^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 110, 999 (2009)	1-Nov-2008

Other: 1978Ya06: ^{185}Re(α,2nγ), E(α)=28 MeV.

1975An08: ^{185}Re(α,2nγ), 96.7% enriched ^{185}Re; E(α)=23-42.8 MeV; Ge(Li) detector; Measured: Eγ, Iγ, γ-ray spectra were measured at six different energies from 23.0 to 42.8 MeV, Identification of gammas to (α,2nγ) was based on the γ excitation functions; γ-angular distributions were determined from Iγ measurements at five angles between 25° and 90° with respect to the beam axis.

1975Ke06: ^{185}Re(α,2nγ), E(α)=23, 27 MeV; ^{187}Re(α,4nγ), E(α)=48 MeV; 90% and 98% enriched ^{185}Re and ^{187}Re targets, respectively; Ge(Li) detectors; Measured: Eγ, Iγ, γ-angular distributions were determined from Iγ measurements at six angles between 90° and 160° with respect to the beam axis in (α,2nγ) reaction, and at angles of 90°, 125°, and 150° in (α,4nγ) reaction.

^{187}Ir Levels

E(level)[†]	J$^\pi$[c]	E(level)[†]	J$^\pi$[c]	E(level)[†]	J$^\pi$[c]	E(level)[†]	J$^\pi$[c]
0.0[‡]	3/2$^+$	688.4[#] 3	(9/2$^+$)	1159.4? 8	(15/2$^-$)	1847.8[&] 7	(23/2$^-$)
106.5[#] 3	1/2$^+$	716.9[‡] 4	(11/2$^+$)	1192.1 7		1900.7[‡] 6	(19/2$^+$)
109.98[‡] 25	5/2$^+$	731.3 6	5/2$^-$	1193.6[#] 4	(13/2$^+$)	1993.0[a] 8	(21/2$^-$)
186.2[&] 4	9/2$^-$	738.6 7	(7/2$^-$)	1247.0? 4		2034.2 7	(19/2$^-$)
189.6[#] 4	3/2$^+$	764.3[a] 7	(13/2$^-$)	1264.3[‡] 5	(15/2$^+$)	2131.0[‡] 7	(21/2$^+$)
201.6[@] 3	5/2$^-$	818.9 7	(9/2$^-$)	1317.4[&] 6	(19/2$^-$)	2225.5? 6	
285.1[‡] 3	7/2$^+$	842.5 6	(9/2$^-$)	1321.9 7	(17/2$^-$)	2233.6[a] 8	(23/2$^-$)
311.76[#] 24	5/2$^+$	897.6[#] 4	(11/2$^+$)	1352.9[a] 7	(17/2$^-$)	2260.4 8	(23/2$^-$)
350.4[&] 5	(13/2$^-$)	901.8[&] 6	15/2$^-$	1442.8[#] 5	(15/2$^+$)	2401.4[&] 9	(29/2$^-$)
388.5[@] 4	1/2$^-$	903.2[‡] 4	(13/2$^+$)	1472.6[‡] 6	(17/2$^+$)	2468.3? 6	
433.9[a] 6	11/2$^-$	964.4[a] 7	(15/2)$^-$	1523.2[a] 7	(19/2$^-$)	2490.4 9	
442.9[‡] 4	(9/2$^+$)	995.3 7	(11/2$^-$)	1561.2?[b] 5		2505.9?[b] 6	
471.2[#] 3	7/2$^+$	1008.8 12	(13/2$^-$)	1591.0 9		2620.6?[b] 6	
486.3[@] 6	7/2$^-$	1042.1 6	(11/2$^-$)	1637.0? 6		3152.2[&] 9	(33/2$^-$)
620.4[&] 5	(11/2$^-$)	1095.3 7	(17/2$^-$)	1720.8 8			
675.4[&] 6	(17/2$^-$)	1139.4[&] 7	(21/2$^-$)	1721.9[&] 8	(25/2$^-$)		

[†] From a least-squares adjustment to the γ-ray energies.
[‡] 3/2$^+$[402] band.
[#] 1/2$^+$[400] band.
[@] 1/2$^-$[541].
[&] h9/2 structure.
[a] h11/2 structure.
[b] Level assigned by 1975An08 only.
[c] From Adopted Levels.

γ(^{187}Ir)

E$_\gamma$[†]	I$_\gamma$[&]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[b]	Comments
83.1 4	4.6 18	189.6	3/2$^+$	106.5	1/2$^+$		I$_\gamma$: Includes contribution from ^{185}Re(α,N)^{188}Ir (1975An08).
[x]94.2[@] 3	1.7[@] 5						
106.5 4	16 6	106.5	1/2$^+$	0.0	3/2$^+$	D	A$_2$=−0.11 17 (1975Ke06).

