Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, S. Singh, H. X. Nguyen, M. Patial	NDS 114, 661 (2013)	28-Feb-2013

Q(β^-)=−2892 *7*; S(n)=7746 *8*; S(p)=2983.1 *25*; Q(α)=5982.4 *13* 2012Wa38
S(2n)=14907 *6*, S(2p)=7966.6 *24* (2012Wa38).

^{211}At evaluated by B. Singh, S. Singh, H.X. Nguyen, M. Patial.

Nuclear structure calculations, and systematics:
Configurations: 2003Ca21, 2003By04, 1999Co30, 1991Wa22, 1985Be22, 1985Zw01, 1984Ci02, 1983Is09.
Additional information 1.
Intruder states: 1988Ar12.
Yrast levels: 1978Ma38.
Nuclear moments: 1988Sa08, 1977To04, 1974Is08.
Quadrupole-octupole deformation of g.s.: 1987Sh24.
B(E3) systematics: 1985Be05.
α decay probabilities: 1973Ma52.
Charged particle emission: 1986Pi11, 1984Po26.
Other reaction:
^{209}Bi(^{6}He,4n): 2002Pe03, 2000Pe16, 1998De50, 1994PuZZ.

^{211}At Levels

Configuration assignments are based on semi-empirical shell model calculations, which reproduced very well the energies of the yrast states (see 2001Ba79 for details).

Cross Reference (XREF) Flags

A	^{211}At IT decay (4.23 μs)	F	^{215}Fr α decay:prompt:1440 keV
B	^{211}Rn ε decay (14.6 h)	G	^{215}Fr α decay:prompt:1573 keV
C	^{215}Fr α decay (86 ns)	H	^{208}Pb(^{7}Li,4nγ)
D	^{215}Fr α decay:prompt:835 keV	I	^{209}Bi(α,2nγ)
E	^{215}Fr α decay:prompt:1121 keV		

E(level)[†]	J$^\pi$	T$_{1/2}$[‡]	XREF	Comments
0.0[@]	9/2$^-$	7.214 h *7*	ABCDEFGHI	%α=41.80 *8*; %ε=58.20 *8* J$^\pi$: spin from atomic beam (1958Ga16); parity from favored α transition (HF=1.54) from ^{211}At g.s. to 9/2$^-$ ^{207}Bi g.s. T$_{1/2}$: from 1961Ap01 (quoted uncertainty is at the 95% confidence level). Others: 7.23 h *2* (1978Ya04), 7.17 h *9* (1962Th08), 7.23 h *4* (1959Ra08), 7.20 h *5* (1956Gr11). %α: weighted average of 41.94 *16* (1985La17), 41.74 *10* (1978Ya04), 41.8 *2* (1969Go23). Others: 41.9 *5* (1975Ja04), 40.9 *5* (1951Ne02).
674.11 *7*	(7/2)$^-$		B HI	J$^\pi$: E1−>E2 cascade from (1/2)$^+$; (M1+E2) γ to 9/2$^-$ and $\gamma\gamma(\theta)$ in ^{211}Rn ε.
865.99 *7*	(7/2)$^-$		B HI	J$^\pi$: E1,E2 cascade from (1/2)$^+$; M1(+E2) γ to (7/2)$^-$ and $\gamma\gamma(\theta)$ in ^{211}Rn ε.
947.44 *7*	(5/2)$^-$		B HI	J$^\pi$: E2+M1 γ from (3/2)$^-$; (E2) γ to 9/2$^-$ and $\gamma\gamma(\theta)$ in ^{211}Rn ε.
1066.83[@] *15*	(13/2)$^-$	≤0.14 ns	A HI	J$^\pi$: (E2) γ to 9/2$^-$ level.
1116.21 *8*	(3/2)$^-$	0.57 ns *4*	B HI	J$^\pi$: E1 γ from (1/2)$^+$; E2,M1+E2 sequence to 9/2$^-$ and $\gamma\gamma(\theta)$ in ^{211}Rn ε. T$_{1/2}$: from (ce(K))(γ)(t) (1972As12, ^{211}Rn ε decay).

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Adopted Levels, Gammas (continued)

^{211}At Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF		Comments
1123.24[@] *16*	$(11/2)^-$			HI	Jπ: γ to $9/2^-$ g.s.; E2 γ from $(15/2^-)$.
1270.09[@] *17*	$(15/2)^-$	12.1 ns *15*		HI	g=0.91 *8* (1975McZO). Jπ: E2 γ to $(13/2)^-$ level; expected configuration suggests π=−. $T_{1/2}$: weighted average of 9.7 ns 28 (1995Ba66), 11.1 ns *28* (1975McZO), 13.0 ns *15* (1970Be37,1972As04). g: from ^{208}Pb(^{7}Li,4nγ) reaction.
1320.28[@] *21*	$(17/2)^-$	≤0.07 ns	A	HI	Jπ: stretched E2 γ to $(13/2)^-$ level.
1354.94 *15*	$(13/2)^+$			HI	Jπ: E1 gammas to $(11/2)^-$ and $(13/2)^-$.
1416.27[@] *25*	$(21/2)^-$	35.1 ns *7*	A	HI	μ=+9.56 *9* (1976Ha62,1989Ra17,2011StZZ) Q=0.53 *5* (1990Ha30,2011StZZ) Jπ: stretched E2 γ to $(17/2)^-$ level. $T_{1/2}$: from γγ(t) (1995Ba66). Others: 50 ns 5 (1970Be37,1972As04), 34 ns *5* (1975McZO,1976Ha62). μ: TDPAD method, for J=21/2 and g-factor=0.910 *9* (weighted average of measurements by 1976Ha62 and 1975In01). Q: level mixing resonance technique (1990Ha30). Q=0.524 *10* from B(E2) deduced from $T_{1/2}$=35.1 ns *7* (1995Ba66). Negative sign is suggested by 1995Ba66 from shell-model predictions.
1800.80 *8*	$(3/2)^-$		B		Jπ: M1 γ from $1/2^-$,$3/2^-$ level; (E2) γ to $(7/2)^-$ and γγ(θ) in ^{211}Rn ε.
1912.1 *3*				H	
1919.12 *25*				H	
1927.4[&] *3*	$(23/2)^-$[#]	≤0.21 ns	A	HI	Jπ: M1 γ to $(21/2)^-$ level.
1946.23 *22*				H	
1992.57 *9*	$(5/2)^-$		B		Jπ: M1 γ from $(3/2)^-$; γ to $9/2^-$ g.s.
2062.87 *9*	$1/2^-$,$3/2^-$		B		Jπ: E1 γ from $(1/2)^+$ level.
2108.72 *10*	$(3/2)^-$		B		Jπ: E1 γ from $(1/2)^+$ level; γ to $(7/2)^-$ level.
2128.71 *9*	$(5/2^-)$		B		Jπ: (M2) γ from $(1/2)^+$ level. $(5/2^-)$ is inconsistent with log *ft*=8.15 from $1/2^-$ parent state.
2139.6 *3*	$(21/2)^-$			H	Jπ: 212γ M1 to $(23/2)^-$; M1 γ between 2139.6 and 2284.6 levels.
2169.3 *3*				H	
2189.4 *6*				H	
2222.6 *4*				H	
2241.0 *6*				H	
2244.1 *6*				H	
2284.6 *3*	$(19/2)^-$			H	Jπ: gammas to $(15/2)^-$ and $(21/2)^-$; M1 γ between 2139.6 and 2284.6 levels.
2399.14 *25*				H	
2436.0 *4*				H	
2479.19 *8*	$(1/2)^+$		B		Jπ: log *ft*=5.59 from $1/2^-$; E1 ->E2 ->M1+E2 cascade to $9/2^-$; γγ(θ) in ^{211}Rn ε.
2555.4 *3*				H	
2581.5 *4*				H	
2609.4 *3*				H	
2616.3[a] *4*	$(25/2^+)$	≤0.28 ns	A	HI	Jπ: γ to $(23/2)^-$; shell model indicates $25/2^+$.
2636.08 *24*				H	
2640.7[a] *4*	$(29/2)^+$	50.8 ns *7*	A	HI	μ=+15.31 *13* (1976Ha62,1989Ra17,2011StZZ) Q=1.00 *5* (1995Ba66,2011StZZ) Jπ: E3 γ to $(23/2)^-$ level. $T_{1/2}$: from γ(t) (^{208}Pb(^{7}Li,4nγ)). Others: ≈50 ns in IT decay, 70 ns *5* (^{209}Bi(α,2nγ)). μ: TDPAD method, if J=29/2; g-factor measurements of 1976Ha62, 1975McZO, and 1975In01. Q: TDPAD method (1983Ma08); recalculated by 1995Ba66 from Q(1417, $21/2^-$)=0.524 *10* and Q($21/2^-$)/Q($29/2^+$)=0.52 *2*. Negative sign is suggested by 1995Ba66 from shell-model predictions.

