^{161}Tb β^- decay 1984Vy01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 112,2497 (2011)	1-Jun-2011

Parent: ^{161}Tb: E=0; J$^{\pi}$=3/2$^+$; T$_{1/2}$=6.89 d *2*; Q(β^-)=593.0 *13*; %β^- decay=100.0
^{161}Tb-J$^{\pi}$: Additional information 1.
^{161}Tb-T$_{1/2}$: Additional information 2.
^{161}Tb-Q(β^-): Additional information 3.
Additional information 4.

All ^{161}Tb sources were made by the ^{160}Gd(n,γ) reaction followed by β^- decay, unless otherwise noted. Usually an enriched target was used and the Tb was chemically separated.

1961Gr01: ce′s measured in iron-free magnetic spectrometer. Abstract only, but 1974Tu05 have some additional information.

1964Fu11: Measured γ and ce singles and $\gamma\gamma$, γ-ce and γ-β^- coincidences with NaI detectors and magnetic spectrometers. Report 9 γ′s.

1965Su04: Reanalyzed $\gamma\gamma(\theta)$ data of 1962Su03 with ce data of 1961Gr01 to obtain two mixing ratios and one penetration parameter.

1966Fu07: Measured γ′s with small Ge detector. Report 15 γ′s (i.e., 15 Iγ values).

1966Gi02: ce′s measured in magnetic spectrometer for 25 and 48 γ′s.

1971Kr19: Measured $\gamma(\theta$,H) with oriented ^{161}Tb nuclei. Deduced δ for 49 and 75 γ′s.

1983Hn01: Measured γ energies and intensities for 18 γ′s and K x and computed β^- feeding intensities. Deduced penetration parameter of 57 G.

1983Ri15: Measured $\gamma(\theta)$ for oriented nuclei to determine moments of ^{161}Tb ground state and δ for γ′s in ^{161}Dy.

1984Vy01: Measured γ energies and intensities for 33 γ′s.

1999Ts02: Measured the parity-odd circular polarizations of the 25.6 and 74.4 gammas using a Compton polarimeter.

Theory calculations related to log *ft* values: 1974Bo41 and 1979Mi17.

^{161}Dy Levels

Decay scheme is that of 1984Vy01, which is the same as that proposed by 1966Fu07 and each succeeding investigator.

Studies of this decay not otherwise referenced here include 1956Co58, 1956Sm10, 1958Be01, 1958Mc11, 1962Su03, 1963Ho15, 1963Ko08, 1964Fu11, 1968Mu11, 1971Ba28, 1972De67, 1972WyZZ, and 1984De49.

Additional information 5.

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
0[@]	5/2$^+$	stable	Additional information 6.
25.65136[&] *3*	5/2$^-$	29.5 ns *4*	T$_{1/2}$: weighted average of: 27 ns *2* (1957Ve17); 28 ns *2* (1958Ha13); 29 ns *3* (1959Fa06); 29.4 ns *10* (1965Me08); 28.4 ns *12* (1969Be54); and 30.0 ns *5* (1977Pe20).
43.818[@] *4*	7/2$^+$		
74.56670[a] *5*	3/2$^-$	3.14 ns *4*	T$_{1/2}$: weighted average of: 2.3 ns *7* (1957Ve17 or 1960Ve03); 3.0 ns *3* (1985Ha13); 3.1 ns *6* (1959Fa06); 2.95 ns *15* (1965Ay02); 3.36 ns *10* (from 1965Me08 but with uncertainty increased from 0.05 because value is inconsistent with other values); 3.34 ns *18* (1969Be49); 3.08 ns *5* (1969Be54), and 3.16 ns *5* (1977Pe20).
100.46[@] *3*	9/2$^+$		
103.067[&] *3*	7/2$^-$		
131.7585[a] *3*	5/2$^-$	0.145 ns *15*	T$_{1/2}$: from 1969Be49. Others:≤3 ns (1958Ha13);≤0.3 ns (1965Me08);≤0.3 ns (1969Be54).
212.923[a] *25*	7/2$^-$		
366.968[b] *7*	1/2$^-$		
418.238[b] *9*	3/2$^-$		

