Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 159, 1 (2019)	30-Aug-2019

Q(β^-)=−6677 *25*; S(n)=10240 *26*; S(p)=1240 *30*; Q(α)=5080 *30* 2017Wa10

^{177}Ir Levels

Cross Reference (XREF) Flags

- A ^{177}Pt ε decay
- B ^{181}Au α decay
- C (HI,xnγ)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0[#]	5/2$^-$	29.8 s *17*	ABC	%ε+%β^+=99.94 *1*; %α=0.06 *1* %α: From the comparison of α- and γ-ray intensities in singles spectra in 1990Bo19. Other: 0.13 *7* (1986Ke03). %ε+%β^+: Not measured directly, but estimated from %α. $T_{1/2}$: Weighted average of 31 s *2* (^{177}Ir α-decay) and 27 s *3* (^{177}Ir ε+β^+ decay) in 1990Bo19. Other: 21 s 2 (1967Si02). J$^\pi$: Favored α-decay to the ^{173}Re g.s. (J^π=5/2$^-$); J^π systematics; band assignment. configuration: π 1/2[541] Nilsson configuration. The band is strongly Coriolis mixed. The assignment is supported by the observed in-band properties, such as large signature splitting and rotational alignment. It is consistent with systematics of similar structures known in neighboring odd-Z nuclei.
0.0+x[g]	(9/2$^-$)	>100 ns	C	Additional information 1. J$^\pi$: Band assignment; J^π systematics. $T_{1/2}$: A lower limit based on the non-observation of a direct decay from this state to the J^π=5/2$^-$ ground state and/or the J^π=9/2$^-$ band member and the applied coincidence window. The value depends on the excitation energy of this state and the decay pattern. configuration: π 9/2[514] Nilsson configuration. The assignment is supported by the observed in-band properties, such as alignment and g_K-g_R values. It is consistent with systematics of similar structures known in neighboring odd-Z nuclei.
44.8[#] *3*	9/2$^-$		BC	E(level): Other: 46 keV *7* from α-decay energy differences in ^{181}Au α decay. J$^\pi$: J^π systematics; band assignment.
51.4 *4*			B	
85.44[#] *16*	(1/2$^-$)		AB	J$^\pi$: 85.4γ to 5/2$^-$; J^π systematics.
105.8 *5*			B	
118.7+x[g] *4*	(11/2$^-$)		C	J$^\pi$: 118.6γ M1+E2 to (9/2$^-$); band assignment.
148.01[&] *18*	(3/2$^-$)		AB	J$^\pi$: 148.0γ M1+E2 to 5/2$^-$, 62.4γ to (1/2$^-$); band assignment.
157.22[h] *16*	(3/2$^+$)		A	J$^\pi$: 71.8γ to (1/2$^-$), 157.2γ to 5/2$^-$; J^π systematics. configuration: π 3/2[402] Nilsson configuration (1993Me13). The assignment is tentative.
180.9[f] *4*	5/2$^+$	>100 ns	C	J$^\pi$: 100.8γ M1(+E2) from 7/2$^+$; band assignment; J^π systematics. $T_{1/2}$: Lower limit based on the non-observation of a direct decay from this state via the 180.6γ to the J^π=5/2$^-$ ground state and the applied coincidence window. Using B(E1)=2.8×10^{-8} *3* (W.u.) from equivalent decay to the J^π=5/2$^-$, π1/2$^-$[541] ground state of ^{181}Ir (1993Dr02), one may expect $T_{1/2} \approx 1.2$ μs. configuration: π 5/2[402] Nilsson configuration. The assignment is supported by the observed in-band properties, such as alignment and g_K-g_R values, and configuration systematics.

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Adopted Levels, Gammas (continued)

^{177}Ir Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
223.12[&] *25*	7/2⁻	ABC	Jπ: 223.0γ M1(+E2) to 5/2⁻; band assignment.
258.7[#] *4*	13/2⁻	C	Jπ: 214.2γ E2 to 9/2⁻ level; band assignment.
265.8 *3*	(3/2⁻,5/2⁻)	B	Jπ: 42.8γ to 7/2⁻, 180.2γ to (1/2⁻) and 265.9γ to 5/2⁻.
278.8+x[g] *4*	(13/2⁻)	C	Jπ: 160.1γ M1+E2 to (11/2⁻), 278.9γ E2 to (9/2⁻); band assignment.
281.8[f] *5*	7/2⁺	C	Jπ: 100.8γ M1(+E2) to 5/2⁺; band assignment.
331.4 *3*		AB	
393 *11*		B	E(level): From Eα=5242 *10* in ^{181}Au α-decay.
404.8[f] *5*	9/2⁺	C	Jπ: 122.9γ M1+E2 to 7/2⁺, 223.9γ to 5/2⁺; band assignment.
433.4[&] *4*	11/2⁻	BC	XREF: B(440). Jπ: 210.0γ E2 to the 7/2⁻ level, 388.7γ M1(+E2) to the 9/2⁻ level; band assignment.
454.3+x[g] *5*	(15/2⁻)	C	Jπ: 175.4γ M1+E2 to the (13/2⁻) level, 335.5γ (E2) to the (11/2⁻) level; band assignment.
549.8[f] *5*	11/2⁺	C	Jπ: 145.4γ M1+E2 to the 9/2⁺ level, 268.1γ E2 to the 7/2⁺ level; band assignment.
575.4[a]	(11/2⁻)	C	Jπ: 530.6γ to 9/2⁻; band assignment.
615.2[#] *5*	17/2⁻	C	Jπ: 356.6γ E2 to the 13/2⁻ level; band assignment.
650.1+x[g] *6*	(17/2⁻)	C	Jπ: 195.7γ M1+E2 to the (15/2⁻) level, 371.5γ E2 to the (13/2⁻) level; band assignment.
712.6[b] *5*	(9/2⁺)	C	E(level): From Eγ=94.3 keV *5*. Jπ: 94.3γ from the 13/2⁺ level; band assignment. configuration: π 1/2[660] Nilsson configuration. The assignment is supported by the observed in-band properties, such as the decoupled character of the band and rotational alignment, and configuration systematics.
712.7[f] *5*	13/2⁺	C	Jπ: 308.0γ E2 to the 9/2⁺ level; band assignment.
764.4[&] *5*	15/2⁻	C	Jπ: 331.1γ E2 to the 11/2⁻ level, 505.7γ M1(+E2) to the 13/2⁻; band assignment.
807.1[b] *5*	13/2⁺	C	Jπ: 257.5γ M1(+E2) to the 11/2⁺ level, 402.0γ (E2) to the 9/2⁺ level; band assignment.
858.6[a] *6*	15/2⁻	C	Jπ: 599.8γ M1(+E2) to the 13/2⁻ level; band assignment.
860.9+x[g] *6*	(19/2⁻)	C	Jπ: 210.8γ M1+E2 to the (17/2⁻) level, 406.5γ (E2) to the (15/2⁻) level; band assignment.
897.5[f] *6*	15/2⁺	C	Jπ: 184.5γ M1+E2 to the 13/2⁺ level, 348.0γ to the 11/2⁺ level; band assignment.
955.0[b] *5*	17/2⁺	C	Jπ: 147.7γ E2 to the 13/2⁺ level; band assignment.
1076.1[#] *6*	21/2⁻	C	Jπ: 460.7γ E2 to the 17/2⁻ level; band assignment.
1088.8+x[g] *6*	(21/2⁻)	C	Jπ: 227.7γ M1+E2 to the (19/2⁻) level, 438.8γ E2 to the (17/2⁻) level; band assignment.
1099.5[f] *6*	17/2⁺	C	Jπ: 201γ (M1+E2) to the 15/2⁺ level, 386γ E2 to the 13/2⁺ level; band assignment.
1188.8[&] *6*	19/2⁻	C	Jπ: 424.4γ to the 15/2⁻ level, 574.1γ M1(+E2) to the 17/2⁻ level; band assignment.
1215.5[b] *7*	21/2⁺	C	Jπ: 260.4γ E2 to the 17/2⁺ level; band assignment.
1225.1[a] *5*	19/2⁻	C	Jπ: 366.4γ E2 to the 15/2⁻ level, 609.8 M1(+E2) to the 17/2⁻ level; band assignment.
1314.6[f] *6*	19/2⁺	C	Jπ: 215.3γ M1+E2 to the 17/2⁺ level; 417.1γ to the 15/2⁺ level; band assignment.
1330.6+x[g] *7*	(23/2⁻)	C	Jπ: 241.7γ M1+E2 to the (21/2⁻) level, 469.7γ E2 to the (19/2⁻) level; band assignment.
1549.2[f] *7*	21/2⁺	C	Jπ: 449.7γ E2 to the 17/2⁺ level; band assignment.
1563.6[b] *8*	25/2⁺	C	Jπ: 347.9γ E2 to the 21/2⁺ level; band assignment.
1588.6+x[g] *7*	(25/2⁻)	C	Jπ: 257.9γ M1+E2 to the (23/2⁻) level, 499.8γ E2 to the (21/2⁻) level; band assignment.
1611.4[#] *7*	25/2⁻	C	Jπ: 534.9γ E2 to the 21/2⁻ level; band assignment.
1653.1[a] *6*	23/2⁻	C	Jπ: 427.7γ E2 to the 19/2⁻ level, 577.3 M1(+E2) to the 21/2⁻ level; band assignment.
1694.9[&] *8*	23/2⁻	C	Jπ: 506.1γ E2 to the 19/2⁻ level; band assignment.
1790.5[f] *7*	23/2⁺	C	Jπ: 241.1γ to the 21/2⁺ level, 476.1 E2 to the 19/2⁺ level; band assignment.
1859.6+x[g] *8*	(27/2⁻)	C	Jπ: 270.9γ M1+E2 to the (25/2⁻) level, 529.0γ E2 to the (23/2⁻) level; band assignment.
1876.2[c]	(23/2⁺)	C	Jπ: 661.2γ to the 21/2⁺ level; band assignment.
1988.3[b] *8*	29/2⁺	C	Jπ: 425.1γ E2 to the 25/2⁺ level; band assignment.
2059.4[f] *7*	25/2⁺	C	Jπ: 269.0γ to the 23/2⁺ level, 510.3γ E2 to the 21/2⁺ level; band assignment.
2145.4+x[g] *8*	(29/2⁻)	C	Jπ: 285.8γ M1+E2 to the (27/2⁻) level, 556.9γ E2 to the (25/2⁻) level; band assignment.
2149.7[a] *7*	27/2⁻	C	Jπ: 497.0γ E2 to the 23/2⁻ level, 538.3γ M1(+E2) to the 25/2⁻ level; band assignment.

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Adopted Levels, Gammas (continued)

^{177}Ir Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
2203.3[#] *8*	29/2$^-$	C	J$^{\pi}$: 591.6γ E2 to the 25/2$^-$ level; band assignment.
2257.0[&] *9*	27/2$^-$	C	J$^{\pi}$: 562.1γ E2 to the 23/2$^-$ level; band assignment.
2300.5[c] *9*	27/2$^+$	C	J$^{\pi}$: 423.7γ to the 23/2$^+$ level, 736.4γ M1(+E2) to the 25/2$^+$ level; band assignment.
2319.1+x *8*	(25/2$^-$)	C	J$^{\pi}$: 1230.5γ to the (21/2$^-$) level.
2390.2 *9*	(29/2$^+$)	C	J$^{\pi}$: 826.6γ to the 25/2$^+$ level.
2444.1+x[g] *8*	(31/2$^-$)	C	J$^{\pi}$: 298.8γ M1+E2 to the (29/2$^-$) level, 584.4γ E2 to the (27/2$^-$) level; band assignment.
2483.1[b] *9*	33/2$^+$	C	J$^{\pi}$: 494.8γ E2 to the 29/2$^+$ level; band assignment.
2532.3+x *9*	(27/2$^-$)	C	J$^{\pi}$: 1201.7γ to the (23/2$^-$) level.
2549.6[@] *8*	29/2$^-$	C	J$^{\pi}$: 938.1γ E2 to the 25/2$^-$ level; band assignment.
2623.1[f] *8*	(29/2$^+$)	C	J$^{\pi}$: 563.9γ to the 27/2$^+$ level; band assignment.
2703.1[a] *8*	31/2$^-$	C	J$^{\pi}$: 499.4γ to the 29/2$^-$ level, 553.8γ E2 to the 27/2$^-$ level; band assignment.
2754.6+x[g] *8*	(33/2$^-$)	C	J$^{\pi}$: 310.5γ M1+E2 to the (31/2$^-$) level, 609.2γ E2 to the (29/2$^-$) level; band assignment.
2757.4+x *8*	(29/2$^-$)	C	J$^{\pi}$: 438.6γ to (25/2$^-$).
2802.9[c] *9*	31/2$^+$	C	J$^{\pi}$: 501.9γ to the 27/2$^+$ level, 814.9γ M1(+E2) to the 29/2$^+$ level; band assignment.
2823.5[#] *9*	33/2$^-$	C	J$^{\pi}$: 620.1γ E2 to the 29/2$^-$ level; band assignment.
2856.2[&] *11*	31/2$^-$	C	J$^{\pi}$: 599.2γ E2 to the 27/2$^-$ level; band assignment.
2979.0 *11*	(29/2$^+$)	C	J$^{\pi}$: 1415γ to the 25/2$^+$ level.
2995.9[@] *8*	33/2$^-$	C	J$^{\pi}$: 792.8γ E2 to the 29/2$^-$ level; band assignment.
3042.0[b] *9*	37/2$^+$	C	J$^{\pi}$: 559.2γ E2 to the 33/2$^+$ level; band assignment.
3075.7+x[g] *9*	(35/2$^-$)	C	J$^{\pi}$: 321.0γ M1+E2 to the (33/2$^-$) level, 631.6γ E2 to the (31/2$^-$) level; band assignment.
3193.3[f] *9*	(33/2$^+$)	C	J$^{\pi}$: 570.3γ to the (29/2$^+$) level; band assignment.
3193.4[d] *10*	33/2$^+$	C	J$^{\pi}$: 1205.2γ E2 to the 29/2$^+$ level; band assignment.
3305.6[e] *10*	(33/2$^+$)	C	J$^{\pi}$: 1317.3γ to the 29/2$^+$ level; band assignment.
3306.1[a] *9*	35/2$^-$	C	J$^{\pi}$: 603.0γ E2 to the 29/2$^+$ level; band assignment.
3350.7[c] *9*	35/2$^+$	C	J$^{\pi}$: 547.7γ to the 31/2$^+$ level; 868.0γ M1(+E2) to the 33/2$^+$ level; band assignment.
3394.6[#] *10*	37/2$^-$	C	J$^{\pi}$: 571.1γ E2 to the 33/2$^-$ level; band assignment.
3404.8+x[g] *9*	(37/2$^-$)	C	J$^{\pi}$: 329.9γ to the (35/2$^-$) level; 650.3γ E2 to the (33/2$^-$) level; band assignment.
3461.4[&] *12*	(35/2$^-$)	C	J$^{\pi}$: 605.2γ to the (31/2$^-$) level; band assignment.
3614.8[@] *9*	37/2$^-$	C	J$^{\pi}$: 791.2γ E2 to the 33/2$^-$ level; band assignment.
3617.4[d] *9*	37/2$^+$	C	J$^{\pi}$: 1134.2γ E2 to the 33/2$^+$ level; band assignment.
3660.9[b] *9*	41/2$^+$	C	J$^{\pi}$: 619.2γ E2 to the 39/2$^+$ level; band assignment.
3735.9+x[g] *9*	(39/2$^-$)	C	J$^{\pi}$: 330.9γ to the (37/2$^-$) level; 660.4γ E2 to the (35/2$^-$) level; band assignment.
3787.1[e] *10*	(37/2$^+$)	C	J$^{\pi}$: 480.8γ to the (33/2$^+$) level; band assignment.
3795.7?[f]	(37/2$^+$)	C	J$^{\pi}$: 603.2γ to the (33/2$^+$) level; band assignment.
3941.4 *11*	(39/2$^-$)	C	J$^{\pi}$: 635.3γ to the 35/2$^-$ level.
3951.0[c] *9*	39/2$^+$	C	J$^{\pi}$: 600.5 to the 35/2$^+$ level; 908.6γ M1(+E2) to the (37/2$^+$) level; band assignment.
3977.1[a] *14*	(39/2$^-$)	C	J$^{\pi}$: 671γ to the 35/2$^-$ level; band assignment.
3988.7[#] *11*	41/2$^-$	C	J$^{\pi}$: 594.1γ to the 37/2$^-$ level; band assignment.
3998.5+x *10*	(39/2$^-$)	C	J$^{\pi}$: 922.8γ to the (35/2$^-$) level.
4068.9+x[g] *10*	(41/2$^-$)	C	J$^{\pi}$: 333γ to the (39/2$^-$) level; 664γ E2 to the (37/2$^-$) level; band assignment.
4102.8[d] *9*	41/2$^+$	C	J$^{\pi}$: 485.5γ E2 to the 37/2$^+$ level; band assignment.
4325.3[e] *9*	(41/2$^+$)	C	J$^{\pi}$: 537.7γ to the (37/2$^+$) level; 1283.4γ to the 37/2$^+$ level; band assignment.
4333.3[@] *10*	41/2$^-$	C	J$^{\pi}$: 718.5γ E2 to the 37/2$^-$ level; band assignment.
4335.3[b] *10*	45/2$^+$	C	J$^{\pi}$: 674.4γ E2 to the 41/2$^+$ level; band assignment.
4394.3+x *10*	(43/2$^-$)	C	J$^{\pi}$: 325.2γ to the (41/2$^-$) level 658.6γ to the (39/2$^-$) level.
4408.4+x[g] *12*	(43/2$^-$)	C	J$^{\pi}$: 340γ to the (41/2$^-$) level; 672γ to the (39/2$^-$) level; band assignment.
4600.9[c] *10*	(43/2$^+$)	C	J$^{\pi}$: 649.7γ to the 39/2$^+$ level; 940.2γ to the 41/2$^+$ level; band assignment.
4651.8[#] *13*	45/2$^-$	C	J$^{\pi}$: 663.1γ E2 to the 41/2$^-$ level; band assignment.

