^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	K. Kitao, Y. Tendow and A. Hashizume	NDS 96, 241 (2002)	1-Dec-2001

Parent: ^{120}I: E=0.0; $J^\pi=2^-$; $T_{1/2}$=81.6 min *2*; Q(ε)=5615 *15*; %ε+%$β^+$ decay=100.0

1988Br38, 1990BrZL: ^{93}Nb+^{34}S; on-line mass separation; γ, ce, γγ, ce-γ coin, γ(θ); low-temperature nuclear orientation.

2000Ho19: ^{120}Te(p,n) E=15 MeV, 99% enriched target, chem; γ, K x ray.

1970LaZT: Te(p,xn) E=140 MeV; γ, γγ.

1970Ga32: La,Ca(p,xn) E=660 MeV; γ, β, ce, γγ.

1987Wa17: ^{93}Nb(^{32}S,X),(^{34}S,X) E=160-175 MeV; γ, ce, γγ, γ lin. Pol.

Other: 1969Sp07.

The decay scheme is that proposed by 1988Br38. Nine levels above 3800 keV proposed by 1970Ga32 are added by the evaluators. However, it seems still tentative, because the scheme does not reproduce a measured sum($β^+$) value of 56% from 2000Ho19. The evaluators do not adopt a level at 2184.6 keV and both 6^+ states at 1776 and 2201 keV proposed by 1988Br38 are ignored by one of authors (1990BrZL).

Following levels are ignored: 1983, 2103, 2109, 2573, 2654, 2865, 2934, and 3125 keV proposed by 1970LaZT; 1833, 2106, 2586, 2693, 2741, 2778, 3015, 3072,3096, 3124, 3333, 3360, 3498, 3580, 3609, 3642, 3693, and 3740 keV proposed by 1970Ga32.

^{120}Te Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†
0.0	0^+	2083.3 *3*	3^-	3255.7 *16*	$3,4^+$	4001.9? *22*
560.29 *22*	2^+	2455.6 *4*	1^+	3286.2 *6*	$(2,3)^+$	4030? *3*
1102.7 *3*	0^+	2612.9 *5*	2^+	3341.7 *11*	$2^+,3$	4117.8? *18*
1161.6 *3*	4^+	2689.7 *11*	(2^+)	3366.6 *7*	1,2,3	4130.1? *16*
1201.4 *3*	2^+	2748.3 *11*	(2^+)	3371.5 *16*	2^+	4148? *4*
1535.0 *3*	2^+	2937.0 *5*	2^+	3494.1 *6*	2^+	4188.3? *24*
1613.3 *6*	0^+	2964.3 *7*	$2^+,3^+$	3666.1 *6*	$(2,3)^+$	4283.3? *24*
1815.4 *5*	4^+	3036.3 *11*	(4^+)	3672.3 *6*		4288? *4*
1863.3 *4*	3^+	3052.3 *7*	2,3	3765.8 *11*	$(2^+,3^+)$	
1924.7 *6*	2^+	3136.1 *11*	$(2,3)^+$	3887.0 *11*	$(2^+,3^+)$	
1936.7 *5*		3162.8 *21*	$1^+,2^+,3^+$	3896.8? *14*		

† From a least-squares fit to E(γ's) by the evaluators.

‡ From Adopted Levels.

ε,$β^+$ radiations

($β^+$)(γ)-coincidences (1968La18) (511γ)($β^+$) − E($β^+$)=4000 *100*, (560γ)($β^+$) − E($β^+$)=3450 *100*, (640γ)($β^+$) − E($β^+$)=2900 *200*.
Sum($β^+$)=56% 3 from γ's and K x ray counting (2000Ho19).

E(decay)	E(level)	Iβ+ †	Iε†	Log *ft*	I(ε+β+)†	Comments
(1327 *16*)	4288?	0.00026 *6*	0.209 *2*	7.126 *12*	0.209 *2*	av Eβ=145.7 *69*; εK=0.8536 *2*; εL=0.11477 *8*; εM+=0.03037 *3*
(1332 *15*)	4283.3?	0.00073 *16*	0.556 *4*	6.704 *11*	0.557 *4*	av Eβ=147.8 *68*; εK=0.8536 *2*; εL=0.11475 *8*; εM+=0.03037 *3*
(1427 *15*)	4188.3?	0.0027 *4*	0.693 *5*	6.669 *11*	0.696 *5*	av Eβ=189.4 *67*; εK=0.8517 *5*; εL=0.1142 *2*; εM+=0.03020 *3*
(1467 *16*)	4148?	0.00158 *23*	0.276 *2*	7.093 *11*	0.278 *2*	av Eβ=207.0 *68*; εK=0.8503 *7*; εL=0.11387 *14*; εM+=0.03012 *4*
(1485 *15*)	4130.1?	0.0056 *7*	0.829 *6*	6.627 *10*	0.835 *6*	av Eβ=214.8 *66*; εK=0.8496 *7*; εL=0.11372 *14*; εM+=0.03008 *4*