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^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06 (continued)

$\gamma(^{187}Ir)$ (continued)

E_γ[†]	I_γ[&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	Comments
110.0 *4*	90[a] *23*	109.98	5/2$^+$	0.0	3/2$^+$	D	A_2=−0.15 *3* and −0.03 *5* (1975Ke06).
122.0 *4*	5.6 *19*	311.76	5/2$^+$	189.6	3/2$^+$	D	I_γ: Includes contribution from ^{185}Re(α,N)^{188}Ir (1975An08). A_2=−0.15 *22* (1975Ke06).
[x]127.8[@] *3*	2.7[@] *5*						
130.9[‡] *3*	2.6[‡] *5*	1095.3	(17/2$^-$)	964.4	(15/2)$^-$	D	A_2=−0.4 *3* and −0.7 *2* (1975Ke06).
157.9 *4*	3.5 *14*	442.9	(9/2$^+$)	285.1	7/2$^+$		
159.3 *4*	6.8 *22*	471.2	7/2$^+$	311.76	5/2$^+$		I_γ: Includes contribution from ^{185}Re(α,α')^{185}Re (1975An08). A_2=+0.0 *1*, A_4=+0.12 *7* (1975An08).
164.0 *4*	100.0	350.4	(13/2$^-$)	186.2	9/2$^-$	Q	A_2=+0.35 *2*, A_4=−0.04 *3* (1975An08), A_2=+0.25 *4* and 0.30 *9* (1975Ke06).
170.4 *4*	2.1 *6*	1523.2	(19/2$^-$)	1352.9	(17/2$^-$)	D	A_2=−0.3 *3* (1975Ke06).
175.0 *4*	14 *5*	285.1	7/2$^+$	109.98	5/2$^+$	D	A_2=−0.38 *3*, A_4=+0.07 *4* (1975An08); A_2=−0.33 *13* (1975Ke06).
177.2[#@g] *4*	3.0[@] *10*	1317.4	(19/2$^-$)	1139.4	(21/2$^-$)		
186.2[e] *4*	31 *11*	186.2	9/2$^-$	0.0	3/2$^+$		
186.2[eg] *4*		471.2	7/2$^+$	285.1	7/2$^+$		E_γ: Placement by 1975An08.
186.2[eg] *4*		903.2	(13/2$^+$)	716.9	(11/2$^+$)		E_γ: Placement by 1975An08.
186.9 *1*		388.5	1/2$^-$	201.6	5/2$^-$		E_γ: from ^{187}Pt decay. Observed by 1975Ke06 in $\gamma\gamma$ coincidence.
191.2[g] *4*	3.9 *13*	2225.5?		2034.2	(19/2$^-$)		A_2=−0.23 *17* (for 48 MeV) (1975Ke06).
193.5[‡g] *3*	0.4[‡] *1*	1352.9	(17/2$^-$)	1159.4?	(15/2$^-$)		
195 *1*		1159.4?	(15/2$^-$)	964.4	(15/2)$^-$		Existence was inferred by 1975An08 from coincidence data.
196.7 *4*	4.0[a] *22*	1192.1		995.3	(11/2$^-$)		
200.0 *4*	12 *5*	964.4	(15/2)$^-$	764.3	(13/2$^-$)		A_2=−0.1 *2*, A_4=0.0 *2* (1975An08); A_2=−0.14 *8* and −0.15 *13* (1975Ke06).
201.6[‡] *3*	16[‡] *5*	201.6	5/2$^-$	0.0	3/2$^+$		A_2=−0.02 *8* (1975Ke06).
201.9[@] *3*	9.1[@] *20*	311.76	5/2$^+$	109.98	5/2$^+$		
205.2[‡] *3*	3.2[‡] *11*	311.76	5/2$^+$	106.5	1/2$^+$		
209.2[‡] *3*	1.9[‡] *6*	897.6	(11/2$^+$)	688.4	(9/2$^+$)		
215.3[#@g] *3*	3.0[@] *10*	903.2	(13/2$^+$)	688.4	(9/2$^+$)	Q	A_2=+0.25 *6*, A_4=0.0 *1* (1975An08).
217.2 *4*	7 *2*	688.4	(9/2$^+$)	471.2	7/2$^+$	D	A_2=−0.02 *5*, A_4=0.0 *1* (1975An08); A_2=−0.15 *12* (1975Ke06).
221.9 *4*	2.6 *11*	842.5	(9/2$^-$)	620.4	(11/2$^-$)		
223.3 *4*	4.3 *14*	1042.1	(11/2$^-$)	818.9	(9/2$^-$)	(D)	A_2=+0.09 *19* (1975Ke06).
226.3[f] *4*	12[f] *5*	901.8	15/2$^-$	675.4	(17/2$^-$)	(Q)	A_2=+0.26 *10*, A_4=−0.2 *2* (1975An08); A_2=+0.10 *18* and 0.07 *4* for doublet (1975Ke06).
226.3[f] *4*	12[f] *5*	2260.4	(23/2$^-$)	2034.2	(19/2$^-$)	Q	E_γ: Placed only by 1975Ke06 based on coincidence data. A_2=+0.10 *18* and +0.07 *4* for doublet (1975Ke06).
245.0[‡] *3*	2.6[‡] *8*	731.3	5/2$^-$	486.3	7/2$^-$		
247.7 *4*	102 *36*	433.9	11/2$^-$	186.2	9/2$^-$	D	A_2=−0.12 *2* and −0.09 *5* (1975Ke06).
256.7 *4*	8 *3*	995.3	(11/2$^-$)	738.6	(7/2$^-$)	Q	A_2=+0.19 *5*, A_4=−0.05 *7* (1975An08); A_2=+0.07 *12* (1975Ke06).
256.8[‡] *3*	8[‡] *2*	2490.4		2233.6	(23/2$^-$)		A_2=+0.29 *10* (for 48 MeV) (1975Ke06).
[x]267.4[@] *3*	1.7[@] *5*						
267.4 *4*	1.7 *6*	2260.4	(23/2$^-$)	1993.0	(21/2$^-$)		
270.1 *4*	4.5 *16*	620.4	(11/2$^-$)	350.4	(13/2$^-$)	D	A_2=−0.22 *18* (1975Ke06).
274.1 *4*	4.6 *21*	716.9	(11/2$^+$)	442.9	(9/2$^+$)	D	A_2=−0.6 *3* (1975Ke06).
277.6 *4*	2.2 *12*	1042.1	(11/2$^-$)	764.3	(13/2$^-$)		

