^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 105, 223 (2005)	22-Jun-2005

Includes (pol n,γ).

1978Do06, 1977DoZP: Measured γ, $\gamma\gamma$, ce Details of γ-ray energies and intensities are given in 1977DoZP.

2002Va29 (also 2001Kh13): Measured $\gamma\gamma$ cascades in a coincidence arrangement. Transition energies and coincidence intensities of 115 $\gamma\gamma$ cascades are given with about 65 new levels reported between 1250-4630 keV. The 87 primary Eγ's are in the range 3266-7622; and 115 secondary Eγ's in the range 270-4626, most of these in the range 500-3500 keV.

1994HoZu: Measured ce; EKC reported for 29 gamma rays in the range 59-469 keV.

Other γ-ray measurements: 1969Ra10, 1961Tr07, 1957Ca28.

Additional information 1.

^{80}Br Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†
0.0	1^+	771.04?@ *10*	$(4^-,5^-,6^-)$	1423.9[a] *4*
37.054 *3*	2^-	805.125 *12*	(1,2,3)	1453.8[a] *3*
85.844 *4*	5^-	813.890 *7*	$(2,3)^+$	1521.38[a] *20*
256.431 *4*	$(2)^-$	821.9[a] *3*		1581.7[a] *3*
271.374 *3*	$(2)^+$	825.239?@ *16*	$(6,7^+)$	1600.6[a] *3*
281.291 *4*	$(3)^-$	830.876 *12*	$(2)^+$	1616.96[a] *20*
299.890 *5*	$(0^+,1^+,2^+)$	852.351 *10*	$(3)^+$	1624.4[a] *3*
309.472 *4*	$(4)^-$	860.654 *7*	(2^+)	1645.29[a] *10*
314.982 *4*	$(1)^+$	883.66?@ *9*	(≤ 3)	1668.1[a] *4*
331.049 *5*	5^+	908.052 *7*	$(1^-,2,3)$	1773.8[a] *7*
331.403 *4*	$(3)^-$	914.582 *7*	$(0^+,1,2)$	1937.70[a] *11*
357.215?@ *7*	(6^+)	918.5[a] *7*		1968.94[a] *17*
366.608 *3*	$(1,2)^-$	958.458 *7*	$(1,2,3)^+$	1975.70[a] *11*
379.891?@ *7*	(6^-)	971.732 *9*		2134.88[a] *20*
380.460 *4*	$(3)^-$	987.7[a] *6*		2149.5[a] *3*
385.727@ *5*	(4^-)	997.318 *13*	$(2,3)^+$	2218.95[a] *20*
390.519 *4*	$(4)^-$	1021.325 *10*	(≤ 4)	2277.4[a] *4*
447.853?@ *8*	(7^+)	1022.392 *9*	$(1^-,2,3^+)$	2303.7[a] *6*
456.377 *4*	$(4)^-$	1051.56 *4*	(≤ 3)	2320.29[a] *20*
468.982 *3*	$(2)^+$	1053.631 *15*	(1,2,3)	2346.0[a] *6*
469.273 *4*	$(3)^-$	1065.202 *11*	$(2^-,3,4^-)$	2382.91[a] *11*
492.886 *4*	$(2)^-$	1075.53 *3*		2463.2[a] *7*
500.075?@ *5*	$(4)^-$	1116.922 *19*	$(1,2,3)^+$	2470.3[a] *3*
523.295?@ *5*	(5^-)&	1143.421 *15*	$(1^-,2,3^+)$	2508.8[a] *7*
549.562 *4*	$(3)^+$	1146.389 *10*	$(1,2,3)^+$	2525.82[a] *20*
572.931?@ *9*	$(3,4,5)^-$	1148.047 *25*	$(1^-,2,3^+)$	2591.5[a] *7*
586.122 *5*	(3^+)	1190.73 *6*	$(1^-,2,3^+)$	2620.6[a] *5*
608.815[a] *11*		1198.224 *10*	(≤ 4)	2661.31[a] *20*
646.529?@ *21*		1203.01 *4*	$(1^-,2,3^+)$	2684.26[a] *20*
660.565 *4*	$(2)^+$	1212.30 *3*		2692.3[a] *5*
682.977?@ *10*	$(3,4^-,5^-)$	1223.97 *10*	(≤ 3)	2750.8[a] *7*
685.263?@ *20*	(3^-)	1248.812 *12*	$(\leq 3)^+$	2772.8[a] *3*
718.01?@ *8*	$(3,4^-,5)$	1260.5[a] *7*		2800.67[a] *20*
723.989 *5*	(1,2)	1279.4[a] *3*		2805.7[a] *7*
727.076 *13*	$(1^-,2,3)$	1320.244 *25*	(≤ 3)	2868.78[a] *20*
731.151 *5*	$(2)^+$	1322.10 *9*	$(1^-,2,3^+)$	2880.31[a] *20*
737.138? *6*	$(1^-,2^-)$	1357.8[a] *3*		2887.2[a] *7*
765.890 *5*	$(1,2)^+$	1358.86 *3*	(3^-)	2941.0[a] *7*