Continued on next page (footnotes at end of table)

^{161}Tb β^- decay 1984Vy01 (continued)

^{161}Dy Levels (continued)

E(level)[†]	J$^{\pi}$[‡]
451.455[b] *24*	5/2$^-$
550.236[c] *15*	3/2$^+$

[†] From a least-squares fit to the γ energies.
[‡] From the adopted values. See the 'Adopted Levels' data set for further discussion.
[#] Level half-lives include data from ^{161}Tb β^- decay only. See the Adopted Levels for additional data on these and other levels.
[@] Band(A): g.s. band. configuration=5/2[642].
[&] Band(B): 5/2[523] band.
[a] Band(C): 3/2[521] band.
[b] Band(D): 1/2[521] band.
[c] Band(E): ΔN=2−mixed 3/2[402]+3/2[651] band. In these studies, this band has often been assigned simply as 3/2[651], but the evaluator believes that the ΔN=2−mixed configuration assignment is more appropriate here.

β^- radiations

E(decay)	E(level)	Iβ^-[†‡]	Log *ft*	Comments
(42.8 *13*)	550.236	0.064 *4*	6.33 *6*	av Eβ=10.9 *4*
(141.5 *13*)	451.455	0.0100 *11*	8.73 *5*	av Eβ=37.7 *4*
(174.8 *13*)	418.238	0.0331 *21*	8.49 *3*	av Eβ=47.2 *4*
(226.0 *13*)	366.968	0.065 *5*	8.55 *4*	av Eβ=62.3 *5*
(380.1 *13*)	212.923	0.0117 *16*	9.90[1u] *6*	av Eβ=124.0 *5*
460	131.7585	25.7 *16*	6.96 *3*	av Eβ=137.7 *5* E(decay): from 1958Ha13 and 1964Fu11.
522	74.56670	65 *4*	6.73 *3*	av Eβ=157.4 *5* E(decay): unweighted average from 1956Sm10, 1958Ha13 and 1964Fu11.
(567.3 *13*)	25.65136	5 *5*	>7.5	av Eβ=174.6 *5* Iβ^-: see note on ground-state Iβ.
589	0	5 *5*	>7.5	av Eβ=183.7 *5* E(decay): unweighted average from 1958Ha13, 1964Fu11, 1963Ko08, and 1956Sm10. Iβ^-: the 10% β^- transition reported by 1964Fu11 to both the 0 and 25 levels has been assumed by the evaluator to be equally divided between them.

[†] From γ-intensity balance, except where noted otherwise.
[‡] Absolute intensity per 100 decays.

γ(^{161}Dy)

Iγ normalization: normalization is calculated to give 100% feeding of the ground state, including a 5% β^- branch to ground state.
Decay scheme is that of 1984Vy01, which is the same as that proposed by 1966Fu07 and each succeeding investigator.
Studies of this decay not otherwise referenced here include 1956Co58, 1956Sm10, 1958Be01, 1958Mc11, 1962Su03, 1963Ho15, 1963Ko08, 1964Fu11, 1968Mu11, 1971Ba28, 1972De67, 1972WyZZ, and 1984De49.

