Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan	NDS 194,3 (2024)	8-Jan-2024

Q(β^-)=−1275 *10*; S(n)=9253 *10*; S(p)=5409 *9*; Q(α)=−4484 *10* 2021Wa16
Q(ε)=4963 *9*, S(2n)=21144 *11*, S(2p)=14007 *9* (2021Wa16).
Additional information 1.

^{76}Br Levels

Band assignments are from 1997Pa35. Limited assignments in 1997Wi01 and in earlier references and in the resent study by 2022Xu06 are in agreement.

Cross Reference (XREF) Flags

A	^{76}Br IT decay (1.31 s)	E	^{68}Zn(^{12}C,p3nγ)
B	^{76}Kr ε decay (14.79 h)	F	(HI,xnγ)
C	^{55}Mn(^{30}Si,2αnγ)	G	^{76}Se(p,n):IAS
D	^{63}Cu(^{16}O,n2pγ),(^{19}F,αpnγ)	H	^{76}Se(p,nγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	XREF	Comments
0.0[h]	1$^-$	16.14 h *20*	ABCDEF H	%ε+%β^+=100 μ=0.5477 *1* (1960Li11,2019StZV) Q=+0.251 *4* (1960Li11,2021StZZ) Configuration=π3/2[312]⊗ν5/2[422] favors μ in 1980Ek02. J$^\pi$: spin from atomic-beam method (1960Li11); parity from E1 γ from 1$^+$. T$_{1/2}$: weighted average of 16.1 h *2* (1971La01), 16.3 h *3* (1960Bu22) and 16.1 h *2* (1959Gi46). Others: 17.5 h (1955Th01), 17.2 h (1952Fu04, earlier abstract in Phys. Rev. 83, 875 (1951)); 16.5 h *5* (1951Ho42); 15.7 h (quoted by 1948Se40 compilation from a priv. comm., with formation of ^{76}Br in As(α,3n) reaction at Berkeley cyclotron facility). μ,Q: other: γ(θ,H,Temp) (1992Gr20,1988Gr26,1988Wh03). Q=0.270 *3* in 1960Li11 is reanalyzed to +0.251 *4* in 2016St14, based on electric field gradients in ^{79}Br analyzed in 1966Br03 and 2000Ha64. Hyperfine structure study by NMR technique on oriented has been studied by 1993Oh09.
45.475[g] *20*	(2)$^-$	1.13 ns *6*	ABCDEF H	J$^\pi$: cascade of M2-M1 transitions from 103 level to 1$^-$ g.s. limits J^π(103 level) to 0$^+$,2$^+$,3$^+$,4$^+$ and J^π(45 level) to 0$^-$,1$^-$, 2$^-$. Very weak (or absence of) crossover transition from 103 level favors 4$^+$ for 103 level, thus 2$^-$ for 45 level. A band based on the 103 level has been identified in (HI,xnγ) which is consistent with a 4$^+$ choice for the 103 level. First excited state in ^{78}Br, ^{80}Br, ^{82}Br has J^π=2$^-$ which supports the given assignment for 45 level, however, a solid argument for unique assignments for 45.5- and 102.6- level still seems lacking. T$_{1/2}$: from (ce)(ce)(t) in ^{76}Kr ε decay (1973Lo07).
102.578[@] *28*	(4)$^+$	1.31 s *2*	ABCDEF H	%IT=99.7 *3*; %ε+%β^+=0.3 *3* Possible configuration=π3/2[431]⊗ν5/2[422] (1982Do11). J$^\pi$: see comment for 45 level. T$_{1/2}$: from 1980Ha23. Others: 1.35 s *5* (1981Vo04), 1.3 s (1979Kr04), 1.49 s *2* (1978Sc30).
150.53 *12*	(0,1,2)		B H	J$^\pi$: γ to 1$^-$; 295γ from 0$^+$,1$^+$.
212.39[h] *21*	(3$^-$)	111 ps *28*	CD F H	J$^\pi$: ΔJ=1, dipole γ to (2)$^-$; band assignment. T$_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
244.87[&] *17*	(5)$^+$	76 ps *14*	CDEF H	J$^\pi$: ΔJ=1, M1(+E2) γ to (4)$^+$; band assignment.

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Adopted Levels, Gammas (continued)

^{76}Br Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				$T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
252.25 *9*	$(2)^+$	2.18 ns *9*	B H	Jπ: E1 γ to 1^-; 199.8γ M1+E2 from 1^+; possible γ to $(4)^+$. $T_{1/2}$: γγ(t) in ^{76}Kr ε decay (1973Lo07).
301.80[c] *24*	(4^-)	0.52 ns *7*	CDEF H	Jπ: 89.5γ D, ΔJ=1 to (3^-); 199.3γ D, ΔJ=0 to $(4)^+$. Possible configuration=$\pi g_{9/2}\otimes\nu(p_{3/2}$ or $f_{5/2})$ (1982Do11). $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW). Other: γγ(t) (1982Do11).
315.81 *9*	1^+		B H	Jπ: allowed ε feeding (log *ft*=4.8) from 0^+.
317.13 *10*	(2^+)		B H	Jπ: 317.2γ to 1^-; (E1) 271.7γ to $(2)^-$; 214.5γ to $(4)^+$.
355.35 *9*	1^+	0.5 ns *2*	B H	Jπ: allowed ε feeding (log *ft*=5.5) from 0^+. $T_{1/2}$: from (ce)(ce)(t) in ^{76}Kr ε decay (1973Lo07).
356.92[@] *20*	$(6)^+$	118 ps *21*	CDEF	Jπ: 254.3γ ΔJ=2, E2 to $(4)^+$ and 112.0γ ΔJ=1 to $(5)^+$. $T_{1/2}$: from RDDS in (HI,xnγ) (1986KuZW).
363.42[g] *23*	$(4)^-$	59 ps *10*	CD F H	XREF: H(?). Jπ: 318.0γ E2, ΔJ=2 to $(2)^-$, 151.0γ to (3^-). $T_{1/2}$: from RDDS in (HI,xnγ) (1986KuZW).
425.77 *32*	(5)	45 ps *17*	CD F	Jπ: 124.0γ to (4^-) can only be E1 or M1 from RUL; 262.2γ D, ΔJ=1 from (6^-). $T_{1/2}$: from RDDS in (HI,xnγ) (1986KuZW).
446.18 *14*	$(1)^+$		B H	Jπ: ε feeding (log *ft*=6.5 makes 0^+ to 0^+ less likely) from 0^+; M1(+E2) γ to 1^+.
452.08 *9*	1^+	0.4 ns *1*	B H	Jπ: allowed ε feeding (log *ft*=5.0) from 0^+. $T_{1/2}$: from ce-ce(t) in ^{76}Kr ε decay (1973Lo07).
466.89[d] *23*	(5^-)	242 ps *35*	CDEF H	XREF: H(?). Jπ: 103.3γ D, ΔJ=1 to $(4)^-$; band assignment. $T_{1/2}$: from RDDS in (HI,xnγ) (1986KuZW).
495.61 *29*	(0,1,2)		H	Jπ: gammas to 1^+ and 1^-.
505.14 *28*	$(0^-,1,2,3^-)$		H	Jπ: γs to 1^- and $(2)^-$.
527.79 *28*	$(0^-,1,2,3^-)$		H	Jπ: γs to 1^- and $(2)^-$.
548.31 *29*	(0,1,2)		B H	Jπ: 548.3γ to 1^-; possible γ to 1^+.
583.24[f] *29*	(5^-)		CD F	Jπ: 371γ Q, ΔJ=2 to (3^-); band assignment.
583.5+x?		0.8 ns *2*	F	$T_{1/2}$: centroid shift method (1982AnZZ).
592.43[h] *30*	(5^-)		CD	Jπ: 229.1γ D, ΔJ=1 to $(4)^-$; band assignment.
595.00[&] *21*	$(7)^+$	21 ps *4*	CDEF	Jπ: M1+E2, ΔJ=1 γ to $(6)^+$ and band assignment. 350γ(θ) (γ to $(5)^+$) (1981We07), however, disagrees with that expected for ΔJ=2 transition. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
616.13 *15*	$1^{(+)}$		B H	Jπ: possible allowed ε feeding (log *ft*=6.0) from 0^+.
687.76[c] *24*	(6^-)	73 ps *24*	CDEF	Jπ: 386.2γ E2, ΔJ=2 to (4^-); band assignment. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
688.30[@] *22*	$(8)^+$	69 ps *21*	CDEF	Jπ: ΔJ=2, E2 γ to $(6)^+$ and band assignment. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
790.6[g] *4*	(6^-)		CD	Jπ: 198.2γ D, ΔJ=1 to (5^-); band assignment.
815.34 *22*	0,1		B	Jπ: ε feeding (log *ft*=6.3) from 0^+.
868.38 *24*	1^+		B	Jπ: allowed ε feeding (log *ft*=5.5) from 0^+.
882.8 *6*		2.4 ps *4*	F	Jπ: γ to (4^-) suggests 4,5,6^-. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
898.44 *13*	1^+		B	Jπ: allowed ε feeding (log *ft*=5.4) from 0^+.
936.60 *14*	1^+		B	Jπ: allowed ε feeding (log *ft*=5.5) from 0^+.
988.17[f] *26*	(7^-)	17 ps *6*	CDEF	Jπ: E2, ΔJ=2 γ to (5^-); band assignment. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
1025.24[d] *31*	(7^-)	7.6 ps *2*	CD F	Jπ: E2, ΔJ=2 γ to (5^-); band assignment. $T_{1/2}$: RDDS in (HI,xnγ) (1986KuZW).
1048.07 *21*	1^+		B	Jπ: allowed ε feeding (log *ft*=5.3) from 0^+.

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Adopted Levels, Gammas (continued)

^{76}Br Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	XREF	Comments
1120.24[&] *24*	(9)$^+$	0.69 ps *4*	CDEF	J$^{\pi}$: E2, ΔJ=2 γ to (7)$^+$; ΔJ=1, M1+E2 γ to (8)$^+$. 526γ(θ) (γ to (7)$^+$) (1981We07), however, disagrees with that expected for ΔJ=2 transition. T$_{1/2}$: weighted average of 0.59 ps *6* from DSA method (1990Bu07) and 0.83 ps *14* (RDDS,1986KuZW) in (HI,xnγ); 0.707 ps *+35−28* from DSAM (2022Xu06) in (^{12}C,p3nγ).
1254.42[a] *33*	(8$^+$)		E	J$^{\pi}$: ΔJ=2 γ to (6)$^+$; ΔJ=1 γ to (7)$^+$.
1292.5[h] *4*	(7$^-$)		C	J$^{\pi}$: ΔJ=2 γ to (5$^-$); band assignment.
1338.31[c] *28*	(8$^-$)	5.5 ps *14*	CDEF	J$^{\pi}$: E2, ΔJ=2 γ to (6$^-$); band assignment. T$_{1/2}$: from 1983GuZV in (HI,xnγ).
1511.25[@] *31*	(10)$^+$	0.68 ps *12*	CDEF	J$^{\pi}$: E2, ΔJ=2 γ to (8)$^+$; band assignment. T$_{1/2}$: unweighted average of 0.49 ps *6* from DSA method (1990Bu07) and 0.90 ps *14* (RDDS,1986KuZW) in (HI,xnγ), and 0.652 ps *35* from DSAM (2022Xu06) in (^{12}C,p3nγ).
1542.6[g] *4*	(8$^-$)		CD	J$^{\pi}$: ΔJ=2 γ to (6$^-$); band assignment.
1610.16[b] *33*	(9)$^+$	0.395 ps *+49−42*	EF	XREF: F(?). J$^{\pi}$: E2 ΔJ=2 γ to (7)$^+$; band assignment. T$_{1/2}$: from DSAM in (^{12}C,p3nγ).
1747.53[f] *30*	(9$^-$)	0.811 ps *+90−49*	CDE	J$^{\pi}$: ΔJ=2, E2 γ to (7$^-$); band assignment. T$_{1/2}$: from DSAM in (^{12}C,p3nγ).
1824.6[d] *4*	(9$^-$)	0.76 ps *21*	CD F	T$_{1/2}$: from 1983GuZV in (HI,xnγ).
1993.21[&] *35*	(11)$^+$	0.276 ps *23*	CDEF	J$^{\pi}$: E2 ΔJ=2 γ to (9)$^+$; band assignment. T$_{1/2}$: weighted average of 0.284 ps *14* from (^{12}C,p3nγ) and 0.21 ps *4* from (HI,xnγ).
2056.9[h] *5*	(9$^-$)		C	
2080.10[a] *32*	(10$^+$)	0.319 ps *+49−42*	C EF	XREF: F(?). J$^{\pi}$: γ ΔJ=1 to (9)$^+$; band assignment. T$_{1/2}$: from DSAM in (^{12}C,p3nγ).
2217.98[e] *34*	(10$^-$)	0.55 ps *4*	CDEF	T$_{1/2}$: weighted average of 0.541 ps *+42−35* from (^{12}C,p3nγ) and 0.69 ps *21* from (HI,xnγ).
2357.1[g] *5*	(10$^-$)		CD	J$^{\pi}$: ΔJ=2 γ to (8$^-$); band assignment.
2577.7[b] *4*	(11)$^+$	0.194 ps *+62−49*	C EF	XREF: F(?). J$^{\pi}$: E2 ΔJ=2 γ to (9)$^+$; band assignment. T$_{1/2}$: from DSAM in (^{12}C,p3nγ).
2626.6[@] *5*	(12$^+$)		CDEF	J$^{\pi}$: ΔJ=2 γ to (10)$^+$; band assignment.
2688.7[f] *4*	(11$^-$)	0.367 ps *28*	CDE	J$^{\pi}$: ΔJ=2, E2 γ to (9$^-$); band assignment. T$_{1/2}$: from DSAM (^{12}C,p3nγ).
2736.2[d] *4*	(11$^-$)		CD	J$^{\pi}$: ΔJ=2 γ to (9$^-$); band assignment.
2882.9[h] *5*	(11$^-$)		C	J$^{\pi}$: ΔJ=2 γ to (9$^-$); band assignment.
3105.3[a] *5*	(12$^+$)		C E	J$^{\pi}$: ΔJ=(2) γ to (10$^+$); band assignment.
3108.2[&] *5*	(13$^+$)	0.203 ps *20*	CDEF	J$^{\pi}$: E2 ΔJ=2 γ to (11$^+$); band assignment. T$_{1/2}$: weighted average of 0.208 ps *28* from (^{12}C,p3nγ) and 0.20 ps *2* from (HI,xnγ).
3257.0[g] *4*	(12$^-$)		CD	J$^{\pi}$: ΔJ=2 γ to (10$^-$); band assignment.
3285.9[e] *5*	(12$^-$)	0.256 ps *+49−42*	CDE	J$^{\pi}$: E2 ΔJ=2 γ to (10$^-$); band assignment. T$_{1/2}$: from DSAM in (^{12}C,p3nγ).
3641.6[b] *5*	(13$^+$)		C E	J$^{\pi}$: γ to (11$^+$); band assignment.
3705.8[f] *4*	(13$^-$)		CDE	J$^{\pi}$: ΔJ=2, Q γ to (11$^-$); band assignment.
3776.1[h] *5*	(13$^-$)		C	J$^{\pi}$: ΔJ=2, Q γ to (11$^-$); band assignment.
4001.5[@] *6*	(14$^+$)	0.104 ps *14*	CDEF	J$^{\pi}$: E2, ΔJ=2 γ to (12$^+$); band assignment.

