^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin, E. A. Mccutchan	NDS 151, 334 (2018)	30-Jun-2018

Parent: ^{171}Lu: E=0.0; J^π=7/2$^+$; $T_{1/2}$=8.247 d *23*; Q(ε)=1478.4 *19*; %ε+%β^+ decay=100.0

1981Ba52: sources from spallation of tantalum by protons (E(p)=660 MeV), chemical, mass separation; measured Eγ, Iγ (two Ge(Li), FWHM=550 eV at 122 keV, FWHM=2.0 keV at 1332 keV), E(ce), Ice (Si(Li), mag spect), ceγ coin.

1984Ad02: sources from spallation of tantalum by protons (E(p)=660 MeV), chemical, mass separation; additional sources from ^{169}Tm(α,2n), E(α)=30 MeV; measured Eγ, Iγ (Ge(Li), FWHM=0.8 keV at 122 keV; Ge(Li) anti-compt spect, FWHM=2.3 keV at 1332 keV; NaI).

1985Kr07: sources from spallation of tantalum by protons (E(p)=10 GeV), chemical, mass separation; measured Eγ, Iγ of polarized samples (^{171}Lu oriented) (Ge(Li), FWHM=0.55 keV at 122 keV, FWHM=2.9 keV at 1332 keV), γ-ray directional distributions; used semi-microscopic quasi-phonon model (including Coriolis mixing) to interpret level structure.

The decay scheme and level interpretation are from 1985Kr07; transition data are mainly from 1981Ba52 and 1984Ad02.

Others: 1957Bo61, 1957Gr01, 1957Mi65, 1957Mi67, 1958Ke88, 1958Le25, 1959Ha09, 1960Dz02, 1960Io01, 1960Io02, 1960Pl03, 1960Wi16, 1961An05, 1961Dz06, 1962Va17, 1963Ra14, 1965Ba10, 1965Ka17, 1965Vi02, 1966Gi03, 1966Ka11, 1968Lo10, 1969Ba38, 1969Gi07, 1971AkZS, 1971Ba34, 1972Ba50, 1974Ba56, 1974Bo55, 1975Ar15, 1975Ar26, 1976Kr04, 1977Bo32, 1977GoZU, 1977Se05, 1977VyZW, 1977VyZX, 1977VyZZ, 1980EgZX, 1981By04, 1983ArZV, 1983Kr18, 1987BaZB, 1989GoZU, 2000La11, 2011Ma01.

α: Additional information 1.

^{171}Yb Levels

E(level)[†]	J^π	$T_{1/2}$	Comments
0.0[‡]	1/2$^-$	stable	
66.7320[‡] *19*	3/2$^-$	0.81 ns *17*	$T_{1/2}$: cece(t) (1971AkZS).
75.8820[‡] *21*	5/2$^-$	1.64 ns *16*	$T_{1/2}$: cece(t) (1971AkZS). Other: 1.7 ns *4* (1966Ka11).
95.2822[#] *24*	7/2$^+$	5.25 ms *24*	$T_{1/2}$: adopted value; 1968Lo10 report $T_{1/2}$≈5 ms in ^{171}Lu ε decay (8.24 d).
122.4166[@] *24*	5/2$^-$	265 ns *20*	$T_{1/2}$: ceγ(t) (1968Lo10).
167.662[#] *3*	9/2$^+$		
208.019[@] *4*	7/2$^-$		
230.631[‡] *11*	7/2$^-$		
246.618[‡] *10*	9/2$^-$		
259.071[#] *5*	11/2$^+$		
317.310[@] *3*	9/2$^-$		
449.599[@] *15*	11/2$^-$		
487.28[‡] *3*	11/2$^-$		
835.083[&] *5*	7/2$^-$		
902.251[a] *20*	3/2$^-$		
935.261 *15*	9/2$^+$		Possible 9/2[624] bandhead.
944.35 *3*	5/2$^-$		
948.371[&] *8*	9/2$^-$		
958.31[a] *10*	(5/2$^-$)		
984.037 *21*	(9/2)$^+$		Possible 5/2[642] band member.
1024.627[a] *16*	7/2$^-$		
1080.971 *24*	5/2$^-$		
1093.30[b] *3*	9/2$^+$		
1127.68[a] *4*	(9/2$^-$)		
1377.506[c] *14*	7/2$^-$		

Continued on next page (footnotes at end of table)

^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07 (continued)

^{171}Yb Levels (continued)

† From least-squares fit to Eγ, omitting doubly-placed lines and the 862.4γ and 925.8γ, neither of which fits its placement well.
‡ Band(A): 1/2[521] band.
# Band(B): 7/2[633] band.
@ Band(C): 5/2[512] band.
& Band(D): 7/2[514] band.
[a] Band(E): 3/2[521] band (+ γ-vibration).
[b] Band(F): 3/2[651] band (probable).
[c] Band(G): 7/2[503] band.

ε,β^+ radiations

See 1977Bo32 and 1981By04 for measurement of Eβ+, Iβ^+.
ε+β^+ feedings are from intensity imbalance at each level (g.s. feeding not expected because ΔJ=3).

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I(ε+β^+)†	Comments
(100.9 *19*)	1377.506		0.401 *9*	6.84 *4*	0.401 *9*	εK=0.481 *15*; εL=0.383 *11*; εM+=0.136 *4*
(350.7 *19*)	1127.68		0.0391 *19*	9.366 *22*	0.0391 *19*	εK=0.7835 *4*; εL=0.1648 *3*; εM+=0.05172 *10*
(385.1 *19*)	1093.30		0.148 *4*	8.882 *13*	0.148 *4*	εK=0.7890 *3*; εL=0.16076 *21*; εM+=0.05023 *8*
(397.4 *19*)	1080.971		0.158 *10*	8.89 *3*	0.158 *10*	εK=0.7907 *3*; εL=0.15951 *19*; εM+=0.04977 *7*
(453.8 *19*)	1024.627		0.225 *15*	8.86 *3*	0.225 *15*	εK=0.7972 *2*; εL=0.1548 *2*; εM+=0.04805 *5*
(494.4 *19*)	984.037		0.139 *4*	9.155 *14*	0.139 *4*	εK=0.8007 *2*; εL=0.1522 *2*; εM+=0.04709 *4*
(520.1 *19*)	958.31		0.106 *8*	9.32 *4*	0.106 *8*	εK=0.8027 *2*; εL=0.1507 *1*; εM+=0.04657 *4*
(530.0 *19*)	948.371		9.88 *15*	7.371 *8*	9.88 *15*	εK=0.8034 *2*; εL=0.1502 *1*; εM+=0.04639 *4*
(534.1 *19*)	944.35		0.070 *4*	9.53 *3*	0.070 *4*	εK=0.8037 *2*; εL=0.1500 *1*; εM+=0.04632 *4*
(543.1 *19*)	935.261		3.87 *10*	7.802 *12*	3.87 *10*	εK=0.8043 *2*; εL=0.14959 *9*; εM+=0.04616 *4*
(576.1 *19*)	902.251		0.151 *5*	9.298[1u] *16*	0.151 *5*	εK=0.7619 *4*; εL=0.18026 *24*; εM+=0.05782 *10*
(643.3 *19*)	835.083		61.5 *16*	6.762 *12*	61.5 *16*	εK=0.80959 *9*; εL=0.14567 *7*; εM+=0.04474 *3*
(991.1 *19*)	487.28		0.013 *4*	11.37[1u] *14*	0.013 *4*	εK=0.79854 *9*; εL=0.15369 *7*; εM+=0.04777 *3*
(1028.8‡ *19*)	449.599		0.011 *8*	11.5[1u] *4*	0.011 *8*	εK=0.8001; εL=0.15252 *6*; εM+=0.04733 *3*
(1161.1 *19*)	317.310		1.88 *9*	8.823 *21*	1.88 *9*	εK=0.8216; εL=0.13686 *2*; εM+=0.041553 *7*
(1270.4 *19*)	208.019		3.82 *24*	8.60 *3*	3.82 *24*	εK=0.8227; εL=0.13595 *2*; εM+=0.041230 *6*
(1310.7 *19*)	167.662		1.0 *7*	9.2 *3*	1.0 *7*	εK=0.8231; εL=0.13565 *2*; εM+=0.041122 *5*
(1356.0 *19*)	122.4166		0.4 *3*	9.6 *4*	0.4 *3*	εK=0.8233; εL=0.1353; εM+=0.041007 *5*
(1383.1 *19*)	95.2822	0.0062 *22*	14 *5*	8.11 *16*	14 *5*	av Eβ=179.12 *86*; εK=0.8235; εL=0.1351; εM+=0.040940 *5* E(decay): other: 1384 *3* deduced from Eβ+=362 keV *3* (1977Bo32, mag spect). Iβ^+: calculated value (=0.007 *3*) compares with Iβ(exp)=0.0080 *7*, as deduced from Iβ/Ice(K)(739.8γ)=0.074 *6* (1977Bo32).