E_γ[†]	I_γ[#@b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	$I_{(\gamma+ce)}$[b]	Comments
(18.15[a] 5)		43.818	7/2$^+$	25.65136	5/2$^-$	E1		5.93 10	1.4 5	ce(L)/(γ+ce)=0.668 7; ce(M)/(γ+ce)=0.151 3; ce(N+)/(γ+ce)=0.0364 8 ce(N)/(γ+ce)=0.0327 7; ce(O)/(γ+ce)=0.00360 8; ce(P)/(γ+ce)=9.00×10^{-5} 19 $I_{(\gamma+ce)}$: calculated by evaluator from ^{161}Ho ε decay data.
25.65135[‡] 3	227 10	25.65136	5/2$^-$	0	5/2$^+$	E1		2.29		L1/L2=1.39 3; L1/L3=1.00 2 α(L)=1.79 3; α(M)=0.399 6; α(N+..)=0.0984 14 α(N)=0.0878 13; α(O)=0.01035 15; α(P)=0.000297 5 δ: from their measured x/γ ratio, 1971St38 report δ <0.032. From L-subshell ratios, 1966Gi02 give δ <0.010. The evaluator feels that this limit is too optimistic. L1/L2,L1/L3: subshell ratios are from 1961Gr01, as quoted in 1974Tu05. From Compton polarimetry, 1999Ts02 report the value -(3.8 8)×10^{-3} for the parity-odd circular polarization of this G.
28.701 12	0.358 22	131.7585	5/2$^-$	103.067	7/2$^-$	M1+E2	0.036 +8−10	15.5 5		α(L)=12.1 4; α(M)=2.68 9; α(N+..)=0.713 22 α(N)=0.619 19; α(O)=0.0893 24; α(P)=0.00484 7
43.81 3	0.59 6	43.818	7/2$^+$	0	5/2$^+$	M1+E2	0.216 8	7.7 3		α(L)=5.94 21; α(M)=1.36 5; α(N+..)=0.352 13 α(N)=0.310 12; α(O)=0.0409 14; α(P)=0.001339 20 δ: from L-subshell ratios in ^{161}Tb β^- decay, 1961Gr01 report %E2=4, with no uncertainty given.
48.91533[‡] 5	167 4	74.56670	3/2$^-$	25.65136	5/2$^-$	M1+E2	−0.056 1	3.19		α(L)=2.49 4; α(M)=0.550 8; α(N+..)=0.1463 21 α(N)=0.1269 18; α(O)=0.0183 3; α(P)=0.001003 14 Mult.: deduced penetration parameter is

$^{161}_{66}$Dy$_{95}$-3

γ(^{161}Dy) (continued)

E_γ[†]	I_γ[#@b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
									λ=+2.5 *23* (1982Bh07,1985Bh08). These authors derived δ^2=0.0036 *2* In their analysis. δ: 1966Gi02 report %E2=0.310 *5*, from L- and M-subshell ratios. In computing the listed δ value, the evaluator has doubled the quoted uncertainty. The sign is from 1983Ri15, $\gamma(\theta)$, who report δ=−0.067 *42*. Other: δ=−0.01 *6*, from $\gamma(\theta)$ (1971Kr19).