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^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Iβ+ †	Iε†	Log *ft*	I(ε+β+)†	Comments
(1497 *15*)	4117.8?	0.0046 *6*	0.621 *5*	6.760 *10*	0.626 *5*	av Eβ=220.1 *66*; εK=0.8490 *8*; εL=0.11361 *15*; εM+=0.03005 *4*
(1585 *15*)	4030?	0.0029 *3*	0.206 *2*	7.289 *11*	0.209 *2*	av Eβ=258.3 *67*; εK=0.8436 *13*; εL=0.11265 *20*; εM+=0.02978 *6*
(1613 *15*)	4001.9?	0.0082 *8*	0.479 *4*	6.939 *10*	0.487 *4*	av Eβ=270.6 *66*; εK=0.8413 *14*; εL=0.11228 *22*; εM+=0.02968 *6*
(1718 *15*)	3896.8?	0.044 *3*	1.42 *1*	6.524 *10*	1.46 *1*	av Eβ=316.3 *66*; εK=0.8300 *20*; εL=0.1105 *3*; εM+=0.02922 *8*
(1728 *15*)	3887.0	0.0037 *3*	0.114 *1*	7.622 *10*	0.118 *1*	av Eβ=320.6 *66*; εK=0.8287 *21*; εL=0.1104 *3*; εM+=0.02916 *9*
(1849 *15*)	3765.8	0.14 *2*	2.4 *4*	6.37 *7*	2.5 *4*	av Eβ=373.5 *66*; εK=0.809 *3*; εL=0.1075 *4*; εM+=0.02841 *11*
(1943 *15*)	3672.3	0.0024 *3*	0.029 *4*	8.33 *6*	0.031 *4*	av Eβ=414.4 *67*; εK=0.790 *4*; εL=0.1048 *5*; εM+=0.02768 *13*
(1949 *15*)	3666.1	0.069 *9*	0.80 *10*	6.88 *6*	0.87 *11*	av Eβ=417.1 *67*; εK=0.788 *4*; εL=0.1046 *5*; εM+=0.02763 *13*
(2121 *15*)	3494.1	0.25 *3*	1.61 *19*	6.65 *6*	1.86 *22*	av Eβ=492.9 *67*; εK=0.742 *5*; εL=0.0982 *7*; εM+=0.02594 *17*
(2244 *15*)	3371.5	0.15 *2*	0.66 *8*	7.09 *6*	0.81 *10*	av Eβ=547.1 *67*; εK=0.702 *6*; εL=0.0928 *7*; εM+=0.02451 *19*
(2248 *15*)	3366.6	0.12 *2*	0.53 *9*	7.19 *8*	0.65 *11*	av Eβ=549.4 *67*; εK=0.701 *6*; εL=0.0926 *7*; εM+=0.02445 *19*
(2273 *15*)	3341.7	0.0657 *23*	0.275 *3*	7.481 *10*	0.341 *3*	av Eβ=560.4 *67*; εK=0.692 *6*; εL=0.0914 *8*; εM+=0.02414 *19*
(2329 *15*)	3286.2	0.162 *5*	0.590 *7*	7.172 *10*	0.752 *6*	av Eβ=585.1 *67*; εK=0.672 *6*; εL=0.0888 *8*; εM+=0.02343 *20*
(2359 *15*)	3255.7	0.069 *12*	0.23 *4*	7.59 *8*	0.30 *5*	av Eβ=598.7 *68*; εK=0.661 *6*; εL=0.0873 *8*; εM+=0.02303 *20*
(2452 *15*)	3162.8	0.131 *5*	0.356 *11*	7.437 *17*	0.487 *15*	av Eβ=640.1 *68*; εK=0.626 *6*; εL=0.0826 *8*; εM+=0.02179 *21*
(2479 *15*)	3136.1	0.155 *4*	0.395 *5*	7.401 *10*	0.550 *4*	av Eβ=652.1 *68*; εK=0.616 *6*; εL=0.0812 *8*; εM+=0.02143 *21*
(2563 *15*)	3052.3	0.43 *4*	0.91 *8*	7.07 *4*	1.34 *11*	av Eβ=689.7 *68*; εK=0.583 *6*; εL=0.0768 *8*; εM+=0.02028 *21* Eβ=1540 *80*, Iβ≈2.5 (1970Ga32).
(2579 *15*)	3036.3	0.068 *8*	0.47 *5*	8.75[1u] *5*	0.54 *6*	av Eβ=716.4 *67*; εK=0.747 *4*; εL=0.1007 *5*; εM+=0.02668 *13*
(2651 *15*)	2964.3	0.53 *3*	0.94 *6*	7.08 *3*	1.47 *9*	av Eβ=729.2 *68*; εK=0.549 *6*; εL=0.0723 *8*; εM+=0.01908 *21*
(2678 *15*)	2937.0	0.94 *8*	1.58 *13*	6.87 *4*	2.52 *21*	av Eβ=741.5 *68*; εK=0.538 *6*; εL=0.0709 *8*; εM+=0.01870 *21*
(2867 *15*)	2748.3	0.65 *4*	0.79 *5*	7.23 *3*	1.44 *9*	av Eβ=826.9 *69*; εK=0.468 *6*; εL=0.0615 *8*; εM+=0.01622 *20*
(2925 *15*)	2689.7	0.264 *4*	0.286 *4*	7.686 *11*	0.550 *4*	av Eβ=853.5 *69*; εK=0.447 *6*; εL=0.0587 *7*; εM+=0.01549 *19*
(3002 *15*)	2612.9	0.422 *12*	0.406 *12*	7.557 *15*	0.828 *22*	av Eβ=888.5 *69*; εK=0.420 *5*; εL=0.0552 *7*; εM+=0.01456 *18*
(3159 *15*)	2455.6	2.13 *14*	1.61 *11*	7.00 *3*	3.74 *24*	av Eβ=960.1 *69*; εK=0.370 *5*; εL=0.0485 *6*; εM+=0.01280 *16*
(3532 *15*)	2083.3	6.2 *5*	2.9 *2*	6.85 *4*	9.1 *7*	av Eβ=1131.4 *70*; εK=0.271 *4*; εL=0.0355 *5*; εM+=0.00937 *12* Eβ=2490 *50*; I(β+)=6.7% (1970Ga32).
(3678 *15*)	1936.7	0.235 *15*	0.092 *6*	8.38 *3*	0.327 *21*	av Eβ=1199.2 *70*; εK=0.240 *3*; εL=0.0315 *4*; εM+=0.00830 *11*
(3690 *15*)	1924.7	0.664 *12*	0.255 *6*	7.940 *12*	0.919 *16*	av Eβ=1204.7 *70*; εK=0.238 *3*; εL=0.0312 *4*; εM+=0.00821 *11*
(3752 *15*)	1863.3	<0.13	<0.047	>8.7	<0.18	av Eβ=1233.2 *70*; εK=0.226 *3*; εL=0.0296 *4*;

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^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

ε,β+ radiations (continued)

E(decay)	E(level)	Iβ+ †	Iε†	Log *ft*	I(ε+β+)†	Comments
						εM+=0.00781 *10*
(4002 *15*)	1613.3	0.190 *2*	0.136 *2*	10.064[1u] *12*	0.326 *3*	av Eβ=1354.8 *69*; εK=0.358 *4*; εL=0.0475 *5*; εM+=0.01255 *13*
(4080 *15*)	1535.0	1.93 *18*	0.49 *5*	7.74 *5*	2.42 *23*	av Eβ=1386.0 *70*; εK=0.1740 *21*; εL=0.0228 *3*; εM+=0.00600 *8*
(4414 *15*)	1201.4	2.7 *5*	0.50 *9*	7.80 *9*	3.2 *6*	av Eβ=1542.4 *71*; εK=0.1349 *16*; εL=0.01763 *20*; εM+=0.00465 *6* Eβ=3400, I(β+)=3.4% (1970Ga32). Other: 2900 *200* from βγ coin (1968La18).
(4453 *15*)	1161.6	0.93 *8*	0.42 *3*	9.76[1u] *4*	1.35 *11*	av Eβ=1561.3 *69*; εK=0.266 *3*; εL=0.0352 *4*; εM+=0.00931 *10*
(4512 *15*)	1102.7	0.20 *5*	0.087 *21*	10.47[1u] *11*	0.29 *7*	av Eβ=1588.4 *69*; εK=0.256 *3*; εL=0.0339 *4*; εM+=0.00895 *9*
(5055 *15*)	560.29	29.3 *7*	3.27 *9*	7.107 *13*	32.6 *8*	av Eβ=1845.0 *72*; εK=0.0862 *9*; εL=0.01124 *12*; εM+=0.00296 *3* Eβ=4030 *20*, I(β+)=13.5% (1970Ga32).
(5615 *15*)	0.0	19.0 *7*	3.35 *13*	9.266[1u] *18*	22.3 *8*	av Eβ=2099.3 *70*; εK=0.1287 *12*; εL=0.01694 *15*; εM+=0.00447 *4* Eβ=4595 *15*, I(β+)=19% (1970Ga32).

