* E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
820.57 *20*	61 *2*	3216.59		2395.92	4^-	D+Q	+1.1 +*34*−*7*		Mult.,δ: from γ(θ) (2012Hi10). E_γ: only from 2012Hi10.
836.2 *5*	0.017 *6*	3030.11	$1,2^+$	2193.48	2^+				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
843.9 *5*		2655.2		1811.14	6^+				E_γ: only from 2012Hi10 (tentative placement).

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
852.26 *11*	0.09 *2*	2820.71	(1,2$^+$)	1968.486	1$^+$,2$^+$,3$^+$				
873.24 *20*	0.080 *11*	3067.15	3	2193.48	2$^+$	D+Q	−0.09 *+18−23*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10). I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
876.62 *12*		2904.42		2027.77	4$^+$	D+Q	+1.44 *25*	0.00214 *5*	α(K)=0.00184 *5*; α(L)=0.00023 *1* E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
890.24 *26*	0.022 *5*	2869.00?	(1,2$^+$)	1978.80	0$^+$				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
900.48 *13*	0.022 *5*	2869.00?	(1,2$^+$)	1968.486	1$^+$,2$^+$,3$^+$	D+Q	−0.5 *+4−29*	0.00226 *13*	α(K)=0.0019 *4*; α(L)=0.00024 *1* E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator. Mult.,δ: from γ(θ) (2012Hi10).
905.37 *15*		3038.73		2133.29	5$^-$	D+Q	−0.7 *+3−4*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
908.03 *13*		3101.29		2193.48	2$^+$				E_γ: only from 2012Hi10.
908.32 *8*	0.25 *3*	2405.31	(4$^+$,5,6$^+$)	1497.021	4$^+$				
928.97 *3*	0.92 *4*	2426.01	3$^+$,4$^+$,5$^+$	1497.021	4$^+$	M1+E2	−0.147 *17*	0.00215	α(K)=0.00187 *3*; α(L)=0.000228 *4*; α(M)=4.52×10^{-5} *7*; α(N)=8.96×10^{-6} *13*; α(O)=9.82×10^{-7} *14* B(E2)(W.u.)=4.3 *+11−12*; B(M1)(W.u.)=0.26 *+3−4* δ: −0.13 *+7−6* from γ(θ) (2012Hi10).
946.1 *5*		3139.9	2,3	2193.48	2$^+$	D+Q	+0.03 *+48−54*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
957.8 *3*		3091.1		2133.29	5$^-$				E_γ: only from 2012Hi10.
967.40 *14*	0.172 *14*	2487.44	3$^+$	1519.998	2$^+$				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
974.21 *28*	0.080 *4*	2494.20	(3)$^-$	1519.998	2$^+$				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
990.45[&] *4*	0.39 *3*	2487.44	3$^+$	1497.021	4$^+$	M1+E2	+0.43 *+25−24*	0.00181 *7*	α(K)=0.00157 *6*; α(L)=0.000192 *7*; α(M)=3.80×10^{-5} *13*; α(N)=7.5×10^{-6} *3*; α(O)=8.2×10^{-7} *3* B(E2)(W.u.)=3 *+4−3*; B(M1)(W.u.)=0.025 *+8−10* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
996.64 *6*		2516.64		1519.998	2$^+$				E_γ: only from 2012Hi10.
[x]1007.1 *3*	0.054 *13*								
[x]1012.95 *5*	0.18 *3*								

$^{128}_{52}Te_{76}$-7

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
1030.40 *15*	0.157 *17*	2550.52?	3^+	1519.998	2^+	M1+E2	>5	1.36×10^{-3} *2*	α(K)=0.001178 *18*; α(L)=0.0001473 *22*; α(M)=2.93×10^{-5} *5*; α(N)=5.78×10^{-6} *9*; α(O)=6.24×10^{-7} *10* B(E2)(W.u.)>11; B(M1)(W.u.)<0.00069 I_γ: calculated from branching ratios in 2012Hi10 by evaluator. Mult.,δ: from γ(θ) (2012Hi10) and RUL.
1033.4 *3*		3166.51	3^-	2133.29	5^-				E_γ: only from 2012Hi10.
1040.73 *6*	0.23 *3*	2851.91	$(4^+,5,6^+)$	1811.14	6^+				
1053.50 *3*	0.61 *4*	2550.52?	3^+	1497.021	4^+	M1+E2	+0.03 *6*	1.63×10^{-3}	α(K)=0.001413 *20*; α(L)=0.0001713 *24*; α(M)=3.40×10^{-5} *5*; α(N)=6.74×10^{-6} *10* α(O)=7.39×10^{-7} *11* B(E2)(W.u.)=0.04 *+15−4*; B(M1)(W.u.)=0.065 *+13−16* Mult.,δ: from γ(θ) (2012Hi10) and RUL, other: −0.025 *35* or −7.6 *+17−22* (1988GoZD).
1074.14 *10*	0.079 *15*	2571.18	4,5	1497.021	4^+				
1074.30 *22*		2885.02	5	1811.14	6^+	D+Q	−8 *+5−19*	0.00125 *3*	α(K)=0.00107 *3*; α(L)=0.00013 E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
[x]1091.33 *16*	0.060 *13*								
1097.62 *6*	0.14 *3*	3125.40?		2027.77	4^+				
1099.3 *2*		3067.15	3	1968.486	$1^+,2^+,3^+$				E_γ: only from 2012Hi10, doublet.
1118.6 *9*		3146.4		2027.77	4^+				E_γ: only from 2012Hi10.
1132.63 *11*		3101.29		1968.486	$1^+,2^+,3^+$				E_γ: only from 2012Hi10.
1132.90 *18*	0.052 *13*	2630.14	$1^+,2^+,3^+$	1497.021	4^+				
1138.63 *22*		3166.51	3^-	2027.77	4^+				E_γ: only from 2012Hi10.
1141.5 *17*		2952.6		1811.14	6^+				E_γ: only from 2012Hi10.
1157.82 *25*		2969.0		1811.14	6^+				E_γ: only from 2012Hi10.
1158.3 *5*		2655.2		1497.021	4^+				E_γ: only from 2012Hi10, doublet (tentative placement).
1171.2 *26*		3139.9	2,3	1968.486	$1^+,2^+,3^+$	D+Q	−1.5 *+15−24*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
1186.7 *2*	0.033 *12*	2706.65	$1^+,2^+,3^+$	1519.998	2^+				
1186.7 *3*		2997.8		1811.14	6^+				δ: $\tan^{-1}(\delta)$=−0.72 *+38−145* gives δ<−0.35, all positive values are possible. E_γ: only from 2012Hi10.
1192.2 *2*	0.061 *13*	2712.23?	$1^+,2^+,3^+$	1519.998	2^+				
1221.75 *12*		2718.80		1497.021	4^+				E_γ: only from 2012Hi10.
1225.27 *2*	4.23 *9*	1968.486	$1^+,2^+,3^+$	743.218	2^+	M1+E2	−0.210 *11*	1.16×10^{-3}	α(K)=0.001001 *14*; α(L)=0.0001210 *17*; α(M)=2.40×10^{-5} *4*; α(N)=4.76×10^{-6} *7*; α(O)=5.22×10^{-7} *8*

