Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 1103 (2008)	1-Mar-2008

Q(β^-)=−293 *14*; S(n)=7030 *12*; S(p)=4656 *12*; Q(α)=1728 *12* 2012Wa38
Note: Current evaluation has used the following Q record.
Q(β^-)=−305 *14*; S(n)=7029 *12*; S(p)=4655 *12*; Q(α)=1728 *12* 2003Au03
Assignment: ^{169}Tm(p,4n), E=230 MeV; ion chem. Parent ^{166}Tm (1960Bu27). ^{169}Tm(p,4n) chem. ms (1963Pa08).

^{166}Tm Levels

Cross Reference (XREF) Flags

- A ^{166}Yb ε decay
- B ^{165}Ho(α,3nγ)
- C ^{160}Gd(^{11}B,5nγ),
- D Er(p,xnγ)

E(level)†	J$^\pi$‡	$T_{1/2}$	XREF	Comments
0.0	2$^+$	7.70 h *3*	ABCD	%ε+%β^+=100 μ=+0.0926 *7* (1992Sh31); Q=+2.14 *3* (1988Al04) μ: 0.0926 *7* from radiation detected optical pumping (1992Sh31). Other: +0.092 *1* from LASER resonance ion mass spectroscopy (1988Al04); relative to ^{169}Tm. Q: LASER resonance ion mass spectroscopy (1988Al04); relative to ^{170}Tm, Sternheimer correction applied. $<r^2>^{1/2}$(CHARGE)=5.205 *4* (2004An14). J$^\pi$: J=2 from atomic beam (1972Ad14); M1 82.29γ from 1$^+$. $T_{1/2}$: weighted average of 7.7 h *1* (1949Wi03); 7.74 h *8* (1960Gr15); 7.69 h *5* (1960Wi12); 8.0 h *2* (1961Bj02); 7.5 h *2* (1963Pa08); 7.7 h *1* (1963Ra15); 7.70 h *8* (1970Ka23). Other measurements: 1954Mi16, 1960Bo29, 1960Bu27.
0+x[h]	(3$^+$)		BC	E(level): x<16 keV from estimated Eγ<50 keV for (4$^+$) to 2$^+$ transition.
0+u[t]			B	
33.637+x[g] *6*	(4$^+$)		C	
74.920+x[h] *3*	(5$^+$)		BC	
82.298 *8*	1$^+$	385 ps *40*	ABCD	J$^\pi$: allowed ε decay from 0$^+$ ^{166}Yb (log *ft*=4.9). $T_{1/2}$: from ce(L)(t) In Er(p,xnγ) (1976Sv01).
109.338+x[@] *4*	(6$^-$)	340 ms *25*	BC	%IT=100 E(level): 1996Dr07 assumed that the isomer depopulated via an unseen transition of energy x<25 keV. However, based on energy differences, 2002Ca46 find x=0.2 *5* and conclude that the isomer decays directly via a 34.42γ to the 75+x level. $T_{1/2}$: from 34.4γ(t) In (^{11}B,5nγ). other: 370 ms *40* from K x ray(t) In (^{11}B,5nγ).
131.753+x[l] *6*	(5$^+$)		C	
152.117+x[g] *4*	(6$^+$)		BC	
171.566+x[e] *4*	(6$^+$)		BC	
194.032+u[t]			B	
207.553+x[k] *5*	(6$^+$)		BC	
211.437+x[f] *4*	(7$^+$)		BC	
212.91+x[o] *24*	(5$^+$)		C	
226.586+x[h] *4*	(7$^+$)		BC	
231.053+x[c] *4*	(6$^-$)	36 ns *2*	BC	$T_{1/2}$: from fits to time spectra for 59γ, 62γ and 122γ In (^{11}B,5nγ), (^{6}Li,4nγ) (2002Ca46). Other $T_{1/2}$: 2 μs 1 from 59.5γ(t) and 62.2γ(t) measured with pulsed beam (90 μs on, 90 μs off) and <2 μs from 121.7γ(t) (1996Dr07). 80

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Adopted Levels, Gammas (continued)

^{166}Tm Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			ns<$T_{1/2}$<1 μs (1992Dr03) from two-parameter Eγ-t In (α,3nγ).
256.995+x[&] 8	(7⁻)	BC	
266.26+x[a] 14	(6⁺)	C	
281.53+x[p] 11	(6⁺)	C	
287.586+x[d] 5	(7⁻)	BC	
288.141+x[l] 4	(7⁺)	BC	
293.81+x[n] 14	(6⁺)	C	
298.122+x[e] 6	(8⁺)	BC	
341.853+x[g] 4	(8⁺)	BC	
359.14+x 11		B	
367.485+x[c] 7	(8⁻)	BC	
377.0+x?[s] 4	(5⁻)	C	
383.21+x[o] 13	(7⁺)	C	
389.07+x[b] 14	(7⁺)	C	
401.81+x[q] 11	(7⁺)	C	
409.088+u[t] 23		B	
415.45+x 20	(⁻)	B	Jπ: E2 184γ to (6⁻) 230+x.
417.445+x[f] 6	(9⁺)	BC	
423.656+x[j] 20	(7⁻)	BC	
423.693+x[k] 5	(8⁺)	BC	
424.176+x[@] 9	(8⁻)	BC	
453.93+x?[r] 18	(6⁻)	C	
460.262+x[h] 6	(9⁺)	BC	
469.141+x[d] 7	(9⁻)	BC	
488.73+x[p] 11	(8⁺)	BC	
504.87+x[n] 12	(8⁺)	C	
507.811+x[i] 9	(8⁻)	C	
524.631+x[l] 5	(9⁺)	C	
529.71+x[a] 14	(8⁺)	C	
539.90+x[s] 18	(7⁻)	C	
563.383+x[e] 7	(10⁺)	C	
592.557+x[c] 9	(10⁻)	BC	
605.315+x[g] 5	(10⁺)	BC	
609.616+x[&] 13	(9⁻)	BC	
634.390+x[j] 9	(9⁻)	BC	
634.54+x[o] 11	(9⁺)	BC	
637.89+x[r] 15	(8⁻)	C	
642.59+u[t] 6		B	
649.73+x[q] 11	(9⁺)	BC	
688.03+x[b] 14	(9⁺)	BC	
733.224+x[f] 8	(11⁺)	BC	
733.695+x[k] 11	(10⁺)	BC	
736.322+x[i] 9	(10⁻)	BC	
737.615+x[d] 12	(11⁻)	BC	
756.17+x[s] 15	(9⁻)	BC	
772.742+x[h] 12	(11⁺)	BC	
778.37+x[p] 11	(10⁺)	BC	
799.37+x[n] 12	(10⁺)	C	
812.26+x[@] 9	(10⁻)	C	

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Adopted Levels, Gammas (continued)

^{166}Tm Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
850.036+x[l] 8	(11+)#	BC	1900.78+x[q] 23	(15+)	C	3354.7+x[r] 3	(20−)	C
863.54+x[a] 14	(10+)	BC	1908.47+x[i] 4	(16−)	BC	3374.8+x[p] 4	(20+)	C
887.39+x[r] 15	(10−)	BC	1976.5+x[b] 4	(15+)	C	3449.20+x[j] 24	(21−)	C
904.431+x[c] 13	(12−)	BC	2037.54+x[&] 22	(15−)	C	3457.7+x[n] 5	(20+)	C
915.984+x[j] 10	(11−)	BC	2038.35+x[d] 7	(17−)	BC	3546.74+x[c] 13	(22−)	C
922.167+x[e] 9	(12+)	BC	2120.43+x[h] 7	(17+)	BC	3623.42+x[e] 13	(22+)	C
946.244+x[g] 10	(12+)	BC	2122.43+x[k] 14	(16+)	C	3640.6+x[l] 4	(21+)	C
965.86+x[o] 11	(11+)	BC	2123.26+x[r] 17	(16−)	BC	3686.78+x[g] 15	(22+)	C
982.27+x[q] 11	(11+)	BC	2131.92+x[f] 7	(17+)	C	3699.0+x[m] 4	(21+)	C
1030.91+x[&] 9	(11−)	C	2153.22+x[p] 12	(16+)	C	3699.9+x[s] 4	(21−)	C
1043.013+x[i] 10	(12−)	BC	2181.72+x[n] 19	(16+)	C	3732.3+x[o] 3	(21+)	C
1045.54+x[s] 15	(11−)	BC	2237.39+x[j] 10	(17−)	C	3788.4+x[i] 4	(22−)	C
1055.56+x[b] 14	(11+)	BC	2245.5+x[a] 4	(16+)	C	3804.3+x[q] 6	(21+)	C
1092.229+x[d] 14	(13−)	BC	2307.58+x[c] 8	(18−)	BC	3923.95+x[d] 14	(23−)	C
1130.482+x[k] 11	(12+)	BC	2315.79+x[@] 25	(16−)	C	3975.90+x[h] 15	(23+)	C
1132.345+x[f] 10	(13+)	BC	2357.11+x[l] 14	(17+)	C	4018.5+x[k] 4	(22+)	C
1156.59+x[p] 11	(12+)	BC	2381.19+x[e] 7	(18+)	BC	4024.69+x[f] 15	(23+)	C
1157.140+x[h] 18	(13+)	BC	2399.14+x[o] 17	(17+)	C	4058.9+x[r] 4	(22−)	C
1173.09+x[n] 12	(12+)	C	2412.13+x[s] 18	(17−)	C	4136.2+x[j] 4	(23−)	C
1214.15+x[r] 15	(12−)	BC	2423.39+x[g] 11	(18+)	C	4232.54+x[c] 16	(24−)	C
1263.35+x[a] 23	(12+)	BC	2463.70+x[i] 10	(18−)	BC	4316.92+x[e] 17	(24+)	C
1264.02+x[@] 12	(12−)	C	2479.1+x[q] 4	(17+)	C	4328.3+x[m] 4	(23+)	C
1268.634+x[l] 22	(13+)	BC	2521.0+x[b] 5	(17+)	C	4359.0+x[l] 4	(23+)	C
1279.702+x[j] 17	(13−)	BC	2602.1+x[&] 3	(17−)	C	4391.08+x[g] 18	(24+)	C
1299.528+x[c] 14	(14−)	BC	2614.28+x[d] 10	(19−)	BC	4421.0+x[s] 5	(23−)	C
1350.370+x[e] 25	(14+)	BC	2690.13+x[h] 10	(19+)	C	4481.8+x[o] 5	(23+)	C
1368.12+x[g] 4	(14+)	BC	2696.33+x[k] 17	(18+)	C	4542.3+x[i] 5	(24−)	C
1379.24+x[o] 13	(13+)	BC	2702.85+x[r] 19	(18−)	C	4642.89+x[d] 17	(25−)	C
1397.15+x[q] 12	(13+)	C	2713.80+x[f] 10	(19+)	C	4697.4+x[h] 4	(25+)	C
1416.80+x[s] 15	(13−)	BC	2751.22+x[p] 15	(18+)	C	4755.8+x[f] 4	(25+)	C
1433.82+x[i] 3	(14−)	BC	2785.4+x[n] 4	(18+)	C	4762.7+x[k] 5	(24+)	C
1486.8+x[b] 3	(13+)	C	2814.91+x[j] 12	(19−)	C	4874.2+x[j] 5	(25−)	C
1510.57+x[&] 13	(13−)	C	2839.3+x[a] 5	(18+)	C	4957.64+x[c] 19	(26−)	C
1528.158+x[d] 17	(15−)	BC	2893.6+x[@] 4	(18−)	C	5021.3+x[m] 5	(25+)	C
1599.63+x[f] 5	(15+)	BC	2902.79+x[c] 11	(20−)	BC	5064.6+x[e] 4	(26+)	C
1604.02+x[k] 9	(14+)	C	2978.39+x[e] 11	(20+)	C	5111.0+x[l] 4	(25+)	C
1610.04+x[h] 3	(15+)	BC	2987.24+x[l] 23	(19+)	C	5150.9+x[g] 4	(26+)	C
1612.15+x[p] 10	(14+)	BC	3016.41+x[o] 23	(19+)	C	5346.5+x[i] 6	(26−)	C
1625.45+x[r] 16	(14−)	BC	3024.5+x[s] 3	(19−)	C	5407.2+x[d] 4	(27−)	C
1634.82+x[n] 17	(14+)	C	3031.65+x[g] 13	(20+)	C	5480.3+x[h] 5	(27+)	C
1722.71+x[j] 7	(15−)	BC	3092.79+x[i] 14	(20−)	C	5544.9+x[f] 5	(27+)	C
1723.9+x[a] 3	(14+)	C	3100.6+x 5		C	5559.3+x[k] 6	(26+)	C
1768.85+x[@] 14	(14−)	C	3109.0+x 5		C	5662.6+x[j] 6	(27−)	C
1770.17+x[c] 4	(16−)	BC	3133.9+x[q] 5	(19+)	C	5725.5+x[c] 4	(28−)	C
1774.71+x[l] 11	(15+)	BC	3200.6+x[&] 5	(19−)	C	5766.4+x[m] 6	(27+)	C
1836.51+x[e] 8	(16+)	BC	3246.17+x[d] 12	(21−)	C	5873.6+x[e] 5	(28+)	C
1858.44+x[o] 15	(15+)	C	3308.63+x[h] 12	(21+)	C	5923.5+x[l] 5	(27+)	C
1865.94+x[g] 9	(16+)	BC	3328.23+x[k] 20	(20+)	C	5972.8+x[g] 5	(28+)	C

Adopted Levels, Gammas (continued)

^{166}Tm Levels (continued)

E(level)[†]	Jπ[‡]	XREF	E(level)[†]	Jπ[‡]	XREF	E(level)[†]	Jπ[‡]	XREF
1873.54+x[s] *16*	(15⁻)	BC	3345.18+x[f] *12*	(21⁺)	C	6192.9+x[i] *7*	(28⁻)	C

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Adopted Levels, Gammas (continued)

^{166}Tm Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
6227.2+x[d] 5	(29⁻)	C	7063.2+x[i] 7	(30⁻)	C	8065.8+x[d] 7	(33⁻)	C
6329.6+x[h] 6	(29⁺)	C	7111.2+x[d] 6	(31⁻)	C	8234.4+x[h] 7	(33⁺)	C
6396.4+x[f] 6	(29⁺)	C	7247.9+x[h] 7	(31⁺)	C	8297.4+x[f] 7	(33⁺)	C
6407.3+x[k] 7	(28⁺)	C	7304.6+x[k] 8	(30⁺)	C	8345.2+x[c] 7	(34⁻)	C
6503.2+x[j] 7	(29⁻)	C	7313.9+x[f] 7	(31⁺)	C	8352.7+x[j] 8	(33⁻)	C
6542.5+x[c] 6	(30⁻)	C	7398.8+x[j] 8	(31⁻)	C	8692.2+x[e] 7	(34⁺)	C
6571.1+x[m] 7	(29⁺)	C	7414.4+x[c] 6	(32⁻)	C	8845.2+x?[g] 7	(34⁺)	C
6748.9+x[e] 6	(30⁺)	C	7692.5+x[e] 7	(32⁺)	C	9338.8+x[c] 7	(36⁻)	C
6788.7+x[l] 6	(29⁺)	C	7816.1+x[g] 7	(32⁺)	C			
6861.1+x[g] 6	(30⁺)	C	7969.9+x[i] 8	(32⁻)	C			

† From least-squares fit to Eγ.
‡ Values given without comment are based on deduced band structure In (^{11}B,5nγ) and transition multipolarities.
# D+Q 245γ to (10⁺) 605+x.
@ Band(A): $K^{\pi}=6^{-}$, α=0 (π 7/2[404])+(ν 5/2[523]) band.
& Band(a): $K^{\pi}=6^{-}$, α=1 (π 7/2[404])+(ν 5/2[523]) band.
[a] Band(B): $K^{\pi}=6^{+}$, α=0 (π 7/2[523])+(ν 5/2[523]) band. Note that adopted J values are two units higher than shown In (α,3nγ) and π is opposite. The configuration proposed In (α,3nγ) differs also.
[b] Band(b): $K^{\pi}=6^{+}$, α=1 (π 7/2[523])+(ν 5/2[523]) band. See comment on signature partner of this band.
[c] Band(C): $K^{\pi}=6^{-}$, α=0 (π 7/2[523])+(ν5/2[642]) band.
[d] Band(c): $K^{\pi}=6^{-}$, α=1 (π 7/2[523])+(ν5/2[642]) band.
[e] Band(D): $K^{\pi}=6^{+}$, α=0 (π 7/2[404])+(ν5/2[642]) band. Note that adopted J values are one unit higher than shown In (α,3nγ).
[f] Band(d): $K^{\pi}=6^{+}$, α=1 (π 7/2[404])+(ν 5/2[642]) band. See comment on signature partner of this band.
[g] Band(E): $K^{\pi}=2^{+},3^{+}$, α=0 (π 1/2[411])⊗(ν 5/2[642]) band. Note that adopted J values are one unit higher than shown In (α,3nγ).
[h] Band(e): $K^{\pi}=2^{+},3^{+}$, α=1 (π 1/2[411])⊗(ν 5/2[642]) band. See comment on signature partner of this band.
[i] Band(F): $K^{\pi}=2^{-},3^{-}$, α=0 (p1/2[541])⊗(ν 5/2[642]) band. Note that adopted J values are one unit higher than shown In (α,3nγ) and π is opposite. The configuration proposed In (α,3nγ) differs also. From the adopted $K^{\pi}=3^{-}$ configuration=(π 1/2[541])+(ν 5/2[642]).
[j] Band(f): $K^{\pi}=2^{-},3^{-}$, α=1 (p1/2[541])⊗(ν 5/2[642]) band. See comment on signature partner of this band.
[k] Band(G): $K^{\pi}=2^{+},3^{+}$, α=0 (π 1/2[541])⊗(ν 5/2[523]) band. Note that adopted J values are one unit higher than shown In (α,3nγ) and π is opposite. The configuration proposed In (α,3nγ) differs also.
[l] Band(g): $K^{\pi}=2^{+},3^{+}$, α=1 (π 1/2[541])⊗(ν 5/2[523]) band. See comment on signature partner of this band.
[m] Band(H): α=1 band including (21⁺) 3699+x level.
[n] Band(I): $K^{\pi}=1^{+},2^{+}$, α=0 (π 1/2[541])⊗(ν 3/2[521]) band.
[o] Band(i): $K^{\pi}=1^{+},2^{+}$, α=1 (π 1/2[541])⊗(ν 3/2[521]) band.
[p] Band(J): $K^{\pi}=1^{+}$, α=0 (π 7/2[404])-(ν 5/2[642]) band.
[q] Band(j): $K^{\pi}=1^{+}$, α=1 (π 7/2[404])-(ν 5/2[642]) band.
[r] Band(K): $K^{\pi}=1^{-}$, α=0 (π 7/2[523])-(ν 5/2[642]) band. Note that adopted J values are three units higher than shown In (α,3nγ). The configuration proposed In (α,3nγ) differs also.
[s] Band(k): $K^{\pi}=1^{-}$, α=1 (π 7/2[523])-(ν 5/2[642]) band. See comment on signature partner of this band.
[t] Band(L): possible band fragment (1995Ma07). Observed only In (α,3nγ).