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Adopted Levels, Gammas (continued)

^{177}Ir Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
4652.5[d] *10*	45/2$^+$	C	J$^{\pi}$: 549.9γ E2 to the 41/2$^+$ level; 991.4γ E2 to the 41/2$^+$ level; band assignment.
4739.9+x[g] *14*	(45/2$^-$)	C	J$^{\pi}$: 671γ E2 to the (41/2$^-$) level; band assignment.
4911.0[e] *10*	(45/2$^+$)	C	J$^{\pi}$: 585.2γ to the (41/2$^+$) level; band assignment.
5058.4[b] *11*	49/2$^+$	C	J$^{\pi}$: 723.0γ E2 to the 45/2$^+$ level; band assignment.
5114.6+x?[g] *7*	(47/2$^-$)	C	J$^{\pi}$: 706γ to the (43/2$^-$) level; band assignment.
5120.3[@] *15*	(45/2$^-$)	C	J$^{\pi}$: 787γ to the 41/2$^-$ level; band assignment.
5260.9?[c] *11*	(47/2$^+$)	C	J$^{\pi}$: 660.0γ to the (43/2$^+$) level; 925.6γ to the 45/2$^+$ level; band assignment.
5269.2[d] *10*	49/2$^+$	C	J$^{\pi}$: 616.8γ E2 to the 45/2$^+$ level; band assignment.
5386.8[#] *14*	49/2$^-$	C	J$^{\pi}$: 735.0γ E2 to the 45/2$^-$ level; band assignment.
5436.0+x?[g] *7*	(49/2$^-$)	C	J$^{\pi}$: 696γ to the (45/2$^-$) level; band assignment.
5543.2[e] *11*	(49/2$^+$)	C	J$^{\pi}$: 632.2γ to the (45/2$^+$) level; band assignment.
5811.7[b] *12*	53/2$^+$	C	J$^{\pi}$: 753.3γ E2 to the 49/2$^+$ level; band assignment.
5846.4 *15*		C	
5967.1[d] *11*	53/2$^+$	C	J$^{\pi}$: 697.9γ E2 to the 49/2$^+$ level; band assignment.
6173.1[#] *14*	(53/2$^-$)	C	J$^{\pi}$: 786.3γ to the (49/2$^-$) level; band assignment.
6577.0[b] *13*	57/2$^+$	C	J$^{\pi}$: 765.3γ E2 to the 53/2$^+$ level; band assignment.
6680.4 *18*		C	
6761.4[d] *12*	57/2$^+$	C	J$^{\pi}$: 794.9γ E2 to the 53/2$^+$ level; band assignment.
7024.1?[#] *9*	(57/2$^-$)	C	J$^{\pi}$: 850.0γ to the (53/2$^-$) level; band assignment.
7373.9[b] *14*	61/2$^+$	C	J$^{\pi}$: 796.9γ E2 to the 57/2$^+$ level; band assignment.
7627.8?[d] *9*	(61/2$^+$)	C	J$^{\pi}$: 866.2γ to the 57/2$^+$ level; band assignment.
8222.0[b] *15*	65/2$^+$	C	J$^{\pi}$: 848.1γ E2 to the 61/2$^+$ level; band assignment.
9126.2[b] *16*	(69/2$^+$)	C	J$^{\pi}$: 904.2γ to the 65/2$^+$ level; band assignment.

[†] From a least-squares fit to Eγ.

[‡] From γ-ray transition multipolarities, based on the measured angular distributions (1991Dr06) and DCO ratios (2002OdZZ), and total electron-conversion coefficients deduced from intensity balance consideration, the apparent band structures with both cascade (ΔJ=1) and crossover (ΔJ=2) transitions, and the available decay spectroscopic information. Specific arguments are given with each level.

[#] Band(A): K^{π}=1/2$^-$, π1/2[541] band (α=+1/2).

[@] Band(B): Low-K, 3-qp band (α=+1/2); most likely configuration=π1/2[541]$\otimes\nu$(i$_{13/2}$)^2.

[&] Band(C): Low-K, 1-qp band (α=−1/2). Tentatively assigned the Coriolis-mixed (h$_{9/2}$) configuration.

[a] Band(D): Low-K, 1-qp band (α=−1/2); Tentatively assigned the Coriolis-mixed (h$_{9/2}$) configuration.

[b] Band(E): K^{π}=1/2$^+$, π1/2[660] band (α=+1/2). The assignment is supported by the observed in-band properties, such as the decoupled character of the band and rotational alignment. It is consistent with systematics of similar structures known in neighboring odd-Z nuclei.

[c] Band(F): Low-K, 1-qp band. Possible configuration=π1/2[660] (α=−1/2).

[d] Band(G): Low-K, 3-qp band (α=+1/2); most likely configuration=π1/2[660]$\otimes\nu$(i$_{13/2}$)^2.

[e] Band(H): Low-K, 3-qp band (α=+1/2).

[f] Band(I): K^{π}=5/2$^+$, π5/2[402] band.

[g] Band(J): K^{π}=9/2$^-$, π9/2[514] band.

[h] Band(K): K^{π}=3/2$^+$, π3/2[402]. The assignment is tentative.

Adopted Levels, Gammas (continued)

$\gamma(^{177}Ir)$

Mixing ratios values given in the Comments section were deduced from the branching ratios and the rotational model, and by assuming pure K. The sign of δ is determined from $\gamma(\theta)$ and it is assumed that it does not change within a given band.

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[†d]	α[c]	Comments
44.8	9/2$^-$	(44.6[a] *4*)	100	0.0	5/2$^-$	[E2]		186 *9*	α(L)=141 *7*; α(M)=36.0 *17* α(N)=8.7 *4*; α(O)=1.31 *7*; α(P)=0.00120 *5* E_γ: From level energy differences.
51.4		52.1[@] *5*	100	0.0	5/2$^-$				
85.44	(1/2$^-$)	85.4[&] *2*	100	0.0	5/2$^-$				
105.8		54.9[@] *5*	100	51.4					
118.7+x	(11/2$^-$)	118.6 *5*	100	0.0+x	(9/2$^-$)	M1+E2	+0.19 *+19−15*	3.71 *15*	α(K)=3.01 *24*; α(L)=0.54 *8*; α(M)=0.125 *21* α(N)=0.031 *5*; α(O)=0.0054 *7*; α(P)=0.00037 *3* Mult.: A_2= 0.05 *11*. DCO= 0.63 *9*. δ: From $\gamma(\theta)$ in 1991Dr06.
148.01	(3/2$^-$)	62.4[@] *5*		85.44	(1/2$^-$)				
		96.8[@] *5*		51.4					
		148.0[&] *2*	100	0.0	5/2$^-$	M1+E2		2.00	α(K)=1.650 *24*; α(L)=0.270 *4*; α(M)=0.0622 *9* α(N)=0.01529 *23*; α(O)=0.00271 *4*; α(P)=0.000204 *3* Mult.: From α(L)exp= 0.43 *15* in ^{181}Au α decay (1992Sa03).
157.22	(3/2$^+$)	71.8[&] *2*		85.44	(1/2$^-$)				
		157.2[&] *2*	100	0.0	5/2$^-$				
180.9	5/2$^+$	(180.8 *5*)	100	0.0	5/2$^-$	[E1]		0.0880 *14*	α(K)=0.0723 *12*; α(L)=0.01211 *20*; α(M)=0.00279 *5* α(N)=0.000676 *11*; α(O)=0.0001147 *18*; α(P)=6.74×10^{-6} *11* E_γ: From level energy differences.
223.12	7/2$^-$	75.1[@] *5*		148.01	(3/2$^-$)				
		117.8[@] *5*		105.8					
		177.8[@] *5*		44.8	9/2$^-$				
		223.0 *5*	100	0.0	5/2$^-$	M1(+E2)		0.634 *10*	α(K)=0.524 *8*; α(L)=0.0851 *13*; α(M)=0.0196 *3* α(N)=0.00481 *8*; α(O)=0.000853 *13*; α(P)=6.44×10^{-5} *10* Mult.: DCO= 0.69 *9*.
258.7	13/2$^-$	214.2 *5*	100	44.8	9/2$^-$	E2		0.274 *5*	α(K)=0.1424 *22*; α(L)=0.0995 *17*; α(M)=0.0252 *5* α(N)=0.00610 *11*; α(O)=0.000956 *17*; α(P)=1.453×10^{-5} *22* Mult.: A_2= 0.22 *3*, A_4=− 0.06 *4*. DCO= 0.93 *11*.
265.8	(3/2$^-$,5/2$^-$)	(42.7[@a] *4*)		223.12	7/2$^-$				E_γ: From level energy differences.
		180.2[@] *5*		85.44	(1/2$^-$)				
		265.9[@] *5*		0.0	5/2$^-$				

$^{177}_{77}Ir_{100}$-5

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[†d]	α[c]	Comments
278.8+x	(13/2$^-$)	160.1 *5*	100[‡]	118.7+x	(11/2$^-$)	M1+E2	+0.26 *11*	1.55 *6*	α(K)=1.26 *7*; α(L)=0.224 *9*; α(M)=0.0521 *24* α(N)=0.0128 *6*; α(O)=0.00224 *8*; α(P)=0.000155 *8* Mult.: A_2= 0.16 *7*, A_4= 0.14 *8*. DCO= 0.70 *9*. δ: From γ(θ) in 1991Dr06. Other: δ= 0.23 *2*, assuming K=9/2.
		278.9 *5*	12[‡] *2*	0.0+x	(9/2$^-$)	E2		0.1181 *18*	α(K)=0.0723 *11*; α(L)=0.0347 *6*; α(M)=0.00868 *14* α(N)=0.00211 *4*; α(O)=0.000335 *6*; α(P)=7.68×10^{-6} *12* I_γ: Other: 17 *1* in 2002OdZZ. Mult.: A_2= 0.41 *17*, A_4=− 0.02 *20*.
281.8	7/2$^+$	100.8 *5*	100	180.9	5/2$^+$	M1(+E2)		5.99 *12*	α(K)=4.93 *10*; α(L)=0.812 *17*; α(M)=0.187 *4* α(N)=0.0460 *10*; α(O)=0.00814 *17*; α(P)=0.000613 *13* Mult.: DCO= 0.73 *9*.
331.4		183.4[&] *2*	100	148.01	(3/2$^-$)				
404.8	9/2$^+$	122.9 *5*	100[‡]	281.8	7/2$^+$	M1+E2		3.39 *7*	α(K)=2.80 *6*; α(L)=0.459 *9*; α(M)=0.1057 *20* α(N)=0.0260 *5*; α(O)=0.00460 *9*; α(P)=0.000347 *7* Mult.: A_2= 0.03 *11*. DCO= 0.81 *10*. δ: δ=0.23 *1*, assuming K=5/2.
		223.9 *5*	32[‡] *4*	180.9	5/2$^+$	[E2]		0.237	α(K)=0.1271 *20*; α(L)=0.0829 *14*; α(M)=0.0209 *4* α(N)=0.00508 *9*; α(O)=0.000798 *14*; α(P)=1.305×10^{-5} *20* I_γ: Other: 48 *3* in 2002OdZZ.
433.4	11/2$^-$	174.9 *5*	17 *3*	258.7	13/2$^-$	[M1+E2]		1.249 *21*	α(K)=1.031 *17*; α(L)=0.168 *3*; α(M)=0.0387 *7* α(N)=0.00952 *16*; α(O)=0.00169 *3*; α(P)=0.0001271 *21*
		210.0 *5*	47 *10*	223.12	7/2$^-$	E2		0.293 *5*	α(K)=0.1499 *23*; α(L)=0.1080 *19*; α(M)=0.0273 *5* α(N)=0.00663 *12*; α(O)=0.001037 *18*; α(P)=1.524×10^{-5} *23* Mult.: DCO= 0.99 *11*.
		388.7 *5*	100 *13*	44.8	9/2$^-$	M1(+E2)		0.1399 *21*	α(K)=0.1159 *17*; α(L)=0.0186 *3*; α(M)=0.00427 *7* α(N)=0.001049 *16*; α(O)=0.000186 *3*; α(P)=1.410×10^{-5} *21* Mult.: A_2=− 0.04 *8*, A_4=− 0.19 *10*. DCO= 0.64 *9*.
454.3+x	(15/2$^-$)	175.4 *5*	100[‡]	278.8+x	(13/2$^-$)	M1+E2		1.239 *20*	α(K)=1.023 *17*; α(L)=0.167 *3*; α(M)=0.0384 *7* α(N)=0.00944 *16*; α(O)=0.00167 *3*; α(P)=0.0001261 *21* Mult.: A_2=− 0.06 *19*. DCO= 0.72 *9*. δ: δ=0.20 *1*, assuming K=9/2.
		335.5 *5*	31[‡] *2*	118.7+x	(11/2$^-$)	(E2)		0.0684	α(K)=0.0454 *7*; α(L)=0.0175 *3*; α(M)=0.00432 *7* α(N)=0.001051 *16*; α(O)=0.000169 *3*; α(P)=4.95×10^{-6} *8* I_γ: Other: 37 *2* in 2002OdZZ. Mult.: A_2= 0.40 *20*.
549.8	11/2$^+$	145.4 *5*	100[‡]	404.8	9/2$^+$	M1+E2		2.10 *4*	α(K)=1.74 *3*; α(L)=0.284 *5*; α(M)=0.0654 *12* α(N)=0.0161 *3*; α(O)=0.00285 *5*; α(P)=0.000214 *4* Mult.: A_2=− 0.02 *9*, A_4= 0.29 *11*. DCO= 0.91 *25*. δ: δ= 0.14 *1*, assuming K=5/2.
		268.1 *5*	30[‡] *4*	281.8	7/2$^+$	E2		0.1334 *21*	α(K)=0.0799 *12*; α(L)=0.0405 *7*; α(M)=0.01013 *16* α(N)=0.00246 *4*; α(O)=0.000390 *7*; α(P)=8.44×10^{-6} *13*

