

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 108,681 (2007)	1-Jun-2006

Q(β^-)=-1810.9; S(n)=6844.7 21; S(p)=6632.2 12; Q(α)=4857.7 7 [2012Wa38](#)
 Note: Current evaluation has used the following Q record -1810 8 6844.6 21 6632.4 12 4858.7 7 [2003Au03](#).

[Additional information 1.](#)

Other reactions:

²³⁵U(γ ,n): [2006Gi01](#).

²³⁵U(n,2n): [2005YoZZ](#), [2005Ha23](#), [2005BrZW](#), [2002KoZO](#), [2000YoZS](#), [1999CaZV](#).

²³⁴U(p,p'): [2005LeZU](#).

²³⁴U(n,n'): [2003YoZY](#).

²³³U(n, γ): [2005MaZT](#), [2005Ha23](#), [2003YoZZ](#), [2003KaZM](#), [2000MoZZ](#), [1999YuZT](#).

Level energies and two-quasiparticle structures of $K^\pi=0^-, 2^+, 1^-, 2^-, 3^-$ collective states were calculated by [1964So02](#), [1975Iv03](#).

For calculated energies of odd-parity states, see also [1969Bl13](#), [1970Da16](#), [1970Ne08](#), [1971Ko31](#), [1975Iv03](#), [1976Iv01](#), [1976Iv04](#), [1986Da03](#), [1989Ch07](#); for calculated energies of even-parity states, see, [1971Ko31](#), [1973Gu09](#), [1975Sa19](#), [1976Iv01](#), [1976Iv04](#), [1978To13](#), [1981Su13](#), [1982Ca07](#), [1983Ge05](#), [1984Dr08](#), [1985Zh08](#), [1986Da03](#), [1989Ch07](#).

For energy calculations and discussions on the nature of $K, J^\pi=0, 0^+$ collective state at 809.88 keV, see [1972Ch12](#), [1973Ch04](#), [1973Im02](#), [1975Iv03](#), [1976Ra12](#), [1979Ch02](#), [1985Zh08](#), [1987Le17](#).

Based on multiphonon-method calculations, [1987Le17](#) concluded that the $J^\pi, K=1^-, 0$ state at 1237 keV, as well as the $0^+, 0$ state at 1044 keV, cannot be interpreted as a two-phonon state.

For calculations of B(E2) values for excitation of various 2^+ collective states, see [1965Be40](#), [1975Iv03](#), [1981Ma35](#), [1984Dr08](#), [1987Ca31](#), [1988Le14](#), [1988Ri07](#).

For calculations of B(E3) values for excitation of 3^- collective states, see [1970Ne08](#), [1971Ko31](#), [1975Iv03](#), [1988Le14](#), [1989Ch07](#).

Deformation parameters were deduced from Coulomb excitation by [1973Be44](#), [1977Mi11](#); from (α, α') inelastic scattering by [1976Da17](#) and [1979Es06](#); from (p,p') data by [1981Ro09](#); from muonic x rays by [1984Zu02](#). For calculated deformation parameters see [1970Ga12](#), [1971Bo54](#), [1975Iv03](#), [1981Kr21](#), [1982Eg01](#), [1982Du16](#), [1982Li01](#), [1983Ro14](#), [1984Eg01](#), [1988Mi17](#).

For calculated electric quadrupole- and hexadecapole-moments, see [1970Ga12](#), [1975Iv03](#), [1978Ne13](#), [1982Eg01](#), [1982Li01](#), [1983Ro14](#).

Half-life for pionic decay was calculated by [1988Io02](#).

For theoretical calculations of moment of inertia, and discussions, see [1980Du07](#), [1982Eg01](#), [1982Pi02](#), [1987Mi26](#), [1991Ba09](#), [1991Pi05](#).

From measured isotope shift, change in mean-square charge radius was deduced by [1990Ga28](#): ($\Delta\langle r^2 \rangle$ for ²³⁴U)/($\Delta\langle r^2 \rangle$ for ²³⁶U)=1.994 8; $\Delta\langle r^2 \rangle$ for ²³⁴U=0.293 34, if $\Delta\langle r^2 \rangle=0.147 17$ for ²³⁶U ([1990Ga28](#)). See also [1992An17](#), [2002Ob01](#), [2005Bh02](#).

Fission barrier parameters were calculated by [1971Pa33](#), [1972Bl18](#), [1972Ma11](#), [1972We09](#), [1973Ba19](#), [1974Ba28](#), [1976Iw02](#), [1976Ra02](#), [1978Li06](#), [1980Li19](#), [1980Ku14](#), [1982Ru02](#), [1984Ku05](#), [1987Gu03](#), [1997Du14](#), [1995Ta01](#).

The energy and Γ of the giant octupole resonance were calculated by [1976Ma42](#), and of the quadrupole resonance by [1977Ky01](#).

Exotic decays studied via heavy-particle emission (cluster decays) and decay rates calculated:

- [1984Po08](#) (²⁴Ne, ²⁶Ne, ²⁸Mg); [1986Ir01](#) (²⁴Ne, ²⁶Ne, ²⁸Mg);
- [1986Ka46](#) (²⁴Ne, ²⁵Ne, ²⁶Ne, ²⁸Mg); [1986Po15](#) (²⁴Ne, ²⁶Ne);
- [1989Ba18](#) (²⁴Ne, ²⁸Mg); [1989Ci03](#) (²⁰Ne, ²⁴Mg);
- [1989Si13](#) (²⁴Ne, ²⁸Mg); [1990Bu09](#) (²⁸Mg); [1990Ka15](#) (²⁴Ne, ²⁸Mg);
- [1990Ba20](#) (²⁴Ne, ²⁶Ne, ²⁸Mg); [1990Sh01](#) (²⁶Ne, ²⁸Mg); [1991Bu01](#) (²⁸Mg);
- [1992Gu10](#) (²⁴Ne, ²⁶Ne, ²⁸Mg).
- [1993Bu05](#) (²⁸Mg).
- [1993Go18](#) (²⁴Ne).
- [1993Ka21](#) (²⁴Ne).
- [1993Si26](#) (²⁴Ne, ²⁶Ne, ²⁸Mg).
- [1994Bu07](#) (²⁴Ne, ²⁸Mg).
- [1994Mi18](#) (²⁸Mg).
- [1995Ar33](#) (²⁴Ne, ²⁸Mg).
- [1995Si05](#) (²⁴Ne, ²⁶Ne, ²⁸Mg).
- [1996Bu05](#) (²⁸Mg).
- [1997Bu20](#) (²⁴Ne).
- [1997Ku01](#) (²⁰Ne).
- [1997MiZP](#) (²⁴Ne, ²⁸Mg).
- [1997Ro24](#) (²⁴Ne, ²⁸Mg).

1997Tr17 (²⁴Ne, ²⁶Ne, ²⁸Mg).
 1998Ro11 (²⁴Ne, ²⁸Mg).
 1999Mi11 (²⁴Ne, ²⁸Mg).
 2001St29 (²⁴Ne, ²⁸Mg).
 2002Ba80 (²⁴Ne, ²⁶Ne, ²⁸Mg, ³⁰Mg).
 2002Du16 (²⁴Ne, ²⁸Mg).
 2002Sa55 (²⁶Ne, ²⁸Mg).
 2004Ba64 (²⁴Ne, ²⁶Ne, ²⁸Mg).
 2004Re22 (²⁸Mg).
 2005Bh02 (²⁴Mg, ²⁸Mg, ³⁰Mg).
 2005Bu38 (²⁴Ne, ²⁶Ne, ²⁸Mg).
 2005Ku04 (²⁶Ne).
 2005Ku32 (²⁶Ne).
 Other: 2000Gu28.

²³⁴U Levels

Band(α) K=0⁺ g.s. rotational band.

Cross Reference (XREF) Flags

A ²³⁸ Pu α decay	E Coulomb excitation	I ²³⁵ U(d,t)
B ²³⁴ Pa β^- decay (6.70 h)	F ²³² Th($\alpha,2n\gamma$), ²³² Th(⁹ Be, α 3n γ)	J ²³⁶ U(p,t)
C ²³⁴ Pa β^- decay (1.159 min)	G ²³⁴ U(d,d')	K (HI,xn γ)
D ²³⁴ Np ϵ decay	H ²³³ U(d,p)	L ²³⁷ Np(p, α)

<u>E(level)[†]</u>	<u>Jπ[‡]</u>	<u>T_{1/2}</u>	<u>XREF</u>	<u>Comments</u>
0.0	0 ⁺	2.455×10 ⁵ y 6	ABCDEFJK	<p>$\% \alpha = 100$; $\% SF = 1.64 \times 10^{-9}$ 22 $\% Ne = 9 \times 10^{-12}$ 7; $\% Mg = 1.4 \times 10^{-11}$ 3 Intrinsic electric-quadrupole moment: Q(0)=10.61 6 and intrinsic electric-hexadecapole moment: H(0)=2.49 14 were deduced by 1984Zu02 from muonic x rays. Other measurements: Q(0)=13.7 20 (1978Ge10, from optical isomeric shift); Q(0)=10.47 5, H(0)=3.3 5 (1973Be44, from Coulomb excitation). T_{1/2}: recommended in 1989Ho24. Measured half-lives: 2.475×10⁵ y 16 (1952Fl20), 2.520×10⁵ y 8 (1952Ki19), 2.47×10⁵ y 3 (1965Wh05), 2.439×10⁵ y 24 (1970MeZN), 2.450×10⁵ y 8 (1971DeYN, 1981VaZR), 2.459×10⁵ y 7 (1980Ge 13), 2.458×10⁵ y 12 (1971LoZL, corrected for T_{1/2}(²³⁵U, ²³⁶U, ²³⁸U) in 1981HoZI). Early T_{1/2} measurements: 1939Ni03, 1949Ba41, 1949Go18. SF half-life recommended in 2000Ho27: 1.5×10¹⁶ y 2, from T_{1/2}(SF)=1.42×10¹⁶ y 8 (1981Vo02), and 1.90×10¹⁶ y 15 (1987Sh27). Other values: 1.6×10¹⁶ y 7 (1952Gh27), $\geq 0.6 \times 10^{16}$ y (1952Se6 7). Systematic T_{1/2}(SF): 2005Xu01. Others: 1997Ro12, 1998Du05. Measurements for partial half-life of Ne decay: T_{1/2}(Ne)=3.7×10¹⁷ y +12-9 (1987Sh27), =6.3×10¹⁷ y +21-13 (1989Tr11), =2.7×10¹⁸ y 20 from T_{1/2}(α)/T_{1/2}(Ne)=9.1×10⁻¹⁴ 66 (1991Bo20) and. T_{1/2}(total)=2.455×10⁵ y 5. T_{1/2}(α)/T_{1/2}(Ne)=4.4×10⁻¹³ 5 (1989Mo07), =9.1×10⁻¹⁴ 66 (revised in 1991Bo20 from data in 1989Mo07). Measurements for partial half-life of Mg decay: T_{1/2}(Mg)=1.1×10¹⁸ y +13-6 (1987Sh27), =1.1×10¹⁸ y +4-3 (1989Tr11),</p>

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Adopted Levels, Gammas (continued)

<u>²³⁴U Levels (continued)</u>					
E(level) [†]	J ^{π‡}	T _{1/2}	XREF	Comments	
				T _{1/2} (α)/T _{1/2} (Mg)=1.4×10 ⁻¹³ 3 (1989Mo07), T _{1/2} (Mg)/T _{1/2} (Ne)=0.66 5 (1991Bo20). %SF is from T _{1/2} (SF)=1.5×10 ¹⁶ y 2 and T _{1/2} =2.455×10 ⁵ y 6. %Ne and %Mg are from 1991Bo20. Q(²³⁴ U):Q(²³⁶ U):Q(²³⁸ U)=1:1.13 9:1.13 10, by γ resonance (1974Me18). Q(²³⁴ U):Q(²³⁶ U):Q(²³⁸ U)=1:0.99 5:1.11 7; change in nuclear radius between the g.s. and the 2 ⁺ state Δ<r ² >/(r ²)=4.7×10 ⁻⁶ 13, deduced by nuclear γ-ray resonance following ²³⁸ Pu α decay; Δ<r ² >/(r ²)=-12.2×10 ⁻⁶ 59 by comparing isomeric shifts for ²³⁴ U and ²³⁷ Np, if Δ<r ² >=-27×10 ⁻³ 5 fm ² for ²³⁷ Np (1974Mo12). J ^π : 43.48γ to 0 ⁺ is E2. T _{1/2} : from (α)(ce)(t) in ²³⁸ Pu decay. See also Coulomb excitation.	
43.4981 10	2 ⁺	0.252 ns 7	ABCDEFGHIJK		
143.352 4	4 ⁺		ABCDEFGHIJK	B(E4)↑=1.96 56 (1973Be44)	
296.072 4	6 ⁺		AB EFGHIJK	J ^π : 99.8γ to 2 ⁺ state is E2; Coulomb excitation; (d,p) and (d,t) data.	
497.04 3	8 ⁺		AB EFGHIJK	J ^π : 152.7γ to 4 ⁺ is E2; Coulomb excitation; (d,p), (d,t), and (d,d') data.	
741.2 5	10 ⁺		EF K	J ^π : 200.9γ to 6 ⁺ is E2; Coulomb excitation (d,p), (d,t), and (d,d') data.	
786.288# 16	1 ⁻		ABCD FGH J	J ^π : 742.81γ to 2 ⁺ is E1, 786.27γ to 0 ⁺ is (E1). Ratio of their reduced transition intensities is in good agreement with Alaga rule for K=0.	
809.907@ 18	0 ⁺	<0.1 ns	ABCD FG J	J ^π : 810-keV transition to 0 ⁺ is E0. T _{1/2} : from βce(t) in 1.17-min ²³⁴ Pa β ⁻ decay.	
849.266# 18	3 ⁻		ABCDEFGHIJ	B(E3)↑≤0.59 7 (1974Mc15) J ^π : Coulomb excitation; (d,p), (d,d') data; reduced transition intensity ratio of γ rays to 2 ⁺ and 4 ⁺ states.	
851.74@ 3	2 ⁺	≥1.74 ps	ABCDEF IJ	J ^π : 808γ to 2 ⁺ level is E0+E2. T _{1/2} : calculated by the evaluators from B(E2)≤0.098 13 (1974Mc15), using a branching ratio of Iγ(851γ)/total I(γ+ce) from level=0.2.	
926.720& 15	2 ⁺	1.38 ps 17	ABCDE GHIJ	J ^π : Coulomb excitation; γ rays to 0 ⁺ and 4 ⁺ . T _{1/2} : calculated by the evaluators from measured B(E2)=0.123 13 and Iγ(926γ)/total I(γ+ce) from level=0.415 23.	
947.64@ 6	4 ⁺		AB F J	J ^π : 804.4γ to 4 ⁺ state is E0+E2.	
962.546# 23	5 ⁻		B FG	J ^π : reduced transition intensity ratio of γ rays to 4 ⁺ , 6 ⁺ levels; (d,d') data.	
968.425& 21	3 ⁺		B HIJ	J ^π : γ rays to 2 ⁺ and 4 ⁺ levels; (d,p) and (d,t) data.	
989.430 ^a 13	2 ⁻	0.76 ns 4	ABCD F I	J ^π : 140 and 203 γ rays to 3 ⁻ and 1 ⁻ levels are M1+E2. T _{1/2} : by γγ(t) in 6.70-h ²³⁴ Pa decay.	
1023.77& 3	4 ⁺		AB F H J	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.	
1023.8 7	12 ⁺		EF K		
1023.826 ^a 19	3 ⁻		AB E G I	J ^π : Coulomb excited with B(E3)=0.22 5 (1974Mc15).	
1044.536 ^b 23	0 ⁺		A CD F J	J ^π : 234.6-keV transition to 0 ⁺ state is E0.	
1069.281 ^a 16	4 ⁻		B I	J ^π : 45.45γ to 3 ⁻ is M1+E2, 106.68γ decays to 5 ⁻ ; (d,t) reaction, and fit to the band.	
1085.26 ^b 4	2 ⁺		ABCD F J	J ^π : γ rays to 0 ⁺ and 4 ⁺ levels.	
1090.89& 4	5 ⁺		B HIJ	J ^π : γ rays to 6 ⁺ and 4 ⁺ states; energy fit to the band; (d,p) and (d,t) data.	
1096.12@ 8	6 ⁺		B F	J ^π : 799.7γ to 6 ⁺ is E0+E2.	
1125.28# 4	7 ⁻		B F J	J ^π : γ rays to 8 ⁺ and 6 ⁺ ; energy fit to the band.	
1126.626 ^c 25	2 ⁺		BC H J	J ^π : γ rays to 0 ⁺ , 4 ⁺ states; (d,p) reaction.	
1127.552 ^a 19	5 ⁻		B G I	J ^π : 103.77γ to 3 ⁻ is (E2); 831.5γ decays to 6 ⁺ , energy fit to the band; (d,t) and (d,d') data.	

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Adopted Levels, Gammas (continued)

²³⁴U Levels (continued)

E(level) [†]	J ^π [‡]	T _{1/2}	XREF	Comments
1150 2			G	
1165.44 ^c 3	3 ⁺		B H J	J ^π : 196.8γ to 3 ⁺ is E0+E2+M1.
1172.043 ^{&} 19	6 ⁺		B F HI	J ^π : γ rays to 4 ⁺ and 8 ⁺ states.
1174.1 4	(1,2 ⁺)		C G	The levels seen in (d,d') and in 1.159-min ²³⁴ Pa β ⁻ decay at 1174±2 and 1174.2±0.6 keV, respectively, are listed here as the same level solely on the basis of their energy. No structure information is available; level seen in (d,d') may be a different state than the state populated in the 1.159-min ²³⁴ Pa β ⁻ decay.
1194.748 ^a 17	6 ⁻		B I	J ^π : γ's to 0 ⁺ , 1 ⁻ , 2 ⁻ levels. J ^π : 67.1γ to 5 ⁻ is M1+E2, 125.46γ to 4 ⁻ is E2; γ rays to 6 ⁺ and 7 ⁻ states; energy fit to the band.
1214.71 ^c 5	4 ⁺		B H J	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1218 2			G	
1237.256 ^d 19	1 ⁻		BCD G	J ^π : 1237.22γ to 0 ⁺ is E1. Ratio of reduced transition intensities of 1237γ and 1194 γ is consistent with Alaga rule for K=0.
1261.782 ^{&} 25	7 ⁺		B	J ^π : γ rays to 6 ⁺ , 8 ⁺ ; energy fit to the band.
1274.29 ^c 8	(5 ⁺)		B H	J ^π : (d,p) data; γ ray to 6 ⁺ state and γ ray from 3 ⁺ state; energy fit to the band.
1277.461 ^a 23	7 ⁻		B G I	J ^π : γ rays to 5 ⁻ , 8 ⁺ levels; energy fit to the band; (d,t) data.
1292.75 [@] 21	8 ⁺		F	J ^π : 795.7γ to 8 ⁺ state is E0+E2.
1312.18 ^d 9	3 ⁻		B E G	B(E3)↑=0.22 7 (1974Mc15) J ^π : Coulomb excitation and (d,d') data.
1335.67 [#] 5	9 ⁻		F	J ^π : energy fit to the band.
1339 2			G	
1340.5 12	14 ⁺		EF K	
1341.33 ^c 9	(6 ⁺)		B H	J ^π : γ rays to 5 ⁻ , 6 ⁺ states; (d,p) data.
1365.8 ^{&} 3	(8 ⁺)		F	
1421.257 ^e 17	6 ⁻	33.5 μs 20	B I	J ^π : 351.9γ to 4 ⁻ level is E2; 143.78γ to 7 ⁻ is not quadrupole. (d,t) data support this assignment. T _{1/2} : from γγ(t) in 6.70-h ²³⁴ Pa decay.
1435.380 ^f 23	1 ⁻		CD I	J ^π : 1435.0γ to 0 ⁺ is E1.
1447.52 ^d 7	5 ⁻		B G	J ^π : (d,d') data.
1451.4			I	
1457.16 ^f 8	(2 ⁻)		BCD I	J ^π : γ ray only to 2 ⁺ member of the g.s. band, probable γ rays to 1 ⁻ of the K=0 band and to 2 ⁻ of the K=2 band may suggest J ^π =1,2 ⁻ . The authors in 1968Bj05 identified the 2 ⁻ state of the K=1, ν 7/2[743], ν 5/2[633] band at 1464 keV in their (d,t) spectrum. The 1457-keV level populated in ²³⁴ Pa β ⁻ decay might be the same 2 ⁻ state, as suggested in 1975Ar23. The 475.5 and 453.6 γ rays from the 1911 level is consistent with this assignment.
1473			H	
1486.16 ^f 12	(3 ⁻)		B G I	B(E3)↑=0.04 1 B(E3)↑: From (d,d') data. J ^π : (d,t) and (d,d') data; γ rays to 2 ⁺ and 4 ⁺ .
1486.7 ^e	(7 ⁻)		I	J ^π : (d,t) data.
1496.111 ^g 21	3 ⁺		B H	J ^π : 1352.9- and 369.5-keV γ rays to 4 ⁺ and 2 ⁺ levels are M1; (d,p) reaction.
1500.99 10	(1)		CD I	J ^π : γ's to 0 ⁺ , 2 ⁺ levels limit J ^π to 1± and 2 ⁺ ; ε decay from (0 ⁺) ²³⁴ Np suggests J ^π Ne 2 ⁺ .
1502.38 7	3,4 ⁺		B	J ^π : γ rays to 2 ⁺ and 4 ⁺ ; β decay from 4 ⁺ ²³⁴ Pa.
1510.23 12	1		D	J ^π : γ rays to 0 ⁺ and 2 ⁺ ; ε feeding from 0 ⁺ ²³⁴ Np.
1533.31 ^f 7	(4 ⁻)		B I	J ^π : γ rays to 2 ⁻ , 4 ⁻ and 4 ⁺ levels; β decay from 4 ⁺ ²³⁴ Pa; (d,t) data.