Adopted Levels, Gammas (continued)

γ(^{166}Tm)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
74.920+x	(5$^+$)	41.29 *7*	38 *5*	33.637+x	(4$^+$)	M1+E2	0.33	19.8 *4*	Mult.,δ: from intensity balance At the 74.9+x level In (^{11}B,5nγ).
		74.920[@] *3*	100 *5*	0+x	(3$^+$)	E2		9.57	Mult.: from α(K)exp In (^{11}B,5nγ); Q from DCO In (^{11}B,5nγ).
82.298	1$^+$	82.298[@] *8*	100	0.0	2$^+$	M1		5.43	B(M1)(W.u.)=0.0160 *17* Mult.: from ce data In ^{166}Yb ε decay.
109.338+x	(6$^-$)	34.418[@] *1*	100	74.920+x	(5$^+$)	E1		1.116	B(E1)(W.u.)=7.6×10^{-12} *6* Mult.: from intensity balance At the 109+x level In (^{11}B,5nγ).
131.753+x	(5$^+$)	57[@c]		74.920+x	(5$^+$)				
		98.2 *3*	100 *14*	33.637+x	(4$^+$)	D(+Q)			
152.117+x	(6$^+$)	77.195[@] *2*	55.1 *12*	74.920+x	(5$^+$)	(M1+E2)[#]		7.5 *10*	I_γ: from (α,3nγ). other Iγ: 79 from (^{11}B,5nγ).
		118.480[@] *4*	100[@] *9*	33.637+x	(4$^+$)	E2[&]		1.627	Mult.: from ce data In (α,3nγ) and DCO In (^{11}B,5nγ).
171.566+x	(6$^+$)	62.225[@] *2*	100	109.338+x	(6$^-$)	E1		1.137	Mult.: from α(K)exp In (^{11}B,5nγ).
194.032+u		194.032[@] *7*	100	0+u		(M1+E2)[#]		0.38 *10*	
207.553+x	(6$^+$)	75.793[@] *4*	100[@] *3*	131.753+x	(5$^+$)				
		98.10[@c] *5*	<96	109.338+x	(6$^-$)				E_γ,I_γ: from (α,3nγ) for triplet; intensity not divided. this placement of 98.1γ triplet is from (α,3nγ); it does not fit this placement well, so is shown As tentative here.
		132.636[@] *4*	88.5[@] *25*	74.920+x	(5$^+$)				other Eγ: 132.0 *3* In (^{11}B,5nγ).
211.437+x	(7$^+$)	39.867[@] *2*	100[@] *23*	171.566+x	(6$^+$)	M1(+E2)		9.×10^1 *8*	Mult.: from α(exp)=9 *3* from intensity balance In (^{11}B,5nγ) (2002Ca46). placement from (^{11}B,5nγ); placement feeding 109+x level In (α,3nγ) not confirmed In (^{11}B,5nγ).
		102.102[@] *2*	63.1 *12*	109.338+x	(6$^-$)	E1		0.316	Mult.: from α(exp)≤1.5 (2002Ca46) In (^{11}B,5nγ) and γ(θ) In (α,3nγ). I_γ: from (α,3nγ). other: 72 from (^{11}B,5nγ).
226.586+x	(7$^+$)	74.45[@] *3*	3.94[@] *25*	152.117+x	(6$^+$)				
		151.666[@] *1*	100.0[@] *8*	74.920+x	(5$^+$)	E2[#]		0.670	
231.053+x	(6$^-$)	59.488[@] *2*	100[@] *6*	171.566+x	(6$^+$)	E1		0.246	B(E1)(W.u.)=1.35×10^{-5} *12* Mult.: from α(K)exp In (^{11}B,5nγ) (1996Dr07).
		121.710[@] *5*	33.8 *6*	109.338+x	(6$^-$)	M1		1.768	B(M1)(W.u.)=5.3×10^{-5} *4* I_γ: from (α,3nγ). other I(122γ):I(59γ)=45 *15* :100 *16* In (^{11}B5nγ). Mult.: from ce data In (α,3nγ).
256.995+x	(7$^-$)	147.656[@] *7*	100	109.338+x	(6$^-$)	(M1+E2)[#]		0.88 *15*	
266.26+x	(6$^+$)	35.1 *3*		231.053+x	(6$^-$)	E1		1.06 *3*	α(exp)≤3 (2002Ca46)
		94.4 *3*		171.566+x	(6$^+$)				

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
266.26+x	(6$^+$)	156.9 *3*		109.338+x	(6$^-$)				
287.586+x	(7$^-$)	56.532[@] *2*	100	231.053+x	(6$^-$)				
288.141+x	(7$^+$)	80.584[@] *4*	62 *12*	207.553+x	(6$^+$)	M1,E2		6.5 *7*	I_γ: from (α,3nγ). other: 56 from (^{11}B,5nγ).
		136.022[@] *3*	100.0[@] *21*	152.117+x	(6$^+$)	D+Q[#]			
		156.409[@] *7*	27.8	131.753+x	(5$^+$)				I_γ: other Iγ: 41.5 *3* from (α,3nγ).
293.81+x	(6$^+$)	81.1 *3*		212.91+x	(5$^+$)				
		141.7 *3*		152.117+x	(6$^+$)				
298.122+x	(8$^+$)	86.696[@] *9*	100	211.437+x	(7$^+$)	M1+E2	+0.32 *2*	4.74	Mult.: from ce data and γ(θ) In (α,3nγ). δ: from γ(θ) In (α,3nγ).
		126.5 *3*	6.7	171.566+x	(6$^+$)	(E2)[&]		1.281 *21*	
341.853+x	(8$^+$)	53.8 *3*	7.6	288.141+x	(7$^+$)				
		115.269[@] *2*	30.5 *13*	226.586+x	(7$^+$)	(M1)		2.06	I_γ: from (α,3nγ). other: 36 from (^{11}B,5nγ).
		189.733[@] *3*	100.0[@] *11*	152.117+x	(6$^+$)	E2[#]		0.310	
367.485+x	(8$^-$)	79.888[@] *9*	100[@] *3*	287.586+x	(7$^-$)	(M1+E2)		6.7 *8*	
		136.445[@] *9*	9.1 *20*	231.053+x	(6$^-$)				I_γ: from (α,3nγ). other: 3.9 from (^{11}B,5nγ).
383.21+x	(7$^+$)	89.6 *3*		293.81+x	(6$^+$)				
		170.1 *3*		212.91+x	(5$^+$)				
389.07+x	(7$^+$)	122.809 *4*	100	266.26+x	(6$^+$)				
401.81+x	(7$^+$)	107.7 *3*	74	293.81+x	(6$^+$)				
		120.2 *3*	100	281.53+x	(6$^+$)				
409.088+u		215.056[@] *21*	100	194.032+u					
415.45+x	(−)	184.4[@] *2*	100	231.053+x	(6$^-$)	E2		0.341	Mult.: from α(K)exp=0.21 *8* In (α,3nγ).
417.445+x	(9$^+$)	119.324[@] *3*	100.0[@] *16*	298.122+x	(8$^+$)	M1+E2[#]	+0.44 *1*	1.82	
		206.004 *5*	70.6[@] *16*	211.437+x	(7$^+$)	E2[#]		0.236	
423.656+x	(7$^-$)	271.543[@] *19*	100	152.117+x	(6$^+$)				other Eγ: 271.1 *3* In (^{11}B,5nγ).
423.693+x	(8$^+$)	135.554[@] *3*	95.9 *24*	288.141+x	(7$^+$)	(M1+E2)[#]		1.15 *16*	I_γ: from (α,3nγ). other: 49 from (^{11}B,5nγ).
		196.8 *3*	29.0	226.586+x	(7$^+$)				
		216.139[@] *12*	100.0[@] *24*	207.553+x	(6$^+$)	E2[#]		0.201	
		271.543[@] *19*	33[@] *4*	152.117+x	(6$^+$)				
424.176+x	(8$^-$)	167.180[@] *5*	100 *4*	256.995+x	(7$^-$)	(M1+E2)[#]		0.60 *13*	
		314.87[@] *4*	72 *5*	109.338+x	(6$^-$)				
453.93+x?	(6$^-$)	76.9 *3*	100	377.0+x?	(5$^-$)				
460.262+x	(9$^+$)	118.4[@c]		341.853+x	(8$^+$)				
		233.675[@] *5*	100	226.586+x	(7$^+$)	E2[#]		0.1561	
469.141+x	(9$^-$)	101.657[@] *3*	100.0[@] *18*	367.485+x	(8$^-$)	M1+E2[#]	+0.20 *1*	2.95	
		181.552[@] *9*	16.4 *18*	287.586+x	(7$^-$)	E2[#]		0.360	I_γ: from (α,3nγ). other: 12.2 from (^{11}B,5nγ).
488.73+x	(8$^+$)	86.918[@] *4*	100[@] *5*	401.81+x	(7$^+$)				

From ENSDF

$^{166}_{69}Tm_{97}$-7

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
488.73+x	(8$^+$)	129.588[@] *6*	31.2[@] *9*	359.14+x					
		207.20[@] *4*	80 *14*	281.53+x	(6$^+$)	(E2)[&]		0.231	I_γ: from (α,3nγ). other: 63 from (^{11}B,5nγ).
504.87+x	(8$^+$)	103.0 *3*	28	401.81+x	(7$^+$)				
		121.4 *3*	43	383.21+x	(7$^+$)				
		162.9 *3*	35	341.853+x	(8$^+$)				
		211.1 *1*	100	293.81+x	(6$^+$)				
507.811+x	(8$^-$)	219.9 *3*	17.4	288.141+x	(7$^+$)	D			
		281.228[@] *16*	100	226.586+x	(7$^+$)	D+Q[#]			
524.631+x	(9$^+$)	100.939[@] *3*	18.8	423.693+x	(8$^+$)	(M1(+E2))		2.99	
		182.775[@] *8*	100	341.853+x	(8$^+$)	D+Q[#]			
		236.484[@] *10*	65	288.141+x	(7$^+$)	(E2)[&]		0.1502	
529.71+x	(8$^+$)	140.641[@] *12*	100	389.07+x	(7$^+$)	(M1+E2)		1.02 *15*	
		242.5 *3*	12.9	287.586+x	(7$^-$)				
		263.5 *3*	18.6	266.26+x	(6$^+$)				
539.90+x	(7$^-$)	85.973 *20*	100	453.93+x?	(6$^-$)				
563.383+x	(10$^+$)	145.939[@] *3*	50	417.445+x	(9$^+$)	(M1+E2)	+0.47 *2*	1.004 *15*	δ: +0.40 to +0.67 from (^{11}B,5nγ), +0.47 *2* from (α,3nγ).
		265.263[@] *11*	100	298.122+x	(8$^+$)	E2[#]		0.1043	
592.557+x	(10$^-$)	123.416[@] *6*	100.0[@] *14*	469.141+x	(9$^-$)	M1+E2[#]	+0.22 *1*	1.685	
		225.056[@] *17*	29.3 *12*	367.485+x	(8$^-$)	E2[#]		0.1763	I_γ: from (α,3nγ). other: 36.7 from (^{11}B,5nγ).
605.315+x	(10$^+$)	80.682[@] *3*	8.0[@] *16*	524.631+x	(9$^+$)	D			
		144.9 *1*	14.5	460.262+x	(9$^+$)	(M1+E2)		0.93 *15*	Eγ=145.061 *3* for doublet In (α,3nγ). other Iγ: 17 *5* In (α,3nγ).
		263.466 *6*	100.0[@] *10*	341.853+x	(8$^+$)	E2[#]		0.1066	
609.616+x	(9$^-$)	185.441[b@] *9*	83[b] *9*	424.176+x	(8$^-$)				
		352.6 *1*	100 *7*	256.995+x	(7$^-$)				I_γ: I(353γ):I(185γ)=4.8 *5*:5.8 *4* from γγ coin (1996Dr07) In (^{11}B,5nγ).
634.390+x	(9$^-$)	126.577[@] *4*	15.6 *13*	507.811+x	(8$^-$)	(M1)		1.581	I_γ: from (α,3nγ). other: 14.4 from (^{11}B,5nγ).
		211.4 *3*	17.0	423.656+x	(7$^-$)				other Eγ: 210.7 In (α,3nγ).
		292.534[@] *14*	100.0[@] *22*	341.853+x	(8$^+$)	(E1(+M2))	0.0 *1*	0.020 *7*	δ: −0.1 to +0.1 from DCO ratio In (^{11}B,5nγ).
634.54+x	(9$^+$)	129.5 *3*	45	504.87+x	(8$^+$)				
		145.805[@] *4*	69	488.73+x	(8$^+$)				
		251.4 *1*	100	383.21+x	(7$^+$)	(E2)[&]		0.1235	
637.89+x	(8$^-$)	98.0 *1*	100	539.90+x	(7$^-$)	(M1(+E2))		3.30	
		214.7 *3*	20.9	423.656+x	(7$^-$)				
642.59+u		448.56[@] *6*	100	194.032+u					
649.73+x	(9$^+$)	160.998[@] *15*	100	488.73+x	(8$^+$)	(M1(+E2))		0.67 *13*	
		247.9 *3*	62	401.81+x	(7$^+$)	(E2)[&]		0.1292	
		266.1 *3*	28.2	383.21+x	(7$^+$)				