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^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06 (continued)

$\gamma(^{187}Ir)$ (continued)

E_γ[†]	I_γ[&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	α[d]	Comments
281.7[f] 4	8[f] 2	471.2	7/2$^+$	189.6	3/2$^+$	E2		A_2=+0.21 5, A_4=−0.06 8 (1975An08); A_2=−0.09 11 (1975Ke06). Mult.: from α(K)exp=0.067, normalized to theory (1975Ke06).
281.7[f] 4	8[f] 3	901.8	15/2$^-$	620.4	(11/2$^-$)	E2		Mult.: from α(K)exp=0.067, normalized to theory (1975Ke06).
285.1 4	36 14	285.1	7/2$^+$	0.0	3/2$^+$	E2	0.067	α: Normalized to theoretical value (1975Ke06). ce(K)=5.0 (1975Ke06); A_2=+0.10 2, A_4=−0.02 4 (1975An08); A_2=+0.04 3 and 0.12 10 (1975Ke06).
295.8 4	3.5 14	1193.6	(13/2$^+$)	897.6	(11/2$^+$)	D		A_2=−0.2 2, A_4=−0.3 3 (1975An08).
300.3 4	7.5[a] 13	486.3	7/2$^-$	186.2	9/2$^-$	D		A_2=+0.04 6, A_4=−0.11 8 partially obscured by an impurity.
303.6[#@] 3	3.0[@] 5	1042.1	(11/2$^-$)	738.6	(7/2$^-$)			
304.6 4	20 7	738.6	(7/2$^-$)	433.9	11/2$^-$	Q		A_2=+0.14 5, A_4=0.0 1 (1975An08); A_2=+0.04 5 (1975Ke06).
311.8 4	4.8 18	311.76	5/2$^+$	0.0	3/2$^+$	D		A_2=−0.36 24 (1975Ke06).
324.9 4	78 28	675.4	(17/2$^-$)	350.4	(13/2$^-$)	Q		A_2=+0.37 2, A_4=−0.08 3 (1975An08); A_2=+0.27 3 and 0.30 6 (1975Ke06).
330.4 4	54 19	764.3	(13/2$^-$)	433.9	11/2$^-$	M1	0.18	Mult.: α(K)exp=0.18 (1975Ke06); A_2=+0.21 2, A_4=−0.01 3 (1975An08); A_2=0.08 2 and 0.07 2 (1975Ke06).
332.9 4	46 18	442.9	(9/2$^+$)	109.98	5/2$^+$	Q		A_2=+0.28 3, A_4=−0.03 4 (1975An08); A_2=+0.17 2 and 0.20 3 (1975Ke06).
356.4 4	4.9 20	842.5	(9/2$^-$)	486.3	7/2$^-$	(D)		A_2=−0.38 21 (1975Ke06).
361.2[f] 4	11[f] 4	471.2	7/2$^+$	109.98	5/2$^+$	D		A_2=−0.46 7, A_4=−0.09 14 (1975An08); A_2=−0.34 9 for doublet (1975Ke06).
361.2[f] 4	11[f] 4	1264.3	(15/2$^+$)	903.2	(13/2$^+$)	D		A_2=−0.34 9 (1975Ke06).
364.0[@g] 3	1.5[@] 10	1523.2	(19/2$^-$)	1159.4?	(15/2$^-$)			E_γ: 1978Ya06 predicts that 364.0γ from (19/2$^-$) to (15/2$^-$) is a K forbidden transition and set Iγ=2 (upper limit) relative to Iγ=29 of 558.8γ. This γ-ray is not adopted.
367.9 4	4.6 19	1720.8		1352.9	(17/2$^-$)			A_2=+0.06 14, A_4=−0.2 2 (1975An08); A_2=+0.06 20 (1975Ke06).
376.8 4	11 4	688.4	(9/2$^+$)	311.76	5/2$^+$	Q		A_2=+0.23 4, A_4=−0.06 9 (1975An08); A_2=+0.15 8 and 0.18 7 (1975Ke06).
385.1 4	14 6	818.9	(9/2$^-$)	433.9	11/2$^-$	D		A_2=+0.11 3, A_4=−0.05 6 (1975An08); A_2=−0.02 6 (1975Ke06).
388.4[f] 4	17[f] 6	1008.8	(13/2$^-$)	620.4	(11/2$^-$)	M1		Mult.: α(K)exp=0.14 for doublet and A_2=−0.10 5 for doublet (1975Ke06).
388.4[f] 4	17[f] 6	1352.9	(17/2$^-$)	964.4	(15/2)$^-$	M1	0.14	α(K)exp=0.14 for doublet (1975Ke06) ; A_2=+0.02 3, A_4=+0.08 5 (1975An08); A_2=−0.10 5 for doublet (1975Ke06).
395.1 4	17 6	1159.4?	(15/2$^-$)	764.3	(13/2$^-$)	M1		Mult.: α(K)exp=0.24 (1975Ke06), A_2=+0.33 5, A_4=+0.17 7 (1975An08); A_2=+0.16 5 and +0.19 5 (1975Ke06).
401.5[g] 3		1561.2?		1159.4?	(15/2$^-$)			E_γ: observed in coincidence by 1975An08.
403.2 4	3.9 15	688.4	(9/2$^+$)	285.1	7/2$^+$			
[x]406.9[@] 3	2.1[@] 5							
415.7 4	3.9 13	1317.4	(19/2$^-$)	901.8	15/2$^-$	Q		A_2=+0.4 3 (1975Ke06).
420.1 4	3.7 9	1321.9	(17/2$^-$)	901.8	15/2$^-$	D		A_2=−0.7 3 (1975Ke06).
426.5 4	11 3	897.6	(11/2$^+$)	471.2	7/2$^+$			