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Adopted Levels, Gammas (continued)

^{211}At Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF		Comments
2655.16 *10*	1/2,3/2		B		Jπ: log *ft*=6.08 from 1/2⁻.
2678.0 *5*				H	
2693.1[a] *4*	(27/2)⁺[#]	≤0.28 ns		H	
2717.9 *6*				H	
2729.9 *6*				H	
2731.3 *4*				H	
2792.3 *4*				H	
2797.9 *6*				H	
2836.6 *5*				H	
2847.1 *4*				H	
2867.0 *6*				H	
2883.3 *4*				H	
2898.0 *4*				H	
2916.5 *5*				H	
2920.1 *6*				H	
2959.9 *6*				H	
3024.0 *6*				H	
3287.4[b] *4*	(27/2⁺)[#]	≤0.07 ns		H	
3312.8 *7*				H	
3341.7 *7*				H	
3391.7 *7*				H	
3431.4 *6*				H	
3475.0 *4*				H	
3487.4 *6*				H	
3509.3 *5*				H	
3555.5 *7*				H	
3814.2[b] *4*	(29/2⁺)[#]	≤0.21 ns		H	
3822.6 *5*				H	
4027.7 *6*				H	
4165.4[c] *4*	[33/2⁻]			H	Jπ: assignment based on shell-model calculations.
4175.5[d] *4*	(31/2⁺)	≤0.35 ns	A	HI	Jπ: (M1) γ to (29/2)⁺ level; shell-model calc. (1985Be22).
4288.9 *6*				H	
4308.3 *6*				H	
4334.5 *6*				H	
4379.3[e] *5*	(33/2⁺)	≤0.28 ns	A	HI	Jπ: M1+E2 γ to (31/2⁺) level; shell-model calc. (1985Be22).
4452.1 *7*				H	
4572.1 *7*				H	
4576.2 *7*				H	
4598.7 *7*				H	
4808.6 *7*				H	
4814.5[f] *5*	(39/2⁻)	4.23 μs *7*	A	HI	%IT=100 μ=13.46 *14* (1985Be22,1989Ra17,2011StZZ) Q=1.91 *25* (1991Sc15,2011StZZ) Jπ: E3 γ to (33/2⁺) level; shell-model calc. (1985Be22). $T_{1/2}$: from 2001Ba79. Other: 4.2 μs 4 (1971Ma36). μ: TDPAD method, if J=39/2, g-factor=0.690 *7* (1985Be22). Q: level mixing resonance technique (1991Sc15,1990Ha30).
4875.8 *7*				H	
4917.9 *7*				H	
4942.9 *7*				H	
4995.9 *7*				H	
5331.4[g] *5*	(41/2⁻)			H	Jπ: M1+E2 γ to (39/2⁻).
5418.4[i] *5*	(41/2⁻)			H	Jπ: M1 γ to (41/2⁻).
5909.8 *6*	(41/2,43/2)			H	Jπ: gammas to (41/2⁻) and (39/2⁻).
5917.4[h] *5*	(43/2⁺)[#]	≤0.7 ns		H	Jπ: E1 γ rays to (41/2⁻).

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Adopted Levels, Gammas (continued)

^{211}At Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[‡]	XREF	Comments
5940.3 *6*	(41/2,43/2)		H	
6017.3[j] *6*	(45/2$^+$)[#]	0.97 ns *14*	H	Jπ: γ M1 to (43/2$^+$).
6090.1 *7*			H	
6247.8 *8*			H	
6466.5 *6*	(45/2)		H	
6567.2[k] *6*	(49/2$^+$)	50.6 ns *14*	H	Jπ: E2 γ to (45/2$^+$).
6569.1 *8*			H	
6600.4 *6*	(47/2)		H	
6649.1 *8*			H	
6770.9 *8*			H	
6866.7 *8*			H	
6871.1 *8*			H	
6990.5 *8*			H	
7239.2 *8*			H	
7346.5 *8*			H	
7386.2 *7*	(51/2)		H	
7399.0 *8*			H	
7496.2 *8*			H	
7517.4[k] *6*	(55/2$^-$)[#]	24.3 ns *14*	H	
7573.2 *8*			H	
7621.2 *7*			H	
7658.2 *8*			H	
7848.4 *8*			H	
7920.2 *7*			H	
7972.2 *7*			H	
8120.3 *9*			H	
8232.8 *9*			H	
8337.1 *7*			H	
8829.0[k] *7*	[59/2$^-$]		H	
9814.8 *9*			H	
10016.0 *10*			H	

[†] From a least-squares fit to Eγ data.
[‡] From γγ(t), from 1995Ba66 and 2001Ba79, unless otherwise stated.
[#] Assignment based on γ-ray transition strengths in ^{211}Rn(^{7}Li,4nγ).
[@] Configuration=$\pi h^3_{9/2}$.
[&] Configuration=$\pi h^2_{9/2}\otimes\pi f^1_{7/2}$.
[a] Configuration=$\pi h^2_{9/2}\otimes\pi i^1_{13/2}$.
[b] Configuration=$\pi h^1_{9/2}\otimes\pi i^1_{13/2}\otimes\pi f^1_{7/2}$.
[c] Configuration=$\pi h^1_{9/2}\otimes\pi i^2_{13/2}$.
[d] Configuration=$\pi h^3_{9/2}\otimes\nu g^1_{9/2}\otimes\nu p^{-1}_{1/2}$.
[e] Configuration=$\pi h^2_{9/2}\otimes\pi f^1_{7/2}\otimes\nu p^{-1}_{1/2}\otimes \nu g^1_{9/2}$.
[f] Configuration=$\pi h^2_{9/2}\otimes\pi i^1_{13/2}\otimes\nu p^{-1}_{1/2}\otimes \nu g^1_{9/2}$.
[g] Configuration=$\pi h^2_{9/2}\otimes\pi i^1_{13/2}\otimes\nu i^1_{11/2}\otimes \nu p^{-1}_{1/2}$.
[h] Configuration=$\pi h^1_{9/2}\otimes\pi i^2_{13/2}\otimes\nu g^1_{9/2}\otimes \nu p^{-1}_{1/2}$.
[i] Configuration=$\pi h^2_{9/2}\otimes\pi i^1_{13/2}\otimes\nu g^1_{9/2}\otimes \nu f^{-1}_{5/2}$.
[j] Configuration=$\pi h^2_{9/2}\otimes\pi i^1_{13/2}\otimes\nu j^1_{15/2}\otimes \nu p^{-1}_{1/2}$.
[k] Double-core excitation.

Adopted Levels, Gammas (continued)