From ENSDF

$^{166}_{69}Tm_{97}$-8

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
688.03+x	(9$^+$)	158.329[@] *15*	100[@] *15*	529.71+x	(8$^+$)	(M1+E2)[#]		0.71 *14*	
		298.89[@] *9*	65 *19*	389.07+x	(7$^+$)	E2[#]		0.0723	I_γ: from (α,3nγ). other: 39 from (^{11}B,5nγ).
		320.6 *3*	33	367.485+x	(8$^-$)				
733.224+x	(11$^+$)	169.841[@] *5*	20.9 *12*	563.383+x	(10$^+$)	M1+E2[#]	+0.66 *19*	0.62 *3*	I_γ: from (α,3nγ). other: 27.1 from (^{11}B,5nγ).
		315.735[@] *17*	100[@] *4*	417.445+x	(9$^+$)	E2[#]		0.0613	
733.695+x	(10$^+$)	209.081[@] *13*	50 *4*	524.631+x	(9$^+$)	(M1+E2)		0.31 *9*	I_γ: from (α,3nγ). other: 58 from (^{11}B,5nγ).
		273.5 *3*	4.9	460.262+x	(9$^+$)				
		309.977[@] *16*	100[@] *3*	423.693+x	(8$^+$)	E2[#]		0.0647	
		391.0 *3*	2.1	341.853+x	(8$^+$)				
736.322+x	(10$^-$)	101.929[@] *5*	10.54 *18*	634.390+x	(9$^-$)				I_γ: from (α,3nγ). other: 13.9 from (^{11}B,5nγ).
		211.67[@] *3*	31.9 *15*	524.631+x	(9$^+$)	D			I_γ: from (α,3nγ). other: 26.7 from (^{11}B,5nγ).
		228.533[@] *15*	71 *6*	507.811+x	(8$^-$)	(E2)[&]		0.1677	I_γ: from (α,3nγ). other: 35 from (^{11}B,5nγ).
		276.058[@] *13*	100.0[@] *18*	460.262+x	(9$^+$)	D[#]			
737.615+x	(11$^-$)	145.1 *1*	100[@] *20*	592.557+x	(10$^-$)	(M1+E2)		0.93 *15*	Eγ=145.061 *3* for doublet In (α,3nγ).
		268.479[@] *10*	51 *3*	469.141+x	(9$^-$)	E2[#]		0.1005	I_γ: from (α,3nγ). other: 42 from (^{11}B,5nγ).
756.17+x	(9$^-$)	118.284[@] *4*	100	637.89+x	(8$^-$)	(M1+E2)		1.78 *15*	
		216.1 *3*	12.8	539.90+x	(7$^-$)				
		248.1 *3*	30	507.811+x	(8$^-$)				
772.742+x	(11$^+$)	167.4 *3*	4.2	605.315+x	(10$^+$)	(M1)		0.718	
		248.2 *3*		524.631+x	(9$^+$)				
		312.484[@] *12*	100	460.262+x	(9$^+$)	E2[#]		0.0632	
778.37+x	(10$^+$)	128.645[@] *7*	55 *3*	649.73+x	(9$^+$)	(M1(+E2))		1.36 *16*	I_γ: from (α,3nγ). other: 44 from (^{11}B,5nγ).
		143.7 *3*	45	634.54+x	(9$^+$)				
		289.61[@] *5*	100[@] *11*	488.73+x	(8$^+$)	E2[&]		0.0795	
799.37+x	(10$^+$)	164.8 *3*	25	634.54+x	(9$^+$)				
		193.9 *3*	9.6	605.315+x	(10$^+$)				
		294.5 *1*	100	504.87+x	(8$^+$)				E_γ: possibly the same transition As the unplaced 294.379 *22* In (α,3nγ).
812.26+x	(10$^-$)	202.5 *3*	44	609.616+x	(9$^-$)				
		388.0 *1*	100	424.176+x	(8$^-$)				
850.036+x	(11$^+$)	116.3[@c]		733.695+x	(10$^+$)				γ absent In (^{11}B,5nγ).
		244.718[@] *7*	59 *4*	605.315+x	(10$^+$)	D+Q			I_γ: from (α,3nγ). other: 64 from (^{11}B,5nγ). Mult.: Δπ=yes from α(K)exp In (α,3nγ); D+Q from γ(θ) In (α,3nγ) and DCO ratio In (^{11}B,5nγ). however, level scheme requires Δπ=No.
		325.423[@] *12*	100.0[@] *13*	524.631+x	(9$^+$)	E2[#]		0.0560	
		389.4 *1*	42	460.262+x	(9$^+$)				
863.54+x	(10$^+$)	175.514[@] *9*	100	688.03+x	(9$^+$)				

From ENSDF

$^{166}_{69}Tm_{97}$-9

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
863.54+x	(10$^+$)	333.78[@] *3*	32	529.71+x	(8$^+$)				I(334γ):I(176γ)=100 *1*:75 *5* In (α,3nγ).
887.39+x	(10$^-$)	131.215[@] *4*	100[@] *6*	756.17+x	(9$^-$)	(M1(+E2))		1.27 *16*	
		249.7 *1*	46 *15*	637.89+x	(8$^-$)				I_γ: from (α,3nγ). other: 35 from (^{11}B,5nγ).
		252.9 *3*		634.390+x	(9$^-$)				
904.431+x	(12$^-$)	166.819[@] *7*	100[@] *3*	737.615+x	(11$^-$)	M1+E2[#]	+0.25 *1*	0.711	δ: from γ(θ) In (α,3nγ).
		311.855[@] *19*	86.4 *25*	592.557+x	(10$^-$)	E2[#]		0.0636	I_γ: from (α,3nγ). other: 78 from (^{11}B,5nγ).
915.984+x	(11$^-$)	179.664[@] *7*	28.2 *22*	736.322+x	(10$^-$)	(M1+E2)	−0.15 *10*	0.585 *12*	I_γ: from (α,3nγ). other: 39 from (^{11}B,5nγ).
		281.597[@] *13*	71 *8*	634.390+x	(9$^-$)	E2[#]		0.0867	I_γ: from (α,3nγ). other: 52 from (^{11}B,5nγ).
		310.662[@] *19*	100[@] *6*	605.315+x	(10$^+$)	D			
922.167+x	(12$^+$)	188.925[@] *8*	18.3 *12*	733.224+x	(11$^+$)	M1+E2[#]	+0.63 *14*	0.456 *19*	δ: from γ(θ) In (α,3nγ).
									I_γ: from (α,3nγ). other: 17.0 from (^{11}B,5nγ).
		358.80[@] *1*	100.0[@] *23*	563.383+x	(10$^+$)	E2[#]		0.0422	
946.244+x	(12$^+$)	96.23[@] *4*	3.0 *4*	850.036+x	(11$^+$)	D			I_γ: from (α,3nγ). other: 5.9 from (^{11}B,5nγ).
		173.46[@] *8*	5.4 *7*	772.742+x	(11$^+$)	(M1(+E2))	−0.11 *14*	0.647 *14*	δ: −0.25 to +0.03.
									I_γ: from (α,3nγ). other: 3.9 from (^{11}B,5nγ).
		340.928[@] *10*	100.0[@] *9*	605.315+x	(10$^+$)	E2[#]		0.0489	
965.86+x	(11$^+$)	166.5 *3*	7.4	799.37+x	(10$^+$)				
		187.482[@] *6*	38 *7*	778.37+x	(10$^+$)	D			I_γ: from (α,3nγ). other: 44 from (^{11}B,5nγ).
		331.323[@] *21*	100[@] *4*	634.54+x	(9$^+$)	E2[#]		0.0531	
982.27+x	(11$^+$)	203.894[@] *12*	21.1 *26*	778.37+x	(10$^+$)				I_γ: from (α,3nγ). other: 33 from (^{11}B,5nγ).
		332.58[@] *3*	100[@] *4*	649.73+x	(9$^+$)	E2[#]		0.0525	
1030.91+x	(11$^-$)	218.2 *3*	34.5	812.26+x	(10$^-$)				
		421.4 *1*	100	609.616+x	(9$^-$)	(E2)[&]		0.0269	
1043.013+x	(12$^-$)	127.030[@] *4*	12.1 *15*	915.984+x	(11$^-$)	(M1+E2)		1.41 *16*	I_γ: from (α,3nγ). other: 17.8 from (^{11}B,5nγ).
		192.8[@] *2*	9.7 *24*	850.036+x	(11$^+$)	D			I_γ: from (α,3nγ). other: 17.4 from (^{11}B,5nγ).
		270.30[@] *4*	30.6 *24*	772.742+x	(11$^+$)	D			I_γ: from (α,3nγ). other: 42.1 from (^{11}B,5nγ).
		306.685[@] *9*	100.0[@] *19*	736.322+x	(10$^-$)	E2[#]		0.0668	
1045.54+x	(11$^-$)	158.148[@] *14*	100	887.39+x	(10$^-$)	(M1+E2)[#]		0.71 *14*	
		289.36[@] *7*	22.0	756.17+x	(9$^-$)				I(158γ):I(289γ)=100 *10*:68 *7* In (α,3nγ).
		309.1 *3*	4.8	736.322+x	(10$^-$)				
1055.56+x	(11$^+$)	192.023[@] *11*	100	863.54+x	(10$^+$)				
		367.52[@] *5*	63	688.03+x	(9$^+$)	E2[#]		0.0394	other Iγ: I(192γ):I(368γ)=63 *8*:100 *5* In (α,3nγ).
1092.229+x	(13$^-$)	187.796[@] *5*	85 *3*	904.431+x	(12$^-$)	M1+E2	+0.40 *8*	0.494 *12*	I_γ: from (α,3nγ). other: 98 from (^{11}B,5nγ).
									δ: weighted average of +0.23 *8* from DCO In (^{11}B,5nγ), +0.44 *4* from γ(θ) In (α,3nγ).
		354.61[@] *6*	100[@] *7*	737.615+x	(11$^-$)	E2[#]		0.0436	

From ENSDF

$^{166}_{69}Tm_{97}$-10

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[‡]	α[a]	Comments
1130.482+x	(12$^+$)	280.446[@] *8*	52 *8*	850.036+x	(11$^+$)	(M1(+E2))		0.13 *5*	I_γ: from (α,3nγ). other: 24.5 from (^{11}B,5nγ).
		396.79[@] *4*	100[@] *8*	733.695+x	(10$^+$)	E2[#]		0.0317	
1132.345+x	(13$^+$)	210.177[@] *3*	17.1 *16*	922.167+x	(12$^+$)				I_γ: from (α,3nγ). other: 12.9 from (^{11}B,5nγ).
		399.16[@] *2*	100	733.224+x	(11$^+$)	E2[#]		0.0312	
1156.59+x	(12$^+$)	174.4 *3*	13.6	982.27+x	(11$^+$)				
		190.4 *3*	14.8	965.86+x	(11$^+$)				
		378.22[@] *5*	100	778.37+x	(10$^+$)	E2[#]		0.0363	
1157.140+x	(13$^+$)	210.893[@] *25*	32.9 *11*	946.244+x	(12$^+$)	(M1)		0.378	I_γ: from (α,3nγ). other: 8.7 from (^{11}B,5nγ).
		384.406[@] *21*	100.0[@] *14*	772.742+x	(11$^+$)	E2[#]		0.0347	
1173.09+x	(12$^+$)	206.9 *3*	17.4	965.86+x	(11$^+$)				
		373.7 *1*	100	799.37+x	(10$^+$)				
1214.15+x	(12$^-$)	168.609[@] *5*	100	1045.54+x	(11$^-$)	(M1+E2)[#]		0.58 *12*	
		326.89[@][@] *8*	32.7	887.39+x	(10$^-$)	E2		0.0553	other Iγ: 73 *12* In (α,3nγ).
1263.35+x	(12$^+$)	207.7 *3*	100	1055.56+x	(11$^+$)				other Eγ: 208.0 In (α,3nγ).
		399.9 *3*	74	863.54+x	(10$^+$)				
1264.02+x	(12$^-$)	233.2 *3*	30.3	1030.91+x	(11$^-$)				
		451.7 *1*	100	812.26+x	(10$^-$)				
1268.634+x	(13$^+$)	322.27[@] *7*	21.9 *26*	946.244+x	(12$^+$)	(M1+E2)	−2.6 *24*	0.07 *6*	δ: −5.0 to −0.18.
									I_γ: from (α,3nγ). other: 29.4 from (^{11}B,5nγ).
		418.603[@] *22*	100.0[@] *26*	850.036+x	(11$^+$)	E2[&]		0.0274	
		496.1 *3*	7.9	772.742+x	(11$^+$)				
1279.702+x	(13$^-$)	236.688[@] *15*	48.2 *22*	1043.013+x	(12$^-$)	(M1)		0.275	I_γ: from (α,3nγ). other: 50 from (^{11}B,5nγ).
		333.6 *1*	48	946.244+x	(12$^+$)	D			
		363.76[@] *5*	100[@] *4*	915.984+x	(11$^-$)	E2[#]		0.0405	
1299.528+x	(14$^-$)	207.295[@] *5*	69 *5*	1092.229+x	(13$^-$)	(M1+E2)	+0.17 *1*	0.392	δ: from γ(θ) In (α,3nγ).
									I_γ: from (α,3nγ). other: 67 from (^{11}B,5nγ).
		395.12[@] *2*	100[@] *3*	904.431+x	(12$^-$)	E2[#]		0.0321	
1350.370+x	(14$^+$)	217.8 *3*	8.5 *19*	1132.345+x	(13$^+$)				I_γ: from (α,3nγ). other: 7.9 from (^{11}B,5nγ).
		404.14[@] *3*	20.4 *19*	946.244+x	(12$^+$)	Q			I_γ: from (α,3nγ). other: 32 from (^{11}B,5nγ).
		428.19[@] *4*	100[@] *4*	922.167+x	(12$^+$)	(E2)[&]		0.0258	
1368.12+x	(14$^+$)	211.2[b] *3*	2.3[b]	1157.140+x	(13$^+$)				
		235.6 *3*	6.1	1132.345+x	(13$^+$)				
		421.88[@] *4*	100	946.244+x	(12$^+$)	(E2)[&]		0.0268	
		445.9 *1*	25.0	922.167+x	(12$^+$)	Q			
1379.24+x	(13$^+$)	206.0 *3*	5.7	1173.09+x	(12$^+$)				
		222.7 *3*	4.9	1156.59+x	(12$^+$)	D			
		396.9 *3*	27	982.27+x	(11$^+$)				
		413.4[@] *1*	100	965.86+x	(11$^+$)	E2[#]		0.0283	

From ENSDF

$^{166}_{69}Tm_{97}$-11

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
1397.15+x	(13$^+$)	223.6 *3*	15.4	1173.09+x	(12$^+$)			
		240.4 *3*	43	1156.59+x	(12$^+$)			
		267.0 *3*	12.3	1130.482+x	(12$^+$)			
		414.9 *1*	100	982.27+x	(11$^+$)			
1416.80+x	(13$^-$)	202.649[@] *8*	100	1214.15+x	(12$^-$)	(M1(+E2))	0.34 *9*	
		371.3 *1*	52	1045.54+x	(11$^-$)	(E2)[&]	0.0382	
1433.82+x	(14$^-$)	154.18[@] *4*	14.5 *14*	1279.702+x	(13$^-$)	(M1(+E2))	0.77 *14*	I_γ: from (α,3nγ). other: 8.4 from (^{11}B,5nγ).
		165.1 *3*	4.3	1268.634+x	(13$^+$)			
		276.7 *3*	9.2	1157.140+x	(13$^+$)	D		
		390.77[@] *3*	100[@] *3*	1043.013+x	(12$^-$)	E2[#]	0.0331	
1486.8+x	(13$^+$)	223.5 *3*	96	1263.35+x	(12$^+$)			
		431.2 *3*	100	1055.56+x	(11$^+$)			
1510.57+x	(13$^-$)	246.4 *3*	19.2	1264.02+x	(12$^-$)			
		479.7 *1*	100	1030.91+x	(11$^-$)			
1528.158+x	(15$^-$)	228.622[@] *10*	62[@] *5*	1299.528+x	(14$^-$)	(M1+E2)	0.24 *7*	
		435.97[@] *2*	100[@] *5*	1092.229+x	(13$^-$)	(E2)[&]	0.0245	
1599.63+x	(15$^+$)	231.8 *3*	6.5	1368.12+x	(14$^+$)			
		249.3 *3*	3.5	1350.370+x	(14$^+$)			other Iγ: 8 *4* In (α,3nγ).
		442.3 *3*	8.6	1157.140+x	(13$^+$)			
		467.28[@] *6*	100	1132.345+x	(13$^+$)	(E2)[&]	0.0204	
1604.02+x	(14$^+$)	335.1 *3*	7.9	1268.634+x	(13$^+$)			
		430.9 *3*	9.2	1173.09+x	(12$^+$)			
		447.0 *3*	34	1156.59+x	(12$^+$)			
		473.6 *1*	100	1130.482+x	(12$^+$)			
1610.04+x	(15$^+$)	241.9 *3*	3.8	1368.12+x	(14$^+$)			
		259.7 *3*	7.8	1350.370+x	(14$^+$)	D		
		452.904[@] *22*	100	1157.140+x	(13$^+$)	(E2)[&]	0.0222	
		477.6 *3*	7.2	1132.345+x	(13$^+$)			
1612.15+x	(14$^+$)	343.6 *3*	13.3	1268.634+x	(13$^+$)			
		439.0 *3*	80	1173.09+x	(12$^+$)			
		455.6 *1*	100	1156.59+x	(12$^+$)	(E2)[&]	0.0218	
		481.60[@] *16*	63	1130.482+x	(12$^+$)			placement from (^{11}B,5nγ); placed In different band In (α,3nγ).
1625.45+x	(14$^-$)	208.659[@] *15*	100[@] *5*	1416.80+x	(13$^-$)			
		411.21[@] *11*	45 *5*	1214.15+x	(12$^-$)	(E2)[#]	0.0288	I_γ: from (α,3nγ). other: 39 from (^{11}B,5nγ).
1634.82+x	(14$^+$)	461.9 *3*	92	1173.09+x	(12$^+$)			
		478.3 *3*	100	1156.59+x	(12$^+$)			placement from (^{11}B,5nγ); see comment on the 478.99 *11* transition In (α,3nγ) source data set.
		504.4 *3*	16	1130.482+x	(12$^+$)			
1722.71+x	(15$^-$)	289.0 *3*	27	1433.82+x	(14$^-$)	(M1+E2)	0.12 *4*	
		354.3 *3*	23.1	1368.12+x	(14$^+$)	D		