(56.64[a] *3*)		100.46	9/2$^+$	43.818	7/2$^+$	M1+E2	0.22 *3*	12.91 *25*	α(K)=9.94 *18*; α(L)=2.31 *21*; α(M)=0.52 *5*; α(N+..)=0.136 *13* α(N)=0.120 *12*; α(O)=0.0162 *14*; α(P)=0.000631 *11*
57.1917[‡] *3*	17.5 *5*	131.7585	5/2$^-$	74.56670	3/2$^-$	M1+E2	−0.187 *16*	12.39 *19*	α(K)=9.78 *15*; α(L)=2.03 *10*; α(M)=0.459 *23*; α(N+..)=0.120 *6* α(N)=0.105 *5*; α(O)=0.0145 *6*; α(P)=0.000619 *10* E_γ: from the evaluation by 1999He10. Mult.: deduced penetration parameter is λ=−5 *5* from λ=−7 *+6−8* (1965Su04,1966Su03) and λ=−4.0 *42* (1983Hn01). Values of δ=−0.22 and δ=−0.20, respectively, were used In these authors′ analyses. δ: 1961Gr01 report %E2=3, from L-subshell ratios. 1965Su04 report δ=−0.22 *2*, from $\gamma\gamma(\theta)$. 1983Ri15, from $\gamma(\theta)$, give δ=−0.14 *10*. 1983Hn01 report %E2=3.8 *4*, deduced from x/γ ratios and a particular choice of L1/L2 and Li/L3 ratios.
59.243 *12*	0.218 *21*	103.067	7/2$^-$	43.818	7/2$^+$	E1		1.220	α(K)=0.999 *14*; α(L)=0.1733 *25*; α(M)=0.0381 *6*; α(N+..)=0.00974 *14* α(N)=0.00858 *12*; α(O)=0.001125 *16*; α(P)=4.32×10^{-5} *6* δ: from $\gamma(\theta)$, δ=−0.1 *+5−3* (1983Ri15).
74.56669[‡] *6*	100 *2*	74.56670	3/2$^-$	0	5/2$^+$	E1		0.672	α(K)=0.556 *8*; α(L)=0.0909 *13*; α(M)=0.0200 *3*; α(N+..)=0.00514 *8* α(N)=0.00451 *7*; α(O)=0.000603 *9*; α(P)=2.46×10^{-5} *4* δ: δ=0.00 *3*. An average of: −0.006 *20*, from $\gamma(\theta)$ (1983Ri15); 0.06 *+3−6*, from $\gamma\gamma(\theta)$ (1966Su03); and +0.08 *10*, from $\gamma(\theta)$ (1971Kr19).
77.422 *5*	0.585 *20*	103.067	7/2$^-$	25.65136	5/2$^-$	M1+E2	−1.050 *8*	6.15	α(K)=3.03 *5*; α(L)=2.41 *4*; α(M)=0.572 *9*; α(N+..)=0.1444 *22* α(N)=0.1285 *20*; α(O)=0.01569 *24*; α(P)=0.0001691 *25* δ: 1961Gr01 report %E2=47, from L-subshell ratios. From $\gamma(\theta)$, 1983Ri15 report δ=−1.1 *+3−16*. From Compton polarimetry, 1999Ts02 report the value -(7.0 *15*)×10^{-5} for the parity-odd circular polarization of this G.
81.27 *5*	0.0220 *24*	212.923	7/2$^-$	131.7585	5/2$^-$	M1+E2	0.18 *4*	4.40	α(K)=3.60 *6*; α(L)=0.62 *4*; α(M)=0.139 *10*; α(N+..)=0.0368 *25* α(N)=0.0320 *22*; α(O)=0.0045 *3*; α(P)=0.000224 *4*