$^{128}_{52}Te_{76}$-8

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
									B(E2)(W.u.)=1.08 *+14−15*; B(M1)(W.u.)=0.055 *5* δ: +3.9 *+13−8* or +0.13 *+14−7* from 2008Hi17.
1228.02 *10*	0.29 *3*	2748.66	3^+	1519.998	2^+	M1+E2	−0.03 *+9−10*	1.16×10^{-3}	α(K)=0.001004 *15*; α(L)=0.0001212 *18*; α(M)=2.41×10^{-5} *4*; α(N)=4.77×10^{-6} *7*; α(O)=5.23×10^{-7} *8* B(E2)(W.u.)=0.002 *+13−2*; B(M1)(W.u.)=0.0053 *+17−40* E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator. Mult.,δ: from γ(θ) (2012Hi10) and RUL.
1235.58 *3*	0.95 *4*	1978.80	0^+	743.218	2^+				
1243.96 *13*		2763.97		1519.998	2^+				E_γ: only from 2012Hi10.
1251.81 *8*	0.17 *2*	2748.66	3^+	1497.021	4^+	M1+E2	−0.03 *19*	1.12×10^{-3} *2*	α(K)=0.000963 *16*; α(L)=0.0001162 *19*; α(M)=2.31×10^{-5} *4*; α(N)=4.57×10^{-6} *8*; α(O)=5.01×10^{-7} *9* B(E2)(W.u.)=0.001 *+15−1*; B(M1)(W.u.)=0.0029 *+10−23* δ: from γ(θ) (2012Hi10) and RUL.
1284.54 *3*	1.38 *4*	2027.77	4^+	743.218	2^+	E2		8.71×10^{-4}	α(K)=0.000739 *11*; α(L)=9.06×10^{-5} *13*; α(M)=1.80×10^{-5} *3*; α(N)=3.56×10^{-6} *5*; α(O)=3.86×10^{-7} *6* B(E2)(W.u.)=4.0 *+11−21*
1300.45 *11*	0.084 *10*	2820.71	$(1,2^+)$	1519.998	2^+				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
[x]1324.20 *15*	0.10 *2*								
[x]1329.36 *17*	0.089 *16*								
1349.10 *13*	0.049 *13*	2869.00?	$(1,2^+)$	1519.998	2^+				
1354.95 *9*	0.10 *2*	2851.91	$(4^+,5,6^+)$	1497.021	4^+				
1364.68 *15*	0.036 *11*	2884.51	$1^+,2^+,3^+$	1519.998	2^+	M1+E2	−0.8 *+5−12*	0.00089 *7*	α(K)=0.00074 *6*; α(L)=9.0×10^{-5} *7*; α(M)=1.78×10^{-5} *14*; α(N)=3.5×10^{-6} *3*; α(O)=3.9×10^{-7} *3* B(E2)(W.u.)=0.5 *5*; B(M1)(W.u.)=0.0023 *14* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
1371.55 *13*	0.023 *8*	2891.46	2^+	1519.998	2^+				
1384.46 *25*		2904.42		1519.998	2^+				E_γ: only from 2012Hi10.
[x]1384.64 *9*	0.11 *2*								
1387.76 *16*		2885.02	5	1497.021	4^+	D+Q	−0.13 *+10−9*	0.00090 *1*	α(K)=0.00077 *1* E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
1393.0 *5*	0.0054 *15*	2912.78		1519.998	2^+				E_γ: only from 2012Hi10. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.

$^{128}_{52}Te_{76}$-9

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
1394.45 *34*	0.019 *12*	2891.46	2+	1497.021	4+				E_γ: only from 2012Hi10, doublet. I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
1401.55 *14*		2921.56		1519.998	2+				E_γ: only from 2012Hi10.
1420.30 *3*	0.88 *4*	2163.547	3+	743.218	2+	M1+E2	+0.419 *11*	8.69×10^{-4}	α(K)=0.000712 *10*; α(L)=8.58×10^{-5} *12*; α(M)=1.702×10^{-5} *24*; α(N)=3.37×10^{-6} *5*; α(O)=3.70×10^{-7} *6* B(E2)(W.u.)=0.22 *+5−7*; B(M1)(W.u.)=0.0038 *+7−11* δ: 0.43 *+13−6* from γ(θ) (2012Hi10).
1434.83 *4*	0.47 *3*	2931.86?	3+,4+,5+	1497.021	4+	M1+E2	+4.0 *3*	7.48×10^{-4}	α(K)=0.000599 *9*; α(L)=7.29×10^{-5} *11*; α(M)=1.446×10^{-5} *21*; α(N)=2.86×10^{-6} *4*; α(O)=3.11×10^{-7} *5* E_γ: Doublet (2012Hi10).
1434.85 *6*		2954.87		1519.998	2+				E_γ: only from 2012Hi10, doublet.
1450.28 *3*	2.43 *7*	2193.48	2+	743.218	2+	M1+E2	−0.116 *13*	8.61×10^{-4}	α(K)=0.000697 *10*; α(L)=8.38×10^{-5} *12*; α(M)=1.663×10^{-5} *24*; α(N)=3.30×10^{-6} *5*; α(O)=3.62×10^{-7} *5* B(E2)(W.u.)=0.55 *13*; B(M1)(W.u.)=0.128 *7* δ: −0.03 *+9−6* or +2.5 *5* from 2008Hi17.
1463.32 *7*	0.12 *4*	2983.32?	3+	1519.998	2+	M1+E2	−0.8 *+4−7*	0.00080 *4*	α(K)=0.00064 *4*; α(L)=7.7×10^{-5} *5*; α(M)=1.53×10^{-5} *9*; α(N)=3.04×10^{-6} *17*; α(O)=3.32×10^{-7} *19* B(E2)(W.u.)=4 *3*; B(M1)(W.u.)=0.018 *11* I_γ: from 2012Hi10, other:≤0.18 (1988GoZD). Mult.,δ: from γ(θ) (2012Hi10).
1474.76 *3*	1.34 *4*	2217.95	1+,2+,3+	743.218	2+	M1+E2	+0.16 *16*	8.39×10^{-4} *15*	α(K)=0.000671 *13*; α(L)=8.07×10^{-5} *15*; α(M)=1.60×10^{-5} *3*; α(N)=3.17×10^{-6} *6*; α(O)=3.48×10^{-7} *7* B(E2)(W.u.)=0.1 *+3−1*; B(M1)(W.u.)=0.014 *+18−14* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
1477.15 *25*		2997.49		1519.998	2+				E_γ: only from 2012Hi10. δ: $\tan^{-1}(\delta)$=+0.94 *+100−103* gives δ<−0.07, all positive values are possible.
1486.28 *7*	0.09 *3*	2983.32?	3+	1497.021	4+	M1+E2	−0.9 *+8−7*	0.00078 *6*	α(K)=0.00061 *5*; α(L)=7.4×10^{-5} *6*; α(M)=1.47×10^{-5} *11*; α(N)=2.91×10^{-6} *23*; α(O)=3.2×10^{-7} *3* B(E2)(W.u.)=3 *3*; B(M1)(W.u.)=0.012 *11* I_γ: from 2012Hi10, other:≤0.22 (1988GoZD). Mult.,δ: from γ(θ) (2012Hi10).
1520.02 *5*	0.40 *3*	1519.998	2+	0.0	0+	E2		6.96×10^{-4}	α(K)=0.000529 *8*; α(L)=6.42×10^{-5} *9*; α(M)=1.273×10^{-5} *18*; α(N)=2.52×10^{-6} *4*; α(O)=2.74×10^{-7} *4* B(E2)(W.u.)=0.032 *+8−16*
1534.48 *12*		3054.50		1519.998	2+				E_γ: only from 2012Hi10.