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Adopted Levels, Gammas (continued)

^{76}Br Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$#	XREF	Comments
				$T_{1/2}$: from DSAM in (^{12}C,p3nγ).
4301.7[e] 5	(14⁻)		C E	Jπ: Q, ΔJ=2 γ to (12⁻); band assignment.
4363.8[a] 6	(14⁺)		C E	Jπ: γ to (12⁺); band assignment.
4403.7[g] 6	(14⁻)		C	Jπ: Q, ΔJ=2 γ to (12⁻); band assignment.
4434.3[&] 6	(15⁺)	0.099 ps 14	CDEF	Jπ: E2, ΔJ=2 γ to (13⁺); band assignment. $T_{1/2}$: weighted average of 0.097 ps 14 from (^{12}C,p3nγ) and 0.11 ps 3 from (HI,xnγ).
4852.2[f] 6	(15⁻)		C E	Jπ: Q, ΔJ=2 γ to (13⁻); band assignment.
4900	(0⁺)		G	E(level),Jπ: analog of g.s. 0⁺ in ^{76}Se, estimated uncertainty=100 keV.
4902.9[b] 8	(15⁺)		C	Jπ: γ to (13⁺); band assignment.
4942.4[h] 6	(15⁻)		C	Jπ: Q, ΔJ=2 γ to (13⁻); band assignment.
5400	(2⁺)		G	E(level),Jπ: analog of g.s. 2⁺ in ^{76}Se; estimated uncertainty=100 keV.
5533.6[e] 6	(16⁻)		C	
5554.3[@] 7	(16⁺)		CDEF	Jπ: Q, ΔJ=2 γ to (14⁺); band assignment.
5762.3[g] 6	(16⁻)		C	Jπ: Q, ΔJ=2 γ to (14⁻); band assignment.
5793.8[a] 21	(16⁺)		C	Jπ: γ to (14⁺); band assignment.
5931.6[&] 9	(17⁺)	0.055 ps 28	CDEF	Jπ: E2, ΔJ=2 γ to (15⁺); band assignment. $T_{1/2}$: DSA method in (HI,xnγ) (1990Bu07).
6100	(0⁺,2⁺,4⁺)		G	E(level),Jπ: triplet. Analogs of 1122, 0⁺; 1216, 2⁺; 1330, 4⁺ levels in ^{76}Se; estimated uncertainty=100 keV.
6166.6[f] 7	(17⁻)		C	Jπ: Q, ΔJ=2 γ to (15⁻); band assignment.
6383.9[b] 22	(17⁺)		C	Jπ: γ to (15⁺); band assignment.
6391.0[h] 7	(17⁻)		C	Jπ: γ to (15⁻); band assignment.
6500	(2⁺)		G	E(level),Jπ: analog of level in ^{76}Se.
6900	(4⁺)		G	Jπ: analog of 2026, 4⁺ level in ^{76}Se; estimated uncertainty=100 keV.
7009.7[e] 7	(18⁻)		C	Jπ: Q, ΔJ=2 γ to (16⁻); band assignment.
7200	(3⁻)		G	Jπ: analog of 2429, 3⁻ level in ^{76}Se; estimated uncertainty=100 keV.
7207.8[@] 11	(18⁺)		C	Jπ: γ to (16⁺); band assignment.
7308.3[g] 21	(18⁻)		C	Jπ: γ to (16⁻); band assignment.
7592.8[&] 12	(19⁺)	<0.06 ps	CD F	Jπ: E2, ΔJ=2 γ to (17⁺); band assignment. $T_{1/2}$: DSA method in (HI,xnγ) (1990Bu07).
7680.6[f] 8	(19⁻)		C	Jπ: Q, ΔJ=2 γ to (17⁻); band assignment.
8033.9[b] 24	(19⁺)		C	
8124.0[h] 21	(19⁻)		C	
8701.9[e] 11	(20⁻)		C	
8960.1[@] 14	(20⁺)		C	
9092.3[g] 29	(20⁻)		C	
9390.2[f] 11	(21⁻)		C	
9427.5[&] 15	(21⁺)		C F	
10216.1[h] 29	(21⁻)		C	
10541.4[e] 13	(22⁻)		C	
10870.1[@] 24	(22⁺)		C	
11289.8[f] 14	(23⁻)		C	
11450.0[&] 17	(23⁺)		C	
12564.5[e] 24	(24⁻)		C	
12954.2[@] 32	(24⁺)		C	
13439.3[f] 16	(25⁻)		C	

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Adopted Levels, Gammas (continued)

^{76}Br Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF
13606.1[&] *26*	(25^{+})	C
14794.5[e] *31*	(26^{-})	C
15863.1[&] *33*	(27^{+})	C
15954.3[f] *26*	(27^{-})	C

[†] From a least-squares fit to Eγ data.

[‡] For levels populated only in reactions leading to the population of high-spin (J>3) levels, when no J^{π} argument is given, the assignment is based on $\gamma\gamma(\theta)$(DCO) data in (^{30}Si,2αnγ), and possible band assignment. Ascending spins are assumed as the excitation energy increases which is generally supported by the yrast nature of level population in heavy-ion fusion reactions as well as decay pattern of levels.

[#] For high-spin (J>4) states, values are from DSA or RDDS in (HI,xnγ), unless otherwise specified.

[@] Band(A): $K^{\pi}=4^{+}$,$\alpha=0$. Band built on $\pi g_{9/2}\otimes\nu g_{9/2}$ with possible Nilsson orbitals $\pi 3/2[431]$ and $\nu 5/2[422]$. Observed crossing at $\hbar\omega\approx 0.82$ MeV in both the signature partners is assigned to the alignment of the second $g_{9/2}$ neutron, and at $\hbar\omega\approx 1.09$ MeV in the odd-spin sequence to the alignment of $g_{9/2}$ proton.

[&] Band(a): $K^{\pi}=4^{+}$,$\alpha=1$. For configurations and alignments, see comments for $\alpha=0$ signature partner.

[a] Band(B): Band based on (8^{+}),$\alpha=0$. Moment of inertia and signature inversion is similar to that for low-spin members of $K^{\pi}=4^{+}$ band. Configuration=$\pi g_{9/2}\otimes\nu g_{9/2}$ (2022Xu06).

[b] Band(b): Band based on (8^{+}),$\alpha=1$.

[c] Band(C): $K^{\pi}=4^{-}$,$\alpha=0$. Configuration=$\pi g_{9/2}\otimes\nu p_{3/2}$ or $\pi g_{9/2}\otimes\nu f_{5/2}$.

[d] Band(c): $K^{\pi}=4^{-}$,$\alpha=1$. Configuration=$\pi g_{9/2}\otimes\nu p_{3/2}$ or $\pi g_{9/2}\otimes\nu f_{5/2}$.

[e] Band(D): $K^{\pi}=5^{-}$,$\alpha=0$. Configuration=$\pi g_{9/2}\otimes\nu p_{3/2}$ or $\pi g_{9/2}\otimes\nu f_{5/2}$.

[f] Band(d): $K^{\pi}=5^{-}$,$\alpha=1$. Configuration=$\pi g_{9/2}\otimes\nu p_{3/2}$ or $\pi g_{9/2}\otimes\nu f_{5/2}$.

[g] Band(E): $K^{\pi}=1^{-}$,$\alpha=0$. Configuration=$\pi 3/2[312]\otimes\nu 5/2[422]$. Band crossing at $\hbar\omega\approx 0.39$ MeV due to the alignment of a pair of $g_{9/2}$ protons.

[h] Band(e): $K^{\pi}=1^{-}$,$\alpha=1$. See comment for $\alpha=0$ signature partner.

Adopted Levels, Gammas (continued)

γ(^{76}Br)

Additional information 2.

E_i(level)	J_i^π	E_γ‡	I_γ‡	E_f	J_f^π	Mult.@	δ@	α†	Comments
45.475	(2)$^-$	45.48# *2*	100#	0.0	1$^-$	M1		1.057 *15*	B(M1)(W.u.)=0.101 *6* α(K)=0.933 *13*; α(L)=0.1052 *15*; α(M)=0.01675 *24* α(N)=0.001547 *22* Mult.: from ce data in ^{76}Br IT decay and ^{76}Kr ε decay.
102.578	(4)$^+$	57.11# *2*	100# *3*	45.475	(2)$^-$	M2		9.58 *13*	B(M2)(W.u.)=2.038×10^{-4} *+40−42* α(K)=8.10 *11*; α(L)=1.262 *18*; α(M)=0.2053 *29* α(N)=0.01831 *26* Mult.: from ce data in ^{76}Br IT decay. B(M2)(W.u.): greatest retardation in the systematics of M2 transitions in A=45-90 region (1979En04).
		102.6[c]	<1.1	0.0	1$^-$	[E3]		7.26 *10*	B(E3)(W.u.)<0.026 α(K)=5.55 *8*; α(L)=1.461 *20*; α(M)=0.2340 *33* α(N)=0.01749 *24*
150.53	(0,1,2)	104.9 *2*	100 *21*	45.475	(2)$^-$				
		150.5[b] *2*	<157[b]	0.0	1$^-$				Iγ(150.5γ)/Iγ(104.9γ) disagree in ^{76}Kr ε and (p,nγ) it is possible to relocate 150.5γ from 252 level in ^{76}Kr ε decay and from 363 level in (p,nγ). The 150γ may be a doublet with only a part of the intensity from this level.
212.39	(3$^-$)	167.0 *4*	100 *7*	45.475	(2)$^-$	(M1)		0.0290 *4*	B(M1)(W.u.)=0.040 *+13−8* α(K)=0.0257 *4*; α(L)=0.00280 *4*; α(M)=0.000446 *7* α(N)=4.15×10^{-5} *6*
		212.5 *4*	≤9	0.0	1$^-$	[E2]		0.0544 *8*	B(E2)(W.u.)<71 α(K)=0.0478 *7*; α(L)=0.00565 *9*; α(M)=0.000894 *14* α(N)=7.96×10^{-5} *12*
244.87	(5)$^+$	142.2 *2*	100	102.578	(4)$^+$	M1(+E2)[a]	<0.2	0.048 *4*	B(M1)(W.u.)=0.095 *+24−18* α(K)=0.0424 *33*; α(L)=0.0047 *4*; α(M)=0.00075 *7* α(N)=6.9×10^{-5} *6* Eγ: from (HI,xnγ). δ: +0.2 to +1.8 from γ(θ,pol); <0.2 from RUL<300 for E2. B(E2)(W.u.)<305 upper limit exceeds RUL=300.
252.25	(2)$^+$	150.5[bc] *2*	<3[b]	102.578	(4)$^+$	[E2]		0.1930 *29*	B(E2)(W.u.)<6.0 α(K)=0.1681 *25*; α(L)=0.02124 *32*; α(M)=0.00336 *5* α(N)=0.000292 *4*
		252.0 *2*	100 *12*	0.0	1$^-$	E1[&]		0.00560 *8*	B(E1)(W.u.)=1.056×10^{-5} *46* α(K)=0.00499 *7*; α(L)=0.000527 *7*; α(M)=8.34×10^{-5} *12* α(N)=7.73×10^{-6} *11*