$\gamma(^{211}At)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡@]	α[#&a]	Comments
674.11	$(7/2)^-$	674.1 *1*	100	0.0	$9/2^-$	(M1+E2)	−0.65 *6*	0.0493 *19*	α(K)=0.0398 *16*; α(L)=0.00724 *24*; α(M)=0.00172 *6* α(N)=0.000445 *15*; α(O)=9.5×10^{-5} *3*; α(P)=1.29×10^{-5} *5* δ: from $\gamma\gamma(\theta)$ in ^{211}Rn ε.
865.99	$(7/2)^-$	191.8 *1*	11.4 *6*	674.11	$(7/2)^-$	M1(+E2)	−0.06 *18*	1.90 *8*	α(K)=1.54 *8*; α(L)=0.275 *4*; α(M)=0.0652 *12* α(N)=0.0169 *3*; α(O)=0.00361 *6*; α(P)=0.000499 *9* I_γ: 4.4 *13* in (^{7}Li,4nγ) and 7.7 in (α,2nγ) are in disagreement. δ: from $\gamma\gamma(\theta)$ in ^{211}Rn ε.
		866.0 *1*	100 *5*	0.0	$9/2^-$	(E2)		0.01025	α(K)=0.00792 *11*; α(L)=0.001769 *25*; α(M)=0.000430 *6* α(N)=0.0001113 *16*; α(O)=2.33×10^{-5} *4*; α(P)=3.01×10^{-6} *5*
947.44	$(5/2)^-$	947.4 *1*	100	0.0	$9/2^-$	(E2)		0.00859	α(K)=0.00671 *10*; α(L)=0.001427 *20*; α(M)=0.000345 *5* α(N)=8.93×10^{-5} *13*; α(O)=1.88×10^{-5} *3*; α(P)=2.44×10^{-6} *4*
1066.83	$(13/2)^-$	1066.9 *2*	100	0.0	$9/2^-$	(E2)		0.00683	α(K)=0.00540 *8*; α(L)=0.001086 *16*; α(M)=0.000261 *4* α(N)=6.75×10^{-5} *10*; α(O)=1.422×10^{-5} *20*; α(P)=1.87×10^{-6} *3* B(E2)(W.u.)>0.039 Mult.: from ce data in IT decay; $\gamma(\theta)$ (^{209}Bi(α,2nγ)).
1116.21	$(3/2)^-$	168.7 *1*	29.2 *16*	947.44	$(5/2)^-$	E2+M1	−2.9 *4*	1.12 *6*	α(K)=0.44 *7*; α(L)=0.499 *8*; α(M)=0.1318 *23* α(N)=0.0341 *6*; α(O)=0.00676 *12*; α(P)=0.000720 *11* B(M1)(W.u.)=0.00013 *4*; B(E2)(W.u.)=12.8 *14* δ: $\gamma\gamma(\theta)$ in ^{211}Rn ε.
		250.2 *1*	26.1 *14*	865.99	$(7/2)^-$	E2		0.232	α(K)=0.1017 *15*; α(L)=0.0969 *14*; α(M)=0.0255 *4* α(N)=0.00660 *10*; α(O)=0.001316 *19*; α(P)=0.0001419 *20* B(E2)(W.u.)=1.78 *18* Mult.: from ce data, $\gamma\gamma(\theta)$ (^{211}Rn ε decay).
		442.2 *1*	100 *6*	674.11	$(7/2)^-$	E2		0.0454	α(K)=0.0295 *5*; α(L)=0.01192 *17*; α(M)=0.00304 *5* α(N)=0.000786 *11*; α(O)=0.0001601 *23*; α(P)=1.88×10^{-5} *3* B(E2)(W.u.)=0.40 *4* Mult.: from ce data, $\gamma\gamma(\theta)$ (^{211}Rn ε decay).
1123.24	$(11/2)^-$	1123.2 *2*	100	0.0	$9/2^-$				
1270.09	$(15/2)^-$	146.8 *2*	90 *5*	1123.24	$(11/2)^-$	E2		1.579	α(K)=0.301 *5*; α(L)=0.946 *14*; α(M)=0.253 *4* α(N)=0.0654 *10*; α(O)=0.01287 *18*; α(P)=0.001321 *19* B(E2)(W.u.)=1.7 *3*
		203.3 *2*	100 *15*	1066.83	$(13/2)^-$	E2		0.468	α(K)=0.1601 *23*; α(L)=0.229 *4*; α(M)=0.0607 *9* α(N)=0.01569 *23*; α(O)=0.00311 *5*; α(P)=0.000328 *5* B(E2)(W.u.)=0.37 *8*
1320.28	$(17/2)^-$	253.5 *2*	100	1066.83	$(13/2)^-$	E2		0.223	α(K)=0.0987 *15*; α(L)=0.0920 *15*; α(M)=0.0242 *4* α(N)=0.00626 *11*; α(O)=0.001248 *21*; α(P)=0.0001348 *22* B(E2)(W.u.)>84 Mult.: from ce data, $\gamma(\theta)$ in IT decay; $\alpha\gamma(\theta)$ (^{209}Bi(α,2nγ)).
1354.94	$(13/2)^+$	231.7 *5*	20.6 *11*	1123.24	$(11/2)^-$	E1		0.0590	α(K)=0.0477 *8*; α(L)=0.00864 *13*; α(M)=0.00204 *3* α(N)=0.000525 *8*; α(O)=0.0001092 *17*; α(P)=1.396×10^{-5} *21*
		288.1 *2*	47 *3*	1066.83	$(13/2)^-$	E1		0.0354	α(K)=0.0288 *4*; α(L)=0.00508 *8*; α(M)=0.001198 *17* α(N)=0.000308 *5*; α(O)=6.44×10^{-5} *9*; α(P)=8.34×10^{-6} *12*

$^{211}_{85}At_{126}$-5

Adopted Levels, Gammas (continued)

γ(^{211}At) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡@]	α[#&a]	Comments
1354.94	(13/2)$^+$	1354.9 *2*	100 *5*	0.0	9/2$^-$	[M2]		0.0242	α(K)=0.0194 *3*; α(L)=0.00359 *5*; α(M)=0.000856 *12* α(N)=0.000222 *4*; α(O)=4.75×10^{-5} *7*; α(P)=6.55×10^{-6} *10*; α(IPF)=1.376×10^{-5} *20*
1416.27	(21/2)$^-$	95.9 *2*	100	1320.28	(17/2)$^-$	E2		9.04 *16*	α(L)=6.69 *12*; α(M)=1.79 *3* α(N)=0.463 *8*; α(O)=0.0907 *16*; α(P)=0.00913 *16* B(E2)(W.u.)=2.66 *10* Mult.: from ce data in IT decay; intensity balance and stretched E2 from αγ(θ) (^{209}Bi(α,2nγ)).
1800.80	(3/2)$^-$	684.7 *1*	2.6 *2*	1116.21	(3/2)$^-$				
		853.4 *1*	20.8 *10*	947.44	(5/2)$^-$	(M1+E2)	−0.38 *11*	0.0310 *17*	α(K)=0.0252 *14*; α(L)=0.00440 *21*; α(M)=0.00104 *5* α(N)=0.000269 *13*; α(O)=5.7×10^{-5} *3*; α(P)=7.9×10^{-6} *4*
		934.7 *1*	16.5 *8*	865.99	(7/2)$^-$	(E2)		0.00882	α(K)=0.00688 *10*; α(L)=0.001473 *21*; α(M)=0.000357 *5* α(N)=9.22×10^{-5} *13*; α(O)=1.94×10^{-5} *3*; α(P)=2.52×10^{-6} *4*
		1126.7 *1*	100 *6*	674.11	(7/2)$^-$	(E2)		0.00616	α(K)=0.00489 *7*; α(L)=0.000962 *14*; α(M)=0.000231 *4* α(N)=5.96×10^{-5} *9*; α(O)=1.258×10^{-5} *18*; α(P)=1.666×10^{-6} *24*; α(IPF)=3.94×10^{-7} *6*
1912.1		642.0 *2*	100	1270.09	(15/2)$^-$				
1919.12		502.8 *2*	29.8 *18*	1416.27	(21/2)$^-$				
		598.9 *2*	100 *4*	1320.28	(17/2)$^-$				
1927.4	(23/2)$^-$	511.1 *2*	100	1416.27	(21/2)$^-$	M1		0.1306	α(K)=0.1062 *16*; α(L)=0.0185 *3*; α(M)=0.00438 *7* α(N)=0.001133 *17*; α(O)=0.000243 *4*; α(P)=3.36×10^{-5} *5* B(M1)(W.u.)>0.00069 Mult.: from ce and γ(θ) in IT decay.
1946.23		626.0 *2*	91 *4*	1320.28	(17/2)$^-$				
		676.1 *2*	100 *9*	1270.09	(15/2)$^-$				
1992.57	(5/2)$^-$	1044.7 *4*	12 *4*	947.44	(5/2)$^-$				
		1318.3 *1*	25 *3*	674.11	(7/2)$^-$				
		1992.7 *2*	100 *5*	0.0	9/2$^-$				
2062.87	1/2$^-$,3/2$^-$	262.1 *1*	4.5 *5*	1800.80	(3/2)$^-$	M1		0.798	α(K)=0.647 *9*; α(L)=0.1148 *17*; α(M)=0.0272 *4* α(N)=0.00703 *10*; α(O)=0.001506 *22*; α(P)=0.000208 *3*
		946.7 *1*	100 *27*	1116.21	(3/2)$^-$	(M1)		0.0259	α(K)=0.0212 *3*; α(L)=0.00363 *5*; α(M)=0.000855 *12* α(N)=0.000221 *4*; α(O)=4.75×10^{-5} *7*; α(P)=6.57×10^{-6} *10*
		1115.5[b] *3*	1.8 *9*	947.44	(5/2)$^-$				
2108.72	(3/2)$^-$	116.0 *1*	100 *10*	1992.57	(5/2)$^-$	M1(+E2)	<0.65	7.4 *6*	α(K)=5.5 *9*; α(L)=1.39 *24*; α(M)=0.34 *7* α(N)=0.089 *18*; α(O)=0.018 *4*; α(P)=0.0023 *3*
		992.5[b]	≈1500	1116.21	(3/2)$^-$				
		1242.9 *2*	75 *15*	865.99	(7/2)$^-$				
		1435.1 *2*	75 *10*	674.11	(7/2)$^-$				
2128.71	(5/2$^-$)	1012.5 *1*	14.7 *13*	1116.21	(3/2)$^-$				
		1181.3 *1*	100 *6*	947.44	(5/2)$^-$				
		2129.0[b] *3*	0.31 *12*	0.0	9/2$^-$				

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Adopted Levels, Gammas (continued)