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^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06 (continued)

$\gamma(^{187}Ir)$ (continued)

E_γ[†]	I_γ[&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	δ[c]	Comments
427.8[@] *3*	4.5[@] *10*	1192.1		764.3	(13/2$^-$)			
431.6[f] *4*	23[f] *8*	716.9	(11/2$^+$)	285.1	7/2$^+$	Q		A_2=+0.11 *3* for doublet (1975Ke06).
431.6[f] *4*	23[f] *8*	1591.0		1159.4?	(15/2$^-$)			A_2=+0.34 *4*, A_4=+0.04 *5* (1975An08); A_2=+0.11 *3* for doublet (1975Ke06).
434.2 *4*	24 *9*	620.4	(11/2$^-$)	186.2	9/2$^-$	D		A_2=−0.52 *4*, A_4=+0.04 *5* (1975An08); A_2=−0.59 *4* (1975Ke06).
454.5 *4*	5.8 *18*	897.6	(11/2$^+$)	442.9	(9/2$^+$)	D		A_2=−0.28 *13* (1975Ke06).
460.3 *4*	21 *8*	903.2	(13/2$^+$)	442.9	(9/2$^+$)	Q		A_2=+0.33 *4*, A_4=−0.10 *7* (1975An08); A_2=+0.20 *5* (1975Ke06).
464.0 *3*	31 *12*	1139.4	(21/2$^-$)	675.4	(17/2$^-$)	Q		A_2=+0.40 *4*, A_4=−0.11 *6* (1975An08); A_2=+0.24 *3* and 0.30 *10* (1975Ke06).
469.7 *4*	7 *4*	1993.0	(21/2$^-$)	1523.2	(19/2$^-$)	D		A_2=+0.13 *17* and +0.12 *6* (1975Ke06).
477.6[fg] *4*	5.8[f] *25*	1193.6	(13/2$^+$)	716.9	(11/2$^+$)			E_γ: Placement by 1975An08.
477.6[fg] *4*	5.8[f] *25*	1637.0?		1159.4?	(15/2$^-$)			E_γ: Placed from this level only in 1975Ke06. A_2=+0.23 *10* (for 48 MeV) (1975Ke06).
505.4 *4*	10 *5*	1193.6	(13/2$^+$)	688.4	(9/2$^+$)			
511.0 *4*		2034.2	(19/2$^-$)	1523.2	(19/2$^-$)			E_γ: includes annihilation radiation, evidence from coincidence data.
530.4[f] *4*	30[f] *12*	964.4	(15/2)$^-$	433.9	11/2$^-$	Q		A_2=+0.30 *3*, A_4=−0.13 *5* (1975An08); A_2=+0.23 *3* and 0.16 *4* (1975Ke06).
530.4[f] *4*	30[f] *12*	1847.8	(23/2$^-$)	1317.4	(19/2$^-$)			
539.6 *4*	1.9 *6*	1442.8	(15/2$^+$)	903.2	(13/2$^+$)			
545.2 *4*	4.8 *22*	1442.8	(15/2$^+$)	897.6	(11/2$^+$)	Q		A_2=+0.4 *2*, A_4=−0.2 *3* (1975An08); A_2=+0.36 *19* (1975Ke06).
547.3 *4*	7 *3*	1264.3	(15/2$^+$)	716.9	(11/2$^+$)	Q		A_2=+0.33 *10*, A_4=−0.12 *15* (1975An08); A_2=+0.15 *12* and 0.14 *12* (1975Ke06).
551.1 *4*	27 *9*	901.8	15/2$^-$	350.4	(13/2$^-$)	M1+E2	1.1 *6*	Mult.: α(K)exp=0.029 (1975Ke06); A_2=−0.73 *4*, A_4=+0.11 *7* (1975An08); A_2=−0.79 *2* and −0.69 *5* (1975Ke06).
558.8 *4*	21 *10*	1523.2	(19/2$^-$)	964.4	(15/2)$^-$	Q		A_2=+0.34 *5*, A_4=−0.04 *10* (1975Ke06); A_2=+0.21 *5* and +0.20 *3* (1975Ke06).
569.4 *4*	7 *3*	1472.6	(17/2$^+$)	903.2	(13/2$^+$)	Q		A_2=+0.58 *24*, A_4=+0.2 *3* (1975An08); A_2=+0.23 *4* (1975Ke06).
571.8[@g] *3*	2.5[@] *5*	1247.0?		675.4	(17/2$^-$)			
582.5 *4*	12 *5*	1721.9	(25/2$^-$)	1139.4	(21/2$^-$)	Q		A_2=+0.5 *3*, A_4=+0.2 *3* (1975An08); A_2=+0.27 *6* and +0.25 *6* (1975Ke06).
588.7 *4*	3.4 *8*	1352.9	(17/2$^-$)	764.3	(13/2$^-$)			A_2=+0.21 *10* (1975Ke06).
596.5[@g] *3*	5.5[@] *10*	1561.2?		964.4	(15/2)$^-$			
608.3[@] *3*	9.0[@] *20*	1042.1	(11/2$^-$)	433.9	11/2$^-$			
636.4 *4*	6.2 *16*	1900.7	(19/2$^+$)	1264.3	(15/2$^+$)			E_γ: 1975An08 place a 640.4γ from this level (1904 keV? in 1975An08) and 636.7γ (1975An08) without placement. 636.0γ is from this level in 1975Ke06. Average of 636.7γ and 636.0γ is reported here.
640.4[#@g] *3*	4.0[@] *20*	1993.0	(21/2$^-$)	1352.9	(17/2$^-$)			
642.0 *4*	14 *5*	1317.4	(19/2$^-$)	675.4	(17/2$^-$)	M1+E2	1.0 *5*	Mult.: α(K)exp=0.021 (1975Ke06); A_2=−0.8 *4*, A_4=−0.4 *4* (1975An08); A_2=−0.98 *6* −0.99 *5* (1975Ke06).
646.0[@g] *3*	5.0[@] *8*	1321.9	(17/2$^-$)	675.4	(17/2$^-$)			
658.4[fg] *4*	3.5[f] *12*	1008.8	(13/2$^-$)	350.4	(13/2$^-$)			E_γ: Placement by 1975An08.
658.4[f] *4*	3.5[f] *12*	2131.0	(21/2$^+$)	1472.6	(17/2$^+$)	Q		E_γ: Placed from this level only in

Continued on next page (footnotes at end of table)

^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06 (continued)

$\gamma(^{187}Ir)$ (continued)