† Absolute intensity per 100 decays.
‡ Existence of this branch is questionable.

γ(^{171}Yb)

Iγ normalization: from Σ I(γ+ce) to g.s.=100% (ε+β^+ branch to g.s. is not expected (ΔJ=3)).
α(K)exp values are from 1984Ad02, corrected for small differences between their data and Iγ adopted here, except where noted. Qualifiers (<,>,≈) are from 1981Ba52.

Iγ(K x ray) (relative to Iγ(739.8γ)=100.0 21) (1981Ba52)

	E(x-ray)	I(x-ray)
Yb $K\alpha_2$ x ray	51.354	72.3 14
Yb $K\alpha_1$ x ray	52.389	126.5 23
Yb $K\beta_1'$ x ray	59.3	40.6 8
Yb $K\beta_2'$ x ray	61.0	10.44 22

E_γ[†]	I_γ[‡e]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@]	α	Comments
9.149 *1*	0.32 *3*	75.8820	5/2⁻	66.7320	3/2⁻	M1+E2[a]	0.016 *+4−5*	160 *10*	α(L)=12 *5*; α(M)=135 *6*; α(N+..)=45 E_γ: from 1981Ba52. Other Eγ: 9.150 *8* (1974Bo55). I_γ: deduced from intensity balance at 66.7 level (ε+β^+ feeding of 76 level not expected (first-forbidden and ΔK=3)); value compares with Iγ(exp)=0.303 *24*, as deduced from Ice(N)(9.2γ) and intensity data for 66.7γ (1975Ar15). M1:M2:M3:N=15.5 *10*:2.2 *4*:2.1 *5*:3.7 *5* (1975Ar15). Ice(N)(9.2γ)≈one third Ice(L1)(19.4γ) (1969Ba38).
19.394 *2*	28.7 *15*	95.2822	7/2⁺	75.8820	5/2⁻	E1[a]		5.57	α(L)=4.33 *6*; α(M)=1.001 *14*; α(N)=0.221 *3*; α(O)=0.0231 *4*; α(P)=0.000527 *8* E_γ: from 1989GoZU (precision measurement of 8 ce lines). Other Eγ: 19.384 *8* (1974Bo55), 19.388 *1* (1981Ba52), 19.402 *10* (1984Ad02). I_γ: Iγ(calc) deduced from intensity balance at 75.9 level (ε+β^+ feeding of g.s. band not expected (ΔJ=0, but ΔK=3)); value compares with Iγ(exp)=31.7 *9*. The discrepancy between Iγ(calc) and Iγ(exp) could be explained by anomalous conversion of the 19.4γ (1975Ar26 suggest the latter explanation on the basis of L- and M-subshell ratios). L1:L2:L3:M1:M4:M5:N:O= 10.1 *15*:13.8 *10*:22.1 *17*:3.04 *35*:1.12 *8*:1.34 *9*:3.17 *18*:0.36 *2* (1966Ka11); L1:L2:L3=0.76 *4*:0.69 *4*:1.00 (1975Ar26); M1:M2:M3:(M4+M5)=0.64 *3*:0.72 *3*:1.00:0.42 *3* (1975Ar26).
27.133 *1*	1.62 *3*	122.4166	5/2⁻	95.2822	7/2⁺	E1[a]		2.22	α(L)=1.727 *25*; α(M)=0.395 *6*; α(N)=0.0881 *13*; α(O)=0.00990 *14*; α(P)=0.000259 *4* L1:L3:M1:M2:M3:M4:N:O= 396 *59*:433 *36*:51 *8*:46 *7*:49 *7*:15 *2*:22 *3*:15 *2* (1966Ka11); L1:L2:L3=0.6 *1*:≈0.6:0.6 *1* (1975Ar15).
46.543 *5*	0.352 *15*	122.4166	5/2⁻	75.8820	5/2⁻	M1+E2[a]	0.127 *13*	6.4 *3*	α(L)=4.99 *22*; α(M)=1.14 *6*; α(N)=0.266 *12*; α(O)=0.0362 *14*; α(P)=0.001581 *23*

$\gamma(^{171}Yb)$ (continued)