$^{177}_{77}Ir_{100}$-6

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[†d]	α[c]	Comments
									I_γ: Other: 48 *3* in 2002OdZZ. Mult.: DCO= 0.94 *11*.
575.4	(11/2$^-$)	530.6[e] *5*	100	44.8	9/2$^-$				
615.2	17/2$^-$	356.6 *5*	100	258.7	13/2$^-$	E2		0.0576	α(K)=0.0391 *6*; α(L)=0.01405 *21*; α(M)=0.00346 *6* α(N)=0.000843 *13*; α(O)=0.0001365 *21*; α(P)=4.29×10^{-6} *7* Mult.: A_2= 0.27 *3*, A_4=− 0.05 *4*. DCO= 0.98 *11*.
650.1+x	(17/2$^-$)	195.7 *5*	100‡	454.3+x	(15/2$^-$)	M1+E2	+0.16 *5*	0.898 *17*	α(K)=0.739 *16*; α(L)=0.1231 *20*; α(M)=0.0284 *5* α(N)=0.00699 *12*; α(O)=0.001233 *20*; α(P)=9.08×10^{-5} *20* Mult.: A_2= 0.02 *4*, A_4= 0.02 *4*. DCO= 0.73 *9*. δ: From γ(θ) in 1991Dr06. δ=0.18 *1*, assuming K=9/2.
		371.5 *5*	45‡ *2*	278.8+x	(13/2$^-$)	E2		0.0514	α(K)=0.0354 *5*; α(L)=0.01218 *18*; α(M)=0.00299 *5* α(N)=0.000729 *11*; α(O)=0.0001184 *18*; α(P)=3.90×10^{-6} *6* I_γ: Other: 52 *2* in 2002OdZZ. Mult.: A_2= 0.26 *7*, A_4=− 0.05 *9*. DCO= 0.91 *11*.
712.7	13/2$^+$	162.7 *5*	100‡	549.8	11/2$^+$	[M1+E2]		1.53 *3*	α(K)=1.263 *21*; α(L)=0.206 *4*; α(M)=0.0475 *8* α(N)=0.01168 *20*; α(O)=0.00207 *4*; α(P)=0.000156 *3* δ: δ= 0.15 *1*, assuming K=5/2.
		308.0 *5*	68‡ *5*	404.8	9/2$^+$	E2		0.0877	α(K)=0.0562 *9*; α(L)=0.0239 *4*; α(M)=0.00594 *9* α(N)=0.001443 *22*; α(O)=0.000231 *4*; α(P)=6.06×10^{-6} *9* I_γ: Other: 79 *4* in 2002OdZZ. Mult.: A_2= 0.22 *14*. DCO= 0.94 *11*.
764.4	15/2$^-$	331.1 *5*	57 *11*	433.4	11/2$^-$	E2		0.0711	α(K)=0.0469 *7*; α(L)=0.0183 *3*; α(M)=0.00453 *7* α(N)=0.001103 *17*; α(O)=0.000178 *3*; α(P)=5.11×10^{-6} *8* Mult.: A_2= 0.19 *9*. DCO= 0.95 *11*.
		505.7 *5*	100 *15*	258.7	13/2$^-$	M1(+E2)		0.0698	α(K)=0.0579 *9*; α(L)=0.00920 *14*; α(M)=0.00211 *3* α(N)=0.000519 *8*; α(O)=9.21×10^{-5} *14*; α(P)=7.01×10^{-6} *10* Mult.: A_2= 0.31 *11*. DCO= 0.49 *8*.
807.1	13/2$^+$	94.3[e] *5*	12.0 *9*	712.6	(9/2$^+$)	[E2]		5.88 *16*	α(K)=0.802 *12*; α(L)=3.82 *11*; α(M)=0.98 *3* α(N)=0.238 *7*; α(O)=0.0362 *11*; α(P)=0.0001052 *21*
		257.5 *5*	20.0 *22*	549.8	11/2$^+$	M1(+E2)		0.427 *7*	α(K)=0.353 *6*; α(L)=0.0571 *9*; α(M)=0.01314 *20* α(N)=0.00323 *5*; α(O)=0.000572 *9*; α(P)=4.32×10^{-5} *7* Mult.: DCO= 0.83 *10*.
		373.7 *5*	44 *9*	433.4	11/2$^-$	(E1)		0.01514	α(K)=0.01259 *18*; α(L)=0.00197 *3*; α(M)=0.000450 *7* α(N)=0.0001098 *16*; α(O)=1.90×10^{-5} *3*; α(P)=1.273×10^{-6} *19* Mult.: DCO= 0.78 *10*.
		402.0 *5*	17.8 *22*	404.8	9/2$^+$	(E2)		0.0415	α(K)=0.0293 *5*; α(L)=0.00930 *14*; α(M)=0.00228 *4* α(N)=0.000554 *9*; α(O)=9.06×10^{-5} *14*; α(P)=3.26×10^{-6} *5* Mult.: DCO= 0.95 *11*.
		548.6 *5*	100 *16*	258.7	13/2$^-$	(E1)		0.00655	α(K)=0.00547 *8*; α(L)=0.000829 *12*; α(M)=0.000189 *3* α(N)=4.62×10^{-5} *7*; α(O)=8.07×10^{-6} *12*; α(P)=5.68×10^{-7} *8* Mult.: DCO= 0.99 *11*, consistent with J to J transition.

$^{177}_{77}Ir_{100}$-7

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[†d]	α[c]	Comments
858.6	15/2⁻	282.7[e] *5*	18.4 *24*	575.4	(11/2⁻)	[E2]		0.1134 *17*	α(K)=0.0698 *11*; α(L)=0.0330 *6*; α(M)=0.00824 *13* α(N)=0.00200 *4*; α(O)=0.000319 *5*; α(P)=7.43×10^{-6} *11*
		599.8 *5*	100 *8*	258.7	13/2⁻	M1(+E2)		0.0447	α(K)=0.0371 *6*; α(L)=0.00587 *9*; α(M)=0.001347 *19* α(N)=0.000331 *5*; α(O)=5.88×10^{-5} *9*; α(P)=4.48×10^{-6} *7* Mult.: DCO= 0.60 *9*.
860.9+x	(19/2⁻)	210.8 *5*	100‡	650.1+x	(17/2⁻)	M1+E2	+0.14 *8*	0.733 *17*	α(K)=0.603 *16*; α(L)=0.0997 *16*; α(M)=0.0230 *4* α(N)=0.00565 *10*; α(O)=0.000998 *16*; α(P)=7.42×10^{-5} *20* Mult.: A_2=− 0.01 *6*, A_4= 0.02 *8*. DCO= 0.82 *10*. δ: From γ(θ) in 1991Dr06. δ= 0.19 *1*, assuming K=9/2.
		406.5 *5*	67‡ *5*	454.3+x	(15/2⁻)	(E2)		0.0403	α(K)=0.0285 *4*; α(L)=0.00896 *13*; α(M)=0.00219 *4* α(N)=0.000534 *8*; α(O)=8.73×10^{-5} *13*; α(P)=3.18×10^{-6} *5* I_γ: Other: 75 *3* in 2002OdZZ. Mult.: A_2= 0.11 *11*. DCO= 0.97 *11*.
897.5	15/2⁺	184.5 *5*	98# *7*	712.7	13/2⁺	M1+E2		1.075 *18*	α(K)=0.887 *15*; α(L)=0.1447 *23*; α(M)=0.0333 *6* α(N)=0.00819 *13*; α(O)=0.001451 *24*; α(P)=0.0001094 *18* Mult.: DCO= 0.74 *10*. δ: δ=0.16 *1*, assuming K=5/2.
		348.0 *5*	100# *9*	549.8	11/2⁺	[E2]		0.0617	α(K)=0.0415 *6*; α(L)=0.01531 *23*; α(M)=0.00378 *6* α(N)=0.000920 *14*; α(O)=0.0001487 *23*; α(P)=4.55×10^{-6} *7*
955.0	17/2⁺	147.7 *5*	75 *5*	807.1	13/2⁺	E2		1.010 *19*	α(K)=0.359 *6*; α(L)=0.491 *11*; α(M)=0.126 *3* α(N)=0.0304 *7*; α(O)=0.00468 *10*; α(P)=3.57×10^{-5} *6* Mult.: A_2= 0.15 *4*, A_4= 0.14 *6*. DCO= 1.02 *12*.
		190.6 *5*	34 *5*	764.4	15/2⁻	(E1)		0.0770 *12*	α(K)=0.0634 *10*; α(L)=0.01054 *17*; α(M)=0.00243 *4* α(N)=0.000589 *10*; α(O)=0.0001000 *16*; α(P)=5.95×10^{-6} *10* Mult.: A_2= 0.02 *7*, A_4= 0.03 *9*. DCO= 0.80 *10*.
		242.2 *5*	58 *6*	712.7	13/2⁺	E2		0.184	α(K)=0.1038 *16*; α(L)=0.0604 *10*; α(M)=0.01519 *25* α(N)=0.00369 *6*; α(O)=0.000581 *10*; α(P)=1.079×10^{-5} *16* Mult.: DCO= 0.94 *11*.
		339.7 *5*	100 *5*	615.2	17/2⁻	(E1)		0.0189	α(K)=0.01566 *23*; α(L)=0.00247 *4*; α(M)=0.000565 *9* α(N)=0.0001378 *20*; α(O)=2.38×10^{-5} *4*; α(P)=1.570×10^{-6} *23* Mult.: A_2= 0.38 *6*, A_4= 0.06 *8*. DCO= 0.97 *11*.
1076.1	21/2⁻	460.7 *5*	100	615.2	17/2⁻	E2		0.0291	α(K)=0.0213 *3*; α(L)=0.00596 *9*; α(M)=0.001447 *21* α(N)=0.000353 *5*; α(O)=5.83×10^{-5} *9*; α(P)=2.39×10^{-6} *4* Mult.: A_2= 0.22 *3*, A_4=− 0.07 *3*. DCO= 1.08 *12*.
1088.8+x	(21/2⁻)	227.7 *5*	100‡ *7*	860.9+x	(19/2⁻)	M1+E2	+0.20 *+15−11*	0.58 *3*	α(K)=0.48 *3*; α(L)=0.0802 *13*; α(M)=0.0185 *3* α(N)=0.00455 *8*; α(O)=0.000803 *13*; α(P)=5.9×10^{-5} *4* Mult.: A_2= 0.08 *9*, A_4= 0.03 *10*. DCO= 0.73 *9*. δ: From γ(θ) in 1991Dr06. δ= 0.19 *1*, assuming K=9/2.
		438.8 *5*	92‡ *7*	650.1+x	(17/2⁻)	E2		0.0330	α(K)=0.0238 *4*; α(L)=0.00697 *10*; α(M)=0.001696 *25*

$^{177}_{77}Ir_{100}$-8

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
								α(N)=0.000413 *6*; α(O)=6.80×10^{-5} *10*; α(P)=2.67×10^{-6} *4* I_γ: Other: 93 *4* in 2002OdZZ. Mult.: A_2= 0.17 *12*. DCO= 0.93 *10*.
1099.5	17/2$^+$	201.9 *5*	100[#] *8*	897.5	15/2$^+$	M1(+E2)	0.836 *13*	α(K)=0.690 *11*; α(L)=0.1123 *18*; α(M)=0.0259 *4* α(N)=0.00636 *10*; α(O)=0.001126 *18*; α(P)=8.50×10^{-5} *14* Mult.: A_2= 0.23 *17*. δ: δ=0.12 *1*, assuming K=5/2.
		386.9 *5*	91[#] *7*	712.7	13/2$^+$	E2	0.0460	α(K)=0.0321 *5*; α(L)=0.01059 *16*; α(M)=0.00260 *4* α(N)=0.000633 *10*; α(O)=0.0001030 *16*; α(P)=3.56×10^{-6} *5* Mult.: DCO= 0.98 *11*.
1188.8	19/2$^-$	424.4 *5*	100 *8*	764.4	15/2$^-$	[E2]	0.0360	α(K)=0.0258 *4*; α(L)=0.00777 *12*; α(M)=0.00190 *3* α(N)=0.000462 *7*; α(O)=7.58×10^{-5} *11*; α(P)=2.88×10^{-6} *5*
		574.1 *5*	86 *7*	615.2	17/2$^-$	M1(+E2)	0.0501 *8*	α(K)=0.0416 *6*; α(L)=0.00659 *10*; α(M)=0.001511 *22* α(N)=0.000371 *6*; α(O)=6.59×10^{-5} *10*; α(P)=5.02×10^{-6} *8*
1215.5	21/2$^+$	260.4 *5*	100	955.0	17/2$^+$	E2	0.1460 *23*	α(K)=0.0861 *13*; α(L)=0.0453 *8*; α(M)=0.01137 *19* α(N)=0.00276 *5*; α(O)=0.000437 *7*; α(P)=9.06×10^{-6} *14* Mult.: A_2= 0.17 *2*, A_4=− 0.06 *2*. DCO= 0.97 *11*.
1225.1	19/2$^-$	366.4 *5*	62 *10*	858.6	15/2$^-$	E2	0.0534	α(K)=0.0366 *6*; α(L)=0.01277 *19*; α(M)=0.00314 *5* α(N)=0.000765 *12*; α(O)=0.0001242 *19*; α(P)=4.03×10^{-6} *6* Mult.: DCO= 1.19 *13*.
		460.6 *5*	45 *5*	764.4	15/2$^-$	[E2]	0.0291	α(K)=0.0213 *3*; α(L)=0.00597 *9*; α(M)=0.001448 *21* α(N)=0.000353 *5*; α(O)=5.83×10^{-5} *9*; α(P)=2.40×10^{-6} *4*
		609.8 *5*	100 *10*	615.2	17/2$^-$	M1(+E2)	0.0429	α(K)=0.0356 *5*; α(L)=0.00562 *8*; α(M)=0.001290 *19* α(N)=0.000317 *5*; α(O)=5.63×10^{-5} *8*; α(P)=4.29×10^{-6} *6* Mult.: DCO= 0.61 *9*.
1314.6	19/2$^+$	215.3 *5*	90[#] *7*	1099.5	17/2$^+$	M1+E2	0.699 *11*	α(K)=0.577 *9*; α(L)=0.0938 *15*; α(M)=0.0216 *4* α(N)=0.00531 *9*; α(O)=0.000941 *15*; α(P)=7.10×10^{-5} *11* δ: δ=0.12 *1*, assuming K=5/2.
		417.1 *5*	100[#] *9*	897.5	15/2$^+$	[E2]	0.0376	α(K)=0.0268 *4*; α(L)=0.00823 *12*; α(M)=0.00201 *3* α(N)=0.000489 *8*; α(O)=8.02×10^{-5} *12*; α(P)=2.99×10^{-6} *5*
1330.6+x	(23/2$^-$)	241.7 *5*	99[‡] *4*	1088.8+x	(21/2$^-$)	M1+E2	0.508	α(K)=0.419 *7*; α(L)=0.0680 *11*; α(M)=0.01565 *24* α(N)=0.00385 *6*; α(O)=0.000682 *11*; α(P)=5.15×10^{-5} *8* I_γ: Other: 94 *4* in 2002OdZZ. Mult.: DCO= 0.54 *8*. δ: δ= 0.17 *1*, assuming K=9/2.
		469.7 *5*	100[‡] *8*	860.9+x	(19/2$^-$)	E2	0.0277	α(K)=0.0204 *3*; α(L)=0.00561 *8*; α(M)=0.001360 *20* α(N)=0.000332 *5*; α(O)=5.48×10^{-5} *8*; α(P)=2.29×10^{-6} *4* Mult.: A_2= 0.21 *10*, A_4=− 0.15 *11*. DCO= 0.91 *11*.
1549.2	21/2$^+$	234.5 *5*	80[#] *6*	1314.6	19/2$^+$	[M1+E2]	0.552 *9*	α(K)=0.456 *7*; α(L)=0.0740 *12*; α(M)=0.0170 *3*

