

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

$Q(\beta^-) = -6385$ 12; $S(n) = 9960$ 22; $S(p) = 1310$ 16; $Q(\alpha) = 5465.3$ 29 [2012Wa38](#)

$Q(\epsilon p) = 1574$ 23 ([2012Wa38](#)).

Other Reactions:

Isotope shift and hfs data: [1988Kr18](#), [1990Hi08](#).

For discussion of effects of deformation on decay patterns to Pt, Hg, see [2015Bo01](#).

 ^{183}Au Levels

$E(Y), J(Y)$ An almost degenerate pair of levels with $J^\pi = 11/2^-$ and $13/2^-$ is adopted (analogous to the 220 keV doublet in ^{185}Au) to accommodate both the M1 $E\gamma = 218.2$ 5 transition in ϵ decay and the Q $E\gamma = 218.8$ 2 transition from ($^{35}\text{Cl}, 4n\gamma$). Level energy systematics for odd-A Au isotopes support the existence of such a doublet in ^{183}Au .

For calculation of bands, J^π , configurations, shape coexistence features (particle triaxial rotor model), see [2005Ch36](#).

For calculation of properties of low-lying levels, see [2001Ro23](#).

Cross Reference (XREF) Flags

- A ^{183}Hg ϵ decay
- B ^{187}Tl α decay
- C $^{152}\text{Sm}(^{35}\text{Cl}, 4n\gamma)$
- D $^{159}\text{Tb}(^{29}\text{Si}, 5n\gamma)$,

$E(\text{level})^\dagger$	J^π^\ddagger	$T_{1/2}$	XREF	Comments
0.0 [#]	(5/2) ⁻	42.8 s 10	A CD	$\% \epsilon + \% \beta^+ = 99.45$ 25; $\% \alpha = 0.55$ 25 $\mu = +1.972$ 23 (1988Kr18) μ : From resonance ionization mass spectroscopy. $\langle r^2 \rangle^{1/2}(\text{charge}) = 5.388$ fm 6 (2004An14). $\% \alpha$: Unweighted average of 0.8 3 (1995Bi01), 0.30 5 (1970Ha18). $\Delta \langle r^2 \rangle(183, 197) = -0.130$ 9 fm ² (1988Kr18 ; see also 1990Hi08). $T_{1/2}$: weighted average of 44.6 s 19 (1995Bi01), 42 s 4 (1970Ha18), 42.0 s 12 (1970Ma24), 45 s 4 (1968Si01). Other: 50 s 2 (1968De01). J^π : parity from $\log ft = 5.4$ to (7/2) ⁻ $^{183}\text{Pt}(1957)$ level; $J = 5/2$ expected based on energy systematics of 5/2 ⁻ levels in neighboring odd-A Au isotopes.
12.4 [#] 4	(9/2) ⁻		ABCD	J^π : low energy 9/2 ⁻ level expected based on energy systematics for 9/2 ⁻ levels in neighboring odd-A Au isotopes; $\Delta\pi = \text{no } 284\gamma$ from $\pi = -$ 297 level.
12.78 16	(3/2) ⁻		A C	J^π : $\Delta\pi = \text{no } 160\gamma$ from $\pi = -$ 173 level; low energy 3/2 ⁻ level expected, by analogy with ^{185}Au .
69.1 [@] 5	(7/2) ⁻		CD	J^π : band assignment.
73.3 4	(1/2) ⁺	>1 μs	A	J^π : E1 61 γ to (3/2) ⁻ 12.8; 1/2 ⁺ level energy systematics for neighboring odd-A Au isotopes; absence of γ to (5/2) ⁻ g.s.. Possibly an oblate nuclear state (1984Ma41).
91.26 25	(5/2 ⁻ , 7/2 ⁻)		A	$T_{1/2}$: based on absence of 60.5 γ in coincidence spectra in ϵ decay (1984Ma41). J^π : gammas to (9/2) ⁻ and (3/2) ⁻ .
172.67 16	(3/2, 5/2) ⁻		A	J^π : D+Q 160 γ to $J = (3/2)$ 12.8; M1 173 γ to (5/2) ⁻ g.s..
179.14 24	(1/2, 3/2, 5/2) ⁻		A	J^π : M1+E2 166 γ to (3/2) ⁻ 12.8 level.
230.6 6	(11/2) ⁻	<1 μs	A	J^π : M1 218 γ to (9/2) ⁻ 12.4; hindrance of M1 deexcitation consistent with observations for $h_{11/2}$ state in neighboring Au isotopes. $T_{1/2}$: 5 ns $\leq T_{1/2} \leq 1$ μs proposed by 1984Ma41 on the basis of delayed coincidence intensity in ϵ decay.
231.2 [#] 4	(13/2) ⁻		CD	J^π : Q 219 γ to (9/2) ⁻ ; band structure; 13/2 ⁻ level energy systematics in

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Adopted Levels, Gammas (continued) ^{183}Au Levels (continued)