E_γ [†]	I_γ [‡e]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	δ [@]	α	Comments
									E_γ: from 1981Ba52. L1:L2:L3:M1:M2:M3= 1290 *70*:283 *27*:222 *26*:225 *28*:65 *12*:56 *12* (1966Ka11).
55.689 *2*	2.55 *4*	122.4166	5/2⁻	66.7320	3/2⁻	M1+E2 [a]	0.055 *6*	3.15	α(L)=2.45 *4*; α(M)=0.551 *9*; α(N)=0.1291 *21*; α(O)=0.0183 *3*; α(P)=0.000944 *14* L1:L2:L3:M:N=2840 *70*:299 *14*:99 *12*:734 *22*:170 *12* (1966Ka11); L1:L2:L3=9.6 *4*:3.1 *2*:1.00 (1975Ar26); A_2=+0.47 *26*, δ=−0.05 *15* (1985Kr07).
66.731 *2*	5.17 *7*	66.7320	3/2⁻	0.0	1/2⁻	M1+E2	+0.684 *17*	12.60 *19*	α(K)=6.66 *13*; α(L)=4.55 *13*; α(M)=1.10 *3*; α(N)=0.252 *7*; α(O)=0.0301 *8*; α(P)=0.000413 *8* α(K)exp=6.3 *7*; L1:L2:L3:M1:M2:M3:N=242 *6*:486 *11*:489 *11*:56.4 *11*:104.0 *12*:122.0 *16*:62 *3* (1966Ka11); K/L=1.4 *1* (1975Ar15). δ: from subshell ratios and BrIccMixing; sign is from Adopted Gammas. A_2=+0.9 *5* (implying δ=−0.6 *+6−12*) (1985Kr07) is inconsistent with adopted δ=+0.693; δ=+2.0 *+50−12* (1976Kr04) May not be reliable due to limited resolution and source impurities (see discussion In 1985Kr07).
72.380 *2*	4.17 *6*	167.662	9/2⁺	95.2822	7/2⁺	M1+E2 [a]	−0.32 *3*	8.86 *14*	α(K)=6.64 *13*; α(L)=1.71 *11*; α(M)=0.40 *3*; α(N)=0.093 *7*; α(O)=0.0121 *7*; α(P)=0.000407 *8* α(K)exp=6.1 *4*; K:L1:L2:L3:M1:M2:M3:(N1+N2):O= 1170 *81*:192 *3*:68.6 *29*:56.4 *28*:50.4 *15*:19.5 *6*:16.1 *5*:16.2 *6*:1.6 *6* (1966Ka11); A_2=+0.80 *18*, δ=−0.31 *+13−18* (1985Kr07).
75.889 *5*	12.72 *16*	75.8820	5/2⁻	0.0	1/2⁻	E2		9.60	α(K)=1.604 *23*; α(L)=6.11 *9*; α(M)=1.508 *22*; α(N)=0.344 *5*; α(O)=0.0391 *6*; α(P)=7.98×10⁻⁵ *12* α(K)exp=1.59 *13*; K:L1:L2:L3:M1:M2:M3:(M4+M5)= 940 *66*:111 *2*:1776 *37*:1784 *37*:23.3 *7*:441 *13*:510 *15*: 11.9 *4* (1966Ka11).
85.602 *3*	2.26 *3*	208.019	7/2⁻	122.4166	5/2⁻	M1+E2	−0.224 *26*	5.31	α(K)=4.27 *7*; α(L)=0.81 *4*; α(M)=0.185 *9*; α(N)=0.0432 *19*; α(O)=0.00590 *21* α(P)=0.000260 *5* α(K)exp=4.29 *30*; K:L1:M1:M2:M3= 4530 *290*:649 *40*:144 *8*:41 *4*:21 *2* (1966Ka11); A_2=+0.81 *8*, δ=−0.30 *+6−7* (1985Kr07).
91.408 *3*	0.939 *18*	259.071	11/2⁺	167.662	9/2⁺	M1+E2 [a]	−0.281 *16*	4.38	α(K)=3.47 *6*; α(L)=0.705 *19*; α(M)=0.162 *5*; α(N)=0.0377 *11*; α(O)=0.00510 *12* α(P)=0.000211 *4* α(K)exp=3.66 *23*; K:L1:L2:L3=1600 *80*:211 *12*:54 *5*:46 *5* (1966Ka11); A_2=+0.71 *14*, δ=−0.25 *+9−11* (1985Kr07). A_2=+0.19 *5*, A_4=+0.09 *9* for 689γ-91γ(θ) (1977Se05) implies δ=−0.22 *+11−13* if δ(689γ)=0.
109.289 *3*	1.27 *3*	317.310	9/2⁻	208.019	7/2⁻	M1+E2 [a]	−0.27 *4*	2.60	α(K)=2.10 *4*; α(L)=0.387 *17*; α(M)=0.088 *5*; α(N)=0.0206 *10*; α(O)=0.00283 *10* α(P)=0.000127 *3*

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α	Comments
									α(K)exp=1.92 *9*; K:L1:L2:L3:M= 1140 *30*:201 *24*:39 *4*:15 *4*:32 *5* (1966Ka11); A_2=+0.59 *7*, δ=−0.16 *4* (1985Kr07).
112.70[d] *14*	0.0101 *12*	208.019	7/2⁻	95.2822	7/2⁺	[E1]		0.250	α(K)=0.207 *3*; α(L)=0.0334 *5*; α(M)=0.00747 *11*; α(N)=0.001722 *25*; α(O)=0.000228 *4* α(P)=9.28×10^{-6} *14*
122.37 *5*	0.0245 *14*	122.4166	5/2⁻	0.0	1/2⁻	[E2]		1.502	α(K)=0.632 *9*; α(L)=0.665 *10*; α(M)=0.1634 *23*; α(N)=0.0373 *6*; α(O)=0.00433 *7* α(P)=2.68×10^{-5} *4* α(K)exp≤0.80; K:L2:L3≤10:7 *2*:7 *2* (1975Ar15).
132.255 *19*	0.081 *4*	449.599	11/2⁻	317.310	9/2⁻	M1+E2	1.4 *+21−6*	1.26 *11*	α(K)=0.77 *21*; α(L)=0.38 *8*; α(M)=0.091 *20*; α(N)=0.021 *5*; α(O)=0.0025 *5*; α(P)=4.1×10^{-5} *15* α(K)exp=0.78 *20*.
149.63[d] *5*	0.0095 *15*	317.310	9/2⁻	167.662	9/2⁺	[E1]		0.1182	α(K)=0.0985 *14*; α(L)=0.01536 *22*; α(M)=0.00343 *5*; α(N)=0.000794 *12* α(O)=0.0001068 *15*; α(P)=4.60×10^{-6} *7*
154.753 *11*	0.100 *3*	230.631	7/2⁻	75.8820	5/2⁻	M1+E2	+0.521 *16*	0.905 *14*	α(K)=0.714 *12*; α(L)=0.1477 *24*; α(M)=0.0341 *6*; α(N)=0.00793 *13*; α(O)=0.001064 *17* α(P)=4.23×10^{-5} *7* δ: from Adopted Gammas; α(K)exp=0.67 *6*; K:L1:L3≈100:20:10 (1959Ha09) imply δ=0.71 *21*.
163.847[g] *5*	0.186[g] *15*	230.631	7/2⁻	66.7320	3/2⁻	E2[a]		0.529	α(K)=0.289 *4*; α(L)=0.184 *3*; α(M)=0.0448 *7*; α(N)=0.01026 *15*; α(O)=0.001215 *17* α(P)=1.292×10^{-5} *18* α(K)exp=0.23 *3*; K:L1:L2:L3=55 *9*:11 *2*:28 *2*:25 *2* (1959Ha09,1966Ka11). I_γ: deduced from intensity balance at 230.6 level (ε+β^+ feeding of g.s. band not expected (first forbidden, ΔK=3)).
163.847[g] *5*	0.35[g] *4*	259.071	11/2⁺	95.2822	7/2⁺	E2[a]		0.529	α(K)=0.289 *4*; α(L)=0.184 *3*; α(M)=0.0448 *7*; α(N)=0.01026 *15*; α(O)=0.001215 *17* α(P)=1.292×10^{-5} *18* I_γ: deduced from Iγ=0.54 *3* for both placements of 163.8γ and Iγ=0.186 *15* for 230.6 level placement.
170.732 *10*	0.145 *4*	246.618	9/2⁻	75.8820	5/2⁻	E2		0.459	α(K)=0.258 *4*; α(L)=0.1542 *22*; α(M)=0.0375 *6*; α(N)=0.00859 *12*; α(O)=0.001021 *15* α(P)=1.162×10^{-5} *17* α(K)exp=0.25 *8*; K:L1:L2=30:6:10 (1959Ha09).
194.896 *7*	0.37 *4*	317.310	9/2⁻	122.4166	5/2⁻	E2		0.293	α(K)=0.1775 *25*; α(L)=0.0884 *13*; α(M)=0.0214 *3*; α(N)=0.00491 *7*; α(O)=0.000590 *9* α(P)=8.25×10^{-6} *12* α(K)exp=0.141 *18*; L1:L2:L3:(M1+M2+M3):(M4+M5):N1:O1= 4.8 *9*:11.2 *18*:7.1 *11*:5.6 *10*:0.10:1.4 *3*:0.41 *22* (1980EgZX); K:L1:L2=29 *2*:4.0 *8*:10 *2* (1966Ka11); A_2=−0.45 *14*, δ=+0.01 *13* (1985Kr07).

