Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

Q(β^-)=−56.6 *3*; S(n)=7771.99 *20*; S(p)=5943.0 *24*; Q(α)=1018 *8* 2017Wa10

^{193}Ir Levels

The rotational bands of ^{193}Ir with axially asymmetric core are discussed in 1979Vi06, 1983Ci01, 1987Pr10 and 1997Dr04. The band assignments are based on assignments in ^{193}Ir(n,n′γ) (1987Pr10), ^{194}Pt(t,α) (1983Ci01), ^{192}Os(^{3}He,d) (1971Pr13) and ^{192}Ir(n,γ) (1997Dr04). Spin(6) symmetry and U(6/4), U(6/20) supersymmetry are used to describe ^{193}Ir (1983Ci01, 1984Mu19, 1987Mc01, 2000Be07).

Cross Reference (XREF) Flags

A	^{193}Os β^- decay	G	^{192}Os(^{3}He,d), (α,t)	M	Coulomb excitation
B	^{193}Ir IT decay (10.53 d)	H	^{192}Os(^{7}Li,α2nγ)	N	^{194}Pt(d,^{3}He)
C	^{193}Pt ε decay (50 y)	I	^{193}Ir(γ,γ):Mossbauer	O	^{194}Pt(pol t,α), (t,α)
D	^{191}Ir(t,p)	J	^{193}Ir(γ,γ'):res fluorescence	P	Muonic atom
E	^{192}Ir(n,γ) E=th	K	^{193}Ir(n,n′γ)	Q	(HI,xnγ)
F	^{192}Os(d,nγ)	L	Inelastic scattering		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[@]	3/2$^+$	stable	ABCDEFGHIJKLMNOPQ	μ=+0.1637 *6*; Q=+0.751 *9* J$^\pi$: optical spectroscopy (1976Fu06), L(^{3}He,d)=2, L(d,^{3}He)=2. μ: Atomic beam (direct) (2014StZZ,1984Bu15). Other: +0.1591 *6* (NMR 2014StZZ,1968Na01). Q: Hyperfine structure of muonic x rays (2014StZZ,1984Ta04); Others: +0.7 *2* Atomic beam (1978Bu17), +0.73 *7* Laser spectroscopy (2006Ve10). Isotope shift: Δ<r^2>(^{191}Ir,^{193}Ir)=0.044 fm^2 *4* (1989Sa31); <r^2>$^{1/2}$=5.40 fm *11* (2004An14).
73.041[&] *5*	1/2$^+$	6.09 ns *15*	A EFG I KLMNO	μ=+0.519 *2* J$^\pi$: J=1/2 from ^{193}Ir(γ,γ): Mossbauer; π from M1+E2 γ to 3/2$^+$ level. T$_{1/2}$: from ^{193}Os β^- decay; other: 4.1 ns *3* (B(E2) in Coulomb excitation). μ: Mossbauer (2014StZZ,1969Pe05). 2005Ki01 observed nuclear excitation by electron transitions (NEET) of 2.8×10^{-9} *4* times the K-shell photoelectric cross section at energy: Ir K-edge + 128 eV (76.229 keV); synchrotron radiation, internal conversion electron time spectroscopy using Si avalanche photodiode.
80.238[a] *6*	11/2$^-$	10.53 d *4*	AB EFGH JK M O Q	%IT=100 J$^\pi$: M4 γ to 3/2$^+$. T$_{1/2}$: from ^{193}Ir IT decay (10.53 d) (1987Li16).
138.941[@] *5*	5/2$^+$	69.7 ps *10*	A EFG I KLMNOP	μ=+0.89 *4* J$^\pi$: M1+E2 γ to 3/2$^+$ level, M1+E2 γ from 7/2$^+$ level; T$_{1/2}$: from recoil-distance method in Coulomb excitation (2000Be07). Other: 80 ps *5* (^{193}Os β^- decay); 80 ps *2* (^{193}Ir(γ,γ):Mossbauer). μ: From transient field IMPAC measurement ((^{58}Ni,^{58}Ni′) and

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{193}Ir Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				(^{65}Cu,^{65}Cu′) – 2000Be07). Others: +0.53 *3* transient field IMPAC measurement ((^{32}S,^{32}S′) (Coulomb excitation) 2014StZZ,1986Ko20); +0.93 *5* (1996St22) (transient field IMPAC measurement) (1996St22) (the reason for discrepancy with the datum from 1986Ko20 is not clear (1996St22)).
180.069[&] *4*	3/2$^+$	44 ps *15*	A EFG KLMNO	μ=1.1 *4* (2014StZZ,1973Il02) Jπ: M1+E2 γ to 1/2$^+$ level. $T_{1/2}$: unweighted average of 59 ps *7* (^{193}Os β$^-$ decay) and 28 ps *4* (B(E2) in Coulomb excitation). μ: from integral perturbed angular correlation.
299.396[b] *7*	7/2$^-$	0.19 ns *3*	A EFG K MNO	Jπ: L=3 in ^{194}Pt(d,^{3}He); J=L+1/2 ^{194}Pt(pol t,α); E2 γ to 11/2$^-$ level. $T_{1/2}$: from γγ(t) in ^{193}Os β$^-$ decay.
357.768[@] *5*	7/2$^+$	18.7 ps *7*	A EFG KLM o	μ=+1.54 *6* Jπ: γγ(θ) in Coulomb excitation (1958Mc02) is consistent only with J=7/2; M1+E2 γ to π=+ level; L=2 in inelastic scattering. $T_{1/2}$: from recoil-distance method in Coulomb excitation (2000Be07,1986Ko20). μ: From transient field IMPAC measurement ((^{58}Ni,^{58}Ni′) and (^{65}Cu,^{65}Cu′) – 2014StZZ, 2000Be07, 1996St22). Others: +1.7 *3* (transient field IMPAC measurement in Coulomb Excitation – relative to μ (138.9 level)=+0.528 *30* – 2014StZZ,1986Ko20).
361.857[&] *5*	5/2$^+$[‡]	27 ps *3*	A EFG K MNo	Jπ: L=2 in ^{194}Pt(d,^{3}He), (E2) to 1/2$^+$. $T_{1/2}$: weighted average of 36 ps *7* (^{193}Os β$^-$ decay) and 25 ps *3* (B(E2) in Coulomb excitation).
460.538[c] *4*	3/2$^+$	13.4 ps *10*	A EF JKLMNO	Jπ: M1+E2 γ to 1/2$^+$ level, band structure. $T_{1/2}$: Weighted average of 17 ps *4* (^{193}Os β$^-$ decay), 13.8 ps *10* (B(E2) in Coulomb excitation), 11 ps *2* (^{193}Ir(γ,γ′):res fluorescence).
469.384[a] *11*	(13/2$^-$)[#]		EF H K Q	Jπ: (M1) γ to 11/2$^-$ level. Band structure.
478.988[a] *14*	(15/2$^-$)[#]		EF H K Q	Jπ: (E2) γ to 11/2$^-$ level. Band structure.
516.414[&] *6*	(7/2)$^+$		A EF K M	Jπ: (E2) γ to 3/2$^+$ level, γ from (11/2$^+$) level; band structure.
521.926[@] *6*	(9/2)$^+$	13.2 ps *19*	EF KLM	μ=+2.2 *2* Jπ: (M1) γ to 7/2$^+$ level, (E2) γ to 5/2$^+$ level; band structure. $T_{1/2}$: From recoil-distance method in Coulomb excitation. μ: From transient field IMPAC measurement ((^{58}Ni,^{58}Ni′) – 2014StZZ, 1996St22). Other: +3.8 *11* (relative to μ(138.9 level)=+0.528 *30*, transient field IMPAC in Coulomb excitation (1986Ko20)).
557.413[c] *6*	(1/2)$^+$	34 ps *8*	A EF JK M	Jπ: M1+E2 γ to 3/2$^+$ level; 1/2$^+$ consistent with band assignment. $T_{1/2}$: from ^{193}Os β$^-$ decay.
559.298 *5*	5/2$^+$[‡]	1.08 ps *16*	A EFG JK MNO	XREF: G(562). Jπ: L=2 in ^{194}Pt(d,^{3}He); M1 γ to 5/2$^+$ level. $T_{1/2}$: from ^{193}Ir(γ,γ′) res fluorescence. configuration: assigned as 5/2$^+$ 5/2[402] state by 1971Pr13 (^{193}Os(^{3}He,d), (α,t)).
563.402[b] *7*	(9/2$^-$)[#]		A EF K M	Jπ: (M1) γ′s to 7/2$^-$ and 11/2$^-$ levels; band structure.
598.220[d] *6*	3/2$^-$	2.8 ps *+28–9*	A EF JKLM	Jπ: M1 γ from 5/2$^-$ level; γ to 1/2$^+$ level. Band structure. $T_{1/2}$: from ^{194}Ir(γ,γ′): res fluorescence.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{193}Ir Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
620.991[e] *7*	7/2+	4.3 ps *3*	A EFG KLMNO	μ=+1.16 *14* Jπ: L=4 in ^{194}Pt(d,^{3}He) and ^{192}Os(^{3}He,d), (α,t); J=L−1/2 in ^{194}Pt(pol t,α); γ to 3/2+. $T_{1/2}$: from recoil distance method and B(E2) in Coulomb excitation. μ: From transient field IMPAC measurement ((^{58}Ni,^{58}Ni′) – 2014StZZ, 1996St22). Other: +0.5 *4* (relative to μ(138.9 level)=+0.528 *30* transient field IMPAC measurement in Coulomb excitation 2014StZZ, 1986Ko20).
695.142[c] *5*	5/2+‡		A EF KLMNO	Jπ: 234.6γ M1+E2 to 3/2+ level, 337.3γ to 7/2+ level. Band structure.
712.180 *5*	3/2+‡	15 ps *14*	A EF K MNO	Jπ: M1+E2 γ′s to 3/2+ and 5/2+ levels. $T_{1/2}$: from ^{193}Os β− decay.
740.380[d] *6*	5/2−		A EF KLM	Jπ: M1+E2 γ to 7/2− level; M1 γ to 3/2− level.
806.902 *8*	(5/2)+		A EF K M	Jπ: (M1) γ to 7/2+ level, γ to 1/2+ level.
828.92 *9*	(9/2−)#		K o	Jπ: γ to 11/2− level.
832.893[b] *10*	(11/2−)#		EF K o	Jπ: (M1) γ to (9/2−) level, (E2) γ to 7/2− level; band structure.
838.918[&] *8*	(9/2+)		EF M	Jπ: (M1) γ to (7/2)+ level, (E2) γ to 5/2+ level; band structure.
848.967 *13*	3/2(+),5/2(+)‡		A E g K nO	Jπ: 388.60γ (M1) to 3/2+ level, 487.217γ (E2) to 5/2+ level, 491.26γ to 7/2+.
857.027[@] *7*	(11/2)+	4.2 ps *4*	EFg KLM	μ=+2.7 *7* Jπ: (E2) γ to 7/2+ level, (M1) γ to (9/2)+ level; band structure. $T_{1/2}$: From B(E2) to 357.8 level in Coulomb excitation. μ: From transient field IMPAC measurement ((^{58}Ni,^{58}Ni′) – 2014StZZ, 1996St22).
874.290 *8*	3/2+,5/2+		A EF K nO	Jπ: γ′s to 1/2+ and 7/2+. Assigned 7/2+ member of the second Kπ=1/2 band in (n,n′γ); however, this assignment is inconsistent with observed transitions to 1/2+ levels.
879.49 *17*			A	
882.19 *7*			A	
890.41 *7*			A	
892.269[e] *11*	(9/2+)		EF K M	Jπ: γ′s to 5/2+ and (9/2)+ levels; band structure.
918.363[d] *7*	(7/2−)#		EF K	Jπ: (M1) γ to 5/2− level, (E2) γ to 3/2− level; band structure.
930.429[a] *16*	(17/2−)#		EF H K Q	Jπ: γ to (15/2−) level; band structure.
959.73 *3*			A	
964.41 *3*	1/2+		A G K N	XREF: G(969). Jπ: L=0 in ^{194}Pt(d,^{3}He).
972.872 *11*	(5/2+)#		EF K O	Jπ: γ′s to 1/2+, 5/2 and 7/2+ levels.
975.330 *13*	(11/2−)‡		E O	Jπ: (E2) γ to (15/2−) level, (M1) γ to (13/2−) level.
1009.354 *10*	(11/2+)#		E K	Jπ: (E2) γ to (7/2)+ level, γ to (13/2−) level.
1019.589[&] *10*	(11/2+)#		E K	Jπ: (E2) γ to (7/2)+ level; band structure.
1026.0[a] *3*	(19/2−)		H Q	Jπ: 545.7γ Q to (17/2−), band structure.
1035.465[@] *8*	(13/2+)		EF M	Jπ: (M1) γ to (11/2)+ level, (E2) γ to (9/2)+ level; band structure.
1035.855 *25*	3/2+,5/2(+),7/2+		EF K o	XREF: o(1032).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{193}Ir Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			Jπ: γ's to 3/2+ and 7/2+ levels; 5/2− not consistent with ^{193}Ir(n,n′γ) data.
1038.054 *10*	(5/2+,7/2+)[#]	E K o	XREF: o(1032). Jπ: γ's to (9/2)+ and 3/2+ levels.
1065.89 *6*	1/2+,3/2(+),5/2+	g K O	Jπ: γ's to 1/2+ and 5/2+ levels; 3/2− not consistent with ^{193}Ir(n,n′γ) data; multiply placed γ to 7/2+ level would rule out 1/2+.
1076.47 *8*	(3/2+)[#]	g K o	XREF: o(1080). Jπ: γ's to 5/2+ and 7/2+ levels.
1077.99 *14*	(3/2−,5/2−)[#]	A Fg K o	XREF: o(1080). Jπ: γ's to 5/2− and 7/2− levels.
1126		L	
1131.17 *11*	5/2−	G K O	XREF: O(1146). Jπ: L=3 in ^{192}Os(^{3}He,d), (α,t); γ to 3/2+ level. Assigned as 5/2− 1/2[541] state by 1971Pr13 (^{192}Os(^{3}He,d), (α,t)).
1145.614[d] *10*	(9/2)−	E G K O	XREF: G(1150)O(1146). Jπ: L=5 in ^{192}Os(^{3}He,d), (α,t); 9/2− consistent with band assignment. Alternatively assigned as 9/2− 1/2[541] state by 1971Pr13 (^{192}Os(^{3}He,d), (α,t)).
1163 *3*	(13/2)+	G O	XREF: O(1146). Jπ: L=6 in ^{192}Os(^{3}He,d), (α,t). Assigned as 13/2+ 1/2[660] state by 1971Pr13.
1168.06[b] *13*	(13/2−)[#]	K	Jπ: γ's to (11/2−) and (13/2−) levels; band structure.
1169.170[e] *8*	(11/2+)[#]	EF K M	Jπ: (E2) γ to 7/2+ level, (M1) γ to (11/2)+ level; band structure.
1193		L	
1201 *3*	1/2−,3/2−[‡]	G O	E(level): from ^{192}Os(^{3}He,d), (α,t). Jπ: L=1 in ^{192}Os(^{3}He,d), (α,t).
1250.42 *8*	(3/2,5/2)+[#]	K O	Jπ: γ's to 5/2+ and 7/2+ levels.
1286	5/2−,7/2−	G O	E(level): from ^{192}Os(^{3}He,d), (α,t). Jπ: L=3 in ^{192}Os(^{3}He,d), (α,t).
1358.8 *5*	(19/2−)	H L O	XREF: L(1347)O(1344). Jπ: 428.4γ d to (17/2−).
1398 *10*		O	
1407		G	
1438.429[&] *11*	(13/2+)[#]	E K	Jπ: γ to (9/2+) level; band structure.
1459.968[@] *11*	(15/2)+	EF M	Jπ: γ's to (11/2)+ and (13/2)+ levels; band structure.
1511.714 *17*	(3/2+)[‡]	EF KL O	XREF: O(1504). Jπ: (M1+E2) γ to 5/2+ level, γ to (1/2)+ level.
1527.7 *4*	(21/2−)	H Q	Jπ: 501.3γ d to (19/2−), γ to (17/2−).
1552 *10*		O	
1592.6[a] *4*	(21/2−)	H O Q	XREF: O(1583). Jπ: 662.7γ Q to (17/2−), band structure.
1609 *5*		O	
1639 *5*		O	
1650.5[@] *5*	(17/2+)	M	Jπ: γ to (13/2)+ level; band structure.
1690 *5*		O	
1698 *3*	3/2+,5/2,7/2−	G	Jπ: L=2 or 3 in (^{3}He,d), (α,t).
1714.9[a] *4*	(23/2−)	H Q	Jπ: Q γ to (19/2−), band structure.
1728.5 *4*	(23/2−,25/2−)	H Q	Jπ: 200.8γ to (19/2−).
1744 *5*		O	
1759[f] *3*	(3/2)−	G	Jπ: L=1 in ^{192}Os(^{3}He,d), (α,t); band structure.
1820[f] *3*	(7/2)−	G	Jπ: L=3 in ^{192}Os(^{3}He,d), (α,t); band structure.
1823.7 *4*	(23/2)	Q	Jπ: 231.3γ to (23/2−,25/2−), 797.4γ to (19/2−).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{193}Ir Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
1826 *5*			O	Jπ: J=L+1/2 in ^{194}Pt(pol t,α).
1845.2 *6*	(23/2)		Q	Jπ: 819.2γ to (19/2⁻).
1866 *5*			O	
1893.9 *5*	(25/2⁻)		H O Q	XREF: O(1898). Jπ: 165.3γ M1 to (23/2⁻).
1935 *5*	(5/2⁺)[‡]		O	
1944.3 *5*	25/2⁻,27/2⁻		Q	Jπ: 215.8γ M1+E2 to (23/2⁻).
1970 *3*			G	
1999 *3*			G	
2029			G	
2052.3 *5*	(27/2⁻)		Q	Jπ: 323.9γ (E2) to (23/2⁻), 158.3γ M1 to (27/2⁻).
2179.0[@] *5*	(19/2⁺)		M	Jπ: decay to (15/2)⁺ level; band structure.
2231.7 *6*	(29/2⁺)		Q	Jπ: 337.8γ M2 to (25/2⁻).
2278.9 *5*	31/2⁺	124.8 μs *21*	Q	%IT=100 $T_{1/2}$: from γ(t) (HI,xnγ). configuration: possible ν(9/2⁻[505],11/2⁺[615])⊗π(11/2⁻[505]).
2404?[@]	(21/2⁺)		M	Jπ: possible member of rotational band (Coulomb excitation).