E(level) [†]	J ^π [‡]	XREF	Comments
263.53 22	(5/2,7/2) ⁻	A	neighboring odd-A Au isotopes.
273.5 [@] 4	(11/2 ⁻)	CD	J ^π : M1+E2 91γ to (3/2,5/2) ⁻ 173; 251γ to (9/2) ⁻ 12.4.
289.43 18	(3/2,5/2,7/2) ⁻	A	J ^π : stretched Q 204γ to (7/2 ⁻) 69; D 261γ to J=(9/2) ⁻ 12.4.
296.8 4	(7/2) ⁻	A	J ^π : M1 290γ to (5/2) ⁻ g.s..
317.94 17	(1/2,3/2,5/2) ⁻	A	J ^π : (D) 284γ to J=(9/2) ⁻ 12.4; D, Δπ=no 297γ to (5/2) ⁻ g.s..
517.1 8	(7/2 ⁻)	A	J ^π : M1 305γ to (3/2) ⁻ 12.8.
562.52 25	(≤7/2)	A	J ^π : γ to (11/2) ⁻ 231; analogy with ^{185}Au (1984Ma41).
565.3 [#] 4	(17/2 ⁻)	CD	J ^π : γ to (3/2) ⁻ 12.8.
599.6 [@] 4	(15/2 ⁻)	CD	
701.8 ^{&} 4	(13/2 ⁺)	CD	
779.86 16	(≤7/2)	A	J ^π : 767γ to (3/2) ⁻ 12.8.
811.14 24	(≤7/2)	A	J ^π : 798γ to (3/2) ⁻ 12.8.
817.67 20	(≤7/2)	A	J ^π : 805γ to (3/2) ⁻ 12.8.
865.4 ^{&} 4	(17/2 ⁺)	CD	
885.57 21	(≤7/2)	A	J ^π : 873γ to (3/2) ⁻ 12.8.
989.1 [#] 5	(21/2 ⁻)	CD	
1022.8 [@] 5	(19/2 ⁻)	CD	
1025.1 3		A	
1054.5 ^b 5	(19/2 ⁻)	C	
1100.2 10		A	
1148.5 ^{&} 5	(21/2 ⁺)	CD	
1487.5 ^b 5	(23/2 ⁻)	CD	
1492.0 [#] 5	(25/2 ⁻)	CD	
1527.7 ^{&} 5	(25/2 ⁺)	CD	
1544.5 [@] 5	(23/2 ⁻)	CD	
1605.5 3	(≤7/2)	A	J ^π : 1593γ to (3/2) ⁻ 12.8.
1671.2 4		A	
1680.9 3		A	
1681.96 17	(≤7/2)	A	J ^π : 1669γ to (3/2) ⁻ 12.8.
1736.9 ^a 10	(23/2 ⁺)	D	
1800.55 18	(≤7/2)	A	J ^π : 1788γ to (3/2) ⁻ 12.8.
1981.1 ^{&} 6	(29/2 ⁺)	CD	
1986.4 ^b 5	(27/2 ⁻)	CD	
2063.5 [#] 6	(29/2 ⁻)	CD	
2117.9 [@] 12	(27/2 ⁻)	D	
2175.7 ^a 10	(27/2 ⁺)	D	
2490.9 ^{&} 6	(33/2 ⁺)	C	
2541.5 ^b 6	(31/2 ⁻)	CD	
2681.6 ^a 12	(31/2 ⁺)	D	
2691.1 [#] 6	(33/2 ⁻)	CD	
2742.4 [@] 16	(31/2 ⁻)	D	
3048.7 ^{&} 6	(37/2 ⁺)	CD	
3149.4 ^b 6	(35/2 ⁻)	CD	
3240.4 ^a 12	(35/2 ⁺)	D	
3360.0 [#] 6	(37/2 ⁻)	CD	
3388.8 [@] 19	(35/2 ⁻)	D	
3656.7 ^{&} 7	(41/2 ⁺)	CD	
3798.9 ^b 6	(39/2 ⁻)	CD	

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Adopted Levels, Gammas (continued) ^{183}Au Levels (continued)

<u>E(level)[†]</u>	<u>J^{π‡}</u>	<u>XREF</u>	<u>E(level)[†]</u>	<u>J^{π‡}</u>	<u>XREF</u>	<u>E(level)[†]</u>	<u>J^{π‡}</u>	<u>XREF</u>
3838.7 ^a 12	(39/2 ⁺)	D	4989.2 ^{&} 7	(49/2 ⁺)	CD	6381.5 ^{&} 8	(57/2 ⁺)	C
4053.1 [#] 7	(41/2 ⁻)	CD	5129.1 ^{?b} 8	(47/2 ⁻)	C	7110.5 ^{&} 9	(61/2 ⁺)	C
4309.6 ^{&} 7	(45/2 ⁺)	CD	5500.6 [#] 9	(49/2 ⁻)	CD	7879.5 ^{?&} 11	(65/2 ⁺)	C
4461.1 ^b 7	(43/2 ⁻)	CD	5681.3 ^{&} 8	(53/2 ⁺)	CD			
4765.6 [#] 7	(45/2 ⁻)	CD	6276.6 ^{?#} 10	(53/2 ⁻)	C			

[†] From least-squares fit to adopted E_γ , assigning 1 keV uncertainty to E_γ data for which the authors did not state the uncertainty.

[‡] From ($^{35}\text{Cl}, 4n\gamma$), based on established band structure and measured DCO ratios and/or $\gamma(\theta)$, assuming $J^\pi=(5/2)^-$ and $(9/2)^-$, respectively, for the g.s. and the 12.4 level, except as noted.