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@]	α	Comments
222.06[d] *5*	0.018 *2*	317.310	9/2⁻	95.2822	7/2⁺				
240.63[&] *8*	0.0074 *5*	487.28	11/2⁻	246.618	9/2⁻	M1+E2	+0.50 *4*	0.258 *6*	α(K)=0.211 *5*; α(L)=0.0365 *6*; α(M)=0.00828 *12*; α(N)=0.00194 *3*; α(O)=0.000268 *4* α(P)=1.26×10^{-5} *3* I_γ: Iγ(exp)=0.062 *3* for 241.4γ; Iγ apportioned to give Iγ(240.6γ)=0.0074 *5* and Iγ(241.4γ)=0.055 *3* on basis of Iγ(240.6γ)/Iγ(256.6γ)=0.158 *5* in Coulomb excitation. K:L1:L2:L3=2.0 *4*:0.11 *6*:0.19 *8*:0.16 *9* (1980EgZX). Mult.,δ: from Adopted Gammas. Placement from Adopted Levels, Gammas.
241.73 *5*	0.055 *3*	449.599	11/2⁻	208.019	7/2⁻	(E2)		0.1446	α(K)=0.0964 *14*; α(L)=0.0371 *6*; α(M)=0.00889 *13*; α(N)=0.00204 *3*; α(O)=0.000251 *4* α(P)=4.71×10^{-6} *7* E_γ: from 1980EgZX. Eγ=241.40 *3* (1981Ba52) and 241.41 *4* (1984Ad02) are presumably for 241.7γ+240.6γ doublet. I_γ: see comment with 240.6γ. α(K)exp=0.16 *3* (ce data from 1980EgZX); K:L1:L2:L3=3.8 *6*:0.30 *9*:0.42 *9*:0.30 *7* (1980EgZX).
256.65[c] *3*	0.047 *3*	487.28	11/2⁻	230.631	7/2⁻	E2		0.1196	α(K)=0.0814 *12*; α(L)=0.0294 *5*; α(M)=0.00702 *10*; α(N)=0.001616 *23*; α(O)=0.000200 *3* α(P)=4.03×10^{-6} *6* Mult.: from Adopted Gammas. α(K)exp=0.112 *14*; K:L1:L2:L3=3.0 *5*:0.33 *6*:0.45 *8*:0.30 *8* (1980EgZX).
[x]373.7[&] *3*									
[x]376.10[&] *25*									
[x]380.10[&] *25*									
[x]382.50[&] *25*									
[x]385.31[&] *25*									
[x]400.98[&] *25*									
[x]412.3[&] *3*									
498.755 *21*	0.216 *6*	948.371	9/2⁻	449.599	11/2⁻	M1+E2	+0.41 *+12−14*	0.0379 *19*	α(K)=0.0317 *17*; α(L)=0.00481 *18*; α(M)=0.00108 *4*; α(N)=0.000252 *9*; α(O)=3.59×10^{-5} *14* α(P)=1.89×10^{-6} *11* α(K)exp=0.0324 *16*; A_2=+0.33 *27*, δ=+0.01 *2* (1985Kr07).
517.773 *4*	0.714 *12*	835.083	7/2⁻	317.310	9/2⁻	M1+E2	+0.53 *8*	0.0328 *12*	α(K)=0.0274 *11*; α(L)=0.00420 *12*; α(M)=0.00094 *3*; α(N)=0.000221 *6*; α(O)=3.14×10^{-5} *10* α(P)=1.63×10^{-6} *7*

^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07 (continued)

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@]	α	Comments
									α(K)exp=0.028 *1*; K/L1=6 (1959Ha09); A_2=+0.80 *9*, δ=+0.54 *+16−11* (1985Kr07).
605.6[d] *2*	0.035 *7*	1093.30	9/2$^+$	487.28	11/2$^-$				
627.062 *12*	1.75 *3*	835.083	7/2$^-$	208.019	7/2$^-$	M1+E2	+1.17 *+7−6*	0.0156 *5*	α(K)=0.0129 *4*; α(L)=0.00208 *5*; α(M)=0.000470 *11*; α(N)=0.0001099 *24*; α(O)=1.54×10^{-5} *4* α(P)=7.52×10^{-7} *22* α(K)exp=0.0132 *3*; A_2=−0.55 *4*, δ=+0.76 *+14−19* (1985Kr07). A_2=+0.26 *5*, A_4=−0.10 *10* for 627γ-86γ(θ) (1977Se05), implying δ=+1.4 *+149−3* if δ(86γ)=−0.222 *12*.
631.066 *14*	0.275 *5*	948.371	9/2$^-$	317.310	9/2$^-$	M1+E2	+1.14 *+18−15*	0.0155 *9*	α(K)=0.0129 *8*; α(L)=0.00207 *10*; α(M)=0.000465 *21*; α(N)=0.000109 *5*; α(O)=1.53×10^{-5} *8* α(P)=7.5×10^{-7} *5* α(K)exp=0.0131 *8*; A_2=−0.11 *16*, δ=+2.0 *+14−7* (1985Kr07).
667.422 *11*	23.1 *4*	835.083	7/2$^-$	167.662	9/2$^+$	E1		0.00329	α(K)=0.00279 *4*; α(L)=0.000390 *6*; α(M)=8.65×10^{-5} *13*; α(N)=2.02×10^{-5} *3*; α(O)=2.86×10^{-6} *4* α(P)=1.485×10^{-7} *21* α(K)exp=0.00275 *6*; K/L=7.5 *6* (1966Ka11); A_2=+0.177 *15*, δ=+0.016 *10* (1985Kr07).
676.15 *8*	0.036 *4*	935.261	9/2$^+$	259.071	11/2$^+$	M1		0.0190	α(K)=0.01597 *23*; α(L)=0.00233 *4*; α(M)=0.000520 *8*; α(N)=0.0001220 *17* α(O)=1.752×10^{-5} *25*; α(P)=9.50×10^{-7} *14* α(K)exp=0.020 *6*.
689.286[d] *20*	4.95 *7*	948.371	9/2$^-$	259.071	11/2$^+$	E1		0.00308	α(K)=0.00261 *4*; α(L)=0.000365 *6*; α(M)=8.08×10^{-5} *12*; α(N)=1.89×10^{-5} *3*; α(O)=2.68×10^{-6} *4* α(P)=1.392×10^{-7} *20* E_γ: 1981Ba52 report Eγ=689.373 *13* in table 1, but 689.324 in table 3. α(K)exp=0.00261 *9*; M1/N1=4.5 *13* (1980EgZX); A_2=+0.210 *14*, δ=+0.029 *9* (1985Kr07). A_2=−0.007 *3*, A_4=−0.06 *3* for 689γ-164γ(θ) (1977Se05) not consistent with conclusions of 1985Kr07.
[x]701.5[d] *3*	0.013 *3*								
707.46 *14*	0.025 *5*	1024.627	7/2$^-$	317.310	9/2$^-$	(M1)		0.01691	α(K)=0.01425 *20*; α(L)=0.00208 *3*; α(M)=0.000463 *7*; α(N)=0.0001087 *16* α(O)=1.561×10^{-5} *22*; α(P)=8.47×10^{-7} *12* α(K)exp=0.027 *12*.
712.670 *16*	2.37 *3*	835.083	7/2$^-$	122.4166	5/2$^-$	M1+E2	−1.62 *+10−11*	0.0101 *3*	α(K)=0.00837 *24*; α(L)=0.00136 *4*; α(M)=0.000306 *7*; α(N)=7.16×10^{-5} *17*; α(O)=1.000×10^{-5} *24* α(P)=4.82×10^{-7} *15* α(K)exp=0.0085 *2*; K/L=8.8 *19* (1966Ka11); L1:L2:M=1.28 *6*:0.15 *5*:0.30 *5* (1980EgZX); A_2=+0.91 *5*, δ=−1.52 *16* (1985Kr07).