$^{128}_{52}Te_{76}$-10

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
1547.04 *12*	0.087 *16*	3067.15	3	1519.998	2^+	D+Q	+0.09 *+17−15*		Mult.,δ: from γ(θ) (2012Hi10). E_γ: only from 2012Hi10, doublet.
1551.42 *17*		3048.45		1497.021	4^+				
1551.42 *20*		3071.60		1519.998	2^+				E_γ: only from 2012Hi10.
1565.08 *4*	0.34 *2*	2308.30	0^+	743.218	2^+				
1570.61 *18*	0.136 *18*	3067.15	3	1497.021	4^+	D+Q	−0.4 *+3−48*		E_γ: only from 2012Hi10. δ: from γ(θ) (2012Hi10). I_γ: calculated from branching ratios in 2012Hi10 by evaluator.
1574.63 *15*		3071.60		1497.021	4^+	D+Q	−3 *+2−90*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
1580.37 *12*	0.068 *14*	3100.42	1,2,3	1519.998	2^+	D+Q	−4 *+2−12*		Mult.,δ: from γ(θ) (2012Hi10).
1600.6 *3*		3097.6		1497.021	4^+				E_γ: only from 2012Hi10.
1608.88 *3*	1.17 *4*	2352.11	2^+	743.218	2^+	M1+E2	−0.230 *14*	7.55×10^{-4}	α(K)=0.000555 *8*; α(L)=6.66×10^{-5} *10*; α(M)=1.321×10^{-5} *19*; α(N)=2.62×10^{-6} *4*; α(O)=2.88×10^{-7} *4* B(E2)(W.u.)=0.43 *+6−7*; B(M1)(W.u.)=0.0313 *+22−28* δ: −0.19 *10* or +4.5 *+31−14* from 2008Hi17. Both values should have appeared in Table V according to e-mail received from the first author of 2008Hi17.
1617.9 *4*		3137.43	2^+	1519.998	2^+				E_γ: only from 2012Hi10. δ: $\tan^{-1}(\delta)$=−0.97 *+97−94* gives δ>+2.8, all negative values are possible.
[x]1622.82 *15*	0.080 *16*								
1628.25 *11*		3148.35		1519.998	2^+				E_γ: only from 2012Hi10.
1628.39 *8*	0.16 *2*	3125.40?		1497.021	4^+				
1638.77 *23*		3135.80		1497.021	4^+	D+Q	+0.43 *+58−40*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
1638.93 *11*	0.12 *2*	3607.42?		1968.486	$1^+,2^+,3^+$				
1697.2 *5*	39 *2*	3216.59		1519.998	2^+				E_γ: only from 2012Hi10.
1698.6 *11*		3195.6		1497.021	4^+				E_γ: only from 2012Hi10, doublet.
1701.2 *13*		3221.4		1519.998	2^+				
1702.1 *17*		3199.1		1497.021	4^+				E_γ: only from 2012Hi10, doublet.
1724.4 *3*		3221.4		1497.021	4^+				E_γ: only from 2012Hi10.
1729.4 *4*		3249.4		1519.998	2^+				E_γ: only from 2012Hi10.
1731.0 *4*		3251.0		1519.998	2^+				E_γ: only from 2012Hi10.
1735.0 *4*		3255.0		1519.998	2^+				E_γ: only from 2012Hi10.
1738.99 *7*		2482.22		743.218	2^+				E_γ: only from 2012Hi10.
1744.18 *4*	0.38 *2*	2487.44	3^+	743.218	2^+	M1+E2	+0.268 *21*	7.10×10^{-4}	α(K)=0.000468 *7*; α(L)=5.60×10^{-5} *8*; α(M)=1.110×10^{-5} *16*; α(N)=2.20×10^{-6} *3*; α(O)=2.42×10^{-7} *4* B(E2)(W.u.)=0.077 *+21−30*; B(M1)(W.u.)=0.0049 *+12−17*
1750.94 *3*	1.58 *5*	2494.20	$(3)^-$	743.218	2^+	E1+M2	+0.029 *10*	6.47×10^{-4}	α(K)=0.000201 *3*; α(L)=2.37×10^{-5} *4*; α(M)=4.68×10^{-6}