$^{161}_{66}$Dy$_{95}$-4

$\gamma(^{161}Dy)$ (continued)

E_γ[†]	I_γ[#@b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[&]	α[c]	Comments
84.73 *10*	0.0041 *15*	451.455	5/2⁻	366.968	1/2⁻	[E2]		5.07	α(K)=1.648 *24*; α(L)=2.63 *4*; α(M)=0.632 *10*; α(N+..)=0.1586 *24* α(N)=0.1416 *22*; α(O)=0.0169 *3*; α(P)=6.86×10^{-5} *10*
87.941 *4*	1.79 *4*	131.7585	5/2⁻	43.818	7/2⁺	(E1)		0.435	α(K)=0.362 *5*; α(L)=0.0573 *8*; α(M)=0.01256 *18*; α(N+..)=0.00325 *5* α(N)=0.00285 *4*; α(O)=0.000385 *6*; α(P)=1.638×10^{-5} *23*
100.5 *1*	0.0010 *5*	100.46	9/2⁺	0	5/2⁺	(E2)		2.66	α(K)=1.109 *16*; α(L)=1.195 *18*; α(M)=0.286 *5*; α(N+..)=0.0719 *11* α(N)=0.0642 *10*; α(O)=0.00771 *12*; α(P)=4.60×10^{-5} *7*
103.065 *4*	0.99 *4*	103.067	7/2⁻	0	5/2⁺	E1		0.285	α(K)=0.238 *4*; α(L)=0.0368 *6*; α(M)=0.00806 *12*; α(N+..)=0.00209 *3* α(N)=0.00183 *3*; α(O)=0.000250 *4*; α(P)=1.101×10^{-5} *16*
106.113 *3*	0.763 *24*	131.7585	5/2⁻	25.65136	5/2⁻	M1+E2	−0.85 *35*	2.09 *5*	α(K)=1.39 *17*; α(L)=0.54 *15*; α(M)=0.13 *4*; α(N+..)=0.032 *10* α(N)=0.028 *9*; α(O)=0.0036 *10*; α(P)=7.8×10^{-5} *15* Mult.: from L-subshell ratios (1961Gr01). δ: from γ(θ) (1983Ri15).
(109.83[a] *4*)		212.923	7/2⁻	103.067	7/2⁻	(M1)		1.83	α(K)=1.541 *22*; α(L)=0.227 *4*; α(M)=0.0498 *7*; α(N+..)=0.01329 *19* α(N)=0.01151 *17*; α(O)=0.001683 *24*; α(P)=9.61×10^{-5} *14*
112.60 *15*	0.0011 *5*	212.923	7/2⁻	100.46	9/2⁺	E1		0.225	α(K)=0.188 *3*; α(L)=0.0287 *5*; α(M)=0.00629 *10*; α(N+..)=0.001636 *24* α(N)=0.001431 *21*; α(O)=0.000196 *3*; α(P)=8.82×10^{-6} *13*
131.8 *1*	≈0.001	131.7585	5/2⁻	0	5/2⁺	[E1]		0.1475	α(K)=0.1238 *18*; α(L)=0.0186 *3*; α(M)=0.00406 *6*; α(N+..)=0.001060 *15* α(N)=0.000926 *14*; α(O)=0.0001281 *19*; α(P)=5.93×10^{-6} *9*
138.3 *1*	0.0078 *12*	212.923	7/2⁻	74.56670	3/2⁻	E2		0.838	α(K)=0.468 *7*; α(L)=0.285 *4*; α(M)=0.0678 *10*; α(N+..)=0.01714 *25* α(N)=0.01525 *22*; α(O)=0.00187 *3*; α(P)=2.04×10^{-5} *3*
(187.3[a] *2*)		212.923	7/2⁻	25.65136	5/2⁻	M1,E2		0.35 *6*	α(K)=0.27 *8*; α(L)=0.064 *15*; α(M)=0.015 *4*; α(N+..)=0.0038 *9* α(N)=0.0034 *9*; α(O)=0.00045 *8*; α(P)=1.5×10^{-5} *7*
212.8 *2*	0.00038 *18*	212.923	7/2⁻	0	5/2⁺	E1		0.0413	α(K)=0.0349 *5*; α(L)=0.00504 *8*; α(M)=0.001101 *16*; α(N+..)=0.000290 *5* α(N)=0.000252 *4*; α(O)=3.56×10^{-5} *5*; α(P)=1.78×10^{-6} *3*
238.57 *4*	0.0222 *12*	451.455	5/2⁻	212.923	7/2⁻				
286.481 *9*	0.140 *5*	418.238	3/2⁻	131.7585	5/2⁻	M1+E2	−0.096 *20*	0.1272	α(K)=0.1074 *16*; α(L)=0.01554 *22*; α(M)=0.00341 *5*; α(N+..)=0.000911 *13* α(N)=0.000789 *11*; α(O)=0.0001155 *17*; α(P)=6.62×10^{-6} *10* δ: from γ(θ), (1983Ri15).
292.401 *7*	0.57 *3*	366.968	1/2⁻	74.56670	3/2⁻	[M1,E2]		0.10 *3*	α(K)=0.08 *3*; α(L)=0.0142 *5*; α(M)=0.00320 *6*; α(N+..)=0.000840 *25* α(N)=0.000734 *17*; α(O)=0.000102 *8*; α(P)=4.5×10^{-6} *18*
315.1 *1*	0.0054 *12*	418.238	3/2⁻	103.067	7/2⁻				

From ENSDF

γ(^{161}Dy) (continued)