E_γ[†]	I_γ[&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	Comments
							1975Ke06. A_2=+0.44 *28* (1975Ke06).
679.5[‡] *3*	11.0[‡] *22*	2401.4	(29/2$^-$)	1721.9	(25/2$^-$)	Q	A_2=+0.2 *2* (for 48 MeV) (1975Ke06).
681.3[‡] *3*	5[‡] *1*	2034.2	(19/2$^-$)	1352.9	(17/2$^-$)	(D)	A_2=−0.7 *5* (for 48 MeV) (1975Ke06).
708.3 *4*	6.9[a] *25*	1847.8	(23/2$^-$)	1139.4	(21/2$^-$)	(D)	A_2=−0.6 *4* (for 48 MeV) (1975Ke06).
710.4 *4*	8 *3*	2233.6	(23/2$^-$)	1523.2	(19/2$^-$)	Q	A_2=+0.3 *2* (for 48 MeV) (1975Ke06).
746.2[‡g] *3*	3.7[‡] *7*	2468.3?		1721.9	(25/2$^-$)		A_2=−0.9 *4* (for 48 MeV) (1975Ke06).
750.8[‡] *3*	3.0[‡] *6*	3152.2	(33/2$^-$)	2401.4	(29/2$^-$)	(Q)	A_2=+0.7 *5* (for 48 MeV) (1975Ke06).
783.8[@g] *3*	10.0[@] *15*	2505.9?		1721.9	(25/2$^-$)		
822.9[@g] *3*	6.0[@] *10*	1008.8	(13/2$^-$)	186.2	9/2$^-$		
[x]856.5[@] *3*	4.5[@] *10*						
896.0[@g] *3*	5.5[@] *10*	1247.0?		350.4	(13/2$^-$)		
898.5[@g] *3*	4.0[@] *5*	2620.6?		1721.9	(25/2$^-$)		
971.3[@g] *3*	7.0[@] *10*	1321.9	(17/2$^-$)	350.4	(13/2$^-$)		

[†] Average of 1975An08 and 1975Ke06, except where noted. In 1975An08, authors estimated uncertainty as 0.1-0.2 keV for strong, well-resolved transitions and 0.6 keV for weak transitions. In 