$^{76}_{35}Br_{41}$-6

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
301.80	(4$^-$)	89.5 *4*	6.8 *27*	212.39	(3$^-$)	(M1)		0.1555 *29*	B(M1)(W.u.)=0.0037 *+15−14* α(K)=0.1376 *26*; α(L)=0.01529 *29*; α(M)=0.00244 *5* α(N)=0.000226 *4*
		199.3 *4*	100 *5*	102.578	(4)$^+$	(E1)		0.01101 *17*	B(E1)(W.u.)=8.4×10^{-5} *+13−10* α(K)=0.00979 *15*; α(L)=0.001037 *16*; α(M)=0.0001640 *25* α(N)=1.514×10^{-5} *23* Mult.: ΔJ=0 transition.
315.81	1$^+$	63.6 *2*	0.30 *13*	252.25	(2)$^+$	M1(+E2)[&]	<0.2[&]	0.49 *8*	α(K)=0.42 *7*; α(L)=0.053 *13*; α(M)=0.0084 *20* α(N)=0.00075 *16*
		270.3 *2*	52.7 *34*	45.475	(2)$^-$	(E1)[&]		0.00460 *7*	α(K)=0.00409 *6*; α(L)=0.000432 *6*; α(M)=6.84×10^{-5} *10* α(N)=6.34×10^{-6} *9*
		315.8 *2*	100 *7*	0.0	1$^-$	E1[&]		0.00298 *4*	α(K)=0.00265 *4*; α(L)=0.000280 *4*; α(M)=4.44×10^{-5} *6* α(N)=4.12×10^{-6} *6*
317.13	(2$^+$)	166.7 *2*	4.0 *8*	150.53	(0,1,2)				
		214.5 *2*	5.6 *12*	102.578	(4)$^+$				
		271.7 *2*	100 *10*	45.475	(2)$^-$	(E1)[&]		0.00453 *6*	α(K)=0.00403 *6*; α(L)=0.000426 *6*; α(M)=6.74×10^{-5} *10* α(N)=6.25×10^{-6} *9*
		317.2 *4*	10.3 *29*	0.0	1$^-$				
355.35	1$^+$	39.5 *2*	1.2 *4*	315.81	1$^+$	[M1]		1.590 *32*	B(M1)(W.u.)=0.0037 *+28−15* α(K)=1.404 *29*; α(L)=0.1585 *32*; α(M)=0.0252 *5* α(N)=0.00233 *5*
		103.24 *15*	72 *7*	252.25	(2)$^+$	M1(+E2)[&]	<0.15[&]	0.112 *8*	B(M1)(W.u.)=0.012 *+12−5*; B(E2)(W.u.)<66 α(K)=0.099 *7*; α(L)=0.0112 *9*; α(M)=0.00179 *15* α(N)=0.000164 *12*
		309.9 *2*	51 *6*	45.475	(2)$^-$	[E1]		0.00314 *4*	B(E1)(W.u.)=5.5×10^{-6} *+35−17* α(K)=0.00280 *4*; α(L)=0.000295 *4*; α(M)=4.67×10^{-5} *7* α(N)=4.34×10^{-6} *6*
		355.3 *2*	100 *10*	0.0	1$^-$	[E1]		2.17×10^{-3} *3*	B(E1)(W.u.)=7.2×10^{-6} *+46−21* α(K)=0.001929 *27*; α(L)=0.0002033 *29*; α(M)=3.22×10^{-5} *5* α(N)=2.99×10^{-6} *4*
356.92	(6)$^+$	112.0 *2*	100 *3*	244.87	(5)$^+$	M1(+E2)[a]	<0.16	0.094 *10*	B(M1)(W.u.)=0.105 *+29−22* α(K)=0.083 *8*; α(L)=0.0094 *12*; α(M)=0.00149 *18* α(N)=0.000137 *15* E_γ: from (HI,xnγ). Other: 112.1 *5* from (^{30}Si,2αnγ) and (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *10* from (^{16}O,n2pγ), 100 *7* from (^{12}C,p3nγ), and 100 *5* from (HI,xnγ).

$^{76}_{35}Br_{41}$-7

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
									δ: −0.3 to −2.4 from γ(θ,pol); <0.16 from RUL<300 for E2.
356.92	(6)$^+$	254.2 *5*	15.2 *23*	102.578	(4)$^+$	E2[a]		0.0285 *4*	B(E2)(W.u.)=29 *+8−6* α(K)=0.0251 *4*; α(L)=0.00290 *5*; α(M)=0.000460 *7* α(N)=4.13×10^{-5} *6* E_γ: weighted average of 254.5 *5* from (^{30}Si,2αnγ), 254.3 *5* from (^{12}C,p3nγ), and 253.9 *5* from (HI,xnγ). I_γ: unweighted average of 10.1 *9* from (^{30}Si,2αnγ), 20.5 *24* from (^{16}O,n2pγ), 13.2 *10* from (^{12}C,p3nγ), and 17.0 *9* from (HI,xnγ).
363.42	(4)$^-$	151.0 *4*	100 *6*	212.39	(3$^-$)	(M1)		0.0378 *6*	B(M1)(W.u.)=0.064 *+13−10* α(K)=0.0334 *5*; α(L)=0.00366 *6*; α(M)=0.000583 *9* α(N)=5.42×10^{-5} *9*
		318.0 *4*	65 *8*	45.475	(2)$^-$	E2		0.01301 *19*	B(E2)(W.u.)=59 *+13−10* α(K)=0.01149 *17*; α(L)=0.001297 *19*; α(M)=0.0002055 *30* α(N)=1.865×10^{-5} *27*
425.77	(5)	124.0 *5*	100	301.80	(4$^-$)	[D]			
446.18	(1)$^+$	91.0 *2*	100 *62*	355.35	1$^+$	M1(+E2)[&]	<0.35[&]	0.21 *6*	α(K)=0.18 *5*; α(L)=0.022 *8*; α(M)=0.0036 *12* α(N)=3.2×10^{-4} *10*
		295.0 *3*	39 *8*	150.53	(0,1,2)				
		446.2[b] *3*	<115[b]	0.0	1$^-$				Other possible location from 898 level.
452.08	1$^+$	96.7 *2*	1.5 *5*	355.35	1$^+$	M1(+E2)[&]	<0.25[&]	0.151 *26*	B(M1)(W.u.)=4.0×10^{-4} *+40−21*; B(E2)(W.u.)<6.8 α(K)=0.133 *22*; α(L)=0.0156 *33*; α(M)=0.0025 *5* α(N)=0.00022 *4*
		134.9 *2*	22.4 *23*	317.13	(2$^+$)	(M1)[&]		0.0509 *7*	B(M1)(W.u.)=0.0022 *+8−5* α(K)=0.0451 *7*; α(L)=0.00496 *7*; α(M)=0.000790 *11* α(N)=7.34×10^{-5} *11*
		136.3 *2*	8.8 *9*	315.81	1$^+$	(M1)[&]		0.0496 *7*	B(M1)(W.u.)=8.5×10^{-4} *+31−19* α(K)=0.0439 *6*; α(L)=0.00482 *7*; α(M)=0.000768 *11* α(N)=7.14×10^{-5} *10*
		199.9 *2*	10.3 *10*	252.25	(2)$^+$	M1+E2[&]	0.6[&] *2*	0.031 *6*	B(M1)(W.u.)=2.3×10^{-4} *+9−6*; B(E2)(W.u.)=2.8 *+18−14* α(K)=0.028 *6*; α(L)=0.0032 *7*; α(M)=0.00050 *11* α(N)=4.5×10^{-5} *9*
		406.5 *2*	100 *9*	45.475	(2)$^-$	E1[&]		1.52×10^{-3} *2*	B(E1)(W.u.)=6.2×10^{-6} *+21−13* α(K)=0.001352 *19*; α(L)=0.0001423 *20*; α(M)=2.254×10^{-5} *32* α(N)=2.098×10^{-6} *30*
		452.0 *2*	81 *8*	0.0	1$^-$	[E1]		1.16×10^{-3} *2*	B(E1)(W.u.)=3.7×10^{-6} *+13−8*

$^{76}_{35}Br_{41}$-8

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
								α(K)=0.001030 *14*; α(L)=0.0001083 *15*; α(M)=1.716×10^{-5} *24* α(N)=1.599×10^{-6} *22*
466.89	(5$^-$)	103.3 *4*	18.8 *15*	363.42	(4)$^-$	(M1)	0.1049 *18*	B(M1)(W.u.)=0.0089 *+18−14* α(K)=0.0928 *16*; α(L)=0.01028 *18*; α(M)=0.001636 *29* α(N)=0.0001518 *27*
		165.3 *5*	100 *5*	301.80	(4$^-$)	(M1)	0.0297 *5*	B(M1)(W.u.)=0.0116 *+21−16* α(K)=0.0264 *4*; α(L)=0.00288 *5*; α(M)=0.000458 *7* α(N)=4.27×10^{-5} *7* E_γ: weighted average of 164.8 *5* from (^{30}Si,2αnγ), 165.8 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *8* from (^{12}C,p3nγ).
		222.0 *5*	40 *6*	244.87	(5)$^+$	(E1)	0.00805 *12*	B(E1)(W.u.)=3.3×10^{-5} *+7−6* α(K)=0.00716 *11*; α(L)=0.000758 *12*; α(M)=0.0001200 *19* α(N)=1.109×10^{-5} *17* E_γ: weighted average of 221.7 *5* from (^{30}Si,2αnγ) and 222.3 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 34.3 *24* from (^{30}Si,2αnγ) and 46.6 *34* from (^{12}C,p3nγ). Mult.: ΔJ=0, dipole transition.
		364.5 *5*	10 *6*	102.578	(4)$^+$	[E1]	2.02×10^{-3} *3*	B(E1)(W.u.)=1.9×10^{-6} *+12−9* α(K)=0.001801 *26*; α(L)=0.0001898 *27*; α(M)=3.01×10^{-5} *4* α(N)=2.80×10^{-6} *4* E_γ: weighed average of 364.1 *5* from (^{30}Si,2αnγ) and 364.8 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 5.0 *21* from (^{30}Si,2αnγ) and 15.8 *19* from (^{12}C,p3nγ).
495.61	(0,1,2)	180.0 *4*	23	315.81	1$^+$			
		495.4 *4*	100	0.0	1$^-$			
505.14	(0$^-$,1,2,3$^-$)	459.8 *4*	38	45.475	(2)$^-$			
		505.0 *4*	100	0.0	1$^-$			
527.79	(0$^-$,1,2,3$^-$)	482.6 *4*	31	45.475	(2)$^-$			
		527.5 *4*	100	0.0	1$^-$			
548.31	(0,1,2)	232.5[c] *4*	58	315.81	1$^+$			γ from (p,nγ) only.
		548.3 *4*	100	0.0	1$^-$			
583.24	(5$^-$)	157.4 *5*	60 *8*	425.77	(5)			
		219.9 *5*	100 *11*	363.42	(4)$^-$	D		
		371.0 *5*	67 *11*	212.39	(3$^-$)	Q		
592.43	(5$^-$)	166.6 *5*	100 *4*	425.77	(5)			
		229.1 *4*	27 *4*	363.42	(4)$^-$	D		
		380.1 *5*	≤4.4	212.39	(3$^-$)			

$^{76}_{35}Br_{41}$-9

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
595.00	$(7)^+$	238.0 *2*	100 *5*	356.92	$(6)^+$	M1+E2[a]	−0.20 *4*	0.0126 *4*	B(M1)(W.u.)=0.064 *+15−11*; B(E2)(W.u.)=61 *+31−22* α(K)=0.0112 *4*; α(L)=0.00122 *4*; α(M)=0.000193 *7* α(N)=1.79×10^{-5} *6* E_γ: weighted average of 238.3 *5* from (^{30}Si,2αnγ), 238.0 *5* from (^{12}C,p3nγ), and 237.9 *2* from (HI,xnγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *7* from (^{16}O,n2pγ), 100 *7* from (^{12}C,p3nγ), and 100 *6* from (HI,xnγ).
		350.1 *2*	15.3 *20*	244.87	$(5)^+$	E2		0.00938 *13*	B(E2)(W.u.)=35 *+10−7* α(K)=0.00829 *12*; α(L)=0.000928 *13*; α(M)=0.0001470 *21* α(N)=1.339×10^{-5} *19* E_γ: from (HI,xnγ). Others: 350.4 *5* from (^{30}Si,2αnγ) and 349.9 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 20.5 *18* from (^{30}Si,2αnγ), 15.9 *23* from (^{16}O,n2pγ), 13.7 *10* from (^{12}C,p3nγ), and 11.1 *28* from (HI,xnγ).
616.13	$1^{(+)}$	299.0 *3*	100 *10*	317.13	(2^+)	(M1,E2)[&]		0.011 *5*	α(K)=0.010 *4*; α(L)=0.0011 *5*; α(M)=1.8×10^{-4} *8* α(N)=1.6×10^{-5} *7*
		300.2 *2*	51 *5*	315.81	1^+	(M1,E2)[&]		0.011 *5*	α(K)=0.010 *4*; α(L)=0.0011 *5*; α(M)=1.8×10^{-4} *8* α(N)=1.6×10^{-5} *7*
		364.0 *3*	64 *7*	252.25	$(2)^+$				
687.76	(6^-)	104.8 *5*	55 *4*	583.24	(5^-)	(M1)		0.1008 *19*	B(M1)(W.u.)=0.054 *+27−15* α(K)=0.0892 *17*; α(L)=0.00988 *19*; α(M)=0.001572 *30* α(N)=0.0001459 *28*
		220.9 *5*	100 *7*	466.89	(5^-)	(M1)		0.01406 *21*	B(M1)(W.u.)=0.010 *+5−3* α(K)=0.01247 *19*; α(L)=0.001351 *21*; α(M)=0.0002149 *33* α(N)=2.003×10^{-5} *30* E_γ: weighted average of 221.4 *5* from (^{30}Si,2αnγ) and 220.4 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *10* from (^{12}C,p3nγ).
		262.2 *6*	15.5 *23*	425.77	(5)	D			
		330.8 *5*	41 *19*	356.92	$(6)^+$	(E1)		0.00263 *4*	B(E1)(W.u.)=2.2×10^{-5} *+14−10* α(K)=0.002339 *34*; α(L)=0.000247 *4*; α(M)=3.91×10^{-5} *6* α(N)=3.63×10^{-6} *5* E_γ: weighted average of 330.9 *5* from (^{30}Si,2αnγ) and 330.6 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 60 *4* from (^{30}Si,2αnγ) and 21.6 *25* from (^{12}C,p3nγ).
		386.0 *5*	35 *15*	301.80	(4^-)	E2		0.00677 *10*	B(E2)(W.u.)=6.2 *+41−27* α(K)=0.00599 *9*; α(L)=0.000665 *10*; α(M)=0.0001055 *15*