$^{128}_{52}Te_{76}$-11

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
									7; α(N)=9.26×10^{-7} *14*; α(O)=1.015×10^{-7} *15* B(E1)(W.u.)=0.000194 *+20−25*; B(M2)(W.u.)=0.24 *17*
1764.83 *4*	0.69 *3*	2508.06	2$^+$	743.218	2$^+$	M1+E2	+1.8 *3*	6.61×10^{-4} *11*	α(K)=0.000413 *8*; α(L)=4.96×10^{-5} *9*; α(M)=9.82×10^{-6} *18*; α(N)=1.95×10^{-6} *4*; α(O)=2.13×10^{-7} *4* B(E2)(W.u.)=1.32 *+22−25*; B(M1)(W.u.)=0.0019 *6* δ: +0.63 *+36−23* from 2008Hi17. −0.19 *10* in Table V is incorrect.
1766.3 *4*		3286.3		1519.998	2$^+$				E_γ: only from 2012Hi10.
1776.9 *4*		3296.9		1519.998	2$^+$				E_γ: only from 2012Hi10.
1783.8 *4*		3303.8		1519.998	2$^+$				E_γ: only from 2012Hi10.
1799.41 *9*	0.11 *2*	3296.46?	(2$^+$,3,4$^+$)	1497.021	4$^+$				
1807.30 *6*	0.21 *2*	2550.52?	3$^+$	743.218	2$^+$	M1+E2	−0.03 *+12−13*	7.04×10^{-4}	α(K)=0.000438 *7*; α(L)=5.24×10^{-5} *8*; α(M)=1.038×10^{-5} *15*; α(N)=2.06×10^{-6} *3*; α(O)=2.26×10^{-7} *4* B(E2)(W.u.)=0.001 *+7−1*; B(M1)(W.u.)=0.0044 *+9−11* Mult.,δ: from γ(θ) (2012Hi10) and RUL, other −0.06 *5* or −3.2 *+5−7* (1988GoZD).
1886.92 *4*	0.64 *3*	2630.14	1$^+$,2$^+$,3$^+$	743.218	2$^+$	M1+E2	+1.91 *11*	6.59×10^{-4}	α(K)=0.000362 *6*; α(L)=4.33×10^{-5} *7*; α(M)=8.59×10^{-6} *13*; α(N)=1.701×10^{-6} *25*; α(O)=1.86×10^{-7} *3* B(E2)(W.u.)=4.7 *6*; B(M1)(W.u.)=0.0069 *11* δ: +0.63 *+15−8* (2012Hi10).
1900.05 *6*	0.16 *2*	2643.28		743.218	2$^+$				
1963.42 *4*	0.38 *2*	2706.65	1$^+$,2$^+$,3$^+$	743.218	2$^+$	M1+E2	+1.4 *+127−9*	6.70×10^{-4} *22*	α(K)=0.000341 *20*; α(L)=4.07×10^{-5} *24*; α(M)=8.1×10^{-6} *5*; α(N)=1.60×10^{-6} *10*; α(O)=1.75×10^{-7} *11* B(E2)(W.u.)=3 *+20−3*; B(M1)(W.u.)=0.009 *+112−9* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
1969.00 *4*	≤0.55	2712.23?	1$^+$,2$^+$,3$^+$	743.218	2$^+$	M1+E2	−0.9 *+11−67*	6.80×10^{-4} *25*	α(K)=0.000348 *23*; α(L)=4.2×10^{-5} *3*; α(M)=8.2×10^{-6} *6*; α(N)=1.63×10^{-6} *11*; α(O)=1.79×10^{-7} *13* B(E2)(W.u.)=1.0 *+19−10*; B(M1)(W.u.)=0.007 *+12−7* I_γ: authors of 1988GoZD give≤0.52 *3*. Mult.,δ: from γ(θ) (2012Hi10) and RUL.
2005.45 *5*	0.25 *2*	2748.66	3$^+$	743.218	2$^+$	M1+E2	−0.03 *16*	7.00×10^{-4}	α(K)=0.000353 *6*; α(L)=4.21×10^{-5} *6*; α(M)=8.35×10^{-6} *12*; α(N)=1.655×10^{-6} *24*; α(O)=1.82×10^{-7} *3* B(E2)(W.u.)=0.0002 *+17−2*; B(M1)(W.u.)=0.0010 *+4−8* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
2020.73 *17*		2763.97		743.218	2$^+$				E_γ: only from 2012Hi10.
[x]2062.38 *14*	0.051 *13*								

$^{128}_{52}Te_{76}$-12

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
2077.53 *6*	0.20 *2*	2820.71	(1,2$^+$)	743.218	2$^+$				
2087.62 *17*		2830.66		743.218	2$^+$				E_γ: only from 2012Hi10.
2125.59 *17*	0.046 *12*	2869.00?	(1,2$^+$)	743.218	2$^+$				δ: $\tan^{-1}(\delta)$=−0.94 *+76−78* gives +6<δ<−0.2 (2012Hi10).
2141.25 *6*	0.18 *2*	2884.51	1$^+$,2$^+$,3$^+$	743.218	2$^+$	M1+E2	−2.5 *+27−20*	0.00069 *3*	α(K)=0.000283 *25*; α(L)=3.4×10^{-5} *3*; α(M)=6.7×10^{-6} *6*; α(N)=1.32×10^{-6} *12*; α(O)=1.45×10^{-7} *14* B(E2)(W.u.)=0.60 *21*; B(M1)(W.u.)=0.0007 *+13−7* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
2148.22 *15*	0.050 *13*	2891.46	2$^+$	743.218	2$^+$	M1+E2	−0.94 *+60−69*	7.04×10^{-4} *15*	α(K)=0.000293 *12*; α(L)=3.49×10^{-5} *14*; α(M)=6.9×10^{-6} *3*; α(N)=1.37×10^{-6} *6*; α(O)=1.50×10^{-7} *7* B(E2)(W.u.)=0.12 *+9−10*; B(M1)(W.u.)=0.0009 *7* Mult.,δ: from γ(θ) (2012Hi10) and RUL.
2161.36 *44*		2904.42		743.218	2$^+$				E_γ: only from 2012Hi10.
2169.53 *6*	0.21 *2*	2912.78		743.218	2$^+$				
2178.5 *24*		2921.56		743.218	2$^+$				E_γ: only from 2012Hi10.
2193.42 *6*	0.27 *2*	2193.48	2$^+$	0.0	0$^+$	E2		6.98×10^{-4}	α(K)=0.000267 *4*; α(L)=3.18×10^{-5} *5*; α(M)=6.30×10^{-6} *9*; α(N)=1.247×10^{-6} *18*; α(O)=1.366×10^{-7} *20* B(E2)(W.u.)=0.58 *5*
2211.71 *15*		2954.87		743.218	2$^+$	D+Q	+0.8 *+22−3*		E_γ: only from 2012Hi10. Mult.,δ: from γ(θ) (2012Hi10).
2211.71 *7*	≤0.19	3731.72?		1519.998	2$^+$				I_γ: authors of 1988GoZD give≤0.17 *2*.
2217.68 *13*	0.063 *13*	2217.95	1$^+$,2$^+$,3$^+$	0.0	0$^+$				
2240.0 *3*	0.051 *13*	2983.32?	3$^+$	743.218	2$^+$				
[x]2251.26 *10*	0.047 *12*								
2286.88 *8*	0.14 *2*	3030.11	1,2$^+$	743.218	2$^+$	D+Q	−1.6 *+9−46*		B(E2)(W.u.)=(0.12 *+8−10*); B(M1)(W.u.)=(0.0004 *4*) Mult.,δ: from γ(θ) (2012Hi10).
2311.3 *2*		3054.50		743.218	2$^+$				E_γ: only from 2012Hi10.
2323.80 *9*	0.16 *2*	3067.15	3	743.218	2$^+$	D+Q	+0.32 *+26−22*		Mult.,δ: from γ(θ) (2012Hi10).
2328.5 *3*		3071.60		743.218	2$^+$				E_γ: only from 2012Hi10.
2352.08 *8*	0.20 *2*	2352.11	2$^+$	0.0	0$^+$	E2		7.38×10^{-4}	α(K)=0.000236 *4*; α(L)=2.80×10^{-5} *4*; α(M)=5.54×10^{-6} *8*; α(N)=1.098×10^{-6} *16*; α(O)=1.203×10^{-7} *17* B(E2)(W.u.)=0.22 *3* E_γ: 2353.25 *14* keV from 2008Hi17.
2357.22 *13*	0.077 *14*	3100.42	1,2,3	743.218	2$^+$	D+Q	+1.3 *+14−7*		Mult.,δ: from γ(θ) (2012Hi10).
2391.3 *41*		3135.80		743.218	2$^+$				E_γ: only from 2012Hi10.
2393.8 *3*	0.078 *14*	3137.43	2$^+$	743.218	2$^+$				
2397.3 *55*		3139.9	2,3	743.218	2$^+$				δ: $\tan^{-1}(\delta)$=+0.41 *+148−44* gives wide range of