γ(^{211}At) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡@]	α[#&a]	Comments
2139.6	(21/2)$^-$	212.0 *5*	7.2 *3*	1927.4	(23/2)$^-$	M1		1.439 *23*	α(K)=1.166 *17*; α(L)=0.208 *3*; α(M)=0.0491 *7* α(N)=0.01273 *18*; α(O)=0.00272 *4*; α(P)=0.000376 *6*
		723.3 *2*	100 *3*	1416.27	(21/2)$^-$				
2169.3		899.2 *2*	100	1270.09	(15/2)$^-$				
2189.4		834.5 *5*	100	1354.94	(13/2)$^+$				
2222.6		303.5 *5*	21 *3*	1919.12					
		902.2 *5*	100 *6*	1320.28	(17/2)$^-$				
		952.4 *5*	32 *4*	1270.09	(15/2)$^-$				
2241.0		886.1 *5*	100	1354.94	(13/2)$^+$				
2244.1		332.0 *5*	100	1912.1					
2284.6	(19/2)$^-$	144.8 *5*	29.3 *24*	2139.6	(21/2)$^-$	M1		4.21 *8*	α(K)=3.41 *5*; α(L)=0.611 *9*; α(M)=0.1447 *21* α(N)=0.0375 *6*; α(O)=0.00803 *12*; α(P)=0.001108 *16*
		338.5 *5*	63 *10*	1946.23					
		365.5 *5*	51 *7*	1919.12					
		868.1 *5*	27 *12*	1416.27	(21/2)$^-$				
		964.6 *5*	100 *5*	1320.28	(17/2)$^-$				
		1014.5 *5*	76 *10*	1270.09	(15/2)$^-$				
2399.14		1044.2 *2*	100	1354.94	(13/2)$^+$				
2436.0		1081.0 *5*	100 *25*	1354.94	(13/2)$^+$				
		1312.8 *5*	96 *21*	1123.24	(11/2)$^-$				
2479.19	(1/2)$^+$	350.5 *1*	1.22 *8*	2128.71	(5/2$^-$)	(M2)		1.200	α(K)=0.903 *13*; α(L)=0.224 *4*; α(M)=0.0555 *8* α(N)=0.01449 *21*; α(O)=0.00308 *5*; α(P)=0.000416 *6*
		370.5 *1*	4.2 *3*	2108.72	(3/2)$^-$	E1		0.0201	α(K)=0.01642 *23*; α(L)=0.00282 *4*; α(M)=0.000663 *10* α(N)=0.0001703 *24*; α(O)=3.58×10^{-5} *5*; α(P)=4.70×10^{-6} *7*
		416.4 *1*	10.7 *6*	2062.87	1/2$^-$,3/2$^-$	E1		0.01561	α(K)=0.01278 *18*; α(L)=0.00216 *3*; α(M)=0.000508 *8* α(N)=0.0001308 *19*; α(O)=2.75×10^{-5} *4*; α(P)=3.64×10^{-6} *5*
		678.4 *1*	89 *4*	1800.80	(3/2)$^-$	(E1+M2)	0.23 *5*	0.014 *4*	α(K)=0.011 *3*; α(L)=0.0020 *6*; α(M)=0.00049 *14* α(N)=0.00013 *4*; α(O)=2.7×10^{-5} *8*; α(P)=3.7×10^{-6} *11*
		1362.9 *1*	100 *6*	1116.21	(3/2)$^-$	E1+M2	−0.12 *3*	0.00204 *18*	α(K)=0.00162 *14*; α(L)=0.00026 *3*; α(M)=6.0×10^{-5} *7* α(N)=1.56×10^{-5} *17*; α(O)=3.3×10^{-6} *4*; α(P)=4.6×10^{-7} *5*; α(IPF)=7.95×10^{-5} *13*
		1531.8 *3*	0.14 *7*	947.44	(5/2)$^-$				
		1805.0 *2*	0.36 *7*	674.11	(7/2)$^-$	[E3]		0.00528	α(K)=0.00410 *6*; α(L)=0.000825 *12*; α(M)=0.000198 *3* α(N)=5.14×10^{-5} *8*; α(O)=1.088×10^{-5} *16*; α(P)=1.455×10^{-6} *21*; α(IPF)=9.61×10^{-5} *14*
2555.4		1235.1 *2*	100	1320.28	(17/2)$^-$				
2581.5		662.4 *2*	100	1919.12					
2609.4		469.7 *5*	10.0 *20*	2139.6	(21/2)$^-$				
		682.0 *5*	26.7 *13*	1927.4	(23/2)$^-$				
		1193.1 *2*	100 *7*	1416.27	(21/2)$^-$				
2616.3	(25/2$^+$)	688.9 *2*	100	1927.4	(23/2)$^-$	(E1)		0.00563	α(K)=0.00465 *7*; α(L)=0.000750 *11*; α(M)=0.0001752 *25* α(N)=4.51×10^{-5} *7*; α(O)=9.57×10^{-6} *14*; α(P)=1.292×10^{-6} *19*

Adopted Levels, Gammas (continued)

γ(^{211}At) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[#&a]	$I_{(\gamma+ce)}$	Comments
									B(E1)(W.u.)>2.0×10^{-6} Mult.: E1, E2 from ce data in IT decay, ΔJ^π favors E1.
2636.08		1281.0 *5*	14 *3*	1354.94	(13/2)$^+$				
		1366.0 *2*	100 *8*	1270.09	(15/2)$^-$				
2640.7	(29/2)$^+$	(24.4 *5*)	0.048 *7*	2616.3	(25/2$^+$)	[E2]	6.9×10^3 *8*	344 *31*	ce(L)/(γ+ce)=0.74 *6*; ce(M)/(γ+ce)=0.20 *3* ce(N)/(γ+ce)=0.051 *8*; ce(O)/(γ+ce)=0.0098 *15*; ce(P)/(γ+ce)=0.00097 *15* α(L)=5.2×10^3 *6*; α(M)=1.36×10^3 *15*; α(N)=3.5×10^2 *4*; α(O)=68 *8*; α(P)=6.7 *8* B(E2)(W.u.)=1.8 *3* E_γ: deduced from level scheme; γ unobserved. $I_{(\gamma+ce)}$: I(γ+ce)(24.2γ)/I(γ+ce)(713.6γ)=3.3 *3*, deduced from intensity balance in IT decay. I_γ: from I(γ+ce) and α.
		713.3 *2*	100 *5*	1927.4	(23/2)$^-$	E3	0.0418		α(K)=0.0265 *4*; α(L)=0.01142 *16*; α(M)=0.00294 *5* α(N)=0.000763 *11*; α(O)=0.0001567 *22*; α(P)=1.89×10^{-5} *3* B(E3)(W.u.)=21.5 *19* Mult.: from ce data and RUL (^{209}Bi(α,2nγ)) and IT decay.
2655.16	1/2,3/2	176.0 *1*	1.3 *3*	2479.19	(1/2)$^+$				
		592.3 *1*	5.6 *5*	2062.87	1/2$^-$,3/2$^-$				
		1538.8 *2*	100 *11*	1116.21	(3/2)$^-$				
2678.0		455.4 *5*	<53	2222.6					
		759.0 *5*	100 *25*	1919.12					
2693.1	(27/2)$^+$	52.5 *5*	100 *6*	2640.7	(29/2)$^+$	M1	15.2 *5*		α(L)=11.6 *4*; α(M)=2.75 *9* α(N)=0.712 *23*; α(O)=0.152 *5*; α(P)=0.0211 *7* B(M1)(W.u.)>0.024
		76.9 *5*	92 *6*	2616.3	(25/2$^+$)	M1	4.99 *12*		α(L)=3.80 *9*; α(M)=0.899 *22* α(N)=0.233 *6*; α(O)=0.0499 *12*; α(P)=0.00689 *17* B(M1)(W.u.)>0.0071
2717.9		1363.0 *5*	100	1354.94	(13/2)$^+$				
2729.9		810.8 *5*	100	1919.12					
2731.3		591.7 *5*	100 *10*	2139.6	(21/2)$^-$				
		803.8 *5*	36.1 *21*	1927.4	(23/2)$^-$				
		1315.0 *5*	79 *5*	1416.27	(21/2)$^-$				
2792.3		236.7 *5*	17 *1*	2555.4					
		1376.1 *5*	75 *5*	1416.27	(21/2)$^-$				
		1472.0 *5*	100 *10*	1320.28	(17/2)$^-$				
2797.9		1443.0 *5*	100	1354.94	(13/2)$^+$				
2836.6		552.0 *5*	25 *6*	2284.6	(19/2)$^-$				
		697.0 *5*	100 *25*	2139.6	(21/2)$^-$				
2847.1		211.0 *5*	10.0 *25*	2636.08					
		1577.0 *5*	100 *9*	1270.09	(15/2)$^-$				
2867.0		1512.1 *5*	100	1354.94	(13/2)$^+$				