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
1722.71+x	(15⁻)	372.6 *3*	10.0	1350.370+x	(14⁺)			
		442.95[@] *7*	100	1279.702+x	(13⁻)	(E2)[&]	0.0235	
1723.9+x	(14⁺)	237.1 *3*	87	1486.8+x	(13⁺)			
		460.5 *3*	100	1263.35+x	(12⁺)			
1768.85+x	(14⁻)	258.5 *3*	13.0	1510.57+x	(13⁻)			
		504.8 *1*	100	1264.02+x	(12⁻)	(E2)[&]	0.01671	
1770.17+x	(16⁻)	242.05[@] *4*	70 *3*	1528.158+x	(15⁻)	(M1+E2)	0.20 *6*	I_γ: from (α,3nγ). other: 46 In (^{11}B,5nγ).
		470.60[@] *4*	100[@] *7*	1299.528+x	(14⁻)	(E2)[&]	0.0200	
1774.71+x	(15⁺)	406.9 *3*	10.7	1368.12+x	(14⁺)			
		505.97[@] *13*	100	1268.634+x	(13⁺)	(E2)[&]	0.01662	
1836.51+x	(16⁺)	236.8 *3*	3.7	1599.63+x	(15⁺)			
		468.3 *3*	10.9	1368.12+x	(14⁺)	Q		
		486.14[@] *4*	100	1350.370+x	(14⁺)	(E2)[&]	0.0184	
1858.44+x	(15⁺)	461.3 *3*	14.3	1397.15+x	(13⁺)			
		479.2 *1*	100	1379.24+x	(13⁺)	(E2)[&]	0.0191	placement from (^{11}B,5nγ); see comment on the 478.99 *11* transition In (α,3nγ) source data set.
1865.94+x	(16⁺)	266.2 *3*	5.8	1599.63+x	(15⁺)			
		497.8[@] *1*	100	1368.12+x	(14⁺)	(E2)[&]	0.01732	
		515.4 *3*	4.8	1350.370+x	(14⁺)			
1873.54+x	(15⁻)	248.08[@] *3*	100	1625.45+x	(14⁻)	(M1+E2)[#]	0.19 *6*	
		456.91[@] *16*		1416.80+x	(13⁻)			I_γ: data from (^{11}B,5nγ) (86) and from (α,3nγ) (25 *7*) are discrepant.
1900.78+x	(15⁺)	296.8 *3*	24	1604.02+x	(14⁺)			
		503.6 *3*	100	1397.15+x	(13⁺)			
1908.47+x	(16⁻)	185.4[b] *3*	4.7[b]	1722.71+x	(15⁻)			
		299.1 *3*	2.4	1610.04+x	(15⁺)	D		
		474.66[@] *3*	100	1433.82+x	(14⁻)	(E2)[&]	0.0196	
1976.5+x	(15⁺)	252.6 *3*	55	1723.9+x	(14⁺)			
		489.9 *3*	100	1486.8+x	(13⁺)			
2037.54+x	(15⁻)	268.6 *3*	12.5	1768.85+x	(14⁻)			
		527.0 *3*	100	1510.57+x	(13⁻)	(E2)[&]	0.01499	
2038.35+x	(17⁻)	268.2 *1*	22 *6*	1770.17+x	(16⁻)	(M1+E2)	0.15 *5*	I_γ: from (α,3nγ). other: 37 In (^{11}B,5nγ).
		510.2 *1*	100[@] *22*	1528.158+x	(15⁻)	E2[&]	0.01627	
2120.43+x	(17⁺)	254.5 *3*	13	1865.94+x	(16⁺)			
		283.9 *3*	7.0	1836.51+x	(16⁺)			
		510.4 *1*	100	1610.04+x	(15⁺)	(E2)[&]	0.01625	
		520.8 *1*	16.0	1599.63+x	(15⁺)	Q		
2122.43+x	(16⁺)	510.3 *1*	100	1612.15+x	(14⁺)			
		518.2 *3*	35	1604.02+x	(14⁺)			
2123.26+x	(16⁻)	249.8 *1*	100	1873.54+x	(15⁻)	(M1(+E2))	0.18 *6*	
		497.8 *1*	100	1625.45+x	(14⁻)			

From ENSDF

$^{166}_{69}Tm_{97}$-13

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
2131.92+x	(17$^+$)	295.6 *3*	14.7	1836.51+x	(16$^+$)	(M1+E2)	0.11 *4*	
		521.9 *1*	100	1610.04+x	(15$^+$)	Q		
		532.3 *1*	82	1599.63+x	(15$^+$)	(E2)[&]	0.01462	
2153.22+x	(16$^+$)	378.3 *3*	3.2	1774.71+x	(15$^+$)			
		518.7 *3*		1634.82+x	(14$^+$)			
		541.0 *3*	48	1612.15+x	(14$^+$)			
		549.2 *1*	100	1604.02+x	(14$^+$)			
2181.72+x	(16$^+$)	546.9 *1*	100	1634.82+x	(14$^+$)			
2237.39+x	(17$^-$)	329.1 *3*	22	1908.47+x	(16$^-$)			
		401.1 *3*	8.6	1836.51+x	(16$^+$)			
		514.6 *1*	100	1722.71+x	(15$^-$)	(E2)[&]	0.01592	
2245.5+x	(16$^+$)	269.2 *3*	39	1976.5+x	(15$^+$)			
		521.4 *3*	100	1723.9+x	(14$^+$)			
2307.58+x	(18$^-$)	269.32[@] *9*	47[@] *11*	2038.35+x	(17$^-$)	(M1+E2)	0.15 *5*	
		537.38[@] *11*	100[@] *16*	1770.17+x	(16$^-$)	(E2)[&]	0.01428	
2315.79+x	(16$^-$)	278.4 *3*		2037.54+x	(15$^-$)			
		547.0 *3*	100	1768.85+x	(14$^-$)			
2357.11+x	(17$^+$)	582.4 *1*	100	1774.71+x	(15$^+$)	(E2)[&]	0.01171	
2381.19+x	(18$^+$)	249.3 *3*	1.5	2131.92+x	(17$^+$)			
		544.67[@] *6*	100	1836.51+x	(16$^+$)	(E2)[&]	0.01381	
2399.14+x	(17$^+$)	540.7 *1*	100	1858.44+x	(15$^+$)	(E2)[&]	0.01406	
2412.13+x	(17$^-$)	289.6 *3*	4.5	2123.26+x	(16$^-$)			
		538.5 *1*	100	1873.54+x	(15$^-$)			
2423.39+x	(18$^+$)	291.7 *3*	5.8	2131.92+x	(17$^+$)			
		557.4 *1*	100	1865.94+x	(16$^+$)	(E2)[&]	0.01304	
2463.70+x	(18$^-$)	555.26[@] *9*	100	1908.47+x	(16$^-$)	(E2)[&]	0.01316	other Eγ: 554.9 *1* In (^{11}B,5nγ).
2479.1+x	(17$^+$)	578.3 *3*	100	1900.78+x	(15$^+$)			
2521.0+x	(17$^+$)	544.5 *3*	100	1976.5+x	(15$^+$)			
2602.1+x	(17$^-$)	286.5 *3*		2315.79+x	(16$^-$)			
		564.4 *3*		2037.54+x	(15$^-$)			
2614.28+x	(19$^-$)	306.8 *1*	<17	2307.58+x	(18$^-$)	(M1+E2)	0.10 *4*	I_γ: from (α,3nγ). other: 30 In (^{11}B,5nγ).
		575.76[@] *14*	100[@] *10*	2038.35+x	(17$^-$)	(E2)[&]	0.01205	
2690.13+x	(19$^+$)	266.6 *3*	4.6	2423.39+x	(18$^+$)			
		308.9 *3*	4.6	2381.19+x	(18$^+$)			
		558.3 *3*	8.2	2131.92+x	(17$^+$)			
		569.7 *1*	100	2120.43+x	(17$^+$)	(E2)[&]	0.01236	
2696.33+x	(18$^+$)	573.9 *1*	100	2122.43+x	(16$^+$)			
2702.85+x	(18$^-$)	290.8 *3*	56	2412.13+x	(17$^-$)			
		579.6 *1*	100	2123.26+x	(16$^-$)			
2713.80+x	(19$^+$)	290.8 *3*	3.7	2423.39+x	(18$^+$)			
		332.6 *3*	8.1	2381.19+x	(18$^+$)			

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]	Comments
2713.80+x	(19$^+$)	581.9 *1*	100	2131.92+x	(17$^+$)	(E2)[&]	0.01174	
2751.22+x	(18$^+$)	598.0 *1*	100	2153.22+x	(16$^+$)	(E2)[&]	0.01099	
2785.4+x	(18$^+$)	603.7 *3*	100	2181.72+x	(16$^+$)			
2814.91+x	(19$^-$)	351.5 *3*	19	2463.70+x	(18$^-$)			
		433.6 *3*	3.7	2381.19+x	(18$^+$)			
		577.5 *1*	100	2237.39+x	(17$^-$)	(E2)[&]	0.01196	
2839.3+x	(18$^+$)	593.8 *3*	100	2245.5+x	(16$^+$)			
2893.6+x	(18$^-$)	291.4 *3*		2602.1+x	(17$^-$)			
		577.9 *3*		2315.79+x	(16$^-$)			
2902.79+x	(20$^-$)	288.6 *1*	34	2614.28+x	(19$^-$)	(M1+E2)	0.12 *4*	
		595.2 *1*	100	2307.58+x	(18$^-$)	(E2)[&]	0.01112	other Eγ: 598.8 *8* In (α,3nγ).
2978.39+x	(20$^+$)	597.2 *1*	100	2381.19+x	(18$^+$)	(E2)[&]	0.01103	
2987.24+x	(19$^+$)	588.2 *3*	100	2399.14+x	(17$^+$)			
		630.1 *3*	88	2357.11+x	(17$^+$)	(E2)[&]	0.00971	
3016.41+x	(19$^+$)	617.2 *3*	66	2399.14+x	(17$^+$)			
		659.3 *3*	100	2357.11+x	(17$^+$)			
3024.5+x	(19$^-$)	321.7 *3*	47	2702.85+x	(18$^-$)			
		612.3 *3*	100	2412.13+x	(17$^-$)			
3031.65+x	(20$^+$)	318.3 *3*	6.7	2713.80+x	(19$^+$)			
		608.2 *1*	100	2423.39+x	(18$^+$)	(E2)[&]	0.01056	
3092.79+x	(20$^-$)	629.1 *1*	100	2463.70+x	(18$^-$)	(E2)[&]	0.00974	
3100.6+x		621.5 *3*	100	2479.1+x	(17$^+$)			
3109.0+x		629.9 *3*	100	2479.1+x	(17$^+$)			
3133.9+x	(19$^+$)	654.8 *3*	100	2479.1+x	(17$^+$)			
3200.6+x	(19$^-$)	598.4 *3*	100	2602.1+x	(17$^-$)			
3246.17+x	(21$^-$)	343.6 *1*	34	2902.79+x	(20$^-$)	(M1+E2)	0.07 *3*	
		631.8 *1*	100	2614.28+x	(19$^-$)	(E2)[&]	0.00965	
3308.63+x	(21$^+$)	277.1 *3*	1.4	3031.65+x	(20$^+$)			
		330.4 *3*	4.2	2978.39+x	(20$^+$)			
		618.5 *1*	100	2690.13+x	(19$^+$)	(E2)[&]	0.01014	
3328.23+x	(20$^+$)	631.9 *1*	100	2696.33+x	(18$^+$)			
3345.18+x	(21$^+$)	366.8 *3*	7.9	2978.39+x	(20$^+$)			
		631.4 *1*	100	2713.80+x	(19$^+$)	(E2)[&]	0.00966	
3354.7+x	(20$^-$)	330.1 *3*	35	3024.5+x	(19$^-$)			
		651.9 *3*	100	2702.85+x	(18$^-$)			
3374.8+x	(20$^+$)	623.6 *3*	100	2751.22+x	(18$^+$)	(E2)[&]	0.00995	
3449.20+x	(21$^-$)	356.5 *3*	11.8	3092.79+x	(20$^-$)			
		634.2 *3*	100	2814.91+x	(19$^-$)	(E2)[&]	0.00956	
3457.7+x	(20$^+$)	672.3 *3*	100	2785.4+x	(18$^+$)			
3546.74+x	(22$^-$)	300.7 *1*	28	3246.17+x	(21$^-$)	(M1+E2)	0.11 *4*	

From ENSDF

$^{166}_{69}Tm_{97}$-15

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]
3546.74+x	(22⁻)	643.8 *1*	100	2902.79+x	(20⁻)	(E2)[&]	0.00923
3623.42+x	(22⁺)	645.0 *1*	100	2978.39+x	(20⁺)	(E2)[&]	0.00919
3640.6+x	(21⁺)	653.4 *3*	100	2987.24+x	(19⁺)	(E2)[&]	0.00892
3686.78+x	(22⁺)	341.8 *3*		3345.18+x	(21⁺)		
		655.1 *1*	100	3031.65+x	(20⁺)	(E2)[&]	0.00886
3699.0+x	(21⁺)	682.5 *3*	100	3016.41+x	(19⁺)		
3699.9+x	(21⁻)	345.3 *3*	32	3354.7+x	(20⁻)		
		675.4 *3*	100	3024.5+x	(19⁻)		
3732.3+x	(21⁺)	715.9 *3*	100	3016.41+x	(19⁺)		
		745.1 *3*	86	2987.24+x	(19⁺)		
3788.4+x	(22⁻)	695.6 *3*	100	3092.79+x	(20⁻)	(E2)[&]	0.00772
3804.3+x	(21⁺)	670.4 *3*	100	3133.9+x	(19⁺)		
3923.95+x	(23⁻)	377.2 *1*	37	3546.74+x	(22⁻)	(M1+E2)	0.058 *22*
		677.8 *1*	100	3246.17+x	(21⁻)	(E2)[&]	0.00819
3975.90+x	(23⁺)	352.2 *3*	2.6	3623.42+x	(22⁺)		
		667.3 *1*	100	3308.63+x	(21⁺)	(E2)[&]	0.00849
4018.5+x	(22⁺)	690.3 *3*	100	3328.23+x	(20⁺)		
4024.69+x	(23⁺)	401.3 *3*	6.5	3623.42+x	(22⁺)		
		679.5 *1*	100	3345.18+x	(21⁺)	(E2)[&]	0.00814
4058.9+x	(22⁻)	359.0 *3*	16	3699.9+x	(21⁻)		
		704.2 *3*	100	3354.7+x	(20⁻)		
4136.2+x	(23⁻)	687.0 *3*	100	3449.20+x	(21⁻)	(E2)[&]	0.00794
4232.54+x	(24⁻)	308.9 *3*	23	3923.95+x	(23⁻)		
		685.8 *1*	100	3546.74+x	(22⁻)	(E2)[&]	0.00797
4316.92+x	(24⁺)	693.5 *1*	100	3623.42+x	(22⁺)	(E2)[&]	0.00777
4328.3+x	(23⁺)	629.4 *3*	36	3699.0+x	(21⁺)		
		687.7 *3*	100	3640.6+x	(21⁺)		
4359.0+x	(23⁺)	660.0 *3*	77	3699.0+x	(21⁺)		
		718.5 *3*	100	3640.6+x	(21⁺)		
4391.08+x	(24⁺)	704.3 *1*	100	3686.78+x	(22⁺)	(E2)[&]	0.00750
4421.0+x	(23⁻)	721.1 *3*	100	3699.9+x	(21⁻)		
4481.8+x	(23⁺)	749.5 *3*	100	3732.3+x	(21⁺)		
4542.3+x	(24⁻)	753.9 *3*	100	3788.4+x	(22⁻)	(E2)[&]	0.00644
4642.89+x	(25⁻)	410.7 *3*	27	4232.54+x	(24⁻)		
		718.9 *1*	100	3923.95+x	(23⁻)	(E2)[&]	0.00716
4697.4+x	(25⁺)	721.5 *3*	100	3975.90+x	(23⁺)	(E2)[&]	0.00711
4755.8+x	(25⁺)	731.1 *3*	100	4024.69+x	(23⁺)		
4762.7+x	(24⁺)	744.2 *3*	100	4018.5+x	(22⁺)		
4874.2+x	(25⁻)	738.0 *3*	100	4136.2+x	(23⁻)		

From ENSDF

$^{166}_{69}Tm_{97}$-16

Adopted Levels, Gammas (continued)