From ENSDF

$^{171}_{70}$Yb$_{101}$-7

γ(^{171}Yb) (continued)

E_γ [†]	I_γ [‡e]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	δ [@]	α	Comments
724.97 *5*	0.152 *5*	984.037	(9/2)$^+$	259.071	11/2$^+$	(M1)		0.01591	α(K)=0.01340 *19*; α(L)=0.00195 *3*; α(M)=0.000435 *6*; α(N)=0.0001021 *15* α(O)=1.467×10^{-5} *21*; α(P)=7.96×10^{-7} *12* α(K)exp=0.0173 *20*.
^{x}734.6 [&] *5*									
^{x}737.9 [&] *3*									
739.793 *12*	100.0 *14*	835.083	7/2$^-$	95.2822	7/2$^+$	E1		0.00267	α(K)=0.00227 *4*; α(L)=0.000316 *5*; α(M)=6.99×10^{-5} *10*; α(N)=1.634×10^{-5} *23*; α(O)=2.32×10^{-6} *4* α(P)=1.212×10^{-7} *17* K:L1:M1=100:12.7 *9*:3.18 *16* (1980EgZX); A_2=−0.458 *17*, δ(D,Q)=+0.030 *25* (1985Kr07).
753.37 *6*	0.020 *3*	984.037	(9/2)$^+$	230.631	7/2$^-$	E1		0.00258	α(K)=0.00219 *3*; α(L)=0.000304 *5*; α(M)=6.73×10^{-5} *10*; α(N)=1.574×10^{-5} *22*; α(O)=2.23×10^{-6} *4* α(P)=1.170×10^{-7} *17* α(K)exp=0.0028 *13*.
759.21 *3*	0.049 *3*	835.083	7/2$^-$	75.8820	5/2$^-$	(E2)		0.00664	α(K)=0.00544 *8*; α(L)=0.000935 *13*; α(M)=0.000212 *3*; α(N)=4.95×10^{-5} *7*; α(O)=6.81×10^{-6} *10* α(P)=3.05×10^{-7} *5* α(K)exp=0.0059 *8*.
767.614 *20*	1.47 *2*	935.261	9/2$^+$	167.662	9/2$^+$	M1+E2	−0.55 *7*	0.0121 *4*	α(K)=0.0102 *4*; α(L)=0.00151 *5*; α(M)=0.000337 *9*; α(N)=7.90×10^{-5} *22*; α(O)=1.13×10^{-5} *4* α(P)=5.99×10^{-7} *20* α(K)exp=0.0104 *3*; A_2=−0.073 *19*, δ=−0.477 *25* (1985Kr07).
777.99 *4*	0.10 *3*	1024.627	7/2$^-$	246.618	9/2$^-$	(M1)		0.01333	α(K)=0.01124 *16*; α(L)=0.001633 *23*; α(M)=0.000364 *5*; α(N)=8.54×10^{-5} *12* α(O)=1.227×10^{-5} *18*; α(P)=6.67×10^{-7} *10* α(K)exp=0.009 *4*.
780.711 *23*	9.12 *13*	948.371	9/2$^-$	167.662	9/2$^+$	E1		0.00240	α(K)=0.00204 *3*; α(L)=0.000283 *4*; α(M)=6.26×10^{-5} *9*; α(N)=1.465×10^{-5} *21*; α(O)=2.08×10^{-6} *3* α(P)=1.092×10^{-7} *16* α(K)exp=0.00185 *10*; K/L1=7.9 *7* (1980EgZX); A_2=−0.420 *15*, δ=−0.033 *24* (1985Kr07).
^{x}791.7 [&] *3*									
794.00 *3*	0.148 *4*	1024.627	7/2$^-$	230.631	7/2$^-$	M1+E2	+0.66 *+19−15*	0.0107 *8*	α(K)=0.0089 *7*; α(L)=0.00133 *9*; α(M)=0.000298 *19*; α(N)=7.0×10^{-5} *5*; α(O)=1.00×10^{-5} *7* α(P)=5.3×10^{-7} *5* δ: from A_2=−0.06 *4*, A_4=−0.14 *8* (1977Se05) for 794γ-155γ(θ) if δ(155γ)=+0.521 *16*. Other δ: 0.5 *+3−4* from α(K)exp=0.0099 *10*; δ=+1.1 *4* or 0.0 *2* from A_2=−0.44 *13* (1985Kr07, nuclear orientation).

From ENSDF

$^{171}_{70}$Yb$_{101}$-8

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α	Comments
[x]804.95[d] 20	0.013 2								
816.37 3	0.074 3	984.037	(9/2)$^+$	167.662	9/2$^+$	M1(+E2)	0.7 +8−7	0.0098 23	α(K)=0.0082 20; α(L)=0.00123 25; α(M)=0.00027 6; α(N)=6.4×10^{-5} 13; α(O)=9.2×10^{-6} 19 α(P)=4.8×10^{-7} 12 α(K)exp=0.0085 20.
821.96 12	0.017 3	944.35	5/2$^-$	122.4166	5/2$^-$	M1(+E2)	0.6 +9−7	0.0100 26	α(K)=0.0084 23; α(L)=0.0012 3; α(M)=0.00028 7; α(N)=6.5×10^{-5} 15; α(O)=9.3×10^{-6} 22 α(P)=5.0×10^{-7} 14 α(K)exp=0.0085 23.
825.96 3	0.337 13	948.371	9/2$^-$	122.4166	5/2$^-$	E2		0.00553	α(K)=0.00455 7; α(L)=0.000760 11; α(M)=0.0001719 24; α(N)=4.01×10^{-5} 6; α(O)=5.55×10^{-6} 8 α(P)=2.56×10^{-7} 4 α(K)exp=0.0046 6; A_2=−0.53 16, δ=+0.09 16 (1985Kr07).
[x]828.90[d] 15	0.018 2								
834.3[f] 3	0.06[f]	1080.971	5/2$^-$	246.618	9/2$^-$				α(K)exp=0.008.
834.3[f] 3	0.06[f]	1093.30	9/2$^+$	259.071	11/2$^+$				
835.91 12	0.203 16	958.31	(5/2$^-$)	122.4166	5/2$^-$	(E2)		0.00539	α(K)=0.00444 7; α(L)=0.000738 11; α(M)=0.0001669 24; α(N)=3.90×10^{-5} 6; α(O)=5.39×10^{-6} 8 α(P)=2.50×10^{-7} 4 α(K)exp=0.0052 13.
839.961 21	6.36 10	935.261	9/2$^+$	95.2822	7/2$^+$	M1+E2	−0.50 9	0.0099 4	α(K)=0.0083 3; α(L)=0.00122 4; α(M)=0.000273 9; α(N)=6.40×10^{-5} 21; α(O)=9.2×10^{-6} 3 α(P)=4.90×10^{-7} 19 α(K)exp=0.0085 3; K/L=8.1 10 (1966Ka11); A_2=+0.97 4, δ=−0.48 +5−7 (1985Kr07).
850.38 4	0.15 2	1080.971	5/2$^-$	230.631	7/2$^-$	M1+E2	0.9 +11−6	0.0082 20	α(K)=0.0069 18; α(L)=0.00104 22; α(M)=0.00023 5; α(N)=5.4×10^{-5} 12; α(O)=7.7×10^{-6} 17 α(P)=4.0×10^{-7} 11 α(K)exp=0.0070 17.
853.091 12	5.33 7	948.371	9/2$^-$	95.2822	7/2$^+$	E1		0.00202	α(K)=0.001717 24; α(L)=0.000237 4; α(M)=5.25×10^{-5} 8; α(N)=1.228×10^{-5} 18 α(O)=1.745×10^{-6} 25; α(P)=9.22×10^{-8} 13 α(K)exp=0.00157 12; A_2=+0.281 23, δ=+0.011 12 (1985Kr07).
862.389[b] 24	0.072 3	1093.30	9/2$^+$	230.631	7/2$^-$	E1		0.00198	α(K)=0.001682 24; α(L)=0.000232 4; α(M)=5.14×10^{-5} 8; α(N)=1.202×10^{-5} 17 α(O)=1.709×10^{-6} 24; α(P)=9.03×10^{-8} 13 α(K)exp<0.0018.
868.45 5	0.064 3	944.35	5/2$^-$	75.8820	5/2$^-$	M1+E2	+1.8 +21−6	0.0062 9	α(K)=0.0052 8; α(L)=0.00081 10; α(M)=0.000181 22;