$^{177}_{77}Ir_{100}$-9

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
								α(N)=0.00419 *7*; α(O)=0.000742 *12*; α(P)=5.60×10^{-5} *9* δ: δ=0.11 *1*, assuming K=5/2.
1549.2	21/2$^+$	449.7 *5*	100[#] *7*	1099.5	17/2$^+$	E2	0.0310	α(K)=0.0225 *4*; α(L)=0.00644 *10*; α(M)=0.001565 *23* α(N)=0.000382 *6*; α(O)=6.29×10^{-5} *9*; α(P)=2.53×10^{-6} *4* Mult.: DCO= 1.03 *12*.
1563.6	25/2$^+$	347.9 *5*	100	1215.5	21/2$^+$	E2	0.0617	α(K)=0.0415 *6*; α(L)=0.01533 *23*; α(M)=0.00379 *6* α(N)=0.000921 *14*; α(O)=0.0001488 *23*; α(P)=4.55×10^{-6} *7* Mult.: A_2= 0.18 *3*, A_4=− 0.03 *4*. DCO= 1.04 *12*.
1588.6+x	(25/2$^-$)	257.9 *5*	62[‡] *3*	1330.6+x	(23/2$^-$)	M1+E2	0.425 *7*	α(K)=0.351 *6*; α(L)=0.0568 *9*; α(M)=0.01308 *20* α(N)=0.00322 *5*; α(O)=0.000570 *9*; α(P)=4.30×10^{-5} *7* I_γ: Other: 76 *4* in 2002OdZZ. Mult.: DCO= 0.64 *9*. δ: δ= 0.20 *1*, assuming K=9/2.
		499.8 *5*	100[‡] *7*	1088.8+x	(21/2$^-$)	E2	0.0238	α(K)=0.0177 *3*; α(L)=0.00463 *7*; α(M)=0.001118 *16* α(N)=0.000273 *4*; α(O)=4.53×10^{-5} *7*; α(P)=2.00×10^{-6} *3* Mult.: DCO= 0.99 *11*.
1611.4	25/2$^-$	534.9 *5*	100	1076.1	21/2$^-$	E2	0.0202	α(K)=0.01522 *22*; α(L)=0.00377 *6*; α(M)=0.000907 *13* α(N)=0.000221 *4*; α(O)=3.70×10^{-5} *6*; α(P)=1.725×10^{-6} *25* Mult.: A_2= 0.24 *5*, A_4=− 0.06 *5*. DCO= 1.17 *13*.
1653.1	23/2$^-$	427.7 *5*	100 *18*	1225.1	19/2$^-$	E2	0.0353	α(K)=0.0253 *4*; α(L)=0.00757 *11*; α(M)=0.00185 *3* α(N)=0.000450 *7*; α(O)=7.39×10^{-5} *11*; α(P)=2.83×10^{-6} *4*
		464.8 *5*	56 *5*	1188.8	19/2$^-$	[E2]	0.0285	α(K)=0.0209 *3*; α(L)=0.00580 *9*; α(M)=0.001406 *21* α(N)=0.000343 *5*; α(O)=5.67×10^{-5} *9*; α(P)=2.35×10^{-6} *4*
		577.3 *5*	64 *7*	1076.1	21/2$^-$	M1(+E2)	0.0494	α(K)=0.0410 *6*; α(L)=0.00649 *10*; α(M)=0.001489 *22* α(N)=0.000366 *6*; α(O)=6.49×10^{-5} *10*; α(P)=4.95×10^{-6} *7*
1694.9	23/2$^-$	506.1 *5*	100	1188.8	19/2$^-$	E2	0.0231	α(K)=0.01722 *25*; α(L)=0.00446 *7*; α(M)=0.001075 *16* α(N)=0.000262 *4*; α(O)=4.36×10^{-5} *7*; α(P)=1.95×10^{-6} *3* Mult.: DCO= 1.45 *20*.
1790.5	23/2$^+$	241.1 *5*	61[#] *5*	1549.2	21/2$^+$	[M1+E2]	0.511	α(K)=0.422 *7*; α(L)=0.0685 *11*; α(M)=0.01576 *24* α(N)=0.00388 *6*; α(O)=0.000687 *11*; α(P)=5.19×10^{-5} *8* δ: δ=0.11 *1*, assuming K=5/2.
		476.1 *5*	100[#] *8*	1314.6	19/2$^+$	E2	0.0268	α(K)=0.0198 *3*; α(L)=0.00538 *8*; α(M)=0.001302 *19* α(N)=0.000318 *5*; α(O)=5.26×10^{-5} *8*; α(P)=2.23×10^{-6} *4* Mult.: DCO= 1.03 *12*.
1859.6+x	(27/2$^-$)	270.9 *5*	57[‡] *3*	1588.6+x	(25/2$^-$)	M1+E2	0.371	α(K)=0.307 *5*; α(L)=0.0496 *8*; α(M)=0.01142 *17* α(N)=0.00281 *5*; α(O)=0.000497 *8*; α(P)=3.76×10^{-5} *6* I_γ: Other: 68 *3* in 2002OdZZ. Mult.: A_2= 0.17 *22*. DCO= 0.71 *9*. δ: δ= 0.18 *1*, assuming K=9/2.
		529.0 *5*	100[‡] *5*	1330.6+x	(23/2$^-$)	E2	0.0207	α(K)=0.01560 *22*; α(L)=0.00390 *6*; α(M)=0.000938 *14*

$^{177}_{77}Ir_{100}$-10

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
								α(N)=0.000229 *4*; α(O)=3.82×10^{-5} *6*; α(P)=1.77×10^{-6} *3* Mult.: DCO= 1.18 *13*.
1876.2	(23/2$^+$)	661.2[e] *5*	100	1215.5	21/2$^+$	[M1]	0.0348	α(K)=0.0289 *4*; α(L)=0.00455 *7*; α(M)=0.001044 *15* α(N)=0.000257 *4*; α(O)=4.55×10^{-5} *7*; α(P)=3.48×10^{-6} *5*
1988.3	29/2$^+$	425.1 *5*	100	1563.6	25/2$^+$	E2	0.0358	α(K)=0.0257 *4*; α(L)=0.00773 *12*; α(M)=0.00188 *3* α(N)=0.000459 *7*; α(O)=7.54×10^{-5} *11*; α(P)=2.87×10^{-6} *4* Mult.: A_2= 0.35 *4*, A_4=− 0.20 *6*. DCO= 1.02 *12*.
2059.4	25/2$^+$	269.0 *5*	37[#] *3*	1790.5	23/2$^+$	[M1+E2]	0.378	α(K)=0.313 *5*; α(L)=0.0506 *8*; α(M)=0.01164 *18* α(N)=0.00286 *5*; α(O)=0.000507 *8*; α(P)=3.83×10^{-5} *6* δ: δ=0.12 *1*, assuming K=5/2.
		510.3 *5*	100[#] *8*	1549.2	21/2$^+$	E2	0.0226	α(K)=0.01690 *24*; α(L)=0.00434 *7*; α(M)=0.001048 *15* α(N)=0.000256 *4*; α(O)=4.25×10^{-5} *6*; α(P)=1.91×10^{-6} *3* Mult.: DCO= 0.90 *11*.
2145.4+x	(29/2$^-$)	285.8 *5*	45[‡] *3*	1859.6+x	(27/2$^-$)	M1+E2	0.321	α(K)=0.265 *4*; α(L)=0.0428 *7*; α(M)=0.00985 *15* α(N)=0.00242 *4*; α(O)=0.000429 *7*; α(P)=3.25×10^{-5} *5* I_γ: Other: 58 *3* in 2002OdZZ. Mult.: DCO= 0.72 *9*. δ: δ= 0.19 *1*, assuming K=9/2.
		556.9 *5*	100[‡] *10*	1588.6+x	(25/2$^-$)	E2	0.0183	α(K)=0.01394 *20*; α(L)=0.00335 *5*; α(M)=0.000804 *12* α(N)=0.000196 *3*; α(O)=3.29×10^{-5} *5*; α(P)=1.582×10^{-6} *23* Mult.: DCO= 1.04 *12*.
2149.7	27/2$^-$	497.0 *5*	≈67	1653.1	23/2$^-$	E2	0.0241	α(K)=0.0179 *3*; α(L)=0.00471 *7*; α(M)=0.001137 *17* α(N)=0.000277 *4*; α(O)=4.61×10^{-5} *7*; α(P)=2.02×10^{-6} *3* Mult.: DCO= 1.14 *13*.
		538.3 *5*	100 *11*	1611.4	25/2$^-$	M1(+E2)	0.0593	α(K)=0.0492 *7*; α(L)=0.00780 *11*; α(M)=0.00179 *3* α(N)=0.000440 *7*; α(O)=7.81×10^{-5} *11*; α(P)=5.94×10^{-6} *9* Mult.: DCO= 0.38 *7*.
2203.3	29/2$^-$	591.6 *5*	100	1611.4	25/2$^-$	E2	0.01592	α(K)=0.01223 *18*; α(L)=0.00282 *4*; α(M)=0.000674 *10* α(N)=0.0001646 *24*; α(O)=2.77×10^{-5} *4*; α(P)=1.390×10^{-6} *20* Mult.: DCO= 1.15 *13*.
2257.0	27/2$^-$	562.1 *5*	100	1694.9	23/2$^-$	E2	0.0179	α(K)=0.01366 *20*; α(L)=0.00326 *5*; α(M)=0.000782 *12* α(N)=0.000191 *3*; α(O)=3.20×10^{-5} *5*; α(P)=1.550×10^{-6} *22* Mult.: DCO= 1.15 *13*.
2300.5	27/2$^+$	423.7[e] *5*	40 *4*	1876.2	(23/2$^+$)	[E2]	0.0361	α(K)=0.0259 *4*; α(L)=0.00781 *12*; α(M)=0.00191 *3* α(N)=0.000464 *7*; α(O)=7.62×10^{-5} *11*; α(P)=2.89×10^{-6} *5*
		736.4 *5*	100 *8*	1563.6	25/2$^+$	M1(+E2)	0.0264	α(K)=0.0219 *3*; α(L)=0.00344 *5*; α(M)=0.000789 *12* α(N)=0.000194 *3*; α(O)=3.44×10^{-5} *5*; α(P)=2.63×10^{-6} *4* Mult.: DCO= 0.57 *8*.
2319.1+x	(25/2$^-$)	1230.5 *5*	100	1088.8+x	(21/2$^-$)	[E2]	0.00349	α(K)=0.00286 *4*; α(L)=0.000476 *7*; α(M)=0.0001100 *16* α(N)=2.69×10^{-5} *4*; α(O)=4.71×10^{-6} *7*; α(P)=3.24×10^{-7} *5*; α(IPF)=7.39×10^{-6} *12*

$^{177}_{77}Ir_{100}$-11

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult. [b]	α [c]	Comments
2390.2	(29/2$^+$)	826.6 *5*	100	1563.6	25/2$^+$	[E2]	0.00767	α(K)=0.00614 *9*; α(L)=0.001173 *17*; α(M)=0.000275 *4* α(N)=6.73×10^{-5} *10*; α(O)=1.156×10^{-5} *17*; α(P)=7.00×10^{-7} *10*
2444.1+x	(31/2$^-$)	298.8 *5*	60[‡] *5*	2145.4+x	(29/2$^-$)	M1+E2	0.284 *5*	α(K)=0.235 *4*; α(L)=0.0379 *6*; α(M)=0.00872 *13* α(N)=0.00214 *4*; α(O)=0.000380 *6*; α(P)=2.87×10^{-5} *5* I_γ: Other: 51.0 *23* in 2002OdZZ. Mult.: DCO= 0.74 *9*. δ: δ= 0.15 *1*, assuming K=9/2.
		584.4 *5*	100[‡] *4*	1859.6+x	(27/2$^-$)	E2	0.01637	α(K)=0.01256 *18*; α(L)=0.00292 *5*; α(M)=0.000698 *10* α(N)=0.0001705 *25*; α(O)=2.87×10^{-5} *4*; α(P)=1.427×10^{-6} *21* Mult.: DCO= 1.05 *12*.
2483.1	33/2$^+$	494.8 *5*	100	1988.3	29/2$^+$	E2	0.0244	α(K)=0.0181 *3*; α(L)=0.00477 *7*; α(M)=0.001153 *17* α(N)=0.000281 *4*; α(O)=4.67×10^{-5} *7*; α(P)=2.04×10^{-6} *3* Mult.: A_2= 0.34 *15*, A_4=− 0.18 *17*. DCO= 1.00 *12*.
2532.3+x	(27/2$^-$)	1201.7 *5*	100	1330.6+x	(23/2$^-$)	[E2]	0.00365	α(K)=0.00299 *5*; α(L)=0.000501 *7*; α(M)=0.0001157 *17* α(N)=2.84×10^{-5} *4*; α(O)=4.95×10^{-6} *7*; α(P)=3.39×10^{-7} *5*; α(IPF)=4.44×10^{-6} *8*
2549.6	29/2$^-$	938.1 *5*	100	1611.4	25/2$^-$	E2	0.00592	α(K)=0.00479 *7*; α(L)=0.000868 *13*; α(M)=0.000203 *3* α(N)=4.96×10^{-5} *7*; α(O)=8.57×10^{-6} *12*; α(P)=5.45×10^{-7} *8* Mult.: DCO= 1.24 *13*.
2623.1	(29/2$^+$)	563.9 *5*	100	2059.4	25/2$^+$	[E2]	0.0178	α(K)=0.01356 *20*; α(L)=0.00323 *5*; α(M)=0.000775 *11* α(N)=0.000189 *3*; α(O)=3.17×10^{-5} *5*; α(P)=1.540×10^{-6} *22*
2703.1	31/2$^-$	499.4 *5*	100 *25*	2203.3	29/2$^-$	[M1+E2]	0.0721 *11*	α(K)=0.0598 *9*; α(L)=0.00951 *14*; α(M)=0.00218 *4* α(N)=0.000537 *8*; α(O)=9.52×10^{-5} *14*; α(P)=7.24×10^{-6} *11*
		553.8 *5*	≈88	2149.7	27/2$^-$	E2	0.0186	α(K)=0.01411 *20*; α(L)=0.00341 *5*; α(M)=0.000818 *12* α(N)=0.000200 *3*; α(O)=3.34×10^{-5} *5*; α(P)=1.601×10^{-6} *23* Mult.: DCO= 0.92 *11*.
2754.6+x	(33/2$^-$)	310.5 *5*	40[‡] *5*	2444.1+x	(31/2$^-$)	M1+E2	0.256	α(K)=0.212 *4*; α(L)=0.0341 *5*; α(M)=0.00785 *12* α(N)=0.00193 *3*; α(O)=0.000342 *5*; α(P)=2.59×10^{-5} *4* I_γ: Other: 53 *3* in 2002OdZZ. Mult.: DCO= 0.70 *9*. δ: δ= 0.17 *1*, assuming K=9/2.
		609.2 *5*	100[‡]	2145.4+x	(29/2$^-$)	E2	0.01488	α(K)=0.01149 *17*; α(L)=0.00260 *4*; α(M)=0.000620 *9* α(N)=0.0001514 *22*; α(O)=2.55×10^{-5} *4*; α(P)=1.307×10^{-6} *19* Mult.: DCO= 0.96 *11*.
2757.4+x	(29/2$^-$)	438.6 *5*	100	2319.1+x	(25/2$^-$)	[E2]	0.0330	α(K)=0.0239 *4*; α(L)=0.00698 *11*; α(M)=0.001699 *25* α(N)=0.000414 *6*; α(O)=6.81×10^{-5} *10*; α(P)=2.67×10^{-6} *4*
		1168.6 *5*	35	1588.6+x	(25/2$^-$)			
2802.9	31/2$^+$	501.9 *5*	100 *8*	2300.5	27/2$^+$	[E2]	0.0235	α(K)=0.01754 *25*; α(L)=0.00457 *7*; α(M)=0.001103 *16* α(N)=0.000269 *4*; α(O)=4.47×10^{-5} *7*; α(P)=1.98×10^{-6} *3*
		814.9 *5*	70 *6*	1988.3	29/2$^+$	M1(+E2)	0.0204	α(K)=0.01694 *24*; α(L)=0.00265 *4*; α(M)=0.000608 *9* α(N)=0.0001493 *21*; α(O)=2.65×10^{-5} *4*; α(P)=2.03×10^{-6} *3* Mult.: DCO= 0.47 *8*.