$^{128}_{52}Te_{76}$-13

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#@]	α	Comments
									negative and positive values, except δ=−0.04 to −3.0 region seems not permitted.
									E_γ: only from 2012Hi10.
2405.37 *19*		3148.35		743.218	2^+				E_γ: only from 2012Hi10.
2407.60[&] *19*		3150.84	$(6)^+$	743.218	2^+				E_γ: only from 2012Hi10.
2441.5 *8*		3184.84		743.218	2^+				E_γ: only from 2012Hi10.
2445.0 *4*		3188.2		743.218	2^+	D+Q	−1.7 *+17−28*		Mult.,δ: from γ(θ) (2012Hi10).
									E_γ: only from 2012Hi10.
2476.1 *4*		3219.3		743.218	2^+				E_γ: only from 2012Hi10.
2508.04 *6*	0.24 *2*	2508.06	2^+	0.0	0^+	E2		7.84×10^{-4}	α(K)=0.000210 *3*; α(L)=2.49×10^{-5} *4*; α(M)=4.94×10^{-6} *7*; α(N)=9.78×10^{-7} *14*; α(O)=1.073×10^{-7} *15* B(E2)(W.u.)=0.104 *+17−20*
2543.1 *2*	0.032 *12*	4063.11?		1519.998	2^+				
2553.3 *2*	0.052 *13*	3296.46?	$(2^+,3,4^+)$	743.218	2^+				
[x]2587.7 *2*	0.054 *13*								
[x]2664.4 *5*	0.074 *14*								
[x]2698.1 *5*	0.062 *13*								
2706.5 *3*	0.091 *17*	2706.65	$1^+,2^+,3^+$	0.0	0^+				
2712.2 *6*	0.045 *12*	2712.23?	$1^+,2^+,3^+$	0.0	0^+				
[x]2725.2 *3*	0.064 *13*								
2763.96 *35*		2763.97		0.0	0^+				E_γ: only from 2012Hi10.
[x]2785.2 *3*	0.088 *16*								
2821.0 *4*	0.081 *16*	2820.71	$(1,2^+)$	0.0	0^+				
2864.0 *8*	0.034 *12*	3607.42?		743.218	2^+				
2869.0 *3*	0.094 *18*	2869.00?	$(1,2^+)$	0.0	0^+				
2891.34 *12*	0.24 *2*	2891.46	2^+	0.0	0^+	E2		9.05×10^{-4}	α(K)=0.0001645 *23*; α(L)=1.94×10^{-5} *3*; α(M)=3.84×10^{-6} *6*; α(N)=7.61×10^{-7} *11*; α(O)=8.36×10^{-8} *12* B(E2)(W.u.)=0.28 *+5−6*
[x]2907.5 *3*	0.043 *12*								
[x]2916.6 *4*	0.036 *12*								
2988.2 *5*	0.031 *12*	3731.72?		743.218	2^+				
2997.65 *19*		2997.49		0.0	0^+				E_γ: only from 2012Hi10.
3030.1 *4*	0.063 *14*	3030.11	$1,2^+$	0.0	0^+				
[x]3055.5 *7*	0.036 *12*								
3095.1 *6*	0.038 *12*	3838.4?	$(1,2^+)$	743.218	2^+				
3104.36 *17*	0.16 *2*	3104.40?		0.0	0^+				
3137.5 *3*	0.11 *2*	3137.43	2^+	0.0	0^+	E2		9.87×10^{-4}	α(K)=0.0001432 *20*; α(L)=1.686×10^{-5} *24*; α(M)=3.34×10^{-6} *5*; α(N)=6.61×10^{-7} *10* α(O)=7.26×10^{-8} *11* B(E2)(W.u.)=0.23 *+7−8*
3184.80 *13*	0.15 *2*	3184.84		0.0	0^+				
[x]3291.6 *4*	0.053 *13*								
3319.8 *3*	0.067 *14*	4063.11?		743.218	2^+				

$^{128}_{52}Te_{76}$-14

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10 (continued)

γ(^{128}Te) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π
[x]3477.1 *5*	0.039 *12*				
[x]3804.9 *7*	0.033 *12*				
3838.3 *9*	0.039 *12*	3838.4?	(1,2$^+$)	0.0	0$^+$

[†] From 1988GoZD unless otherwise stated.
[‡] Relative to I(743.22γ)=100, measured at θ=90° to the neutron beam direction (1988GoZD).
[#] Multipolarities and mixing ratios are based on linear polarization measurements and on A_2 and A_4 values in γ(θ) (1988GoZD) unless otherwise stated.
[@] If No value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[&] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