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Adopted Levels, Gammas (continued)

^{234}U Levels (continued)					
E(level) [†]	J^{π} [‡]	$T_{1/2}$	XREF		Comments
1537.228 ^g 21	4 ⁺		B	H	J^{π} : 372.4 γ to 3 ⁺ level is M1+E2; γ rays to 2 ⁺ , 6 ⁺ levels; (d,p) data.
1543.69 5	4 ⁺		B		J^{π} : γ rays to 2 ⁺ and 6 ⁺ levels.
1548.28 10	(5)		B		J^{π} : γ ray to 6 ⁺ state and probably to 4 ⁻ , γ ray from 4 ⁺ suggest $J^{\pi}=4^{+},5^{\pm}$. Nonobservations of γ -ray transitions to lower spin levels may imply J=5.
1552.555 ^h 18	5 ⁺	2.20 ns 25	B	H	J^{π} : 131.3 γ to 6 ⁻ is E1; 584.1 γ to 3 ⁺ ; (d,p) data.
1553.60 20	(1)		C	G	$T_{1/2}$: $\beta\gamma(t)$ in 6.70-h ^{234}Pa β^{-} decay. J^{π} : γ rays to 0 ⁺ , 2 ⁺ levels; log ft for the β^{-} feeding from 1.159-min ^{234}Pa β^{-} decay.
1567.7 ^e	(8 ⁻)			I	J^{π} : (d,t) data.
1570.690 ⁱ 23	1 ⁺		CD		J^{π} : 1570.7 γ to 0 ⁺ is M1.
1581.59 ^f 11	(5 ⁻)		B	G I	J^{π} : γ rays to 3 ⁻ , 5 ⁻ states; (d,t), (d,d') data.
1588.819 ^g 22	5 ⁺		B	H	J^{π} : 1292.8 γ to 6 ⁺ is M1; 565.2 γ to 4 ⁺ is mixed E2; (d,p) data.
1589.07 [#]	11 ⁻			F	J^{π} : energy fit to the band.
1592.29 6	(1)		C	F	J^{π} : γ rays to 0 ⁺ , 2 ⁺ levels; log ft for the β^{-} feeding from (0 ⁻), 1.159-min ^{234}Pa β^{-} decay.
1601.0				I	
1601.826 21	1 ⁺		CD		J^{π} : 1558.7 γ to 2 ⁺ state is M1; 556.0 γ to 0 ⁺ is mixed E2. A possible configuration is K=1, $\nu\nu$ 7/2[624],5/2[633].
1619.58 ^h 10	(6 ⁺)		B	H	J^{π} : (d,p) data.
1624.4				I	
1649.99 ^f 11	(6 ⁻)		B	G I	J^{π} : (d,t) data.
1651.2 ^e	(9 ⁻)			I	J^{π} : (d,t) data.
1653.30 7	(3 ⁺)		B		J^{π} : 629.4 γ to 4 ⁺ state is (M1); γ ray to 2 ⁻ .
1653.9 ^g	(6 ⁺)			H	J^{π} : (d,p) data.
1667.4 4	(1 ⁻)		C		J^{π} : γ rays to 0 ⁺ , 3 ⁻ levels; log ft for the β^{-} feeding from (0 ⁻), 1.159-min ^{234}Pa β^{-} decay.
1675 2				G	
1687.8 16	16 ⁺		EF	K	
1690.5 ^h	(7 ⁺)			H	J^{π} : (d,p) data.
1693.453 ^j 24	5 ⁻		B	I	J^{π} : γ rays to 3 ⁻ , 7 ⁻ states; (d,t) data.
1693.7? 6	(1 ⁻)		C		J^{π} : γ rays to 0 ⁺ , 1 ⁻ , 3 ⁻ levels and log ft for the β^{-} feeding from 1.159-min ^{234}Pa β^{-} decay suggest $J^{\pi}=1^{-}$.
1696 2				G	
1718.5 ^f	(7 ⁻)			HI	J^{π} : (d,p) and (d,t) data.
1722.87 ^k 4	3 ⁻		B	G	J^{π} : 733.0 γ to 2 ⁻ is M1; γ ray to 5 ⁻ state.
1723.402 ^l 17	4 ⁺		B		J^{π} : M1 γ -ray transitions to 3 ⁺ and 5 ⁺ levels.
1730.7				I	
1736.5 ^g	(7 ⁺)			H	J^{π} : (d,p) data.
1737.43 7	3 ⁺		B		J^{π} : 1594.0 γ to 4 ⁺ state is M1,E2; γ ray to 2 ⁻ state; β decay from ^{234}Pa g.s. rules out $J^{\pi}=2^{+}$.
1738.17 6	(3 ⁺)		B		J^{π} : 612.0 γ to 2 ⁺ is (M1); β^{-} feeding from ^{234}Pa g.s. suggests J^{π} Ne 1 ⁺ , 2 ⁺ .
1747.1 ^j	(6 ⁻)			I	J^{π} : (d,t) data.
1749.6				H	
1761.79 ^k 6	(4 ⁻)		B		J^{π} : (M1) γ -ray transitions to 3 ⁻ , 4 ⁻ levels.
1770.79 ⁿ 9	(3 ⁺)		B		J^{π} : γ rays to 2 ⁺ , 4 ⁺ states, and β feeding from ^{234}Pa g.s. suggest 3 \pm , 4 ⁺ . Spin-parity of 3 ⁺ was proposed in 1986Ar05 from intensity ratio of γ rays to the g.s. band.
1779.4				I	
1780.2 ^h	(8 ⁺)		H		J^{π} : (d,p) data.

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Adopted Levels, Gammas (continued)

^{234}U Levels (continued)

E(level) [†]	J ^π [‡]	XREF	Comments
1781.22 7	(0 ⁺ ,1)	C	J ^π : γ rays to 2 ⁺ , 1 ⁺ , 1 ⁻ levels and log ft for the β ⁻ feeding from 1.159-min ^{234}Pa suggest J ^π =0 ⁺ , 1±.
1782.554 ^l 23	5 ⁺	B G	J ^π : 245.37γ to 4 ⁺ is M1; γ ray to 6 ⁻ state.
1784.18 13	4 ⁺	B	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1793.01 6	4 ⁺	B	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1796.3 6	(1)	C	J ^π : γ rays to 0 ⁺ , 1 ⁻ levels and log ft for the β ⁻ feeding from 1.159-min ^{234}Pa β ⁻ decay.
1807.2		H	
1809.73 4	(1 ⁻)	C	J ^π : γ rays to 0 ⁺ , 2 ⁺ , 3 ⁻ levels; log ft for the β ⁻ feeding from 1.159-min ^{234}Pa β ⁻ decay.
1810.0 ^j	(7 ⁻)	I	J ^π : (d,t) data.
1811.62 ⁿ 5	4 ⁺	B	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1838.9		I	
1843.86 17	3,4,5 ⁻	B	J ^π : γ rays to 3 ⁻ and 4 ⁺ states; β feeding from ^{234}Pa g.s.
1849.7 ^g	(8 ⁺)	H	J ^π : (d,p) data.
1860.6		I	
1863.07 ⁿ 15	(5 ⁺)	B	J ^π : γ rays to 4 ⁺ and 6 ⁺ states; β feeding from ^{234}Pa g.s.; energy fit to the band.
1863.16 9	(1)	C G	The level observed in (d,d') at 1863 keV is assumed by the evaluators not to be the 5 ⁺ member of the K=3 ⁺ band seen in ^{234}Pa ground state β ⁻ decay at 1863.1 keV, since the 3 ⁺ and 4 ⁺ members of this band are not populated in (d,d'). The level populated in (d,d') might be a completely different state than the one populated in 1.159-min ^{234}Pa β ⁻ decay.
			J ^π : γ rays to 0 ⁺ , 2 ⁺ levels; log ft for the β ⁻ feeding from 1.159-min ^{234}Pa β ⁻ decay.
1875.3 4	(1)	C	J ^π : γ rays to 0 ⁺ , 2 ⁺ levels; log ft for the β ⁻ feeding from 1.17-min ^{234}Pa β ⁻ decay.
1881.74 ^m 7	4 ⁺	B I	J ^π : γ rays to 2 ⁺ and 6 ⁺ levels; (d,t) data.
1891.3 ^h	(9 ⁺)	H	J ^π : (d,p) data.
1911.09 5	(1 ⁻)	C	J ^π : γ rays to 0 ⁺ , 3 ⁻ levels; log ft for the β ⁻ feeding from (0 ⁻), 1.159-min ^{234}Pa β ⁻ decay.
1916.26 9	3,4 ⁺	B	J ^π : γ rays to 2 ⁺ and 4 ⁺ states; β feeding in 4 ⁺ ^{234}Pa g.s. decay.
1927.52 11	4 ⁺	B	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1931.2 ^m	(5 ⁺)	I	J ^π : (d,t) data.
1932.1		H	
1937.01 7	(1)	C	J ^π : γ rays to 0 ⁺ , 2 ⁺ levels; log ft for the β ⁻ feeding from (0 ⁻), 1.159-min ^{234}Pa β ⁻ decay.
1940.50 9	4 ⁺	B	J ^π : γ rays to 2 ⁺ and 6 ⁺ states.
1955.8 ^o	(3 ⁺)	I	J ^π : (d,t) data.
1955.8		H	
1958.77 3	3 ⁻	B	J ^π : γ rays to 1 ⁻ , 4 ⁺ , and 4 ⁻ states; β feeding from 4 ⁺ ^{234}Pa ground state. K=3, with ν 7/2[743]-ν 1/2[631] configuration was suggested in 1986Ar05.
1968.84 10	4 ⁺ ,5	B	J ^π : γ rays to 4 ⁺ and 6 ⁺ ; β feeding from 4 ⁺ , ^{234}Pa g.s..
1969.9 5	(1 ⁻)	C	J ^π : γ rays to 0 ⁺ , 3 ⁻ levels; log ft for β ⁻ feeding from (0 ⁻), 1.159-min ^{234}Pa β ⁻ decay.
1981.26 7	4 ⁺	B	J ^π : γ-ray transitions to 2 ⁺ and 6 ⁺ states.
1985.2 ^m	(6 ⁺)	I	J ^π : (d,t) data.
2000.44 ^o 13	(4 ⁺)	B I	J ^π : 3 ⁻ ,4 ⁺ from γ rays to 2 ⁺ and 5 ⁻ states; (d,t) data suggest J ^π =4 ⁺ .
2019.81 13	4 ⁺	B	J ^π : γ-ray transitions to 2 ⁺ and 6 ⁺ states.
≈2026.0		I	
2033.52 5	3 ⁺ ,4 ⁺	B	J ^π : γ-ray transitions to 2 ⁺ and 5 ⁺ states.
2033.8		H	
2037.05 17	4 ⁺ ,5	B	J ^π : γ-ray transitions to 4 ⁺ and 6 ⁺ states; β feeding from 4 ⁺ , ^{234}Pa g.s.
≈2038.6		I	
2058.7		I	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

²³⁴U Levels (continued)

E(level) [†]	J ^π [‡]	XREF	Comments
2062.8 17	18 ⁺	E K	
2066.24 9	4 ⁺ ,5	B	J ^π : γ-ray transitions to 4 ⁻ and 6 ⁺ levels; β feeding from 4 ⁺ , from ²³⁴ Pa g.s.
2068.81 11	3,4,5 ⁺	B	J ^π : γ rays to 3 ⁺ and 4 ⁺ states; β feeding from 4 ⁺ , ²³⁴ Pa ground state.
2095.8		I	
2097.4		H	
2101.43 9	5 ⁺	B	J ^π : γ-ray transitions to 4 ⁻ and 7 ⁺ levels.
2115.66 11	4 ⁺	B	J ^π : γ-ray transitions to 2 ⁺ and 6 ⁺ states.
2144.01 9	3 ⁺ ,4 ⁺	B	J ^π : γ-ray transitions to 2 ⁺ and 5 ⁺ .
2163.3		I	
2184.1		I	
2213.7		I	
2464.0 18	20 ⁺	E K	
2889.5 18	22 ⁺	E K	
3338.5 21	24 ⁺	E K	
3807.5 23	26 ⁺	E K	
4296.5 25	(28 ⁺)	E K	
4807?	(30 ⁺)	K	

[†] The energies of levels deexcited by γ rays have been deduced by evaluators from a least-squares fit to adopted γ-ray energies.

Levels seen in ²³⁷Np(p,α) reaction are assumed to include more than a single state; therefore, no identification of the levels observed in this reaction with those from other sources has been made here.

[‡] J^π assignments from (d,p), (d,t) reaction data are based on spectroscopic factors (ratio of observed to calculated cross sections) at 90° and 125°; assignments from (d,d') inelastic scattering are based on intensity patterns, ratios of cross sections at 90° and 125°, and β(EL) values deduced from (observed cross section)/(calculated DWBA cross section) ratios. See sections for these reactions for more detail.

Band(A): K^π=0⁻ octupole-vibrational band.

@ Band(B): K^π=0⁺ β-vibrational band.

& Band(C): K^π=2⁺ γ-vibrational band. Squared amplitude of νν 5/2[633],1/2[631] was obtained as 0.37 7 from (d,p) data, squared amplitude of νν 7/2[743],3/2[761] was obtained as 0.27 14 from (d,t) data by 1968Bj05. See 1965Be40 and 1975Iv03 for the calculated νν and ππ wave-function amplitudes in γ-vibrational state.

^a Band(D): K^π=2⁻ octupole-vibrational band. Squared amplitude of νν 7/2[743],3/2[631] was obtained as 0.58 10 from (d,t) data by 1968Bj05. See 1975Iv05 for the calculated ππ and νν wave-function amplitudes.

^b Band(E): K^π=0⁺ band.

^c Band(F): K^π=2⁺ band. Squared amplitude of νν 5/2[633],1/2[631] was obtained as 0.30 7 from (d,p) data by 1968Bj05. Two phonon, (β+γ)- vibrational character was suggested by 1968Bj05 on the basis of strong γ-ray feedings to β- and γ-vibrational bands.

^d Band(G): K^π=(0⁻) band. From (d,d') data, 1973Bo27 deduced that it was strongly collective.

^e Band(H): K^π=6⁻ band: Configuration=((ν 7/2(743))(ν 5/2(633)).

^f Band(I): K^π=1⁻ band: Configuration=((ν 7/2(743))(ν 5/2(633)) The amplitude square of this configuration in a probable octupole vibration was deduced by 1968Bj05 from (d,t) data to be 100% 20.

^g Band(J): K^π=3⁺ band: Configuration=((ν 5/2(633))(ν 1/2(631)).

^h Band(K): K^π=5⁺ band: Configuration=((ν 5/2(622))(ν 5/2(633)).

ⁱ Band(L): K=1 state: Configuration=((π 3/2(651))(π 5/2(642)).

^j Band(M): K^π=5⁻ band: Configuration=((ν 7/2(743))(ν 3/2(631)).

^k Band(N): K^π=3⁻ band: Configuration=((π 5/2(642))(π 1/2(530)) Configuration was proposed by 1968Bj06 from ²³⁴Pa g.s. β decay.

^l Band(O): K^π=4⁺ band: Configuration=((ν 5/2(633))(ν 3/2(631)) + ((π 3/2[631])(π 5/2[642]) Configuration was proposed by 1968Bj06 on the bases of strong M1 transition to K=3 νν 5/2[633],1/2[631] band and of β⁻ feeding from ²³⁴Pa g.s.

^m Band(P): K^π=4⁺ band: Configuration=((ν 7/2(743))(ν 1/2(501)).

ⁿ Band(Q): K^π=3⁺ ππ 1/2[530], 5/2[525] configuration was suggested by 1986Ar05 from two-quasiparticle states' energy

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) **^{234}U Levels (continued)**

calculations of [1964So02](#).

^o Band(R): $K^\pi=3^+$ band: Configuration= $((\nu 7/2(743))(\nu 1/2(501))$ J and configuration assignments were made by [1968Bj05](#) from (d,t) data.

Adopted Levels, Gammas (continued) $\gamma(^{234}\text{U})$

For theoretical discussions and calculations of B(E2) values for γ rays deexciting 2^+ states of the γ - vibrational, β -vibrational and g.s. bands, see [1985Zh08](#).