[†] For levels seen in ^{193}Os β⁻ decay, ^{192}Ir(n,γ), ^{192}Os(d,nγ) and ^{193}Ir(n,n′γ) reaction and Coulomb excitation, E(level) is from a least-squares fit to Eγ, assuming ΔE=0.5 keV for missing uncertainties. Fifteen γ transitions fit poorly. Uncertainty tripled for those γ rays during the fit: 96.815γ, 418.431γ from 557.427; 154.721γ, 573.267γ from 712.169; 181.38γ, 176.907γ from 740.376; 388.60γ, 487.217γ, 709.924γ from 848.982; 282.34γ, 418.31γ from 879.49; 369.81γ, 752.73γ from 892.262; 459.5γ from 930.430; and 662.636γ from 1511.665. χ^2_{crit}=1.3, prior χ^2=6 and later χ^2=1.8. 282.34γ, 418.31γ yet had a poor fit. 740 keV level during the fit. For levels seen only in particle reactions, the source is given only if an ambiguity exists.

[‡] From angular distributions and analyzing powers in ^{194}Pt(pol t,α), (t,α).

[#] From comparison of experimental and theoretical level-population rates in ^{193}Ir(n,n′γ), and γ-ray decay systematics (1987Pr10).

[@] Band(A): Kπ=3/2⁺, 3/2[402] band.

[&] Band(B): Kπ=1/2⁺, 1/2[400] band.

[a] Band(C): Kπ=11/2⁻, 11/2[505] band.

[b] Band(D): Kπ=7/2⁻, 7/2[523] band.

[c] Band(E): Kπ=1/2⁺, 1/2[411] band.

[d] Band(F): Kπ=3/2⁻, 3/2[532] band.

[e] Band(G): Kπ=7/2⁺, 7/2[404] band.

[f] Band(H): Kπ=1/2⁻, 1/2[530] band.

Adopted Levels, Gammas (continued)

γ(^{193}Ir)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	$I_{(\gamma+ce)}$	Comments
73.041	1/2$^+$	73.029[#] *15*	100	0.0	3/2$^+$	M1+E2	−0.558 *5*	6.10 *10*		α(L)=4.63 *8*; α(M)=1.148 *19* α(N)=0.279 *5*; α(O)=0.0446 *7*; α(P)=0.001240 *18* B(M1)(W.u.)=0.00100 *3*; B(E2)(W.u.)=22.6 *8* δ: from ^{193}Ir(γ,γ): Mossbauer.
80.238	11/2$^-$	80.234[b f] *7*	100	0.0	3/2$^+$	M4		2.11×10^4		α(K)=103.5 *15*; α(L)=1.451×10^4 *21*; α(M)=5.03×10^3 *7* α(N)=1289 *18*; α(O)=196 *3*; α(P)=3.57 *5* B(M4)(W.u.)=2.15 *4* Mult.: From ^{193}Ir IT decay (10.53 d).
138.941	5/2$^+$	138.930 *18*	100	0.0	3/2$^+$	M1+E2	−0.362[a] *6*	2.26		α(K)=1.79 *3*; α(L)=0.360 *6*; α(M)=0.0850 *13* α(N)=0.0208 *3*; α(O)=0.00358 *6*; α(P)=0.000221 *4* B(M1)(W.u.)=0.0320 *6*; B(E2)(W.u.)=84 *3* δ: Others: 0.316 *15*, 0.353 *21*, 0.329 *12* (^{193}Os β$^-$ decay).
180.069	3/2$^+$	41.18[#] *7*		138.941	5/2$^+$				12[#] *3*	
		107.022[@] *5*	100[@] *4*	73.041	1/2$^+$	M1+E2	+0.164 *8*	5.00		α(K)=4.06 *6*; α(L)=0.721 *11*; α(M)=0.168 *3* α(N)=0.0411 *7*; α(O)=0.00720 *11*; α(P)=0.000504 *8* B(M1)(W.u.)=0.061 *23*; B(E2)(W.u.)=55 *22*
		180.071[@] *7*	28.6[@] *14*	0.0	3/2$^+$	M1+E2	−0.48 *2*	1.028 *17*		α(K)=0.814 *15*; α(L)=0.1646 *24*; α(M)=0.0388 *6* α(N)=0.00951 *15*; α(O)=0.001633 *24*; α(P)=9.93×10^{-5} *19* B(M1)(W.u.)=0.0031 *12*; B(E2)(W.u.)=8 *4* I_γ: Other: 71 *8* (Coulomb Excitation).
299.396	7/2$^-$	219.158[@] *7*	100	80.238	11/2$^-$	E2		0.254		α(K)=0.1343 *19*; α(L)=0.0905 *13*; α(M)=0.0229 *4* α(N)=0.00555 *8*; α(O)=0.000870 *13*; α(P)=1.374×10^{-5} *20* B(E2)(W.u.)=71 *12*
357.768	7/2$^+$	218.826[@] *7*	87[@] *4*	138.941	5/2$^+$	M1+E2[a]	−0.280[a] *9*	0.638 *10*		α(K)=0.522 *8*; α(L)=0.0898 *13*; α(M)=0.0208 *3* α(N)=0.00511 *8*; α(O)=0.000897 *13*; α(P)=6.39×10^{-5} *10*

$^{193}_{77}Ir_{116}$-6

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	Comments
									B(M1)(W.u.)=0.0375 *24*; B(E2)(W.u.)=23.8 *21*
357.768	7/2$^+$	357.761[#] *10*	100[#] *2*	0.0	3/2$^+$	E2[a]		0.0571	α(K)=0.0388 *6*; α(L)=0.01389 *20*; α(M)=0.00342 *5* α(N)=0.000833 *12*; α(O)=0.0001349 *19*; α(P)=4.26×10^{-6} *6* B(E2)(W.u.)=32.3 *17* Mult.: Q from Coulomb excitation, E2 from ce data (^{192}Ir(n,γ)).
361.857	5/2$^+$	181.792[@] *7*	66 *3*	180.069	3/2$^+$	M1+E2	+0.149 *11*	1.107	α(K)=0.910 *13*; α(L)=0.1518 *22*; α(M)=0.0351 *5* α(N)=0.00862 *13*; α(O)=0.001521 *22*; α(P)=0.0001120 *16* B(M1)(W.u.)=0.026 *5*; B(E2)(W.u.)=6.8 *16* I_γ: Weighted average of data from β^- decay, (n,γ), (d,nγ), Coul. Ex., and (n,n′γ).
		288.819[#] *10*	49.5 *6*	73.041	1/2$^+$	(E2)		0.1063	α(K)=0.0661 *10*; α(L)=0.0304 *5*; α(M)=0.00758 *11* α(N)=0.00184 *3*; α(O)=0.000294 *5*; α(P)=7.06×10^{-6} *10* B(E2)(W.u.)=22 *4* I_γ: Weighted average of data from β^- decay, (n,γ), Coul. Ex., and (n,n′γ).
		361.858[#] *10*	100[a] *7*	0.0	3/2$^+$	M1+E2	−0.315 *19*	0.159 *3*	α(K)=0.1310 *21*; α(L)=0.0217 *4*; α(M)=0.00501 *8* α(N)=0.001230 *18*; α(O)=0.000217 *4*; α(P)=1.59×10^{-5} *3* B(M1)(W.u.)=0.0041 *7*; B(E2)(W.u.)=1.21 *25*
460.538	3/2$^+$	98.681[#] *10*	0.42[#] *1*	361.857	5/2$^+$	M1		6.36	B(M1)(W.u.)=0.0032 *6* α(K)=5.24 *8*; α(L)=0.863 *12*; α(M)=0.199 *3* α(N)=0.0489 *7*; α(O)=0.00866 *13*; α(P)=0.000652 *10*
		280.465[@] *3*	31.7[#] *2*	180.069	3/2$^+$	M1+E2	−0.049 *12*	0.337	α(K)=0.279 *4*; α(L)=0.0451 *7*; α(M)=0.01037 *15* α(N)=0.00255 *4*; α(O)=0.000452 *7*; α(P)=3.41×10^{-5} *5* B(M1)(W.u.)=0.0105 *8*; B(E2)(W.u.)=0.12 *7*
		321.604[@] *7*	32.1[#] *2*	138.941	5/2$^+$	M1+E2	+0.234 *10*	0.225	α(K)=0.185 *3*; α(L)=0.0305 *5*; α(M)=0.00703 *10* α(N)=0.001726 *25*; α(O)=0.000305 *5*; α(P)=2.26×10^{-5} *4* B(M1)(W.u.)=0.0067 *6*; B(E2)(W.u.)=1.38 *16* I_γ: Other: 42 *3* (n,n′γ).
		387.509[#] *10*	31.6[#] *2*	73.041	1/2$^+$	M1+E2	−0.24 *4*	0.136 *3*	α(K)=0.1122 *22*; α(L)=0.0183 *3*; α(M)=0.00421 *7* α(N)=0.001034 *17*; α(O)=0.000183 *3*; α(P)=1.36×10^{-5} *3* B(M1)(W.u.)=0.0038 *3*; B(E2)(W.u.)=0.56 *19*
		460.547[@] *7*	100.0[#] *5*	0.0	3/2$^+$	M1+E2	−0.64 *3*	0.0718 *16*	α(K)=0.0587 *13*; α(L)=0.01010 *18*; α(M)=0.00234 *4* α(N)=0.000575 *10*; α(O)=0.0001007 *19*; α(P)=7.06×10^{-6} *17* B(M1)(W.u.)=0.0053 *5*; B(E2)(W.u.)=4.0 *4*
469.384	(13/2$^-$)	389.140[@] *10*	100	80.238	11/2$^-$	(M1)[@]		0.1395	α(K)=0.1155 *17*; α(L)=0.0185 *3*; α(M)=0.00425 *6* α(N)=0.001046 *15*; α(O)=0.000185 *3*; α(P)=1.406×10^{-5} *20*
478.988	(15/2$^-$)	398.775[@] *23*	100	80.238	11/2$^-$	(E2)[@]		0.0424	α(K)=0.0299 *5*; α(L)=0.00956 *14*; α(M)=0.00234 *4* α(N)=0.000570 *8*; α(O)=9.31×10^{-5} *13*; α(P)=3.32×10^{-6} *5*
516.414	(7/2)$^+$	154.554[@] *7*	24[@] *3*	361.857	5/2$^+$	(M1)[@]		1.770	α(K)=1.460 *21*; α(L)=0.239 *4*; α(M)=0.0550 *8*