[#] Band(A): ($\pi h_{9/2}$), $\alpha=+1/2$ band.

[@] Band(B): ($\pi f_{7/2}$)?, $\alpha=-1/2$ band (2005So01). Prolate orbital; energetically favored signature.

[&] Band(C): $1/2[660]$, $\alpha=+1/2$ band. $E_0=966$, $\alpha=13.5$, $a=+10.5$ ($J=13/2$ through $25/2$). For discussion of the systematics of the $1/2[660] i_{13/2}$ band in odd-A Au, see 2004So20.

^a Band(D): $\pi=+$, $\alpha=-1/2$ band. Probably the unfavored $\alpha=-1/2$ branch of ($\pi i_{13/2}$) band. $E_0=490$, $\alpha=8.8$, $B_0=-1.0$ ($J=23/2$ through $35/2$).

^b Band(E): possible ($\pi h_{9/2}$), $\alpha=-1/2$ band. Prolate orbital; unfavored signature.

Adopted Levels, Gammas (continued) $\gamma(^{183}\text{Au})$ E,I, γ ,M, δ From ϵ decay, except as noted.

E_i (level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	α^\dagger	Comments
12.4	(9/2) ⁻	(12.4 4)	100	0.0	(5/2) ⁻	[E2]			E_γ : from level energy difference.
12.78	(3/2) ⁻	(12.78 16)	100	0.0	(5/2) ⁻	[M1]			E_γ : from level energy difference.
73.3	(1/2) ⁺	60.5 3	100	12.78	(3/2) ⁻	E1		0.323 7	B(E1)(W.u.)<6.6×10 ⁻⁷ Mult.: anomalous E1 transition (1984Ma41); $\alpha(\text{exp})=0.45$ from ϵ decay.
91.26	(5/2 ⁻ ,7/2 ⁻)	78.3 5 79.0 5 91.1 5		12.78 (3/2) ⁻ 12.4 (9/2) ⁻ 0.0 (5/2) ⁻					
172.67	(3/2,5/2) ⁻	159.9 3 172.7 3	100 20 81 16	12.78 (3/2) ⁻ 0.0 (5/2) ⁻		M1+E2 M1	0.7	1.551 24 1.533	
179.14	(1/2,3/2,5/2) ⁻	166.3 3 179.5 5	100 20 5.9 12	12.78 (3/2) ⁻ 0.0 (5/2) ⁻		M1+E2	0.65	1.412 22	
230.6	(11/2) ⁻	218.2 5	100	12.4 (9/2) ⁻		M1		0.797 13	B(M1)(W.u.)>1.2×10 ⁻⁶
231.2	(13/2) ⁻	218.8 ^a 2	100 ^a	12.4 (9/2) ⁻		(E2) [‡]		0.277	Presumed to differ from the 218.2 5 γ in ϵ decay. Other E_γ : 220.0 In (²⁹ Si,5n γ).
263.53	(5/2,7/2) ⁻	90.7 3 250.9 5	100 23 ≈46	172.67 (3/2,5/2) ⁻ 12.4 (9/2) ⁻		M1+E2	0.5	9.24 16	
273.5	(11/2) ⁻	204.4 ^a 2 261.1 ^a 2	100.0 ^a 25 43.5 ^a 14	69.1 (7/2) ⁻ 12.4 (9/2) ⁻		(E2) [‡] D+Q [#]		0.348	other E_γ : 205.6 from (²⁹ Si,5n γ). other E_γ (I_γ): 261.8 (74 6) from (²⁹ Si,5n γ).
289.43	(3/2,5/2,7/2) ⁻	198.1 3 276.7 3 289.5 3	44 9 53 12 100 21	91.26 (5/2 ⁻ ,7/2 ⁻) 12.78 (3/2) ⁻ 0.0 (5/2) ⁻		M1		1.044	
296.8	(7/2) ⁻	284.4 3 296.7 5	100 20 ≈35	12.4 (9/2) ⁻ 0.0 (5/2) ⁻		(M1) (M1)		0.384 0.342	Mult.: anomalous M1 or M1+E0+E2 from $\alpha(\text{K})\text{exp}$ in ϵ decay; level scheme. Mult.: anomalous M1 or M1+E0+E2 from $\alpha(\text{K})\text{exp}$ in ϵ decay; level scheme.
317.94	(1/2,3/2,5/2) ⁻	305.1 3 318.1 3	100 20 18 4	12.78 (3/2) ⁻ 0.0 (5/2) ⁻		M1		0.317	
517.1	(7/2) ⁻	286.5 5	100	230.6 (11/2) ⁻					
562.52	(≤7/2)	244.6 5 273.0 5 549.6 3	≈7.1 36 7 100 21	317.94 (1/2,3/2,5/2) ⁻ 289.43 (3/2,5/2,7/2) ⁻ 12.78 (3/2) ⁻					
565.3	(17/2) ⁻	334.1 ^a 2	100 ^a	231.2 (13/2) ⁻		(E2) [‡]		0.0748	
599.6	(15/2) ⁻	326.1 ^a 2 368.0 ^a 5	100.0 ^a 17 18.6 ^a 12	273.5 (11/2) ⁻ 231.2 (13/2) ⁻		(E2) [‡] D [‡]		0.0802	other I_γ : 23.1 28 from (²⁹ Si,5n γ).
701.8	(13/2 ⁺)	428.3 ^a 2 470.2 ^{&}	100 ^a 4 37 ^{&} 4	273.5 (11/2) ⁻ 231.2 (13/2) ⁻		D+Q [‡] (D)			interpreted In (²⁹ Si,5n γ) As D, $\Delta J=0$ transition.