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult.‡	$\alpha^\#$	$I_{(\gamma+ce)}$	Comments
43.4981	2^+	43.498 1		0.0	0^+	E2	713		$\alpha(\text{L})=520$ 8; $\alpha(\text{M})=143.5$ 20; $\alpha(\text{N}+..)=49.3$ 7 $\alpha(\text{N})=38.9$ 6; $\alpha(\text{O})=8.91$ 13; $\alpha(\text{P})=1.441$ 21; $\alpha(\text{Q})=0.00339$ 5 B(E2)(W.u.)=236 10
143.352	4^+	99.853 3		43.4981	2^+	E2	13.42		$\alpha(\text{L})=9.77$ 14; $\alpha(\text{M})=2.71$ 4; $\alpha(\text{N}+..)=0.933$ 13 $\alpha(\text{N})=0.736$ 11; $\alpha(\text{O})=0.1691$ 24; $\alpha(\text{P})=0.0277$ 4; $\alpha(\text{Q})=0.0001099$ 16
296.072	6^+	152.720 2		143.352	4^+	E2	2.14		$\alpha(\text{K})=0.217$ 3; $\alpha(\text{L})=1.404$ 20; $\alpha(\text{M})=0.388$ 6; $\alpha(\text{N}+..)=0.1338$ 19 $\alpha(\text{N})=0.1055$ 15; $\alpha(\text{O})=0.0243$ 4; $\alpha(\text{P})=0.00402$ 6; $\alpha(\text{Q})=2.69 \times 10^{-5}$ 4
497.04	8^+	200.97 3		296.072	6^+	E2	0.734		$\alpha(\text{K})=0.1534$ 22; $\alpha(\text{L})=0.424$ 6; $\alpha(\text{M})=0.1166$ 17; $\alpha(\text{N}+..)=0.0402$ 6 $\alpha(\text{N})=0.0317$ 5; $\alpha(\text{O})=0.00731$ 11; $\alpha(\text{P})=0.001223$ 18; $\alpha(\text{Q})=1.237 \times 10^{-5}$ 18
741.2	10^+	244.2 5		497.04	8^+				
786.288	1^-	742.81 3	100 2	43.4981	2^+	E1	0.00636		$\alpha(\text{K})=0.00518$ 8; $\alpha(\text{L})=0.000895$ 13; $\alpha(\text{M})=0.000213$ 3; $\alpha(\text{N}+..)=7.37 \times 10^{-5}$ 11 $\alpha(\text{N})=5.71 \times 10^{-5}$ 8; $\alpha(\text{O})=1.378 \times 10^{-5}$ 20; $\alpha(\text{P})=2.61 \times 10^{-6}$ 4; $\alpha(\text{Q})=1.95 \times 10^{-7}$ 3
		786.27 3	58 2	0.0	0^+	(E1)	0.00573		$\alpha(\text{K})=0.00467$ 7; $\alpha(\text{L})=0.000804$ 12; $\alpha(\text{M})=0.000191$ 3; $\alpha(\text{N}+..)=6.61 \times 10^{-5}$ 10 $\alpha(\text{N})=5.12 \times 10^{-5}$ 8; $\alpha(\text{O})=1.237 \times 10^{-5}$ 18; $\alpha(\text{P})=2.35 \times 10^{-6}$ 4; $\alpha(\text{Q})=1.766 \times 10^{-7}$ 25
809.907	0^+	766.38 2	100.0 7	43.4981	2^+	(E2)	0.0187		$\alpha(\text{K})=0.01336$ 19; $\alpha(\text{L})=0.00396$ 6; $\alpha(\text{M})=0.001003$ 14; $\alpha(\text{N}+..)=0.000348$ 5 $\alpha(\text{N})=0.000271$ 4; $\alpha(\text{O})=6.45 \times 10^{-5}$ 9; $\alpha(\text{P})=1.182 \times 10^{-5}$ 17; $\alpha(\text{Q})=6.25 \times 10^{-7}$ 9 B(E2)(W.u.)>0.067
849.266	3^-	810.0 5 705.9 1	90 5	0.0	0^+	E0		2.7×10^2 10	
		805.80 5	100 7	143.352	4^+				
		(41.82 11)	0.24 12	43.4981	2^+				
851.74	2^+	(41.82 11)	0.24 12	809.907	0^+	[E2]	863 17		B(E2)(W.u.)< 1.1×10^4 $\alpha(\text{L})=630$ 12; $\alpha(\text{M})=174$ 4; $\alpha(\text{N}+..)=59.6$ 12 $\alpha(\text{N})=47.1$ 9; $\alpha(\text{O})=10.79$ 21; $\alpha(\text{P})=1.74$ 4; $\alpha(\text{Q})=0.00403$ 8 E γ : this γ -ray transition was not observed; its existence has been inferred in 6.70-h ^{234}Pa β^- decay. E γ is from level scheme.
		708.3 2	31 4	143.352	4^+	[E2]	0.0219		B(E2)(W.u.)<1.0

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\#$	Comments
									$\alpha(\text{K})=0.01537$ 22; $\alpha(\text{L})=0.00489$ 7; $\alpha(\text{M})=0.001246$ 18; $\alpha(\text{N}+..)=0.000432$ 6 $\alpha(\text{N})=0.000337$ 5; $\alpha(\text{O})=8.00\times 10^{-5}$ 12; $\alpha(\text{P})=1.458\times 10^{-5}$ 21; $\alpha(\text{Q})=7.28\times 10^{-7}$ 11
851.74	2 ⁺	808.20 10	60 6	43.4981	2 ⁺	E0+E2	0.45 9	4.2	B(E2)(W.u.)<0.23 α : deduced in ^{234}Np ε decay.
		851.70 10	100 6	0.0	0 ⁺	[E2]		0.01513	B(E2)(W.u.)<1.3 $\alpha(\text{K})=0.01109$ 16; $\alpha(\text{L})=0.00302$ 5; $\alpha(\text{M})=0.000759$ 11; $\alpha(\text{N}+..)=0.000263$ 4 $\alpha(\text{N})=0.000205$ 3; $\alpha(\text{O})=4.89\times 10^{-5}$ 7; $\alpha(\text{P})=9.03\times 10^{-6}$ 13; $\alpha(\text{Q})=5.10\times 10^{-7}$ 8
926.720	2 ⁺	783.4 1	3.1 3	143.352	4 ⁺	[E2]		0.0179	B(E2)(W.u.)=0.28 5 $\alpha(\text{K})=0.01285$ 18; $\alpha(\text{L})=0.00374$ 6; $\alpha(\text{M})=0.000946$ 14; $\alpha(\text{N}+..)=0.000328$ 5 $\alpha(\text{N})=0.000255$ 4; $\alpha(\text{O})=6.08\times 10^{-5}$ 9; $\alpha(\text{P})=1.116\times 10^{-5}$ 16; $\alpha(\text{Q})=5.99\times 10^{-7}$ 9
		883.24 4	100 7	43.4981	2 ⁺	E2		0.01409	B(E2)(W.u.)=4.9 8 $\alpha(\text{K})=0.01040$ 15; $\alpha(\text{L})=0.00276$ 4; $\alpha(\text{M})=0.000692$ 10; $\alpha(\text{N}+..)=0.000240$ 4 $\alpha(\text{N})=0.000187$ 3; $\alpha(\text{O})=4.46\times 10^{-5}$ 7; $\alpha(\text{P})=8.25\times 10^{-6}$ 12; $\alpha(\text{Q})=4.76\times 10^{-7}$ 7
		926.72 10	75 4	0.0	0 ⁺	(E2)		0.01284	B(E2)(W.u.)=2.9 5 $\alpha(\text{K})=0.00956$ 14; $\alpha(\text{L})=0.00245$ 4; $\alpha(\text{M})=0.000613$ 9; $\alpha(\text{N}+..)=0.000213$ 3 $\alpha(\text{N})=0.0001653$ 24; $\alpha(\text{O})=3.95\times 10^{-5}$ 6; $\alpha(\text{P})=7.34\times 10^{-6}$ 11; $\alpha(\text{Q})=4.34\times 10^{-7}$ 6
947.64	4 ⁺	804.4 3	100 34	143.352	4 ⁺	E0+E2		0.37	α : deduced in 6.70 ^{234}Pa β^- decay.
		904.37 15	55 4	43.4981	2 ⁺				
962.546	5 ⁻	666.5 1	62 4	296.072	6 ⁺				
		819.2 1	100 6	143.352	4 ⁺				
968.425	3 ⁺	825.1 2	24 2	143.352	4 ⁺				
		925.0 1	100 10	43.4981	2 ⁺				
989.430	2 ⁻	62.70 1	12 3	926.720	2 ⁺	E1		0.426	$\alpha(\text{L})=0.320$ 5; $\alpha(\text{M})=0.0791$ 11; $\alpha(\text{N}+..)=0.0266$ 4 $\alpha(\text{N})=0.0209$ 3; $\alpha(\text{O})=0.00481$ 7; $\alpha(\text{P})=0.000795$ 12; $\alpha(\text{Q})=3.22\times 10^{-5}$ 5 B(E1)(W.u.)=7.0 $\times 10^{-5}$ 19
		140.15 2	3.8 4	849.266	3 ⁻	M1+E2	1.2 6	5.3 18	$\alpha(\text{K})=2.9$ 22; $\alpha(\text{L})=1.76$ 25; $\alpha(\text{M})=0.47$ 9; $\alpha(\text{N}+..)=0.16$ 3 $\alpha(\text{N})=0.127$ 23; $\alpha(\text{O})=0.030$ 5; $\alpha(\text{P})=0.0051$ 6; $\alpha(\text{Q})=0.00015$ 10 B(M1)(W.u.)=0.00010 8; B(E2)(W.u.)=2.2 13
		203.12 3	9.2 8	786.288	1 ⁻	M1+E2	1.5 4	1.4 4	B(E2)(W.u.)=1.0 3; B(M1)(W.u.)=6 $\times 10^{-5}$ 3 $\alpha(\text{K})=0.8$ 4; $\alpha(\text{L})=0.422$ 10; $\alpha(\text{M})=0.1113$ 16; $\alpha(\text{N}+..)=0.0385$ 6 $\alpha(\text{N})=0.0301$ 5; $\alpha(\text{O})=0.00708$ 11; $\alpha(\text{P})=0.00124$ 4; $\alpha(\text{Q})=4.3\times 10^{-5}$ 15
		946.00 3	100 7	43.4981	2 ⁺	(E1)		0.00412	$\alpha(\text{K})=0.00337$ 5; $\alpha(\text{L})=0.000571$ 8; $\alpha(\text{M})=0.0001355$ 19; $\alpha(\text{N}+..)=4.69\times 10^{-5}$ 7 $\alpha(\text{N})=3.63\times 10^{-5}$ 5; $\alpha(\text{O})=8.78\times 10^{-6}$ 13; $\alpha(\text{P})=1.675\times 10^{-6}$ 24;

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	$\gamma(^{234}\text{U})$ (continued)			Comments
						Mult. [‡]	δ	$\alpha^\#$	
									$\alpha(\text{Q})=1.285\times 10^{-7}$ 18 $\text{B}(\text{E}1)(\text{W.u.})=1.69\times 10^{-7}$ 20
1023.77	4 ⁺	54.96 [@] 10 727.8 2 880.5 ^{&} 1 980.3 ^{&} 1	1.83 17 ≈ 100 ^{&} ≈ 28 ^{&}	968.425 3 ⁺ 296.072 6 ⁺ 143.352 4 ⁺ 43.4981 2 ⁺					
1023.8	12 ⁺	282.6 5		741.2 10 ⁺					
1023.826	3 ⁻	34.30 4	0.09 3	989.430 2 ⁻	(E2(+M1))		1.2×10^3 11		$\alpha(\text{L})=9.\text{E}+2$ 8; $\alpha(\text{M})=2.4\times 10^2$ 22; $\alpha(\text{N}+.)=8.\text{E}+1$ 8 $\alpha(\text{N})=6.\text{E}+1$ 6; $\alpha(\text{O})=15$ 14; $\alpha(\text{P})=2.4$ 22; $\alpha(\text{Q})=0.015$ 5
		54.96 ^{@a} 10 97.17 10 174.55 3 880.5 ^{&} 1 980.3 ^{&} 1	≤ 0.22 5.6 20 3.9 5 ≈ 100 ^{&} ≈ 63 ^{&}	968.425 3 ⁺ 926.720 2 ⁺ 849.266 3 ⁻ 143.352 4 ⁺ 43.4981 2 ⁺					
1044.536	0 ⁺	192.91 ^{&} 7 234.6 2 258.23 7	0.067 ^{&} 20 8.6 5	851.74 2 ⁺ 809.907 0 ⁺ 786.288 1 ⁻	E0 (E1)		0.0548		Total Ice=10.4 12. $\alpha(\text{K})=0.0434$ 6; $\alpha(\text{L})=0.00859$ 12; $\alpha(\text{M})=0.00207$ 3; $\alpha(\text{N}+.)=0.000712$ 10 $\alpha(\text{N})=0.000554$ 8; $\alpha(\text{O})=0.0001321$ 19; $\alpha(\text{P})=2.42\times 10^{-5}$ 4; $\alpha(\text{Q})=1.499\times 10^{-6}$ 21
		1001.03 3	100 3	43.4981 2 ⁺	E2		0.01107		$\alpha(\text{K})=0.00835$ 12; $\alpha(\text{L})=0.00204$ 3; $\alpha(\text{M})=0.000507$ 8; $\alpha(\text{N}+.)=0.0001760$ 25 $\alpha(\text{N})=0.0001367$ 20; $\alpha(\text{O})=3.28\times 10^{-5}$ 5; $\alpha(\text{P})=6.10\times 10^{-6}$ 9; $\alpha(\text{Q})=3.76\times 10^{-7}$ 6
1069.281	4 ⁻	45.45 5 79.84 2	19 6 43 15	1023.826 3 ⁻ 989.430 2 ⁻	M1+E2 E2	0.8 4	2.5×10^2 14		$\alpha(\text{L})=1.9\times 10^2$ 10; $\alpha(\text{M})=5.\text{E}1$ 3; $\alpha(\text{N}+.)=17$ 10 $\alpha(\text{N})=14$ 8; $\alpha(\text{O})=3.1$ 17; $\alpha(\text{P})=0.5$ 3; $\alpha(\text{Q})=0.0063$ 15 $\alpha(\text{L})=28.0$ 4; $\alpha(\text{M})=7.76$ 11; $\alpha(\text{N}+.)=2.67$ 4 $\alpha(\text{N})=2.11$ 3; $\alpha(\text{O})=0.483$ 7; $\alpha(\text{P})=0.0788$ 11; $\alpha(\text{Q})=0.000258$ 4
		100.89 2 106.68 5 220.00 8	86 15 25 8 100 15	968.425 3 ⁺ 962.546 5 ⁻ 849.266 3 ⁻	(M1)		2.37		$\alpha(\text{K})=1.89$ 3; $\alpha(\text{L})=0.366$ 6; $\alpha(\text{M})=0.0886$ 13; $\alpha(\text{N}+.)=0.0309$ 5 $\alpha(\text{N})=0.0239$ 4; $\alpha(\text{O})=0.00581$ 9; $\alpha(\text{P})=0.001120$ 16; $\alpha(\text{Q})=8.93\times 10^{-5}$ 13
1085.26	2 ⁺	925.9 2 233.6 ^a 2 235.9 3	12×10^2 9 3.4 13	143.352 4 ⁺ 851.74 2 ⁺ 849.266 3 ⁻					

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
1085.26	2 ⁺	299.1 2	10 3	786.288	1 ⁻			
		941.94 10	100 5	143.352	4 ⁺			
		1041.7 2	48 4	43.4981	2 ⁺			
		1085.4 2	20 6	0.0	0 ⁺			
1090.89	5 ⁺	794.9 2	41 6	296.072	6 ⁺			
		947.7 2	100 10	143.352	4 ⁺			
1096.12	6 ⁺	799.7 2		296.072	6 ⁺	E0+E2		
		952.7 1		143.352	4 ⁺			
1125.28	7 ⁻	628.1 1	66 12	497.04	8 ⁺			
		829.3 2	100 30	296.072	6 ⁺			
1126.626	2 ⁺	137.23 5	5.3 21	989.430	2 ⁻			
		199.95 5	14 5	926.720	2 ⁺	(E0+E2+M1)	1.9 12	$\alpha(\text{K})=1.3$ 12; $\alpha(\text{L})=0.456$ 25; $\alpha(\text{M})=0.1176$ 23; $\alpha(\text{N}+..)=0.0408$ 7 $\alpha(\text{N})=0.0318$ 8; $\alpha(\text{O})=0.00754$ 13; $\alpha(\text{P})=0.00136$ 11; $\alpha(\text{Q})=6.E-5$ 6
		275.04 @ 10	35 7	851.74	2 ⁺			
		316.7 1	20 2	809.907	0 ⁺			
		340.2 1	8.0 17	786.288	1 ⁻			
		1083.2 1	100 7	43.4981	2 ⁺	(M1)	0.0317	$\alpha(\text{K})=0.0254$ 4; $\alpha(\text{L})=0.00477$ 7; $\alpha(\text{M})=0.001147$ 16; $\alpha(\text{N}+..)=0.000400$ 6 $\alpha(\text{N})=0.000309$ 5; $\alpha(\text{O})=7.51 \times 10^{-5}$ 11; $\alpha(\text{P})=1.450 \times 10^{-5}$ 21; $\alpha(\text{Q})=1.163 \times 10^{-6}$ 17
		1126.8 1	59 7	0.0	0 ⁺			
		58.20 6	0.21 7	1069.281	4 ⁻	(E2)	174	$\alpha(\text{L})=126.9$ 19; $\alpha(\text{M})=35.1$ 6; $\alpha(\text{N}+..)=12.06$ 18 $\alpha(\text{N})=9.52$ 15; $\alpha(\text{O})=2.18$ 4; $\alpha(\text{P})=0.354$ 6; $\alpha(\text{Q})=0.000954$ 14
		103.77 2	5.7 8	1023.826	3 ⁻	(E2)	11.22	$\alpha(\text{L})=8.17$ 12; $\alpha(\text{M})=2.27$ 4; $\alpha(\text{N}+..)=0.780$ 11 $\alpha(\text{N})=0.615$ 9; $\alpha(\text{O})=0.1414$ 20; $\alpha(\text{P})=0.0232$ 4; $\alpha(\text{Q})=9.56 \times 10^{-5}$ 14
		164.94 5	1.2 5	962.546	5 ⁻			
278.3 1	1.0 3	849.266	3 ⁻					
1165.44	3 ⁺	831.5 1	100 5	296.072	6 ⁺			
		984.2 1	39 4	143.352	4 ⁺			
		196.80 5	29 9	968.425	3 ⁺	E0+E2+M1	2.0 13	$\alpha(\text{K})=1.4$ 13; $\alpha(\text{L})=0.483$ 21; $\alpha(\text{M})=0.124$ 4; $\alpha(\text{N}+..)=0.0432$ 11 $\alpha(\text{N})=0.0337$ 11; $\alpha(\text{O})=0.00798$ 12; $\alpha(\text{P})=0.00144$ 10; $\alpha(\text{Q})=7.E-5$ 6 α : deduced in ²³⁴ Pa g.s. decay.
		313.5 1	42 5	851.74	2 ⁺			
		1021.8 2	58 13	143.352	4 ⁺			
1121.7 1	100 13	43.4981	2 ⁺	M1	0.0289	$\alpha(\text{K})=0.0232$ 4; $\alpha(\text{L})=0.00434$ 6; $\alpha(\text{M})=0.001045$ 15; $\alpha(\text{N}+..)=0.000365$ 6 $\alpha(\text{N})=0.000281$ 4; $\alpha(\text{O})=6.84 \times 10^{-5}$ 10; $\alpha(\text{P})=1.321 \times 10^{-5}$ 19; $\alpha(\text{Q})=1.060 \times 10^{-6}$ 15; $\alpha(\text{IPF})=6.86 \times 10^{-7}$ 1		
1172.043	6 ⁺	675.1 1	4.0 4	497.04	8 ⁺			
		876.0 1	100.0 9	296.072	6 ⁺	(E2)	0.01432	$\alpha(\text{K})=0.01055$ 15; $\alpha(\text{L})=0.00282$ 4; $\alpha(\text{M})=0.000706$ 10; $\alpha(\text{N}+..)=0.000245$ 4 $\alpha(\text{N})=0.000191$ 3; $\alpha(\text{O})=4.55 \times 10^{-5}$ 7; $\alpha(\text{P})=8.42 \times 10^{-6}$ 12; $\alpha(\text{Q})=4.83 \times 10^{-7}$ 7