γ(^{166}Tm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	α[a]
4957.64+x	(26$^-$)	725.1 *1*	100	4232.54+x	(24$^-$)	(E2)[&]	0.00703
5021.3+x	(25$^+$)	693.0 *3*	100	4328.3+x	(23$^+$)		
5064.6+x	(26$^+$)	747.7 *3*	100	4316.92+x	(24$^+$)	(E2)[&]	0.00656
5111.0+x	(25$^+$)	751.9 *3*	100	4359.0+x	(23$^+$)		
		782.7 *3*	12.5	4328.3+x	(23$^+$)		
5150.9+x	(26$^+$)	759.8 *3*	100	4391.08+x	(24$^+$)	(E2)[&]	0.00633
5346.5+x	(26$^-$)	804.2 *3*	100	4542.3+x	(24$^-$)	(E2)[&]	0.00559
5407.2+x	(27$^-$)	764.3 *3*	100	4642.89+x	(25$^-$)		
5480.3+x	(27$^+$)	782.9 *3*	100	4697.4+x	(25$^+$)		
5544.9+x	(27$^+$)	789.1 *3*	100	4755.8+x	(25$^+$)		
5559.3+x	(26$^+$)	796.6 *3*	100	4762.7+x	(24$^+$)		
5662.6+x	(27$^-$)	788.4 *3*	100	4874.2+x	(25$^-$)		
5725.5+x	(28$^-$)	767.9 *3*	100	4957.64+x	(26$^-$)	(E2)[&]	0.00619
5766.4+x	(27$^+$)	745.1 *3*	100	5021.3+x	(25$^+$)		
5873.6+x	(28$^+$)	809.0 *3*	100	5064.6+x	(26$^+$)		
5923.5+x	(27$^+$)	812.5 *3*	100	5111.0+x	(25$^+$)		
5972.8+x	(28$^+$)	821.9 *3*	100	5150.9+x	(26$^+$)		
6192.9+x	(28$^-$)	846.4 *3*	100	5346.5+x	(26$^-$)		
6227.2+x	(29$^-$)	820.0 *3*	100	5407.2+x	(27$^-$)		
6329.6+x	(29$^+$)	849.3 *3*	100	5480.3+x	(27$^+$)		
6396.4+x	(29$^+$)	851.5 *3*	100	5544.9+x	(27$^+$)		
6407.3+x	(28$^+$)	848.0 *3*	100	5559.3+x	(26$^+$)		
6503.2+x	(29$^-$)	840.6 *3*	100	5662.6+x	(27$^-$)		
6542.5+x	(30$^-$)	817.0 *3*	100	5725.5+x	(28$^-$)		
6571.1+x	(29$^+$)	804.7 *3*	100	5766.4+x	(27$^+$)		
6748.9+x	(30$^+$)	875.3 *3*	100	5873.6+x	(28$^+$)		
6788.7+x	(29$^+$)	865.2 *3*	100	5923.5+x	(27$^+$)		
6861.1+x	(30$^+$)	888.3 *3*	100	5972.8+x	(28$^+$)		
7063.2+x	(30$^-$)	870.3 *3*	100	6192.9+x	(28$^-$)		
7111.2+x	(31$^-$)	884.0 *3*	100	6227.2+x	(29$^-$)		
7247.9+x	(31$^+$)	918.3 *3*	100	6329.6+x	(29$^+$)		
7304.6+x	(30$^+$)	897.3 *3*	100	6407.3+x	(28$^+$)		
7313.9+x	(31$^+$)	917.5 *3*	100	6396.4+x	(29$^+$)		
7398.8+x	(31$^-$)	895.6 *3*	100	6503.2+x	(29$^-$)		
7414.4+x	(32$^-$)	871.9 *3*	100	6542.5+x	(30$^-$)		
7692.5+x	(32$^+$)	943.6 *3*	100	6748.9+x	(30$^+$)		
7816.1+x	(32$^+$)	955.0 *3*	100	6861.1+x	(30$^+$)		
7969.9+x	(32$^-$)	906.7 *3*	100	7063.2+x	(30$^-$)		
8065.8+x	(33$^-$)	954.6 *3*	100	7111.2+x	(31$^-$)		
8234.4+x	(33$^+$)	986.5 *3*	100	7247.9+x	(31$^+$)		
8297.4+x	(33$^+$)	983.5 *3*	100	7313.9+x	(31$^+$)		
8345.2+x	(34$^-$)	930.8 *3*	100	7414.4+x	(32$^-$)		

From ENSDF

$^{166}_{69}Tm_{97}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{166}Tm)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
8352.7+x	(33^-)	953.9 *3*	100	7398.8+x	(31^-)
8692.2+x	(34^+)	999.7 *3*	100	7692.5+x	(32^+)
8845.2+x?	(34^+)	1029.1[c] *3*	100	7816.1+x	(32^+)
9338.8+x	(36^-)	993.5 *3*	100	8345.2+x	(34^-)

† From (^{11}B,5nγ), except As noted. intraband transitions are assigned $\Delta\pi$=(No). $\Delta I\gamma$ ranges between 10% and 50% for (^{11}B,5nγ).

‡ From $\gamma(\theta)$ In (α,3nγ), except As noted.

From $\gamma(\theta)$ In (α,3nγ), assigning $\Delta\pi$=(No) to intraband transitions, unless $\gamma(\theta)$, combined with $\gamma\gamma$ coin resolving time, definitely eliminates $\Delta\pi$=yes based on RUL.

@ From (α,3nγ).

& Q or (Q) from DCO for intraband transition In (^{11}B,5nγ). $\Delta\pi$=(No) assigned based on band structure.

[a] 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.

[b] Multiply placed with intensity suitably divided.

[c] Placement of transition in the level scheme is uncertain.

From ENSDF

$^{166}_{69}Tm_{97}$-18

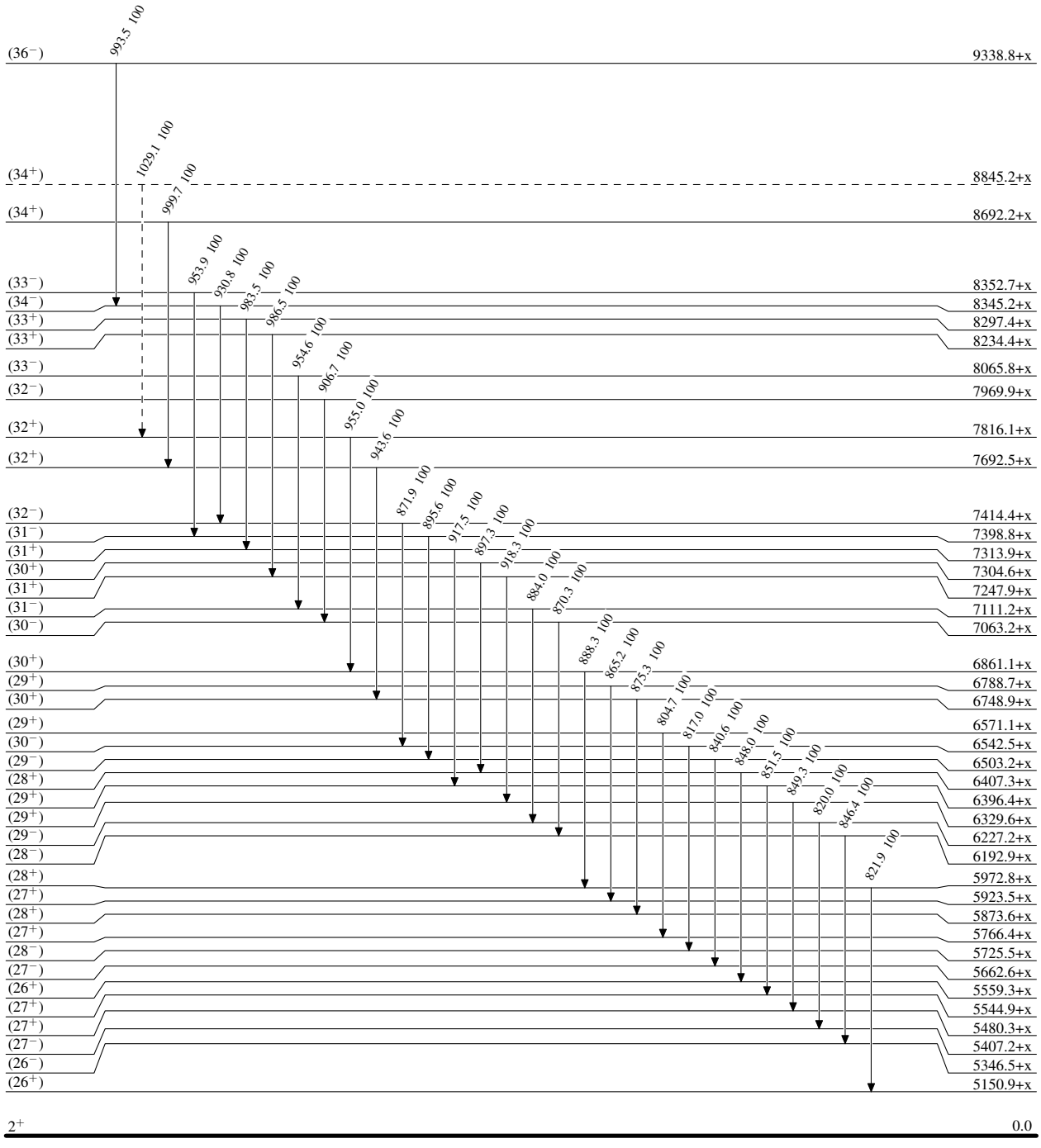
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