Adopted Levels, Gammas (continued)

$\gamma(^{183}\text{Au})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α^\dagger	Comments
779.86	$(\leq 7/2)$	462.2 3	96 20	317.94	$(1/2, 3/2, 5/2)^-$			
		490.4 5	20 4	289.43	$(3/2, 5/2, 7/2)^-$			
		516.3 3	≈ 100	263.53	$(5/2, 7/2)^-$			
		607.7 3	≈ 52	172.67	$(3/2, 5/2)^-$			
		767.1 3	96 20	12.78	$(3/2)^-$			
		779.5 3	84 16	0.0	$(5/2)^-$			
811.14	$(\leq 7/2)$	632.1 5	≈ 45	179.14	$(1/2, 3/2, 5/2)^-$			
		798.3 3	100 19	12.78	$(3/2)^-$			
817.67	$(\leq 7/2)$	254.7 5	≈ 50	562.52	$(\leq 7/2)$			
		499.9 5	43 9	317.94	$(1/2, 3/2, 5/2)^-$			
		644.9 3	100 21	172.67	$(3/2, 5/2)^-$			
		805.0 5	≈ 71	12.78	$(3/2)^-$			
865.4	$(17/2^+)$	817.9 5	≈ 14	0.0	$(5/2)^-$			
		163.6 2	63 7	701.8	$(13/2^+)$	$(E2)^\ddagger$	0.761	E_γ : from $(^{35}\text{Cl}, 4n\gamma)$. Other: 164.9 from $(^{29}\text{Si}, 5n\gamma)$. I_γ : unweighted average of 56 4 from $(^{29}\text{Si}, 5n\gamma)$ and 69 6 from $(^{35}\text{Cl}, 4n\gamma)$.
		265.8 2	100 4	599.6	$(15/2^-)$	D^\ddagger		E_γ : from $(^{35}\text{Cl}, 4n\gamma)$. Other: 266.5 from $(^{29}\text{Si}, 5n\gamma)$. I_γ : from $(^{29}\text{Si}, 5n\gamma)$. Other I_γ : 100 10 from $(^{35}\text{Cl}, 4n\gamma)$.
885.57	$(\leq 7/2)$	300.0 5	6.0 8	565.3	$(17/2^-)$			E_γ : from $(^{35}\text{Cl}, 4n\gamma)$. I_γ : from $(^{29}\text{Si}, 5n\gamma)$. Other I_γ : 23 6 from $(^{35}\text{Cl}, 4n\gamma)$.
		712.7 3	100 20	172.67	$(3/2, 5/2)^-$			
		872.8 3	65 15	12.78	$(3/2)^-$			
885.9 5	40 8	0.0	$(5/2)^-$					
989.1	$(21/2^-)$	423.9 ^a 2	100 ^a	565.3	$(17/2^-)$	$(E2)^\ddagger$	0.0391	
1022.8	$(19/2^-)$	423.2 2	100 7	599.6	$(15/2^-)$	$(E2)^\ddagger$	0.0393	E_γ : from $(^{35}\text{Cl}, 4n\gamma)$. I_γ : from $(^{29}\text{Si}, 5n\gamma)$.
1025.1		457.4 ^{&}	18.1 ^{&} 23	565.3	$(17/2^-)$			
		707.0 5	75 15	317.94	$(1/2, 3/2, 5/2)^-$			
		852.5 3	100 20	172.67	$(3/2, 5/2)^-$			
1054.5	$(19/2^-)$	455.0 ^a 5	100 ^a	599.6	$(15/2^-)$			
1100.2		583.1 5	100	517.1	$(7/2^-)$			
1148.5	$(21/2^+)$	283.1 ^a 2	100 ^a	865.4	$(17/2^+)$	(E2)	0.1218	other E_γ : 283.7 from $(^{29}\text{Si}, 5n\gamma)$. Mult.: from $^{159}\text{Tb}(^{29}\text{Si}, 5n\gamma)$.
1487.5	$(23/2^-)$	433.0 ^a 2	52 ^a 5	1054.5	$(19/2^-)$	$(Q)^\ddagger$		
		464.0 ^a 5	95 ^a 14	1022.8	$(19/2^-)$	$(Q)^\ddagger$		other I_γ : 104 6 from $(^{29}\text{Si}, 5n\gamma)$.
		498.5 ^a 2	100 ^a 21	989.1	$(21/2^-)$			other E_γ : 497.8 from $(^{29}\text{Si}, 5n\gamma)$.
1492.0	$(25/2^-)$	502.8 ^a 2	100 ^a	989.1	$(21/2^-)$	(E2)	0.0255	Mult.: from $(^{29}\text{Si}, 5n\gamma)$.
1527.7	$(25/2^+)$	379.2 ^a 2	100 ^a	1148.5	$(21/2^+)$	$(E2)^\ddagger$	0.0526	
1544.5	$(23/2^-)$	522.0 ^a 5	100 ^a 27	1022.8	$(19/2^-)$			other E_γ : 520.3 from $(^{29}\text{Si}, 5n\gamma)$.
1605.5	$(\leq 7/2)$	555.0 ^a 5	12.0 ^a 20	989.1	$(21/2^-)$			
		1426.4 3	100 21	179.14	$(1/2, 3/2, 5/2)^-$			