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	$\gamma(^{234}\text{U})$ (continued)			Comments
						Mult. [‡]	δ	$\alpha^\#$	
1172.043	6 ⁺	1028.7 1	22.4 13	143.352	4 ⁺				
1174.1	(1,2 ⁺)	184.7 5	90 8	989.430	2 ⁻				
		387.6 8	50 9	786.288	1 ⁻				
		1174.2 10	100 10	0.0	0 ⁺				
1194.748	6 ⁻	67.10 7	1.1 4	1127.552	5 ⁻	M1+E2	1.2 3	58 11	$\alpha(\text{L})=42.8$; $\alpha(\text{M})=11.6$ 22; $\alpha(\text{N}+..)=4.0$ 8 $\alpha(\text{N})=3.1$ 6; $\alpha(\text{O})=0.72$ 14; $\alpha(\text{P})=0.120$ 21; $\alpha(\text{Q})=0.0014$ 4
		69.46 5	0.54 23	1125.28	7 ⁻				
		125.46 1	24 3	1069.281	4 ⁻	E2		4.89	$\alpha(\text{K})=0.216$ 3; $\alpha(\text{L})=3.41$ 5; $\alpha(\text{M})=0.945$ 14; $\alpha(\text{N}+..)=0.325$ 5 $\alpha(\text{N})=0.257$ 4; $\alpha(\text{O})=0.0590$ 9; $\alpha(\text{P})=0.00971$ 14; $\alpha(\text{Q})=4.98 \times 10^{-5}$ 7
		232.21 3	5.4 10	962.546	5 ⁻				
1214.71	4 ⁺	898.67 5	100 7	296.072	6 ⁺				
		267.12 5	100 12	947.64	4 ⁺				
		365.0 @ 3	10 4	849.266	3 ⁻				
		918.4 1	54 6	296.072	6 ⁺				
		1171.3 1	51 6	43.4981	2 ⁺				
1237.256	1 ⁻	192.91 & 7	1.1 & 3	1044.536	0 ⁺				
		247.79 7	1.81 12	989.430	2 ⁻				
		310.52 10	0.65 7	926.720	2 ⁺				
		387.94 6	3.46 20	849.266	3 ⁻				
		427.4 4	0.15 4	809.907	0 ⁺				
		450.93 4	20.7 16	786.288	1 ⁻	M1+E2	0.70	0.241	$\alpha(\text{K})=0.187$ 3; $\alpha(\text{L})=0.0400$ 6; $\alpha(\text{M})=0.00980$ 14; $\alpha(\text{N}+..)=0.00341$ 5 $\alpha(\text{N})=0.00264$ 4; $\alpha(\text{O})=0.000638$ 9; $\alpha(\text{P})=0.0001213$ 17; $\alpha(\text{Q})=8.79 \times 10^{-6}$ 13
		1193.77 3	100 4	43.4981	2 ⁺	E1		0.00277	$\alpha(\text{K})=0.00226$ 4; $\alpha(\text{L})=0.000377$ 6; $\alpha(\text{M})=8.92 \times 10^{-5}$ 13; $\alpha(\text{N}+..)=4.12 \times 10^{-5}$ 6 $\alpha(\text{N})=2.39 \times 10^{-5}$ 4; $\alpha(\text{O})=5.80 \times 10^{-6}$ 9; $\alpha(\text{P})=1.109 \times 10^{-6}$ 16; $\alpha(\text{Q})=8.70 \times 10^{-8}$ 13; $\alpha(\text{IPF})=1.027 \times 10^{-5}$ 15
		1237.22 4	38.7 8	0.0	0 ⁺	E1		0.00262	$\alpha(\text{K})=0.00213$ 3; $\alpha(\text{L})=0.000354$ 5; $\alpha(\text{M})=8.38 \times 10^{-5}$ 12; $\alpha(\text{N}+..)=5.11 \times 10^{-5}$ 8 $\alpha(\text{N})=2.25 \times 10^{-5}$ 4; $\alpha(\text{O})=5.44 \times 10^{-6}$ 8; $\alpha(\text{P})=1.042 \times 10^{-6}$ 15; $\alpha(\text{Q})=8.20 \times 10^{-8}$ 12; $\alpha(\text{IPF})=2.21 \times 10^{-5}$ 3
1261.782	7 ⁺	764.8 2	41 9	497.04	8 ⁺				
		965.8 1	100 7	296.072	6 ⁺				
1274.29	(5 ⁺)	978.2 3		296.072	6 ⁺				
1277.461	7 ⁻	149.88 3	8 3	1127.552	5 ⁻				
		780.4 2	100 5	497.04	8 ⁺				
		981.6 3	80 23	296.072	6 ⁺				
1292.75	8 ⁺	795.7 2		497.04	8 ⁺	E0+E2			

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\#$	Comments
1312.18	3 ⁻	343.8 2 365.0 @ 3 385.4 1	82 18 100 25	968.425 947.64 926.720	3 ⁺ 4 ⁺ 2 ⁺				
1335.6?	9 ⁻	(594.7) 838.5 5		741.2 497.04	10 ⁺ 8 ⁺				
1340.5	14 ⁺	316.7		1023.8	12 ⁺				
1341.33	(6 ⁺)	379.1 1 1044.4 2	100 25 ≈75	962.546 296.072	5 ⁻ 6 ⁺				
1365.8	(8 ⁺)	868.8 3		497.04	8 ⁺				
1421.257	6 ⁻	143.78 2	7.6 8	1277.461	7 ⁻	(M1+E2)	≈1.0	≈5.31	B(M1)(W.u.)≈1.6×10 ⁻⁹ ; B(E2)(W.u.)≈2.3×10 ⁻⁵ α(K)≈3.24; α(L)≈1.532; α(M)≈0.403; α(N+..)≈0.1394 α(N)≈0.1091; α(O)≈0.0256; α(P)≈0.00450; α(Q)≈0.0001658
		159.48 2	15.4 18	1261.782	7 ⁺	[E1]		0.1676	α(K)=0.1303 19; α(L)=0.0282 4; α(M)=0.00684 10; α(N+..)=0.00234 4 α(N)=0.00182 3; α(O)=0.000431 6; α(P)=7.70×10 ⁻⁵ 11; α(Q)=4.23×10 ⁻⁶ 6
		226.50 3	100 8	1194.748	6 ⁻	M1+E2	1.0 +3-1	1.33 22	B(E1)(W.u.)=3.8×10 ⁻¹¹ 6 α(K)=0.93 21; α(L)=0.297 12; α(M)=0.0759 18; α(N+..)=0.0263 7 α(N)=0.0205 5; α(O)=0.00488 14; α(P)=0.00089 4; α(Q)=4.6×10 ⁻⁵ 10
		249.22 1	59 8	1172.043	6 ⁺	E1		0.0594	B(M1)(W.u.)=5.4×10 ⁻⁹ 19; B(E2)(W.u.)=3.1×10 ⁻⁵ 11 B(E1)(W.u.)=3.8×10 ⁻¹¹ 7 α(K)=0.0470 7; α(L)=0.00935 13; α(M)=0.00226 4; α(N+..)=0.000775 11
		293.79 5	71 5	1127.552	5 ⁻	M1+E2	1.7 +6-3	0.42 9	α(N)=0.000604 9; α(O)=0.0001437 21; α(P)=2.63×10 ⁻⁵ 4; α(Q)=1.616×10 ⁻⁶ 23 α(K)=0.28 8; α(L)=0.109 8; α(M)=0.0283 16; α(N+..)=0.0098 6 α(N)=0.0076 4; α(O)=0.00181 11; α(P)=0.000323 24; α(Q)=1.4×10 ⁻⁵ 4
		295.91 8	3.4 5	1125.28	7 ⁻	[M1+E2]		0.6 5	B(M1)(W.u.)=9.E-10 5; B(E2)(W.u.)=9.0×10 ⁻⁶ 21 B(M1)(W.u.)=8.0×10 ⁻¹¹ 14; B(E2)(W.u.)=2.7×10 ⁻⁷ 5 α(K)=0.5 4; α(L)=0.12 4; α(M)=0.031 8; α(N+..)=0.011 3 α(N)=0.0084 20; α(O)=0.0020 6; α(P)=0.00037 12; α(Q)=2.2×10 ⁻⁵ 18
		330.40 & 5	≈7 &	1090.89	5 ⁺	[E1]		0.0318	B(E1)(W.u.)≈1.9×10 ⁻¹² α(K)=0.0254 4; α(L)=0.00484 7; α(M)=0.001165 17; α(N+..)=0.000401 6 α(N)=0.000312 5; α(O)=7.45×10 ⁻⁵ 11; α(P)=1.379×10 ⁻⁵ 20; α(Q)=9.01×10 ⁻⁷ 13
		351.9 1	9.8 8	1069.281	4 ⁻	E2		0.1175	α(K)=0.0555 8; α(L)=0.0455 7; α(M)=0.01222 18;

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\gamma(^{234}\text{U})$ (continued)		Comments
							δ	$\alpha^\#$	
1421.257	6 ⁻	397.7 3	0.63 15	1023.77	4 ⁺	[M2]		1.349	$\alpha(\text{N}+..)=0.00422$ 6 $\alpha(\text{N})=0.00331$ 5; $\alpha(\text{O})=0.000773$ 11; $\alpha(\text{P})=0.0001335$ 19; $\alpha(\text{Q})=3.15\times 10^{-6}$ 5 B(E2)(W.u.)= 6.8×10^{-7} 8 B(M2)(W.u.)= 2.9×10^{-6} 8 $\alpha(\text{K})=0.986$ 14; $\alpha(\text{L})=0.270$ 4; $\alpha(\text{M})=0.0687$ 10; $\alpha(\text{N}+..)=0.0242$ 4 $\alpha(\text{N})=0.0187$ 3; $\alpha(\text{O})=0.00454$ 7; $\alpha(\text{P})=0.000864$ 13; $\alpha(\text{Q})=6.46\times 10^{-5}$ 10
									458.68 5
		1125.2 1	8.5 17	296.072	6 ⁺	[E1]		0.00305	
									1277.7 2
1435.380	1 ⁻	197.91 15	0.28 7	1237.256	1 ⁻				
		445.91 10	0.31 7	989.430	2 ⁻				
		625.66 7	1.19 11	809.907	0 ⁺				
		649.12 & 10	0.42 & 9	786.288	1 ⁻				
1391.87 4	35.6 15	43.4981	2 ⁺	E1			0.00221		$\alpha(\text{K})=0.001745$ 25; $\alpha(\text{L})=0.000288$ 4; $\alpha(\text{M})=6.82\times 10^{-5}$ 10; $\alpha(\text{N}+..)=0.0001116$ 16 $\alpha(\text{N})=1.83\times 10^{-5}$ 3; $\alpha(\text{O})=4.44\times 10^{-6}$ 7; $\alpha(\text{P})=8.51\times 10^{-7}$ 12; $\alpha(\text{Q})=6.76\times 10^{-8}$ 10; $\alpha(\text{IPF})=8.79\times 10^{-5}$ 13
									1435.36 4
1447.52	5 ⁻	275.04 @ 10		1172.043	6 ⁺				
		320.4 1	100 12	1127.552	5 ⁻				
		1151.4 @ 3	62 18	296.072	6 ⁺				
1457.16	(2 ⁻)	468.0 @ a 1		989.430	2 ⁻				
		670.8 10	16 4	786.288	1 ⁻				

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	δ	$\alpha^\#$	Comments
1457.16	(2 ⁻)	1414.0 4	100 5	43.4981	2 ⁺				
1486.16	(3 ⁻)	559.2 2	100 29	926.720	2 ⁺				
		1342.9 2	17 6	143.352	4 ⁺				
		1442.8 2	43 9	43.4981	2 ⁺				
1496.111	3 ⁺	221.83 10	0.87 25	1274.29	(5 ⁺)				
		330.40& 4	≈5.6&	1165.44	3 ⁺	M1+E2	≈0.7	≈0.562	$\alpha(\text{K})\approx 0.431$; $\alpha(\text{L})\approx 0.0980$; $\alpha(\text{M})\approx 0.0242$; $\alpha(\text{N}+..)\approx 0.00842$
		369.50 5	30.0 19	1126.626	2 ⁺	M1		0.565	$\alpha(\text{N})\approx 0.00653$; $\alpha(\text{O})\approx 0.001574$; $\alpha(\text{P})\approx 0.000297$; $\alpha(\text{Q})\approx 2.04\times 10^{-5}$
		426.95 5	5.5 4	1069.281	4 ⁻				$\alpha(\text{K})=0.450$ 7; $\alpha(\text{L})=0.0866$ 13; $\alpha(\text{M})=0.0209$ 3; $\alpha(\text{N}+..)=0.00729$ 11
		472.3 1	4.4 3	1023.77	4 ⁺				$\alpha(\text{N})=0.00563$ 8; $\alpha(\text{O})=0.001370$ 20; $\alpha(\text{P})=0.000264$ 4;
		506.75 5	15.6 10	989.430	2 ⁻				$\alpha(\text{Q})=2.11\times 10^{-5}$ 3
		527.9 1	4.7 4	968.425	3 ⁺	(M1)		0.215	$\alpha(\text{K})=0.1716$ 24; $\alpha(\text{L})=0.0327$ 5; $\alpha(\text{M})=0.00790$ 11;
									$\alpha(\text{N}+..)=0.00275$ 4
		569.5 1	100 10	926.720	2 ⁺	M1		0.1754	$\alpha(\text{N})=0.00213$ 3; $\alpha(\text{O})=0.000517$ 8; $\alpha(\text{P})=9.98\times 10^{-5}$ 14;
									$\alpha(\text{Q})=7.96\times 10^{-6}$ 12
		646.5 1	1.37 13	849.266	3 ⁻				$\alpha(\text{K})=0.1401$ 20; $\alpha(\text{L})=0.0267$ 4; $\alpha(\text{M})=0.00643$ 9; $\alpha(\text{N}+..)=0.00224$ 4
		1352.9 1	14.0 7	143.352	4 ⁺	M1		0.01766	$\alpha(\text{N})=0.001732$ 25; $\alpha(\text{O})=0.000421$ 6; $\alpha(\text{P})=8.12\times 10^{-5}$ 12;
									$\alpha(\text{Q})=6.48\times 10^{-6}$ 9
									$\alpha(\text{K})=0.01412$ 20; $\alpha(\text{L})=0.00263$ 4; $\alpha(\text{M})=0.000633$ 9;
									$\alpha(\text{N}+..)=0.000276$ 4
		1452.7 1	9.7 7	43.4981	2 ⁺				$\alpha(\text{N})=0.0001705$ 24; $\alpha(\text{O})=4.15\times 10^{-5}$ 6; $\alpha(\text{P})=8.01\times 10^{-6}$ 12;
1500.99	(1)	649.0& 10	13& 3	851.74	2 ⁺				$\alpha(\text{Q})=6.44\times 10^{-7}$ 9; $\alpha(\text{IPF})=5.49\times 10^{-5}$ 8
		691.08 10	100 10	809.907	0 ⁺				
		1458.5 15	24 6	43.4981	2 ⁺				
		1501 ^a 2	≈16	0.0	0 ⁺				
1502.38	3,4 ⁺	1359.0 1	100 14	143.352	4 ⁺				
		1458.9 1	60 14	43.4981	2 ⁺				
1510.23	1	1466.5 2	100 10	43.4981	2 ⁺				
		1510.35 15	75 10	0.0	0 ⁺				
1533.31	(4 ⁻)	464.2 1	23 8	1069.281	4 ⁻				
		543.8 1	100 16	989.430	2 ⁻				
		1389.6 2	54 16	143.352	4 ⁺				
1537.228	4 ⁺	372.0 1	34 3	1165.44	3 ⁺	M1+E2	<0.5	0.51 5	$\alpha(\text{K})=0.40$ 4; $\alpha(\text{L})=0.080$ 5; $\alpha(\text{M})=0.0195$ 11; $\alpha(\text{N}+..)=0.0068$ 4
									$\alpha(\text{N})=0.0052$ 3; $\alpha(\text{O})=0.00127$ 8; $\alpha(\text{P})=0.000244$ 16;
									$\alpha(\text{Q})=1.89\times 10^{-5}$ 18

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments	
1537.228	4 ⁺	409.8 1	9.3 9	1127.552	5 ⁻				
		446.6 @ 1	3.1 3	1090.89	5 ⁺				
		468.0 @ 1	6.0 6	1069.281	4 ⁻				
		513.4 & 1	≈21 &	1023.826	3 ⁻			I_γ : 513.4 γ has been assumed to be a doublet, feeding the 4 ⁺ and 3 ⁻ levels at 1023.7 and 1023.83 keV (both the 3 ⁺ , 5 ⁺ members of the $K^\pi=2^+$ band, and the 4 ⁻ , 5 ⁻ members of the $K^\pi=2^-$ band are populated from the 1537-keV level). See 6.70-h ²³⁴ Pa β^- decay data for the splitting of the measured intensity.	
			513.4 & 1	≈11 &	1023.77	4 ⁺			
			568.9 2	100 12	968.425	3 ⁺	M1	0.1759	$\alpha(\text{K})=0.1404$ 20; $\alpha(\text{L})=0.0268$ 4; $\alpha(\text{M})=0.00645$ 9; $\alpha(\text{N}+..)=0.00225$ 4 $\alpha(\text{N})=0.001737$ 25; $\alpha(\text{O})=0.000422$ 6; $\alpha(\text{P})=8.15\times 10^{-5}$ 12; $\alpha(\text{Q})=6.50\times 10^{-6}$ 10 $E_\gamma=589.4$ 4 from adopted level energies.
			590.3 10	1.0 3	947.64	4 ⁺			
			685.1 @ 2		851.74	2 ⁺			
			1241.2 1	6.3 6	296.072	6 ⁺	(E2)	0.00740	$\alpha(\text{K})=0.00573$ 8; $\alpha(\text{L})=0.001252$ 18; $\alpha(\text{M})=0.000307$ 5; $\alpha(\text{N}+..)=0.0001132$ 16 $\alpha(\text{N})=8.28\times 10^{-5}$ 12; $\alpha(\text{O})=1.99\times 10^{-5}$ 3; $\alpha(\text{P})=3.75\times 10^{-6}$ 6; $\alpha(\text{Q})=2.52\times 10^{-7}$ 4; $\alpha(\text{IPF})=6.51\times 10^{-6}$ 10
			1393.9 1	57 3	143.352	4 ⁺	M1	0.01634	$\alpha(\text{K})=0.01304$ 19; $\alpha(\text{L})=0.00243$ 4; $\alpha(\text{M})=0.000585$ 9; $\alpha(\text{N}+..)=0.000279$ 4 $\alpha(\text{N})=0.0001574$ 22; $\alpha(\text{O})=3.83\times 10^{-5}$ 6; $\alpha(\text{P})=7.39\times 10^{-6}$ 11; $\alpha(\text{Q})=5.95\times 10^{-7}$ 9; $\alpha(\text{IPF})=7.52\times 10^{-5}$ 11
1543.69	4 ⁺	1493.6 1	2.9 3	43.4981	2 ⁺				
		474.2 2	21 6	1069.281	4 ⁻				
		575.5 1	15 5	968.425	3 ⁺				
		617.0 @ 2	29 12	926.720	2 ⁺				
		1247.8 2	12 3	296.072	6 ⁺				
		1400.3 1	100 12	143.352	4 ⁺				
1548.28	(5)	1500.0 2	6.5 18	43.4981	2 ⁺				
		452.4 3	100 31	1096.12	6 ⁺				
		478.6 @ a 1		1069.281	4 ⁻				
1552.555	5 ⁺	1252.6 2	65 27	296.072	6 ⁺				
		131.30 1	100.0 15	1421.257	6 ⁻	E1	0.265	$\text{B}(\text{E}1)(\text{W.u.})=2.8\times 10^{-5}$ 4 $\alpha(\text{K})=0.204$ 3; $\alpha(\text{L})=0.0463$ 7; $\alpha(\text{M})=0.01128$ 16; $\alpha(\text{N}+..)=0.00384$ 6 $\alpha(\text{N})=0.00300$ 5; $\alpha(\text{O})=0.000706$ 10; $\alpha(\text{P})=0.0001246$ 18; $\alpha(\text{Q})=6.48\times 10^{-6}$ 9	
		461.5 @ 1	0.19 6	1090.89	5 ⁺	[E2,M1]	0.18 13	$\alpha(\text{K})=0.14$ 11; $\alpha(\text{L})=0.032$ 15; $\alpha(\text{M})=0.008$ 4; $\alpha(\text{N}+..)=0.0028$ 12 $\alpha(\text{N})=0.0022$ 9; $\alpha(\text{O})=0.00052$ 23; $\alpha(\text{P})=0.00010$ 5; $\alpha(\text{Q})=7.\text{E}-6$ 5	
		529.1 @ 3	0.51 18	1023.77	4 ⁺	[E2,M1]	0.13 9	$\alpha(\text{K})=0.10$ 8; $\alpha(\text{L})=0.022$ 11; $\alpha(\text{M})=0.0054$ 25; $\alpha(\text{N}+..)=0.0019$ 9 $\alpha(\text{N})=0.0015$ 7; $\alpha(\text{O})=0.00035$ 17; $\alpha(\text{P})=7.\text{E}-5$ 4; $\alpha(\text{Q})=5.\text{E}-6$ 4	
		584.1 1	0.97 12	968.425	3 ⁺	[E2]	0.0331	$\text{B}(\text{E}2)(\text{W.u.})=3.3\times 10^{-4}$ 6 $\alpha(\text{K})=0.0217$ 3; $\alpha(\text{L})=0.00845$ 12; $\alpha(\text{M})=0.00219$ 3; $\alpha(\text{N}+..)=0.000758$ 11	