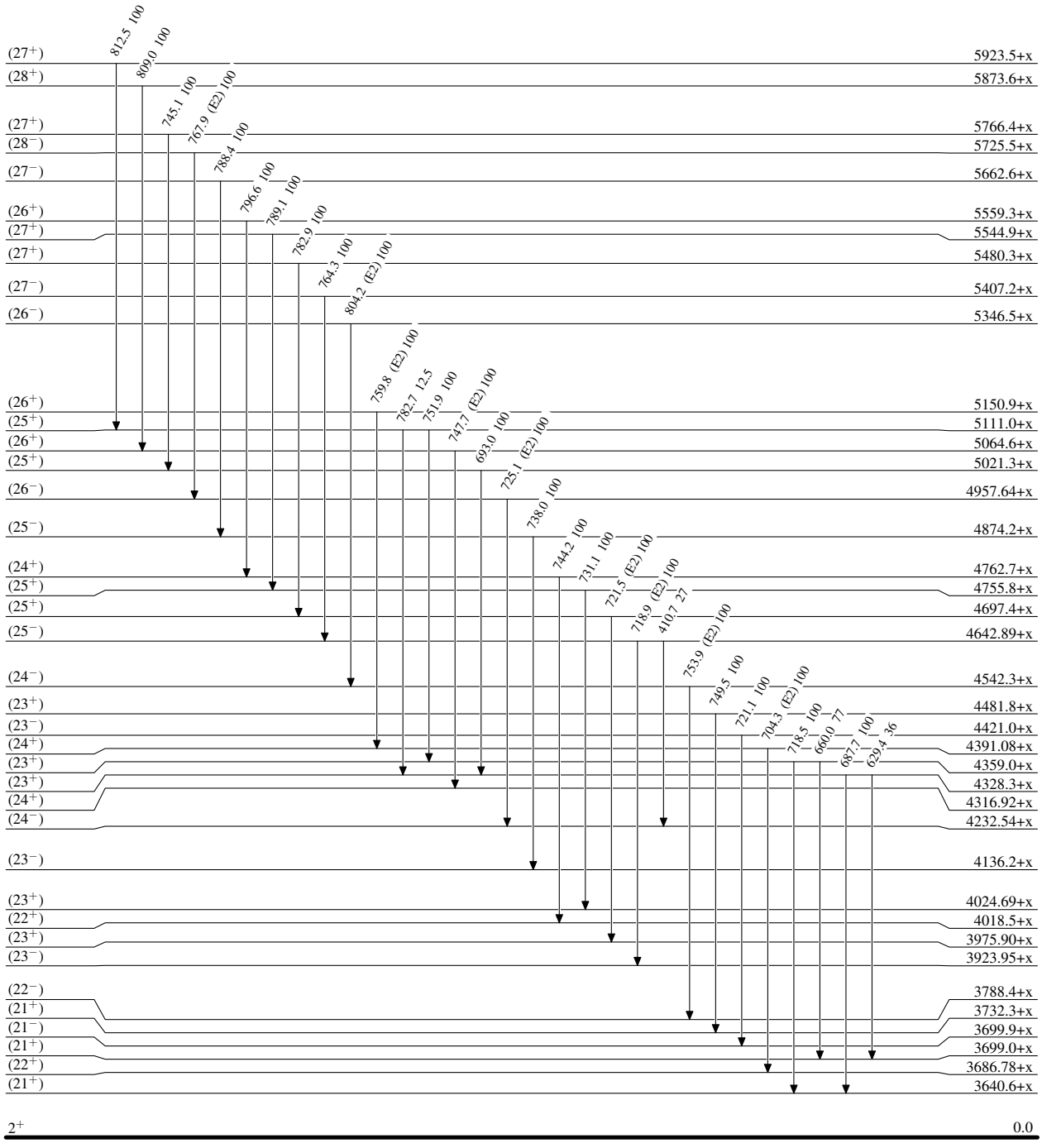


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

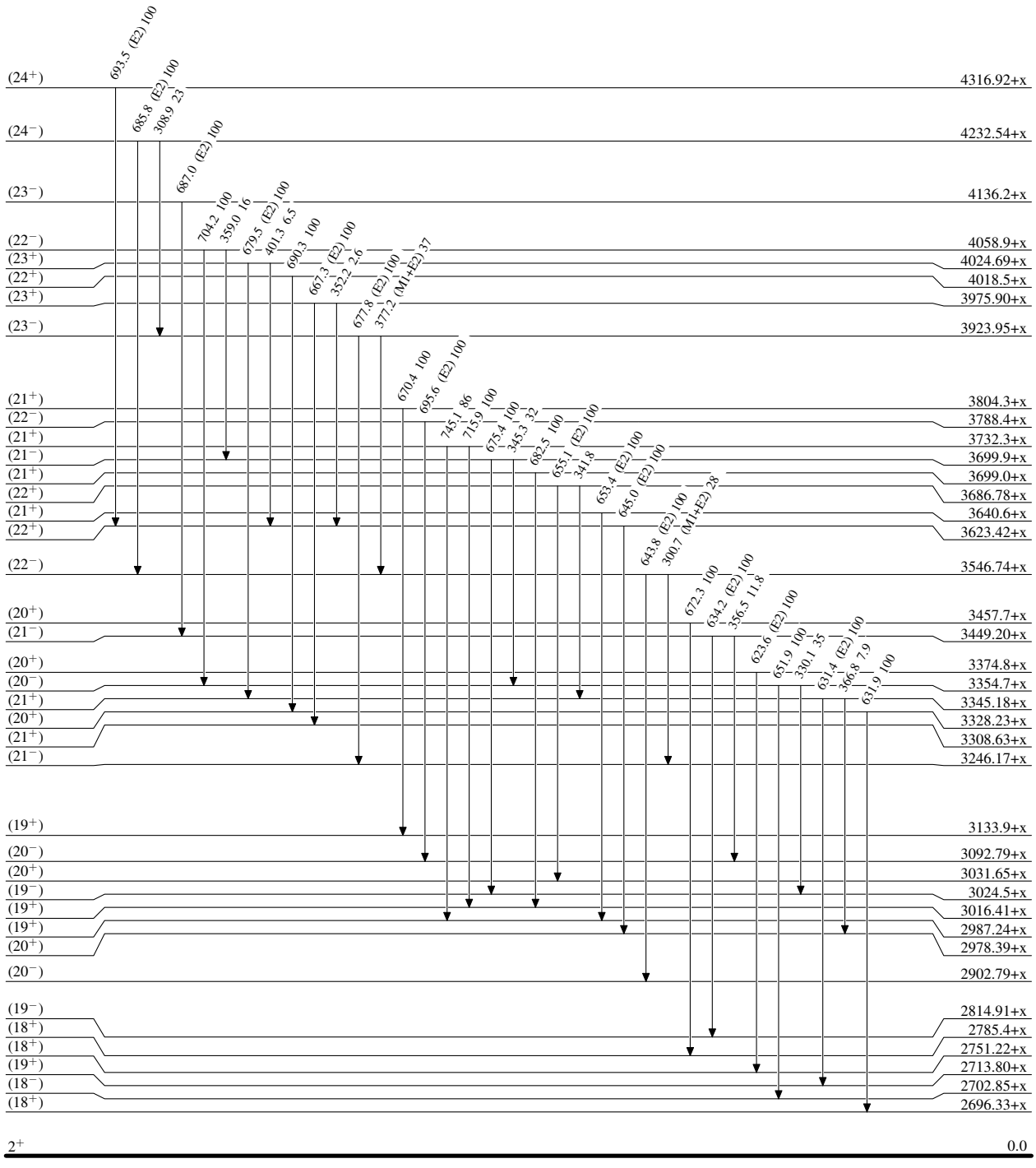


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

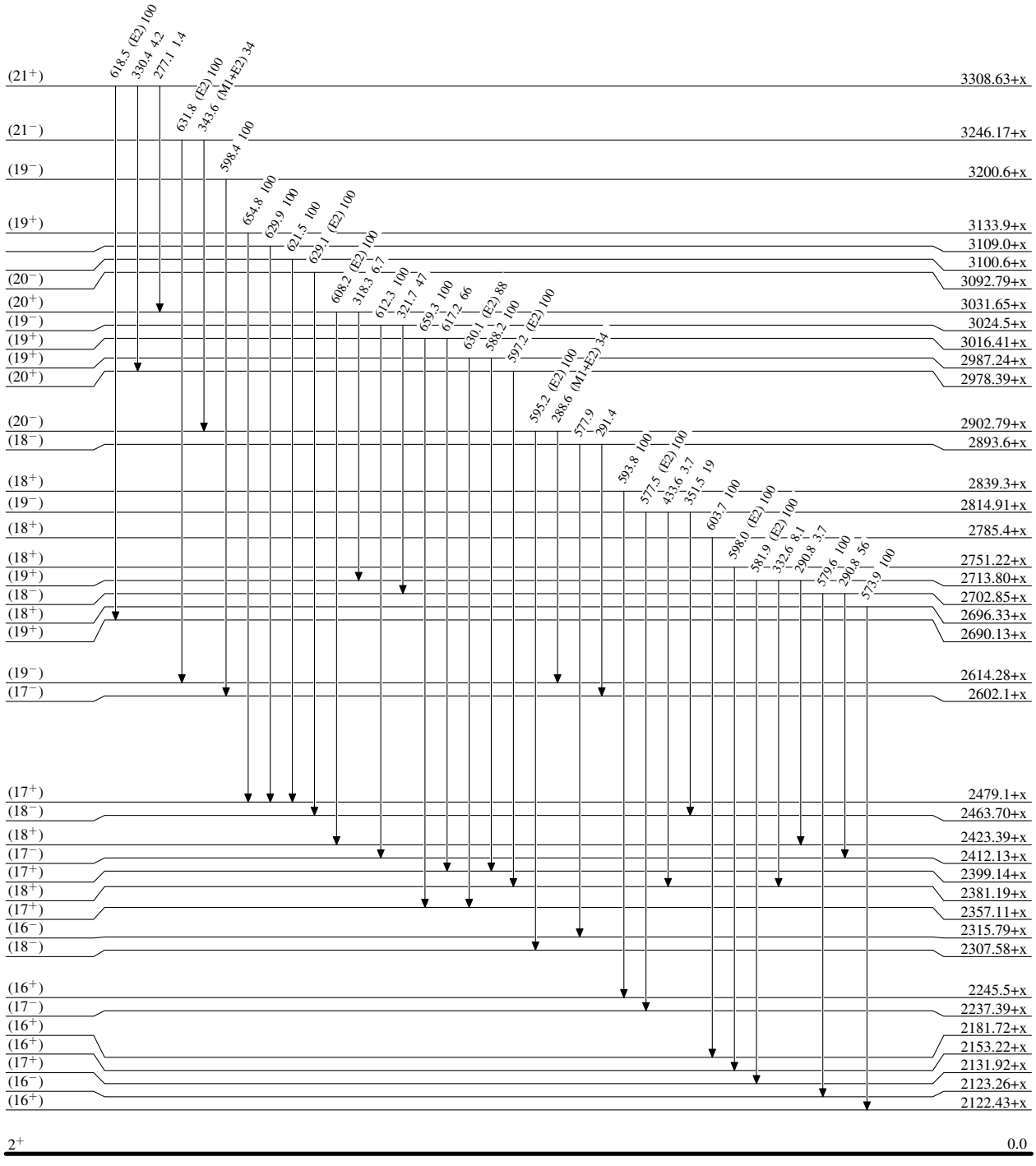


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

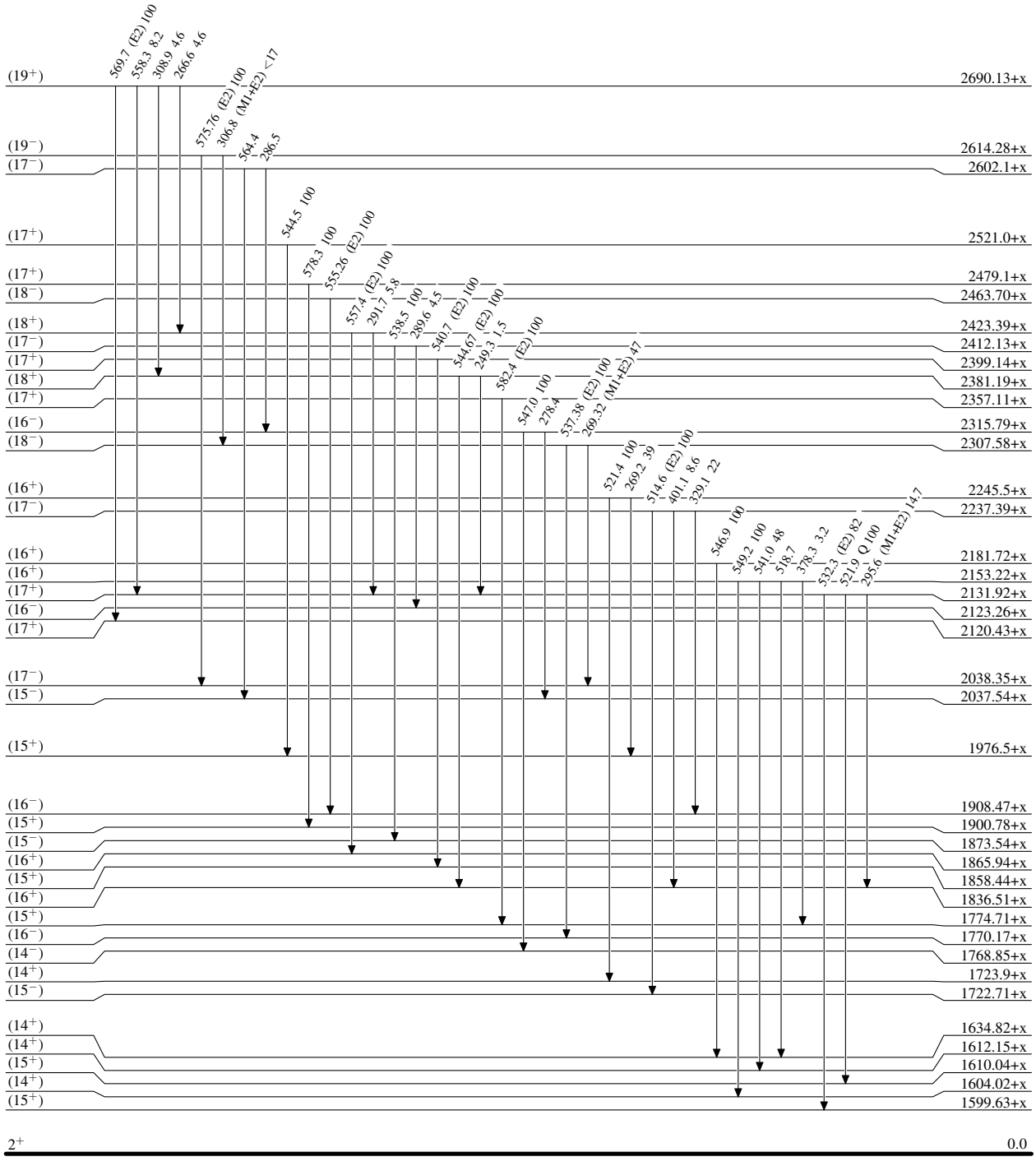


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

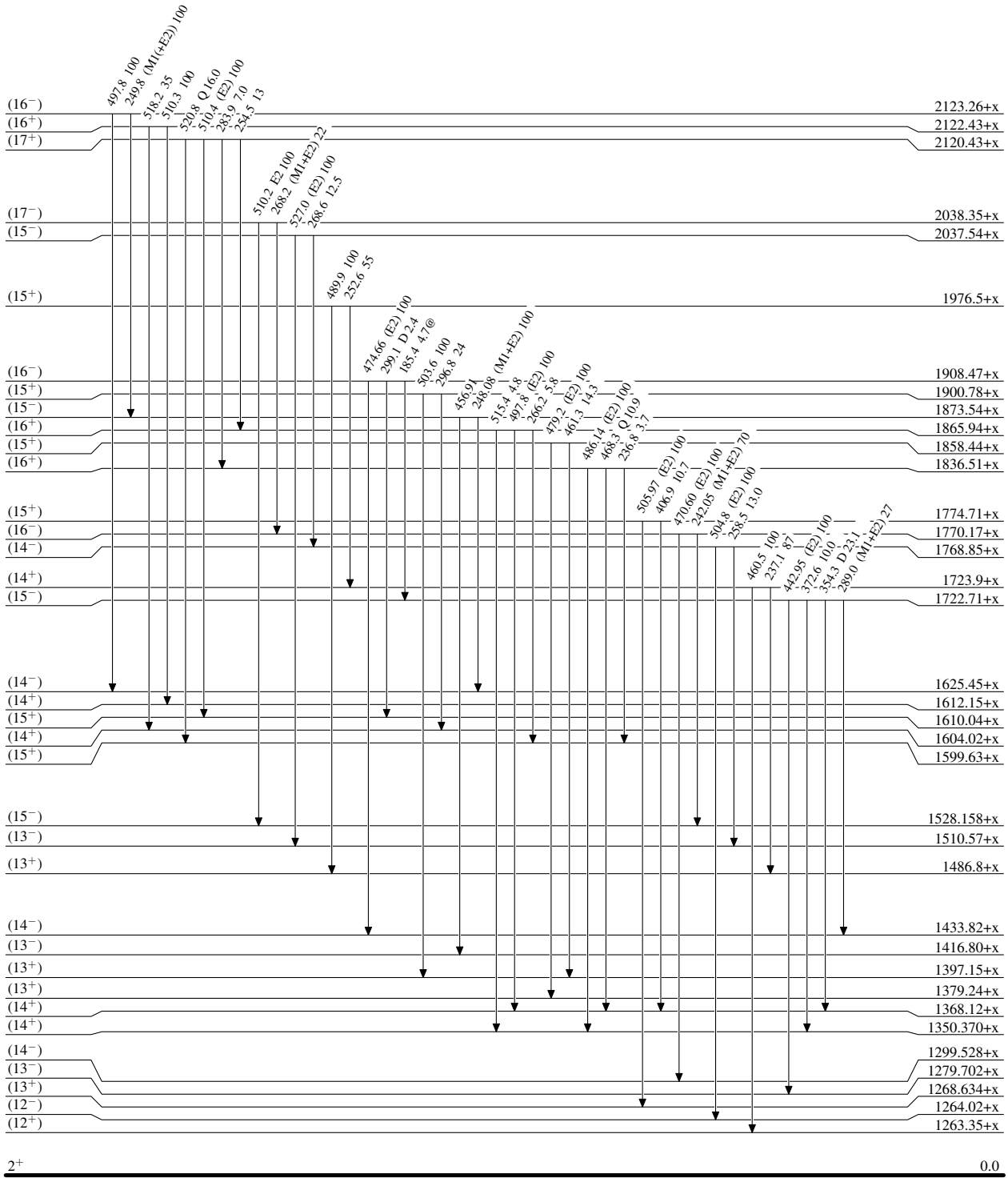


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

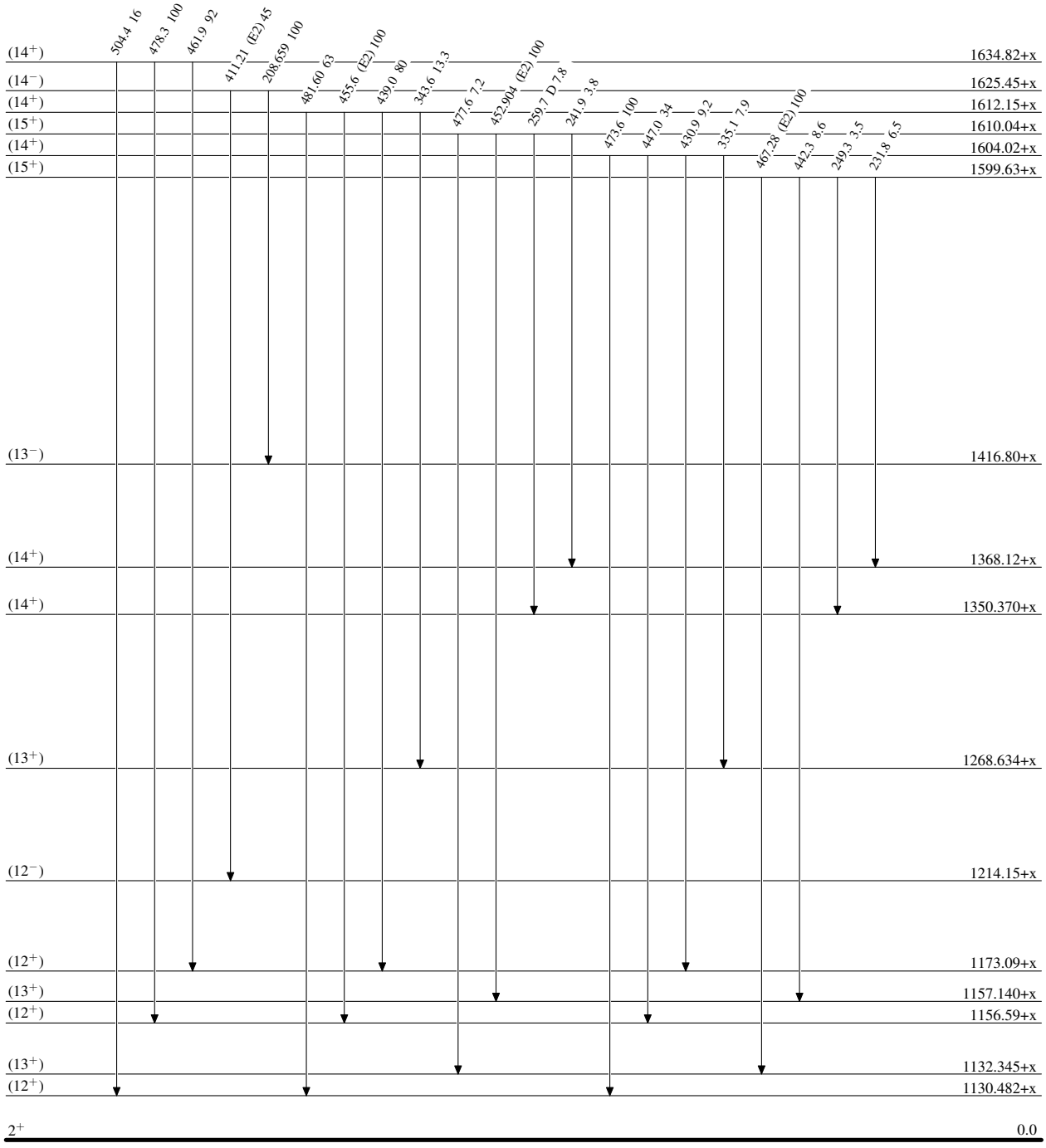