Adopted Levels, Gammas (continued) $\gamma(^{183}\text{Au})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α^\dagger	Comments
1605.5	($\leq 7/2$)	1592.7 3	23 4	12.78	(3/2) ⁻			
1671.2		1381.8 3	100	289.43	(3/2,5/2,7/2) ⁻			
1680.9		1362.9 3	54 12	317.94	(1/2,3/2,5/2) ⁻			
		1391.6 3	100 19	289.43	(3/2,5/2,7/2) ⁻			
1681.96	($\leq 7/2$)	864.2 3	58 11	817.67	($\leq 7/2$)			
		870.8 3	69 14	811.14	($\leq 7/2$)			
		902.2 3	83 17	779.86	($\leq 7/2$)			
		1509.2 3	100 19	172.67	(3/2,5/2) ⁻			
		1669.4 3	31 6	12.78	(3/2) ⁻			
		1681.8 3	42 8	0.0	(5/2) ⁻			
1736.9	(23/2 ⁺)	588.4 &	100 &	1148.5	(21/2 ⁺)	D+Q		Mult.: from $^{159}\text{Tb}(^{29}\text{Si},5n\gamma)$.
1800.55	($\leq 7/2$)	914.9 3	38 8	885.57	($\leq 7/2$)			
		1021.0 3	18 4	779.86	($\leq 7/2$)			
		1482.5 3	45 10	317.94	(1/2,3/2,5/2) ⁻			
		1536.8 3	19 4	263.53	(5/2,7/2) ⁻			
		1627.9 3	23 4	172.67	(3/2,5/2) ⁻			
		1787.8 3	100 21	12.78	(3/2) ⁻			
1981.1	(29/2 ⁺)	453.4 ^a 2	100 ^a	1527.7	(25/2 ⁺)	(E2) [‡]	0.0329	
1986.4	(27/2 ⁻)	441.0 ^{ab} 5	66 ^a 19	1544.5	(23/2 ⁻)			should have been seen in $(^{29}\text{Si},5n\gamma)$ also, but was not; the evaluator, therefore, shows placement As uncertain.
		494.2 &	15.9 & 25	1492.0	(25/2 ⁻)			
		498.9 ^a 2	100 ^a 4	1487.5	(23/2 ⁻)	(E2)	0.0260	other E_γ : 498.1 from $(^{29}\text{Si},5n\gamma)$. Mult.: from $^{159}\text{Tb}(^{29}\text{Si},5n\gamma)$.
2063.5	(29/2 ⁻)	571.5 ^a 2	100 ^a	1492.0	(25/2 ⁻)	(E2)	0.0188	other E_γ : 570.3 from $(^{29}\text{Si},5n\gamma)$. Mult.: from $(^{29}\text{Si},5n\gamma)$.
2117.9	(27/2 ⁻)	573.4 & @	100 &	1544.5	(23/2 ⁻)			
2175.7	(27/2 ⁺)	438.8 &	38 & 12	1736.9	(23/2 ⁺)			
		648.0 &	100 & 23	1527.7	(25/2 ⁺)	D		Mult.: from $^{159}\text{Tb}(^{29}\text{Si},5n\gamma)$.
2490.9	(33/2 ⁺)	509.8 ^a 2	100 ^a	1981.1	(29/2 ⁺)	(E2) [‡]	0.0246	other E_γ : 508.9 from $(^{29}\text{Si},5n\gamma)$.
2541.5	(31/2 ⁻)	555.1 ^a 2	100 ^a	1986.4	(27/2 ⁻)	(E2) [‡]	0.0201	other E_γ : 553.4 from $(^{29}\text{Si},5n\gamma)$.
2681.6	(31/2 ⁺)	505.4 & b		2175.7	(27/2 ⁺)			
		700.5 &	100 & 22	1981.1	(29/2 ⁺)			
2691.1	(33/2 ⁻)	627.6 ^a 2	100 ^a	2063.5	(29/2 ⁻)	(E2) [‡]	0.01520	
2742.4	(31/2 ⁻)	624.5 & @	100 &	2117.9	(27/2 ⁻)			
3048.7	(37/2 ⁺)	557.8 ^a 2	100 ^a	2490.9	(33/2 ⁺)	(E2)	0.0199	Mult.: from $^{159}\text{Tb}(^{29}\text{Si},5n\gamma)$. other E_γ : 556.5 from $(^{29}\text{Si},5n\gamma)$.
3149.4	(35/2 ⁻)	607.9 ^a 2	100 ^a	2541.5	(31/2 ⁻)	(E2) [‡]	0.01633	other E_γ : 606.9 from $(^{29}\text{Si},5n\gamma)$.
3240.4	(35/2 ⁺)	557.9 & b		2681.6	(31/2 ⁺)			
		749.5 &	100 & 17	2490.9	(33/2 ⁺)			