1975Ke06, uncertainty was estimated from 0.1-0.3 keV by the authors. For both publications, the evaluator has considered a 0.3-keV uncertainty for the all transitions and reports 0.4 in propagation, when averaged.

[‡] From 1975Ke06.

[#] Assignment to ^{187}Ir is not definite.

[@] From 1975An08.

[&] Average of 1975An08 and 1975Ke06, except as noted. 1975An08 reported Ir for α=27.6 MeV bombarding energy; 1975Ke06 reported for 23, 27 and 48 MeV. In 1975Ke06 the uncertainty of the Iγ is mentioned between 10 to 30%, the evaluator assumed 20%. All γ-ray RIs were normalized to Iγ=100 (164 keV).

[a] Obscured by contaminant gammas.

[b] From α(K)exp value (1975Ke06) and γ-ray angular distribution. Listed 1975An08′s A2 and A4 values are for α=27.6 MeV; and for 1975Ke06′s, the 1st A2 value for α=27 MeV and the 2nd A2 value for α=48 MeV.

[c] Deduced by the evaluator from α(K)exp values (1975Ke06), 30% uncertainty was assumed.

[d] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

[e] Multiply placed.

[f] Multiply placed with undivided intensity.

[g] Placement of transition in the level scheme is uncertain.

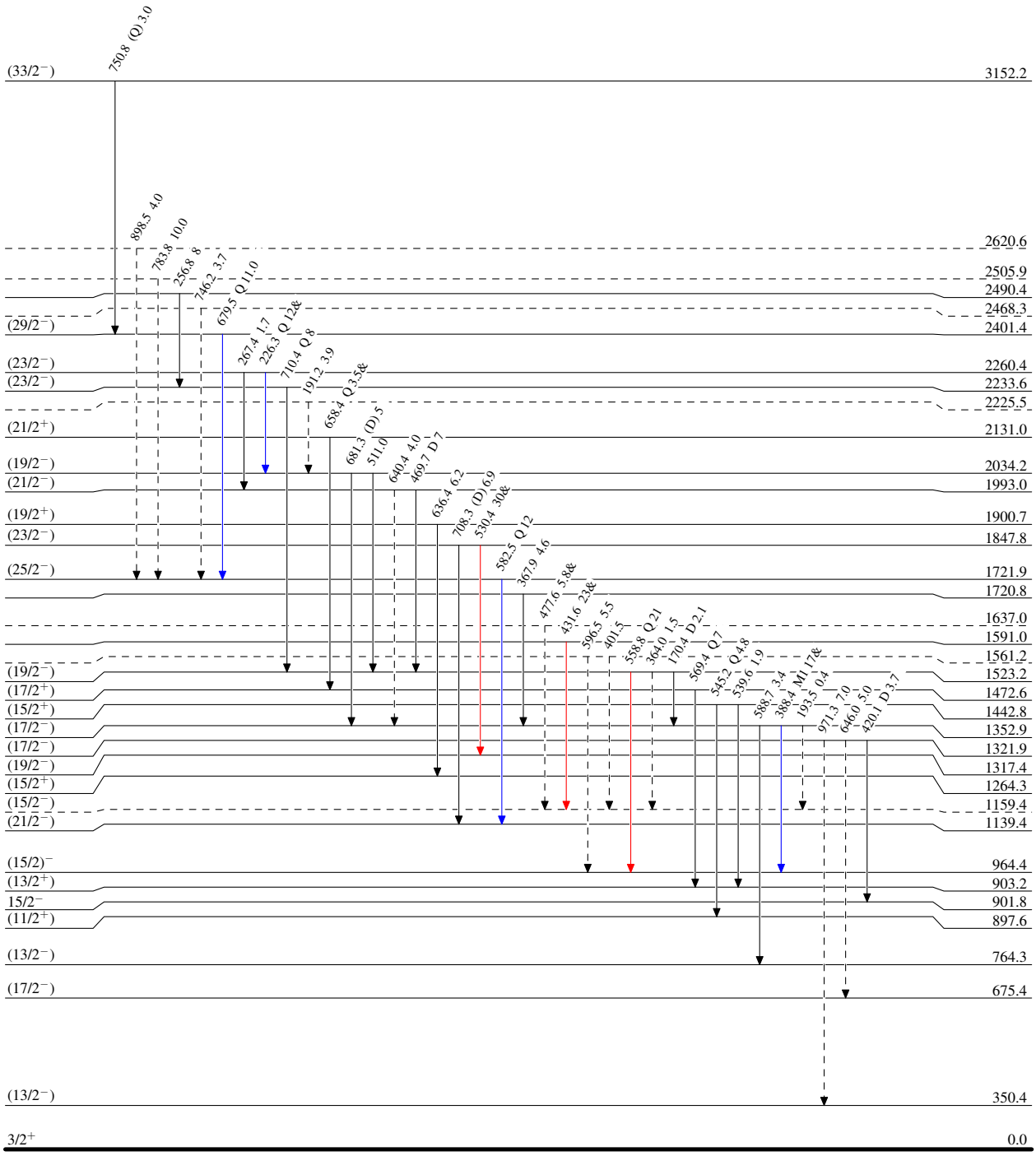
[x] γ ray not placed in level scheme.