$^{128}_{52}Te_{76}$-15

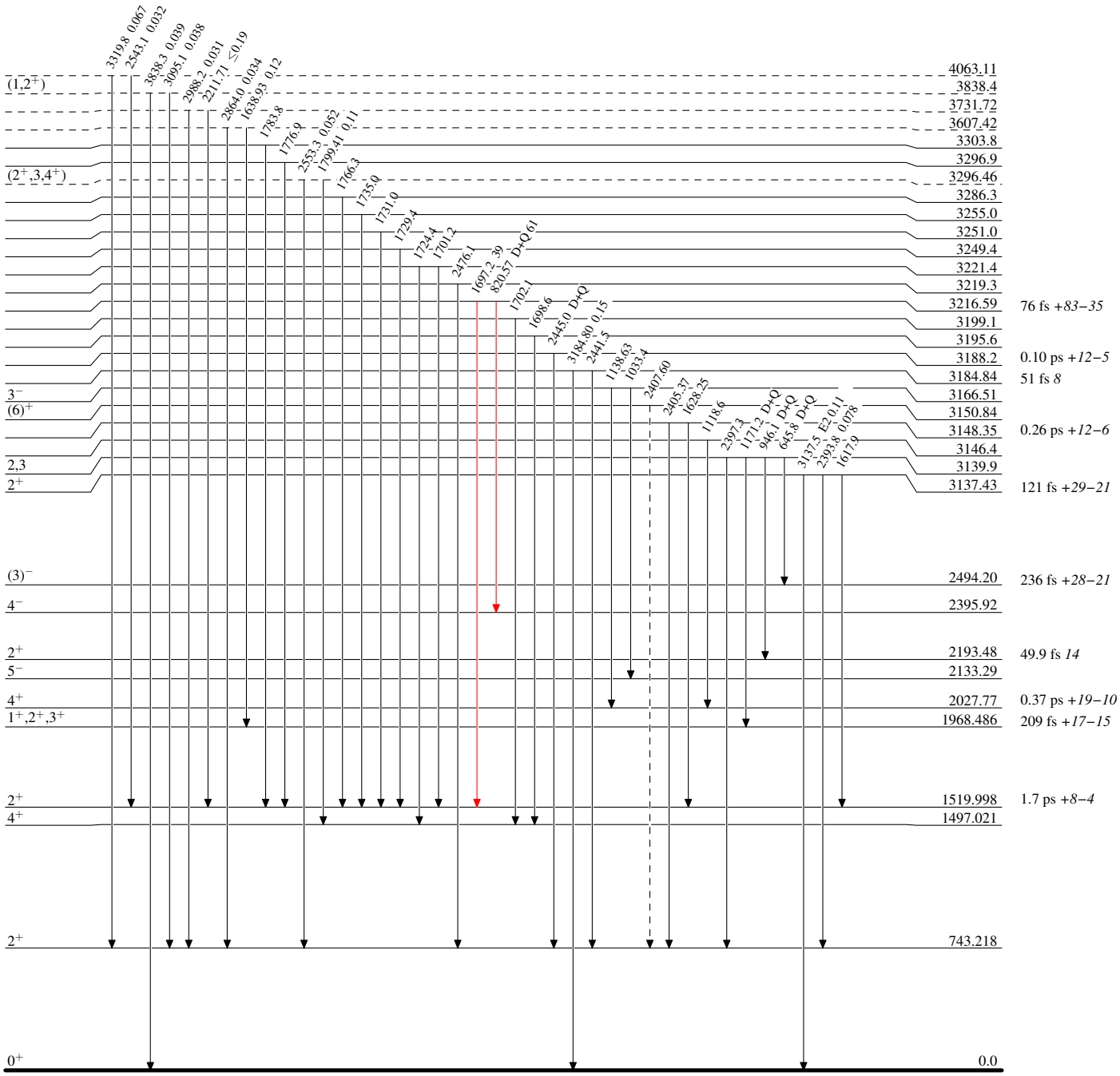
^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

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)

Level Scheme

Intensities: Relative I_γ



$^{128}_{52}Te_{76}$

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

Level Scheme (continued)

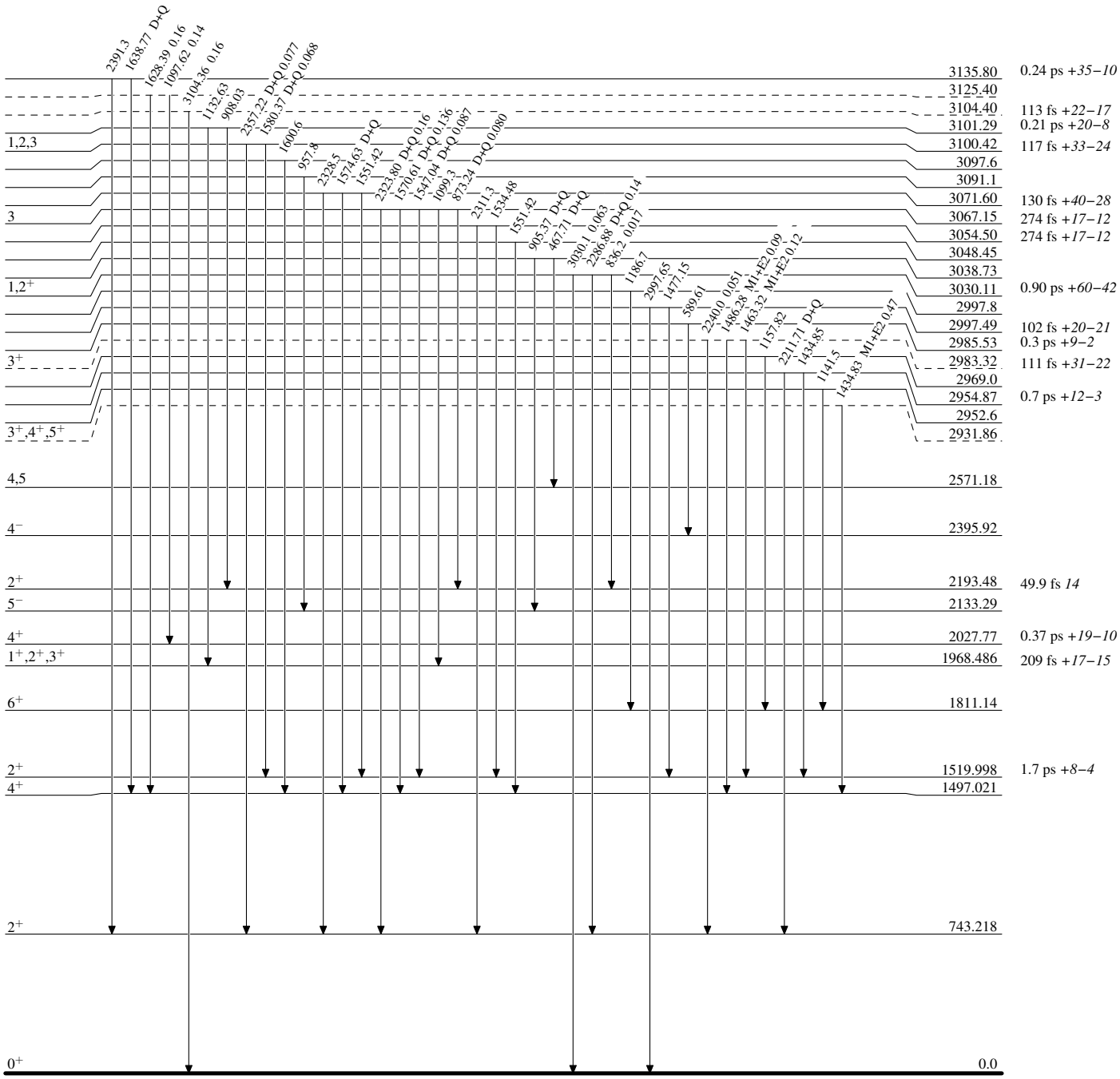
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