$^{177}_{77}Ir_{100}$-12

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. [b]	δ †[d]	α [c]	Comments
2823.5	33/2$^-$	620.1 *5*	100	2203.3	29/2$^-$	E2		0.01429	α(K)=0.01106 *16*; α(L)=0.00247 *4*; α(M)=0.000589 *9* α(N)=0.0001440 *21*; α(O)=2.43×10^{-5} *4*; α(P)=1.259×10^{-6} *18* Mult.: DCO= 1.03 *12*.
2856.2	31/2$^-$	599.2 *5*	100	2257.0	27/2$^-$	E2		0.01546	α(K)=0.01190 *17*; α(L)=0.00272 *4*; α(M)=0.000650 *10* α(N)=0.0001587 *23*; α(O)=2.67×10^{-5} *4*; α(P)=1.353×10^{-6} *19* Mult.: DCO= 0.95 *11*.
2979.0	(29/2$^+$)	1415 *1*	100	1563.6	25/2$^+$	[E2]		0.00271	α(K)=0.00221 *4*; α(L)=0.000356 *5*; α(M)=8.18×10^{-5} *12* α(N)=2.01×10^{-5} *3*; α(O)=3.52×10^{-6} *5*; α(P)=2.50×10^{-7} *4*; α(IPF)=4.20×10^{-5} *7*
2995.9	33/2$^-$	446.2 *5*	16.7 *19*	2549.6	29/2$^-$	[E2]		0.0316	α(K)=0.0229 *4*; α(L)=0.00660 *10*; α(M)=0.001606 *24* α(N)=0.000391 *6*; α(O)=6.45×10^{-5} *10*; α(P)=2.57×10^{-6} *4*
		792.8 *5*	100 *19*	2203.3	29/2$^-$	E2		0.00837	α(K)=0.00667 *10*; α(L)=0.001300 *19*; α(M)=0.000306 *5* α(N)=7.48×10^{-5} *11*; α(O)=1.281×10^{-5} *18*; α(P)=7.60×10^{-7} *11*
3042.0	37/2$^+$	559.2 *5*	100	2483.1	33/2$^+$	E2		0.0181	α(K)=0.01381 *20*; α(L)=0.00331 *5*; α(M)=0.000795 *12* α(N)=0.000194 *3*; α(O)=3.25×10^{-5} *5*; α(P)=1.568×10^{-6} *23* Mult.: DCO= 1.01 *12*.
3075.7+x	(35/2$^-$)	321.0 *5*	36‡ *4*	2754.6+x	(33/2$^-$)	M1+E2	+0.19 *11*	0.229 *9*	α(K)=0.189 *8*; α(L)=0.0308 *7*; α(M)=0.00710 *15* α(N)=0.00174 *4*; α(O)=0.000308 *7*; α(P)=2.30×10^{-5} *10* I_γ: Other: 45.9 *21* in 2002OdZZ. Mult.: A_2= 0.03 *9*, A_4= 0.15 *11*. DCO= 0.69 *9*. δ: From γ(θ) in 1991Dr06. δ= 0.17 *1*, assuming K=9/2.
		631.6 *5*	100‡	2444.1+x	(31/2$^-$)	E2		0.01371	α(K)=0.01064 *15*; α(L)=0.00235 *4*; α(M)=0.000560 *8* α(N)=0.0001367 *20*; α(O)=2.31×10^{-5} *4*; α(P)=1.211×10^{-6} *17* Mult.: DCO= 1.09 *12*.
3193.3	(33/2$^+$)	570.3 *5*	100	2623.1	(29/2$^+$)	[E2]		0.01733	α(K)=0.01324 *19*; α(L)=0.00313 *5*; α(M)=0.000750 *11* α(N)=0.000183 *3*; α(O)=3.07×10^{-5} *5*; α(P)=1.503×10^{-6} *22*
3193.4	33/2$^+$	214 *1*		2979.0	(29/2$^+$)	[E2]		0.275 *6*	α(K)=0.143 *3*; α(L)=0.0999 *24*; α(M)=0.0253 *7* α(N)=0.00613 *15*; α(O)=0.000959 *23*; α(P)=1.46×10^{-5} *3*
		1205.2 *5*	100	1988.3	29/2$^+$	E2		0.00363	α(K)=0.00298 *5*; α(L)=0.000498 *7*; α(M)=0.0001150 *17* α(N)=2.82×10^{-5} *4*; α(O)=4.92×10^{-6} *7*; α(P)=3.37×10^{-7} *5*; α(IPF)=4.76×10^{-6} *9* Mult.: DCO= 0.99 *11*.
3305.6	(33/2$^+$)	1317.3 *5*	100	1988.3	29/2$^+$	[E2]		0.00308	α(K)=0.00252 *4*; α(L)=0.000412 *6*; α(M)=9.51×10^{-5} *14* α(N)=2.33×10^{-5} *4*; α(O)=4.08×10^{-6} *6*; α(P)=2.85×10^{-7} *4*; α(IPF)=1.98×10^{-5} *3*
3306.1	35/2$^-$	603.0 *5*	100	2703.1	31/2$^-$	E2		0.01523	α(K)=0.01174 *17*; α(L)=0.00267 *4*; α(M)=0.000638 *9* α(N)=0.0001558 *23*; α(O)=2.62×10^{-5} *4*; α(P)=1.335×10^{-6} *19* Mult.: DCO= 1.03 *12*.
3350.7	35/2$^+$	547.7 *5*	100 *12*	2802.9	31/2$^+$	[E2]		0.0191	α(K)=0.01445 *21*; α(L)=0.00352 *5*; α(M)=0.000845 *12* α(N)=0.000206 *3*; α(O)=3.45×10^{-5} *5*; α(P)=1.639×10^{-6} *24*
		868.0 *5*	40 *5*	2483.1	33/2$^+$	M1(+E2)		0.01735	α(K)=0.01443 *21*; α(L)=0.00225 *4*; α(M)=0.000517 *8*

$^{177}_{77}Ir_{100}$-13

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
								α(N)=0.0001269 *18*; α(O)=2.25×10^{-5} *4*; α(P)=1.728×10^{-6} *25* Mult.: DCO= 0.57 *8*.
3394.6	37/2$^-$	571.1 *5*	100	2823.5	33/2$^-$	E2	0.01728	α(K)=0.01320 *19*; α(L)=0.00312 *5*; α(M)=0.000747 *11* α(N)=0.000182 *3*; α(O)=3.06×10^{-5} *5*; α(P)=1.499×10^{-6} *22* Mult.: DCO= 1.02 *12*.
3404.8+x	(37/2$^-$)	328.9 *5*	44.6[#] *20*	3075.7+x	(35/2$^-$)	[M1+E2]	0.219 *4*	α(K)=0.181 *3*; α(L)=0.0292 *5*; α(M)=0.00671 *10* α(N)=0.001650 *24*; α(O)=0.000292 *5*; α(P)=2.21×10^{-5} *4* δ: δ=0.14 *1*, assuming K=9/2.
		650.1 *5*	100[#]	2754.6+x	(33/2$^-$)	E2	0.01285	α(K)=0.01002 *15*; α(L)=0.00217 *3*; α(M)=0.000516 *8* α(N)=0.0001262 *18*; α(O)=2.14×10^{-5} *3*; α(P)=1.140×10^{-6} *16* Mult.: DCO= 1.09 *12*.
3461.4	(35/2$^-$)	605.2 *5*	100	2856.2	31/2$^-$	[E2]	0.01511	α(K)=0.01165 *17*; α(L)=0.00265 *4*; α(M)=0.000631 *9* α(N)=0.0001542 *22*; α(O)=2.60×10^{-5} *4*; α(P)=1.325×10^{-6} *19*
3614.8	37/2$^-$	619.0 *5*	≈100	2995.9	33/2$^-$	[E2]	0.01435	α(K)=0.01110 *16*; α(L)=0.00248 *4*; α(M)=0.000592 *9* α(N)=0.0001447 *21*; α(O)=2.44×10^{-5} *4*; α(P)=1.263×10^{-6} *18*
		791.2 *5*	100 *33*	2823.5	33/2$^-$	E2	0.00840	α(K)=0.00670 *10*; α(L)=0.001306 *19*; α(M)=0.000307 *5* α(N)=7.51×10^{-5} *11*; α(O)=1.287×10^{-5} *19*; α(P)=7.63×10^{-7} *11*
3617.4	37/2$^+$	424.3 *5*	28 *3*	3193.3	(33/2$^+$)	[E2]	0.0360	α(K)=0.0258 *4*; α(L)=0.00778 *12*; α(M)=0.00190 *3* α(N)=0.000462 *7*; α(O)=7.58×10^{-5} *11*; α(P)=2.88×10^{-6} *5*
		1134.3 *5*	100 *9*	2483.1	33/2$^+$	E2	0.00407	α(K)=0.00334 *5*; α(L)=0.000567 *8*; α(M)=0.0001313 *19* α(N)=3.22×10^{-5} *5*; α(O)=5.60×10^{-6} *8*; α(P)=3.78×10^{-7} *6*; α(IPF)=6.89×10^{-7} *16* Mult.: DCO= 1.08 *12*.
3660.9	41/2$^+$	619.2 *5*	100	3042.0	37/2$^+$	E2	0.01434	α(K)=0.01110 *16*; α(L)=0.00248 *4*; α(M)=0.000592 *9* α(N)=0.0001445 *21*; α(O)=2.44×10^{-5} *4*; α(P)=1.263×10^{-6} *18* Mult.: DCO= 1.08 *12*.
3735.9+x	(39/2$^-$)	330.9 *5*	83[‡] *14*	3404.8+x	(37/2$^-$)	[M1+E2]	0.216 *4*	α(K)=0.178 *3*; α(L)=0.0287 *5*; α(M)=0.00660 *10* α(N)=0.001623 *24*; α(O)=0.000288 *5*; α(P)=2.18×10^{-5} *4* I$_\gamma$: Other: 53 *3* in 2002OdZZ. δ: δ= 0.09 *1*, assuming K=9/2.
		660.4 *5*	100[‡]	3075.7+x	(35/2$^-$)	E2	0.01241	α(K)=0.00969 *14*; α(L)=0.00208 *3*; α(M)=0.000494 *7* α(N)=0.0001209 *18*; α(O)=2.05×10^{-5} *3*; α(P)=1.104×10^{-6} *16* Mult.: DCO= 1.10 *12*.
3787.1	(37/2$^+$)	480.8[e] *5*	37 *7*	3305.6	(33/2$^+$)	[E2]	0.0262	α(K)=0.0193 *3*; α(L)=0.00522 *8*; α(M)=0.001262 *19* α(N)=0.000308 *5*; α(O)=5.10×10^{-5} *8*; α(P)=2.18×10^{-6} *3*
		1303.5 *5*	100 *9*	2483.1	33/2$^+$	[E2]	0.00314	α(K)=0.00257 *4*; α(L)=0.000422 *6*; α(M)=9.72×10^{-5} *14* α(N)=2.38×10^{-5} *4*; α(O)=4.17×10^{-6} *6*; α(P)=2.91×10^{-7} *4*; α(IPF)=1.74×10^{-5} *3*
3795.7?	(37/2$^+$)	603.2[e] *5*	100	3193.3	(33/2$^+$)	[E2]	0.01522	α(K)=0.01173 *17*; α(L)=0.00267 *4*; α(M)=0.000637 *9* α(N)=0.0001557 *23*; α(O)=2.62×10^{-5} *4*; α(P)=1.334×10^{-6} *19*
3941.4	(39/2$^-$)	635.3 *5*	100	3306.1	35/2$^-$	[E2]	0.01353	α(K)=0.01051 *15*; α(L)=0.00231 *4*; α(M)=0.000550 *8* α(N)=0.0001345 *19*; α(O)=2.27×10^{-5} *4*; α(P)=1.196×10^{-6} *17*