$^{193}_{77}Ir_{116}$-7

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ [†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α^h	Comments
									α(N)=0.01351 *19*; α(O)=0.00239 *4*; α(P)=0.000180 *3* I_γ: Others: 15 *4* (β^- decay), 30 *4* (Coul. Ex), 14 *6* (n,n′γ).
516.414	(7/2)$^+$	336.343[@] *9*	99[@] *9*	180.069	3/2$^+$	(E2)[@]		0.0679	α(K)=0.0451 *7*; α(L)=0.01730 *25*; α(M)=0.00428 *6* α(N)=0.001041 *15*; α(O)=0.0001678 *24*; α(P)=4.92×10^{-6} *7* I_γ: Others: 100 *6* (β^- decay), 57 *12* (Coul. Ex), 47 *6* (n,n′γ), 21 *5* ((d,nγ) − complex peak).
		377.477[@] *7*	100[a] *7*	138.941	5/2$^+$	(M1)[@]		0.1513	α(K)=0.1253 *18*; α(L)=0.0201 *3*; α(M)=0.00462 *7* α(N)=0.001135 *16*; α(O)=0.000201 *3*; α(P)=1.526×10^{-5} *22*
		516.475[@gk] *15*	≤11[@]	0.0	3/2$^+$				γ multiply placed in ^{192}Ir(n,γ).
521.926	(9/2)$^+$	164.158[@] *4*	10.5 *8*	357.768	7/2$^+$	(M1)[@]		1.493	B(M1)(W.u.)=0.028 *5* α(K)=1.232 *18*; α(L)=0.201 *3*; α(M)=0.0463 *7* α(N)=0.01139 *16*; α(O)=0.00202 *3*; α(P)=0.0001520 *22* I_γ: Weighted average of data (n,γ) and Coul. Ex.
		382.989[@] *7*	100[a] *3*	138.941	5/2$^+$	(E2)[@]		0.0473	B(E2)(W.u.)=61 *9* α(K)=0.0329 *5*; α(L)=0.01096 *16*; α(M)=0.00269 *4* α(N)=0.000655 *10*; α(O)=0.0001067 *15*; α(P)=3.64×10^{-6} *5*
557.413	(1/2)$^+$	96.815[#] *15*	7.18[#] *15*	460.538	3/2$^+$	M1+E2	0.171 *19*	6.68	α(K)=5.40 *9*; α(L)=0.982 *21*; α(M)=0.229 *6* B(M1)(W.u.)=0.027 *7*; B(E2)(W.u.)=32 *11* α(N)=0.0562 *13*; α(O)=0.00980 *21*; α(P)=0.000672 *11*
		377.340[@] *10*	4.96[#] *4*	180.069	3/2$^+$	M1(+E2)	1.0 *5*	0.10 *3*	α(K)=0.08 *3*; α(L)=0.016 *3*; α(M)=0.0037 *6* α(N)=0.00091 *14*; α(O)=0.00016 *3*; α(P)=1.0×10^{-5} *4* B(M1)(W.u.)=0.00016 *10*; B(E2)(W.u.)=0.4 *3*
		418.431[#] *16*	3.98[#] *3*	138.941	5/2$^+$	[E2]		0.0373	α(K)=0.0266 *4*; α(L)=0.00814 *12*; α(M)=0.00199 *3* α(N)=0.000484 *7*; α(O)=7.94×10^{-5} *12*; α(P)=2.97×10^{-6} *5* B(E2)(W.u.)=0.44 *11* I_γ: Other: 8.7 *15* (n,γ).
		484.359[#] *10*	12.85[#] *18*	73.041	1/2$^+$	(M1)		0.0782	α(K)=0.0648 *9*; α(L)=0.01031 *15*; α(M)=0.00237 *4* α(N)=0.000582 *9*; α(O)=0.0001033 *15*; α(P)=7.85×10^{-6} *11*
		557.401[#] *10*	100.0[#] *9*	0.0	3/2$^+$	(M1)		0.0541	B(M1)(W.u.)=0.0020 *5* α(K)=0.0449 *7*; α(L)=0.00712 *10*; α(M)=0.001633 *23* α(N)=0.000401 *6*; α(O)=7.12×10^{-5} *10*; α(P)=5.42×10^{-6} *8*
559.298	5/2$^+$	197.486[#] *24*	0.89[#] *5*	361.857	5/2$^+$	[M1,E2]		0.6 *3*	α(K)=0.5 *3*; α(L)=0.130 *11*; α(M)=0.031 *4* α(N)=0.0077 *10*; α(O)=0.00127 *8*; α(P)=5.E−5 *4*
		201.535[@] *7*	0.78[#] *7*	357.768	7/2$^+$	[M1,E2]		0.6 *3*	α(K)=0.4 *3*; α(L)=0.121 *8*; α(M)=0.029 *4* α(N)=0.0071 *8*; α(O)=0.00118 *6*; α(P)=5.E−5 *4*
		379.230[@] *11*	2.08[#] *8*	180.069	3/2$^+$	[M1,E2]		0.10 *5*	α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0037 *9* α(N)=0.00090 *23*; α(O)=0.00015 *5*; α(P)=9.E−6 *6*
		420.351[@] *8*	32.8[#] *3*	138.941	5/2$^+$	M1		0.1136	B(M1)(W.u.)=0.061 *10* α(K)=0.0941 *14*; α(L)=0.01505 *21*; α(M)=0.00346 *5*

$^{193}_{77}Ir_{116}$-8

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ [†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	Comments
									α(N)=0.000850 *12*; α(O)=0.0001507 *21*; α(P)=1.144×10^{-5} *16*
559.298	5/2$^+$	486.255[#] *10*	2.19[#] *2*	73.041	1/2$^+$	[E2]		0.0254	α(K)=0.0188 *3*; α(L)=0.00504 *7*; α(M)=0.001218 *17* B(E2)(W.u.)=5.6 *12* α(N)=0.000297 *5*; α(O)=4.93×10^{-5} *7*; α(P)=2.12×10^{-6} *3*
		559.289[#] *10*	100.0[#] *8*	0.0	3/2$^+$	(M1)		0.0537	α(K)=0.0445 *7*; α(L)=0.00705 *10*; α(M)=0.001619 *23* α(N)=0.000398 *6*; α(O)=7.06×10^{-5} *10*; α(P)=5.38×10^{-6} *8* B(M1)(W.u.)=0.077 *13*
563.402	(9/2$^-$)	264.005[@] *5*	100.0[@] *5*	299.396	7/2$^-$	(M1)[@]		0.398	α(K)=0.329 *5*; α(L)=0.0533 *8*; α(M)=0.01226 *18* α(N)=0.00301 *5*; α(O)=0.000534 *8*; α(P)=4.04×10^{-5} *6*
		483.160[@] *8*	63[@] *4*	80.238	11/2$^-$	(M1)[@]		0.0787	α(K)=0.0652 *10*; α(L)=0.01038 *15*; α(M)=0.00238 *4* α(N)=0.000586 *9*; α(O)=0.0001039 *15*; α(P)=7.90×10^{-6} *11*
598.220	3/2$^-$	236.31[#] *4*	0.35[#] *6*	361.857	5/2$^+$				
		298.828[@] *10*	100.0[#] *10*	299.396	7/2$^-$	(E2)		0.0959	α(K)=0.0607 *9*; α(L)=0.0267 *4*; α(M)=0.00666 *10* α(N)=0.001618 *23*; α(O)=0.000259 *4*; α(P)=6.51×10^{-6} *10* B(E2)(W.u.) exceeds RUL, however, with considerable uncertainty.
		418[#]	3.8[#] *8*	180.069	3/2$^+$	[E1]		0.01176	α(K)=0.00980 *14*; α(L)=0.001517 *22*; α(M)=0.000347 *5* α(N)=8.47×10^{-5} *12*; α(O)=1.470×10^{-5} *21*; α(P)=9.99×10^{-7} *14* B(E1)(W.u.)=3.0×10^{-5} *+12−30*
		525.190[#] *10*	10.8[&] *4*	73.041	1/2$^+$	[E1]		0.00717	α(K)=0.00599 *9*; α(L)=0.000911 *13*; α(M)=0.000208 *3* B(E1)(W.u.)=4.0×10^{-5} *+14−40* α(N)=5.08×10^{-5} *8*; α(O)=8.86×10^{-6} *13*; α(P)=6.20×10^{-7} *9*
		598.42[#] *7*	0.38[#] *13*	0.0	3/2$^+$	[E1]		0.00547	α(K)=0.00458 *7*; α(L)=0.000689 *10*; α(M)=0.0001571 *22* α(N)=3.84×10^{-5} *6*; α(O)=6.72×10^{-6} *10*; α(P)=4.77×10^{-7} *7* B(E1)(W.u.)=1.0×10^{-6} *+5−10*
620.991	7/2$^+$	259.8[&] *13*	5.5[&] *20*	361.857	5/2$^+$	[M1,E2]		0.28 *14*	α(K)=0.22 *13*; α(L)=0.051 *6*; α(M)=0.0121 *8* α(N)=0.00297 *20*; α(O)=0.00050 *6*; α(P)=2.6×10^{-5} *17* I_γ: relative to Iγ(620.98)=74.
		263.218[@] *8*	13.6[@] *7*	357.768	7/2$^+$	M1+E2[a]	−0.26[a] *11*	0.385 *16*	α(K)=0.316 *15*; α(L)=0.0531 *10*; α(M)=0.01227 *20* α(N)=0.00301 *5*; α(O)=0.000531 *10*; α(P)=3.87×10^{-5} *19* B(M1)(W.u.)=0.0174 *20*; B(E2)(W.u.)=7 *6*
		482.048[@] *8*	100[a] *4*	138.941	5/2$^+$	M1+E2[a]	−0.93[a] *11*	0.054 *4*	α(K)=0.044 *3*; α(L)=0.0080 *4*; α(M)=0.00187 *8* α(N)=0.000458 *19*; α(O)=8.0×10^{-5} *4*; α(P)=5.3×10^{-6} *4* B(M1)(W.u.)=0.0119 *18*; B(E2)(W.u.)=17 *3*
		620.98[@] *3*	75[@] *6*	0.0	3/2$^+$	[E2]		0.01425	B(E2)(W.u.)=7.8 *8* α(K)=0.01103 *16*; α(L)=0.00246 *4*; α(M)=0.000587 *9* α(N)=0.0001434 *20*; α(O)=2.42×10^{-5} *4*; α(P)=1.255×10^{-6} *18*