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γ(^{211}At) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α[#&a]	Comments
2883.3		1528.3 *5*	62 *14*	1354.94	(13/2)$^+$			
		1613.2 *5*	100 *7*	1270.09	(15/2)$^-$			
2898.0		1543.0 *5*	<42	1354.94	(13/2)$^+$			
		1628.0 *5*	100 *8*	1270.09	(15/2)$^-$			
2916.5		777.0 *5*	100 *13*	2139.6	(21/2)$^-$			
		989.1 *5*	64 *4*	1927.4	(23/2)$^-$			
2920.1		1650.0 *5*	100	1270.09	(15/2)$^-$			
2959.9		820.3 *5*	100	2139.6	(21/2)$^-$			
3024.0		1096.6 *5*	100	1927.4	(23/2)$^-$			
3287.4	(27/2$^+$)	594.3 *2*	100 *3*	2693.1	(27/2)$^+$	[M1]	0.0876	α(K)=0.0713 *10*; α(L)=0.01239 *18*; α(M)=0.00292 *4* α(N)=0.000757 *11*; α(O)=0.0001622 *23*; α(P)=2.24×10^{-5} *4* B(M1)(W.u.)>0.00094
		646.7 *5*	35 *3*	2640.7	(29/2)$^+$	[M1]	0.0701	α(K)=0.0571 *8*; α(L)=0.00991 *14*; α(M)=0.00234 *4* α(N)=0.000605 *9*; α(O)=0.0001296 *19*; α(P)=1.79×10^{-5} *3* B(M1)(W.u.)>0.00026
		671.0 *5*	12 *3*	2616.3	(25/2$^+$)	[M1]	0.0637	α(K)=0.0519 *8*; α(L)=0.00899 *13*; α(M)=0.00212 *3* α(N)=0.000549 *8*; α(O)=0.0001176 *17*; α(P)=1.627×10^{-5} *23* B(M1)(W.u.)>7.8×10^{-5}
3312.8		581.5 *5*	100	2731.3				
3341.7		549.4 *5*	100	2792.3				
3391.7		555.1 *5*	100	2836.6				
3431.4		1504.0 *5*	100	1927.4	(23/2)$^-$			
3475.0		1547.6 *2*	100	1927.4	(23/2)$^-$			
3487.4		1560.0 *5*	100	1927.4	(23/2)$^-$			
3509.3		778.0 *5*	57 *17*	2731.3				
		1369.7 *5*	100 *22*	2139.6	(21/2)$^-$			
3555.5		763.2 *5*	100	2792.3				
3814.2	(29/2$^+$)	526.8 *5*	93.0 *23*	3287.4	(27/2$^+$)	M1	0.1205	α(K)=0.0980 *14*; α(L)=0.01710 *24*; α(M)=0.00404 *6* α(N)=0.001045 *15*; α(O)=0.000224 *4*; α(P)=3.10×10^{-5} *5* B(M1)(W.u.)>0.00027
		1121.0 *5*	27.9 *23*	2693.1	(27/2)$^+$	[M1]	0.01676	α(K)=0.01369 *20*; α(L)=0.00234 *4*; α(M)=0.000550 *8* α(N)=0.0001423 *20*; α(O)=3.05×10^{-5} *5*; α(P)=4.23×10^{-6} *6*; α(IPF)=6.50×10^{-7} *16* B(M1)(W.u.)>8.5×10^{-6}
		1173.5 *5*	100.0 *23*	2640.7	(29/2)$^+$	[M1]	0.01488	α(K)=0.01216 *17*; α(L)=0.00207 *3*; α(M)=0.000488 *7* α(N)=0.0001262 *18*; α(O)=2.71×10^{-5} *4*; α(P)=3.75×10^{-6} *6*; α(IPF)=3.83×10^{-6} *6* B(M1)(W.u.)>2.7×10^{-5}
		1197.8 *5*	9.3 *23*	2616.3	(25/2$^+$)	[E2]	0.00549	α(K)=0.00438 *7*; α(L)=0.000841 *12*; α(M)=0.000201 *3* α(N)=5.20×10^{-5} *8*; α(O)=1.099×10^{-5} *16*; α(P)=1.462×10^{-6} *21*; α(IPF)=3.43×10^{-6} *7* B(E2)(W.u.)>0.00056
3822.6		347.6 *5*	81 *10*	3475.0				

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Adopted Levels, Gammas (continued)

γ(^{211}At) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡@]	α[#&a]	Comments
3822.6		1895.1 *5*	100 *10*	1927.4	$(23/2)^-$				
4027.7		1387.0 *5*	100	2640.7	$(29/2)^+$				
4165.4	$[33/2^-]$	1524.7 *2*	100	2640.7	$(29/2)^+$				
4175.5	$(31/2^+)$	361.2 *5*	5.3 *5*	3814.2	$(29/2^+)$	M1		0.332	α(K)=0.270 *4*; α(L)=0.0475 *7*; α(M)=0.01123 *16* α(N)=0.00291 *4*; α(O)=0.000623 *9*; α(P)=8.60×10^{-5} *12* B(M1)(W.u.)>6.5×10^{-5}
		1534.8 *2*	100.0 *24*	2640.7	$(29/2)^+$	(M1)		0.00759	α(K)=0.00610 *9*; α(L)=0.001032 *15*; α(M)=0.000243 *4* α(N)=6.28×10^{-5} *9*; α(O)=1.347×10^{-5} *19*; α(P)=1.87×10^{-6} *3*; α(IPF)=0.0001358 *19* B(M1)(W.u.)>1.6×10^{-5} Mult.: from ce data, γ(θ) and RUL.
4288.9		1648.2 *5*	100	2640.7	$(29/2)^+$				
4308.3		1667.6 *5*	100	2640.7	$(29/2)^+$				
4334.5		158.9 *5*	94 *13*	4175.5	$(31/2^+)$				
		520.5 *5*	100 *13*	3814.2	$(29/2^+)$				
4379.3	$(33/2^+)$	203.8 *2*	100	4175.5	$(31/2^+)$	M1+E2	0.8 *4*	1.2 *3*	B(M1)(W.u.)>0.0014; B(E2)(W.u.)>4.6 α(K)=0.9 *3*; α(L)=0.230 *4*; α(M)=0.0570 *16* α(N)=0.0148 *4*; α(O)=0.00306 *5*; α(P)=0.000384 *25*
4452.1		637.9 *5*	100	3814.2	$(29/2^+)$				
4572.1		396.6 *5*	100	4175.5	$(31/2^+)$				
4576.2		762.0 *5*	100	3814.2	$(29/2^+)$				
4598.7		784.5 *5*	100	3814.2	$(29/2^+)$				
4808.6		633.1 *5*	100	4175.5	$(31/2^+)$				
4814.5	$(39/2^-)$	435.2 *2*	100	4379.3	$(33/2^+)$	E3		0.184	α(K)=0.0780 *11*; α(L)=0.0787 *12*; α(M)=0.0210 *4* α(N)=0.00547 *9*; α(O)=0.001103 *17*; α(P)=0.0001236 *19* B(E3)(W.u.)=31.0 *6*
4875.8		496.5 *5*	100	4379.3	$(33/2^+)$				
4917.9		538.6 *5*	100	4379.3	$(33/2^+)$				
4942.9		563.6 *5*	100	4379.3	$(33/2^+)$				
4995.9		616.6 *5*	100	4379.3	$(33/2^+)$				
5331.4	$(41/2^-)$	516.9 *2*	100	4814.5	$(39/2^-)$	M1+E2		0.08 *5*	α(K)=0.06 *4*; α(L)=0.013 *6*; α(M)=0.0030 *13* α(N)=0.0008 *4*; α(O)=0.00017 *7*; α(P)=2.2×10^{-5} *11*
5418.4	$(41/2^-)$	(87.0 *5*)	≤2	5331.4	$(41/2^-)$	M1		3.48 *8*	α(L)=2.65 *6*; α(M)=0.628 *14*
		603.9 *2*	100 *4*	4814.5	$(39/2^-)$	M1+E2		0.05 *4*	α(K)=0.04 *3*; α(L)=0.008 *4*; α(M)=0.0020 *9* α(N)=0.00051 *22*; α(O)=0.00011 *5*; α(P)=1.5×10^{-5} *7*
5909.8	(41/2,43/2)	491.4 *5*	98.4 *16*	5418.4	$(41/2^-)$				
		578.3 *5*	100.0 *16*	5331.4	$(41/2^-)$				
		1095.5	≤16	4814.5	$(39/2^-)$				
5917.4	$(43/2^+)$	499.0 *2*	100.0 *19*	5418.4	$(41/2^-)$	E1		0.01068	α(K)=0.00877 *13*; α(L)=0.001457 *21*; α(M)=0.000342 *5* α(N)=8.79×10^{-5} *13*; α(O)=1.86×10^{-5} *3*; α(P)=2.47×10^{-6} *4* B(E1)(W.u.)>1.2×10^{-6}
		586.0 *2*	79.6 *19*	5331.4	$(41/2^-)$	E1		0.00772	α(K)=0.00636 *9*; α(L)=0.001040 *15*; α(M)=0.000243 *4*