Adopted Levels, Gammas (continued) $\gamma(^{183}\text{Au})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α^\dagger	Comments
3360.0	(37/2 ⁻)	668.9 ^a 2	100 ^a	2691.1 (33/2 ⁻)	(E2) [‡]	0.01320	other E γ : 667.5 from (²⁹ Si,5n γ).	
3388.8	(35/2 ⁻)	646.4 ^{&@}	100 ^{&}	2742.4 (31/2 ⁻)				
3656.7	(41/2 ⁺)	608.0 ^a 2	100 ^a	3048.7 (37/2 ⁺)			other E γ : 606.0 from (²⁹ Si,5n γ).	
3798.9	(39/2 ⁻)	649.5 ^a 2	100 ^a	3149.4 (35/2 ⁻)			other E γ : 647.5 from (²⁹ Si,5n γ).	
3838.7	(39/2 ⁺)	597.0 ^{&b}		3240.4 (35/2 ⁺)				
		790.0 ^{&}	100 ^{&} 18	3048.7 (37/2 ⁺)				
4053.1	(41/2 ⁻)	693.1 ^a 2	100 ^a	3360.0 (37/2 ⁻)			other E γ : 691.4 from (²⁹ Si,5n γ).	
4309.6	(45/2 ⁺)	652.9 ^a 2	100 ^a	3656.7 (41/2 ⁺)			other E γ : 651.3 from (²⁹ Si,5n γ).	
4461.1	(43/2 ⁻)	662.2 ^a 2	100 ^a	3798.9 (39/2 ⁻)			other E γ : 660.5 from (²⁹ Si,5n γ).	
4765.6	(45/2 ⁻)	712.5 ^a 2	100 ^a	4053.1 (41/2 ⁻)			other E γ : 714.7 from (²⁹ Si,5n γ).	
4989.2	(49/2 ⁺)	679.6 ^a 2	100 ^a	4309.6 (45/2 ⁺)	(E2) [‡]	0.01275	other E γ : 678.3 from (²⁹ Si,5n γ).	
5129.1?	(47/2 ⁻)	668.0 ^{ab} 5	100 ^a	4461.1 (43/2 ⁻)				
5500.6	(49/2 ⁻)	735.0 ^a 5	100 ^a	4765.6 (45/2 ⁻)				
5681.3	(53/2 ⁺)	692.1 ^a 2	100 ^a	4989.2 (49/2 ⁺)	(E2) [‡]	0.01226	other E γ : 691.0 from (²⁹ Si,5n γ).	
6276.6?	(53/2 ⁻)	776.0 ^{ab} 5	100 ^a	5500.6 (49/2 ⁻)				
6381.5	(57/2 ⁺)	700.2 ^a 2	100 ^a	5681.3 (53/2 ⁺)				
7110.5	(61/2 ⁺)	729.0 ^a 5	100 ^a	6381.5 (57/2 ⁺)				
7879.5?	(65/2 ⁺)	769.0 ^{ab} 5	100 ^a	7110.5 (61/2 ⁺)				

[†] Additional information 1.

[‡] From ¹⁵²Sm(³⁵Cl,4n γ), assigning $\Delta\pi=(\text{No})$ for intraband transitions.

[#] From DCO In ¹⁵⁹Tb(²⁹Si,5n γ), assigning $\Delta\pi=(\text{No})$ for intraband transitions.

[@] Placement adopted from (²⁹Si,5n γ) where it is firmly established from coin spectra double-gated on transitions lower In the same band.

[&] From ¹⁵⁹Tb(²⁹Si,5n γ). uncertainty In E γ unstated by authors but, typically, E γ from this source ranges from 2.2 keV higher to 4.7 keV lower than the data from (³⁵Cl,4n γ).

^a From ¹⁵²Sm(³⁵Cl,4n γ).