$^{193}_{77}Ir_{116}$-9

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	Comments
695.142	5/2+	96.969[#] *15*	0.73[#] *16*	598.220	3/2−				
		135.88[@] *3*	1.9[@] *10*	559.298	5/2+	[M1,E2]		2.0 *6*	α(K)=1.3 *9*; α(L)=0.53 *19*; α(M)=0.13 *6* α(N)=0.032 *13*; α(O)=0.0051 *17*; α(P)=0.00015 *11* I_γ: Unweighted average from β^- decay and (n,γ).
		234.608[@] *7*	100.0[#] *2*	460.538	3/2+	M1+E2	−0.36 *9*	0.505 *21*	α(K)=0.410 *20*; α(L)=0.0732 *11*; α(M)=0.01704 *24* α(N)=0.00418 *6*; α(O)=0.000730 *12*; α(P)=5.0×10^{-5} *3*
		333.28[@] *4*	5.3[#] *4*	361.857	5/2+	(M1)[@]		0.211	α(K)=0.1749 *25*; α(L)=0.0282 *4*; α(M)=0.00647 *9* α(N)=0.001591 *23*; α(O)=0.000282 *4*; α(P)=2.14×10^{-5} *3*
		337.33[@] *3*	1.38[#] *24*	357.768	7/2+	[M1,E2]		0.14 *7*	α(K)=0.11 *7*; α(L)=0.022 *5*; α(M)=0.0052 *11* α(N)=0.0013 *3*; α(O)=0.00022 *6*; α(P)=1.3×10^{-5} *8* I_γ: Others: 80 *20* (d,nγ), 100 *10* (n,γ) (discrepant data).
		515.064[@] *9*	23.8[#] *3*	180.069	3/2+	(M1+E2)[@]		0.044 *23*	α(K)=0.036 *20*; α(L)=0.0065 *23*; α(M)=0.0015 *5* α(N)=0.00037 *13*; α(O)=6.5×10^{-5} *24*; α(P)=4.3×10^{-6} *24*
		556.175[@] *9*	6.1[@] *5*	138.941	5/2+	(M1+E2)[@]		0.036 *18*	α(K)=0.030 *16*; α(L)=0.0053 *19*; α(M)=0.0012 *5* α(N)=0.00030 *11*; α(O)=5.2×10^{-5} *20*; α(P)=3.5×10^{-6} *20*
		695.159[#] *14*	5.53[#] *16*	0.0	3/2+	[M1,E2]		0.021 *10*	α(K)=0.017 *9*; α(L)=0.0029 *11*; α(M)=0.00067 *25* α(N)=0.00017 *6*; α(O)=2.9×10^{-5} *11*; α(P)=2.0×10^{-6} *11*
712.180	3/2+	154.721[@] *4*	12.96[#] *24*	557.413	(1/2)+	M1+E2	+0.26 *3*	1.71 *3*	α(K)=1.38 *3*; α(L)=0.248 *5*; α(M)=0.0578 *11* α(N)=0.0142 *3*; α(O)=0.00248 *4*; α(P)=0.000170 *4* B(M1)(W.u.)=0.019 *18*; B(E2)(W.u.)=20 *20* I_γ: Other: 32 *15* (n,n′γ).
		251.635[@] *7*	100.0[#] *13*	460.538	3/2+	M1+E2	−0.11 *3*	0.451	α(K)=0.372 *6*; α(L)=0.0607 *9*; α(M)=0.01399 *20* α(N)=0.00344 *5*; α(O)=0.000609 *9*; α(P)=4.56×10^{-5} *7* B(M1)(W.u.)=0.04 *4*; B(E2)(W.u.)=3 *3*
		350.325[@] *9*	2.64[#] *22*	361.857	5/2+	[M1,E2]		0.12 *7*	α(K)=0.10 *6*; α(L)=0.020 *5*; α(M)=0.0047 *10* α(N)=0.00114 *25*; α(O)=0.00020 *5*; α(P)=1.2×10^{-5} *7* I_γ: 69 *10* (n,γ).
		354.25[#] *12*	0.043[#] *24*	357.768	7/2+				
		532.126[#] *10*	40.0[#] *4*	180.069	3/2+	M1+E2	+0.48 *+32−16*	0.053 *9*	α(K)=0.044 *8*; α(L)=0.0073 *9*; α(M)=0.00167 *19* α(N)=0.00041 *5*; α(O)=7.2×10^{-5} *9*; α(P)=5.3×10^{-6} *9* B(M1)(W.u.)=0.0013 *13*; B(E2)(W.u.)=0.4 *+6−4*
		573.267[#] *10*	9.72[#] *9*	138.941	5/2+	M1+E2	+0.03 *2*	0.0503	α(N)=0.000373 *6*; α(O)=6.61×10^{-5} *10*; α(P)=5.04×10^{-6} *7* B(M1)(W.u.)=0.0003 *3* α(K)=0.0417 *6*; α(L)=0.00661 *10*; α(M)=0.001516 *22*
		639.151[#] *10*	3.69[#] *4*	73.041	1/2+	[M1,E2]		0.026 *13*	α(K)=0.021 *11*; α(L)=0.0036 *14*; α(M)=0.0008 *3* α(N)=0.00021 *8*; α(O)=3.6×10^{-5} *14*; α(P)=2.5×10^{-6}

$^{193}_{77}Ir_{116}$-10

Adopted Levels, Gammas (continued)

$\gamma(^{193}Ir)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	Comments
		712.188[#] *10*	8.07[#] *7*	0.0	$3/2^+$	[M1,E2]		0.020 *10* *13*	α(K)=0.016 *8*; α(L)=0.0027 *11*; α(M)=0.00063 *23*

$^{193}_{77}Ir_{116}$-11

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[h]	Comments
									α(N)=0.00016 *6*; α(O)=2.7×10^{-5} *11*; α(P)=1.9×10^{-6} *10*
740.380	5/2$^-$	142.159[@] *3*	75.8[#] *13*	598.220	3/2$^-$	M1		2.24	α(K)=1.85 *3*; α(L)=0.303 *5*; α(M)=0.0697 *10* α(N)=0.01714 *24*; α(O)=0.00304 *5*; α(P)=0.000229 *4*
		176.907[#] *16*	<1.28[#]	563.402	(9/2$^-$)				
		181.38[#] *4*	0.18[#] *4*	559.298	5/2$^+$				
		378.533[@] *8*	1.9 *3*	361.857	5/2$^+$	[E1]		0.01470	α(K)=0.01223 *18*; α(L)=0.00191 *3*; α(M)=0.000437 *7* α(N)=0.0001066 *15*; α(O)=1.85×10^{-5} *3*; α(P)=1.237×10^{-6} *18* I$_\gamma$: Weighted average of data from β$^-$ decay and (n,γ).
		382.63[#] *15*	0.08[#] *4*	357.768	7/2$^+$				
		440.980[@] *13*	100[#] *5*	299.396	7/2$^-$	M1+E2	−0.37 *4*	0.0920 *21*	α(K)=0.0758 *18*; α(L)=0.01247 *23*; α(M)=0.00288 *6* α(N)=0.000707 *13*; α(O)=0.0001247 *24*; α(P)=9.17×10^{-6} *22*
		560.33[@] *3*	3.1[#] *9*	180.069	3/2$^+$	[E1]		0.00626	α(K)=0.00524 *8*; α(L)=0.000792 *11*; α(M)=0.000181 *3* α(N)=4.42×10^{-5} *7*; α(O)=7.72×10^{-6} *11*; α(P)=5.44×10^{-7} *8* I$_\gamma$: there is a disagreement about this Iγ. The branching ratios are given as 3.1 *9* (^{193}Os β$^-$ decay, deduced from γγ data), 31 *4* (^{192}Ir(n,γ)), 44 *7* (^{192}Os(d,nγ)). See ^{192}Ir(n,γ) for comment.
		601.45[@] *5*	0.28[@] *4*	138.941	5/2$^+$				I$_\gamma$: Other 16 *3* (n,γ).
806.902	(5/2)$^+$	445.023[@] *14*	5.6[@] *7*	361.857	5/2$^+$				
		449.149[@] *18*	53[@] *5*	357.768	7/2$^+$	(M1)[@]		0.0953	α(K)=0.0790 *11*; α(L)=0.01261 *18*; α(M)=0.00290 *4* α(N)=0.000712 *10*; α(O)=0.0001262 *18*; α(P)=9.59×10^{-6} *14*
		626.88[@] *8*	8.0[@] *10*	180.069	3/2$^+$				
		667.963[@] *9*	100[@] *7*	138.941	5/2$^+$				
		733.93[&] *15*	7.9[&] *16*	73.041	1/2$^+$				
		807[a]		0.0	3/2$^+$				
828.92	(9/2$^-$)	748.68[&] *9*	100	80.238	11/2$^-$				
832.893	(11/2$^-$)	269.490[@] *7*	100[@] *5*	563.402	(9/2$^-$)	(M1)[@]		0.377	α(K)=0.311 *5*; α(L)=0.0503 *7*; α(M)=0.01158 *17* α(N)=0.00285 *4*; α(O)=0.000505 *7*; α(P)=3.81×10^{-5} *6*
		533.51[@] *3*	70[@] *7*	299.396	7/2$^-$	(E2)[@]		0.0203	α(K)=0.01531 *22*; α(L)=0.00380 *6*; α(M)=0.000915 *13* α(N)=0.000223 *4*; α(O)=3.73×10^{-5} *6*; α(P)=1.735×10^{-6} *25*
		752.73[j&] *15*	<35[j&]	80.238	11/2$^-$				multiply placed, with undivided intensity Iγ=30 *5* in ^{193}Ir(n,n′γ).
838.918	(9/2$^+$)	279.611[@] *18*	2.3[@] *4*	559.298	5/2$^+$				
		322.505[@] *21*	33.4[@] *20*	516.414	(7/2)$^+$	(M1)[@]		0.231	α(K)=0.191 *3*; α(L)=0.0308 *5*; α(M)=0.00708 *10* α(N)=0.001740 *25*; α(O)=0.000308 *5*; α(P)=2.33×10^{-5} *4*
		477.062[@] *8*	100[@] *5*	361.857	5/2$^+$	(E2)[@]		0.0267	α(K)=0.0197 *3*; α(L)=0.00534 *8*; α(M)=0.001294 *19* α(N)=0.000316 *5*; α(O)=5.22×10^{-5} *8*; α(P)=2.22×10^{-6} *4*

$^{193}_{77}Ir_{116}$-12

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[h]	Comments
848.967	3/2(+),5/2(+)	290[#]	≈10[#]	559.298	5/2+	[M1,E2]	0.21 *11*	α(K)=0.16 *10*; α(L)=0.036 *6*; α(M)=0.0085 *10* α(N)=0.0021 *3*; α(O)=0.00035 *7*; α(P)=1.9×10^{-5} *13*
		388.60[@c] *4*	100[@] *21*	460.538	3/2+	(M1)[@]	0.1400	α(K)=0.1159 *17*; α(L)=0.0186 *3*; α(M)=0.00427 *6* α(N)=0.001050 *15*; α(O)=0.000186 *3*; α(P)=1.411×10^{-5} *20*
		487.217[@c] *13*	64[@] *6*	361.857	5/2+	(E2)[@]	0.0253	α(K)=0.0188 *3*; α(L)=0.00501 *7*; α(M)=0.001210 *17* α(N)=0.000295 *5*; α(O)=4.90×10^{-5} *7*; α(P)=2.12×10^{-6} *3*
		491.26[#] *8*	3.9[#] *16*	357.768	7/2+			
		709.924[#] *13*	46.5[#] *18*	138.941	5/2+	[M1,E2]	0.020 *10*	α(K)=0.016 *8*; α(L)=0.0028 *11*; α(M)=0.00064 *23* α(N)=0.00016 *6*; α(O)=2.7×10^{-5} *11*; α(P)=1.9×10^{-6} *10*
		775.9[#] *3*	9[#] *40*	73.041	1/2+	[E2]	0.00876	α(K)=0.00697 *10*; α(L)=0.001371 *20*; α(M)=0.000323 *5* α(N)=7.90×10^{-5} *11*; α(O)=1.351×10^{-5} *19*; α(P)=7.94×10^{-7} *12*
		848.944[#] *16*	100[#] *3*	0.0	3/2+	[M1,E2]	0.013 *6*	α(K)=0.011 *5*; α(L)=0.0017 *7*; α(M)=0.00040 *15* α(N)=0.00010 *4*; α(O)=1.7×10^{-5} *7*; α(P)=1.2×10^{-6} *6*
857.027	(11/2)+	335.101[@] *11*	31[@] *3*	521.926	(9/2)+	(M1)[@]	0.208	α(K)=0.1724 *25*; α(L)=0.0277 *4*; α(M)=0.00638 *9* α(N)=0.001568 *22*; α(O)=0.000278 *4*; α(P)=2.10×10^{-5} *3* B(M1)(W.u.)≈0.043
		499.254[@] *8*	100[a] *4*	357.768	7/2+	(E2)[@]	0.0238	α(K)=0.01775 *25*; α(L)=0.00464 *7*; α(M)=0.001121 *16* α(N)=0.000274 *4*; α(O)=4.54×10^{-5} *7*; α(P)=2.00×10^{-6} *3* B(E2)(W.u.)=57 *10*
874.290	3/2+,5/2+	253.08[#] *8*	<9[#]	620.991	7/2+			
		314.93[#] *5*	10.4[#] *21*	559.298	5/2+			
		317[#]	5.4[#] *15*	557.413	(1/2)+	[M1,E2]	0.16 *8*	α(K)=0.13 *8*; α(L)=0.027 *6*; α(M)=0.0064 *11* α(N)=0.0016 *3*; α(O)=0.00027 *6*; α(P)=1.5×10^{-5} *10*
		413.756[@] *8*	23 *3*	460.538	3/2+	(M1,E2)[@]	0.08 *4*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0028 *8* α(N)=0.00069 *20*; α(O)=0.00012 *4*; α(P)=7.E−6 *5*
		512.3[#] *3*	8[#] *4*	361.857	5/2+	[M1,E2]	0.045 *23*	α(K)=0.036 *20*; α(L)=0.0066 *23*; α(M)=0.0015 *5* α(N)=0.00038 *13*; α(O)=6.6×10^{-5} *24*; α(P)=4.3×10^{-6} *25*
		516.52[#] *4*	15.2[#] *4*	357.768	7/2+	[M1,E2]	0.044 *22*	α(K)=0.036 *20*; α(L)=0.0064 *23*; α(M)=0.0015 *5* α(N)=0.00037 *13*; α(O)=6.4×10^{-5} *23*; α(P)=4.2×10^{-6} *24*
		735.32[#] *34*	5.6[#] *2*	138.941	5/2+	[M1,E2]	0.018 *9*	α(K)=0.015 *8*; α(L)=0.0025 *10*; α(M)=0.00058 *21* α(N)=0.00014 *6*; α(O)=2.5×10^{-5} *10*; α(P)=1.8×10^{-6} *9*
		800.9[#] *3*	1.5[#] *7*	73.041	1/2+	[M1,E2]	0.015 *7*	α(K)=0.012 *6*; α(L)=0.0020 *8*; α(M)=0.00047 *17* α(N)=0.00011 *5*; α(O)=2.0×10^{-5} *8*; α(P)=1.4×10^{-6} *7*
		874.306[#] *25*	100[#] *6*	0.0	3/2+	[M1,E2]	0.012 *6*	α(K)=0.010 *5*; α(L)=0.0016 *6*; α(M)=0.00037 *14* α(N)=9.E−5 *4*; α(O)=1.6×10^{-5} *6*; α(P)=1.2×10^{-6} *6*
879.49		282.34[#] *9*	100[#] *12*	598.220	3/2−			
		418.31[#] *7*	48[#] *28*	460.538	3/2+			