† Absolute intensity per 100 decays.

$\gamma(^{120}Te)$

Iγ normalization: from Σ (I(γ+ce)+Iε+Iβ$^+$)(to g.s.)=100. I(β$^+$)(to g.s.)=19% (1970Ga32) are assumed. Uncertainty is calculated from that in I(γ+ce) (to g.s.).
I(γ$^\pm$)=64 *6* (1970LaZT).
α(K)exp from 1970Ga32. Values are relative to α(K)(E2)=0.00509 (theory) for 560γ.

E_γ [†]	I_γ [‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	δ[i]	α[l]	$I_{(\gamma+ce)}$[k]	Comments
334.0[a]	0.12[a]	1535.0	2$^+$	1201.4	2$^+$	M1+E2	+1.0	0.0268 *7*		α(K)=0.0228 *2*; α(L)=0.0032 *4*; α(M)=0.00064 *8*; α(N+..)=0.00015 *2* δ: assumed by the evaluators. Other: −0.36 *3* or +13 *+6−3* (1988Br38).
412[o]	0.12 *4*	1613.3	0$^+$	1201.4	2$^+$					E_γ: reported by 1987Wa17 only 2.
433.0[d] *5*	0.48 *2*	1535.0	2$^+$	1102.7	0$^+$	E2		0.0124		α(K)=0.0105 *4*; α(L)=0.00151 *5*; α(M)=0.00030 *1* E_γ: other: 431.8 *6* (1969Sp07). I_γ: from 0.49 (1988Br38) and 0.46 *10* (1970LaZT).
x477.9[@&] *5*	0.28 *5*									
x485.1[@&] *5*	0.28 *5*									
511[f]		1613.3	0$^+$	1102.7	0$^+$	E0			0.005 *2*	$I_{(\gamma+ce)}$: I(E0) from 1987Wa17, but peak of the ce is not well defined (1987Wa17).
529.0[na]	0.25[na]	2455.6	1$^+$	1924.7	2$^+$					
529.0[na]	0.02[na]	2612.9	2$^+$	2083.3	3$^-$					
542.7 *3*	1.41 *10*	1102.7	0$^+$	560.29	2$^+$	E2		0.00656		α(K)exp=0.00793 α=0.00656; α(K)=0.00555 *17*; α(L)=0.00076 *2* I_γ: from 1.52 (1988Br38), 1.50 *17* (1970LaZT), and 1.2 (1970Ga32).
560.4 *3*	100	560.29	2$^+$	0.0	0$^+$	[E2]		0.00601		α=0.00601; α(K)=0.00509 *16*; α(L)=0.00070 *2*
601.1 *3*	7.92 *4*	1161.6	4$^+$	560.29	2$^+$	[E2]				α(K)exp=0.00465 I_γ: from 7.86 (1988Br38), 7.9 *17* (1970LaZT), and 8.0 (1970Ga32).
614.0	0.68 *22*	1815.4	4$^+$	1201.4	2$^+$					I_γ: from 0.46 (1988Br38) and 0.9 (1970Ga32).
641.1 *3*	12.1 *2*	1201.4	2$^+$	560.29	2$^+$	M1+E2	−2.4 *16*	0.0044 *5*		α(K)exp=0.00362 α=0.0044 *5*; α(K)=0.0037 *5*; α(L)=0.00049 *4* I_γ: from 12.0 (1988Br38), 12.5 *6* (1970LaZT), and 11.8 (1970Ga32). δ: from −0.40<δ<−0.46 (1988Br38).
653.0[e]	0.305 *5*	1815.4	4$^+$	1161.6	4$^+$	M1+E2	+1.0	0.0045 *5*		α(K)exp=0.00362 α=0.0045 *5*; α(K)=0.0039 *5*; α(L)=0.00049 *4* E_γ: other: 653.6 *6* (1969Sp07). I_γ: from 0.31 (1988Br38) and 0.3 (1970Ga32). δ: assumed by the evaluators. Other: −0.44 *+260−20* or +4.0 +1.0-2.4 (1988Br38).
x659.0[b] *15*						E2(+M1)		0.0044 *5*		α(K)exp=0.00367