Continued on next page (footnotes at end of table)

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

^{80}Br Levels (continued)

E(level)†	E(level)†	E(level)†	E(level)†	Jπ‡
2967.7[a] 4	3105.4[a] 7	3438.1[a] 3	3817.9[a] 5	
2979.19[a] 20	3161.0[a] 7	3559.0[a] 5	4625.0[a] 3	
3010.1[a] 4	3167.7[a] 5	3640.4[a] 4	(7892.40[b] 4)	1$^-$,2$^-$#
3031.10[a] 20	3212.6[a] 6	3695.1[a] 7		
3039.4[a] 3	3228.4[a] 7	3750.2[a] 7		
3060.6[a] 7	3338.7[a] 4	3788.5[a] 6		

† From least-squares fit to Eγ's. With the exception of 683 level, fit for other γ rays is within the given uncertainties.

‡ From 'Adopted Levels'. Authors assigned the following: configuration=((π $2p_{3/2}$)$^{-1}$(ν $2p_{1/2}$)$^{-1}$) to g.s. and 271; configuration=((π $2p_{3/2}$)$^{-1}$(ν $1g_{9/2}$)$^{+3}_{7/2}$) to 37, 145, and 281; configuration=((π $2p_{3/2}$)$^{-1}$(ν $1g_{9/2}$)$^{+1}$) to 85, 309, and 456.

s-wave capture in ^{79}Br (g.s. J^π=3/2$^-$).

@ Population of level tentatively proposed by the evaluator on the basis of data from (d,2nγ) and (p,nγ) reactions.

& 4$^{(-)}$ proposed by 1994HoZU is inconsistent with $\gamma(\theta)$ data In (p,nγ) which suggest ΔJ=1 or 0 transition for 143.3γ to (6$^-$).

a From $\gamma\gamma$ cascade study of 2002Va29.

b S(n)=7892.28 *13* (2003Au03).

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$

Iγ normalization: Iγ's per 100 neutron captures.

Most of the (430 γ's) unplaced γ rays are in the range 1500 to 6000 where it is difficult to make a unique assignment as to the primary or secondary nature of the transition.

γ-ray energies below 1100 were measured by a bent-crystal spectrometer. Ge(Li) detectors in a Compton suppression mode used for Eγ's from 100 to 8000. $\gamma\gamma$ data obtained with Ge(Li) detector system. Enriched target used for γ-ray studies.

ce measurements made with a β-ray spectrometer in the range from 37 to 366. Natural target used for ce study.

About 400 γ's are unplaced in this study. The evaluator suggests placements for a few of these on the basis of energy sums and levels seen in (d,p) work. The proposed placements are given under comments only and have not been shown in the level scheme or in the 'adopted gammas' for ^{80}Br. Based on the $\gamma\gamma$ cascade study of 2002Va29, some of the unplaced transitions have been assigned in the level scheme if these agreed within about 2 keV with those quoted by 2002Va29.