$^{171}_{70}$Yb$_{101}$-9

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	α	Comments
									α(N)=4.2×10^{-5} *6*; α(O)=6.0×10^{-6} *8* α(P)=3.0×10^{-7} *5* α(K)exp=0.0052 *8*; A_2=−0.47 *17*, δ=+1.5 *+7−5* (1985Kr07).
[x]872.79 *6*	0.017 *2*					(M1)		0.01002	
877.60 *4*	0.047 *3*	944.35	5/2$^-$	66.7320	3/2$^-$	M1(+E2)	0.1 *+6−1*	0.0098 *16*	α(K)=0.0083 *14*; α(L)=0.00120 *18*; α(M)=0.00027 *4*; α(N)=6.3×10^{-5} *10*; α(O)=9.0×10^{-6} *14* α(P)=4.9×10^{-7} *9* α(K)exp=0.0085 *14*.
881.03 *4*	0.045 *2*	1127.68	(9/2$^-$)	246.618	9/2$^-$	(E2)		0.00482	α(K)=0.00398 *6*; α(L)=0.000651 *10*; α(M)=0.0001470 *21*; α(N)=3.43×10^{-5} *5*; α(O)=4.77×10^{-6} *7* α(P)=2.24×10^{-7} *4* α(K)exp=0.0041 *15*.
[x]884.74 *5*	0.019 *2*					(M1)		0.00968	
888.77 *4*	0.035 *3*	984.037	(9/2)$^+$	95.2822	7/2$^+$	(M1)		0.00958	α(K)=0.00808 *12*; α(L)=0.001168 *17*; α(M)=0.000260 *4*; α(N)=6.11×10^{-5} *9*; α(O)=8.78×10^{-6} *13* α(P)=4.78×10^{-7} *7* α(K)exp=0.009 *5*.
[x]893.82 *6*	0.015 *3*					(M2)		0.0242	
897.18 *8*	0.028 *3*	1127.68	(9/2$^-$)	230.631	7/2$^-$	(M1)		0.00936	α(K)=0.00789 *11*; α(L)=0.001141 *16*; α(M)=0.000254 *4*; α(N)=5.97×10^{-5} *9*; α(O)=8.57×10^{-6} *12* α(P)=4.67×10^{-7} *7* α(K)exp=0.016 *8*.
902.248 *20*	0.307 *6*	902.251	3/2$^-$	0.0	1/2$^-$	M1(+E2)	−0.4 *+4−10*	0.0086 *25*	α(K)=0.0072 *21*; α(L)=0.00105 *27*; α(M)=0.00024 *6*; α(N)=5.5×10^{-5} *14*; α(O)=7.9×10^{-6} *21* α(P)=4.3×10^{-7} *13* α(K)exp=0.0074 *22*; A_2=+0.60 *7*, δ=−0.06 *5* or −1.52 *16* (1985Kr07).
[x]921.98 *5*	0.036 *2*					(M1+E2)	0.5 *5*	0.0079 *14*	
925.776[b] *20*	0.079 *2*	1093.30	9/2$^+$	167.662	9/2$^+$	M1+E2	0.6 *4*	0.0075 *11*	α(K)=0.0063 *9*; α(L)=0.00093 *12*; α(M)=0.000207 *25*; α(N)=4.9×10^{-5} *6*; α(O)=7.0×10^{-6} *9* α(P)=3.7×10^{-7} *6* α(K)exp=0.0064 *8*; A_2=+0.22 *17*, δ=+0.04 *9* (1985Kr07).
[x]929.43 *3*	0.025 *2*					(M1+E2)	≈1	≈0.00644	
[x]934.36 *5*	0.0095 *8*								
[x]937.48 *10*	0.007 *1*					(M1)		0.00839	
944.40 *6*	0.014 *2*	944.35	5/2$^-$	0.0	1/2$^-$	(E2)		0.00417	α(K)=0.00346 *5*; α(L)=0.000554 *8*; α(M)=0.0001247 *18*; α(N)=2.91×10^{-5} *4*; α(O)=4.06×10^{-6} *6* α(P)=1.95×10^{-7} *3* α(K)exp≈0.0033.
948.740 *20*	0.184 *3*	1024.627	7/2$^-$	75.8820	5/2$^-$	M1+E2	+0.60 *9*	0.0071 *3*	α(K)=0.00596 *22*; α(L)=0.00087 *3*; α(M)=0.000195 *7*; α(N)=4.58×10^{-5} *15*; α(O)=6.55×10^{-6} *22* α(P)=3.50×10^{-7} *14* α(K)exp=0.0061 *2*; A_2=−0.25 *11*, δ=+0.32 *7* (1985Kr07).

γ(^{171}Yb) (continued)

E_γ[†]	I_γ[‡e]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ[@]	α	Comments
[x]953.45 *6*	0.011 *3*					(M2)		0.0203	
958.27 *18*	0.013 *1*	958.31	(5/2$^-$)	0.0	1/2$^-$				α(K)exp<0.007.
985.69 *4*	0.044 *2*	1080.971	5/2$^-$	95.2822	7/2$^+$				α(K)exp=0.0026 *7*; A_2=+0.3 *3*, δ=+0.1 *2* (1985Kr07).
998.02 *3*	0.056 *2*	1093.30	9/2$^+$	95.2822	7/2$^+$	M1+E2	−0.7 *4*	0.0061 *9*	α(K)=0.0051 *8*; α(L)=0.00075 *10*; α(M)=0.000167 *21*; α(N)=3.9×10^{-5} *5*; α(O)=5.6×10^{-6} *8* α(P)=3.0×10^{-7} *5* α(K)exp=0.0052 *8*; A_2=+0.6 *3*, δ=−0.16 *+16−21* (1985Kr07).
1005.04 *4*	0.069 *2*	1080.971	5/2$^-$	75.8820	5/2$^-$	M1+E2	0.61 *21*	0.0062 *5*	α(K)=0.0052 *4*; α(L)=0.00076 *6*; α(M)=0.000169 *12*; α(N)=4.0×10^{-5} *3*; α(O)=5.7×10^{-6} *4* α(P)=3.04×10^{-7} *25* α(K)exp=0.0053 *4*.
[x]1013.49 *9*	0.027 *3*					(E2)		0.00361	
[x]1016.70[d] *12*	0.0077 *10*								
[x]1026.8[d] *2*	0.0032 *10*								
1051.73[d] *10*	0.0069 *8*	1127.68	(9/2$^-$)	75.8820	5/2$^-$				
[x]1064.2[d] *4*	0.0027 *7*								
[x]1088.6[d] *4*	0.0030 *8*								
1169.48 *6*	0.011 *1*	1377.506	7/2$^-$	208.019	7/2$^-$	M1		0.00489	α(K)=0.00413 *6*; α(L)=0.000592 *9*; α(M)=0.0001316 *19*; α(N)=3.09×10^{-5} *5*; α(O)=4.44×10^{-6} *7* α(P)=2.43×10^{-7} *4* α(K)exp=0.0049 *15*.
[x]1202.57 *6*	0.0073 *11*								
1209.830 *21*	0.138 *2*	1377.506	7/2$^-$	167.662	9/2$^+$	E1		1.09×10^{-3}	α(K)=0.000903 *13*; α(L)=0.0001228 *18*; α(M)=2.71×10^{-5} *4*; α(N)=6.35×10^{-6} *9* α(O)=9.07×10^{-7} *13*; α(P)=4.88×10^{-8} *7* α(K)exp=0.0011 *2*; A_2=−0.13 *18*, δ=−0.20 *+13−16* (1985Kr07).
[x]1220.52[d] *24*	0.0024 *7*								
[x]1238.7[d] *5*	0.008 *3*								
[x]1241.0[d] *5*									
1255.14 *4*	0.0127 *7*	1377.506	7/2$^-$	122.4166	5/2$^-$	M1		0.00413	α(K)=0.00348 *5*; α(L)=0.000498 *7*; α(M)=0.0001106 *16*; α(N)=2.60×10^{-5} *4*; α(O)=3.74×10^{-6} *6* α(P)=2.05×10^{-7} *3* α(K)exp=0.0041 *13*.
1282.214 *19*	0.660 *11*	1377.506	7/2$^-$	95.2822	7/2$^+$	E1		1.01×10^{-3}	α(K)=0.000815 *12*; α(L)=0.0001106 *16*; α(M)=2.44×10^{-5} *4*; α(N)=5.71×10^{-6} *8* α(O)=8.17×10^{-7} *12*; α(P)=4.41×10^{-8} *7* α(K)exp=0.00085 *9*; A_2=−0.37 *6*, δ(D,Q)=−0.08 *7* (1985Kr07).
[x]1311.34 *4*	0.023 *1*					E1		9.91×10^{-4}	