$^{193}_{77}Ir_{116}$-13

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ †	E_f	J_f^π	Mult.‡	α h	Comments
882.19		283.97# 7	100	598.220	3/2⁻			
890.41		292.19# 7	100	598.220	3/2⁻			
892.269	(9/2⁺)	271.282@ 12	47@ 5	620.991	7/2⁺			
		369.81& 10	65a 17	521.926	(9/2)⁺			I_γ: Other: 26 4 (n,n′γ).
		534.482@ 21	100@ 6	357.768	7/2⁺			
		752.73j& 15	<47j&	138.941	5/2⁺			
918.363	(7/2⁻)	177.986@ 7	100@ 8	740.380	5/2⁻	(M1)@	1.189	α(K)=0.982 14; α(L)=0.1601 23; α(M)=0.0369 6 α(N)=0.00906 13; α(O)=0.001605 23; α(P)=0.0001210 17
		320.142@ 17	11.8@ 18	598.220	3/2⁻	(E2)@	0.0783	α(K)=0.0510 8; α(L)=0.0207 3; α(M)=0.00514 8 α(N)=0.001249 18; α(O)=0.000201 3; α(P)=5.53×10⁻⁶ 8
		354.960@ 7	17.6@ 26	563.402	(9/2⁻)	(M1)@	0.1784	α(K)=0.1477 21; α(L)=0.0237 4; α(M)=0.00545 8 α(N)=0.001341 19; α(O)=0.000238 4; α(P)=1.80×10⁻⁵ 3
		618.94@ 3	51 4	299.396	7/2⁻			I_γ: Weighted average of branching data from (n,γ) E=th and (n,n′γ).
930.429	(17/2⁻)	451.441@ 8	100	478.988	(15/2⁻)	D+Q		E_γ,Mult.: Other: 449.3 5 (^{7}Li,α2nγ). Mult: From (HI,xnγ).
		459.5d 5		469.384	(13/2⁻)			
959.73		361.51# 3	100	598.220	3/2⁻			
964.41	1/2⁺	784.43# 5	24.3 23	180.069	3/2⁺	[M1,E2]	0.016 7	α(K)=0.013 6; α(L)=0.0021 8; α(M)=0.00049 18 α(N)=0.00012 5; α(O)=2.1×10⁻⁵ 8; α(P)=1.5×10⁻⁶ 8 I_γ: Weighted average of branching data from (n,γ) E=th and (n,n′γ).
		891.34# 3	100# 5	73.041	1/2⁺	[M1,E2]	0.011 5	α(K)=0.009 5; α(L)=0.0015 6; α(M)=0.00036 13 α(N)=9.E−5 4; α(O)=1.5×10⁻⁵ 6; α(P)=1.1×10⁻⁶ 5
972.872	(5/2⁺)	232.507@ 19	14.6@ 15	740.380	5/2⁻			
		351.864@ 14	61@ 5	620.991	7/2⁺			
		611.037@ 21	100@ 18	361.857	5/2⁺			I_γ: 71 16 (n,n′γ).
		615.09@ 5	94@ 13	357.768	7/2⁺			
		899.98& 13	100& 14	73.041	1/2⁺			E_γ: Only reported in (n,n′γ).
		972.08g&k 24	49& 16	0.0	3/2⁺			
975.330	(11/2⁻)	496.345@ 8	100@ 10	478.988	(15/2⁻)	(E2)@	0.0242	α(K)=0.0180 3; α(L)=0.00473 7; α(M)=0.001142 16 α(N)=0.000279 4; α(O)=4.63×10⁻⁵ 7; α(P)=2.03×10⁻⁶ 3
		505.943@ 8	50@ 4	469.384	(13/2⁻)	(M1)@	0.0697	α(K)=0.0578 8; α(L)=0.00919 13; α(M)=0.00211 3 α(N)=0.000519 8; α(O)=9.20×10⁻⁵ 13; α(P)=7.00×10⁻⁶ 10
1009.354	(11/2⁺)	492.940 8	100@ 9	516.414	(7/2)⁺	(E2)@	0.0246	α(K)=0.0183 3; α(L)=0.00483 7; α(M)=0.001167 17 α(N)=0.000285 4; α(O)=4.72×10⁻⁵ 7; α(P)=2.06×10⁻⁶ 3
		539.92@ 8	17@ 3	469.384	(13/2⁻)			
1019.589	(11/2⁺)	503.174@ 8	100	516.414	(7/2)⁺	(E2)@	0.0234	α(K)=0.01744 25; α(L)=0.00453 7; α(M)=0.001094 16 α(N)=0.000267 4; α(O)=4.44×10⁻⁵ 7; α(P)=1.97×10⁻⁶ 3
1026.0	(19/2⁻)	96.0e 5		930.429	(17/2⁻)			

$^{193}_{77}Ir_{116}$-14

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ [†]	E_f	J_f^π	Mult.[‡]	α[h]	Comments
1026.0	(19/2$^-$)	545.7[e] *5*	100	478.988	(15/2$^-$)	Q		Mult.: From (HI,xnγ).
1035.465	(13/2$^+$)	178.441[@] *4*	5.0[@] *10*	857.027	(11/2)$^+$	(M1)[@]	1.181	α(K)=0.975 *14*; α(L)=0.1589 *23*; α(M)=0.0366 *6* α(N)=0.00900 *13*; α(O)=0.001594 *23*; α(P)=0.0001201 *17*
		513.529[@] *8*	100[@] *8*	521.926	(9/2)$^+$	(E2)[@]	0.0222	α(K)=0.01666 *24*; α(L)=0.00426 *6*; α(M)=0.001028 *15* α(N)=0.000251 *4*; α(O)=4.17×10^{-5} *6*; α(P)=1.88×10^{-6} *3*
1035.855	3/2$^+$,5/2$^{(+)}$,7/2$^+$	340.1[&] *9*	31[&] *23*	695.142	5/2$^+$			
		678.085[@] *24*	100[&] *13*	357.768	7/2$^+$			
		856.5[&] *6*	16[&] *10*	180.069	3/2$^+$			
1038.054	(5/2$^+$,7/2$^+$)	516.153[@] *23*	30.3[@] *24*	521.926	(9/2)$^+$			
		676.192[@] *13*	100[@] *17*	361.857	5/2$^+$			
		680.280[@] *15*	69[@] *14*	357.768	7/2$^+$			
		858.2[&] *3*	67[&] *27*	180.069	3/2$^+$			
1065.89	1/2$^+$,3/2$^{(+)}$,5/2$^+$	444.75[&] *12*	8[&] *5*	620.991	7/2$^+$			γ multiply placed in (n,n′γ); only observed in (n,n′γ).
		704.01[&] *11*	35[&] *6*	361.857	5/2$^+$			
		885.91[&] *8*	100[&] *14*	180.069	3/2$^+$			
		992.2[i&] *5*	18[i&] *11*	73.041	1/2$^+$			
1076.47	(3/2$^+$)	718.72[&] *10*	100[&] *10*	357.768	7/2$^+$			
		937.49[&] *13*	30[&] *5*	138.941	5/2$^+$			
1077.99	(3/2$^-$,5/2$^-$)	337.8[&] *2*	8.3[&] *25*	740.380	5/2$^-$			
		778.43[#] *19*	100 *10*	299.396	7/2$^-$	[M1,E2]	0.016 *8*	α(K)=0.013 *6*; α(L)=0.0022 *9*; α(M)=0.00050 *19* α(N)=0.00012 *5*; α(O)=2.2×10^{-5} *9*; α(P)=1.5×10^{-6} *8*
1131.17	5/2$^-$	951.10[&] *11*	100[&] *17*	180.069	3/2$^+$			
		992.2[i&] *5*	37[i&] *22*	138.941	5/2$^+$			
1145.614	(9/2)$^-$	227.252[@] *7*	100[@] *9*	918.363	(7/2$^-$)			
		582.201[@] *20*	17 *3*	563.402	(9/2$^-$)			I_γ: Weighted average of data from (n,γ) and (n,n′γ).
1168.06	(13/2$^-$)	335.21[&] *19*	100[&] *44*	832.893	(11/2$^-$)			
		698.64[&] *17*	67[&] *26*	469.384	(13/2$^-$)			
1169.170	(11/2$^+$)	276.890[@] *20*	14.5[@] *21*	892.269	(9/2$^+$)	(M1)[@]	0.350	α(K)=0.289 *4*; α(L)=0.0467 *7*; α(M)=0.01075 *15* α(N)=0.00264 *4*; α(O)=0.000468 *7*; α(P)=3.54×10^{-5} *5*
		312.125[@] *9*	9.7[@] *24*	857.027	(11/2)$^+$			
		548.19[@] *3*	75[@] *4*	620.991	7/2$^+$	(E2)[@]	0.0190	α(K)=0.01443 *21*; α(L)=0.00351 *5*; α(M)=0.000843 *12* α(N)=0.000206 *3*; α(O)=3.44×10^{-5} *5*; α(P)=1.636×10^{-6} *23*
		647.257[@] *8*	100[@] *11*	521.926	(9/2)$^+$			
		654[a]		516.414	(7/2)$^+$			
		812[a]		357.768	7/2$^+$			
1250.42	(3/2,5/2)$^+$	888.42[&] *10*	100.0[&] *9*	361.857	5/2$^+$			