E$_\gamma$[†]	I$_\gamma$[‡b]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[#]	α[c]	Comments
[x]32.836 *5*	0.059 *17*							
37.052 *5*	27.1 *22*	37.054	2$^-$	0.0	1$^+$	E1	1.56	α(K)= 1.375; α(L)= 0.1548; α(M)=0.02441 α(K)exp=1.25 *16*, α(L1)exp=0.14 *3*, α(L23)exp=0.024 *12* (1978Do06).
[x]38.077 *5*	0.024 *7*							
[x]38.580 *5*	0.020 *7*							Possible assignment: 1358.86-1320.26 (evaluator).
[x]41.919 *5*	0.020 *7*							
43.609 *6*	0.047 *6*	314.982	(1)$^+$	271.374	(2)$^+$			
[x]44.468 *5*	0.024 *7*							
48.786 *5*	0.11 *2*	85.844	5$^-$	37.054	2$^-$	M3	308	α(K)= 224.7; α(L)= 69.7; α(M)= 11.81 α(K)exp=239 *48*, α(L1)exp=44 *9*, α(L23)exp=29 *6*, α(M)exp=7.6 *16* (1978Do06).
49.591 *5*	0.019 *5*	1021.325	(≤4)	971.732				
[x]49.826 *11*	0.014 *9*							
[x]49.986 *8*	0.031 *7*							
[x]50.066 *10*	0.007 *5*							
50.111 *5*	0.62 *5*	331.403	(3)$^-$	281.291	(3)$^-$	D		α(K)exp=0.88 *36* (1978Do06).
50.402 *5*	0.032 *9*	958.458	(1,2,3)$^+$	908.052	(1$^-$,2,3)			
51.832 *5*	0.019 *5*	1198.224	(≤4)	1146.389	(1,2,3)$^+$			
[x]57.889 *5*	0.015 *5*							
[x]58.748 *8*	0.013 *5*							
59.465 *5*	8.5 *7*	390.519	(4)$^-$	331.049	5$^+$	E1	0.493	α(K)=0.434; α(L)=0.0486; α(M)=0.00784 α(K)exp=0.45 *5* (1978Do06), 0.321 *27* (1994HoZU). α(L1)exp=0.053 *7* (1978Do06). Mult.: from α(K)exp In 1994HoZU; α(K)exp In 1978Do06 gives M1. Placement from (d,2nγ) results.
[x]60.360 *5*	0.022 *4*							
63.932 *5*	0.013 *4*	1022.392	(1$^-$,2,3$^+$)	958.458	(1,2,3)$^+$			
[x]65.747 *5*	0.013 *7*							
[x]66.599 *5*	0.010 *3*							
[x]67.149 *14*	0.008 *4*							

$^{80}_{35}Br_{45}$-3

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ [†]	I_γ [‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	Comments
x67.406 *10*	0.010 *5*							
x70.652 *5*	0.015 *4*							
x71.790 *14*	0.012 *4*							
74.444 *5*	0.039 *4*	660.565	$(2)^+$	586.122	(3^+)			
x74.563 *13*	0.019 *5*							
x74.748 *11*	0.020 *4*							Possible assignment: 958.46-883.65 (evaluator).
74.973 *5*	0.26 *3*	331.403	$(3)^-$	256.431	$(2)^-$	M1	0.256	α(K)= 0.2256; α(L)= 0.0251 α(K)exp=0.23 *6* (1978Do06), 0.128 *18* (1994HoZU). Mult.: from α(K)exp In 1978Do06; α(K)exp In 1994HoZU gives E1.
x75.146 *5*	0.017 *3*							
75.914 *5*	0.060 *9*	456.377	$(4)^-$	380.460	$(3)^-$			
x77.934 *5*	0.011 *4*							
78.753 *6*	0.008 *3*	469.273	$(3)^-$	390.519	$(4)^-$			
x79.145 *8*	0.012 *2*							
x80.329 *5*	0.017 *5*							
x80.508 *5*	0.021 *5*							Possible assignment: 1223.96-1143.43 (evaluator).
80.581 *5*	0.099 *6*	549.562	$(3)^+$	468.982	$(2)^+$	M1		α(K)exp=0.195 *32* (1994HoZU)
81.08 *2*	0.013 *3*	805.125	(1,2,3)	723.989	(1,2)			
x82.173 *10*	0.007 *3*							
x83.85 *2*	0.012 *4*							
x84.60 *8*	0.006 *2*							
x84.961 *5*	0.026 *7*							
x87.759 *8*	0.011 *3*							
x88.077 *5*	0.070 *8*							Possible assignment: 971.73-883.65 (evaluator).
x88.242 *5*	0.020 *3*							
88.809 *5*	0.022 *4*	469.273	$(3)^-$	380.460	$(3)^-$			
x89.189 *12*	0.008 *3*							
x90.45 *7*	0.020 *16*							
90.639[@f] *5*	0.080 *15*	447.853?	(7^+)	357.215?	(6^+)			
92.73 *2*	0.008 *3*	1146.389	$(1,2,3)^+$	1053.631	(1,2,3)			
x93.360 *9*	0.009 *3*							
95.228 *5*	0.053 *4*	366.608	$(1,2)^-$	271.374	$(2)^+$			
x95.873 *9*	0.012 *3*							
x97.252 *5*	0.040 *5*							
99.164 *5*	0.14 *2*	380.460	$(3)^-$	281.291	$(3)^-$	M1(+E2)		α(K)exp=0.171 *32* (1994HoZU)
x99.572 *8*	0.006 *1*							
x101.73 *6*	0.009 *5*							
x103.45 *10*	0.007 *3*							
104.437[@] *5*	0.058 *5*	385.727	(4^-)	281.291	$(3)^-$			
x105.060 *9*	0.010 *5*							
105.330 *5*	0.046 *5*	765.890	$(1,2)^+$	660.565	$(2)^+$			
106.12 *2*	0.006 *2*	958.458	$(1,2,3)^+$	852.351	$(3)^+$			
106.80 *2*	0.007 *2*	1021.325	(≤4)	914.582	$(0^+,1,2)$			