$\gamma(^{171}$Yb) (continued)

† Weighted average from 1984Ad02 and 1981Ba52, except as noted.

‡ From combined statistical analysis of intensity values in 1981Ba52, 1983ArZV and 1984Ad02 (for Eγ below 110 keV) and in 1981Ba52 and 1984Ad02 (for higher-energy transitions), except where noted.

From α(K)exp, except where noted; the photon and ce intensity scales were normalized through α(K)=0.00227 (E1 theory) for 739.8γ. This normalization gives α(K)exp$\approx\alpha$(K)(theory) for 91.4γ, 109.3γ and 163.8γ, all with known multipolarity.

@ Magnitudes from α(K)exp and/or ce subshell ratios, except where noted; signs from nuclear orientation (1985Kr07), except As noted.

& From 1980EgZX; transition seen in ce spectrum only.

[a] From ce subshell ratios.

[b] Eγ fits placement poorly; datum excluded from least-squares adjustment when calculating level energies.

[c] Weighted average from 1980EgZX, 1981Ba52 and 1984Ad02.

[d] From 1984Ad02.

[e] For absolute intensity per 100 decays, multiply by 0.487 *11*.

[f] Multiply placed with undivided intensity.

[g] Multiply placed with intensity suitably divided.

[x] γ ray not placed in level scheme.