$^{193}_{77}Ir_{116}$-15

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[h]	Comments
1250.42	(3/2,5/2)$^+$	892.89[&] *13*	92[&] *12*	357.768	7/2$^+$			
1358.8	(19/2$^-$)	428.4[d] *5*	100	930.429	(17/2$^-$)	D		
1438.429	(13/2$^+$)	599.510[@] *7*	100	838.918	(9/2$^+$)			
1459.968	(15/2)$^+$	425[a]		1035.465	(13/2$^+$)			
		440.37[@] *5*	15.8[@] *24*	1019.589	(11/2$^+$)			
		602.940[@] *8*	100[@] *12*	857.027	(11/2)$^+$			
1511.714	(3/2$^+$)	538.845[@] *20*	34[@] *4*	972.872	(5/2$^+$)	(M1+E2)[@]	0.039 *20*	α(K)=0.032 *17*; α(L)=0.0057 *21*; α(M)=0.0013 *5* α(N)=0.00033 *12*; α(O)=5.7×10^{-5} *21*; α(P)=3.8×10^{-6} *22*
		637.46[@] *3*	100[@] *6*	874.290	3/2$^+$,5/2$^+$			
		662.636[@] *15*	100[@] *33*	848.967	3/2$^{(+)}$,5/2$^{(+)}$			
		954.37[&] *15*	100[&] *20*	557.413	(1/2)$^+$			
1527.7	(21/2$^-$)	501.3[d] *5*	100	1026.0	(19/2$^-$)	D		
		597.7[e] *5*		930.429	(17/2$^-$)			
1592.6	(21/2$^-$)	566.3[d] *5*	100[d] *9*	1026.0	(19/2$^-$)	D+Q		Mult.: From (HI,xnγ).
		662.7[d] *5*	43[d] *4*	930.429	(17/2$^-$)	Q		
1650.5	(17/2$^+$)	615[a]	100	1035.465	(13/2$^+$)			
1714.9	(23/2$^-$)	187.3[e] *5*		1527.7	(21/2$^-$)			
		688.8[d] *5*	100	1026.0	(19/2$^-$)	Q		Mult.: From (HI,xnγ).
1728.5	(23/2$^-$,25/2$^-$)	135.9[d] *5*	56[d] *11*	1592.6	(21/2$^-$)	M1+E2	2.0 *6*	α(K)=1.3 *9*; α(L)=0.53 *19*; α(M)=0.13 *6* α(N)=0.032 *13*; α(O)=0.0051 *17*; α(P)=0.00015 *11*
		200.8[d] *5*	100[d] *11*	1527.7	(21/2$^-$)	(E2)	0.341 *6*	α(K)=0.168 *3*; α(L)=0.1301 *23*; α(M)=0.0330 *6* α(N)=0.00800 *14*; α(O)=0.001249 *22*; α(P)=1.70×10^{-5} *3* δ: From (HI,xnγ).
1823.7	(23/2)	231.3[e] *5*		1592.6	(21/2$^-$)			
		797.4[e] *5*		1026.0	(19/2$^-$)			
1845.2	(23/2)	819.2[e] *5*	100	1026.0	(19/2$^-$)			
1893.9	(25/2$^-$)	165.3[e] *5*		1728.5	(23/2$^-$,25/2$^-$)	M1	1.464 *24*	α(K)=1.208 *20*; α(L)=0.197 *4*; α(M)=0.0454 *8* α(N)=0.01117 *19*; α(O)=0.00198 *4*; α(P)=0.0001491 *25* Mult.: M1 in (HI,xnγ) for a placement from 25/2$^-$ to 23/2$^-$,25/2$^-$.
		178.9[d] *5*	100	1714.9	(23/2$^-$)	E2	0.507 *9*	α(K)=0.225 *4*; α(L)=0.212 *4*; α(M)=0.0541 *10* α(N)=0.01310 *25*; α(O)=0.00203 *4*; α(P)=2.25×10^{-5} *4* Mult.: From (HI,xnγ).
1944.3	25/2$^-$,27/2$^-$	120.7[e] *5*		1823.7	(23/2)			
		215.8[e] *5*		1728.5	(23/2$^-$,25/2$^-$)	M1+E2	0.48 *22*	α(K)=0.36 *22*; α(L)=0.0949 *23*; α(M)=0.0229 *16* α(N)=0.0056 *4*; α(O)=0.000931 *16*; α(P)=4.E−5 *3* Mult.: From (HI,xnγ).
2052.3	(27/2$^-$)	158.3[e] *5*		1893.9	(25/2$^-$)	M1	1.65 *3*	α(K)=1.365 *23*; α(L)=0.223 *4*; α(M)=0.0514 *9*

$^{193}_{77}Ir_{116}$-16

Adopted Levels, Gammas (continued)

γ(^{193}Ir) (continued)

E_i(level)	J_i^π	E_γ	I_γ [†]	E_f	J_f^π	Mult.[‡]	α[h]	Comments
								α(N)=0.01263 *21*; α(O)=0.00224 *4*; α(P)=0.000168 *3* Mult.: α(exp)=1.60 *30* (HI,xnγ).
2052.3	(27/2$^-$)	323.9[e] *5*		1728.5	(23/2$^-$,25/2$^-$)	(E2)	0.0757	α(K)=0.0496 *8*; α(L)=0.0198 *3*; α(M)=0.00492 *8* α(N)=0.001196 *18*; α(O)=0.000192 *3*; α(P)=5.38×10^{-6} *8* Mult.: α(exp)=0.02 *12* (HI,xnγ).
2179.0	(19/2$^+$)	719[a]	100	1459.968	(15/2)$^+$			
2231.7	(29/2$^+$)	337.8[e] *5*		1893.9	(25/2$^-$)	M2	0.743	α(K)=0.580 *9*; α(L)=0.1249 *19*; α(M)=0.0299 *5* α(N)=0.00739 *11*; α(O)=0.001295 *20*; α(P)=9.09×10^{-5} *14* Mult.: α(exp)=0.68 *16* (HI,xnγ).
		503.3[e] *5*		1728.5	(23/2$^-$,25/2$^-$)			
2278.9	31/2$^+$	226.7[e] *5*	41.3[e] *12*	2052.3	(27/2$^-$)	M2	2.81 *5*	α(K)=2.13 *4*; α(L)=0.522 *9*; α(M)=0.1267 *21* α(N)=0.0314 *6*; α(O)=0.00548 *9*; α(P)=0.000373 *6* B(M2)(W.u.)≈0.0051 Mult.: α(exp)=3.30 *20* (HI,xnγ).
		334.5[e] *5*	100.0[e] *14*	1944.3	25/2$^-$,27/2$^-$	(E3)	0.303	α(K)=0.1248 *19*; α(L)=0.1335 *21*; α(M)=0.0346 *6* α(N)=0.00845 *14*; α(O)=0.001329 *21*; α(P)=1.95×10^{-5} *3* B(E3)(W.u.)=3.2 *9* Mult.: α(exp)=0.31 *7*.
		385.0[e] *5*	9.4[e] *11*	1893.9	(25/2$^-$)	[E3]	0.179	α(K)=0.0863 *13*; α(L)=0.0699 *11*; α(M)=0.0180 *3* α(N)=0.00439 *7*; α(O)=0.000696 *11*; α(P)=1.298×10^{-5} *19* B(E3)(W.u.)=0.11 *4*
2404?	(21/2$^+$)	753[ak]	100	1650.5	(17/2$^+$)			

[†] The statistical agreement among different datasets is good. When values are discrepant, branching value from β^- decay and other values are listed. Overall (d,nγ) data are less in agreement with other datasets.
[‡] From ^{193}Os β^- decay, unless otherwise noted.
[#] From ^{193}Os β^- decay.
[@] From ^{192}Ir(n,γ).
[&] From ^{193}Ir(n,n′γ).
[a] From Coulomb excitation.
[b] Weighted average of 80.22 keV *2* (1987Li16 – IT decay) and 80.236 keV *7* (1997Dr04 -(n,γ)).
[c] The γ placed from a slightly higher but different state at 849.084 keV, while the levels could be the same as noted in 2006Ac01 (previous evaluation). Based on measurements in 2005Za15, evaluator merged these two levels into one.
[d] From (^{7}Li,α2nγ).
[e] From (HI,xnγ).
[f] Additional information 1.
[g] Additional information 2.
[h] Additional information 3.

$^{193}_{77}Ir_{116}$-17

$\gamma(^{193}Ir)$ (continued)

[i] Multiply placed with undivided intensity.
[j] Multiply placed with intensity suitably divided.
[k] Placement of transition in the level scheme is uncertain.

$^{193}_{77}Ir_{116}$-18

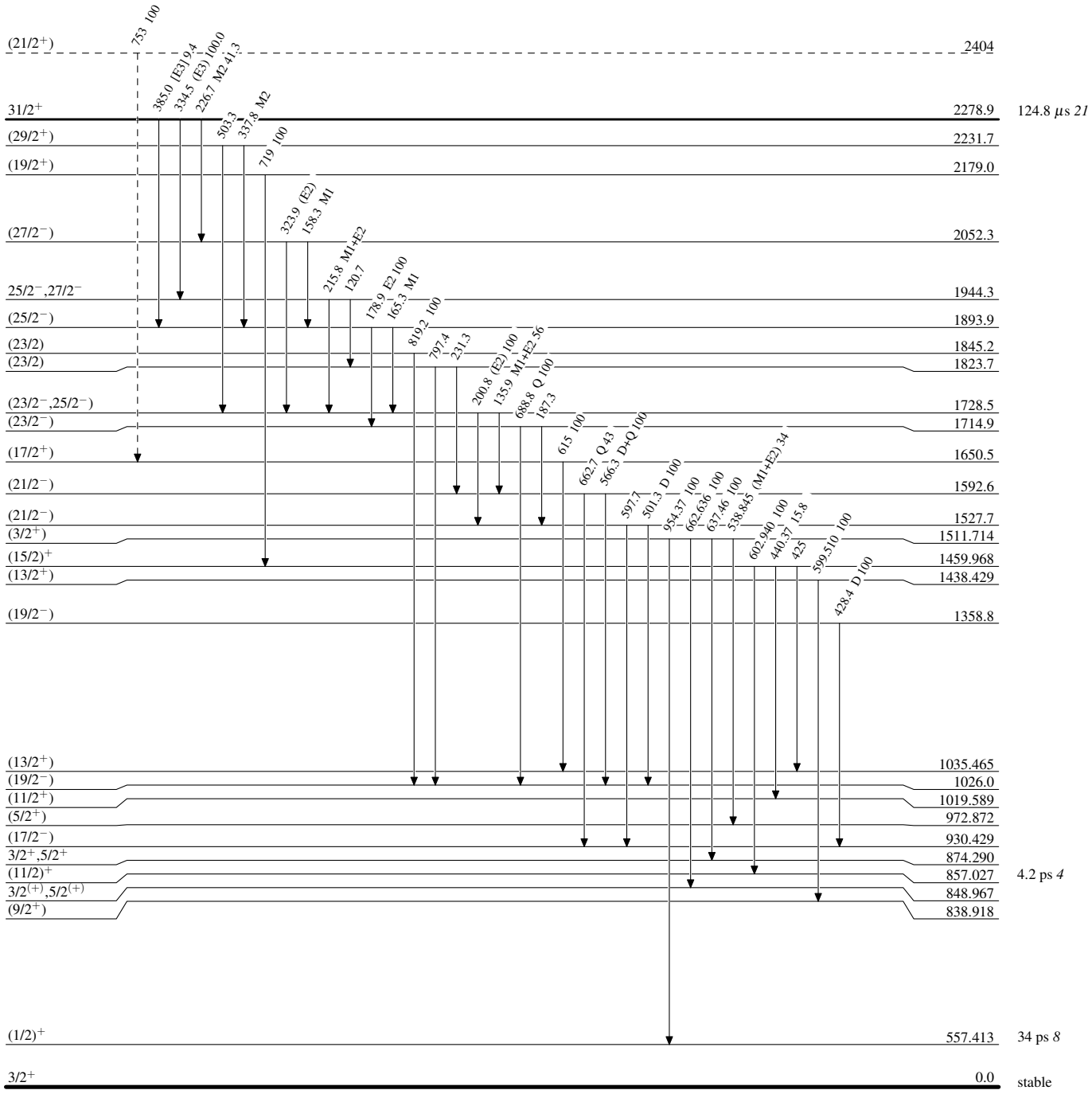
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