$^{120}_{52}Te_{68}$-4

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ[†]	I_γ[‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	δ[i]	α[l]	Comments
									α=0.0044 *5*; α(K)=0.0038 *5*; α(L)=0.00048 *4* Mult.: from α(K)exp.
662.1 *3*	1.51 *6*	1863.3	3+	1201.4	2+	M1+E2	+1.0	0.0044 *5*	α(K)exp=0.00274 α=0.0044 *5*; α(K)=0.0037 *5*; α(L)=0.00047 *4* I_γ: from 1.39 (1988Br38), 1.54 *15* (1970LaZT), and 1.6 (1970Ga32). δ: assumed by the evaluators. Other: +0.13 *3* or −8 *+3−1* (1988Br38).
x694.4[@&] *7*	0.13 *4*								
701.4 *5*	0.50 *6*	1863.3	3+	1161.6	4+	M1+E2	−2.2 *18*	0.0035 *6*	α=0.0035 *6*; α(K)=0.0030 *6*; α(L)=0.00039 *5* I_γ: from 0.49 (1988Br38), 0.41 *8* (1970LaZT), and 0.6 (1970Ga32). δ: from −4.0<δ<−0.35 (1988Br38).
x713.0[b] *7*	0.20								
729.2 *4*	0.28 *14*	3666.1	(2,3)+	2937.0	2+	E2			I_γ: from 0.41 *8* (1970LaZT) and 0.14 (1988Br38). E_γ: assigned to 53-min ^{120}I decay by 1970Ga32.
x730.0[b] *10*									α(K)exp>0.0078 Mult.: from α(K)exp.
x733.0[b] *10*	0.2					M1+E2		0.0034 *4*	α(K)exp=0.00411 α=0.0034 *4*; α(K)=0.0029 *4*; α(L)=0.00037 *4* Mult.: from α(K)exp.
735.3[nd] *4*	0.47[n] *3*	1936.7		1201.4	2+				E_γ: unplaced in 1970LaZT. I_γ: from 0.50 (1988Br38) and 0.44 *8* (1970LaZT).
735.3[nd] *4*	0.045[n] *5*	3672.3		2937.0	2+				E_γ: in 1970LaZT, placed to another level. I_γ: from 0.04 *1* (1970LaZT) and 0.05 (1988Br38).
x743.1 *4*	0.48 *9*								
749.0[a]	0.14[a]	2612.9	2+	1863.3	3+	M1+E2			
x752.0[b] *8*	0.40								
763.0	0.62	1924.7	2+	1161.6	4+				E_γ: other: 762.4 *4* (1969Sp07).
853.3[d] *5*	0.27 *1*	2937.0	2+	2083.3	3−				E_γ: unplaced in 1970LaZT. I_γ: from 0.26 (1988Br38) and 0.28 *8* (1970LaZT).
x874.7[@&] *5*	0.21 *6*								
881.8[d] *5*	0.43 *8*	2083.3	3−	1201.4	2+				I_γ: from 0.35 (1988Br38) and 0.50 *9* (1970LaZT).
x908.5 *5*	0.38 *8*								
921.3[n] *4*	0.52[n] *3*	2083.3	3−	1161.6	4+				E_γ: other: 923 (1970Ga32). I_γ: from 0.48 (1988Br38), 0.58 *7* (1970LaZT), and 0.49 (1970Ga32).
921.3[nd] *4*	0.33[n] *2*	2455.6	1+	1535.0	2+				I_γ: from 0.30 (1988Br38), 0.37 *4* (1970LaZT), and 0.31 (1970Ga32).
950.0[a]	0.17[a]	3887.0	(2+,3+)	2937.0	2+	(M1+E2)			
969.1 *8*	0.26 *5*	3052.3	2,3	2083.3	3−				E_γ: from 1970LaZT.

$^{120}_{52}Te_{68}$-5

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ [†]	I_γ [‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	δ[i]	α[l]	$I_{(\gamma+ce)}$[k]	Comments
975.1 *4*	2.15 *24*	1535.0	2^+	560.29	2^+	M1+E2	−3.3 *27*	0.0016 *3*		α=0.0016 *3*; α(K)=0.0013 *3*; α(L)=0.00017 *3* E_γ: assigned to 53-min ^{120}I decay by 1970Ga32. E_γ: other: 974.6 *4* (1969Sp07). I_γ: from 1970LaZT. Other: 2.15 (1988Br38). δ: from −6.0<δ<−0.65 (1988Br38).
[x]979.6 *5*	0.53 *9*									
1053.0[e]	0.46	1613.3	0^+	560.29	2^+					E_γ: assigned to 53-min decay in 1970Ga32.
1074.0[a] *10*	0.83[a] *17*	2937.0	2^+	1863.3	3^+					
[x]1085.9[&] *7*	0.2 *1*									
1101.0 *6*	0.59 *2*	2964.3	2^+,3^+	1863.3	3^+	M1+E2		0.00134 *17*		α(K)exp=0.00166 α=0.00134 *17*; α(K)=0.00115 *14*; α(L)=0.00014 *2* E_γ: unplaced in 1970Ga32 and 1970LaZT. I_γ: from 0.62 (1988Br38), 0.56 *9* (1970LaZT), and 0.6 (1970Ga32).
1103[f]		1102.7	0^+	0.0	0^+	E0			0.004 *1*	α(K)exp>0.0098 $I_{(\gamma+ce)}$: I(E0) from 1987Wa17.
[x]1158.0[@&] *6*	0.6 *1*									
[x]1168.8[&] *6*	0.80 *13*									
1201.6 *5*	3.6 *6*	1201.4	2^+	0.0	0^+					α(K)exp=0.00069 I_γ: from 3.3 (1988Br38), 2.6 *3* (1970LaZT), and 4.8 (1970Ga32).
[x]1222.0[b] *15*						(E2)		0.00095		α(K)exp>0.0006 α=0.00095; α(K)=0.00082 *3*; α(L)=0.00010 Mult.: from α(K)exp.
1255[n]	0.97[n]	2455.6	1^+	1201.4	2^+					I_γ: from 1988Br38. Other: 1.13 *14* (1970LaZT), but this value seems to be for a doublet.
1255.4[n] *6*	0.10[n]	1815.4	4^+	560.29	2^+					I_γ: from 1988Br38. Other: 1.3 in 1970Ga32, but this value seems to be for a doublet.
1283.4[d] *7*	0.35 *15*	3366.6	1,2,3	2083.3	3^-					E_γ: unplaced in 1970LaZT. I_γ: from 0.50 *9* (1970LaZT) and 0.2 (1988Br38).
[x]1299.4 *7*	0.58 *9*									
1302.7 *7*	1.19 *3*	1863.3	3^+	560.29	2^+	M1+E2				I_γ: from 1.23 (1988Br38), 1.13 *13* (1970LaZT), and 1.2 (1970Ga32). δ: +0.27 *2* or +71 *+10−49* (1988Br38).
1325.0[a] *10*	[a]	2937.0	2^+	1613.3	0^+					I_γ: very weak, no intensity is given by authors.
1363.5[d] *7*	0.95 *2*	1924.7	2^+	560.29	2^+					E_γ: unplaced in 1970LaZT. I_γ: from 0.96 (1988Br38) and 0.93 *19* (1970LaZT).
[x]1383.0[b] *15*	0.7									
1402.0[a]	0.76[a]	2937.0	2^+	1535.0	2^+					
[x]1404.2 *4*	2.4 *3*									E_γ: from 1969Sp07.
1410.9 *5*	1.8 *3*	3494.1	2^+	2083.3	3^-	(E1)		0.00033		α(K)exp=0.0035