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

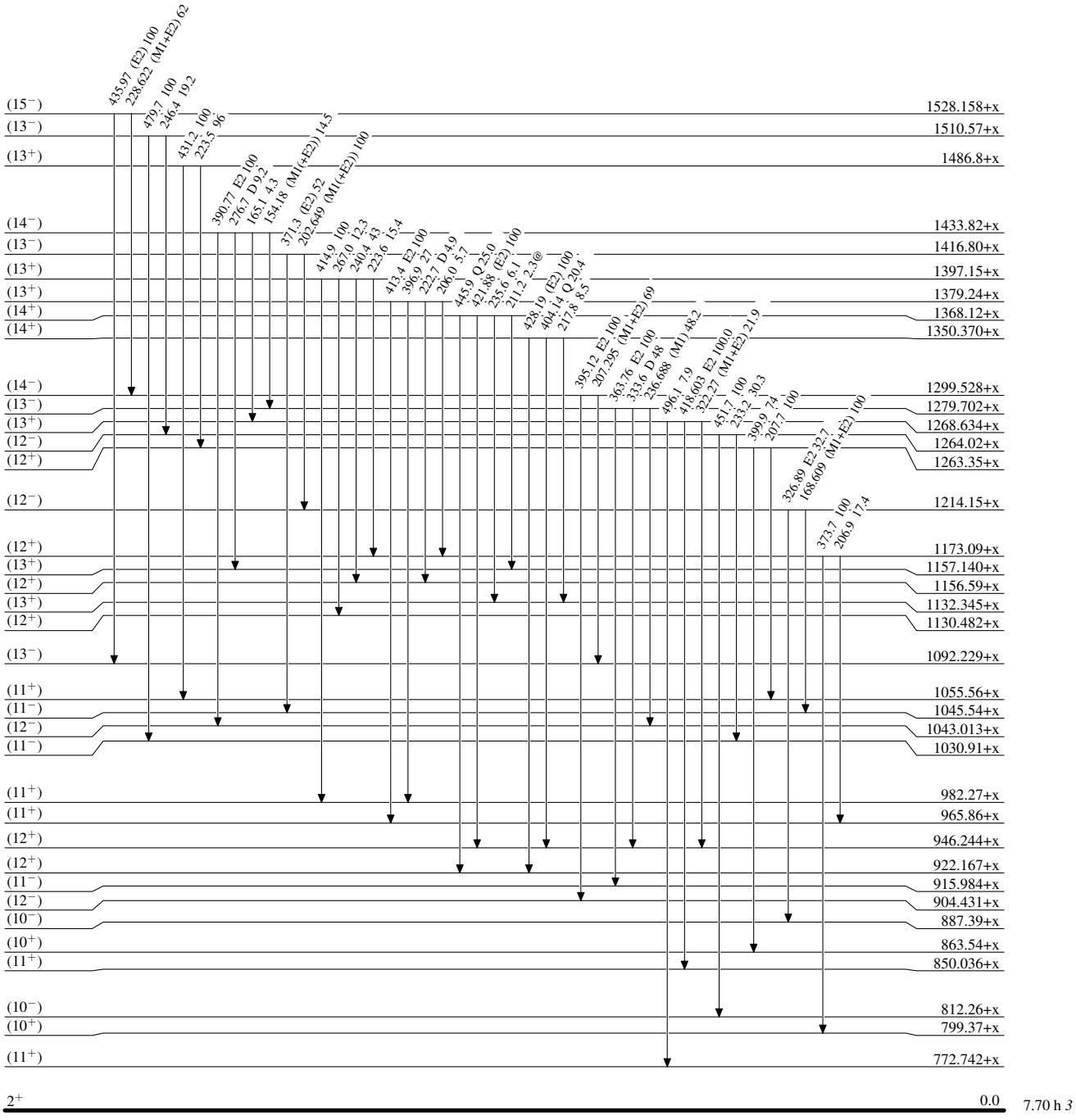


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

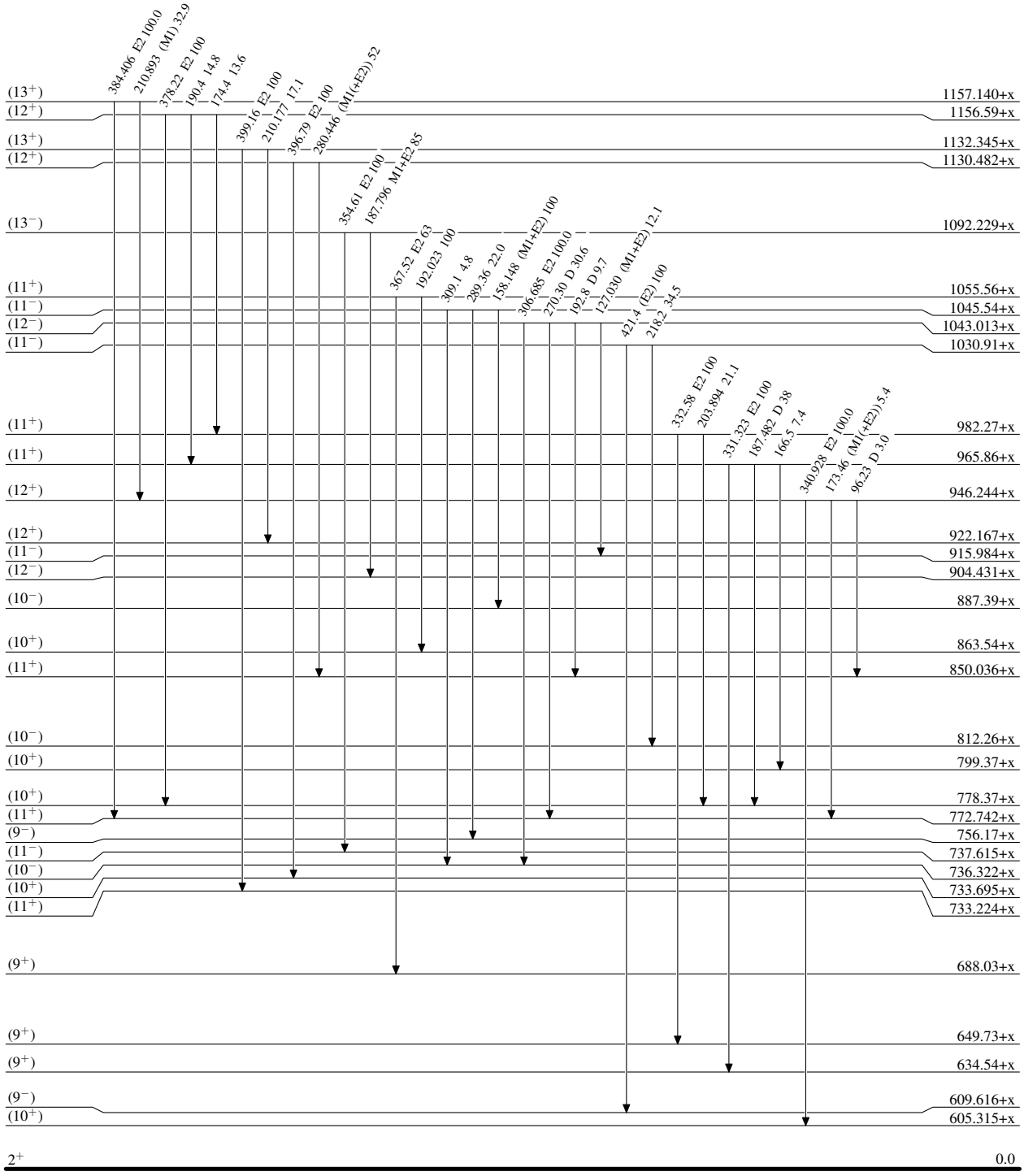


$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided



$^{166}_{69}Tm_{97}$

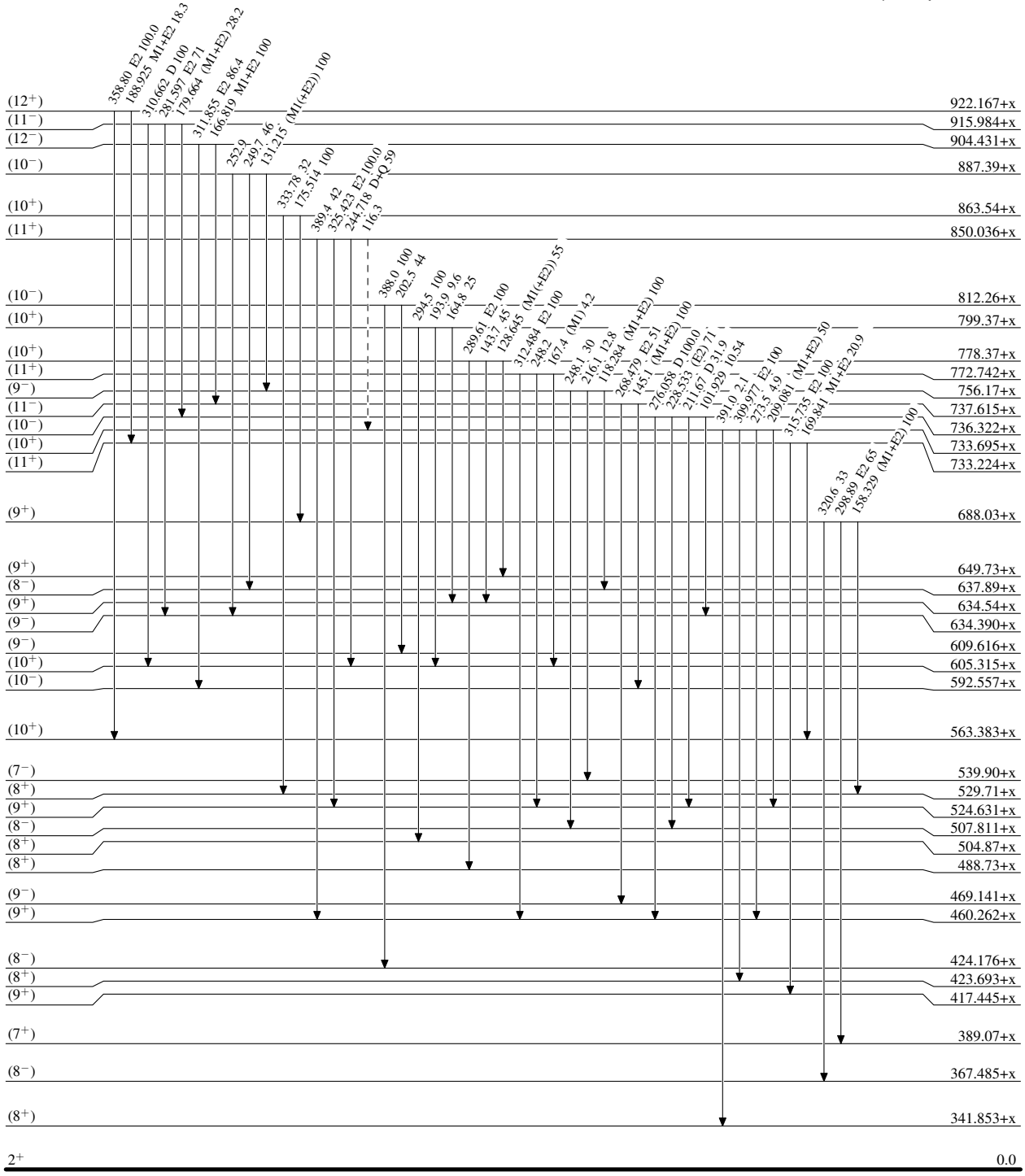
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



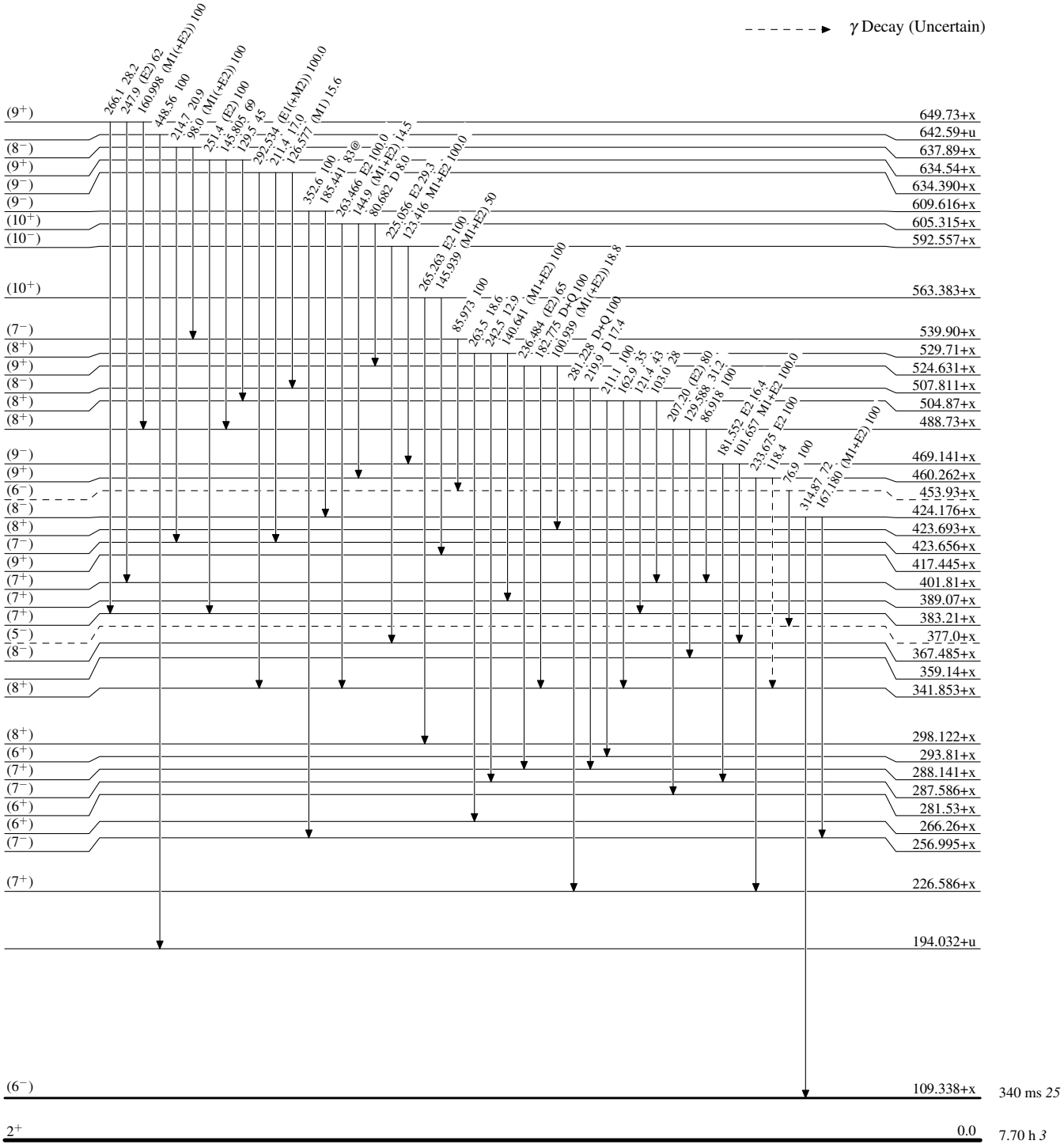
$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

Legend



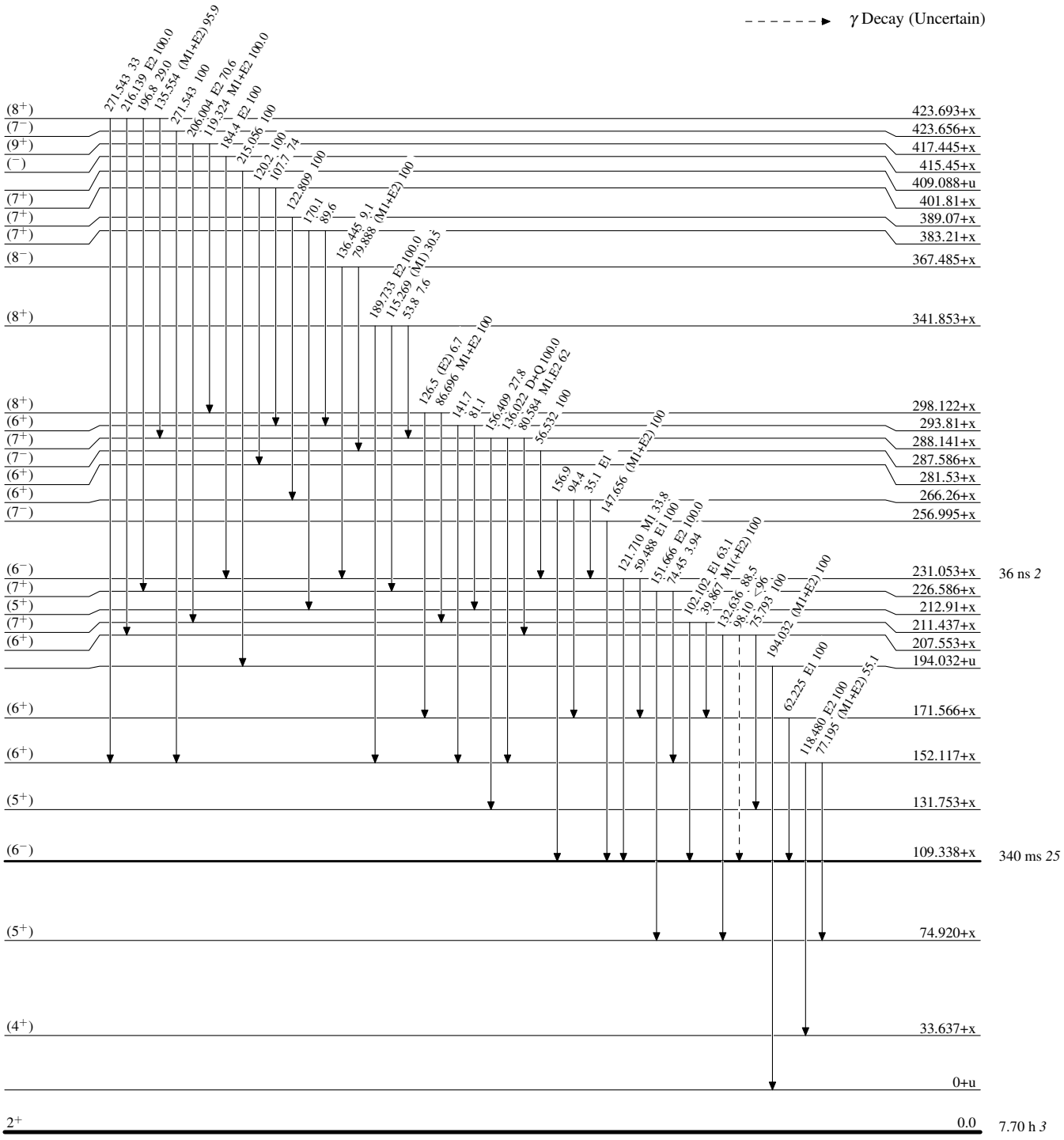
$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