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
								$\alpha(\text{N})=0.000592$ 9; $\alpha(\text{O})=0.0001399$ 20; $\alpha(\text{P})=2.51\times 10^{-5}$ 4; $\alpha(\text{Q})=1.069\times 10^{-6}$ 15
1552.555	5 ⁺	604.6 3	0.29 12	947.64	4 ⁺	[E2,M1]	0.09 6	$\alpha(\text{K})=0.07$ 5; $\alpha(\text{L})=0.015$ 8; $\alpha(\text{M})=0.0037$ 18; $\alpha(\text{N}+..)=0.0013$ 7
		1256.5 1	0.33 4	296.072	6 ⁺	[M1,E2]	0.014 8	$\alpha(\text{N})=0.0010$ 5; $\alpha(\text{O})=0.00024$ 12; $\alpha(\text{P})=4.6\times 10^{-5}$ 24; $\alpha(\text{Q})=3.3\times 10^{-6}$ 23 $\alpha(\text{K})=0.011$ 6; $\alpha(\text{L})=0.0022$ 10; $\alpha(\text{M})=0.00054$ 24; $\alpha(\text{N}+..)=0.00020$ 9 $\alpha(\text{N})=0.00014$ 7; $\alpha(\text{O})=3.5\times 10^{-5}$ 16; $\alpha(\text{P})=7.E-6$ 3; $\alpha(\text{Q})=5.E-7$ 3; $\alpha(\text{IPF})=1.5\times 10^{-5}$ 7
1553.60	(1)	1409.1 2	0.25 5	143.352	4 ⁺			
		468.1 5	18.1 18	1085.26	2 ⁺			
		509.2 8	16 3	1044.536	0 ⁺			
		701.6 3	59 6	851.74	2 ⁺			
		1510.5 5	100 7	43.4981	2 ⁺			
		1554.1 5	69 6	0.0	0 ⁺			
1570.690	1 ⁺	135.32 8	0.18 2	1435.380	1 ⁻			
		485.44 7	0.79 7	1085.26	2 ⁺			
		526.02 10	0.38 5	1044.536	0 ⁺			
		581.19 10	3.3 4	989.430	2 ⁻			
		719.01 7	1.09 7	851.74	2 ⁺			
		760.53 15	0.18 4	809.907	0 ⁺			
		1527.21 4	100 4	43.4981	2 ⁺	E2+M1	0.009 4	$\alpha(\text{K})=0.007$ 4; $\alpha(\text{L})=0.0014$ 6; $\alpha(\text{M})=0.00033$ 14; $\alpha(\text{N}+..)=0.00022$ 10 $\alpha(\text{N})=9.E-5$ 4; $\alpha(\text{O})=2.1\times 10^{-5}$ 9; $\alpha(\text{P})=4.1\times 10^{-6}$ 17; $\alpha(\text{Q})=3.2\times 10^{-7}$ 15; $\alpha(\text{IPF})=0.00011$ 5
		1570.68 4	45.3 19	0.0	0 ⁺	M1	0.01204	$\alpha(\text{K})=0.00951$ 14; $\alpha(\text{L})=0.001769$ 25; $\alpha(\text{M})=0.000425$ 6; $\alpha(\text{N}+..)=0.000335$ 5 $\alpha(\text{N})=0.0001145$ 16; $\alpha(\text{O})=2.79\times 10^{-5}$ 4; $\alpha(\text{P})=5.38\times 10^{-6}$ 8; $\alpha(\text{Q})=4.33\times 10^{-7}$ 6; $\alpha(\text{IPF})=0.000187$ 3
1581.59	(5 ⁻)	558.0 [@] 2	100 23	1023.77	4 ⁺			
		619.0 2	39 12	962.546	5 ⁻			
		634.3 ^{@a} 2		947.64	4 ⁺			
1588.819	5 ⁺	394.1 1	9 1	1194.748	6 ⁻			
		461.5 [@] 1		1127.552	5 ⁻			
		498.0 [@] 1	6 1	1090.89	5 ⁺			
		519.6 1	38 3	1069.281	4 ⁻			
		565.2 [@] 1	100 6	1023.77	4 ⁺	(M1)	0.179	$\alpha(\text{K})=0.1429$ 20; $\alpha(\text{L})=0.0272$ 4; $\alpha(\text{M})=0.00656$ 10; $\alpha(\text{N}+..)=0.00229$ 4 $\alpha(\text{N})=0.001768$ 25; $\alpha(\text{O})=0.000430$ 6; $\alpha(\text{P})=8.29\times 10^{-5}$ 12; $\alpha(\text{Q})=6.62\times 10^{-6}$ 10
		1292.8 1	45 3	296.072	6 ⁺	M1	0.0199	$\alpha(\text{K})=0.01592$ 23; $\alpha(\text{L})=0.00297$ 5; $\alpha(\text{M})=0.000715$ 10; $\alpha(\text{N}+..)=0.000281$ 4 $\alpha(\text{N})=0.000193$ 3; $\alpha(\text{O})=4.68\times 10^{-5}$ 7; $\alpha(\text{P})=9.04\times 10^{-6}$ 13; $\alpha(\text{Q})=7.27\times 10^{-7}$ 11; $\alpha(\text{IPF})=3.16\times 10^{-5}$ 5
		1445.4 1	31 3	143.352	4 ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments	
1589.0?	11 ⁻	565.4 ^a 847.8 ^a		1023.8 741.2	12 ⁺ 10 ⁺				
1592.29	(1)	507.5 ^a 10 739.95 10 781.37 10 1550.0 10 1593.88 10	13.3 14 100 3 66.5 16 15.7 13	1085.26 851.74 809.907 43.4981	2 ⁺ 2 ⁺ 0 ⁺ 2 ⁺ 0 ⁺				
1601.826	1 ⁺	166.5 1 516.60 6	0.032 6 1.67 11	1435.380 1085.26	1 ⁻ 2 ⁺	(M1)	0.228	$\alpha(\text{K})=0.182$ 3; $\alpha(\text{L})=0.0347$ 5; $\alpha(\text{M})=0.00837$ 12; $\alpha(\text{N}+..)=0.00292$ 4	
		557.24 6	1.14 7	1044.536	0 ⁺	(M1)	0.186	$\alpha(\text{N})=0.00226$ 4; $\alpha(\text{O})=0.000548$ 8; $\alpha(\text{P})=0.0001058$ 15; $\alpha(\text{Q})=8.44\times 10^{-6}$ 12	
		750.12 6	2.35 14	851.74	2 ⁺	(M1)	0.0841	$\alpha(\text{K})=0.1485$ 21; $\alpha(\text{L})=0.0283$ 4; $\alpha(\text{M})=0.00682$ 10; $\alpha(\text{N}+..)=0.00238$ 4	
		791.94 5 1558.31 4	1.36 8 100.0 11	809.907 43.4981	0 ⁺ 2 ⁺	M1	0.01228	$\alpha(\text{N})=0.00184$ 3; $\alpha(\text{O})=0.000447$ 7; $\alpha(\text{P})=8.62\times 10^{-5}$ 12; $\alpha(\text{Q})=6.88\times 10^{-6}$ 10	
		1601.80 4	48.9 20	0.0	0 ⁺	(M1)	0.01146	$\alpha(\text{K})=0.0672$ 10; $\alpha(\text{L})=0.01272$ 18; $\alpha(\text{M})=0.00306$ 5; $\alpha(\text{N}+..)=0.001067$ 15	
								$\alpha(\text{N})=0.000825$ 12; $\alpha(\text{O})=0.000201$ 3; $\alpha(\text{P})=3.87\times 10^{-5}$ 6; $\alpha(\text{Q})=3.09\times 10^{-6}$ 5	
1619.58	(6 ⁺)	357.9 1 446.6 ^{@a} 1 529.1 ^{@a} 3 657.4 ^a 1	100 29	1261.782 1172.043 1090.89 962.546	7 ⁺ 6 ⁺ 5 ⁺ 5 ⁻			$\alpha(\text{K})=0.00971$ 14; $\alpha(\text{L})=0.00181$ 3; $\alpha(\text{M})=0.000434$ 6; $\alpha(\text{N}+..)=0.000330$ 5	
		1475.8 2	23 9	143.352	4 ⁺			$\alpha(\text{N})=0.0001169$ 17; $\alpha(\text{O})=2.84\times 10^{-5}$ 4; $\alpha(\text{P})=5.49\times 10^{-6}$ 8; $\alpha(\text{Q})=4.43\times 10^{-7}$	
1649.99	(6 ⁻)	553.7 1 1354.6 2	33 12 100 24	1096.12 296.072	6 ⁺ 6 ⁺			$\alpha(\text{N})=0.0001086$ 16; $\alpha(\text{O})=2.64\times 10^{-5}$ 4; $\alpha(\text{P})=5.10\times 10^{-6}$ 8; $\alpha(\text{Q})=4.11\times 10^{-7}$	
1653.30	(3 ⁺)	629.4 1	65 10	1023.77	4 ⁺	(M1)	0.1342	$\alpha(\text{K})=0.1072$ 15; $\alpha(\text{L})=0.0204$ 3; $\alpha(\text{M})=0.00491$ 7; $\alpha(\text{N}+..)=0.001711$ 24	
		663.9 1 1510.1 2	100 14 <1.7	989.430 143.352	2 ⁻ 4 ⁺			$\alpha(\text{N})=0.001322$ 19; $\alpha(\text{O})=0.000322$ 5; $\alpha(\text{P})=6.20\times 10^{-5}$ 9; $\alpha(\text{Q})=4.95\times 10^{-6}$ 7	
1667.4	(1 ⁻)	818.2 5 880.9 5 1667.6 10	26 8 100 21 5	849.266 786.288 0.0	3 ⁻ 1 ⁻ 0 ⁺				
1687.8	16 ⁺	347.3		1340.5	14 ⁺				
1693.453	5 ⁻	140.91 3 272.28 5	29 3 100 10	1552.555 1421.257	5 ⁺ 6 ⁻	(M1)	1.310	$\alpha(\text{K})=1.042$ 15; $\alpha(\text{L})=0.202$ 3; $\alpha(\text{M})=0.0487$ 7; $\alpha(\text{N}+..)=0.01699$ 24	
		416.1 1	3.3 10	1277.461	7 ⁻			$\alpha(\text{N})=0.01313$ 19; $\alpha(\text{O})=0.00319$ 5; $\alpha(\text{P})=0.000616$ 9; $\alpha(\text{Q})=4.91\times 10^{-5}$ 7	

Adopted Levels, Gammas (continued)

E _i (level)	J _i ^π	γ(²³⁴ U) (continued)							Comments
		E _γ	I _γ [†]	E _f	J _f ^π	Mult. [‡]	δ	α [#]	
1693.453	5 ⁻	478.6 ^{@a} 1	≤11	1214.71	4 ⁺				
		498.0 [@] 1		1194.748	6 ⁻				
		521.4 1	69 5	1172.043	6 ⁺				
		565.2 [@] 1		1127.552	5 ⁻				
		602.6 1	50 3	1090.89	5 ⁺				
		624.2 1	32 3	1069.281	4 ⁻	(M1+E2)	≈0.7	≈0.1015	α(K)≈0.0799; α(L)≈0.01627; α(M)≈0.00396; α(N+..)≈0.001378 α(N)≈0.001067; α(O)≈0.000258; α(P)≈4.94×10 ⁻⁵ ; α(Q)≈3.71×10 ⁻⁶
		669.7 1	91 5	1023.77	4 ⁺				
		730.9 2	58 8	962.546	5 ⁻				
		745.9 1	30 3	947.64	4 ⁺				
		844.1 1	39 3	849.266	3 ⁻				
1397.5 2	7.6 19	296.072	6 ⁺						
1550.1 1	7 1	143.352	4 ⁺						
1693.7?	(1 ⁻)	456.7 10	66 14	1237.256	1 ⁻				
		844.1 8	100 22	849.266	3 ⁻				
		1694.1 10	42 8	0.0	0 ⁺				
1722.87	3 ⁻	595.4 2	1.3 3	1127.552	5 ⁻				
		653.7 [@] 1	6.7 9	1069.281	4 ⁻	M1		0.1213 α(K)=0.0969 14; α(L)=0.0184 3; α(M)=0.00443 7; α(N+..)=0.001545 22 α(N)=0.001194 17; α(O)=0.000290 4; α(P)=5.60×10 ⁻⁵ 8; α(Q)=4.47×10 ⁻⁶ 7	
		699.03 [@] 5	52 3	1023.826	3 ⁻	M1		0.1015 α(K)=0.0811 12; α(L)=0.01537 22; α(M)=0.00370 6; α(N+..)=0.001290 18 α(N)=0.000997 14; α(O)=0.000242 4; α(P)=4.68×10 ⁻⁵ 7; α(Q)=3.74×10 ⁻⁶ 6	
		733.39 5	100 6	989.430	2 ⁻	M1		0.0893 α(K)=0.0714 10; α(L)=0.01351 19; α(M)=0.00325 5; α(N+..)=0.001134 16 α(N)=0.000876 13; α(O)=0.000213 3; α(P)=4.11×10 ⁻⁵ 6; α(Q)=3.29×10 ⁻⁶ 5	
1723.402	4 ⁺	761.0 2	1.0 4	962.546	5 ⁻				
		874.0 3	0.52 11	849.266	3 ⁻				
		1679.5 1	1.1 3	43.4981	2 ⁺				
		134.61 2	2.0 4	1588.819	5 ⁺	M1		9.50 α(K)=7.54 11; α(L)=1.480 21; α(M)=0.358 5; α(N+..)=0.1249 18 α(N)=0.0965 14; α(O)=0.0235 4; α(P)=0.00453 7; α(Q)=0.000362 5	
		170.85 2	8.7 9	1552.555	5 ⁺	M1		4.83 α(K)=3.84 6; α(L)=0.749 11; α(M)=0.181 3; α(N+..)=0.0632 9 α(N)=0.0488 7; α(O)=0.01188 17; α(P)=0.00229 4; α(Q)=0.000183 3	
		179.80 8	0.8 3	1543.69	4 ⁺				
		186.15 2	30.5 18	1537.228	4 ⁺	M1		3.79 α(K)=3.02 5; α(L)=0.587 9; α(M)=0.1420 20; α(N+..)=0.0495 7 α(N)=0.0383 6; α(O)=0.00931 13; α(P)=0.00180 3; α(Q)=0.0001433 20	
227.25 3	100 6	1496.111	3 ⁺	M1		2.17 α(K)=1.724 25; α(L)=0.335 5; α(M)=0.0809 12; α(N+..)=0.0282 4			

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
								$\alpha(\text{N})=0.0218$ 3; $\alpha(\text{O})=0.00530$ 8; $\alpha(\text{P})=0.001022$ 15; $\alpha(\text{Q})=8.15 \times 10^{-5}$ 12
1723.402	4 ⁺	558.0 @ 2		1165.44	3 ⁺			
		596.9 @ 1		1126.626	2 ⁺			
		632.6 2	0.62 18	1090.89	5 ⁺			
		699.03 @ 5		1023.826	3 ⁻			
		755.0 @ 1	21.1 11	968.425	3 ⁺	(E2,M1)	0.05 4	$\alpha(\text{K})=0.04$ 3; $\alpha(\text{L})=0.008$ 5; $\alpha(\text{M})=0.0020$ 10; $\alpha(\text{N}+..)=0.0007$ 4 $\alpha(\text{N})=0.0005$ 3; $\alpha(\text{O})=0.00013$ 7; $\alpha(\text{P})=2.5 \times 10^{-5}$ 13; $\alpha(\text{Q})=1.8 \times 10^{-6}$ 12
		796.1 1	45 4	926.720	2 ⁺			
		1426.9 1	2.9 4	296.072	6 ⁺			
		1579.9 1	1.2 4	143.352	4 ⁺			
1737.43	3 ⁺	713.7 @ 1	21 3	1023.826	3 ⁻			
		748.1 3	15 3	989.430	2 ⁻			
		1594.0 1	45 3	143.352	4 ⁺	M1,E2	0.008 4	$\alpha(\text{K})=0.006$ 3; $\alpha(\text{L})=0.0012$ 5; $\alpha(\text{M})=0.00029$ 12; $\alpha(\text{N}+..)=0.00025$ 10 $\alpha(\text{N})=8.E-5$ 4; $\alpha(\text{O})=1.9 \times 10^{-5}$ 8; $\alpha(\text{P})=3.7 \times 10^{-6}$ 15; $\alpha(\text{Q})=2.9 \times 10^{-7}$ 13; $\alpha(\text{IPF})=0.00015$ 6
1738.17	(3 ⁺)	1693.8 2	100 11	43.4981	2 ⁺			
		612.0 1	100 9	1126.626	2 ⁺	(M1)	0.1447	$\alpha(\text{K})=0.1156$ 17; $\alpha(\text{L})=0.0220$ 3; $\alpha(\text{M})=0.00530$ 8; $\alpha(\text{N}+..)=0.00185$ 3 $\alpha(\text{N})=0.001426$ 20; $\alpha(\text{O})=0.000347$ 5; $\alpha(\text{P})=6.69 \times 10^{-5}$ 10; $\alpha(\text{Q})=5.34 \times 10^{-6}$ 8
		811.5 1	32 3	926.720	2 ⁺			
		1695.0 3	70 17	43.4981	2 ⁺			
1761.79	(4 ⁻)	634.3 @ 2	≤ 12	1127.552	5 ⁻			
		692.6 1	100 6	1069.281	4 ⁻	(M1)	0.1040	$\alpha(\text{K})=0.0831$ 12; $\alpha(\text{L})=0.01575$ 22; $\alpha(\text{M})=0.00379$ 6; $\alpha(\text{N}+..)=0.001322$ 19 $\alpha(\text{N})=0.001022$ 15; $\alpha(\text{O})=0.000249$ 4; $\alpha(\text{P})=4.79 \times 10^{-5}$ 7; $\alpha(\text{Q})=3.83 \times 10^{-6}$ 6
		738.0 1	93 6	1023.826	3 ⁻	(M1)	0.0878	$\alpha(\text{K})=0.0702$ 10; $\alpha(\text{L})=0.01329$ 19; $\alpha(\text{M})=0.00320$ 5; $\alpha(\text{N}+..)=0.001115$ 16 $\alpha(\text{N})=0.000862$ 12; $\alpha(\text{O})=0.000210$ 3; $\alpha(\text{P})=4.04 \times 10^{-5}$ 6; $\alpha(\text{Q})=3.23 \times 10^{-6}$ 5
		772.4 2	5.8 17	989.430	2 ⁻			
		792.8 3	3.6 9	968.425	3 ⁺			
		1618.3 2	0.75 25	143.352	4 ⁺			
1770.79	(3 ⁺)	802.3 ^a 2	41 11	968.425	3 ⁺			
		1627.3 1	100 11	143.352	4 ⁺			
		1727.8 2	26 6	43.4981	2 ⁺			
1781.22	(0 ⁺ ,1)	209.9 4	6.2 8	1570.690	1 ⁺			
		543.98 10	17.0 9	1237.256	1 ⁻			
		655.3 10	6.5 8	1126.626	2 ⁺			
		695.5 10	7.4 8	1085.26	2 ⁺			
		996.1 20	19 4	786.288	1 ⁻			