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Adopted Levels, Gammas (continued)

$\gamma(^{211}At)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[#&a]	Comments
								α(N)=6.27×10^{-5} *9*; α(O)=1.327×10^{-5} *19*; α(P)=1.780×10^{-6} *25* B(E1)(W.u.)>5.8×10^{-7}
5917.4	(43/2$^+$)	1102.8 *5*	5.6 *6*	4814.5	(39/2$^-$)	[M2]	0.0416	α(K)=0.0332 *5*; α(L)=0.00633 *9*; α(M)=0.001515 *22* α(N)=0.000393 *6*; α(O)=8.41×10^{-5} *12*; α(P)=1.157×10^{-5} *17*; α(IPF)=5.15×10^{-8} *8* B(M2)(W.u.)>0.023
5940.3	(41/2,43/2)	521.8 *5*	100.0 *11*	5418.4	(41/2$^-$)			
		609.0 *5*	55.4 *11*	5331.4	(41/2$^-$)			
		1125.7 *5*	66 *4*	4814.5	(39/2$^-$)			
6017.3	(45/2$^+$)	100.0 *5*	23.2 *15*	5917.4	(43/2$^+$)	M1	12.05 *24*	α(K)=9.72 *19*; α(L)=1.77 *4*; α(M)=0.419 *9* α(N)=0.1087 *22*; α(O)=0.0233 *5*; α(P)=0.00321 *7* B(M1)(W.u.)=0.00123 *21*
		686.0 *5*	21.7 *15*	5331.4	(41/2$^-$)	[M2]	0.1550	α(K)=0.1216 *17*; α(L)=0.0253 *4*; α(M)=0.00612 *9* α(N)=0.001591 *23*; α(O)=0.000340 *5*; α(P)=4.64×10^{-5} *7* B(M2)(W.u.)=0.30 *5*
		1202.8 *2*	100 *3*	4814.5	(39/2$^-$)	[E3]	0.01212	α(K)=0.00908 *13*; α(L)=0.00229 *4*; α(M)=0.000564 *8* α(N)=0.0001462 *21*; α(O)=3.06×10^{-5} *5*; α(P)=3.95×10^{-6} *6*; α(IPF)=1.227×10^{-6} *18* B(E3)(W.u.)=30 *5*
6090.1		172.8 *5*	32 *6*	5917.4	(43/2$^+$)			
		671.7 *5*	100.0 *15*	5418.4	(41/2$^-$)			
6247.8		330.4 *5*	100	5917.4	(43/2$^+$)			
6466.5	(45/2)	549.1 *2*	100	5917.4	(43/2$^+$)	D		
6567.2	(49/2$^+$)	549.9 *2*	100	6017.3	(45/2$^+$)	E2	0.0269	α(K)=0.0189 *3*; α(L)=0.00601 *9*; α(M)=0.001509 *22* α(N)=0.000390 *6*; α(O)=8.03×10^{-5} *12*; α(P)=9.74×10^{-6} *14* B(E2)(W.u.)=0.00290 *8*
6569.1		651.7 *5*	100	5917.4	(43/2$^+$)			
6600.4	(47/2)	134.0 *5*	≤7	6466.5	(45/2)	M1	5.25 *10*	α(K)=4.25 *8*; α(L)=0.763 *14*; α(M)=0.181 *4* α(N)=0.0468 *9*; α(O)=0.01002 *18*; α(P)=0.001384 *25*
		583.1 *2*	100 *14*	6017.3	(45/2$^+$)	D		
6649.1		182.6 *5*	100	6466.5	(45/2)			
6770.9		203.7 *5*	100	6567.2	(49/2$^+$)			
6866.7		299.5 *5*	100	6567.2	(49/2$^+$)			
6871.1		303.9 *5*	100	6567.2	(49/2$^+$)			
6990.5		423.3 *5*	100	6567.2	(49/2$^+$)			
7239.2		672.0 *5*	100	6567.2	(49/2$^+$)			
7346.5		746.1 *5*	100	6600.4	(47/2)			
7386.2	(51/2)	819.0 *5*	100	6567.2	(49/2$^+$)	D+Q		
7399.0		831.8 *5*	100	6567.2	(49/2$^+$)			
7496.2		929.0 *5*	100	6567.2	(49/2$^+$)			
7517.4	(55/2$^-$)	950.2 *2*	100	6567.2	(49/2$^+$)	[E3]	0.0206	B(E3)(W.u.)=26.5 *16* α(K)=0.01461 *21*; α(L)=0.00450 *7*; α(M)=0.001129 *16* α(N)=0.000293 *5*; α(O)=6.09×10^{-5} *9*; α(P)=7.64×10^{-6} *11*

Adopted Levels, Gammas (continued)

γ(^{211}At) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. ‡
7573.2		1006.0 *5*	100	6567.2	(49/2$^+$)	7972.2		1405.0 *5*		6567.2	(49/2$^+$)	
7621.2		235.1 *5*	100 *5*	7386.2	(51/2)	8120.3		734.1 *5*	100	7386.2	(51/2)	
		1053.9 *5*	≤26	6567.2	(49/2$^+$)	8232.8		846.6 *5*	100	7386.2	(51/2)	
7658.2		1091.0 *5*	100	6567.2	(49/2$^+$)	8337.1		819.6 *5*	100	7517.4	(55/2$^-$)	D+Q
7848.4		331.0 *5*	100	7517.4	(55/2$^-$)	8829.0	[59/2$^-$]	491.8 *5*		8337.1		
7920.2		402.7 *5*		7517.4	(55/2$^-$)			1311.6 *5*		7517.4	(55/2$^-$)	
		1353.0 *5*		6567.2	(49/2$^+$)	9814.8		985.8 *5*	100	8829.0	[59/2$^-$]	
7972.2		454.8 *5*		7517.4	(55/2$^-$)	10016.0		201.2 *5*	100	9814.8		

† From ^{211}Rn ε decay for transitions from low-spin levels, and from ^{208}Pb(^{7}Li,4nγ) for transitions from high-spin (J>7/2). Note that intensity and/or branching ratios given in comments in (^{7}Li,4nγ) are also used in recommended branching ratios given here.

‡ From ce-data in ^{211}Rn ε decay for transitions from low-spin levels, and from α(exp) values and γ(θ) data in ^{208}Pb(^{7}Li,4nγ) for transitions from high-spin (J>7/2) levels, unless otherwise stated.

Additional information 2.

@ If no value given it was assumed δ=1.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.

& Additional information 3.

a Additional information 4.

b Placement of transition in the level scheme is uncertain.

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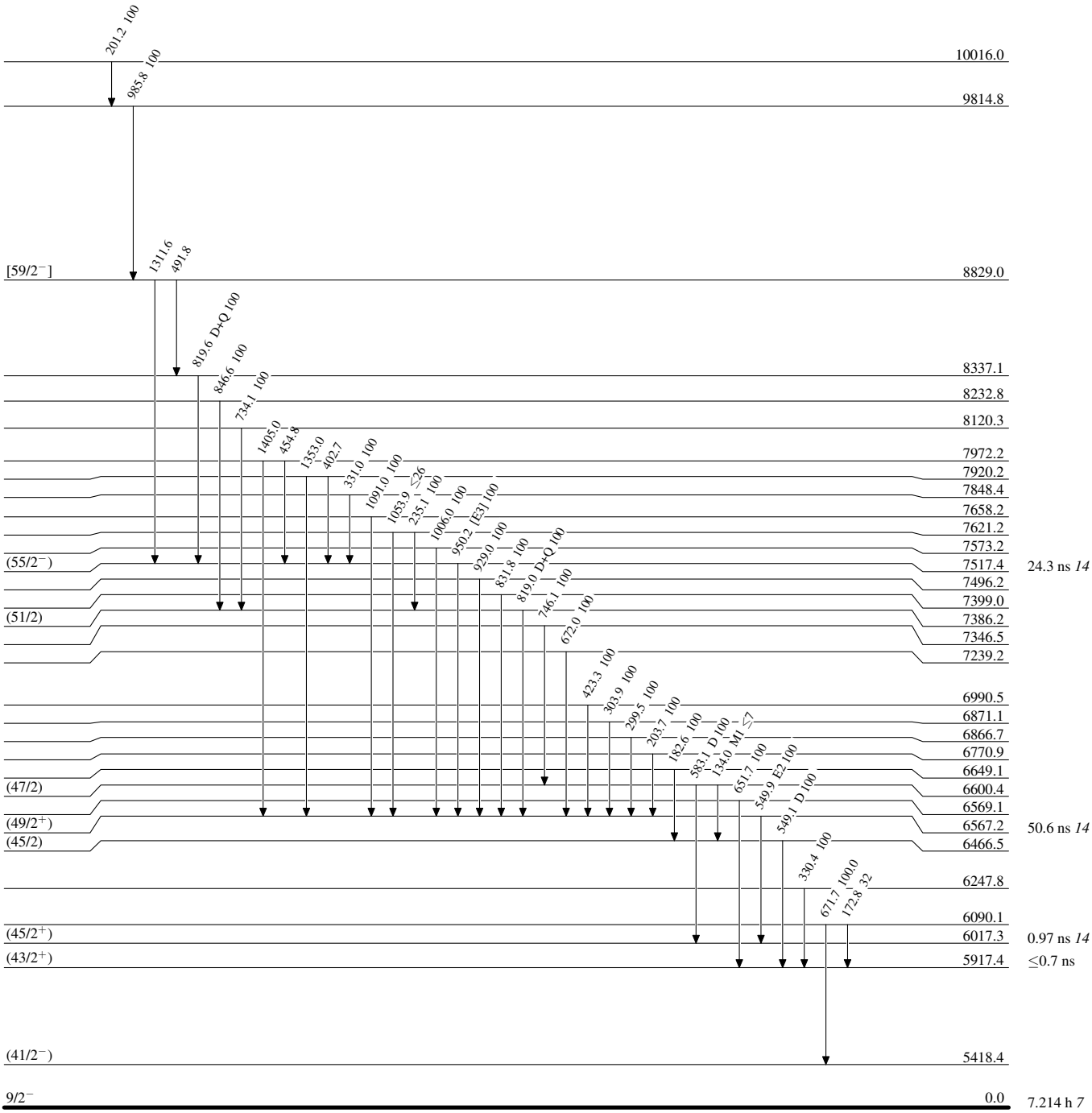
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{211}_{85}At_{126}$