Legend



$^{166}_{69}Tm_{97}$

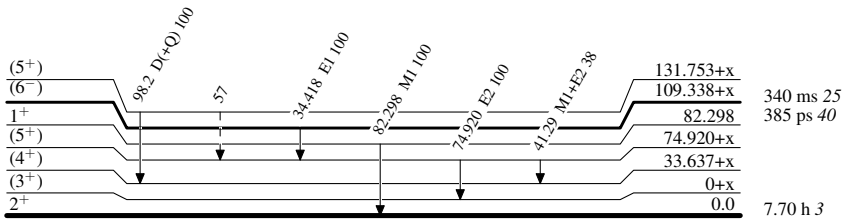
Adopted Levels, Gammas

Legend

Level Scheme (continued)

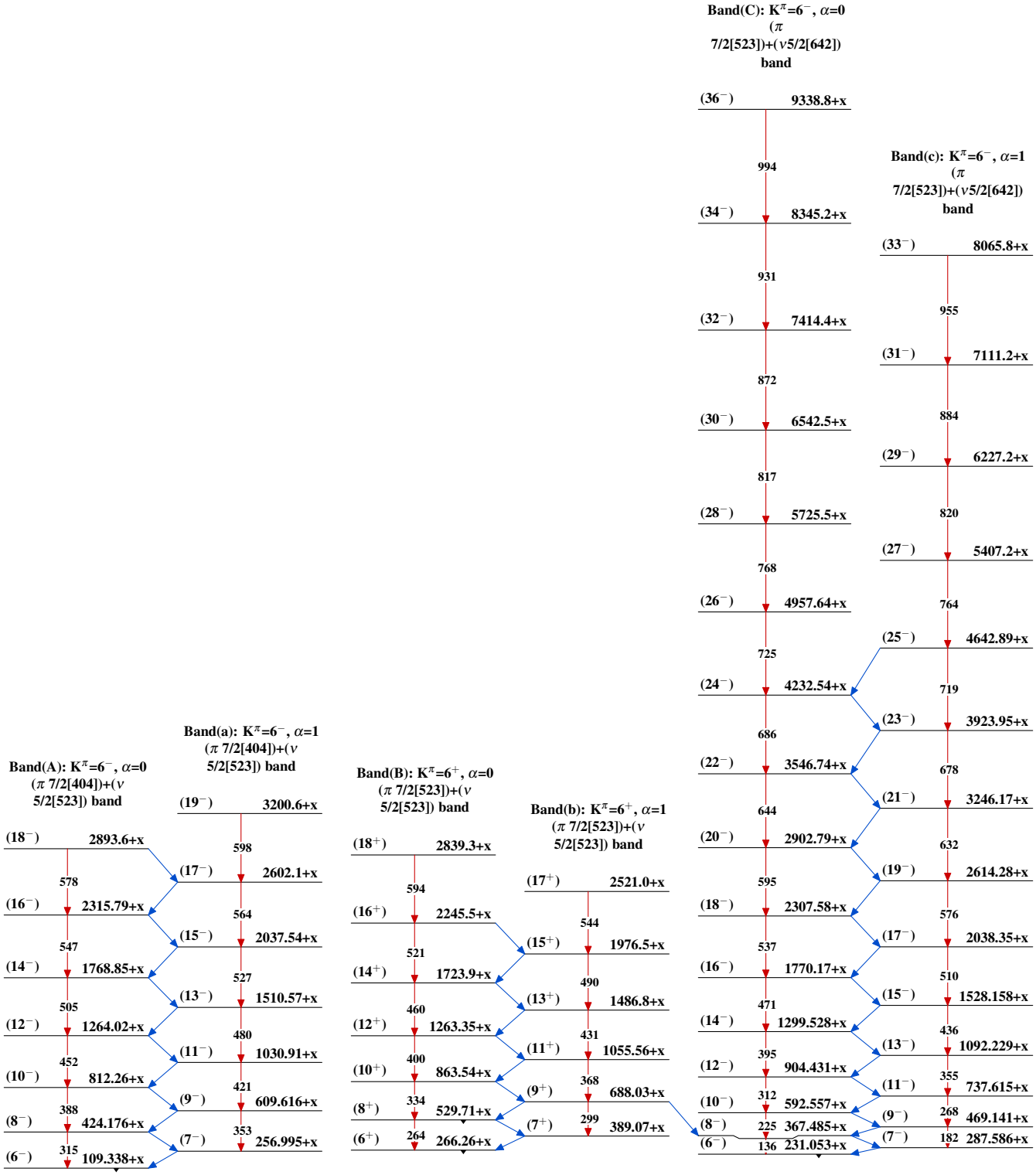
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



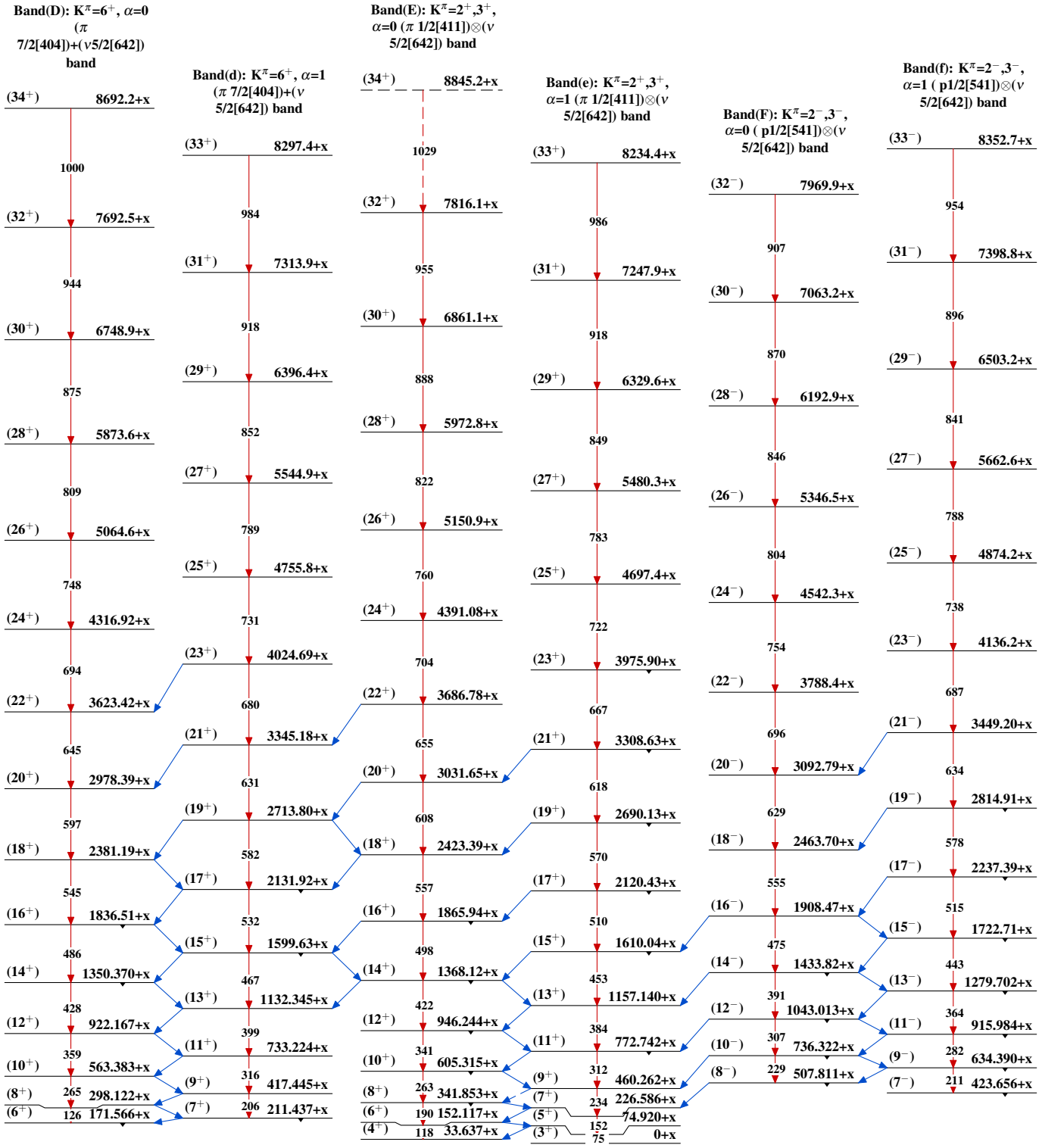
$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas



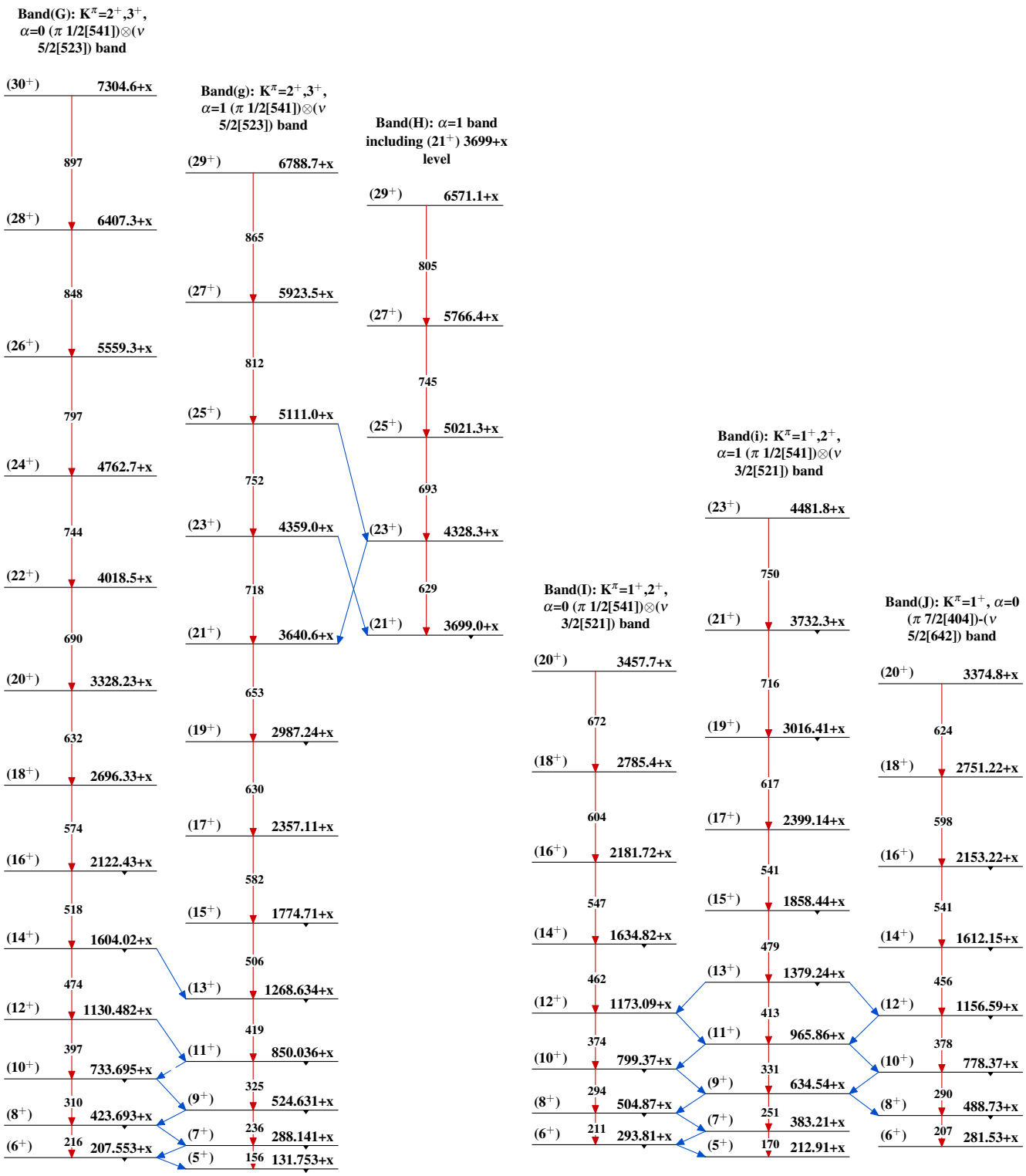
$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas (continued)



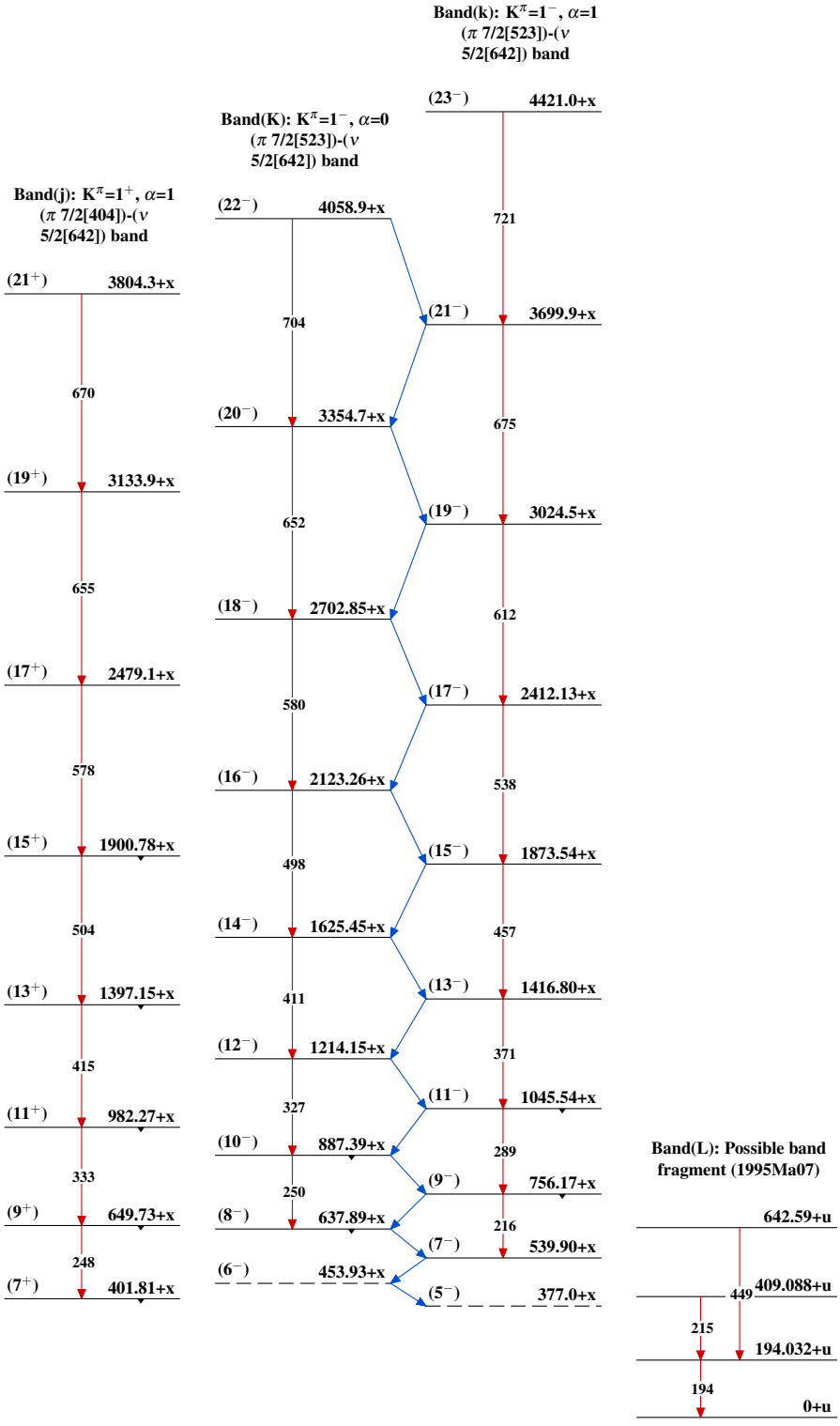
$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas (continued)



$^{166}_{69}Tm_{97}$

Adopted Levels, Gammas (continued)



$^{166}_{69}Tm_{97}$