$^{177}_{77}Ir_{100}$-14

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
3951.0	39/2$^+$	600.5 *5*	100 *8*	3350.7	35/2$^+$	[E2]	0.01538	α(K)=0.01185 *17*; α(L)=0.00270 *4*; α(M)=0.000646 *10* α(N)=0.0001577 *23*; α(O)=2.65×10^{-5} *4*; α(P)=1.347×10^{-6} *19*
		908.6 *5*	46 *5*	3042.0	37/2$^+$	M1(+E2)	0.01545	α(K)=0.01286 *18*; α(L)=0.00201 *3*; α(M)=0.000459 *7* α(N)=0.0001129 *16*; α(O)=2.00×10^{-5} *3*; α(P)=1.538×10^{-6} *22* Mult.: DCO= 0.53 *8*.
3977.1	(39/2$^-$)	671 *1*	100	3306.1	35/2$^-$	[E2]	0.01198	α(K)=0.00938 *14*; α(L)=0.00200 *3*; α(M)=0.000473 *7* α(N)=0.0001157 *17*; α(O)=1.96×10^{-5} *3*; α(P)=1.068×10^{-6} *16*
3988.7	41/2$^-$	594.1 *5*	100	3394.6	37/2$^-$	[E2]	0.01576	α(K)=0.01212 *18*; α(L)=0.00279 *4*; α(M)=0.000666 *10* α(N)=0.0001626 *24*; α(O)=2.74×10^{-5} *4*; α(P)=1.378×10^{-6} *20*
3998.5+x	(39/2$^-$)	922.8 *5*	100	3075.7+x	(35/2$^-$)	[E2]	0.00612	α(K)=0.00495 *7*; α(L)=0.000902 *13*; α(M)=0.000211 *3* α(N)=5.16×10^{-5} *8*; α(O)=8.90×10^{-6} *13*; α(P)=5.63×10^{-7} *8*
4068.9+x	(41/2$^-$)	332.9 *5*	56[#] *3*	3735.9+x	(39/2$^-$)	[M1+E2]	0.212	α(K)=0.175 *3*; α(L)=0.0282 *5*; α(M)=0.00649 *10* α(N)=0.001596 *24*; α(O)=0.000283 *5*; α(P)=2.14×10^{-5} *4* δ: δ=0.11 *1*, assuming K=9/2.
		664.2 *5*	100[#]	3404.8+x	(37/2$^-$)	E2	0.01225	α(K)=0.00958 *14*; α(L)=0.00205 *3*; α(M)=0.000487 *7* α(N)=0.0001190 *17*; α(O)=2.02×10^{-5} *3*; α(P)=1.091×10^{-6} *16* Mult.: DCO= 0.91 *11*.
4102.8	41/2$^+$	485.5 *5*	100 *8*	3617.4	37/2$^+$	E2	0.0255	α(K)=0.0189 *3*; α(L)=0.00506 *8*; α(M)=0.001224 *18* α(N)=0.000299 *5*; α(O)=4.95×10^{-5} *8*; α(P)=2.13×10^{-6} *3* Mult.: DCO= 1.02 *12*.
		1060.9 *5*	35 *4*	3042.0	37/2$^+$	E2	0.00464	α(K)=0.00379 *6*; α(L)=0.000657 *10*; α(M)=0.0001525 *22* α(N)=3.73×10^{-5} *6*; α(O)=6.49×10^{-6} *10*; α(P)=4.30×10^{-7} *6* Mult.: DCO= 1.14 *13*.
4325.3	(41/2$^+$)	537.7 *5*	100 *16*	3787.1	(37/2$^+$)	[E2]	0.0199	α(K)=0.01505 *22*; α(L)=0.00372 *6*; α(M)=0.000893 *13* α(N)=0.000218 *4*; α(O)=3.64×10^{-5} *6*; α(P)=1.706×10^{-6} *25*
		1283.4 *5*	65 *10*	3042.0	37/2$^+$	[E2]	0.00323	α(K)=0.00265 *4*; α(L)=0.000436 *7*; α(M)=0.0001005 *14* α(N)=2.46×10^{-5} *4*; α(O)=4.31×10^{-6} *6*; α(P)=3.00×10^{-7} *5*; α(IPF)=1.426×10^{-5} *22*
4333.3	41/2$^-$	718.5 *5*	100 *17*	3614.8	37/2$^-$	E2	0.01032	α(K)=0.00814 *12*; α(L)=0.001668 *24*; α(M)=0.000394 *6* α(N)=9.64×10^{-5} *14*; α(O)=1.641×10^{-5} *24*; α(P)=9.28×10^{-7} *13* Mult.: DCO= 1.04 *12*.
		938.8[e] *5*	17 *4*	3394.6	37/2$^-$	[E2]	0.00591	α(K)=0.00479 *7*; α(L)=0.000867 *13*; α(M)=0.000202 *3* α(N)=4.95×10^{-5} *7*; α(O)=8.55×10^{-6} *12*; α(P)=5.44×10^{-7} *8*
4335.3	45/2$^+$	674.4 *5*	100	3660.9	41/2$^+$	E2	0.01185	α(K)=0.00928 *13*; α(L)=0.00197 *3*; α(M)=0.000467 *7* α(N)=0.0001141 *17*; α(O)=1.94×10^{-5} *3*; α(P)=1.057×10^{-6} *15* Mult.: DCO= 1.12 *12*.
4394.3+x	(43/2$^-$)	325.2 *5*	68 *5*	4068.9+x	(41/2$^-$)	[M1+E2]	0.226	α(K)=0.187 *3*; α(L)=0.0301 *5*; α(M)=0.00692 *11* α(N)=0.001701 *25*; α(O)=0.000302 *5*; α(P)=2.28×10^{-5} *4*
		658.6 *5*	100 *9*	3735.9+x	(39/2$^-$)	[E2]	0.01249	α(K)=0.00975 *14*; α(L)=0.00210 *3*; α(M)=0.000498 *7* α(N)=0.0001218 *18*; α(O)=2.06×10^{-5} *3*; α(P)=1.110×10^{-6} *16*
4408.4+x	(43/2$^-$)	340 *1*		4068.9+x	(41/2$^-$)	[M1+E2]	0.200 *4*	α(K)=0.166 *3*; α(L)=0.0267 *5*; α(M)=0.00613 *10* α(N)=0.001507 *25*; α(O)=0.000267 *5*; α(P)=2.02×10^{-5} *4*

$^{177}_{77}Ir_{100}$-15

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	α[c]	Comments
4408.4+x	(43/2⁻)	672 *1*		3735.9+x	(39/2⁻)	[E2]	0.01194	α(K)=0.00935 *14*; α(L)=0.00199 *3*; α(M)=0.000472 *7* α(N)=0.0001153 *17*; α(O)=1.95×10^{-5} *3*; α(P)=1.065×10^{-6} *16*
4600.9	(43/2⁺)	649.7 *5*	100 *9*	3951.0	39/2⁺	[E2]	0.01287	α(K)=0.01003 *15*; α(L)=0.00218 *3*; α(M)=0.000517 *8* α(N)=0.0001264 *18*; α(O)=2.14×10^{-5} *3*; α(P)=1.142×10^{-6} *16*
		940.2 *5*	36 *4*	3660.9	41/2⁺	[M1+E2]	0.01417	α(K)=0.01179 *17*; α(L)=0.00184 *3*; α(M)=0.000421 *6* α(N)=0.0001034 *15*; α(O)=1.84×10^{-5} *3*; α(P)=1.410×10^{-6} *20*
4651.8	45/2⁻	663.1 *5*	100	3988.7	41/2⁻	E2	0.01230	α(K)=0.00961 *14*; α(L)=0.00206 *3*; α(M)=0.000489 *7* α(N)=0.0001195 *17*; α(O)=2.03×10^{-5} *3*; α(P)=1.094×10^{-6} *16* Mult.: DCO= 0.96 *11*.
4652.5	45/2⁺	549.9 *5*	100 *9*	4102.8	41/2⁺	E2	0.0189	α(K)=0.01433 *21*; α(L)=0.00348 *5*; α(M)=0.000835 *12* α(N)=0.000204 *3*; α(O)=3.41×10^{-5} *5*; α(P)=1.625×10^{-6} *23* Mult.: DCO= 1.02 *12*.
		991.4 *5*	54 *5*	3660.9	41/2⁺	E2	0.00530	α(K)=0.00431 *6*; α(L)=0.000765 *11*; α(M)=0.000178 *3* α(N)=4.36×10^{-5} *7*; α(O)=7.55×10^{-6} *11*; α(P)=4.90×10^{-7} *7* Mult.: DCO= 1.05 *12*.
4739.9+x	(45/2⁻)	671 *1*	100	4068.9+x	(41/2⁻)	E2	0.01198	α(K)=0.00938 *14*; α(L)=0.00200 *3*; α(M)=0.000473 *7* α(N)=0.0001157 *17*; α(O)=1.96×10^{-5} *3*; α(P)=1.068×10^{-6} *16* Mult.: DCO= 1.03 *12*.
4911.0	(45/2⁺)	585.2 *5*	100 *10*	4325.3	(41/2⁺)	[E2]	0.01632	α(K)=0.01252 *18*; α(L)=0.00291 *5*; α(M)=0.000695 *10* α(N)=0.0001698 *25*; α(O)=2.85×10^{-5} *4*; α(P)=1.423×10^{-6} *20*
		1250.5 *5*	28 *5*	3660.9	41/2⁺	[E2]	0.00339	α(K)=0.00278 *4*; α(L)=0.000460 *7*; α(M)=0.0001062 *15* α(N)=2.60×10^{-5} *4*; α(O)=4.55×10^{-6} *7*; α(P)=3.15×10^{-7} *5*; α(IPF)=9.79×10^{-6} *15*
5058.4	49/2⁺	723.0 *5*	100	4335.3	45/2⁺	E2	0.01018	α(K)=0.00804 *12*; α(L)=0.001641 *24*; α(M)=0.000388 *6* α(N)=9.48×10^{-5} *14*; α(O)=1.615×10^{-5} *23*; α(P)=9.16×10^{-7} *13* Mult.: DCO= 1.06 *12*.
5114.6+x?	(47/2⁻)	706[e] *1*	100	4408.4+x	(43/2⁻)	[E2]	0.01072	α(K)=0.00844 *12*; α(L)=0.00175 *3*; α(M)=0.000413 *6* α(N)=0.0001009 *15*; α(O)=1.718×10^{-5} *25*; α(P)=9.62×10^{-7} *14*
5120.3	(45/2⁻)	787 *1*	100	4333.3	41/2⁻	[E2]	0.00850	α(K)=0.00677 *10*; α(L)=0.001324 *19*; α(M)=0.000311 *5* α(N)=7.62×10^{-5} *11*; α(O)=1.304×10^{-5} *19*; α(P)=7.72×10^{-7} *11*
5260.9?	(47/2⁺)	660.0[e] *5*	100 *10*	4600.9	(43/2⁺)	[E2]	0.01243	α(K)=0.00970 *14*; α(L)=0.00209 *3*; α(M)=0.000495 *7* α(N)=0.0001211 *18*; α(O)=2.05×10^{-5} *3*; α(P)=1.105×10^{-6} *16*
		925.6 *5*	17 *4*	4335.3	45/2⁺	[M1+E2]	0.01475	α(K)=0.01227 *18*; α(L)=0.00191 *3*; α(M)=0.000438 *7* α(N)=0.0001077 *16*; α(O)=1.91×10^{-5} *3*; α(P)=1.467×10^{-6} *21*
5269.2	49/2⁺	616.8 *5*	100 *9*	4652.5	45/2⁺	E2	0.01447	α(K)=0.01119 *16*; α(L)=0.00251 *4*; α(M)=0.000598 *9* α(N)=0.0001461 *21*; α(O)=2.46×10^{-5} *4*; α(P)=1.273×10^{-6} *18* Mult.: DCO= 1.13 *13*.
		933.9 *5*	30 *4*	4335.3	45/2⁺	E2	0.00598	α(K)=0.00484 *7*; α(L)=0.000877 *13*; α(M)=0.000205 *3* α(N)=5.01×10^{-5} *7*; α(O)=8.66×10^{-6} *13*; α(P)=5.50×10^{-7} *8* Mult.: DCO= 1.13 *13*.
5386.8	49/2⁻	735.0 *5*	100	4651.8	45/2⁻	E2	0.00983	α(K)=0.00778 *11*; α(L)=0.001573 *23*; α(M)=0.000371 *6* α(N)=9.08×10^{-5} *13*; α(O)=1.549×10^{-5} *22*; α(P)=8.86×10^{-7} *13* Mult.: DCO= 1.04 *12*.

$^{177}_{77}Ir_{100}$-16

Adopted Levels, Gammas (continued)

γ(^{177}Ir) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.[b]	α[c]	Comments
5436.0+x?	(49/2$^-$)	696[e] *1*	100	4739.9+x	(45/2$^-$)	[E2]	0.01106	α(K)=0.00869 *13*; α(L)=0.00181 *3*; α(M)=0.000429 *7* α(N)=0.0001049 *16*; α(O)=1.78×10^{-5} *3*; α(P)=9.90×10^{-7} *15*
5543.2	(49/2$^+$)	632.2 *5*	100	4911.0	(45/2$^+$)	[E2]	0.01368	α(K)=0.01062 *15*; α(L)=0.00234 *4*; α(M)=0.000558 *8* α(N)=0.0001364 *20*; α(O)=2.30×10^{-5} *4*; α(P)=1.209×10^{-6} *17*
5811.7	53/2$^+$	753.3 *5*	100	5058.4	49/2$^+$	E2	0.00932	α(K)=0.00740 *11*; α(L)=0.001477 *21*; α(M)=0.000348 *5* α(N)=8.52×10^{-5} *12*; α(O)=1.455×10^{-5} *21*; α(P)=8.43×10^{-7} *12* Mult.: DCO= 1.07 *12*.
5846.4		788 *1*	100	5058.4	49/2$^+$			
5967.1	53/2$^+$	698.0 *5*	100 *8*	5269.2	49/2$^+$	E2	0.01099	α(K)=0.00864 *13*; α(L)=0.00180 *3*; α(M)=0.000426 *6* α(N)=0.0001041 *15*; α(O)=1.769×10^{-5} *25*; α(P)=9.85×10^{-7} *14* Mult.: DCO= 0.97 *11*.
		908.6 *5*	53 *5*	5058.4	49/2$^+$	[E2]	0.00632	α(K)=0.00510 *8*; α(L)=0.000936 *14*; α(M)=0.000219 *3* α(N)=5.35×10^{-5} *8*; α(O)=9.23×10^{-6} *13*; α(P)=5.80×10^{-7} *9*
6173.1	(53/2$^-$)	786.3 *5*	100	5386.8	49/2$^-$	[E2]	0.00851	α(K)=0.00679 *10*; α(L)=0.001327 *19*; α(M)=0.000312 *5* α(N)=7.63×10^{-5} *11*; α(O)=1.307×10^{-5} *19*; α(P)=7.73×10^{-7} *11*
6577.0	57/2$^+$	765.3 *5*	100	5811.7	53/2$^+$	E2	0.00902	α(K)=0.00716 *10*; α(L)=0.001420 *20*; α(M)=0.000334 *5* α(N)=8.18×10^{-5} *12*; α(O)=1.398×10^{-5} *20*; α(P)=8.16×10^{-7} *12* Mult.: DCO= 0.96 *11*.
6680.4		834 *1*	100	5846.4				
6761.4	57/2$^+$	794.3 *5*	100 *9*	5967.1	53/2$^+$	E2	0.00834	α(K)=0.00665 *10*; α(L)=0.001294 *19*; α(M)=0.000304 *5* α(N)=7.44×10^{-5} *11*; α(O)=1.275×10^{-5} *18*; α(P)=7.58×10^{-7} *11* Mult.: DCO= 1.04 *12*.
		949.4[e] *5*	6 *3*	5811.7	53/2$^+$	[E2]	0.00578	α(K)=0.00468 *7*; α(L)=0.000845 *12*; α(M)=0.000197 *3* α(N)=4.82×10^{-5} *7*; α(O)=8.34×10^{-6} *12*; α(P)=5.33×10^{-7} *8*
7024.1?	(57/2$^-$)	850.0[e] *5*	100	6173.1	(53/2$^-$)	[E2]	0.00724	α(K)=0.00581 *9*; α(L)=0.001096 *16*; α(M)=0.000257 *4* α(N)=6.29×10^{-5} *9*; α(O)=1.081×10^{-5} *16*; α(P)=6.62×10^{-7} *10*
7373.9	61/2$^+$	796.9 *5*	100	6577.0	57/2$^+$	E2	0.00828	α(K)=0.00661 *10*; α(L)=0.001283 *18*; α(M)=0.000302 *5* α(N)=7.38×10^{-5} *11*; α(O)=1.265×10^{-5} *18*; α(P)=7.53×10^{-7} *11* Mult.: DCO= 0.93 *11*.
7627.8?	(61/2$^+$)	866.2[e] *5*	100	6761.4	57/2$^+$	[E2]	0.00696	α(K)=0.00560 *8*; α(L)=0.001048 *15*; α(M)=0.000245 *4* α(N)=6.00×10^{-5} *9*; α(O)=1.033×10^{-5} *15*; α(P)=6.38×10^{-7} *9*
8222.0	65/2$^+$	848.1 *5*	100	7373.9	61/2$^+$	E2	0.00727	α(K)=0.00584 *9*; α(L)=0.001102 *16*; α(M)=0.000258 *4* α(N)=6.32×10^{-5} *9*; α(O)=1.087×10^{-5} *16*; α(P)=6.65×10^{-7} *10* Mult.: DCO= 1.13 *13*.
9126.2	(69/2$^+$)	904.2 *5*	100	8222.0	65/2$^+$	[E2]	0.00638	α(K)=0.00515 *8*; α(L)=0.000946 *14*; α(M)=0.000221 *4* α(N)=5.41×10^{-5} *8*; α(O)=9.34×10^{-6} *14*; α(P)=5.86×10^{-7} *9*

† From (HI,xnγ), unless otherwise stated.
‡ From precisely determined branching ratios in 1991Dr06, using γγ coin data by gating above the level of interest.
# From precisely determined branching ratios in 2002OdZZ.