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]107.241 *14*	0.008 *4*						
[x]107.503 *5*	0.024 *3*						
109.063 *11*	0.013 *3*	380.460	$(3)^-$	271.374	$(2)^+$		
[x]109.971 *10*	0.013 *4*						Possible assignment: 1358.86-1248.81 (evaluator).
110.173 *5*	0.068 *7*	366.608	$(1,2)^-$	256.431	$(2)^-$		
[x]110.38 *3*	0.006 *4*						
111.02 *1*	0.012 *3*	660.565	$(2)^+$	549.562	$(3)^+$		
112.424 *5*	0.054 *5*	492.886	$(2)^-$	380.460	$(3)^-$		
[x]113.440 *10*	0.012 *2*						
[x]115.010 *6*	0.014 *2*						
[x]115.625 *6*	0.017 *5*						
117.22 *3*	0.011 *3*	1320.244	(≤ 3)	1203.01	$(1^-,2,3^+)$		
[x]119.27 *3*	0.007 *3*						
119.62 *2*	0.011 *3*	1116.922	$(1,2,3)^+$	997.318	$(2,3)^+$		
[x]121.804 *10*	0.009 *3*						
[x]121.968 *10*	0.009 *2*						Possible assignment: 1320.26-1198.22 (evaluator).
[x]122.657 *11*	0.009 *3*						Possible assignment: 1198.22-1075.55 (evaluator).
[x]123.251 *13*	0.008 *2*						
124.026 *5*	0.54 *5*	380.460	$(3)^-$	256.431	$(2)^-$	(M1)	α(K)exp=0.0048 *6* (1994HoZU)
[x]124.271 *14*	0.010 *5*						
[x]124.724 *12*	0.009 *3*						
125.11 *2*	0.008 *3*	1146.389	$(1,2,3)^+$	1021.325	(≤ 4)		
126.278 *5*	0.33 *3*	492.886	$(2)^-$	366.608	$(1,2)^-$		
[x]126.475 *15*	0.010 *4*						
[x]126.723 *5*	0.33 *3*						Possible assignment: 1148.05-1021.33 (evaluator).
127.58 *2*	0.010 *3*	958.458	$(1,2,3)^+$	830.876	$(2)^+$		
[x]128.182 *5*	0.027 *4*						
[x]129.019 *5*	0.015 *3*						
[x]129.886 *10*	0.011 *3*						
[x]130.806 *11*	0.005 *1*						
[x]132.007 *6*	0.016 *3*						
[x]132.36 *2*	0.011 *3*						
[x]133.513 *10*	0.027 *10*						
136.764 *2*	0.083 *3*	1212.30		1075.53			
137.577[e] *5*	0.031[e] *3*	468.982	$(2)^+$	331.403	$(3)^-$		
137.577[e@f] *5*	0.031[e] *3*	523.295?	(5^-)	385.727	(4^-)		
138.98 *2*	0.013 *4*	1053.631	(1,2,3)	914.582	$(0^+,1,2)$		E_γ: level-energy difference=139.05.
[x]139.75 *3*	0.008 *2*						
140.64 *12*	0.009 *3*	971.732		830.876	$(2)^+$		
[x]141.24 *3*	0.008 *4*						
[x]142.111 *7*	0.018 *3*						
143.401[@f] *7*	0.020 *3*	523.295?	(5^-)	379.891?	(6^-)		
144.58 *2*	0.011 *3*	805.125	(1,2,3)	660.565	$(2)^+$		