$^{120}_{52}Te_{68}$-6

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ [†]	I_γ [‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	α[l]	$I_{(\gamma+ce)}$[k]	Comments
									α=0.00033; α(K)=0.00029 *1* E_γ: in 1970LaZT, placed to another level. E_γ: other: 1413 (1970Ga32). I_γ: from 1.8 *2* (1970LaZT), 1.24 (1988Br38), and 2.3 (1970Ga32).
x1419.0[b] *15*						M3,M2	0.0027 *8*		α(K)exp=0.00234 α=0.0027 *8*; α(K)=0.0023 *7*; α(L)=0.00029 *9* Additional information 1.
1422.9 *5*	1.08	3286.2	(2,3)$^+$	1863.3	3$^+$	(M1+E2)	0.00078 *8*		α(K)exp=0.0005 α=0.00078 *8*; α(K)=0.00067 *7* E_γ: in 1970LaZT and 1970Ga32, placed to other levels, respectively. I_γ: from 1.08 (1988Br38) and 1.09 *14* (1970LaZT). Other: 1.8 (1988Br38).
x1428.0[b] *15*						E3,M1+E2	0.00077 *8*		α(K)exp=0.00078 α=0.00077 *8*; α(K)=0.00066 *7*
x1441.1[@&] *10*	0.30 *8*								
1451.7[d] *7*	0.67 *3*	2612.9	2$^+$	1161.6	4$^+$	E2			I_γ: from 0.64 (1988Br38) and 0.69 *13* (1970LaZT). E_γ: in 1970LaZT, assigned to another level. And, 1970Ga32 assigned to 53-min ^{120}I decay.
x1492.0[c] *7*	0.55 *11*								
1523.0 *4*	15.6 *9*	2083.3	3$^-$	560.29	2$^+$	E1	0.00025		α(K)exp=0.00022 α=0.00025; α(K)=0.00025 *1* E_γ: other: 1525 (1970Ga32). I_γ: from 14.2 (1988Br38), 15.4 *13* (1970LaZT), and 17.3 (1970Ga32).
1534.9 *5*	2.60 *21*	1535.0	2$^+$	0.0	0$^+$				I_γ: from 2.39 (1988Br38) and 2.8 *3* (1970LaZT).
x1536.0[b] *15*	1.3					M1,E2	0.00057 *6*		α(K)exp=0.00063 α=0.00057 *6*; α(K)=0.00057 *6* Mult.: from α(K)exp.
x1540.0[b] *15*	0.8					E1	0.00025		α(K)exp=0.00031 α=0.00025; α(K)=0.00025 *1* Mult.: from α(K)exp.
x1543.0[c] *10*	1.6 *3*								
x1547.5 *10*	1.25 *14*								
x1552.2 *10*	0.5 *1*								
1601.0[a]	0.79[a]	3136.1	(2,3)$^+$	1535.0	2$^+$	(M1+E2)			
x1605.0[b] *16*	1.0								
1614[f]		1613.3	0$^+$	0.0	0$^+$	E0		0.0006 *2*	$I_{(\gamma+ce)}$: I(E0) from 1987Wa17, but peak of the ce is not well defined (1987Wa17). E_γ: other: 1665.0 *17* (1970Ga32).
x1663.6[c] *10*	0.5 *1*								

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ [†]	I_γ [‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	Comments
x1674.0[b] *17*	0.70						
x1761.4 *10*	0.85 *13*						
x1764.0[b] *18*	0.7						
x1769.0[b] *18*	0.3						
1775.8 *10*	1.24 *8*	2937.0	2^+	1161.6	4^+	E2	E_γ: unplaced in 1970LaZT. I_γ: from 1.19 (1988Br38), 1.13 *13* (1970LaZT), and 1.4 (1970Ga32).
x1790.0[b] *18*	1.8 *4*						
x1833.0[bo] *20*						(M1,E0)	α(K)exp>0.00039 Mult.: from α(K)exp.
1851.4[o] *15*	0.36 *8*	3052.3	2,3	1201.4	2^+		E_γ: from 1970LaZT.
x1868.3[@] *10*	0.84 *16*						
x1872.0[b] *19*	0.50 *17*						
1874.7[d] *10*	0.77 *8*	3036.3	(4^+)	1161.6	4^+	(M1+E2)	E_γ: unplaced in 1970LaZT. I_γ: from 0.69 (1988Br38) and 0.84 *18* (1970LaZT).
1895.0 *10*	0.94 *13*	2455.6	1^+	560.29	2^+	M1+E2	E_γ: in 1970Ga32, placed to another level. I_γ: from 0.84 (1988Br38), 0.78 *13* (1970LaZT), and 1.2 (1970Ga32).
x1911.0[b] *19*	0.8						
x1922.8[@&] *15*	0.40 *8*					D(+Q)	E_γ: other: 1924.0 *19*.
x1935[b] *2*	0.4						
x1983.4 *10*	0.59 *13*						
2034[m] *2*	0.5[m]	3896.8?		1863.3	3^+		
2034[m] *2*	0.5[m]	4117.8?		2083.3	3^-		
2045[b] *2*	0.3	4130.1?		2083.3	3^-		
2082.0[b] *20*	1.3	3896.8?		1815.4	4^+		
2094.0 *15*	0.43 *7*	3255.7	$3,4^+$	1161.6	4^+	D(+Q)	E_γ: in 1970LaZT, placed to another level; unplaced in (1970Ga32). I_γ: from 0.28 (1988Br38). 0.49 *10* (1970LaZT), and 0.5 (1970Ga32).
x2109.1[c] *10*	0.75 *15*						
2129.4 *10*	0.79	2689.7	(2^+)	560.29	2^+	(M1+E2)	E_γ: in 1970LaZT and 1970Ga32, placed other levels respectively. E_γ: other: 2128.6 *7* (1969Sp07). I_γ: others: 1.10 *13* (1988Br38), 1.4 (1970Ga32).
x2142[b] *2*	0.5						
x2158[b] *2*	0.5						
2165.0[a]	0.58[a]	3366.6	1,2,3	1201.4	2^+		
2172.0[bo] *22*	1.0	4030?		1863.3	3^+		
2180.0[e]	0.49	3341.7	$2^+,3$	1161.6	4^+	D(+Q)	E_γ: in 1970Ga32, doubly placed to other levels. I_γ: other: 0.7 (1970Ga32).
2188.0 *10*	2.07 *12*	2748.3	(2^+)	560.29	2^+	(M1+E2)	E_γ: unplaced in 1970LaZT. I_γ: from 1.97 (1988Br38), 1.94 *21* (1970LaZT), and 2.3 (1970Ga32).
x2218.0[b] *22*	0.3 *6*						