$^{177}_{77}Ir_{100}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{177}Ir)$ (continued)

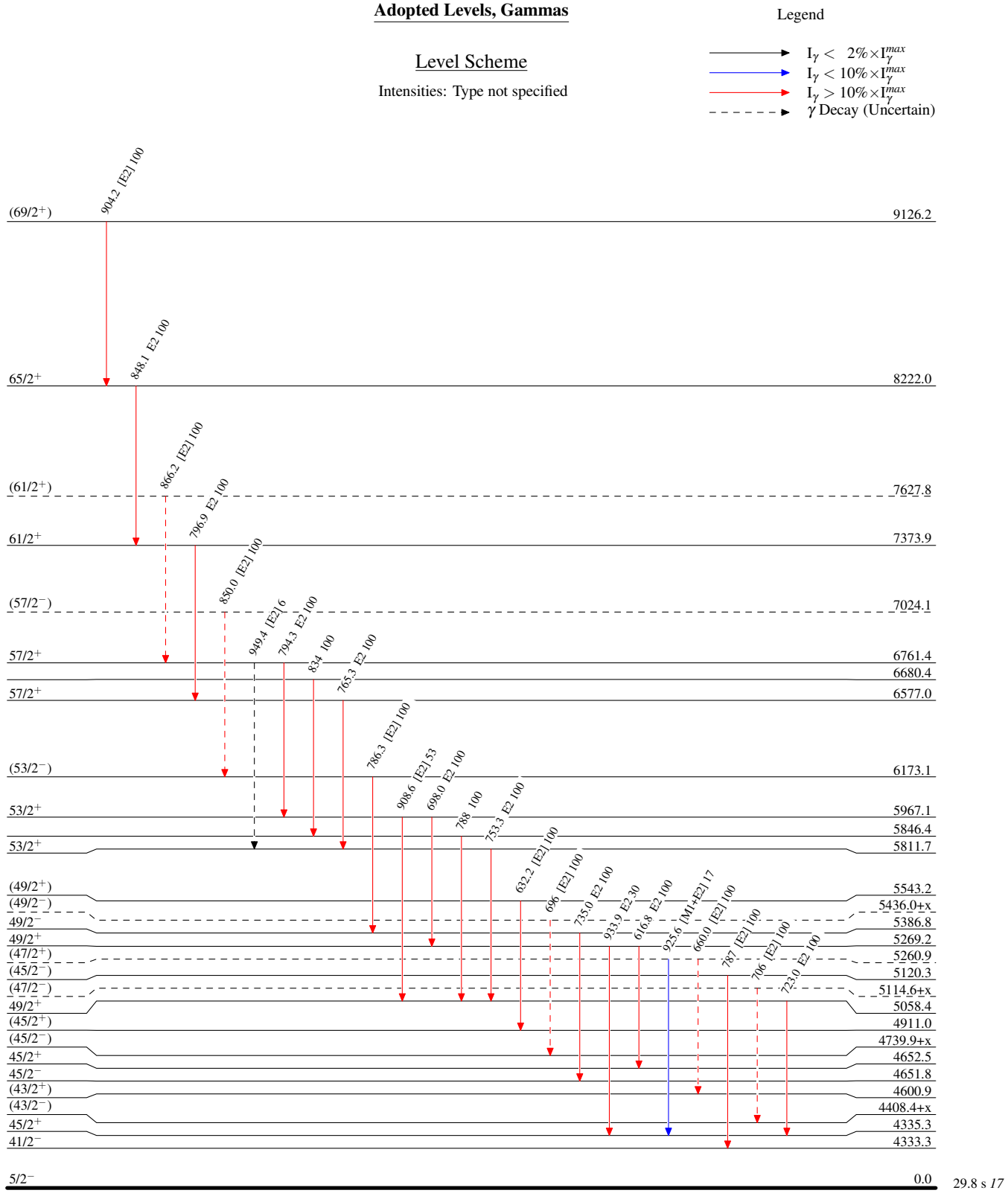
@ From ^{181}Au α decay.
& From ^{177}Pt ε decay.
[a] Not observed directly, but required by the coincidence relationships.
[b] From (HI,xnγ), determined on the basis on the measured angular distributions (1991Dr06) and DCO ratios (2002OdZZ), and the apparent band structures with both cascade (ΔJ=1) and crossover (ΔJ=2) transitions. The quoted DCO values are obtained by gating on stretched quadrupole transition, unless otherwise stated. A value of approximately unity is expected for a ΔJ=2 transition and about 0.4-0.7 for a ΔJ=1 transition.
[c] Additional information 2.
[d] If No value given it was assumed δ=0.00 for E2/M1, δ=1.00 for E3/M2 and δ=0.10 for the other multipolarities.
[e] Placement of transition in the level scheme is uncertain.