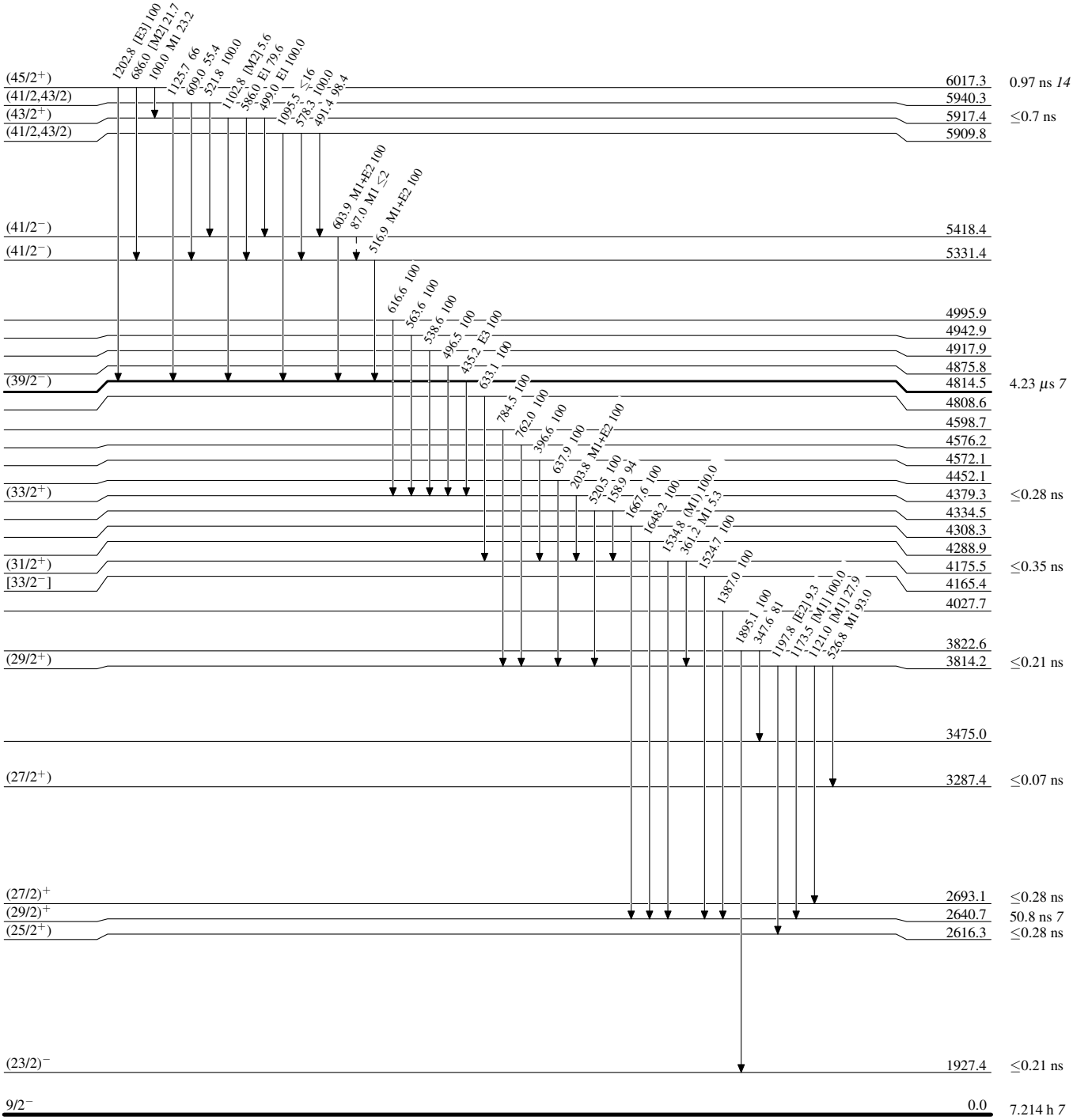
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

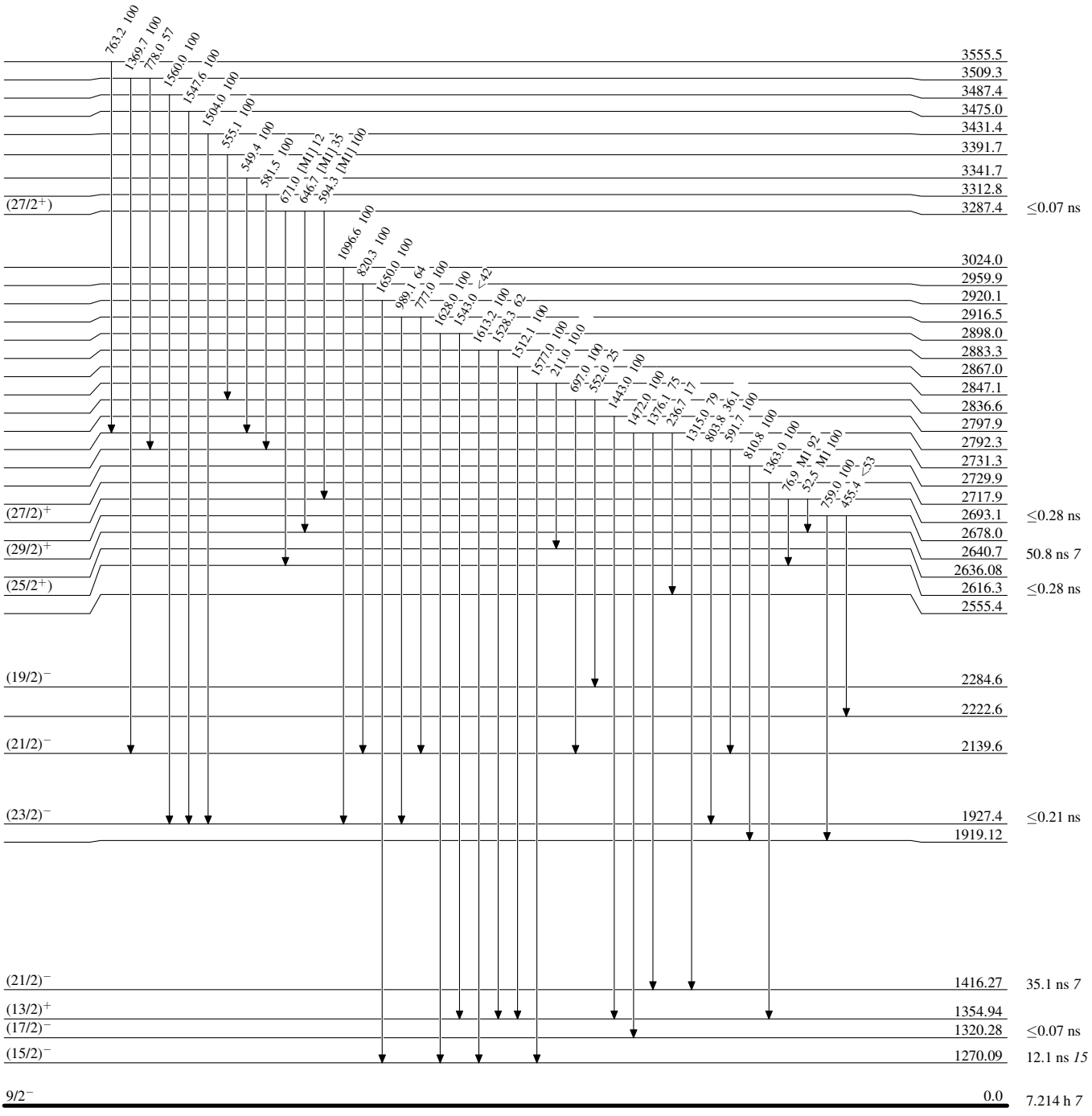


$^{211}_{85}At_{126}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{211}_{85}At_{126}$