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	Mult. [‡]	$\alpha^\#$	Comments
1781.22	(0 ⁺ ,1)	1737.73 10	100 2	43.4981	2 ⁺			
1782.554	5 ⁺	59.19 5	4.2 14	1723.402	4 ⁺			
		193.73 3	66 9	1588.819	5 ⁺	(M1+E2)	2.1 13	$\alpha(\text{K})=1.4$ 13; $\alpha(\text{L})=0.510$ 16; $\alpha(\text{M})=0.132$ 6; $\alpha(\text{N}+..)=0.0457$ 16
		245.37 2	100 11	1537.228	4 ⁺	M1	1.749	$\alpha(\text{N})=0.0356$ 16; $\alpha(\text{O})=0.00844$ 18; $\alpha(\text{P})=0.00152$ 9; $\alpha(\text{Q})=7.E-5$ 6
		360.6 3	2.3 9	1421.257	6 ⁻			$\alpha(\text{K})=1.392$ 20; $\alpha(\text{L})=0.270$ 4; $\alpha(\text{M})=0.0652$ 10; $\alpha(\text{N}+..)=0.0227$ 4
		617.0 @ a 2		1165.44	3 ⁺			$\alpha(\text{N})=0.01757$ 25; $\alpha(\text{O})=0.00427$ 6; $\alpha(\text{P})=0.000824$ 12; $\alpha(\text{Q})=6.57 \times 10^{-5}$ 10
		655.2 2	18 3	1127.552	5 ⁻			
		758.9 1	33 3	1023.77	4 ⁺			
		814.2 1	41 3	968.425	3 ⁺			
		1485.4 2	4.0 9	296.072	6 ⁺			
		1638.1 1	27.4 14	143.352	4 ⁺	(M1)	0.01083	$\alpha(\text{K})=0.00850$ 12; $\alpha(\text{L})=0.001581$ 23; $\alpha(\text{M})=0.000380$ 6; $\alpha(\text{N}+..)=0.000371$ 6
								$\alpha(\text{N})=0.0001023$ 15; $\alpha(\text{O})=2.49 \times 10^{-5}$ 4; $\alpha(\text{P})=4.81 \times 10^{-6}$ 7;
								$\alpha(\text{Q})=3.88 \times 10^{-7}$ 6; $\alpha(\text{IPF})=0.000238$ 4
1784.18	4 ⁺	857.7 2	100 20	926.720	2 ⁺			
		1488.0 2	37 15	296.072	6 ⁺			
		1640.5 3	29 9	143.352	4 ⁺			
1793.01	4 ⁺	240.20 10	28 12	1552.555	5 ⁺			
		769.1 1	100 6	1023.77	4 ⁺			
		1496.0 2	19 5	296.072	6 ⁺			
		1650.2 2	<2.8	143.352	4 ⁺			
		1750.0 1	34 4	43.4981	2 ⁺			
1796.3	(1)	338.1 8	100 21	1457.16	(2 ⁻)			
		362.8 10	61 13	1435.380	1 ⁻			
		1796.2 10	28 6	0.0	0 ⁺			
1809.73	(1 ⁻)	572.0 10	10 2	1237.256	1 ⁻			
		683.4 10	6.6 14	1126.626	2 ⁺			
		883.24 4	20 6	926.720	2 ⁺			
		960.0 10	10 4	849.266	3 ⁻			
		1765.44 10	100.0 15	43.4981	2 ⁺			
		1809.04 10	42.5 10	0.0	0 ⁺			
1811.62	4 ⁺	596.9 @ 1	26 3	1214.71	4 ⁺			
		683.9 2	20 4	1127.552	5 ⁻			
		685.1 @ 2	19 4	1126.626	2 ⁺			
		848.9 2	3.5 10	962.546	5 ⁻			
		863.2 2	9 3	947.64	4 ⁺			
		960.0 1	9.5 14	851.74	2 ⁺			
		1515.6 2	9.5 14	296.072	6 ⁺			
		1668.4 1	100 7	143.352	4 ⁺	(M1)		

Adopted Levels, Gammas (continued)

 $\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π
1811.62	4 ⁺	1768.0 3	2.6 6	43.4981	2 ⁺	1940.50	4 ⁺	916.5 ^a 2	10 3	1023.826	3 ⁻
1843.86	3,4,5 ⁻	994.6 3	60 20	849.266	3 ⁻			1644.9 2	4.3 13	296.072	6 ⁺
		1700.5 2	100 10	143.352	4 ⁺			1797.1 1	100 9	143.352	4 ⁺
1863.07	(5 ⁺)	1567.0 2	65 12	296.072	6 ⁺			1896.7 2	43 9	43.4981	2 ⁺
		1719.7 2	100 30	143.352	4 ⁺	1958.77	3 ⁻	221.15 10	45 19	1737.43	3 ⁺
1863.16	(1)	936.3 10	100 23	926.720	2 ⁺			235.11 3	100 19	1723.402	4 ⁺
		1819.69 10	50 4	43.4981	2 ⁺			502.0 1	24 8	1457.16	(2 ⁻)
		1863.09 15	67 4	0.0	0 ⁺			890.1 4	24 7	1069.281	4 ⁻
1875.3	(1)	1831.5 5	100 4	43.4981	2 ⁺			935.8 2	58 7	1023.77	4 ⁺
		1875.5 5	49 5	0.0	0 ⁺			1110.6 1	55 10	849.266	3 ⁻
1881.74	4 ⁺	716.5 2	21 6	1165.44	3 ⁺			1173.1 1	40 7	786.288	1 ⁻
		755.0 [@] 1		1126.626	2 ⁺			1815.3 3	8 3	143.352	4 ⁺
		1585.9 1	100 7	296.072	6 ⁺			1915.5 3	17 4	43.4981	2 ⁺
		1737.7 2	51 6	143.352	4 ⁺	1968.84	4 ⁺ ,5	1672.8 1	100 30	296.072	6 ⁺
		1838.0 ^{@a} 2		43.4981	2 ⁺			1825.1 3	27 9	143.352	4 ⁺
1911.09	(1 ⁻)	357.5 10	6.2 14	1553.60	(1)	1969.9	(1 ⁻)	732.5 10	76 9	1237.256	1 ⁻
		453.58 10	15.0 13	1457.16	(2 ⁻)			1120.6 8	100 9	849.266	3 ⁻
		475.75 10	18.0 12	1435.380	1 ⁻			1926.5 10	26 5	43.4981	2 ⁺
		673.9 10	5.0 11	1237.256	1 ⁻			1970.0 15	33 7	0.0	0 ⁺
		825.6 5	11 3	1085.26	2 ⁺	1981.26	4 ⁺	257.2 1	17 7	1723.402	4 ⁺
		866.8 10	8.4 18	1044.536	0 ⁺			433.1 1	30 4	1548.28	(5)
		921.70 10	100.0 11	989.430	2 ⁻			1685.7 1	100 7	296.072	6 ⁺
		1059.4 8	8.6 18	851.74	2 ⁺			1838.0 [@] 2	13 3	143.352	4 ⁺
		1061.86 10	18.0 10	849.266	3 ⁻			1937.7 3	13 4	43.4981	2 ⁺
		1125.7 5	28 5	786.288	1 ⁻	2000.44	(4 ⁺)	1037.9 2	17 6	962.546	5 ⁻
		1867.68 10	72.3 11	43.4981	2 ⁺			1073.6 2	100 10	926.720	2 ⁺
		1911.17 10	49.5 8	0.0	0 ⁺			1151.4 [@] 3		849.266	3 ⁻
1916.26	3,4 ⁺	989.5 1	100 10	926.720	2 ⁺	2019.81	4 ⁺	1051.4 2	100 17	968.425	3 ⁺
		1773.0 2	65 15	143.352	4 ⁺			1057.8 3	\approx 28	962.546	5 ⁻
		1872.8 2	34 8	43.4981	2 ⁺			1723.2 2	25 5	296.072	6 ⁺
1927.52	4 ⁺	165.61 ^a 5	100 29	1761.79	(4 ⁻)			1977.4 4	27 7	43.4981	2 ⁺
		308.6 ^a 2	29 8	1619.58	(6 ⁺)	2033.52	3 ⁺ ,4 ⁺	310.2 1	23 4	1723.402	4 ⁺
		586.3 1	100 15	1341.33	(6 ⁺)			481.0 1	100 7	1552.555	5 ⁺
		653.7 ^{@a} 1		1274.29	(5 ⁺)			537.2 1	27 4	1496.111	3 ⁺
		713.7 ^{@a} 1		1214.71	4 ⁺			1009.9 [@] 3	21 4	1023.77	4 ⁺
		1783.7 2	34 9	143.352	4 ⁺			1065.1 1	8.7 24	968.425	3 ⁺
		1884.1 3	21 4	43.4981	2 ⁺			1106.9 2	27 4	926.720	2 ⁺
1937.01	(1)	699.0 10	27 6	1237.256	1 ⁻			1182.1 2	\approx 3.0	851.74	2 ⁺
		1893.50 10	75 3	43.4981	2 ⁺			1890.1 2	47 4	143.352	4 ⁺
		1937.01 10	100 3	0.0	0 ⁺			1989.6 4	2.3 10	43.4981	2 ⁺

Adopted Levels, Gammas (continued)

$\gamma(^{234}\text{U})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π	$E_i(\text{level})$	J_i^π	E_γ	I_γ^\dagger	E_f	J_f^π
2037.05	4 ⁺ ,5	1741.1 2	100 13	296.072 6 ⁺	6 ⁺	2115.66	4 ⁺	562.8 3	44 13	1552.555 5 ⁺	5 ⁺
		1893.4 3	≈13	143.352 4 ⁺	4 ⁺			1019.5 4	33 9	1096.12 6 ⁺	6 ⁺
2062.8	18 ⁺	375.0 5		1687.8 16 ⁺	16 ⁺			1153.5 3	55 9	962.546 5 ⁻	5 ⁻
2066.24	4 ⁺ ,5	975.1 1	40 11	1090.89 5 ⁺	5 ⁺			1819.8 3	5.0 13	296.072 6 ⁺	6 ⁺
		997.7 3	68 16	1069.281 4 ⁻	4 ⁻			1971.2 4	≈3.2	143.352 4 ⁺	4 ⁺
		1770.8 2	100 24	296.072 6 ⁺	6 ⁺			2072.2 4	5.0 25	43.4981 2 ⁺	2 ⁺
2068.81	3,4,5 ⁺	331.4 1	24 4	1737.43 3 ⁺	3 ⁺	2144.01	3 ⁺ ,4 ⁺	869.7 1	90 10	1274.29 (5 ⁺)	(5 ⁺)
		1925.4 2	100 14	143.352 4 ⁺	4 ⁺			1217.3 1	100 10	926.720 2 ⁺	2 ⁺
2101.43	5 ⁺	839.5 1	100 24	1261.782 7 ⁺	7 ⁺	2464.0	20 ⁺	401.2 5		2062.8 18 ⁺	18 ⁺
		1009.9 [@] 3		1090.89 5 ⁺	5 ⁺	2889.5	22 ⁺	425.5 5		2464.0 20 ⁺	20 ⁺
		1032.8 2	57 14	1069.281 4 ⁻	4 ⁻	3338.5	24 ⁺	449 1		2889.5 22 ⁺	22 ⁺
		1805.8 3	17 7	296.072 6 ⁺	6 ⁺	3807.5	26 ⁺	469		3338.5 24 ⁺	24 ⁺
		1958.0 4	32 9	143.352 4 ⁺	4 ⁺	4296.5	(28 ⁺)	489		3807.5 26 ⁺	26 ⁺
2115.66	4 ⁺	534.1 1	100 13	1581.59 (5 ⁻)	(5 ⁻)	4807?	(30 ⁺)	510 ^a		4296.5 (28 ⁺)	(28 ⁺)

[†] Relative photon intensity deexciting each level, adopted from 6.70-h ²³⁴Pa β^- decay, 1.159-min ²³⁴Pa β^- decay, and ²³⁸Pu α decay.

[‡] From ce data measured in 6.70-h ²³⁴Pa, 1.159-min ²³⁴Pa, ²³⁴Np and ²³⁸Pu decays. γ -ray multiplicities, deexciting levels with measured half-lives, have been included in square brackets with the purpose of calculating γ -ray transition rates.

Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

@ Multiply placed.

& Multiply placed with intensity suitably divided.

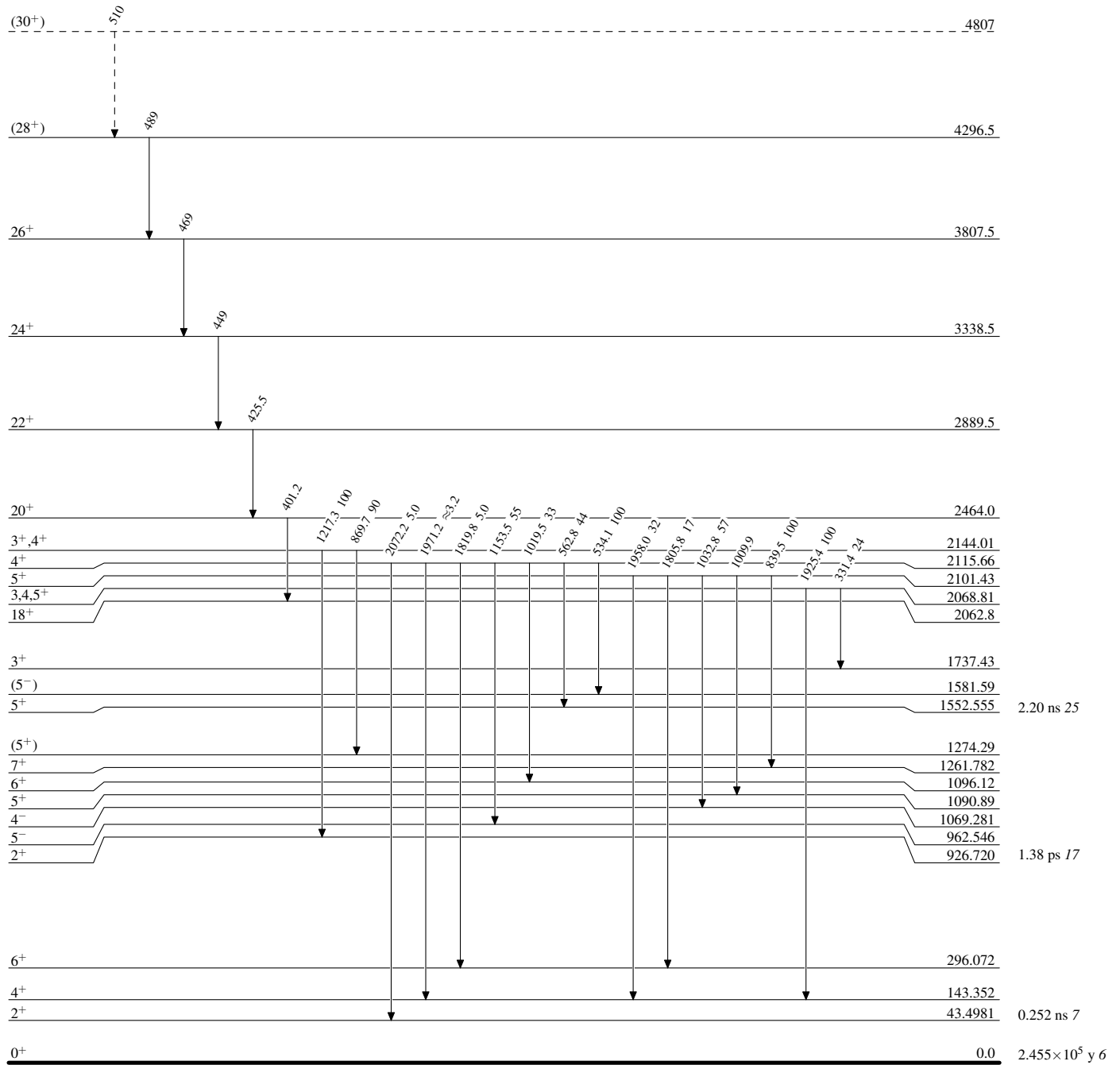
^a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain) $^{234}_{92}\text{U}_{142}$