$^{120}_{52}Te_{68}$-8

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ [†]	I_γ [‡#j]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[h]	Comments
x2305.4@ *20*	0.40 *8*						
x2375.3 *15*	0.50 *10*						
2378.4 *15*	1.01 *18*	2937.0	2^+	560.29	2^+		α(K)exp=0.00009 E_γ: unplaced in 1970LaZT. I_γ: from 1.17 (1988Br38) and 0.66 *13* (1970LaZT), and 1.2 (1970Ga32).
2404.0[g] *15*	1.52 *12*	2964.3	$2^+,3^+$	560.29	2^+	M1+E2	α(K)exp=0.00012 I_γ: from 1.64 (1988Br38) and 1.4 (1970Ga32).
2454.8 *5*	2.8 *3*	2455.6	1^+	0.0	0^+		α(K)exp=0.00016 E_γ: in 1970Ga32, placed to another level. I_γ: from 2.33 (1988Br38), 2.8 *3* (1970LaZT), and 3.2 (1970Ga32).
2462.8[d] *15*	0.97 *7*	3666.1	$(2,3)^+$	1201.4	2^+	D	I_γ: from 0.90 *18* (1970LaZT) and 1.04 (1988Br38).
2491.8 *10*	1.67 *14*	3052.3	2,3	560.29	2^+	D(+Q)	α(K)exp=0.00008 E_γ: in 1970Ga32, placed to another level. I_γ: from 1.83 (1988Br38), 1.39 *14* (1970LaZT), and 1.8 (1970Ga32).
x2510.0[b] *25*	0.4						
x2526[b] *3*	0.4						
2564.4 *10*	3.6 *5*	3765.8	$(2^+,3^+)$	1201.4	2^+	(M1+E2)	α(K)exp=0.00009 E_γ: in 1970LaZT and 1970Ga32, placed to another level. I_γ: from 2.7 *3* (1970LaZT), 3.59 (1988Br38), and 4.6 (1970Ga32).
x2569.0[b] *20*						E2,M1	α(K)exp=0.00021 Mult.: from α(K)exp.
2602.5[d] *20*	0.70 *2*	3162.8	$1^+,2^+,3^+$	560.29	2^+	M1+E2	I_γ: from 0.68 (1988Br38) and 0.71 *15* (1970LaZT).
2613.0[a]	0.36[a]	2612.9	2^+	0.0	0^+	(E2)	
x2638[b] *3*	0.3						
x2654[b] *3*	0.3						
x2693[b] *3*	0.80 *22*						
x2697.2 *15*	0.49 *10*						
x2740[b] *3*	0.6						
x2747[b] *3*	0.4						
x2778[b] *3*	0.5						
2800[b] *3*	0.4	4001.9?		1201.4	2^+		
2811.2 *15*	1.16 *14*	3371.5	2^+	560.29	2^+	M1+E2	E_γ: unplaced in 1970LaZT. E_γ: other: 2807 (1970Ga32). I_γ: from 0.91 *13* (1970LaZT), 1.17 (1988Br38), and 1.4 (1970Ga32).
2829[b] *3*	0.3	4030?		1201.4	2^+		
x2864.3@ *20*	0.51 *13*						E_γ: other: 2862 *3* (1970Ga32).
2932.9 *15*	0.87 *5*	3494.1	2^+	560.29	2^+	M1+E2	E_γ: in 1970LaZT, placed to another level. In 1970Ga32, unplaced. I_γ: from 0.96 *13* (1970LaZT), 0.84 (1988Br38), and 0.8 (1970Ga32).
x2939[b] *3*	0.4						

$^{120}_{52}Te_{68}$-9

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32 (continued)

γ(^{120}Te) (continued)

E_γ †	I_γ ‡#j	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	I_γ ‡#j	E_i(level)	E_f	J_f^π
2987[b] *3*	0.6	4188.3?		1201.4	2^+	x3580[b] *4*	0.4			
3029[b] *3*	0.5	4130.1?		1102.7	0^+	x3608[b] *4*	0.9			
x3047[b] *3*	1.8					x3694[b] *4*	0.4			
3082[b] *3*	0.4	4283.3?		1201.4	2^+	x3742[b] *4*	0.4			
x3098[b] *3*	0.5					4120[b] *4*	0.4	4117.8?	0.0	0^+
x3105.1[@] *15*	0.46 *10*					4134[b] *4*	0.4	4130.1?	0.0	0^+
x3160[b] *3*	0.3					4148[b] *4*	0.4	4148?	0.0	0^+
x3182[b] *3*	0.9					4188[b] *4*	0.4	4188.3?	0.0	0^+
3334[b] *3*	0.3	3896.8?		560.29	2^+	4283[b] *4*	0.4	4283.3?	0.0	0^+
x3395[b] *3*	0.4					4288[b] *4*	0.3	4288?	0.0	0^+
3442[b] *3*	0.3	4001.9?		560.29	2^+	x4413[b] *4*	0.2			
x3545[b] *4*	0.4									

† From 1970LaZT, unless otherwise noted.
‡ From unweighted av from 1988Br38, 1970Ga32 and 1970LaZT, unless otherwise noted. For each value, see additional comments.
# Relative to I(560γ)=100.
@ Isomeric assignment uncertain (1970LaZT).
& Uncertain transition (1970LaZT).
a From 1988Br38, not reported in 1970LaZT and 1970Ga32.
b Reported only in 1970Ga32. Uncertainty from author's statements that 0.1% for Eγ and 10-35% for Iγ.
c Reported in both 1970LaZT and 1970Ga32, but not in 1988Br38.
d Not reported in 1970Ga32.
e Not reported in 1970LaZT.
f E0 transition from 1970Ga32 and/or 1987Wa17.
g Assigned to ^{120}I decay (53 min) in 1970LaZT but unplaced.
h From γ(θ) in low temperature oriented nuclei (1988Br38), unless otherwise noted.
i From A_2 of γ(θ) in low temperature oriented nuclei (1988Br38).
j For absolute intensity per 100 decays, multiply by 0.696 *5*.
k Absolute intensity per 100 decays.
l 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.
m Multiply placed with undivided intensity.
n Multiply placed with intensity suitably divided.
o Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