$^{76}_{35}Br_{41}$-10

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
									α(N)=9.64×10^{-6} *14* E_γ: weighted average of 386.2 *5* from (^{30}Si,2αnγ) and 385.7 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 20 *4* from (^{30}Si,2αnγ), and 49 *6* from (^{12}C,p3nγ).
687.76	(6$^-$)	442.8 *5*	14 *5*	244.87	(5)$^+$	(E1)		1.22×10^{-3} *2*	B(E1)(W.u.)=3.1×10^{-6} *+19−13* α(K)=0.001085 *16*; α(L)=0.0001141 *16*; α(M)=1.808×10^{-5} *26* α(N)=1.684×10^{-6} *24* E_γ: weighted average of 443.1 *5* from (^{30}Si,2αnγ) and 442.5 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 9 *4* from (^{30}Si,2αnγ) and 19.5 *21* from (^{12}C,p3nγ).
688.30	(8)$^+$	93.4 *2*	100 *4*	595.00	(7)$^+$	M1(+E2)	<0.12	0.145 *7*	B(M1)(W.u.)=0.19 *+10−5* α(K)=0.128 *6*; α(L)=0.0145 *9*; α(M)=0.00231 *15* α(N)=0.000212 *12* E_γ: from (HI,xnγ). Others: 93.5 *5* from (^{30}Si,2αnγ) and 93.4 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *8* from (^{12}C,p3nγ), and 100 *8* from (HI,xnγ). δ: <0.12 for RUL(E2)<300.
		331.4 *2*	88 *4*	356.92	(6)$^+$	E2[a]		0.01130 *16*	B(E2)(W.u.)=46 *+20−11* α(K)=0.00998 *14*; α(L)=0.001122 *16*; α(M)=0.0001779 *25* α(N)=1.617×10^{-5} *23* E_γ: weighted average of 331.8 *5* from (^{30}Si,2αnγ), 331.3 *5* from (^{12}C,p3nγ), and 331.3 *2* from (HI,xnγ). I_γ: weighted average of 86 *4* from (^{30}Si,2αnγ) and 96 *8* from (HI,xnγ). Other: 164 *13* from (^{12}C,p3nγ) is discrepant.
790.6	(6$^-$)	198.2 *4*	100 *5*	592.43	(5$^-$)	D			Additional information 3.
		427.3 *5*	≤4	363.42	(4)$^-$				Additional information 4.
815.34	0,1	459.4[c] *5*	9.6 *19*	355.35	1$^+$				
		499.6 *3*	100 *10*	315.81	1$^+$				
868.38	1$^+$	552.7 *3*	100 *10*	315.81	1$^+$				
		822.6 *5*	16.1 *17*	45.475	(2)$^-$				
		868.3 *5*	21 *5*	0.0	1$^-$				
882.8		519.4		363.42	(4)$^-$				
898.44	1$^+$	446.2[b] *3*	<56[b]	452.08	1$^+$				Other placement from 446 level.
		452.1[c] *3*		446.18	(1)$^+$				
		543.2 *4*	28.5 *30*	355.35	1$^+$				
		581.5 *3*	46 *5*	317.13	(2$^+$)				
		582.5 *3*	100 *11*	315.81	1$^+$				

$^{76}_{35}Br_{41}$-11

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
898.44	1^+	853.0 *5*	13.3 *26*	45.475	$(2)^-$			
		898.5 *5*	16.3 *33*	0.0	1^-			
936.60	1^+	38.0[c] *3*	36 *10*	898.44	1^+			
		484.4 *3*	20 *7*	452.08	1^+			
		490.3 *3*	54 *11*	446.18	$(1)^+$			
		581.8[c] *4*		355.35	1^+			
		619.5 *4*	100 *11*	317.13	(2^+)			
		684.5 *3*	67 *26*	252.25	$(2)^+$			
		891.0[c] *5*	33 *7*	45.475	$(2)^-$			
		936.0[c] *10*	30 *7*	0.0	1^-			
988.17	(7^-)	300.8 *4*	100 *6*	687.76	(6^-)	(M1)	0.00649 *9*	B(M1)(W.u.)=0.021 *+11−6* α(K)=0.00576 *8*; α(L)=0.000619 *9*; α(M)=9.84×10^{-5} *14* α(N)=9.19×10^{-6} *13* E_γ: weighted average of 301.0 *4* from (^{30}Si,2αnγ) and 300.5 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *11* from (^{12}C,p3nγ).
		404.8 *5*	39 *10*	583.24	(5^-)	E2	0.00579 *8*	B(E2)(W.u.)=28 *+16−9* α(K)=0.00513 *7*; α(L)=0.000568 *8*; α(M)=9.00×10^{-5} *13* α(N)=8.24×10^{-6} *12*
		521.2 *5*	64 *8*	466.89	(5^-)	E2	0.00262 *4*	B(E2)(W.u.)=13 *+7−4* α(K)=0.002321 *33*; α(L)=0.000253 *4*; α(M)=4.01×10^{-5} *6* α(N)=3.70×10^{-6} *5* E_γ: weighted average of 521.4 *5* from (^{30}Si,2αnγ) and 521.0 *5* from (^{12}C,p3nγ). I_γ: weighted average of 58 *8* from (^{30}Si,2αnγ) and 74 *11* from (^{12}C,p3nγ).
		631.0 *5*	23.2 *26*	356.92	$(6)^+$	(E1)	0.000518 *7*	α(K)=0.000461 *7*; α(L)=4.83×10^{-5} *7*; α(M)=7.66×10^{-6} *11* α(N)=7.16×10^{-7} *10* B(E1)(W.u.)=9×10^{-6} *+5−3* E_γ,I_γ: from (^{12}C,p3nγ) only. Mult.: D, ΔJ=1 from R(ADO) in (^{12}C,p3nγ); Δπ=(yes) from level scheme.
1025.24	(7^-)	337.1 *5*	100 *7*	688.30	$(8)^+$	(E1)	0.00250 *4*	B(E1)(W.u.)=6.59×10^{-4} *40* α(K)=0.002222 *32*; α(L)=0.0002343 *34*; α(M)=3.71×10^{-5} *5* α(N)=3.45×10^{-6} *5*
		558.5 *5*	96 *8*	466.89	(5^-)	E2	2.13×10^{-3} *3*	B(E2)(W.u.)=35.0 *22* α(K)=0.001889 *27*; α(L)=0.0002050 *29*; α(M)=3.25×10^{-5} *5* α(N)=3.00×10^{-6} *4*
1048.07	1^+	232.6 *3*	31 *13*	815.34	0,1			

$^{76}_{35}Br_{41}$-12

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
1048.07	1$^+$	431.7 *4*	52 *26*	616.13	1$^{(+)}$				
		731.2 *4*	65 *13*	317.13	(2$^+$)				
		796.1 *4*	100 *13*	252.25	(2)$^+$				
		1002.0[c] *10*	40 *8*	45.475	(2)$^-$				
1120.24	(9)$^+$	432.0 *2*	100 *5*	688.30	(8)$^+$	M1+E2[a]	−0.29 *9*	0.00287 *10*	B(M1)(W.u.)=0.334 *26*; B(E2)(W.u.)=2.0×10^2 *+13−10* α(K)=0.00255 *9*; α(L)=0.000272 *11*; α(M)=4.33×10^{-5} *17* α(N)=4.04×10^{-6} *15* B(E2)(W.u.)=2.0×10^2 *+13−10* upper bound exceeds RUL=300. E_γ: from (HI,xnγ). Others: 432.4 *5* from (^{30}Si,2αnγ) and 431.9 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *10* from (^{16}O,n2pγ), 100 *8* from (^{12}C,p3nγ), and 100 *7* from (HI,xnγ).
		525.0 *2*	9.0 *14*	595.00	(7)$^+$	E2		0.00256 *4*	B(E2)(W.u.)=89 *15* α(K)=0.002270 *32*; α(L)=0.0002473 *35*; α(M)=3.92×10^{-5} *6* α(N)=3.62×10^{-6} *5* E_γ: weighted average of 525.9 *5* from (^{30}Si,2αnγ), 525.3 *5* from (^{12}C,p3nγ), and 526.0 *2* from (HI,xnγ). I_γ: weighted average of 14 *5* from (^{30}Si,2αnγ), 7.7 *19* from (^{12}C,p3nγ), and 9.3 *14* from (HI,xnγ).
1254.42	(8$^+$)	659.8 *5*	100 *11*	595.00	(7)$^+$	D			E_γ,I_γ,Mult.: from (^{12}C,p3nγ).
		897.7 *5*	87 *9*	356.92	(6)$^+$	Q			E_γ,I_γ,Mult.: from (^{12}C,p3nγ).
1292.5	(7$^-$)	502.0 *5*	100 *13*	790.6	(6$^-$)	D			
		700.2 *5*	67 *22*	592.43	(5$^-$)	Q			
1338.31	(8$^-$)	313.3 *5*	17 *4*	1025.24	(7$^-$)	[M1]		0.00587 *9*	B(M1)(W.u.)=0.012 *+5−4* α(K)=0.00521 *8*; α(L)=0.000559 *8*; α(M)=8.89×10^{-5} *13* α(N)=8.31×10^{-6} *12*
		350.1 *5*	46 *4*	988.17	(7$^-$)	(M1)		0.00448 *6*	B(M1)(W.u.)=0.023 *+8−5* α(K)=0.00398 *6*; α(L)=0.000426 *6*; α(M)=6.77×10^{-5} *10* α(N)=6.33×10^{-6} *9* E_γ: weighted average of 350.4 *6* from (^{30}Si,2αnγ) and 349.8 *5* from (^{12}C,p3nγ). I_γ: weighted average of 44 *7* from (^{30}Si,2αnγ) and 47 *4* from (^{12}C,p3nγ).
		650.3 *5*	100 *7*	687.76	(6$^-$)	E2		1.38×10^{-3} *2*	B(E2)(W.u.)=25 *+9−5* α(K)=0.001222 *17*; α(L)=0.0001316 *19*; α(M)=2.087×10^{-5} *30* α(N)=1.934×10^{-6} *27*

$^{76}_{35}Br_{41}$-13

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	δ[@]	α[†]	Comments
1338.31	(8$^-$)	743.3 *5*	21.1 *27*	595.00	(7)$^+$	(E1)		0.000360 *5*	E_γ: from (^{12}C,p3nγ). Other: 650.4 *6* from (^{30}Si,2αnγ). I_γ: from (^{30}Si,2αnγ) and (^{12}C,p3nγ). α(K)=0.000321 *5*; α(L)=3.36×10^{-5} *5*; α(M)=5.32×10^{-6} *7* α(N)=4.98×10^{-7} *7* B(E1)(W.u.)=1.9×10^{-5} *+7−5*
1511.25	(10)$^+$	390.9 *3*	43 *14*	1120.24	(9)$^+$	M1+E2[a]	−0.38 *22*	0.0038 *4*	B(M1)(W.u.)=0.142 *+45−49*; B(E2)(W.u.)=1.8×10^2 *+21−15* α(K)=0.0034 *4*; α(L)=0.00037 *4*; α(M)=5.8×10^{-5} *7* α(N)=5.4×10^{-6} *6* E_γ: from (HI,xnγ). Others: 390.9 *5* from (^{30}Si,2αnγ) and 390.9 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 69.7 *28* from (^{30}Si,2αnγ), 32 *5* from (^{12}C,p3nγ), and 26.3 *21* from (HI,xnγ). δ: −0.16 to −1.3 from γ(θ,pol); <0.6 from RUL<300 for E2. B(E2)(W.u.)=1.8×10^2 *+21−15* upper bound exceeds RUL=300.
		823.2 *5*	100 *6*	688.30	(8)$^+$	E2		0.000735 *10*	B(E2)(W.u.)=80 *+21−14* α(K)=0.000653 *9*; α(L)=6.96×10^{-5} *10*; α(M)=1.104×10^{-5} *16* α(N)=1.027×10^{-6} *14* E_γ: weighted average of 823.3 *6* from (^{30}Si,2αnγ), 822.8 *5* from (^{12}C,p3nγ), and 823.4 *5* from (HI,xnγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *7* from (^{12}C,p3nγ) and 100 *21* from (HI,xnγ).
1542.6	(8$^-$)	250.1 *4*	12 *4*	1292.5	(7$^-$)				
		752.1 *5*	100 *5*	790.6	(6$^-$)	Q			
1610.16	(9)$^+$	355.9 *5*	100 *11*	1254.42	(8$^+$)	(M1)		0.00431 *6*	α(K)=0.00383 *6*; α(L)=0.000409 *6*; α(M)=6.50×10^{-5} *9* α(N)=6.08×10^{-6} *9* B(M1)(W.u.)=0.48 *7* E_γ,I_γ: from (^{12}C,p3nγ).
		922.1 *5*	73 *8*	688.30	(8)$^+$	(M1)		0.000498 *7*	α(K)=0.000444 *6*; α(L)=4.65×10^{-5} *7*; α(M)=7.39×10^{-6} *10* α(N)=6.94×10^{-7} *10* B(M1)(W.u.)=0.0200 *+32−29* E_γ: weighted average of 921.9 *5* from (^{12}C,p3nγ) and 922.3 *5* from (HI,xnγ). I_γ: from (^{12}C,p3nγ).
		1015.0 *5*	86 *9*	595.00	(7)$^+$	E2		0.000441 *6*	α(K)=0.000393 *6*; α(L)=4.15×10^{-5} *6*; α(M)=6.59×10^{-6} *9* α(N)=6.15×10^{-7} *9* B(E2)(W.u.)=23.1 *+35−33* E_γ,I_γ: from (^{12}C,p3nγ). Mult.: Q, ΔJ=2 from ADO ratio in (^{12}C,p3nγ); M2 ruled out by RUL.