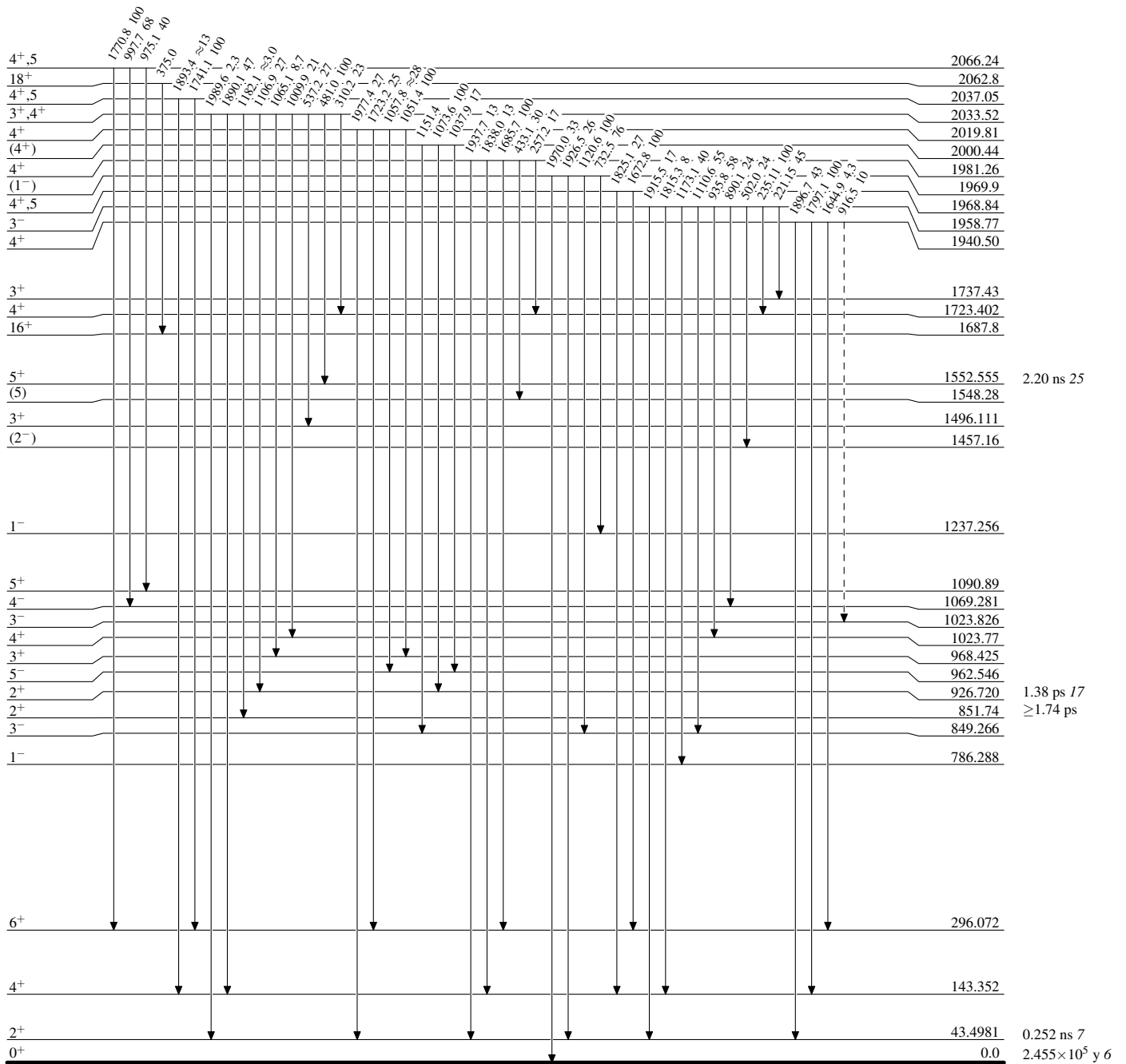
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----> γ Decay (Uncertain)



$^{234}_{92}\text{U}_{142}$

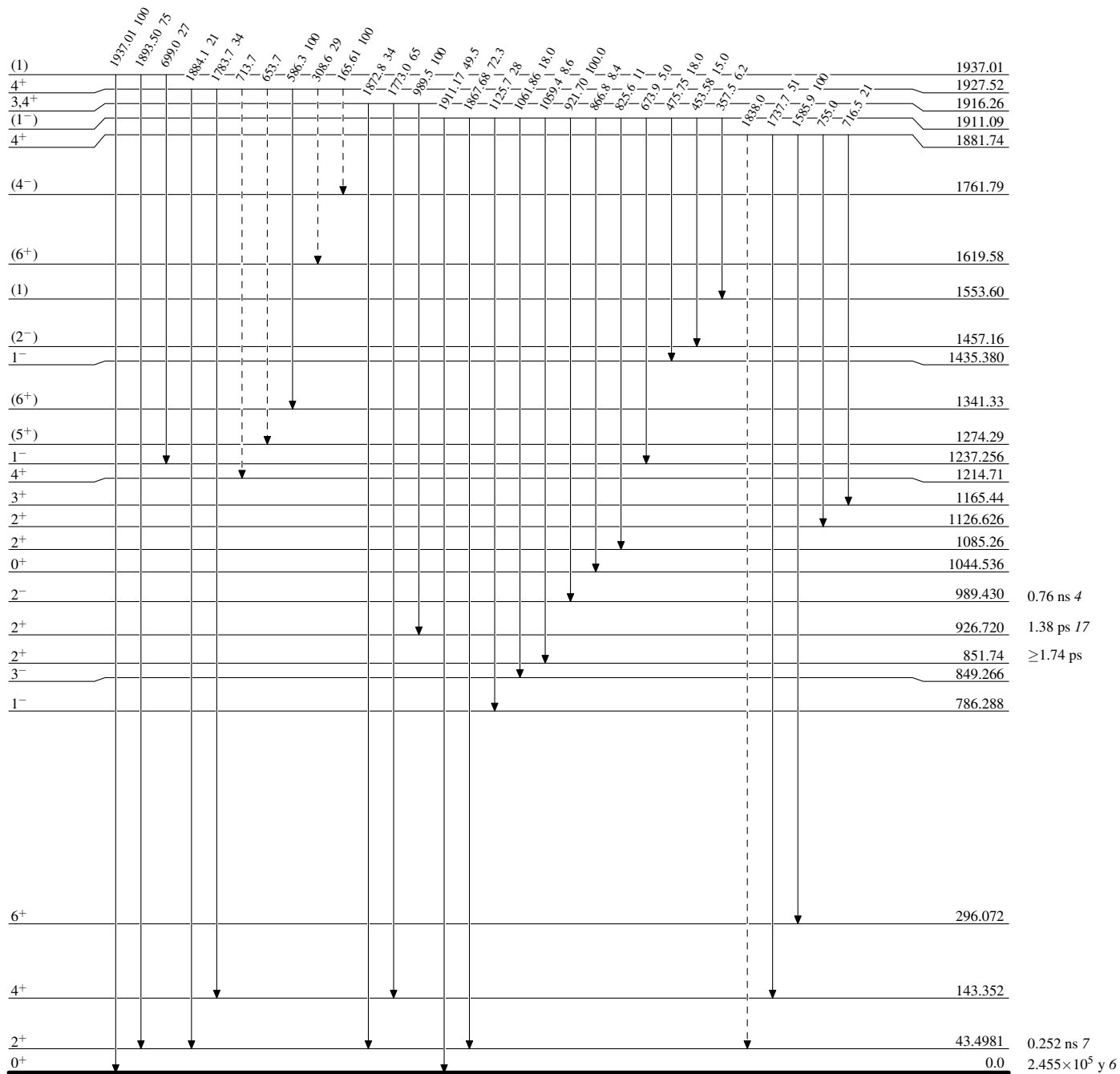
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)



$^{234}_{92}\text{U}_{142}$

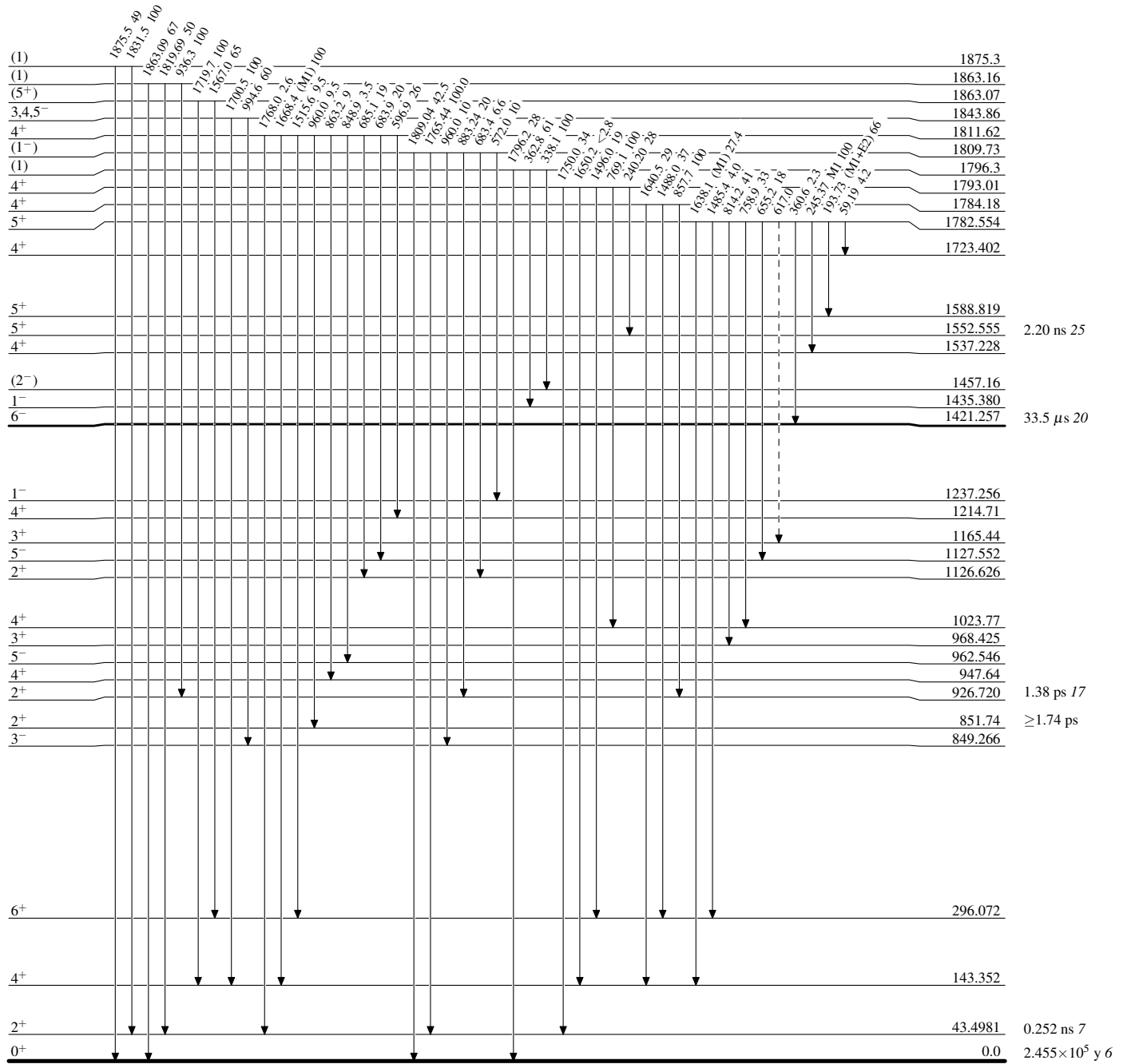
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----> γ Decay (Uncertain)



²³⁴U₉₂¹⁴²

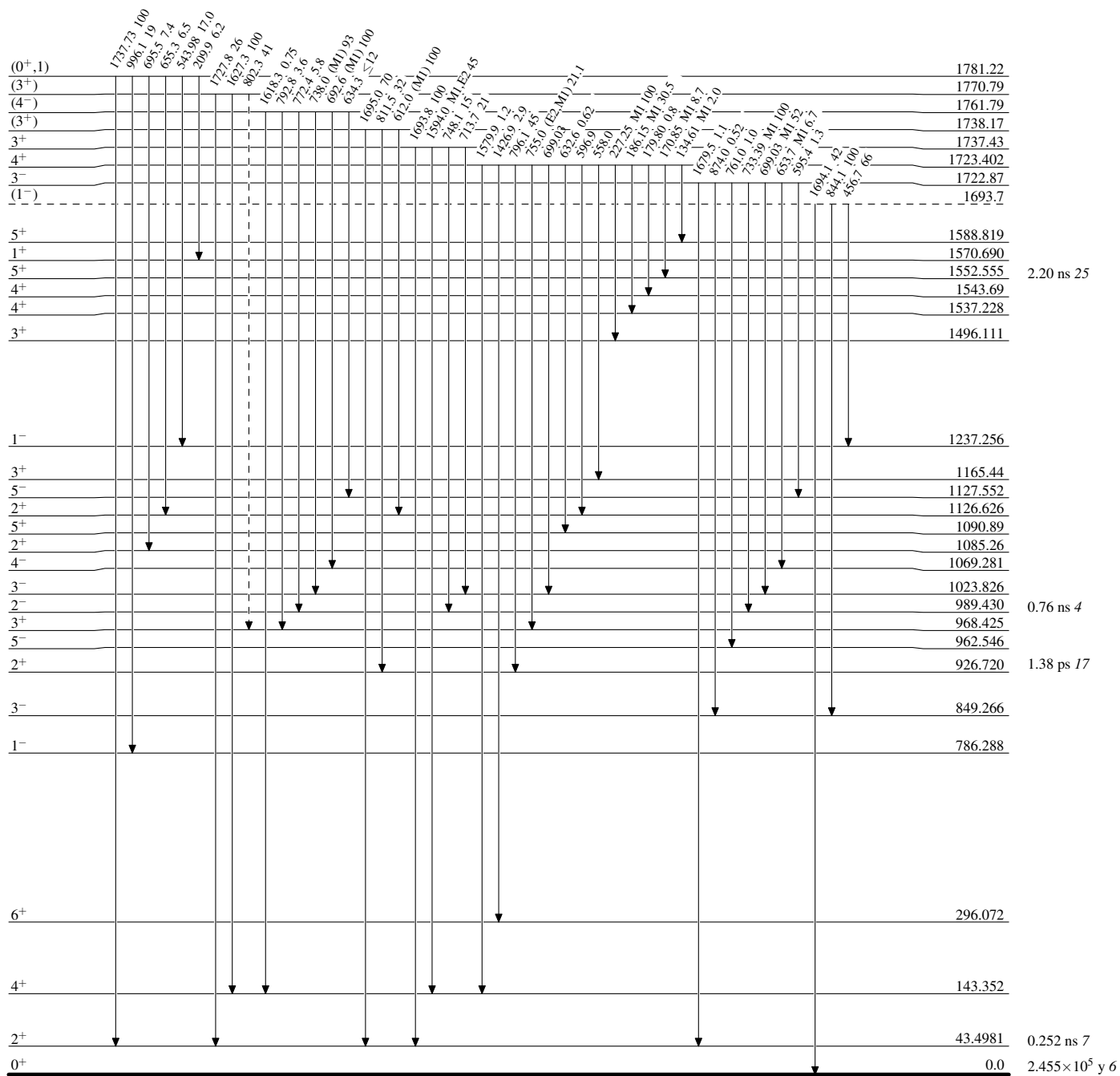
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----> γ Decay (Uncertain)



$^{234}_{92}\text{U}_{142}$

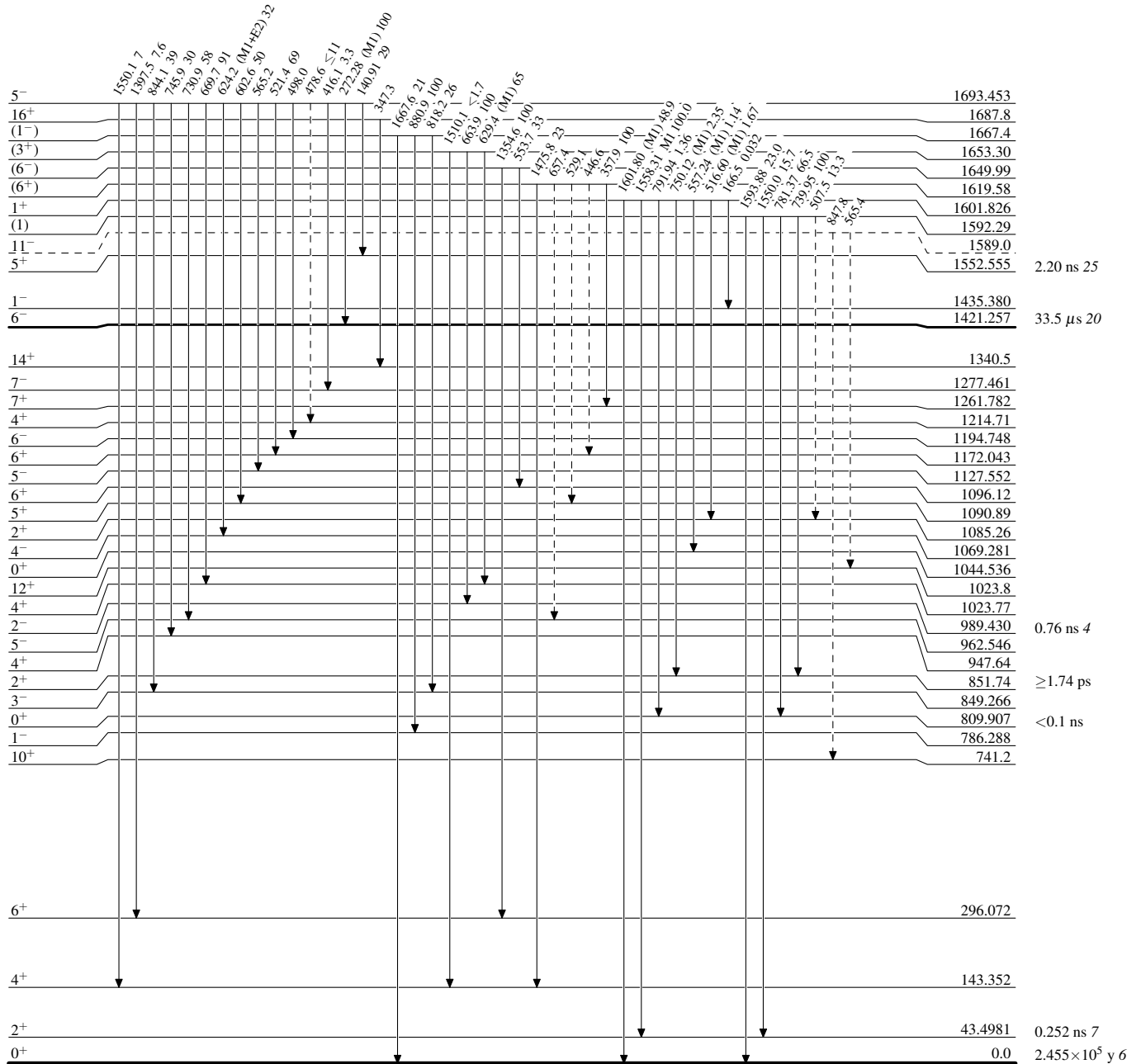
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----> γ Decay (Uncertain)