$^{120}_{52}Te_{68}$-10

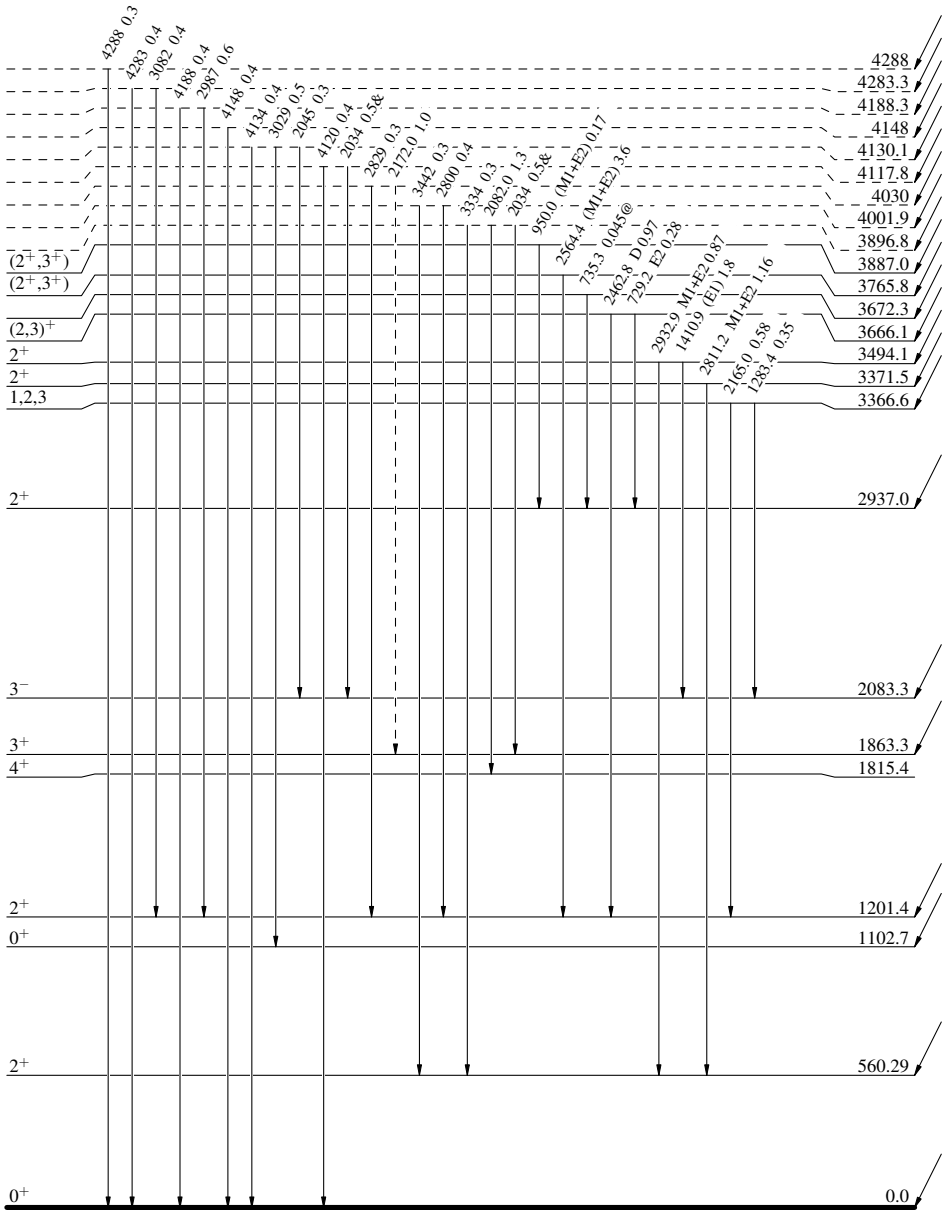
^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32

Decay Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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)

2^- 0.0 81.6 min 2
$\%\varepsilon + \%\beta^+ = 100$ Q_ε=5615 15
$^{120}_{53}I_{67}$



	Iβ+	Iε	Log *ft*
4288	0.00026	0.209	7.126
4283.3	0.00073	0.556	6.704
4188.3	0.0027	0.693	6.669
4148	0.00158	0.276	7.093
4130.1	0.0056	0.829	6.627
4117.8	0.0046	0.621	6.760
4030	0.0029	0.206	7.289
4001.9	0.0082	0.479	6.939
3896.8	0.044	1.42	6.524
3887.0	0.0037	0.114	7.622
3765.8	0.14	2.4	6.37
3672.3	0.0024	0.029	8.33
3666.1	0.069	0.80	6.88
3494.1	0.25	1.61	6.65
3371.5	0.15	0.66	7.09
3366.6	0.12	0.53	7.19
2937.0	0.94	1.58	6.87
2083.3	6.2	2.9	6.85
1863.3	<0.13	<0.047	>8.7
1815.4			
1201.4	2.7	0.50	7.80
1102.7	0.20	0.087	10.47[1u]
560.29	29.3	3.27	7.107
0.0	19.0	3.35	9.266[1u]