$^{76}_{35}Br_{41}$-14

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
1747.53	(9$^-$)	409.3 *5*	65 *5*	1338.31	(8$^-$)	[M1]	0.00308 *4*	α(K)=0.00274 *4*; α(L)=0.000292 *4*; α(M)=4.64×10^{-5} *7* α(N)=4.34×10^{-6} *6* B(M1)(W.u.)=0.116 *+11−14* E_γ: weighted average of 409.0 *5* from (^{30}Si,2αnγ) and 409.5 *5* from (^{12}C,p3nγ). I_γ: weighted average of 62 *5* from (^{30}Si,2αnγ) and 72 *7* from (^{12}C,p3nγ).
		722.3 *5*	35 *7*	1025.24	(7$^-$)	[E2]	1.03×10^{-3} *2*	α(K)=0.000918 *13*; α(L)=9.83×10^{-5} *14*; α(M)=1.560×10^{-5} *22* α(N)=1.448×10^{-6} *20* B(E2)(W.u.)=29 *+5−6*
		759.5 *5*	100 *6*	988.17	(7$^-$)	E2	0.000904 *13*	α(K)=0.000804 *11*; α(L)=8.59×10^{-5} *12*; α(M)=1.363×10^{-5} *19* α(N)=1.267×10^{-6} *18* B(E2)(W.u.)=65 *+6−8* E_γ: weighted average of 759.4 *5* from (^{30}Si,2αnγ) and 759.5 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *9* from (^{12}C,p3nγ).
		1059.0 *5*	21 *5*	688.30	(8)$^+$	(E1)	0.0001768 *25*	α(K)=0.0001576 *22*; α(L)=1.640×10^{-5} *23*; α(M)=2.60×10^{-6} *4* α(N)=2.437×10^{-7} *34* B(E1)(W.u.)=3.7×10^{-5} *+9−10* E_γ,I_γ: from (^{12}C,p3nγ) only.
1824.6	(9$^-$)	486.1 *6*	10 *4*	1338.31	(8$^-$)	[M1]	2.06×10^{-3} *3*	B(M1)(W.u.)=0.023 *+13−9* α(K)=0.001831 *26*; α(L)=0.0001944 *28*; α(M)=3.09×10^{-5} *4* α(N)=2.89×10^{-6} *4*
		799.4 *6*	100 *7*	1025.24	(7$^-$)	E2	0.000792 *11*	B(E2)(W.u.)=106 *+42−23* α(K)=0.000704 *10*; α(L)=7.51×10^{-5} *11*; α(M)=1.191×10^{-5} *17* α(N)=1.108×10^{-6} *16*
		836.5 *6*	≤4.4	988.17	(7$^-$)	[E2]	0.000706 *10*	B(E2)(W.u.)<5.6 α(K)=0.000627 *9*; α(L)=6.68×10^{-5} *9*; α(M)=1.059×10^{-5} *15* α(N)=9.86×10^{-7} *14*
1993.21	(11)$^+$	482.0 *5*	100 *7*	1511.25	(10)$^+$	(M1)	2.10×10^{-3} *3*	B(M1)(W.u.)=0.57 *+7−6* α(K)=0.001867 *27*; α(L)=0.0001983 *28*; α(M)=3.15×10^{-5} *4* α(N)=2.95×10^{-6} *4* δ(E2/M1)<0.35 from RUL<300 for E2. E_γ: weighted average of 482.4 *5* from (^{30}Si,2αnγ), 481.5 *5* from (^{12}C,p3nγ), and 482.1 *5* from (HI,xnγ). I_γ: from (^{30}Si,2αnγ). Others: 100 *8* from (^{12}C,p3nγ) and (HI,xnγ).
		872.9 *3*	24 *9*	1120.24	(9)$^+$	E2	0.000634 *9*	B(E2)(W.u.)=41 *13*

$^{76}_{35}Br_{41}$-15

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
								α(K)=0.000564 *8*; α(L)=5.99×10^{-5} *8*; α(M)=9.51×10^{-6} *13* α(N)=8.86×10^{-7} *12* E_γ: weighted average of 873.7 *6* from (^{30}Si,2αnγ), 872.5 *5* from (^{12}C,p3nγ), and 872.8 *3* from (HI,xnγ). I_γ: unweighted average of 19.3 *20* from (^{30}Si,2αnγ), 41 *7* from (^{12}C,p3nγ), and 13 *4* from (HI,xnγ).
2056.9	(9$^-$)	514.3 *5*	50 *17*	1542.6	(8$^-$)			
		764.4 *5*	100 *27*	1292.5	(7$^-$)	Q		
2080.10	(10$^+$)	470.1 *5*	51 *6*	1610.16	(9)$^+$	(M1)	2.23×10^{-3} *3*	α(K)=0.001979 *28*; α(L)=0.0002103 *30*; α(M)=3.34×10^{-5} *5* α(N)=3.13×10^{-6} *4* B(M1)(W.u.)=0.181 *+32−30* E_γ,I_γ: from (^{12}C,p3nγ) only.
		826.1 *5*	36 *6*	1254.42	(8$^+$)	[E2]	0.000728 *10*	α(K)=0.000647 *9*; α(L)=6.89×10^{-5} *10*; α(M)=1.094×10^{-5} *15* α(N)=1.018×10^{-6} *14* B(E2)(W.u.)=46 *+10−9* E_γ,I_γ: from (^{12}C,p3nγ) only.
		959.7 *3*	100 *8*	1120.24	(9)$^+$	(M1)	0.000458 *6*	α(K)=0.000408 *6*; α(L)=4.28×10^{-5} *6*; α(M)=6.79×10^{-6} *10* α(N)=6.38×10^{-7} *9* B(M1)(W.u.)=0.042 *+7−6* E_γ: weighted average of 960.0 *5* from (^{30}Si,2αnγ), 959.8 *5* from (^{12}C,p3nγ), and 959.6 *3* from (HI,xnγ). I_γ: from (^{12}C,p3nγ).
2217.98	(10$^-$)	470.3 *8*	43 *10*	1747.53	(9$^-$)	(M1)	2.22×10^{-3} *3*	B(M1)(W.u.)=0.104 *20* α(K)=0.001977 *29*; α(L)=0.0002100 *31*; α(M)=3.34×10^{-5} *5* α(N)=3.13×10^{-6} *5* E_γ: unweighted average of 471.0 *5* from (^{30}Si,2αnγ) and 469.5 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 52 *7* from (^{30}Si,2αnγ) and 33 *4* from (^{12}C,p3nγ).
		879.6 *5*	100 *7*	1338.31	(8$^-$)	E2	0.000622 *9*	B(E2)(W.u.)=64 *+7−6* α(K)=0.000553 *8*; α(L)=5.88×10^{-5} *8*; α(M)=9.33×10^{-6} *13* α(N)=8.69×10^{-7} *12* E_γ: weighted average of 880.0 *6* from (^{30}Si,2αnγ) and 879.3 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *11* from (^{12}C,p3nγ).
		1097.5 *5*	16 *4*	1120.24	(9)$^+$	(E1)	0.0001654 *23*	α(K)=0.0001474 *21*; α(L)=1.533×10^{-5} *22*; α(M)=2.431×10^{-6} *34* α(N)=2.279×10^{-7} *32* B(E1)(W.u.)=5.2×10^{-5} *13* E_γ,I_γ: from (^{12}C,p3nγ) only.

$^{76}_{35}Br_{41}$-16

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
2357.1	(10$^-$)	300.3 *5*	21 *7*	2056.9	(9$^-$)	D		
		814.6 *5*	100 *6*	1542.6	(8$^-$)	Q		
2577.7	(11)$^+$	497.7 *5*	100	2080.10	(10$^+$)	(M1)	1.95×10^{-3} *3*	α(K)=0.001734 *25*; α(L)=0.0001840 *26*; α(M)=2.92×10^{-5} *4* α(N)=2.74×10^{-6} *4* B(M1)(W.u.)=0.34 *+13−10* E_γ: weighted average of 497.8 *8* from (^{30}Si,2αnγ) and 497.6 *5* from (^{12}C,p3nγ). I_γ: from (^{12}C,p3nγ).
		967.6 *5*	76 *12*	1610.16	(9)$^+$	E2	0.000494 *7*	α(K)=0.000439 *6*; α(L)=4.65×10^{-5} *7*; α(M)=7.38×10^{-6} *10* α(N)=6.89×10^{-7} *10* B(E2)(W.u.)=50 *+20−14* E_γ,I_γ: from (^{12}C,p3nγ) only.
		1066.2 *5*	97 *18*	1511.25	(10)$^+$	(M1)	0.000368 *5*	α(K)=0.000328 *5*; α(L)=3.43×10^{-5} *5*; α(M)=5.45×10^{-6} *8* α(N)=5.12×10^{-7} *7* B(M1)(W.u.)=0.033 *+13−9* E_γ,I_γ: from (^{12}C,p3nγ) only.
2626.6	(12$^+$)	633.7 *7*	55 *15*	1993.21	(11)$^+$	D		E_γ: weighted average of 633.0 *5* from (^{30}Si,2αnγ) and 634.3 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 70 *5* from (^{30}Si,2αnγ) and 40 *5* from (^{12}C,p3nγ).
		1115.5 *5*	100 *7*	1511.25	(10)$^+$	Q		E_γ: from (^{12}C,p3nγ). Other: 1115.4 *6* from (^{30}Si,2αnγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *15* from (^{12}C,p3nγ).
2688.7	(11$^-$)	470.7 *5*	58 *19*	2217.98	(10$^-$)	(M1)	2.22×10^{-3} *3*	α(K)=0.001973 *28*; α(L)=0.0002096 *30*; α(M)=3.33×10^{-5} *5* α(N)=3.12×10^{-6} *4* B(M1)(W.u.)=0.182 *+41−47* E_γ: weighted average of 470.2 *5* from (^{30}Si,2αnγ) and 471.2 *5* from (^{12}C,p3nγ). I_γ: unweighted average of 39 *8* from (^{30}Si,2αnγ) and 77 *12* from (^{12}C,p3nγ).
		864.1 *5*	25 *4*	1824.6	(9$^-$)	[E2]	0.000650 *9*	α(K)=0.000578 *8*; α(L)=6.15×10^{-5} *9*; α(M)=9.76×10^{-6} *14* α(N)=9.09×10^{-7} *13* B(E2)(W.u.)=22.8 *+47−42*
		941.1 *5*	100 *6*	1747.53	(9$^-$)	E2	0.000528 *7*	α(K)=0.000469 *7*; α(L)=4.98×10^{-5} *7*; α(M)=7.90×10^{-6} *11* α(N)=7.36×10^{-7} *10* B(E2)(W.u.)=60 *+9−7* E_γ: weighted average of 941.2 *5* from (^{30}Si,2αnγ) and 941.0 *5* from (^{12}C,p3nγ). I_γ: from (^{30}Si,2αnγ). Other: 100 *15* from (^{12}C,p3nγ).
2736.2	(11$^-$)	911.7 *6*	100 *7*	1824.6	(9$^-$)	Q		