E$_\gamma$[†]	I$_\gamma$[#@b]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[&]	δ[&]	α[c]	Comments
319.66 *3*	0.0324 *24*	451.455	5/2$^-$	131.7585	5/2$^-$	M1		0.0953	α(K)=0.0805 *12*; α(L)=0.01157 *17*; α(M)=0.00254 *4*; α(N+..)=0.000678 *10* α(N)=0.000587 *9*; α(O)=8.61×10^{-5} *12*; α(P)=4.96×10^{-6} *7*
341.40 *5*	0.034 *3*	366.968	1/2$^-$	25.65136	5/2$^-$	[E2]		0.0438	α(K)=0.0335 *5*; α(L)=0.00792 *11*; α(M)=0.00181 *3*; α(N+..)=0.000469 *7* α(N)=0.000413 *6*; α(O)=5.49×10^{-5} *8*; α(P)=1.79×10^{-6} *3*
343.63 *7*	0.130 *10*	418.238	3/2$^-$	74.56670	3/2$^-$	M1(+E2)	−0.07 *8*	0.0785 *13*	α(K)=0.0664 *11*; α(L)=0.00953 *14*; α(M)=0.00209 *3*; α(N+..)=0.000558 *8* α(N)=0.000483 *7*; α(O)=7.09×10^{-5} *11*; α(P)=4.08×10^{-6} *7* δ: from $\gamma(\theta)$ (1983Ri15).
348.2 *2*	0.0056 *8*	451.455	5/2$^-$	103.067	7/2$^-$				
376.81 *17*	0.0060 *6*	451.455	5/2$^-$	74.56670	3/2$^-$	M1,E2		0.047 *15*	α(K)=0.039 *14*; α(L)=0.0066 *10*; α(M)=0.00146 *18*; α(N+..)=0.00039 *6* α(N)=0.00034 *5*; α(O)=4.7×10^{-5} *8*; α(P)=2.3×10^{-6} *10*
392.57 *8*	0.0206 *13*	418.238	3/2$^-$	25.65136	5/2$^-$				
418.47 *6*	0.079 *4*	550.236	3/2$^+$	131.7585	5/2$^-$	[E1]		0.00771	α(K)=0.00655 *10*; α(L)=0.000908 *13*; α(M)=0.000198 *3*; α(N+..)=5.24×10^{-5} *8* α(N)=4.55×10^{-5} *7*; α(O)=6.55×10^{-6} *10*; α(P)=3.54×10^{-7} *5* δ: from $\gamma(\theta)$, δ=−0.007 *45* (1983Ri15).
425.80 *14*	0.0029 *5*	451.455	5/2$^-$	25.65136	5/2$^-$				
475.658 *19*	0.178 *12*	550.236	3/2$^+$	74.56670	3/2$^-$	[E1]		0.00574	α(K)=0.00489 *7*; α(L)=0.000673 *10*; α(M)=0.0001466 *21*; α(N+..)=3.89×10^{-5} *6* α(N)=3.37×10^{-5} *5*; α(O)=4.87×10^{-6} *7*; α(P)=2.66×10^{-7} *4* δ: from $\gamma(\theta)$, δ=−0.004 *17* (1983Ri15).
506.68 *16*	0.0083 *6*	550.236	3/2$^+$	43.818	7/2$^+$	[E2]		0.01464	α(K)=0.01180 *17*; α(L)=0.00221 *4*; α(M)=0.000497 *7*; α(N+..)=0.0001302 *19* α(N)=0.0001138 *16*; α(O)=1.572×10^{-5} *22*; α(P)=6.61×10^{-7} *10*
550.249 *27*	0.355 *18*	550.236	3/2$^+$	0	5/2$^+$	M1+E2		0.018 *6*	α(K)=0.015 *5*; α(L)=0.0023 *6*; α(M)=0.00050 *11*; α(N+..)=0.00013 *3* α(N)=0.00012 *3*; α(O)=1.7×10^{-5} *5*; α(P)=9.E−7 *4* δ: reported values disagree. From $\gamma(\theta)$, 1983Ri15 report δ=−0.040 *35* or −3.8 *+4−7* (1983Ri15). From ^{160}Dy(n,γ), 1986Sc16 report %E2=43 *19*.

[†] Values are averages of the best available data from 1984Vy01, 1985Je05, 1969Be49, 1983Hn01, and 1965Br16.

[‡] Value from the evaluation by 2000He14 (see also 1999He10).

[#] Weighted average of values from 1984Vy01, 1983Hn01, 1974Pr06, 1969Be49, and 1965Br16.

[@] I(K x rays)=221 *12* (1983Hn01).

[&] From the Adopted Gammas data set. These are based on studies of the ^{161}Ho and ^{161}Tb decays and the (n,γ) reaction. The results are from α, L (and M)

$\gamma(^{161}Dy)$ (continued)

subshell ratios, $\gamma(\theta)$, and $\gamma\gamma(\theta)$ measurements. For a discussion of the bases for the δ choices in specific cases, see the Adopted Gammas data set.