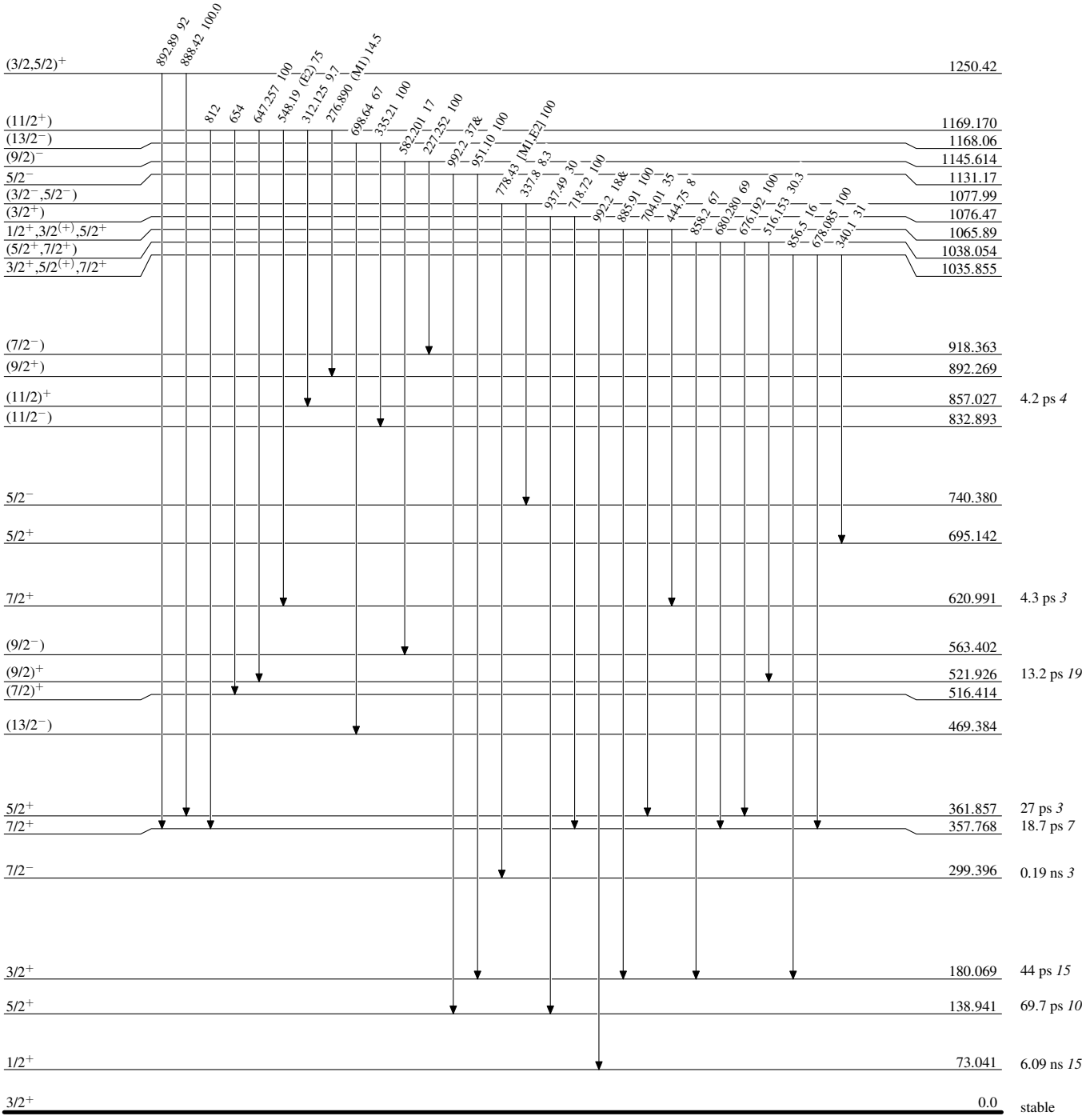


$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{193}_{77}Ir_{116}$

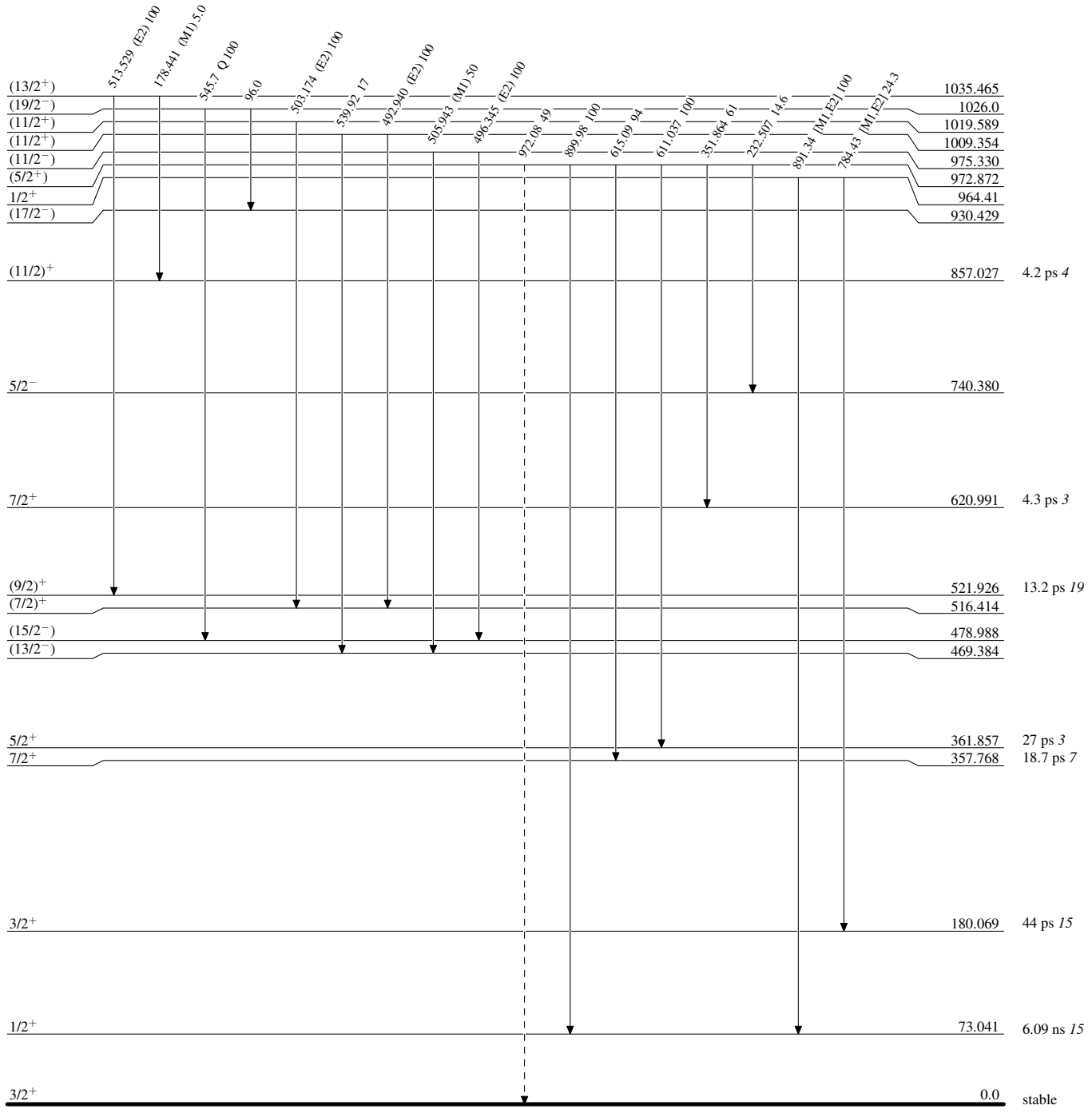
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)

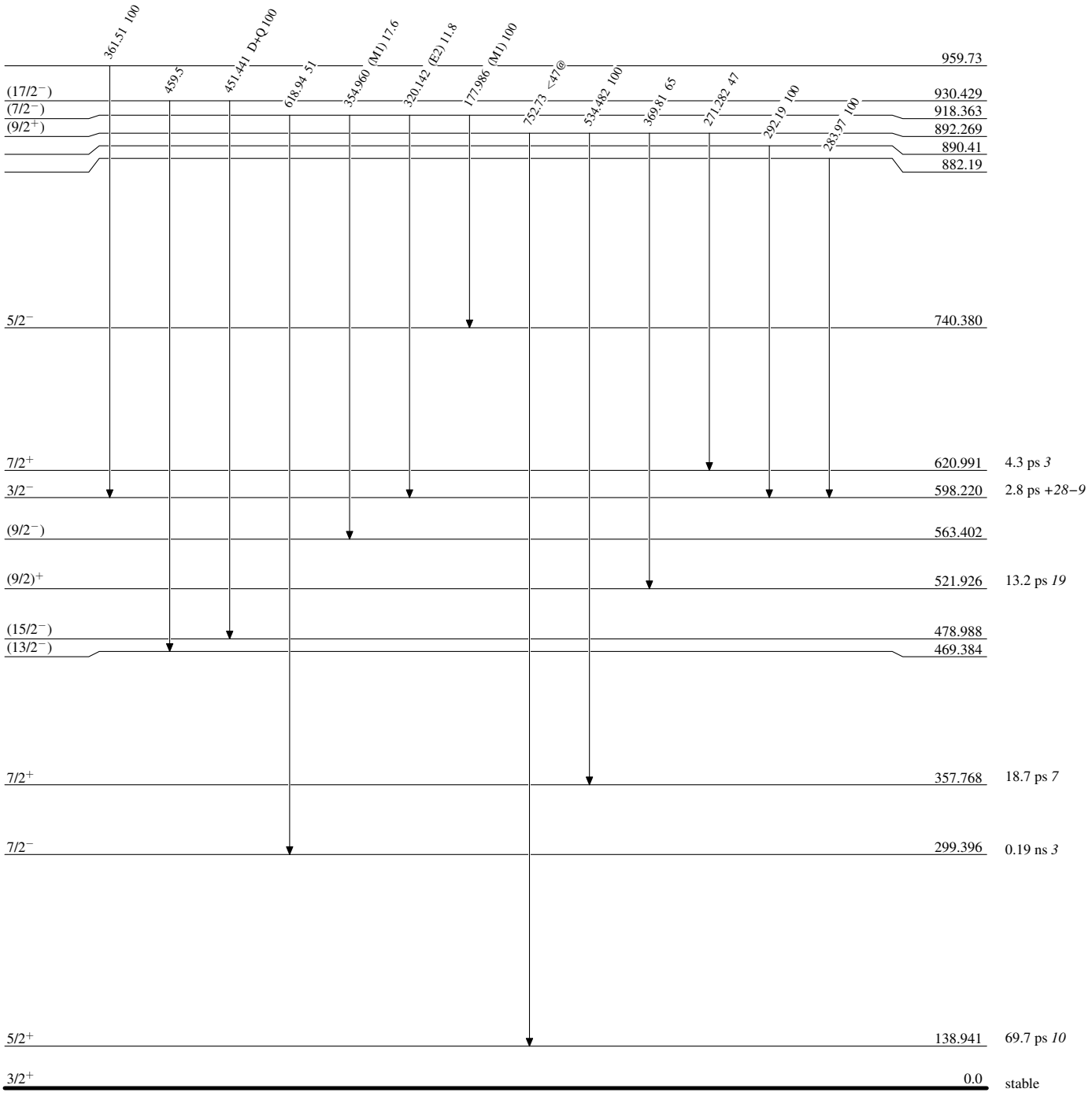


$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

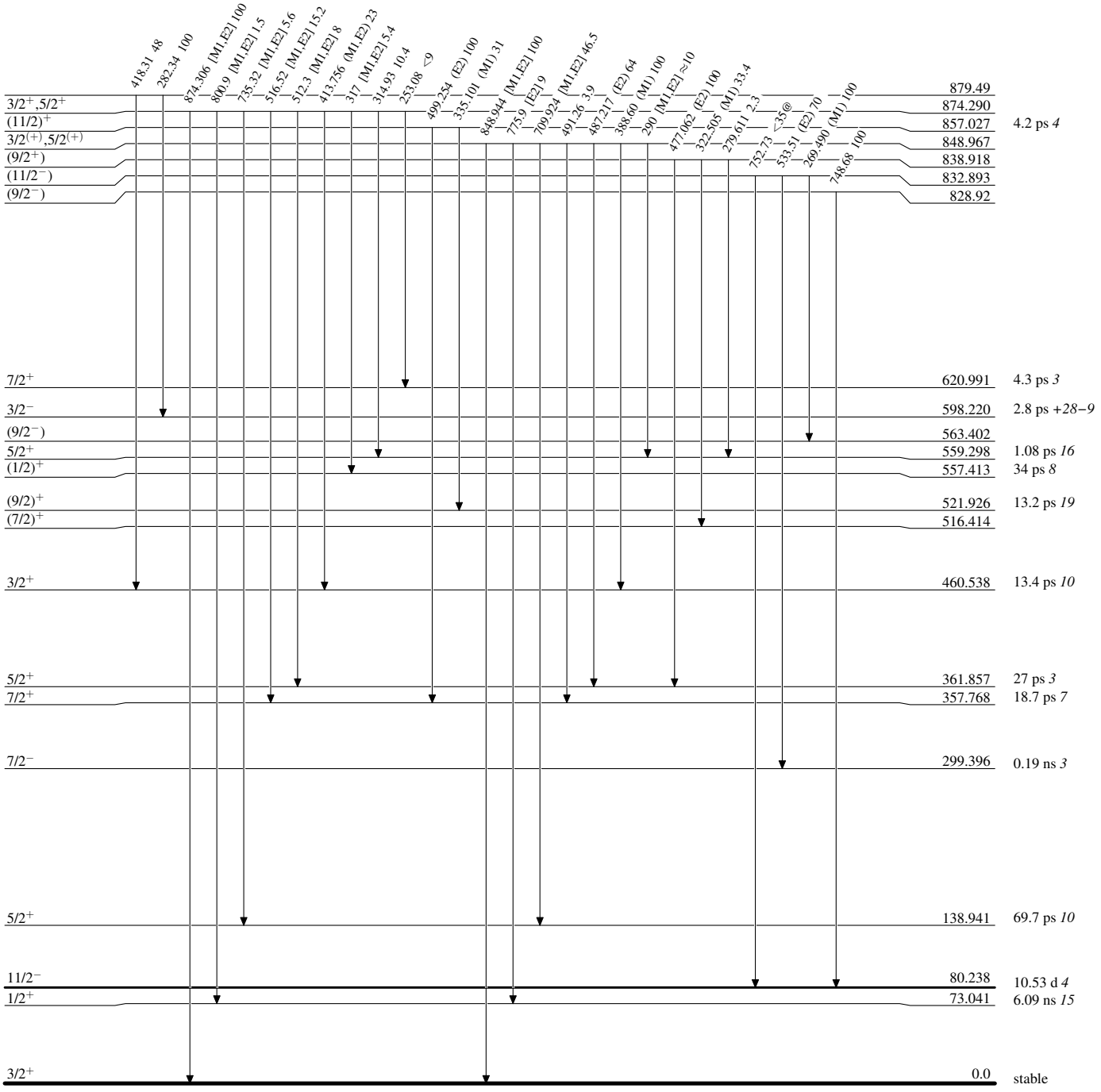


$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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