$^{177}_{77}Ir_{100}$-18

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

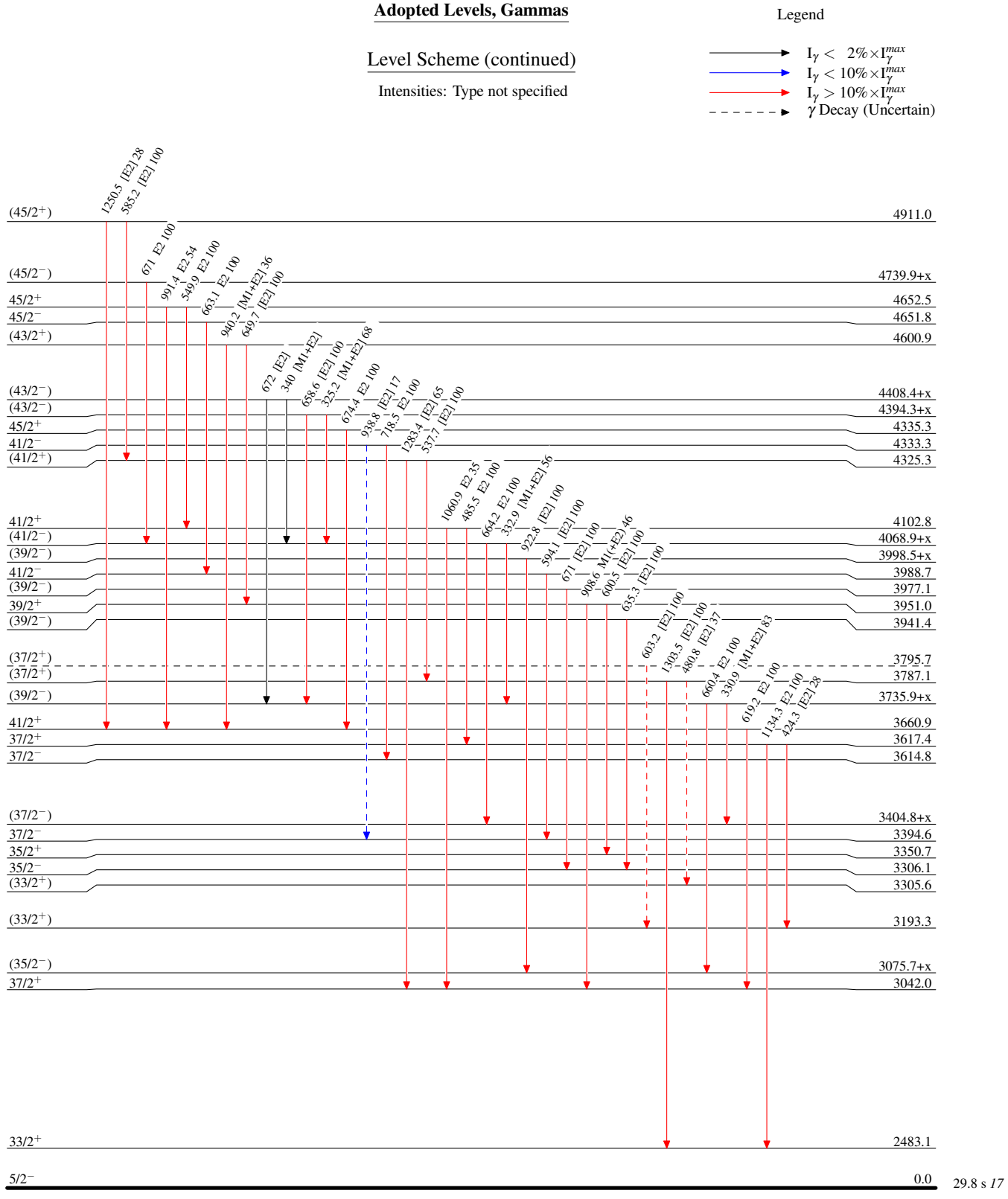


$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

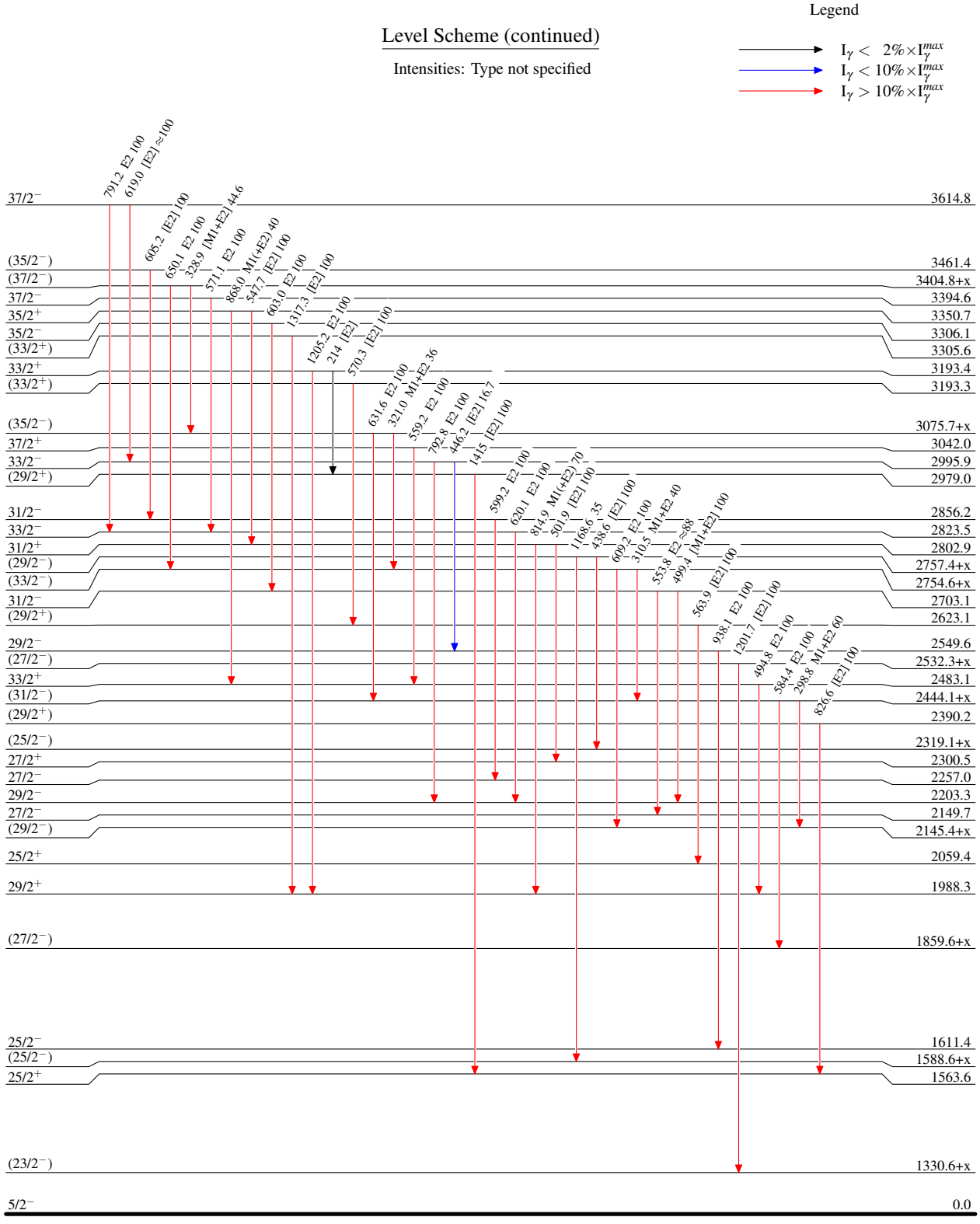


$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

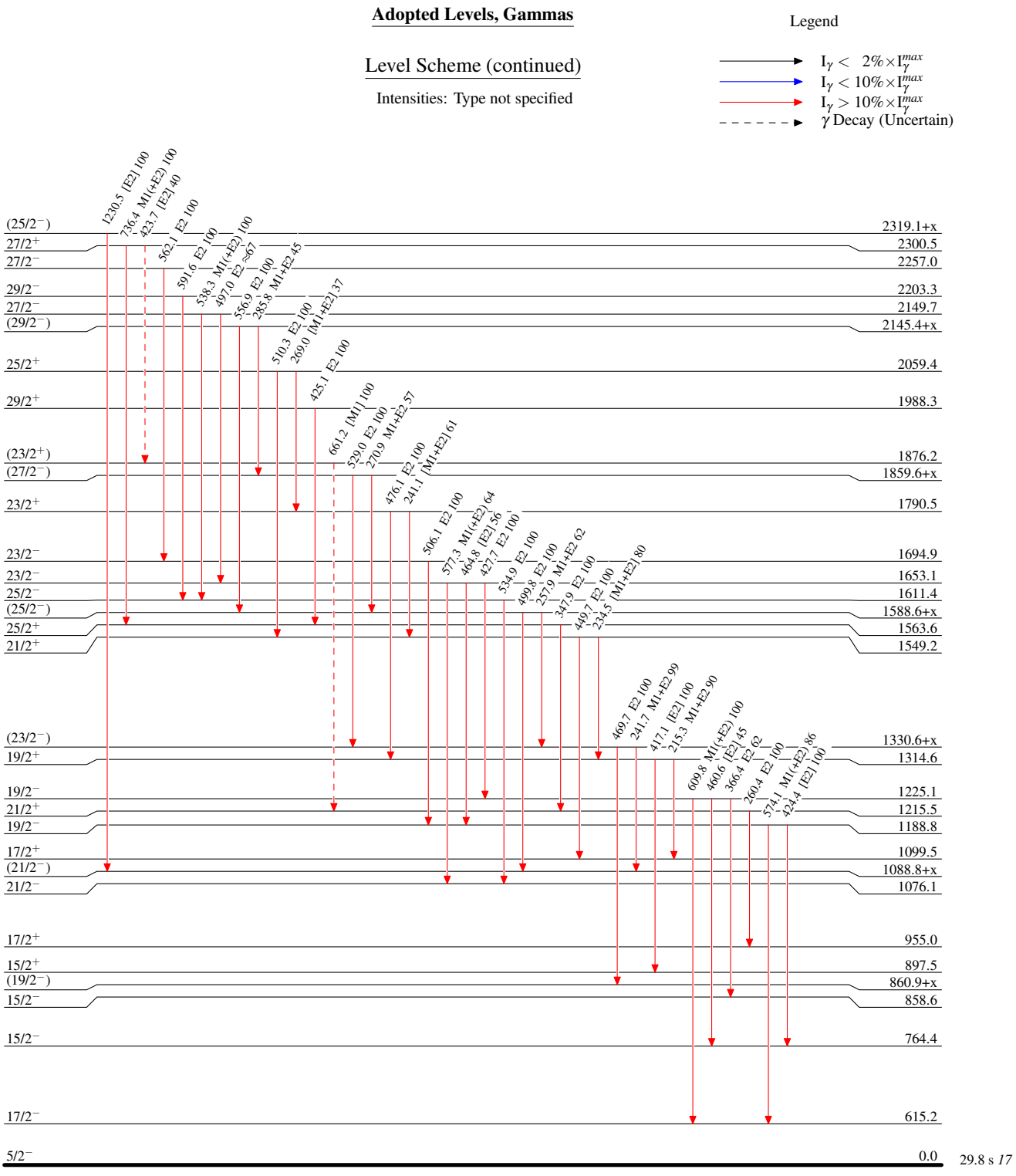


$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

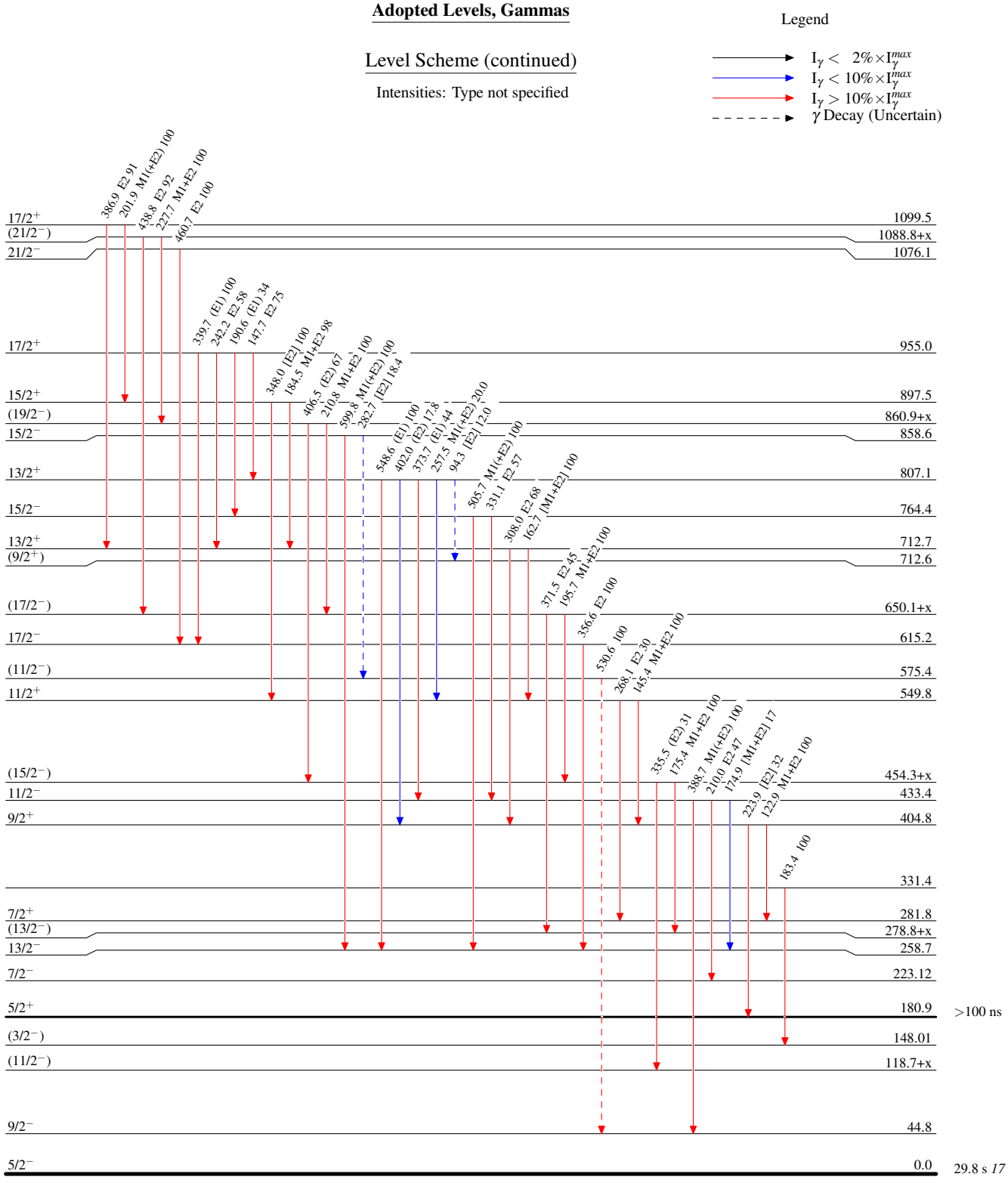


$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

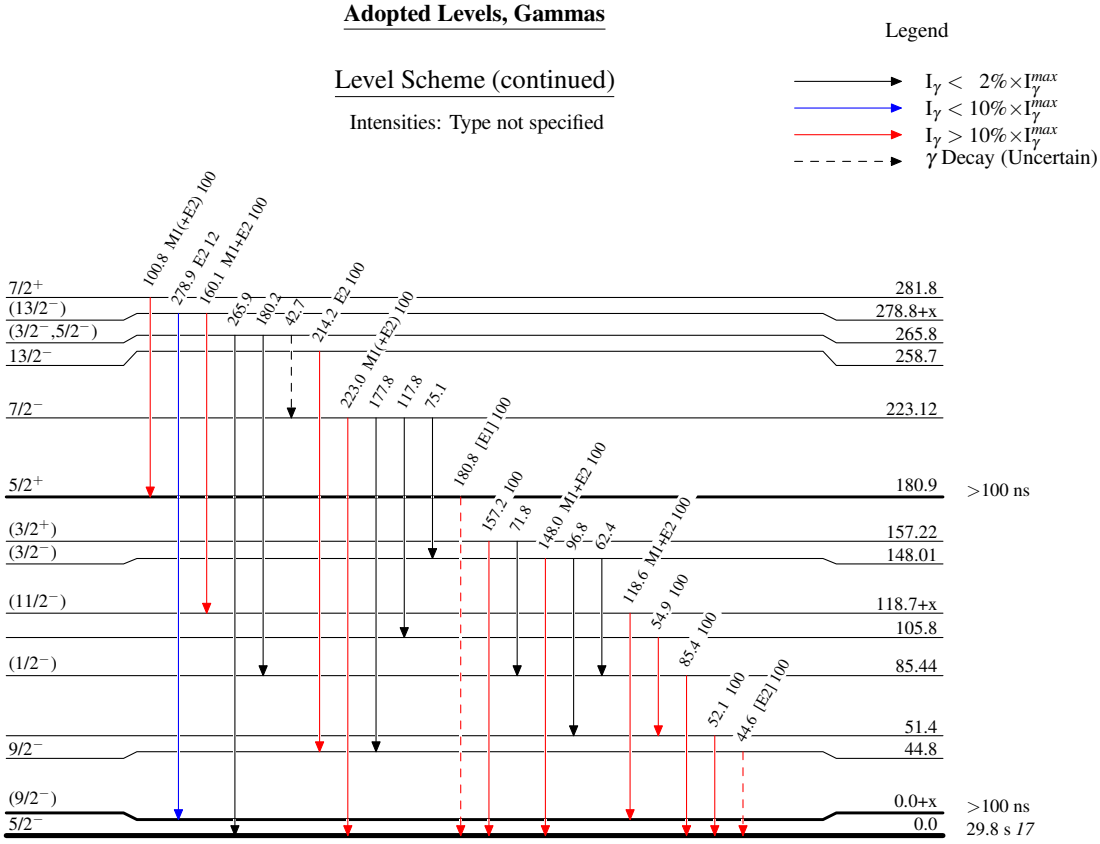


$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas

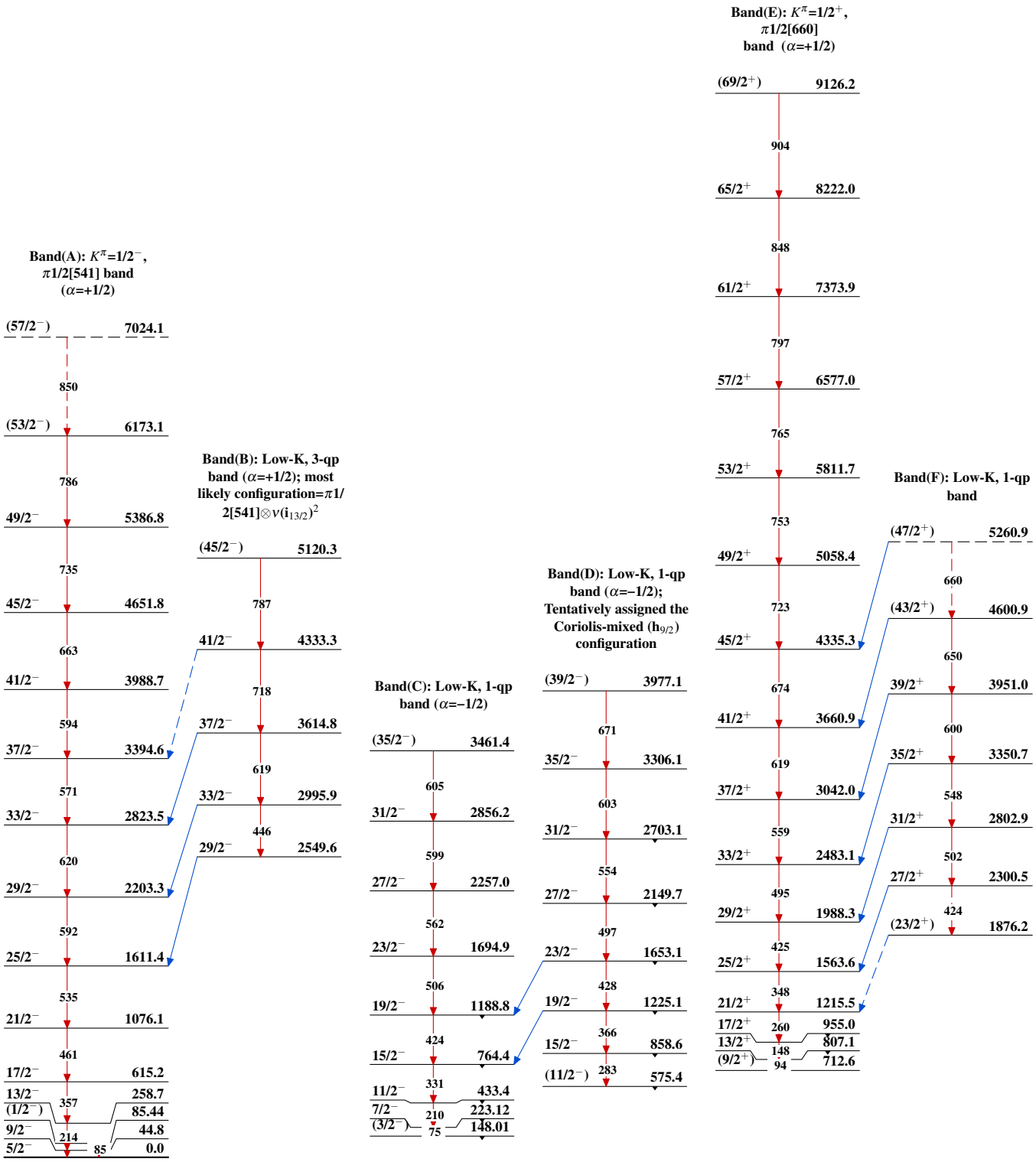
Level Scheme (continued)

Intensities: Type not specified



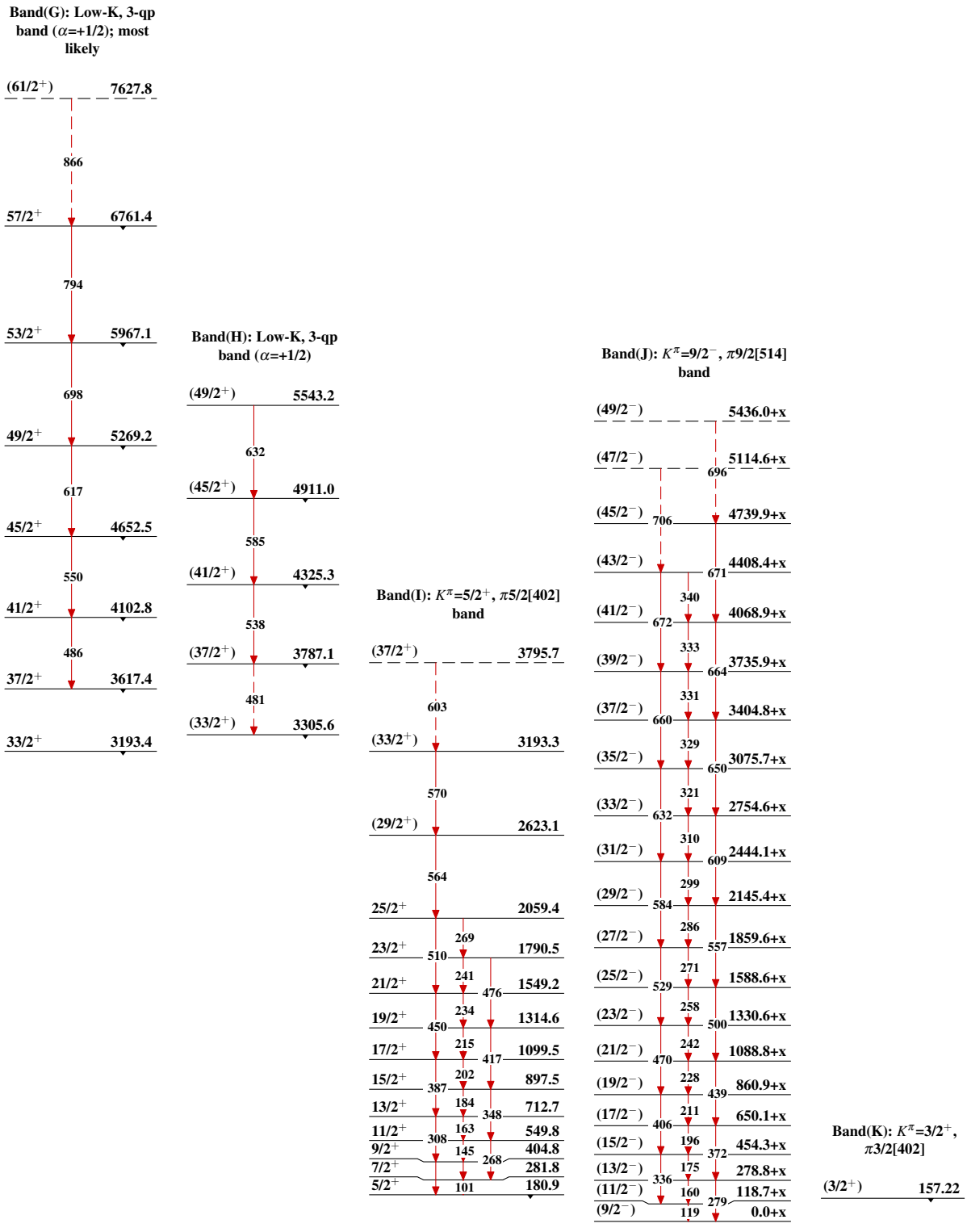
$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas



$^{177}_{77}Ir_{100}$

Adopted Levels, Gammas (continued)



$^{177}_{77}Ir_{100}$