$^{76}_{35}Br_{41}$-17

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
2736.2	(11$^-$)	988.8 *6*	50 *10*	1747.53	(9$^-$)			
2882.9	(11$^-$)	525.9 *5*	100 *38*	2357.1	(10$^-$)	D		
		826.2 *5*	80 *20*	2056.9	(9$^-$)	Q		
3105.3	(12$^+$)	527.6 *5*	40 *18*	2577.7	(11)$^+$	D		E_γ: weighted average of 527.9 *8* from (^{30}Si,2αnγ) and 527.5 *5* from (^{12}C,p3nγ). I_γ: weighted average of 26 *13* from (^{30}Si,2αnγ) and 62 *16* from (^{12}C,p3nγ).
		1025.2 *5*	100 *19*	2080.10	(10$^+$)	(Q)		E_γ: weighted average of 1025.7 *8* from (^{30}Si,2αnγ) and 1025.0 *5* from (^{12}C,p3nγ). I_γ: from (^{12}C,p3nγ). Other: 100 *37* from (^{30}Si,2αnγ).
3108.2	(13$^+$)	482.0 *5*	35 *4*	2626.6	(12$^+$)	[M1]	2.10×10^{-3} *3*	B(M1)(W.u.)=0.251 *+37−33* α(K)=0.001867 *27*; α(L)=0.0001983 *28*; α(M)=3.15×10^{-5} *4* α(N)=2.95×10^{-6} *4*
		1114.7 *5*	100 *7*	1993.21	(11)$^+$	E2	0.000357 *5*	B(E2)(W.u.)=63 *+7−6* α(K)=0.000317 *4*; α(L)=3.34×10^{-5} *5*; α(M)=5.30×10^{-6} *7* α(N)=4.96×10^{-7} *7*; α(IPF)=1.147×10^{-6} *23* E_γ: weighted average of 1115.0 *6* from (^{30}Si,2αnγ), 1115.0 *5* from (^{12}C,p3nγ), and 1114.0 *6* from (HI,xnγ).
3257.0	(12$^-$)	374.0 *5*	17 *4*	2882.9	(11$^-$)			
		521.0 *5*	22 *4*	2736.2	(11$^-$)	D		
		899.9 *5*	100 *6*	2357.1	(10$^-$)	Q		
		1038.8 *8*	22 *4*	2217.98	(10$^-$)	Q		
3285.9	(12$^-$)	1067.6 *5*	100	2217.98	(10$^-$)	E2	0.000393 *6*	α(K)=0.000349 *5*; α(L)=3.69×10^{-5} *5*; α(M)=5.85×10^{-6} *8* α(N)=5.47×10^{-7} *8* B(E2)(W.u.)=83 *+16−14* E_γ: weighted average of 1067.2 *8* from (^{30}Si,2αnγ) and 1067.8 *5* from (^{12}C,p3nγ).
3641.6	(13$^+$)	536.3 *5*	345 *13*	3105.3	(12$^+$)			E_γ: weighted average of 536.0 *8* from (^{30}Si,2αnγ) and 536.4 *5* from (^{12}C,p3nγ). I_γ: from (^{12}C,p3nγ). Other: ≤33 from (^{30}Si,2αnγ).
		1063.8 *5*	100 *23*	2577.7	(11)$^+$			E_γ: from (^{12}C,p3nγ). Other: 1063.9 *8* from (^{30}Si,2αnγ). I_γ: from (^{12}C,p3nγ). Other: 100 *27* from (^{30}Si,2αnγ).
3705.8	(13$^-$)	420.1 *5*	31 *5*	3285.9	(12$^-$)	D		
		969.5 *5*	27 *5*	2736.2	(11$^-$)			
		1017.1 *6*	100 *6*	2688.7	(11$^-$)	Q		
3776.1	(13$^-$)	519.3 *5*	100 *6*	3257.0	(12$^-$)	D		
		893.3 *5*	27 *5*	2882.9	(11$^-$)	Q		
		1040 *2*	23 *7*	2736.2	(11$^-$)			
4001.5	(14$^+$)	893.4 *6*	61 *6*	3108.2	(13$^+$)	[M1,E2]	0.000566 *34*	α(K)=0.000504 *30*; α(L)=5.32×10^{-5} *35*; α(M)=8.4×10^{-6} *5*

$^{76}_{35}Br_{41}$-18

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
								α(N)=7.9×10^{-7} *5* B(M1)(W.u.)=0.113 *+21−16* if M1, B(E2)(W.u.)=189 *+36−27* if E2.
4001.5	(14$^+$)	1374.8 *5*	100 *10*	2626.6	(12$^+$)	E2	0.000272 *4*	α(K)=0.0002017 *28*; α(L)=2.114×10^{-5} *30*; α(M)=3.36×10^{-6} *5* α(N)=3.14×10^{-7} *4*; α(IPF)=4.59×10^{-5} *7* B(E2)(W.u.)=36 *+6−5* E_γ: weighted average of 1375.4 *8* from (^{30}Si,2αnγ) and 1374.6 *5* from (^{12}C,p3nγ). Other: 1374 *3* from (HI,xnγ).
4301.7	(14$^-$)	526.3 *5*	74 *9*	3776.1	(13$^-$)			
		595.8 *5*	100 *13*	3705.8	(13$^-$)			
		1015.4 *5*	74 *11*	3285.9	(12$^-$)	Q		E_γ: weighted average of 1015.9 *6* from (^{30}Si,2αnγ) and 1015.0 *5* from (^{12}C,p3nγ).
4363.8	(14$^+$)	722 *1*	≤33	3641.6	(13$^+$)			
		1258.6 *5*	100 *33*	3105.3	(12$^+$)			E_γ: weighted average of 1258.7 *8* from (^{30}Si,2αnγ) and 1258.5 *5* from (^{12}C,p3nγ).
4403.7	(14$^-$)	627.5 *6*	42 *9*	3776.1	(13$^-$)			
		1146.8 *6*	100 *12*	3257.0	(12$^-$)	Q		
4434.3	(15$^+$)	432.7 *5*	29 *4*	4001.5	(14$^+$)	[M1]	0.00270 *4*	B(M1)(W.u.)=0.62 *+13−11* α(K)=0.002402 *34*; α(L)=0.000256 *4*; α(M)=4.06×10^{-5} *6* α(N)=3.80×10^{-6} *5*
		1326.0 *5*	100 *7*	3108.2	(13$^+$)	E2	0.000278 *4*	B(E2)(W.u.)=57 *+10−7* α(K)=0.0002175 *31*; α(L)=2.282×10^{-5} *32*; α(M)=3.62×10^{-6} *5* α(N)=3.39×10^{-7} *5*; α(IPF)=3.38×10^{-5} *5* E_γ: from (^{12}C,p3nγ). Others: 1326.1 *8* from (^{30}Si,2αnγ) and 1326 *2* from (HI,xnγ).
4852.2	(15$^-$)	550.6 *5*	57 *6*	4301.7	(14$^-$)	D		
		1146.4 *6*	100 *6*	3705.8	(13$^-$)	Q		
4902.9	(15$^+$)	539[c]	≤50	4363.8	(14$^+$)			
		1261.3 *9*	100 *40*	3641.6	(13$^+$)			
4942.4	(15$^-$)	538.6 *5*	90 *9*	4403.7	(14$^-$)	D		
		1166.1 *6*	100 *12*	3776.1	(13$^-$)	Q		
5533.6	(16$^-$)	591.1 *5*	31 *5*	4942.4	(15$^-$)	D		
		1232.2 *7*	100 *5*	4301.7	(14$^-$)	Q		
5554.3	(16$^+$)	1119.9 *6*	20 *6*	4434.3	(15$^+$)			
		1552.8 *5*	100 *12*	4001.5	(14$^+$)	Q		E_γ: weighted average of 1552.6 *8* from (^{30}Si,2αnγ) and 1552.9 *5* from (^{12}C,p3nγ). Other: 1550 *4* from (HI,xnγ).
5762.3	(16$^-$)	819.9 *5*	≤17	4942.4	(15$^-$)			
		1358.5 *8*	100 *8*	4403.7	(14$^-$)	Q		
5793.8	(16$^+$)	1430 *2*	100	4363.8	(14$^+$)			
5931.6	(17$^+$)	1497.3 *7*	100	4434.3	(15$^+$)	E2	0.000274 *4*	B(E2)(W.u.)=7×10^1 *+6−3* α(K)=0.0001695 *24*; α(L)=1.773×10^{-5} *25*; α(M)=2.81×10^{-6} *4*

$^{76}_{35}Br_{41}$-19

Adopted Levels, Gammas (continued)

γ(^{76}Br) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[@]	α[†]	Comments
								α(N)=2.64×10^{-7} *4*; α(IPF)=8.42×10^{-5} *12* E_γ: weighted average of 1498.9 *8* from (^{30}Si,2αnγ), 1496.7 *5* from (^{12}C,p3nγ), and 1496 *3* from (HI,xnγ).
6166.6	(17$^-$)	632.9 *5*	25 *7*	5533.6	(16$^-$)			
		1314.5 *8*	100 *7*	4852.2	(15$^-$)	Q		
6383.9	(17$^+$)	1481 *2*	100	4902.9	(15$^+$)			
6391.0	(17$^-$)	628.7 *5*	≤18	5762.3	(16$^-$)			
		1448.6 *8*	100 *14*	4942.4	(15$^-$)			
7009.7	(18$^-$)	618.6 *5*	16 *4*	6391.0	(17$^-$)			
		1476.1 *8*	100 *6*	5533.6	(16$^-$)	Q		
7207.8	(18$^+$)	1653.5 *8*	100	5554.3	(16$^+$)			
7308.3	(18$^-$)	1546 *2*	100	5762.3	(16$^-$)			
7592.8	(19$^+$)	1661.2 *8*	100	5931.6	(17$^+$)	E2	0.000307 *4*	B(E2)(W.u.)>39 α(K)=0.0001381 *19*; α(L)=1.441×10^{-5} *20*; α(M)=2.287×10^{-6} *32* α(N)=2.145×10^{-7} *30*; α(IPF)=0.0001522 *22*
7680.6	(19$^-$)	670.9 *5*	33 *5*	7009.7	(18$^-$)			
		1514.1 *8*	100 *11*	6166.6	(17$^-$)	Q		
8033.9	(19$^+$)	1650	100	6383.9	(17$^+$)			
8124.0	(19$^-$)	1733 *2*	100	6391.0	(17$^-$)			
8701.9	(20$^-$)	1692.2 *8*	100	7009.7	(18$^-$)			
8960.1	(20$^+$)	1752.3 *9*	100	7207.8	(18$^+$)			
9092.3	(20$^-$)	1784 *2*	100	7308.3	(18$^-$)			
9390.2	(21$^-$)	1709.6 *8*	100	7680.6	(19$^-$)			
9427.5	(21$^+$)	1834.7 *9*	100	7592.8	(19$^+$)			
10216.1	(21$^-$)	2092 *2*	100	8124.0	(19$^-$)			
10541.4	(22$^-$)	1839.5 *8*	100	8701.9	(20$^-$)			
10870.1	(22$^+$)	1910 *2*	100	8960.1	(20$^+$)			
11289.8	(23$^-$)	1899.5 *8*	100	9390.2	(21$^-$)			
11450.0	(23$^+$)	2022.5 *8*	100	9427.5	(21$^+$)			
12564.5	(24$^-$)	2023 *2*	100	10541.4	(22$^-$)			
12954.2	(24$^+$)	2084 *2*	100	10870.1	(22$^+$)			
13439.3	(25$^-$)	2149.5 *8*	100	11289.8	(23$^-$)			
13606.1	(25$^+$)	2156 *2*	100	11450.0	(23$^+$)			
14794.5	(26$^-$)	2230 *2*	100	12564.5	(24$^-$)			
15863.1	(27$^+$)	2257 *2*	100	13606.1	(25$^+$)			
15954.3	(27$^-$)	2515 *2*	100	13439.3	(25$^-$)			

[†] Additional information 5.

[‡] For low-spin (J<4) levels, values are generally from ^{76}Kr ε decay supplemented by data from (p,nγ). For high-spin levels (J>3), values are mainly from ^{55}Mn(^{30}Si,2αnγ). Exceptions are noted.