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

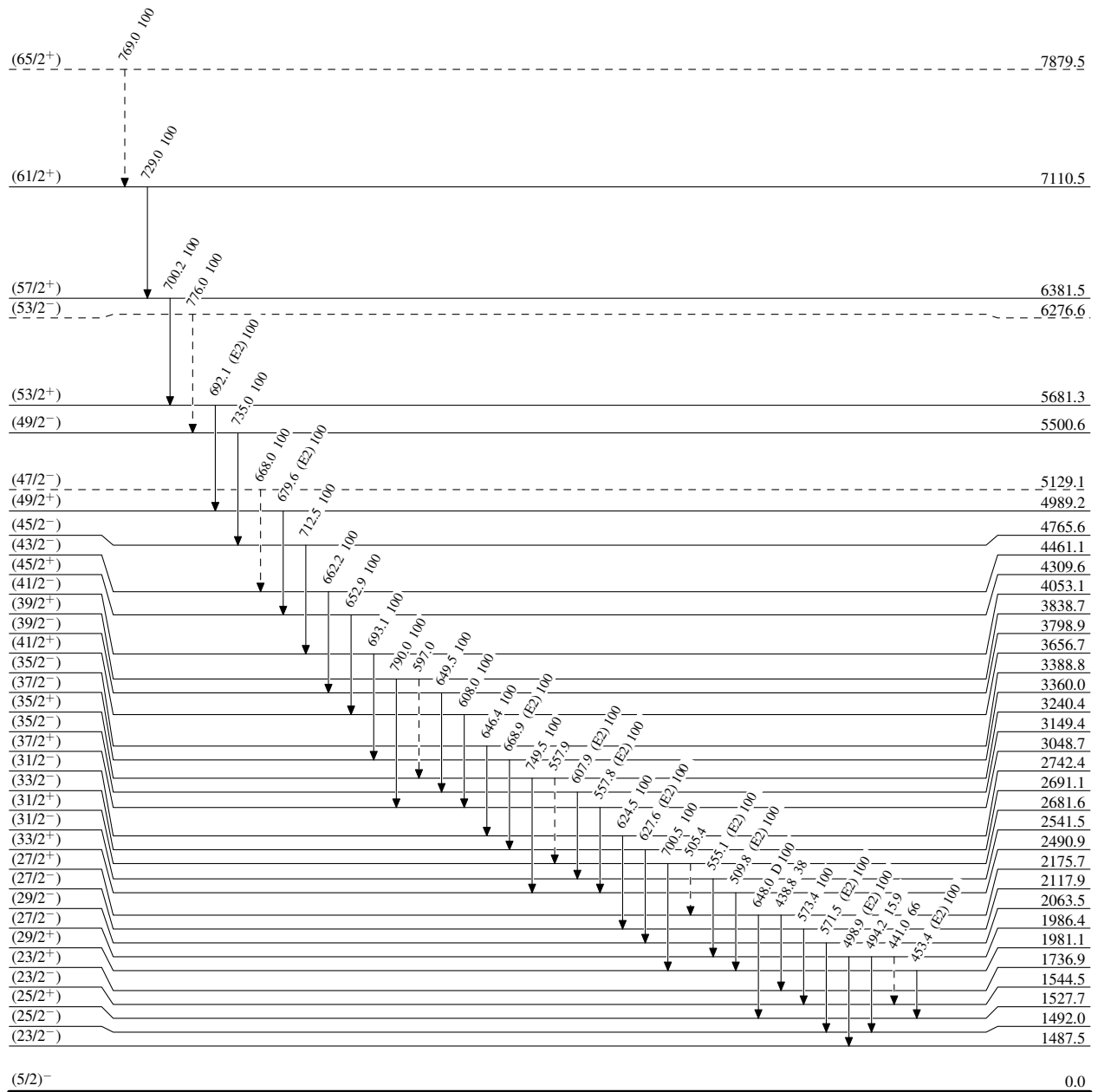
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)