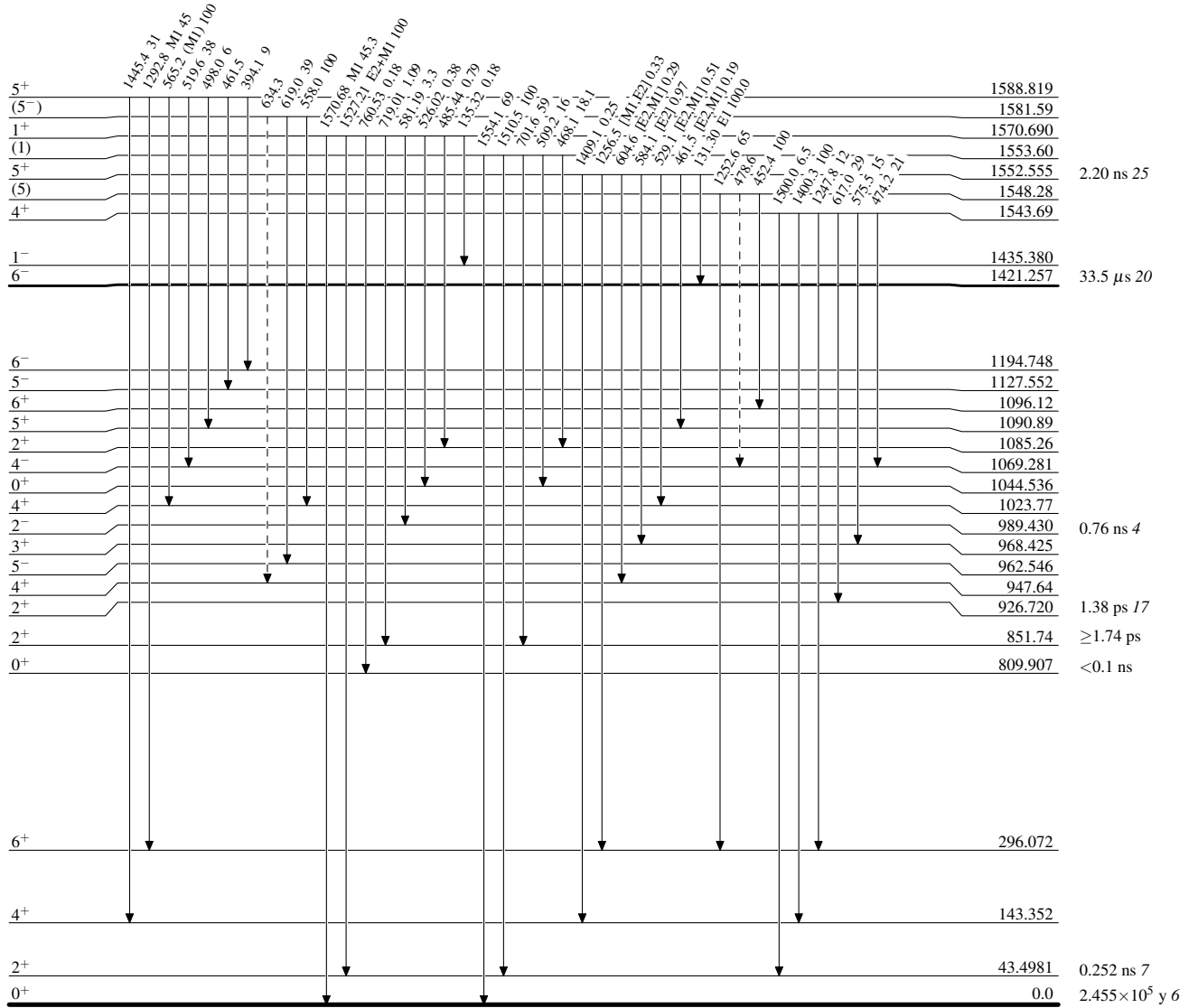
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)



$^{234}\text{U}_{142}$

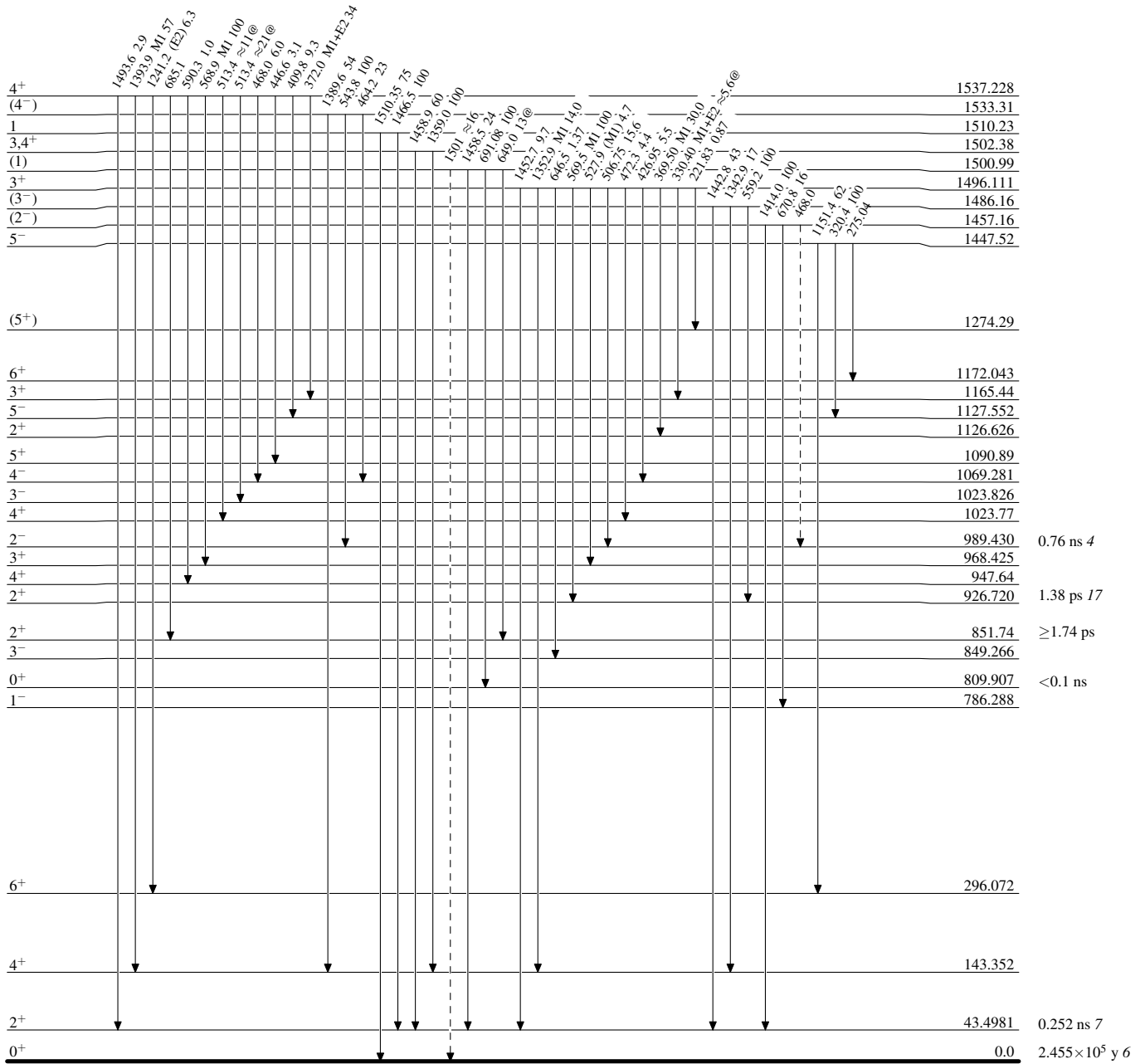
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----> γ Decay (Uncertain)



$^{234}_{92}\text{U}_{142}$

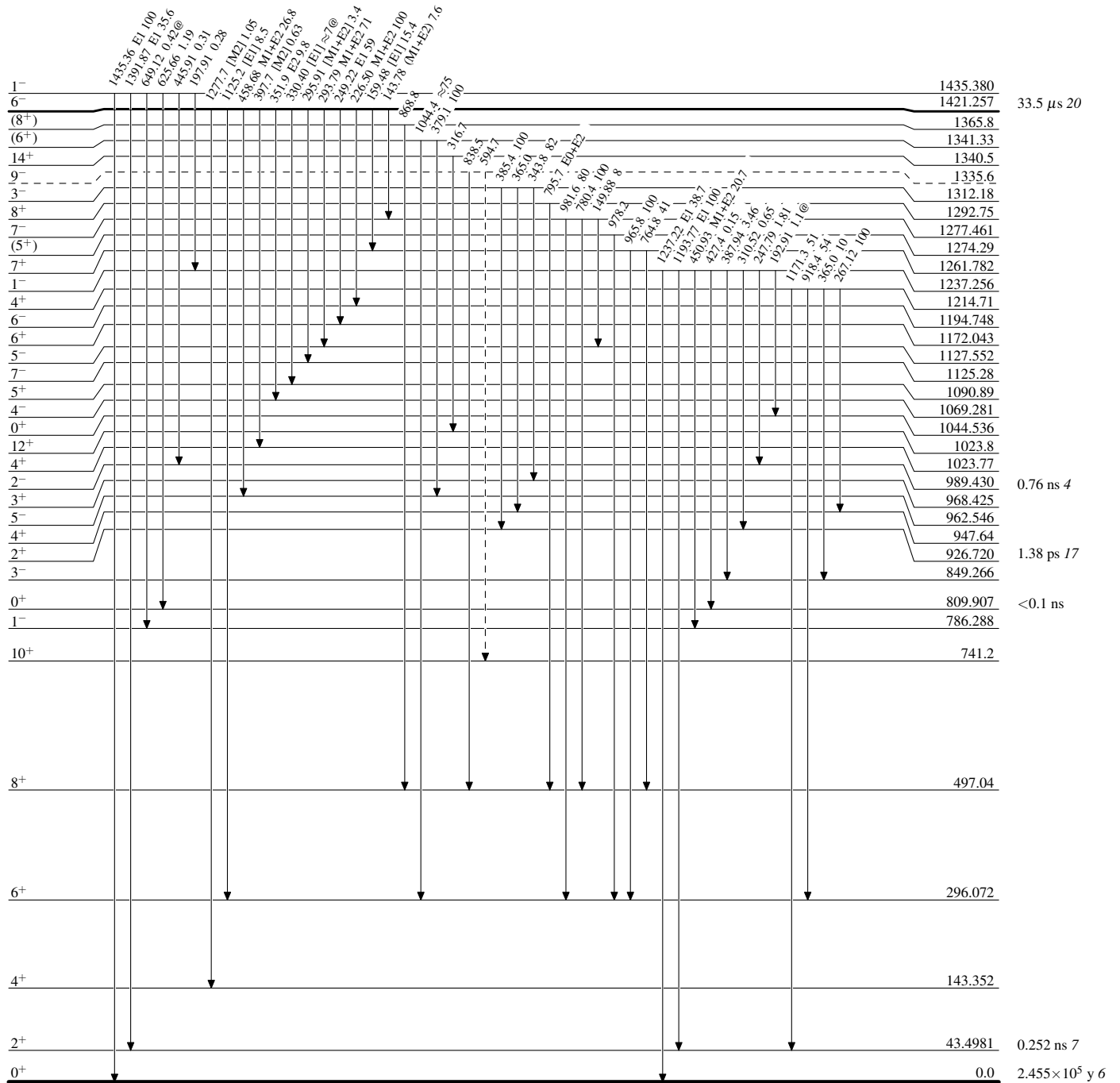
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----► γ Decay (Uncertain)



$^{234}_{92}\text{U}_{142}$

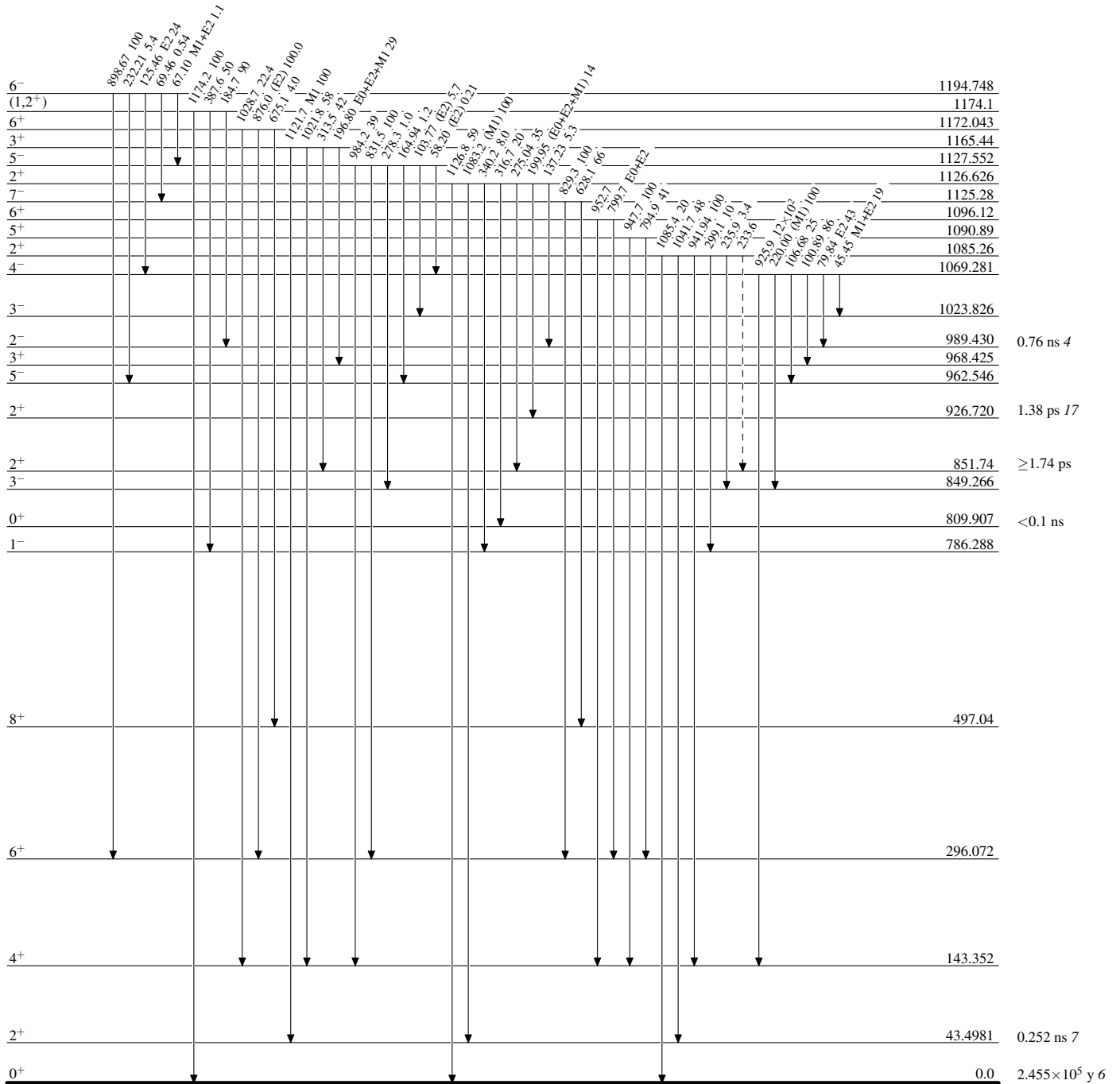
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

-----▶ γ Decay (Uncertain)



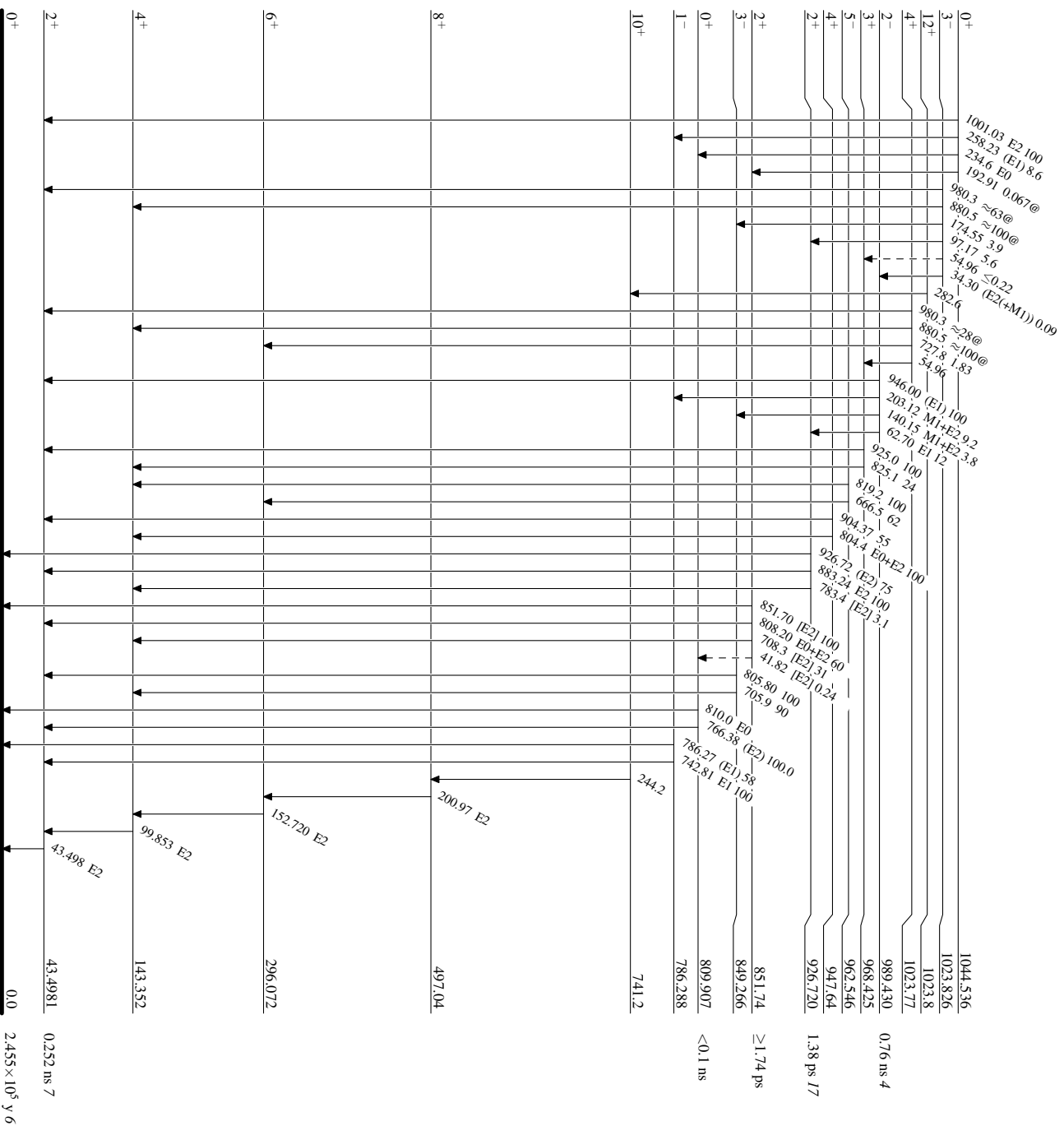
$^{234}_{92}\text{U}_{142}$

Adopted Levels, Gammas
Level Scheme (continued)

Legend

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

-----> γ Decay (Uncertain)



Adopted Levels, Gammas

Band(A): $K^\pi=0^-$
octupole-vibrational
band

11^- 1589.0

Band(C): $K^\pi=2^+$
 γ -vibrational band

(8^+) 1365.8

Band(F): $K^\pi=2^+$ band

(6^+) 1341.33

9^- 1335.6

Band(B): $K^\pi=0^+$
 β -vibrational band

8^+ 1292.75

Band(D): $K^\pi=2^-$
octupole-vibrational band

7^- 1277.461

(5^+) 1274.29

7^- 1125.28

6^+ 1096.12

7^+ 1261.782

6^- 1194.748

4^+ 1214.71

6^+ 1172.043

5^- 1127.552

3^+ 1165.44

5^+ 1090.89

Band(E): $K^\pi=0^+$ band

2^+ 1085.26

5^- 962.546

4^+ 947.64

4^+ 1023.77

4^- 1069.281

2^+ 1126.626

4^+ 1023.77

3^- 1023.826

3^+ 968.425

2^- 989.430

3^- 849.266

2^+ 851.74

3^+ 968.425

2^+ 926.720

1^- 786.288

0^+ 809.907

$^{234}_{92}\text{U}_{142}$