$^{76}_{35}Br_{41}$-20

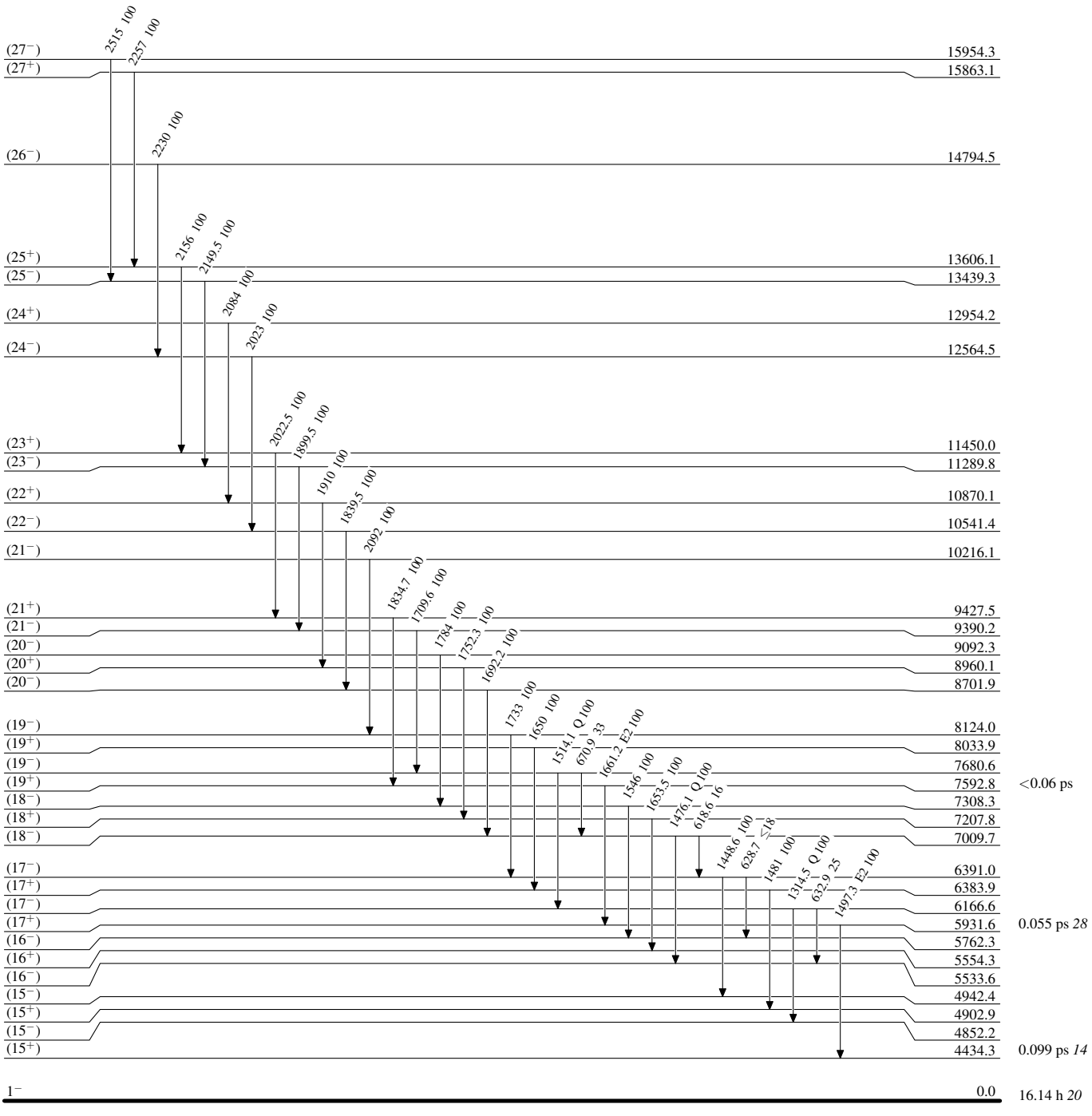
$\gamma(^{76}$Br) (continued)

[#] From ^{76}Br IT decay.
[@] From ce data in ^{77}Kr ε decay, and from $\gamma(\theta)$, γ(pol) and DCO ratios in (HI,xnγ), (^{30}Si,2αnγ) and ADO ratios in (^{12}C,p3nγ). When level half-lives are known or assumed to be less than coincidence resolving time of ≈50 ns, RUL for E2 and M2 is used to assign E2 for ΔJ=2, quadrupole transitions. In some cases (M1) or (E1) is assigned for ΔJ=1, dipole transitions, based on ΔJ^{π}. Specific cases are noted.
[&] From ce data in ^{77}Kr ε decay.
[a] From $\gamma(\theta)$ and γ(lin pol) data in (HI,xnγ).
[b] Multiply placed with undivided intensity.
[c] Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{76}_{35}Br_{41}$

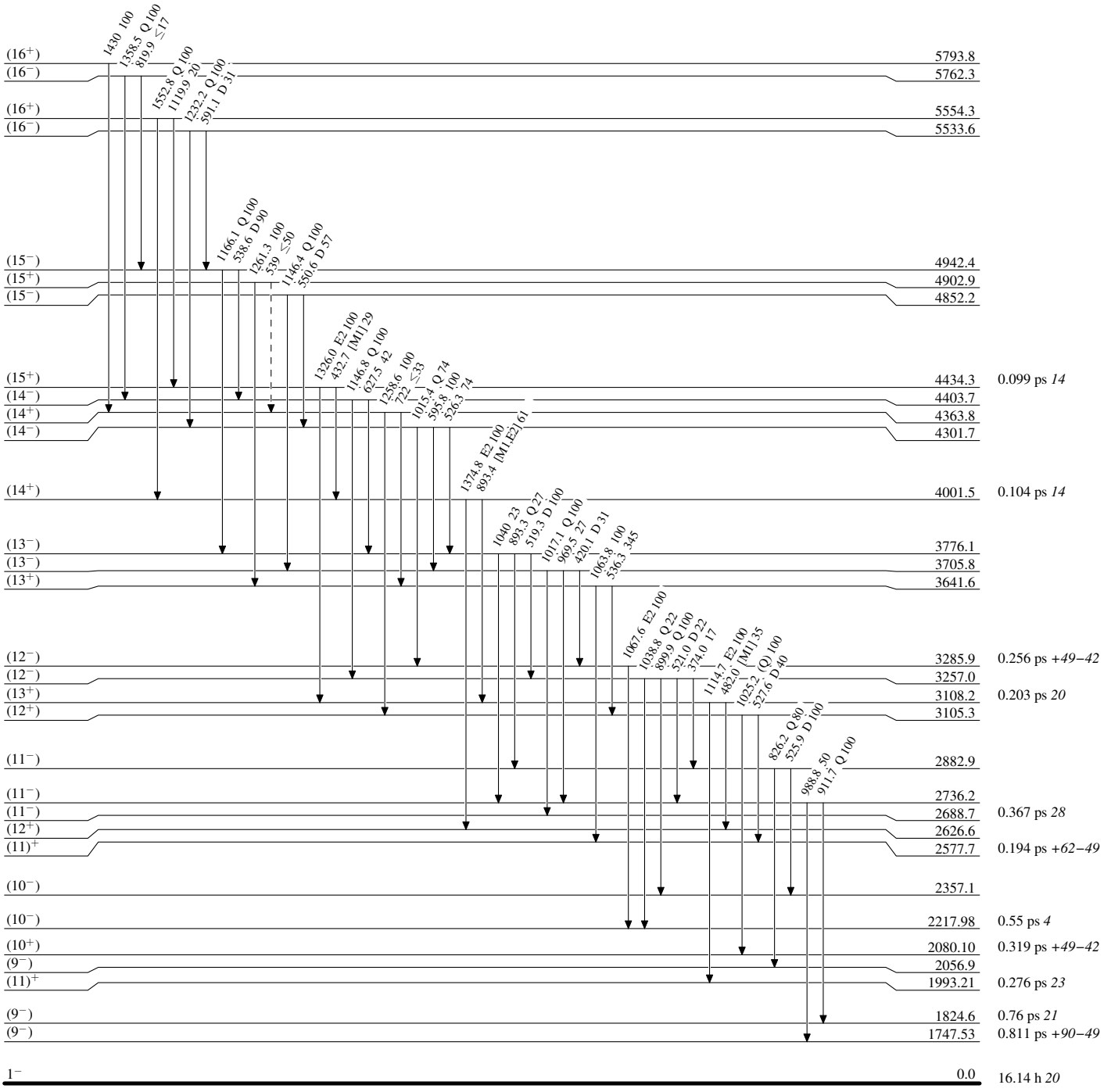
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

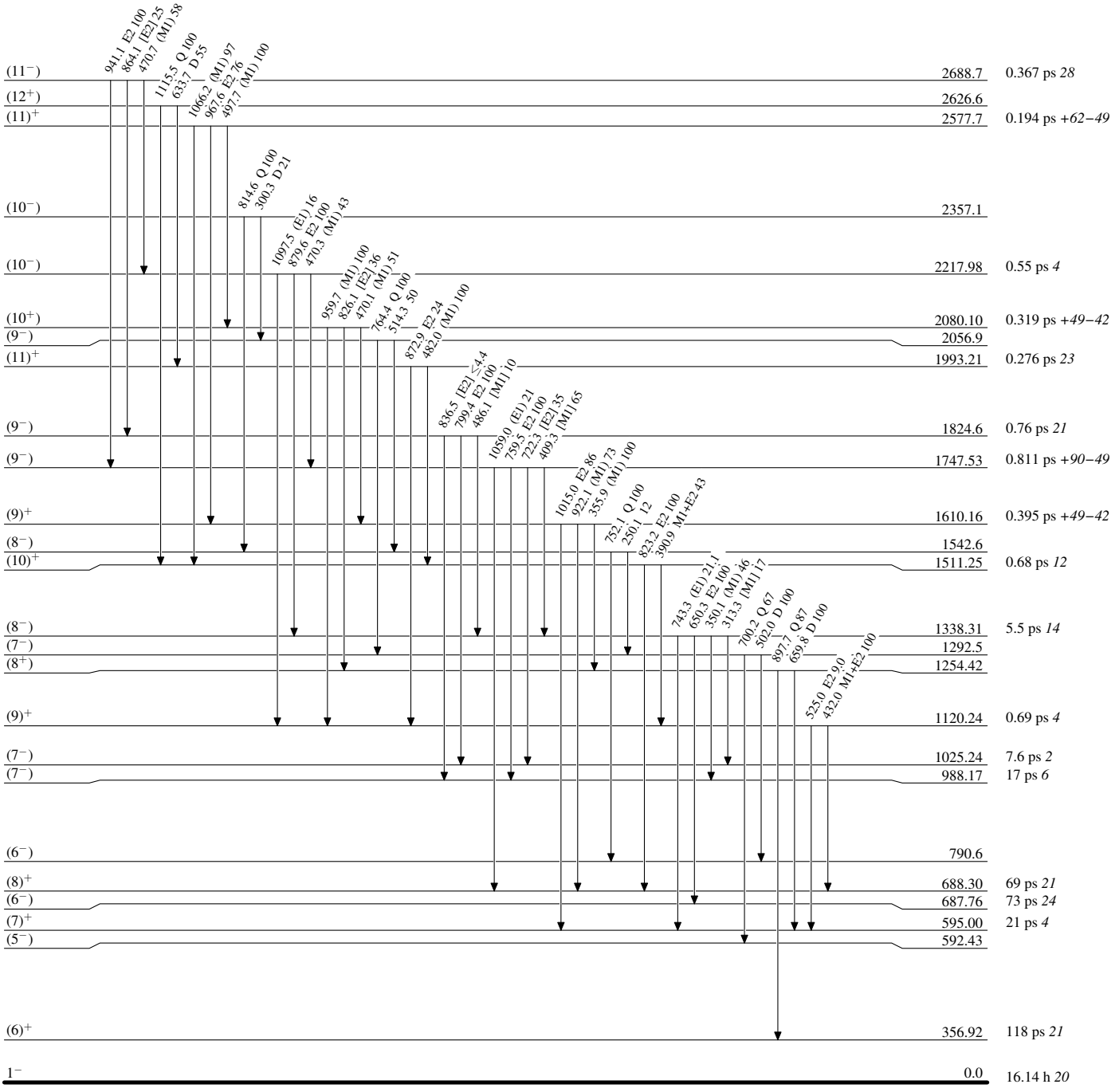


$^{76}_{35}Br_{41}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{76}_{35}Br_{41}$

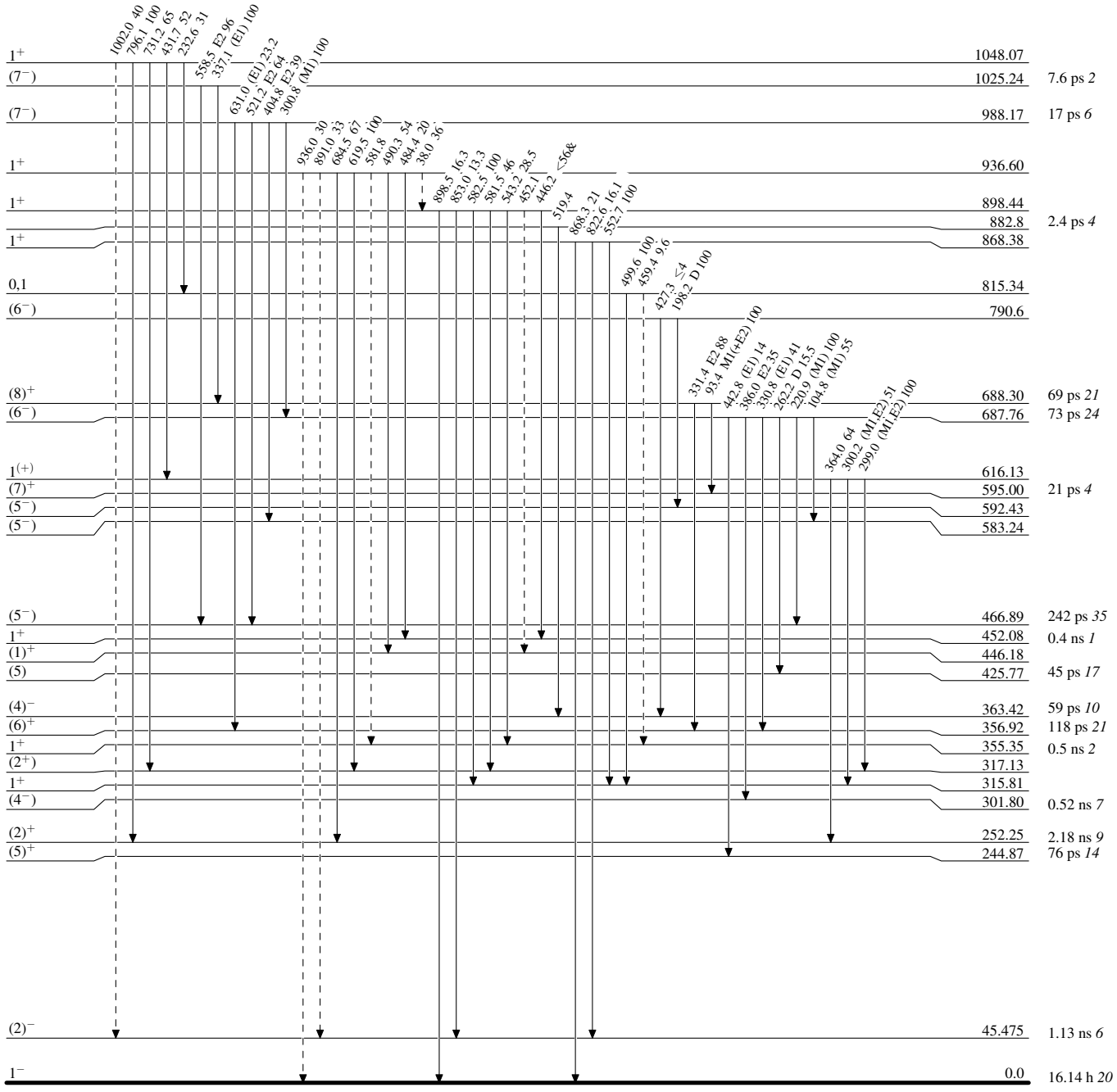
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{76}_{35}Br_{41}$