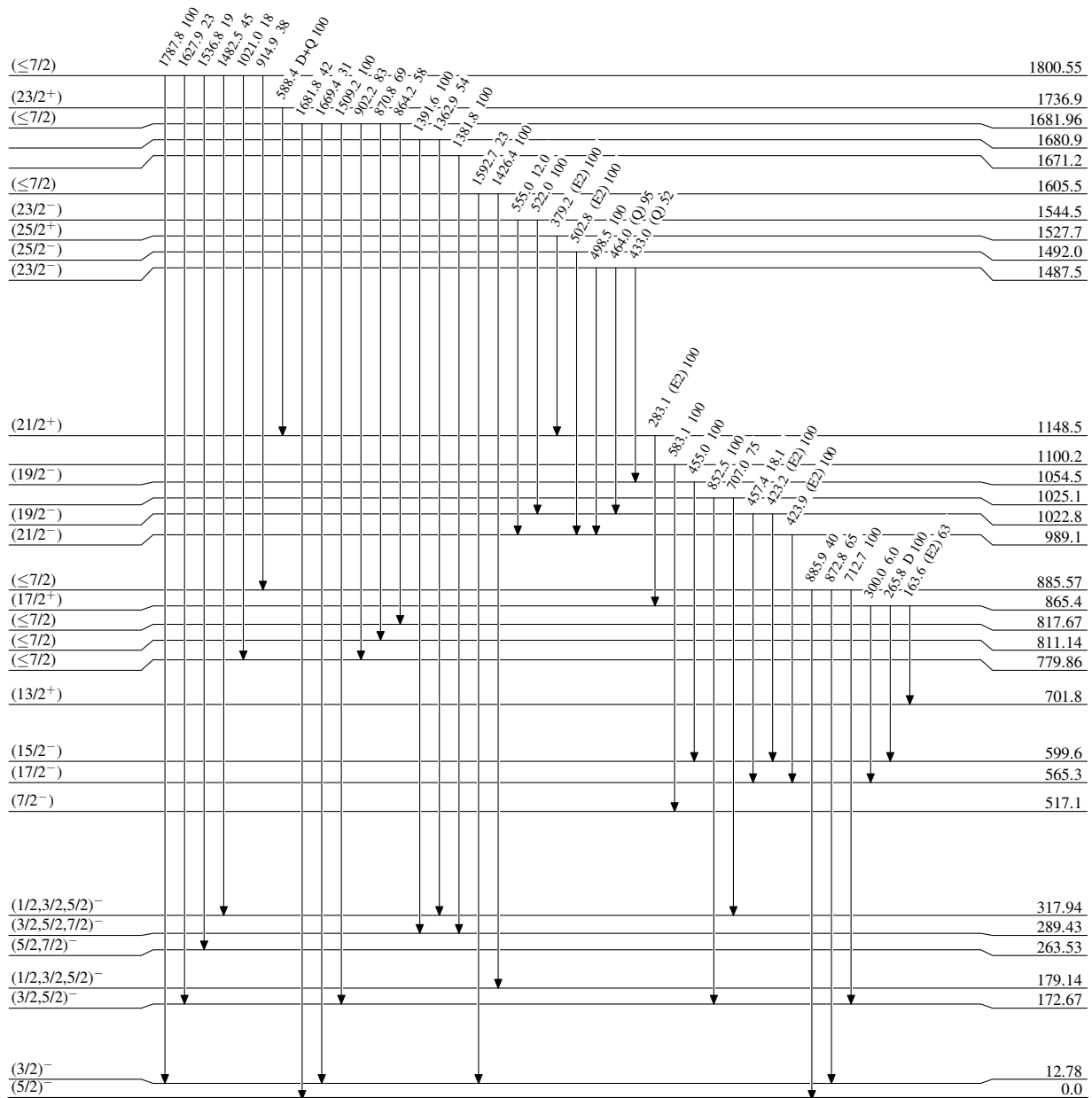


42.8 s 10

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



42.8 s 10

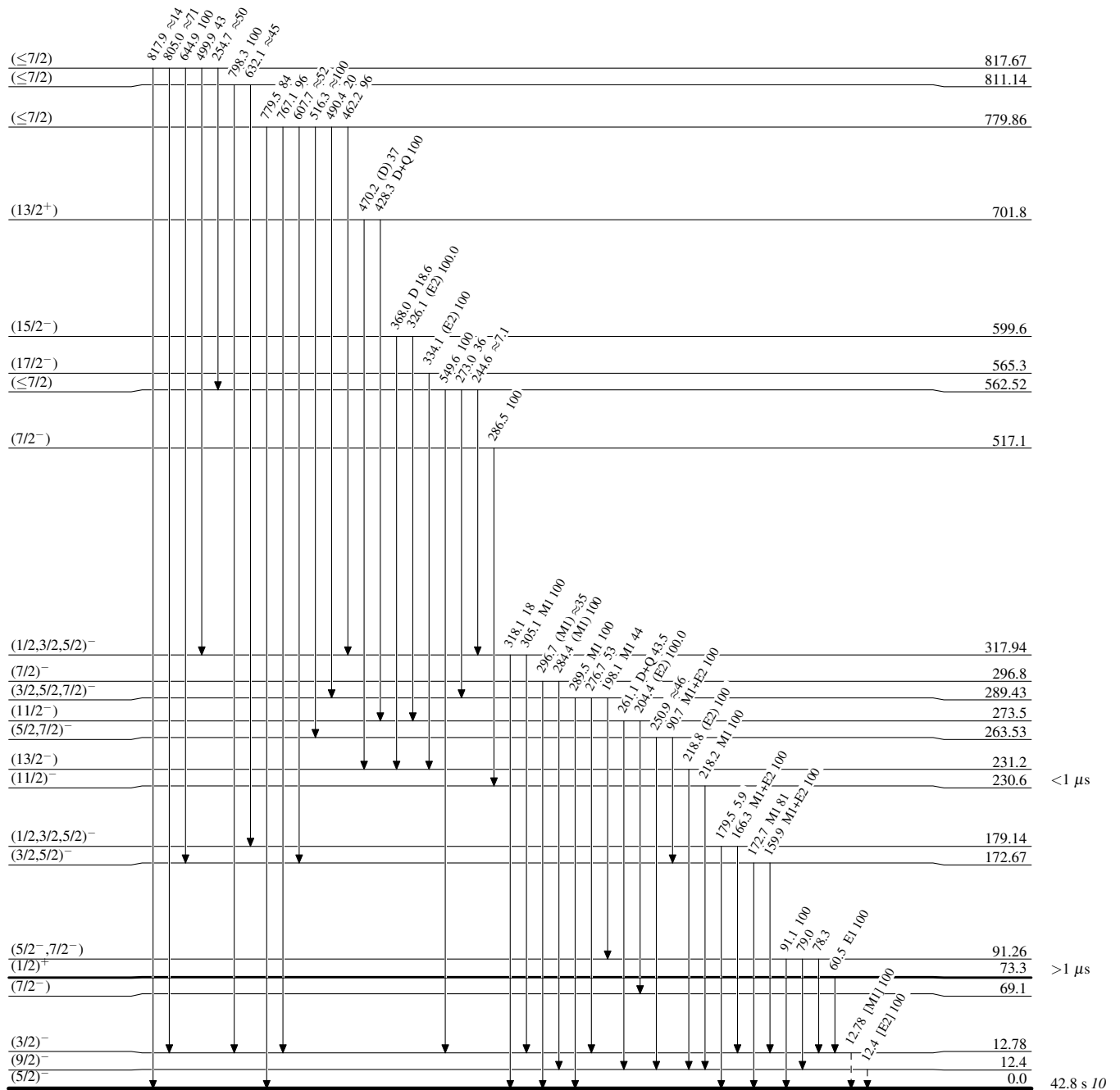
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)



¹⁸³Au₁₀₄

Adopted Levels, Gammas