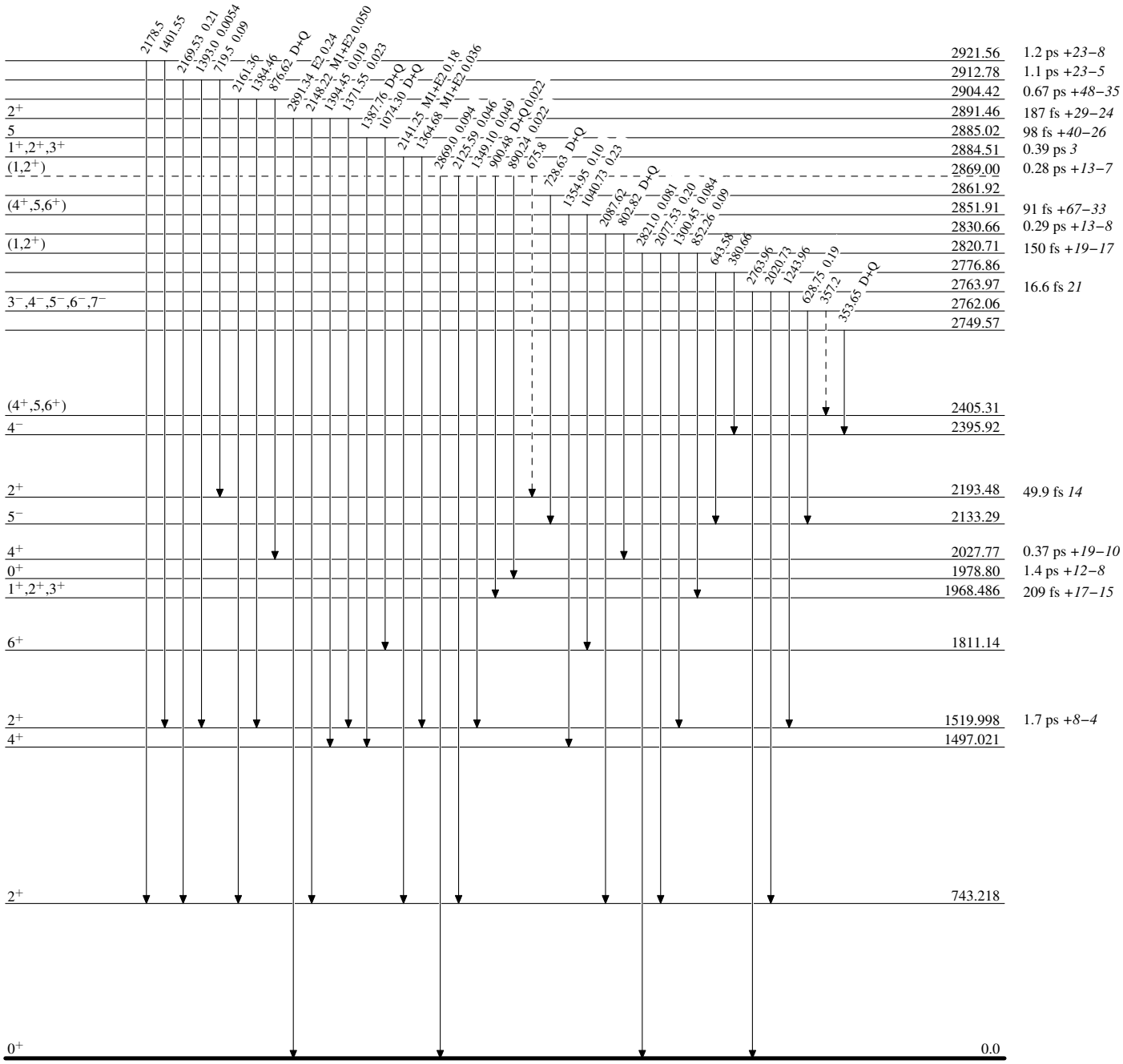
$^{128}_{52}Te_{76}$

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

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)



$^{128}_{52}Te_{76}$

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

Level Scheme (continued)