^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06

Level Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



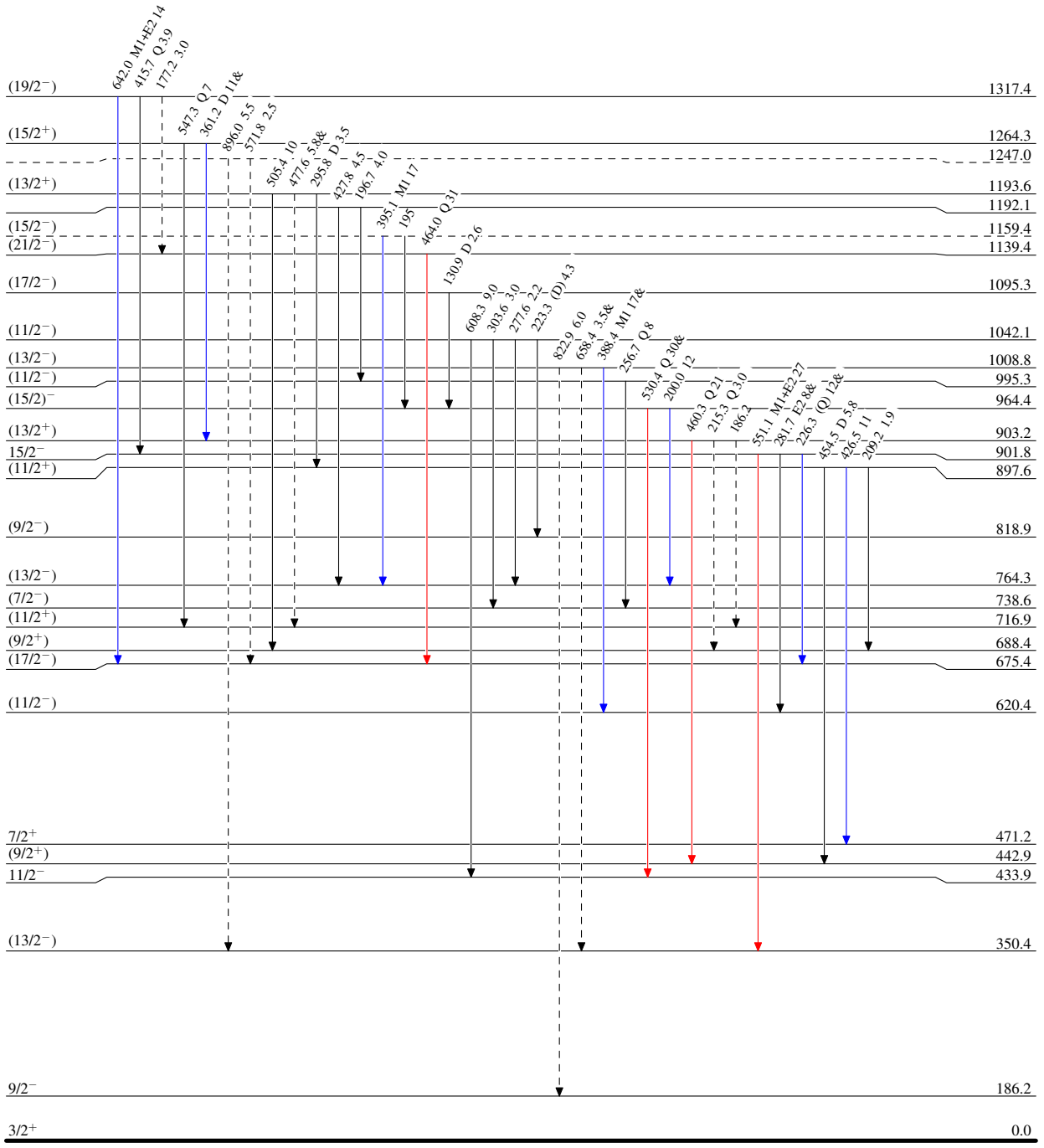
$^{187}_{77}Ir_{110}$

^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