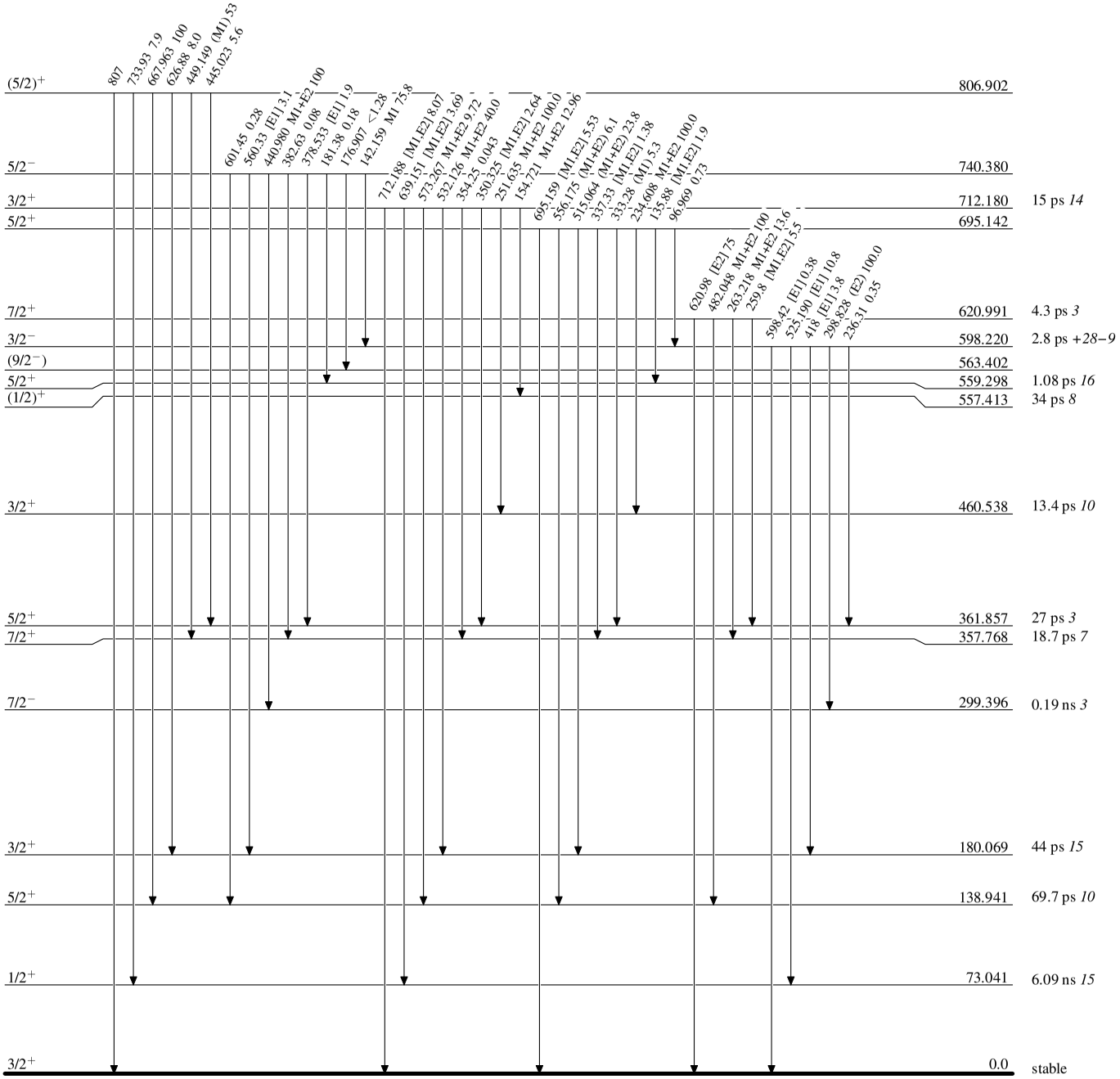


$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

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



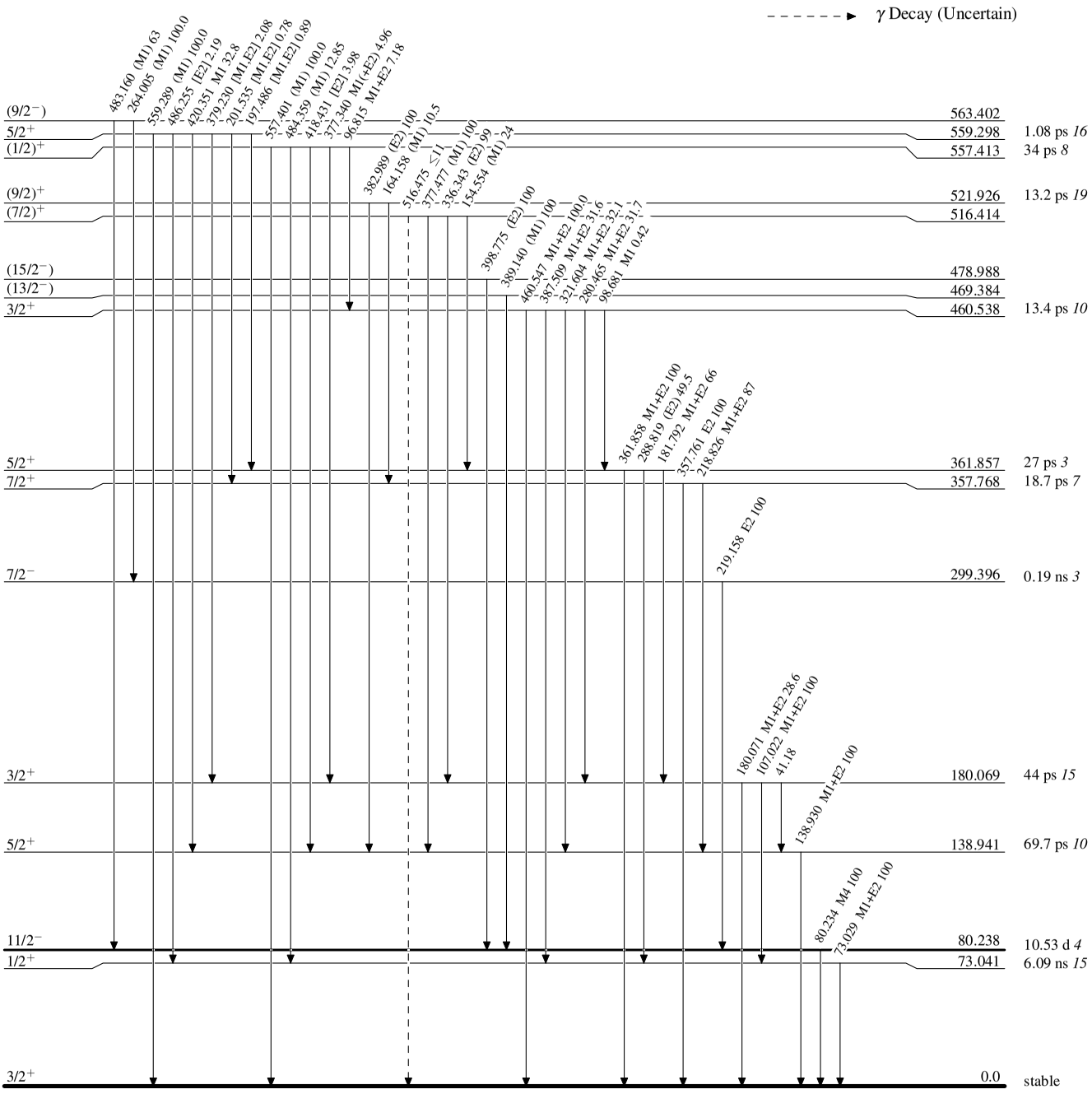
$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

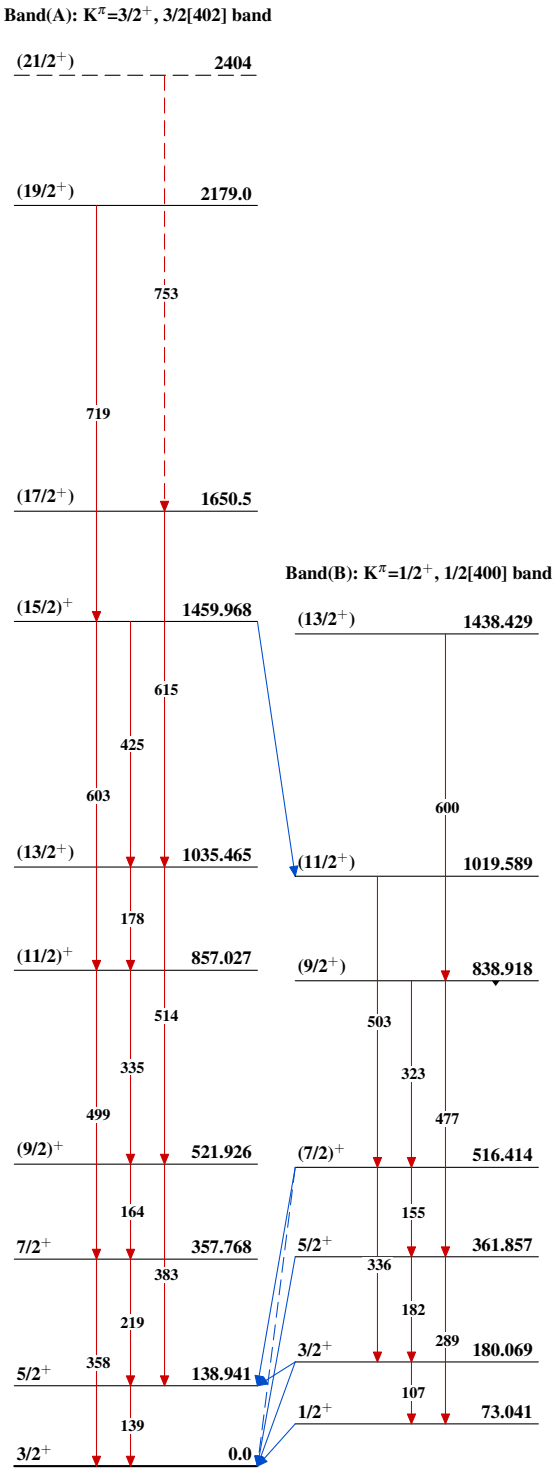
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend



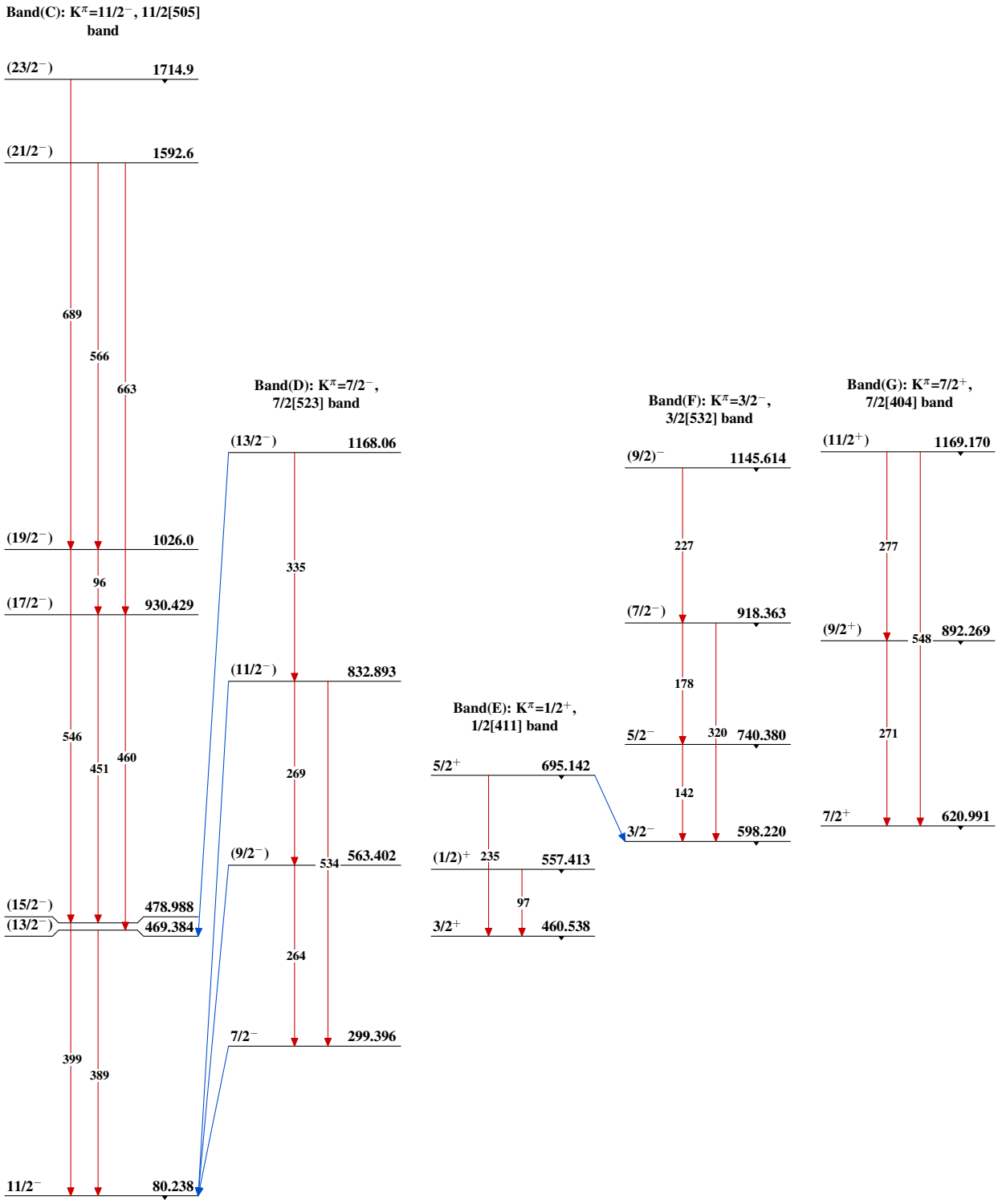
$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas



$^{193}_{77}Ir_{116}$

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas (continued)

Band(H): $K^{\pi}=1/2^{-}$, 1/2[530] band

$(7/2)^{-}$ 1820

$(3/2)^{-}$ 1759

$^{193}_{77}Ir_{116}$