[a] Existence of γ known from ^{161}Ho ε decay.

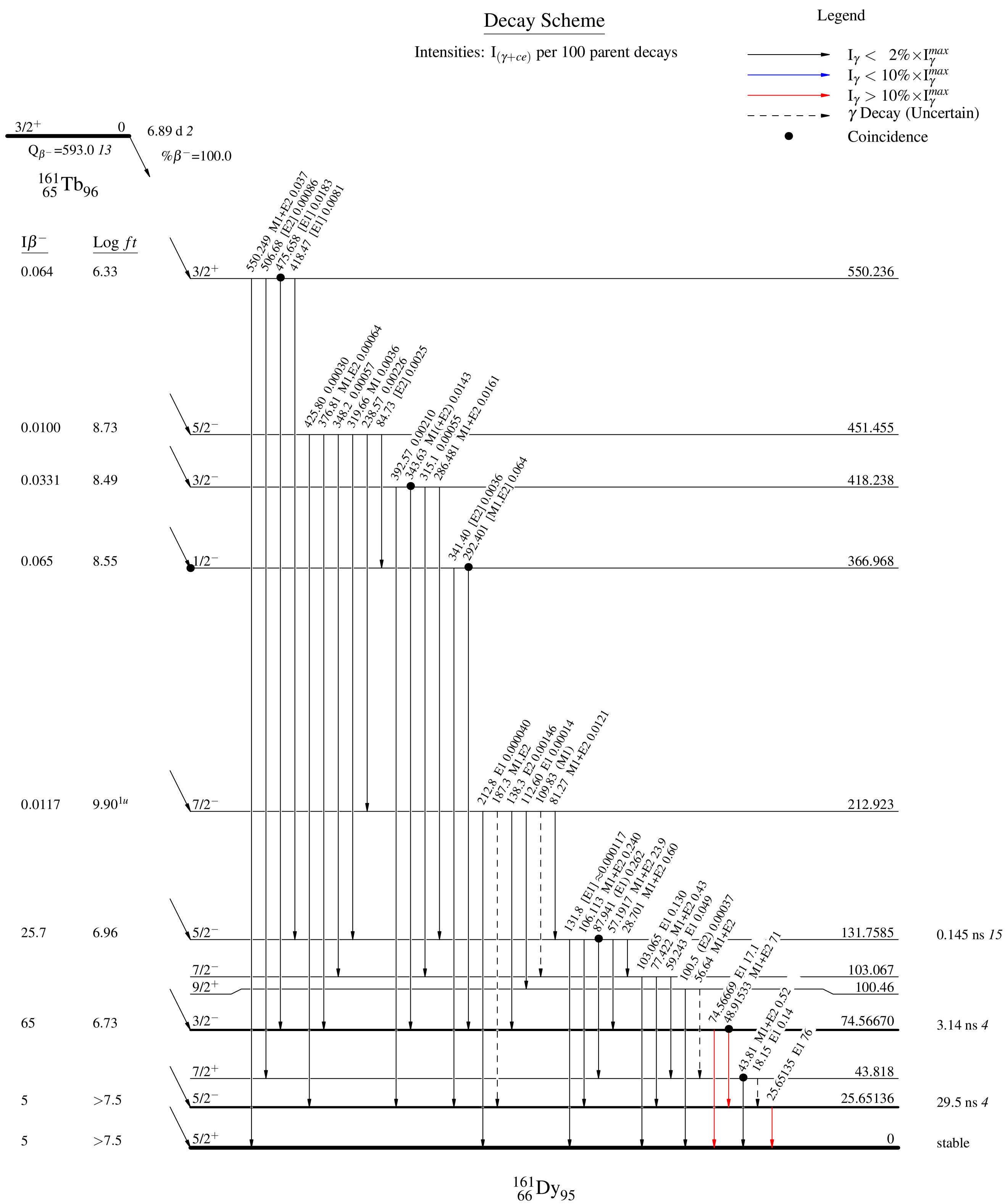
[b] For absolute intensity per 100 decays, multiply by 0.102 *5*.