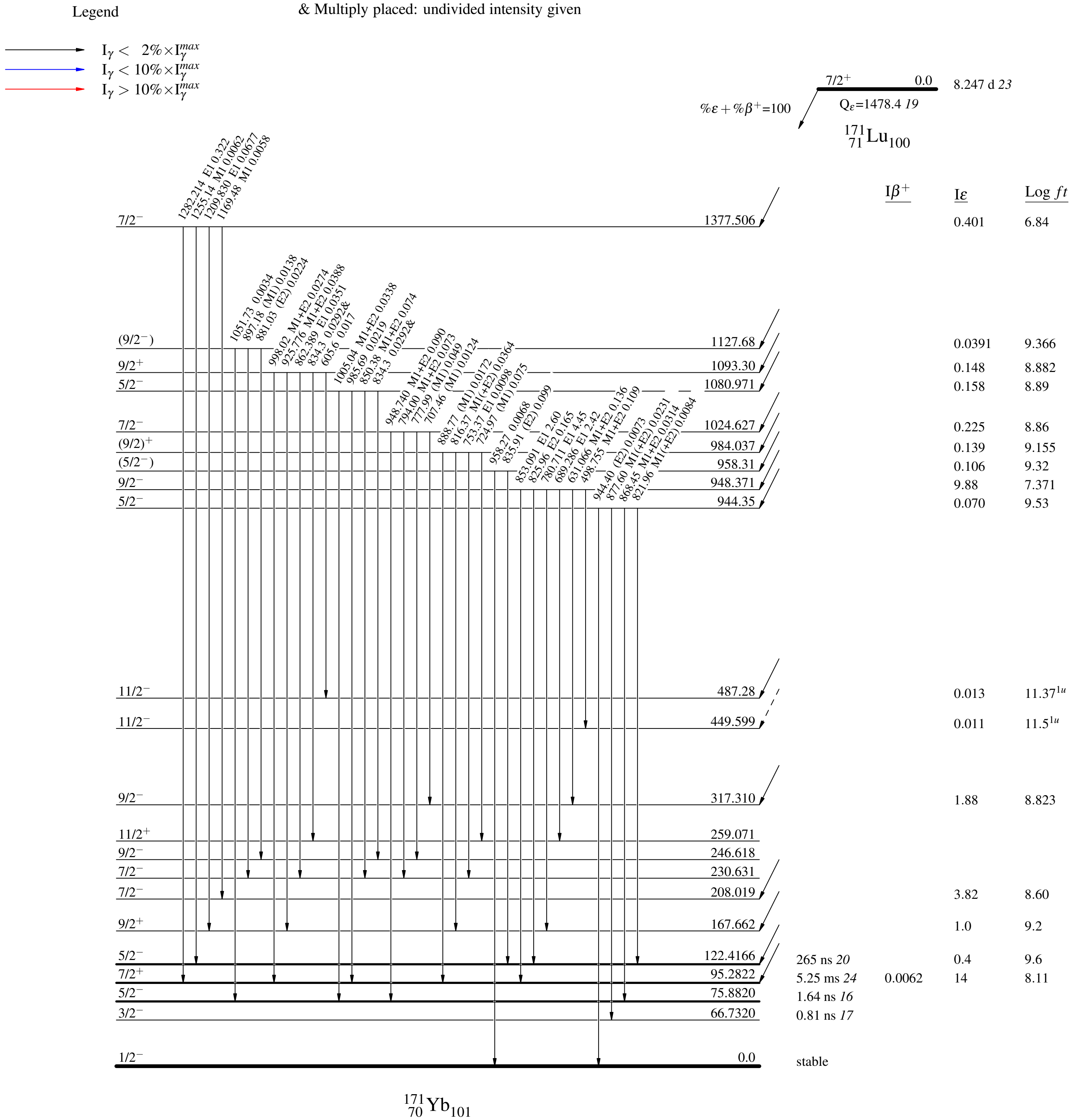
$^{171}_{70}$Yb$_{101}$-12

^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07

Decay Scheme

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

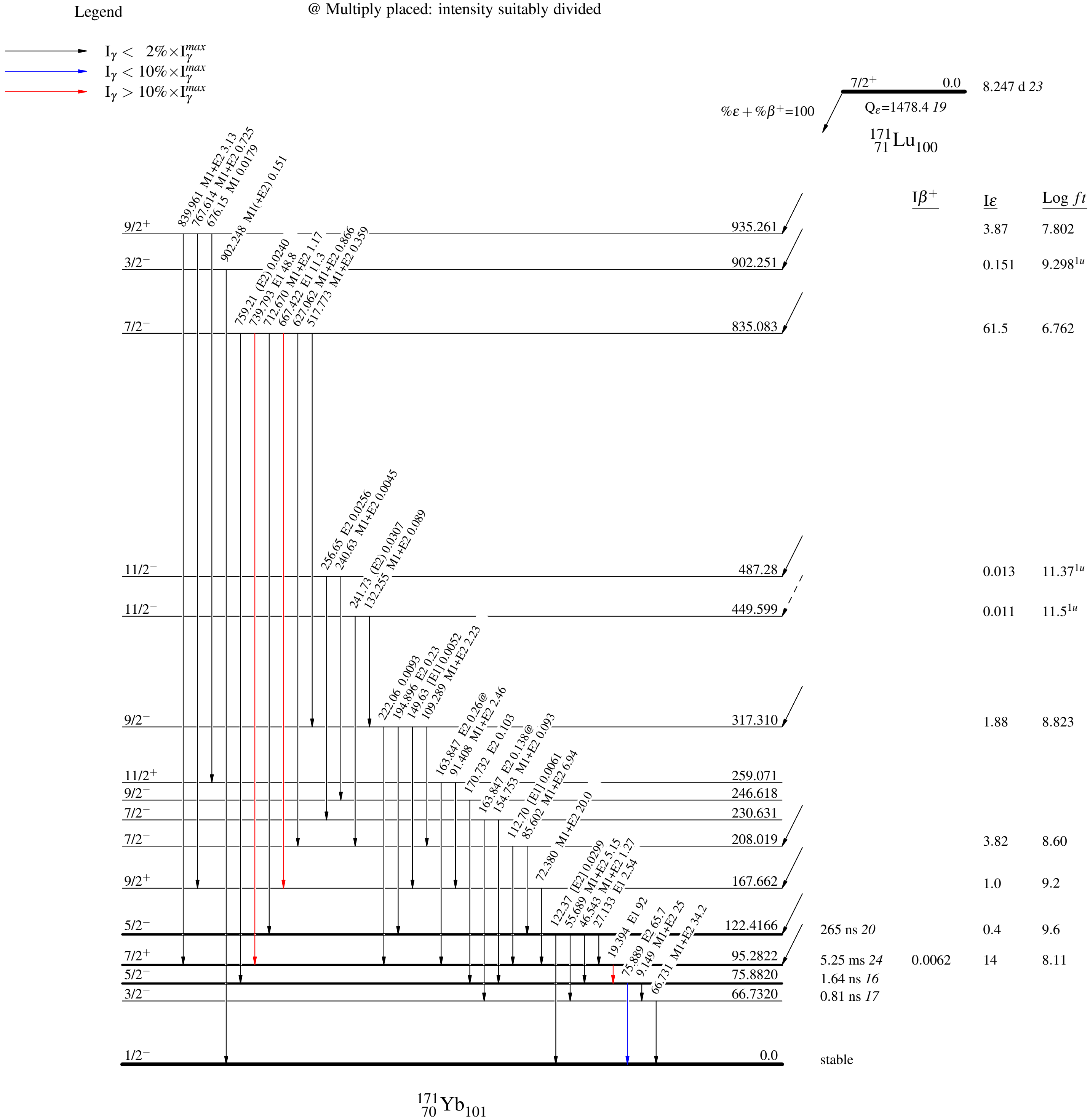
& Multiply placed: undivided intensity given



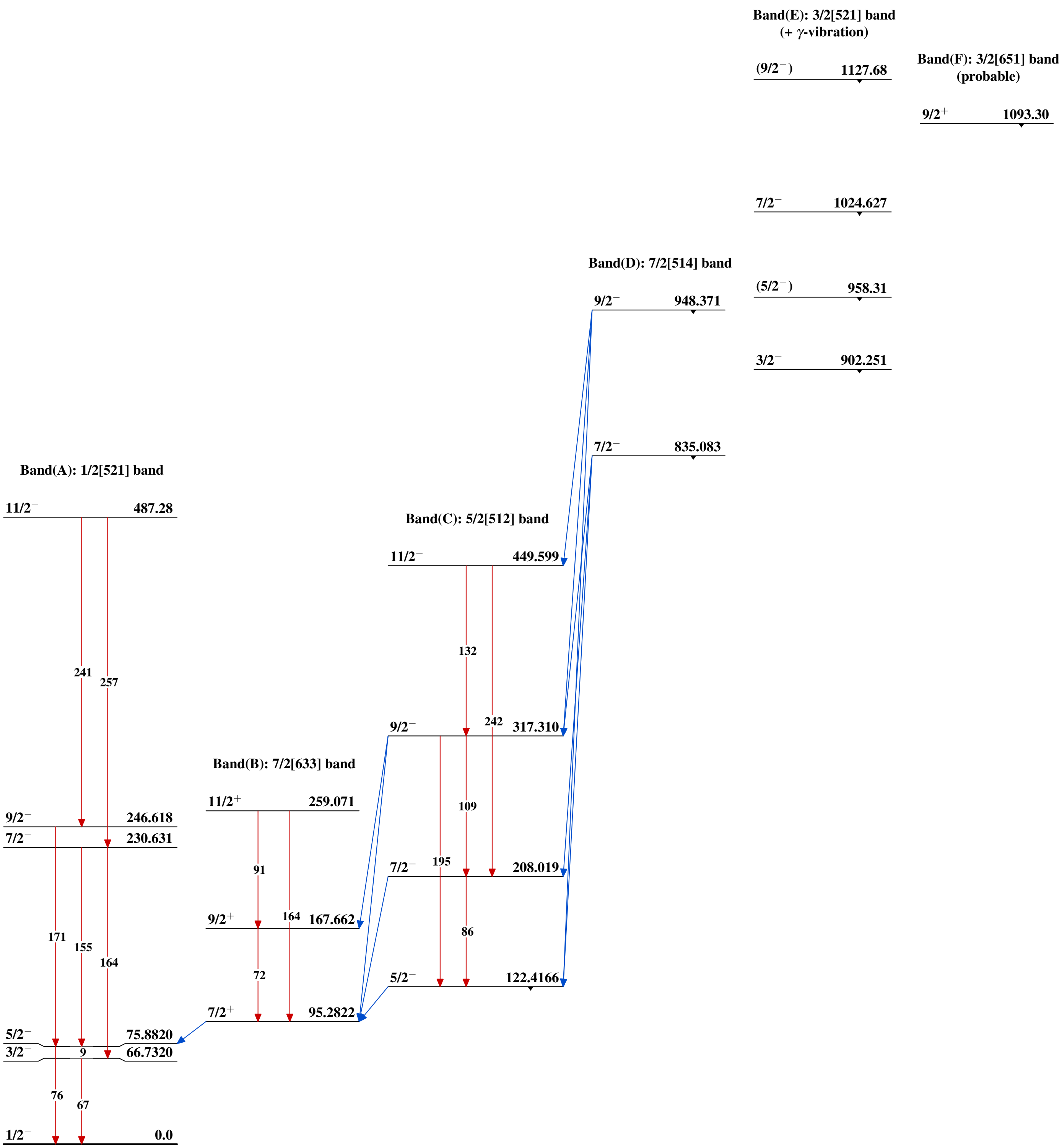
^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07



$^{171}_{70}Yb_{101}$

^{171}Lu ε decay (8.247 d) 1981Ba52,1984Ad02,1985Kr07 (continued)

Band(G): 7/2[503] band

7/2$^-$ 1377.506

$^{171}_{70}Yb_{101}$