Intensities: Relative I_γ

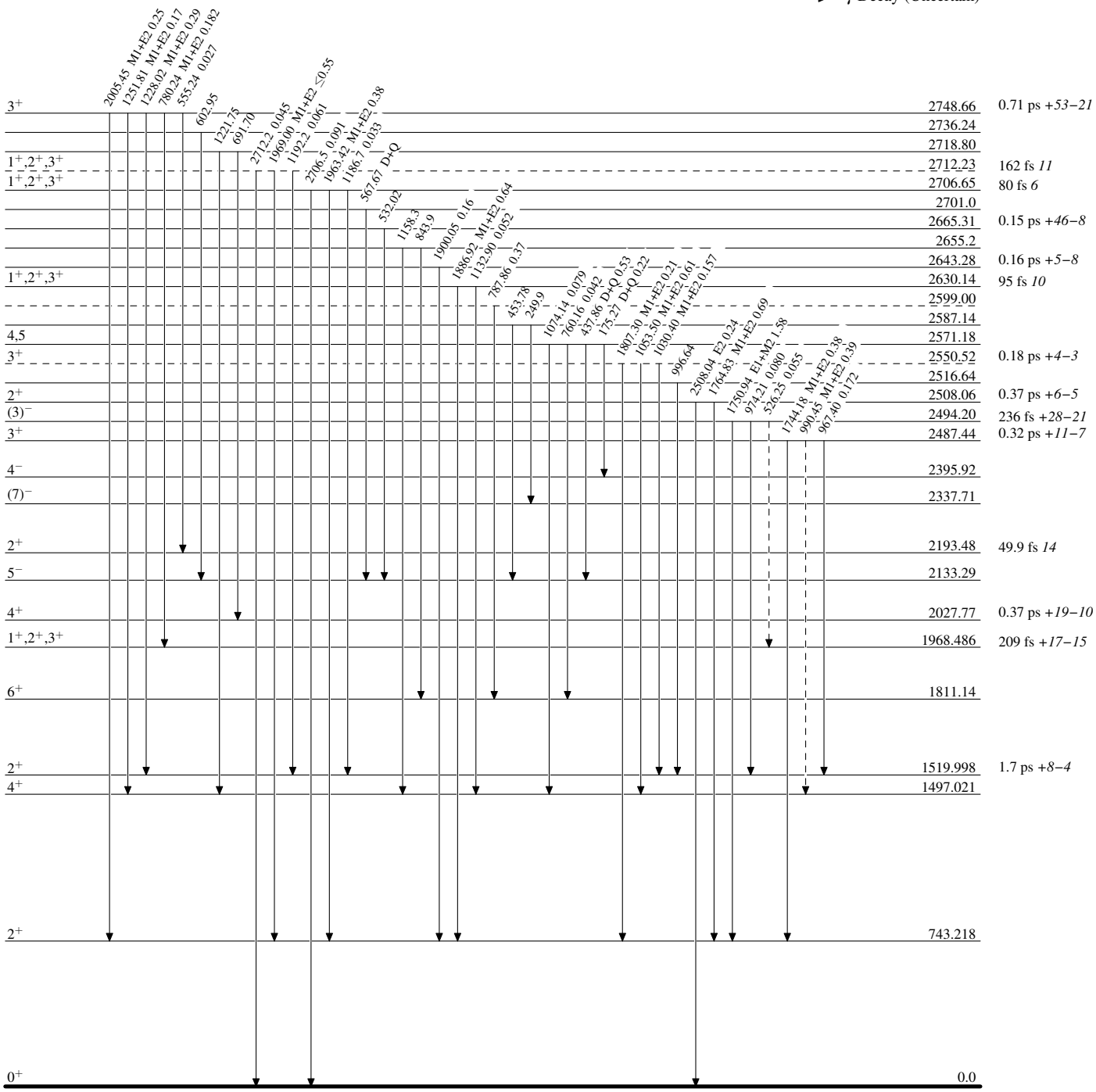
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

γ Decay (Uncertain)



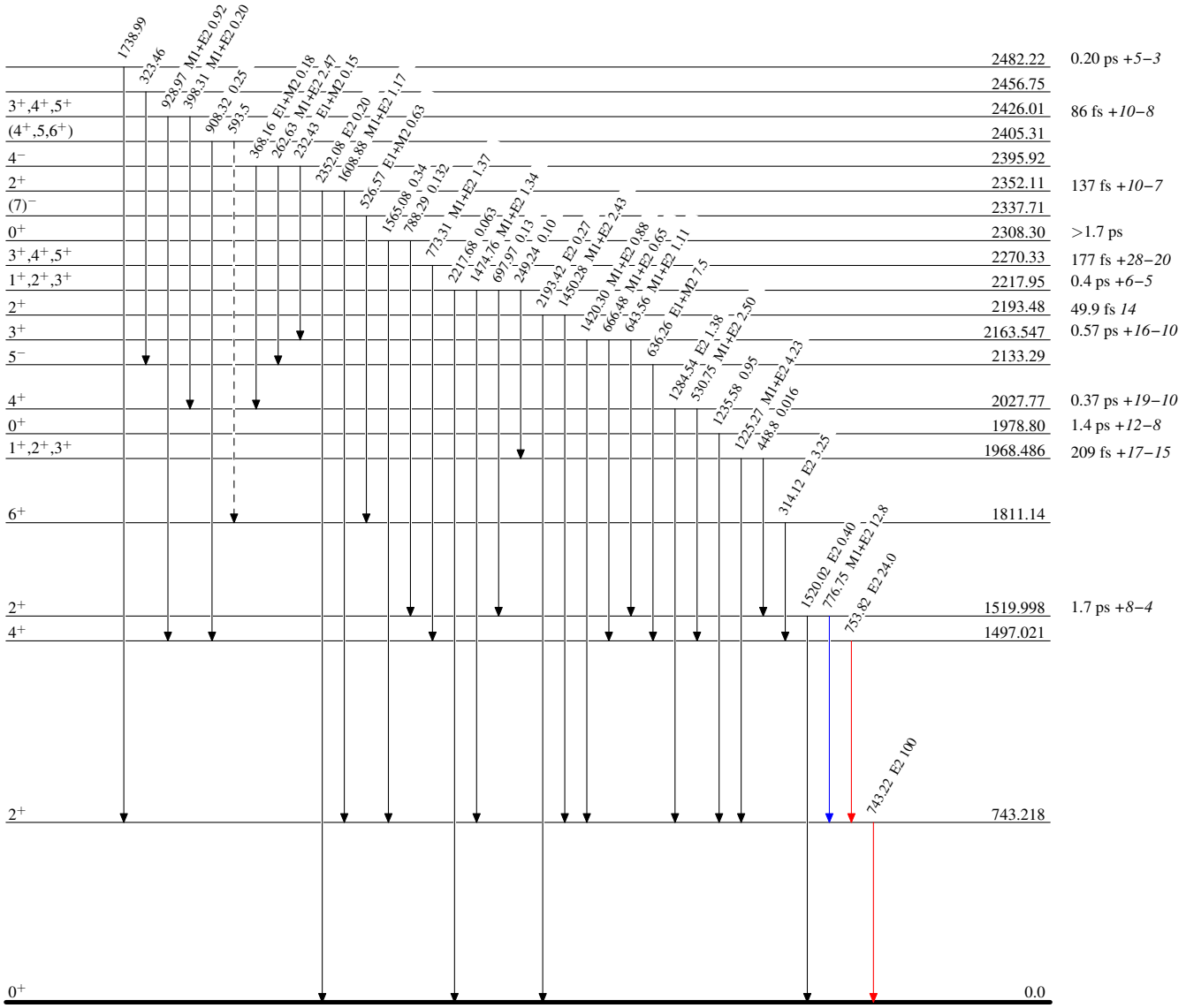
$^{128}_{52}Te_{76}$

^{128}Te(n,n′γ) 1988GoZD,2008Hi17,2012Hi10

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)



$^{128}_{52}Te_{76}$