[c] 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.

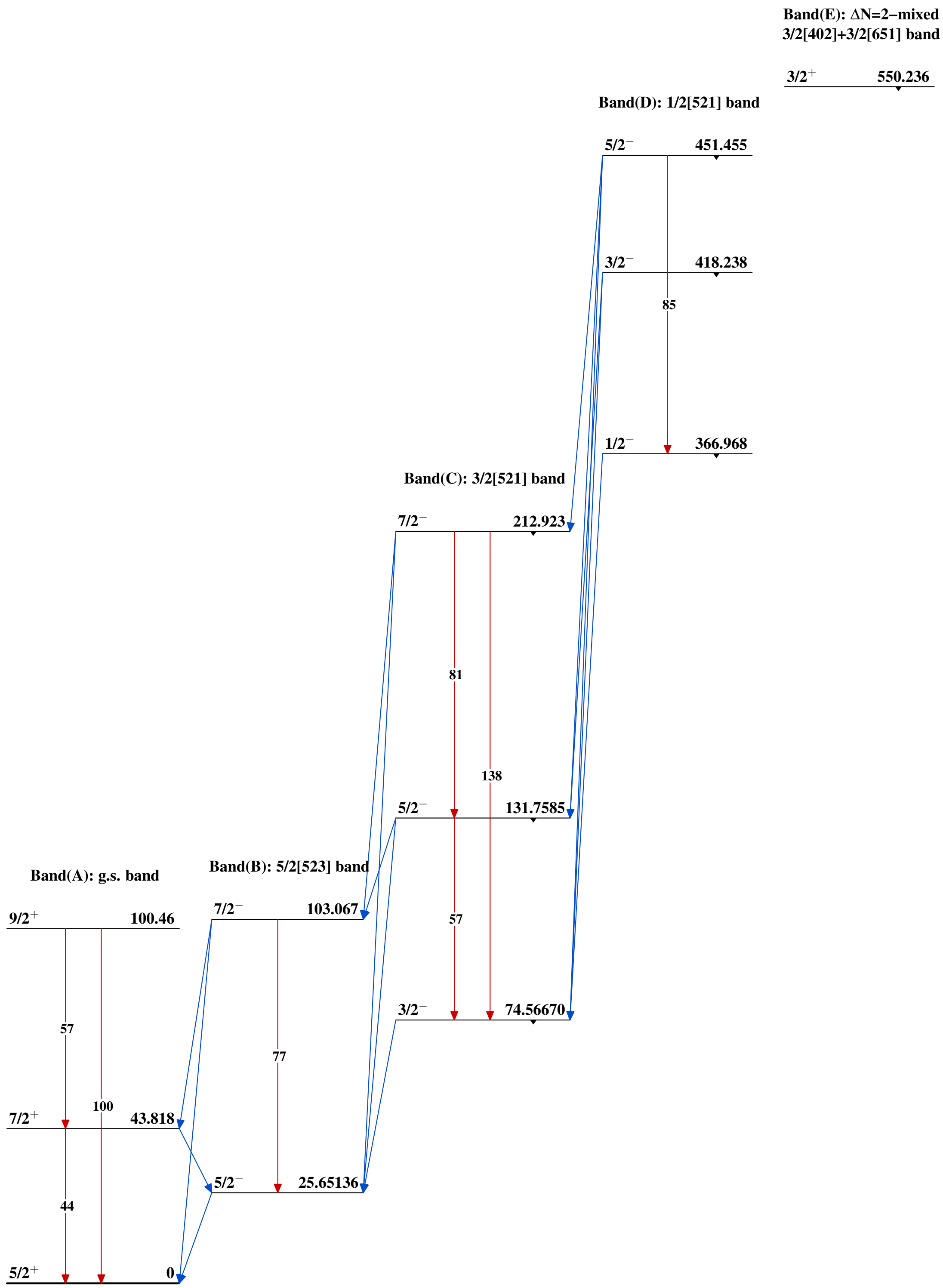
^{161}Tb β^- decay 1984Vy01

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays



^{161}Tb β^- decay 1984Vy01



$^{161}_{66}Dy_{95}$