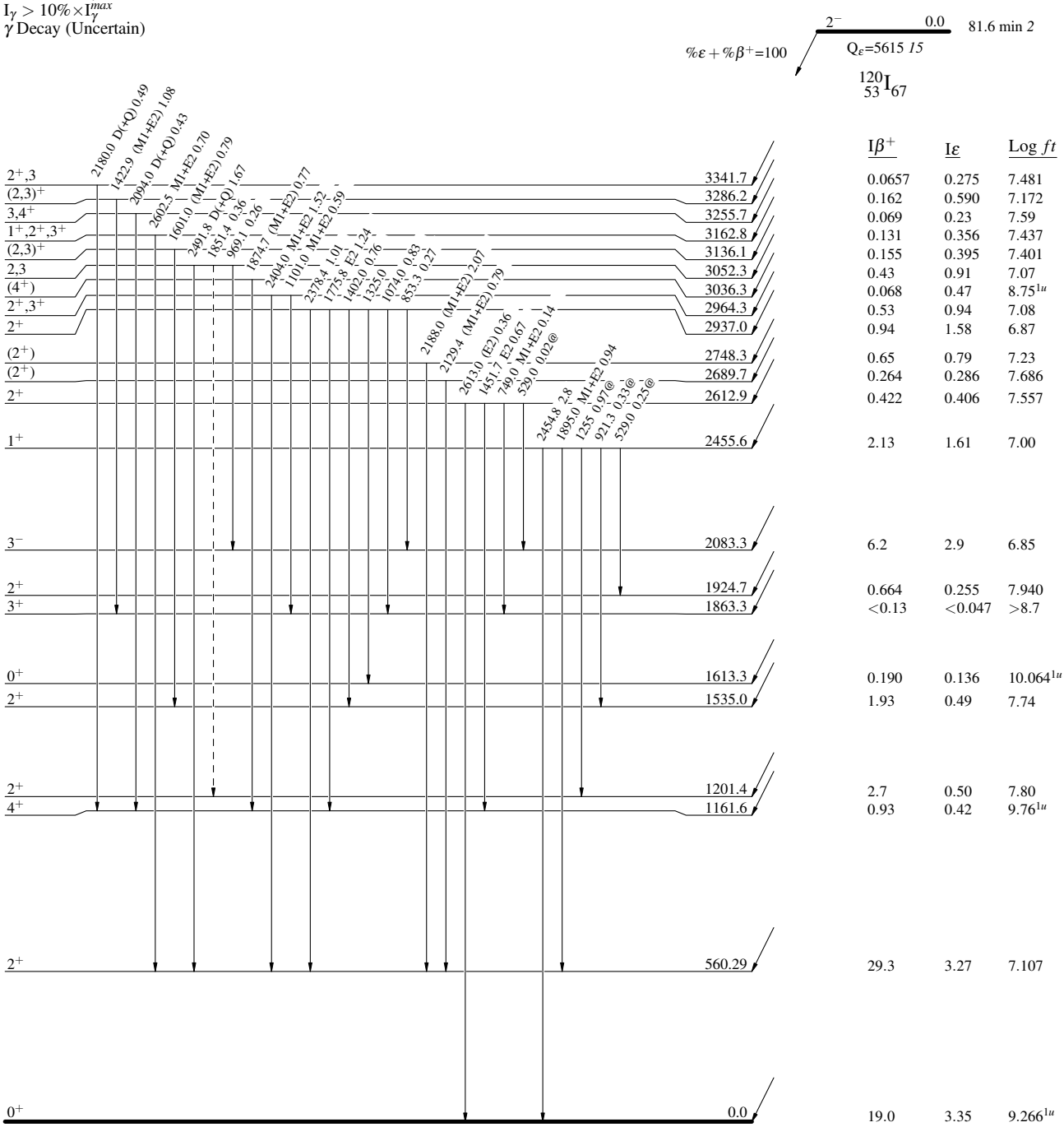
$^{120}_{52}Te_{68}$

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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)

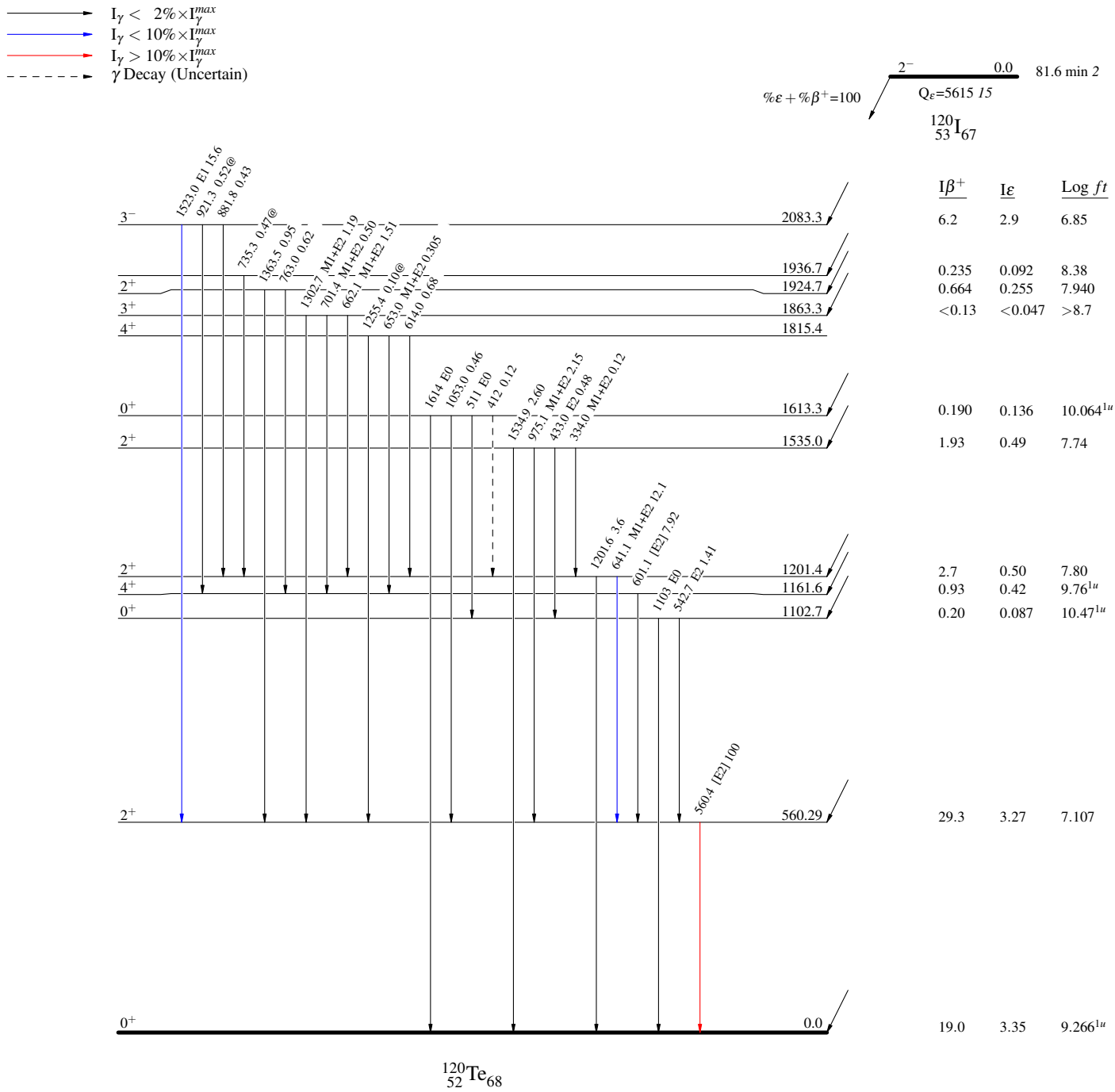


	Iβ+	Iε	Log *ft*
3341.7	0.0657	0.275	7.481
3286.2	0.162	0.590	7.172
3255.7	0.069	0.23	7.59
3162.8	0.131	0.356	7.437
3136.1	0.155	0.395	7.401
3052.3	0.43	0.91	7.07
3036.3	0.068	0.47	8.75[1u]
2964.3	0.53	0.94	7.08
2937.0	0.94	1.58	6.87
2748.3	0.65	0.79	7.23
2689.7	0.264	0.286	7.686
2612.9	0.422	0.406	7.557
2455.6	2.13	1.61	7.00
2083.3	6.2	2.9	6.85
1924.7	0.664	0.255	7.940
1863.3	<0.13	<0.047	>8.7
1613.3	0.190	0.136	10.064[1u]
1535.0	1.93	0.49	7.74
1201.4	2.7	0.50	7.80
1161.6	0.93	0.42	9.76[1u]
560.29	29.3	3.27	7.107
0.0	19.0	3.35	9.266[1u]

^{120}I ε decay (81.6 min) 1988Br38,1970LaZT,1970Ga32

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



	Iβ⁺	Iε	Log *ft*
2083.3	6.2	2.9	6.85
1936.7	0.235	0.092	8.38
1924.7	0.664	0.255	7.940
1863.3	<0.13	<0.047	>8.7
1815.4			
1613.3	0.190	0.136	10.064[1u]
1535.0	1.93	0.49	7.74
1201.4	2.7	0.50	7.80
1161.6	0.93	0.42	9.76[1u]
1102.7	0.20	0.087	10.47[1u]
560.29	29.3	3.27	7.107
0.0	19.0	3.35	9.266[1u]