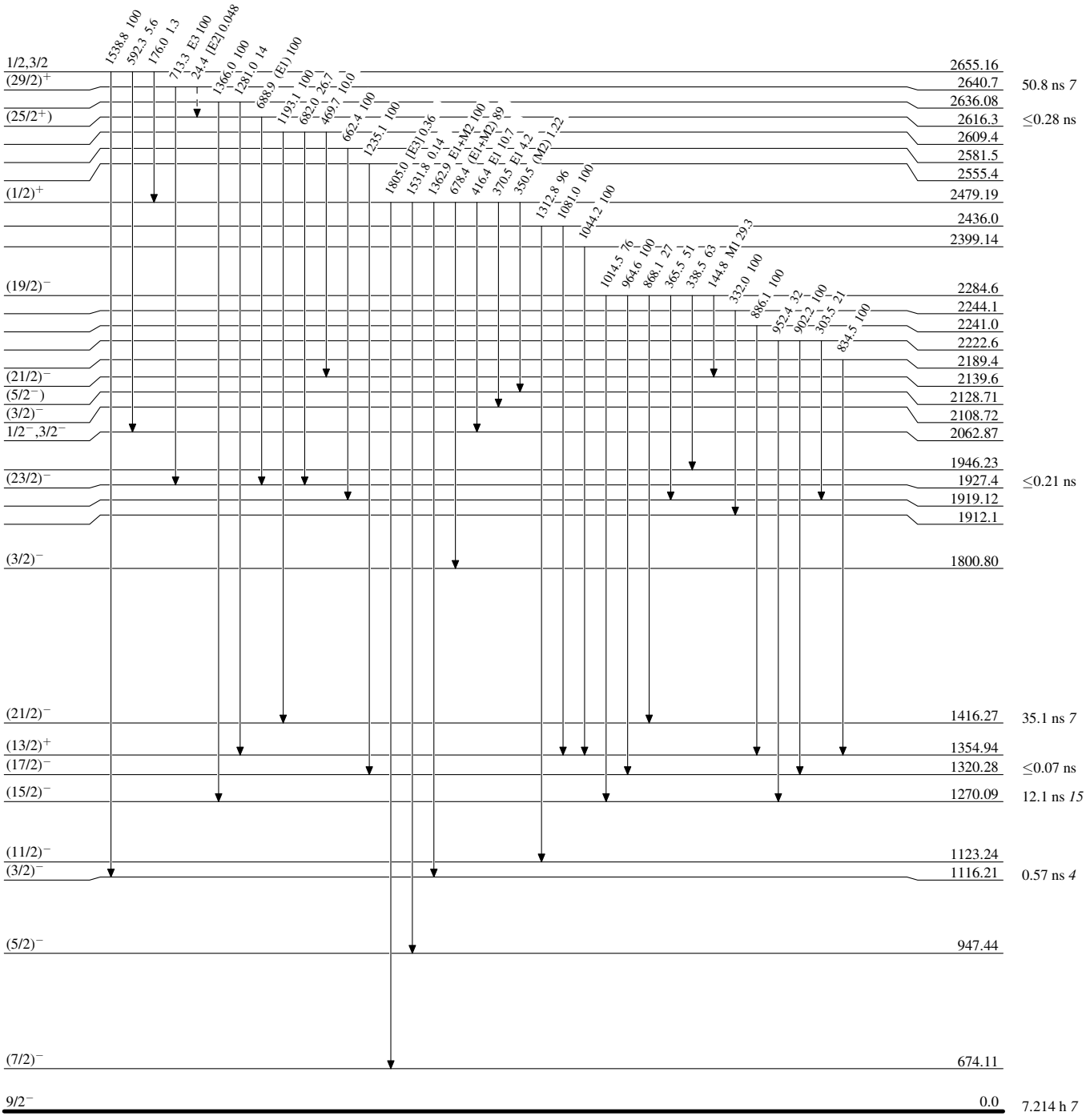
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{211}_{85}At_{126}$

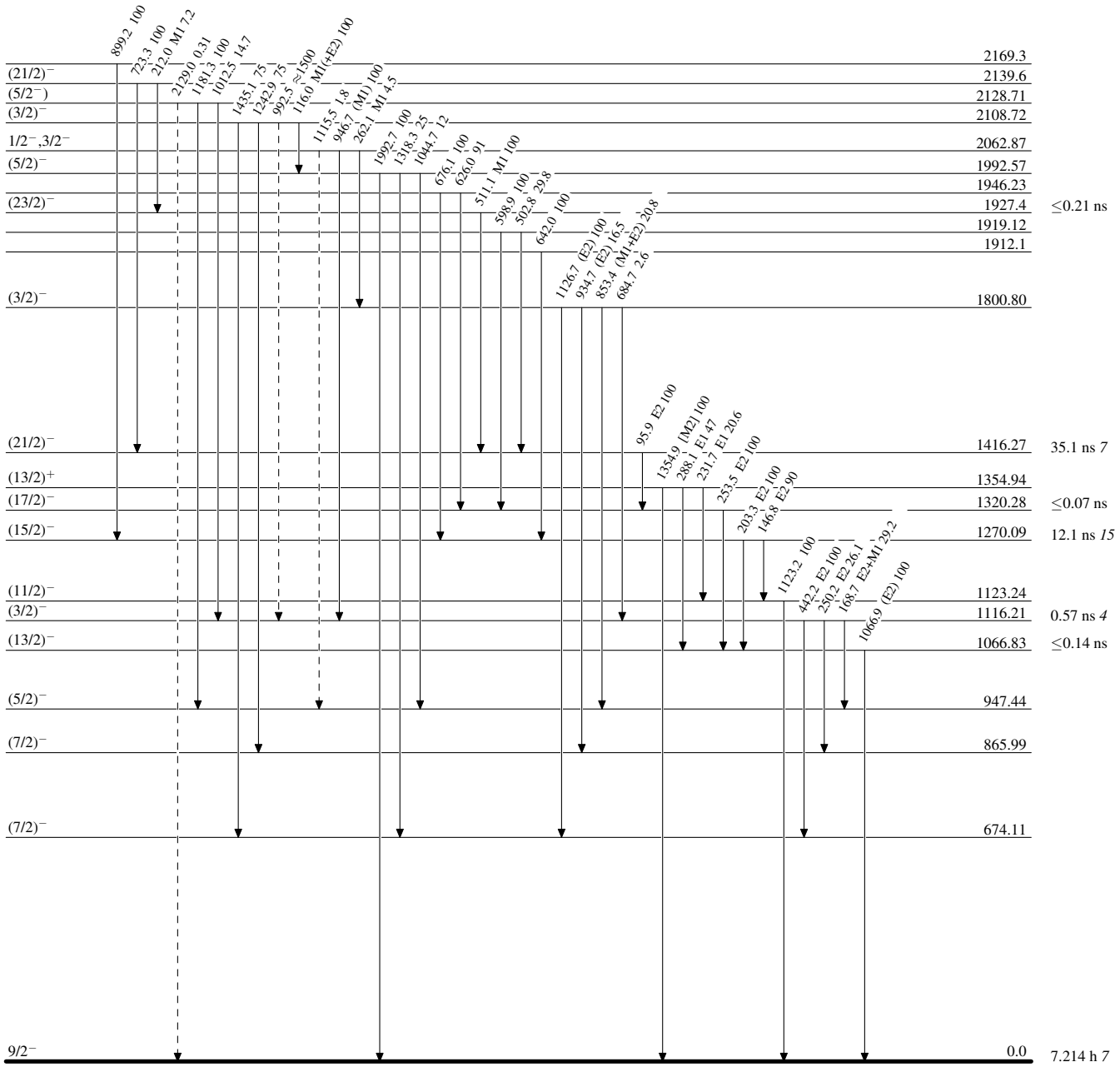
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)

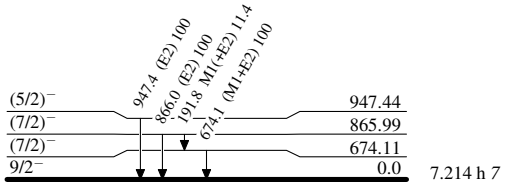


$^{211}_{85}At_{126}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{211}_{85}At_{126}$