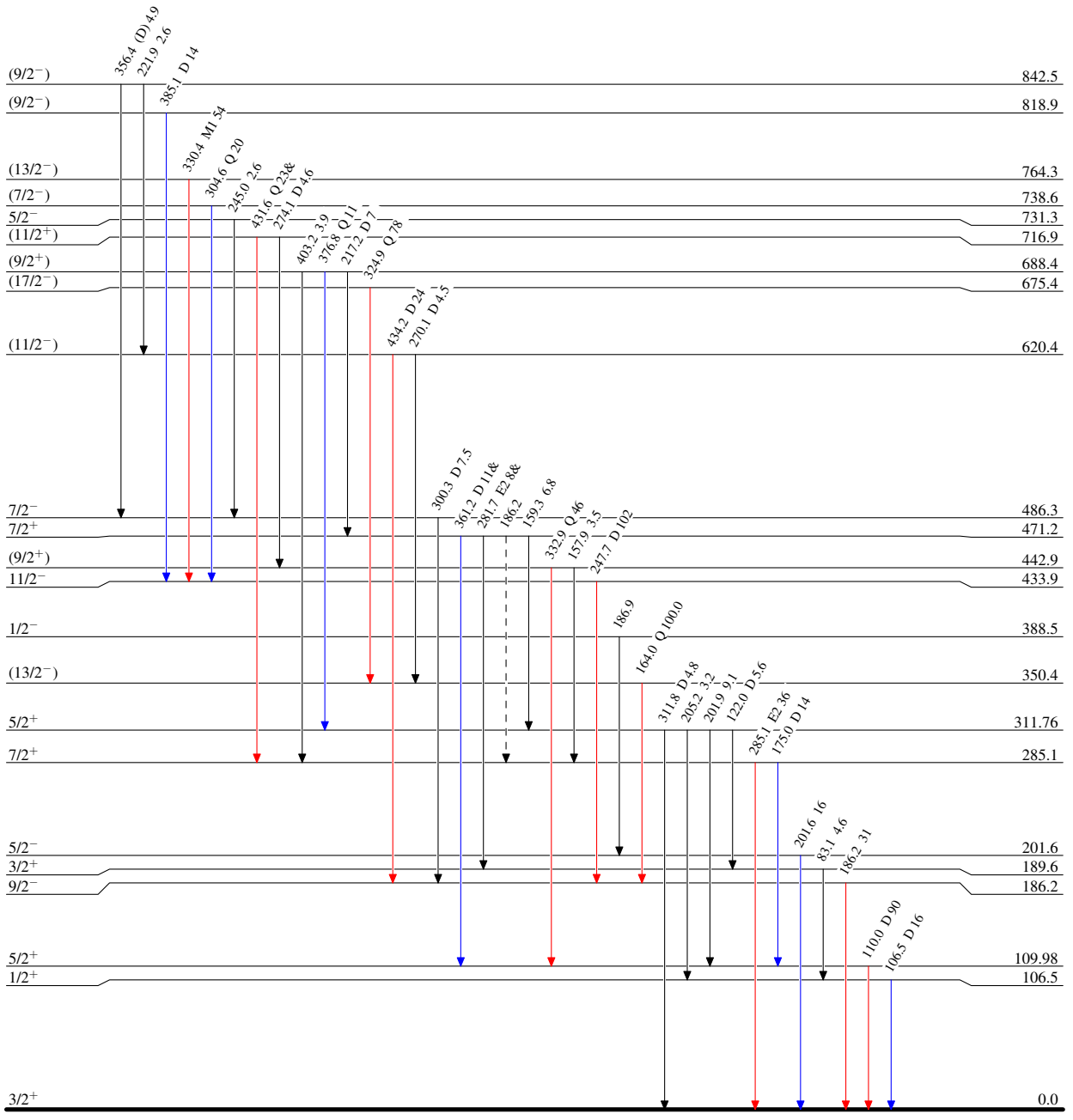
$^{187}_{77}Ir_{110}$

^{185}Re(α,2nγ), ^{187}Re(α,4nγ) 1975An08,1975Ke06

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{187}_{77}Ir_{110}$