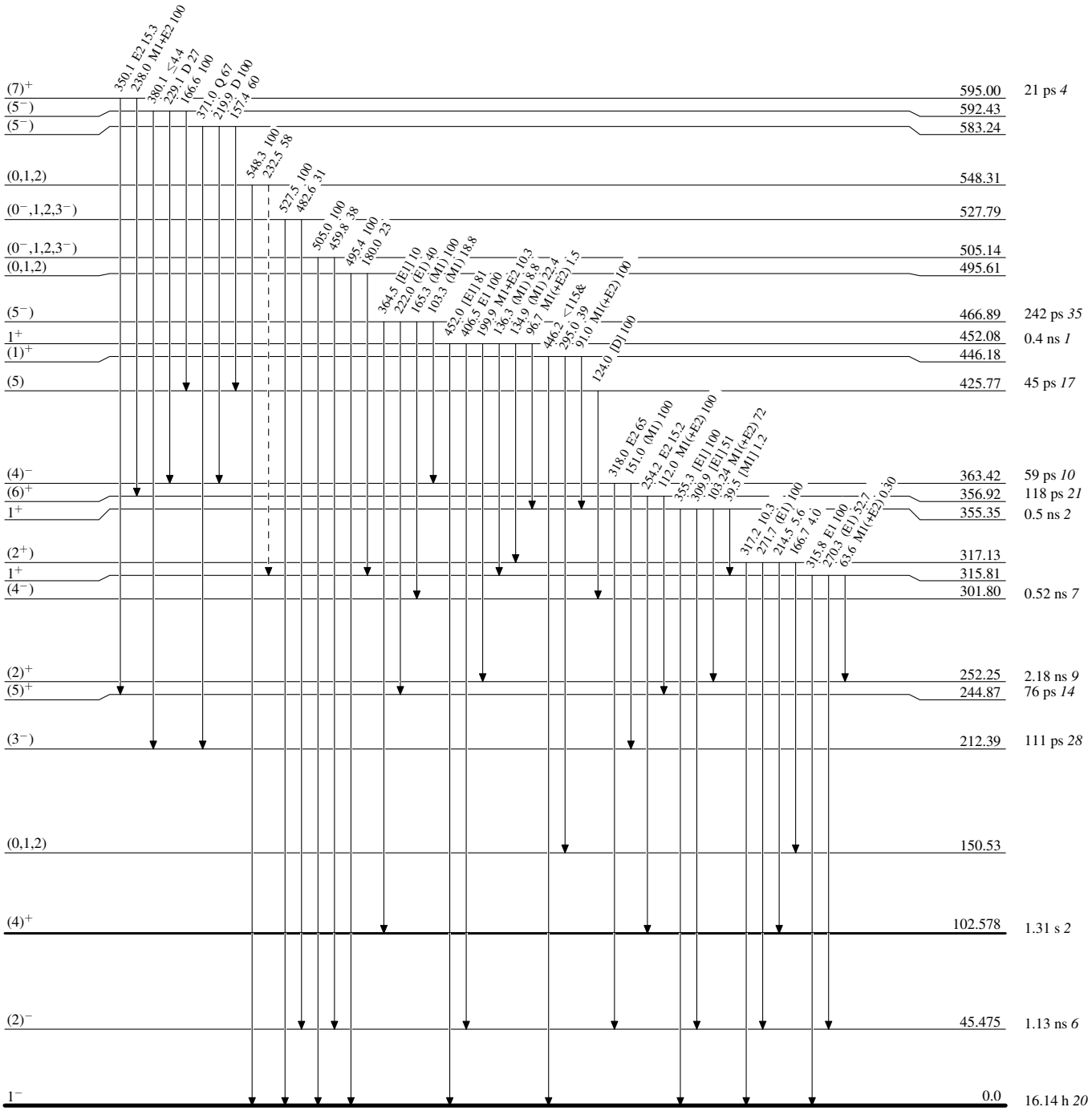
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{76}_{35}Br_{41}$

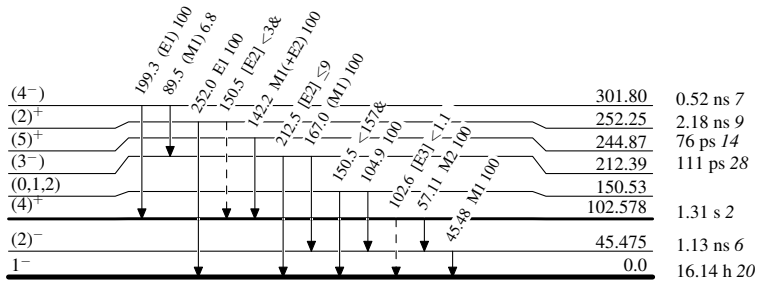
Adopted Levels, Gammas

Legend

Level Scheme (continued)

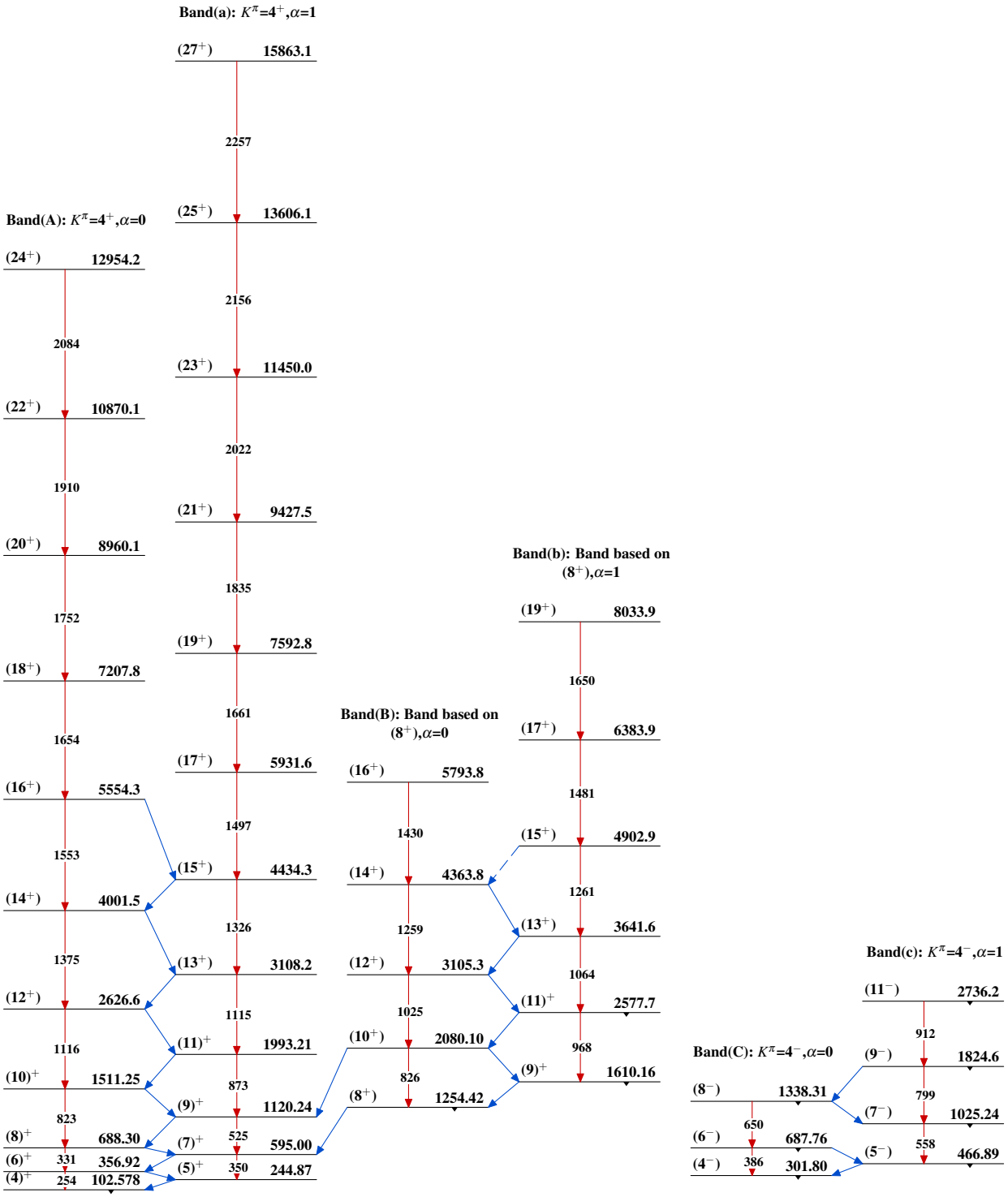
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)

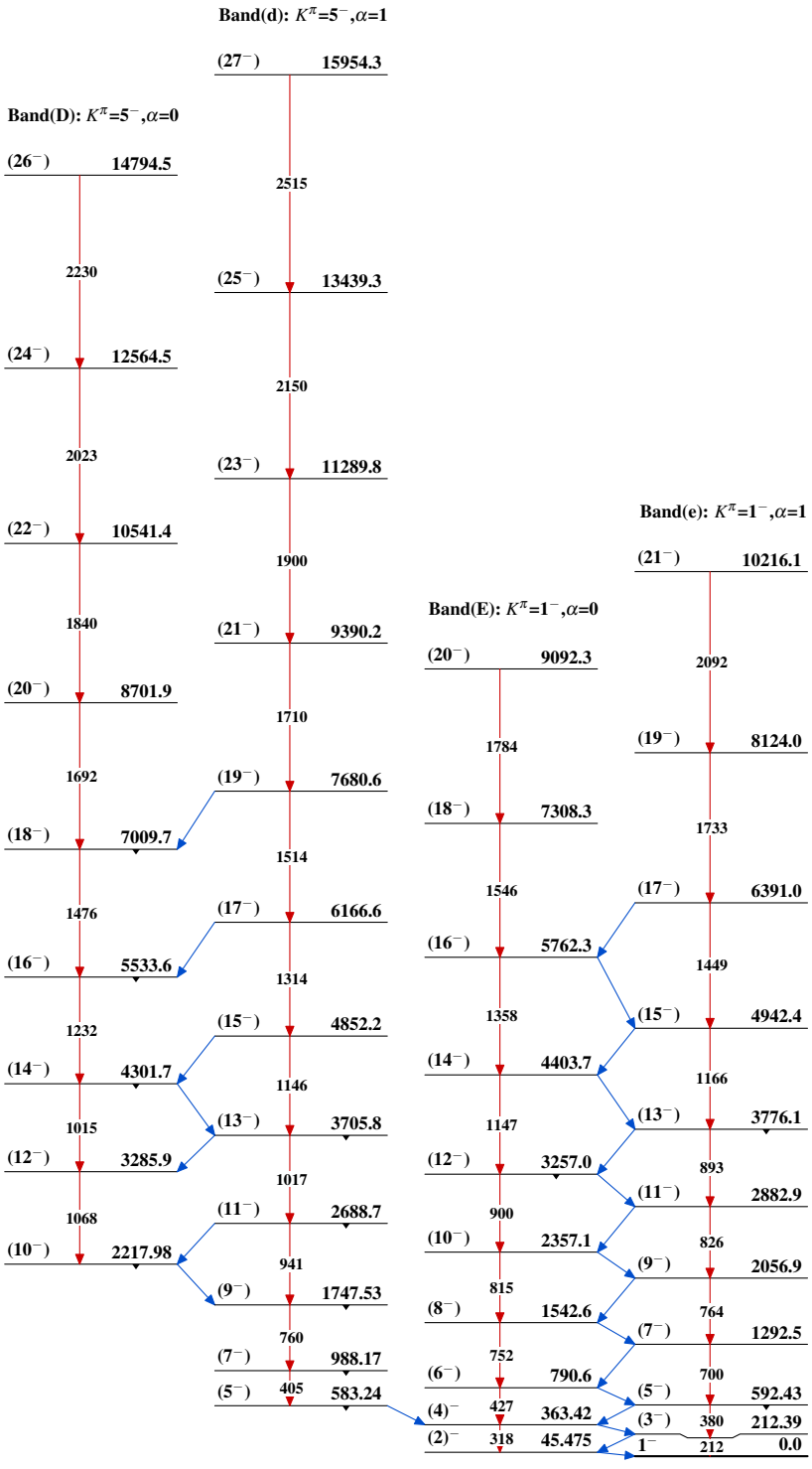


$^{76}_{35}Br_{41}$

Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{76}_{35}Br_{41}$