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	Comments
144.970 *9*	0.008 *2*	997.318	$(2,3)^+$	852.351	$(3)^+$			
146.905 *5*	0.27 *4*	456.377	$(4)^-$	309.472	$(4)^-$			
[x]147.94 *3*	0.008 *4*							
[x]148.257 *7*	0.045 *11*							
[x]152.42 *5*	0.007 *4*							Possible assignment: 883.65-731.15 (evaluator).
154.008 *9*	0.025 *3*	468.982	$(2)^+$	314.982	$(1)^+$			
156.47 *2*	0.013 *4*	456.377	$(4)^-$	299.890	$(0^+,1^+,2^+)$			
158.74 *4*	0.012 *6*	1212.30		1053.631	(1,2,3)			
159.041 *5*	0.25 *3*	549.562	$(3)^+$	390.519	$(4)^-$	(E1)		α(K)exp=0.022 *5* (1994HoZU)
159.800 *5*	0.30 *2*	469.273	$(3)^-$	309.472	$(4)^-$			
[x]160.28 *2*	0.020 *8*							
160.72 *3*	0.008 *3*	1212.30		1051.56	(≤ 3)			
161.47 *2*	0.014 *4*	492.886	$(2)^-$	331.403	$(3)^-$			
[x]163.818 *7*	0.024 *3*							
[x]164.65 *2*	0.016 *2*							
[x]166.17 *9*	0.021 *3*							
[x]168.661 *5*	0.034 *4*							
[x]169.53 *2*	0.006 *1*							
170.30 *6*	0.020 *3*	830.876	$(2)^+$	660.565	$(2)^+$			
[x]171.18 *10*	0.010 *4*							
171.66 *2*	0.009 *2*	1143.421	$(1^-,2,3^+)$	971.732				
175.085 *5*	0.28 *3*	456.377	$(4)^-$	281.291	$(3)^-$	M1		α(K)exp=0.024 *4* (1994HoZU)
[x]176.559 *5*	0.52 *5*							
176.83 *2*	0.020 *7*	1320.244	(≤ 3)	1143.421	$(1^-,2,3^+)$			
[x]179.751 *5*	0.19 *3*							
181.588 *5*	0.073 *7*	731.151	$(2)^+$	549.562	$(3)^+$			
182.78[@f] *3*	0.008 *2*	682.977?	$(3,4^-,5^-)$	500.075?	$(4)^-$			E_γ: level-energy difference=182.90.
184.16 *10*	0.017 *4*	908.052	$(1^-,2,3)$	723.989	(1,2)			
[x]185.63 *7*	0.020 *5*							
187.15[@f] *4*	0.019 *6*	572.931?	$(3,4,5)^-$	385.727	(4^-)			
187.65 *5*	0.016 *5*	468.982	$(2)^+$	281.291	$(3)^-$			
187.991 *10*	0.030 *4*	469.273	$(3)^-$	281.291	$(3)^-$			
190.595[e@f] *5*	0.15[e] *2*	500.075?	$(4)^-$	309.472	$(4)^-$			
190.595[e] *5*	0.15[e] *2*	914.582	$(0^+,1,2)$	723.989	(1,2)			
191.579 *9*	0.036 *5*	660.565	$(2)^+$	468.982	$(2)^+$			
[x]192.385 *8*	0.033 *3*							
193.10 *8*	0.007 *4*	492.886	$(2)^-$	299.890	$(0^+,1^+,2^+)$			
[x]193.90 *2*	0.020 *10*							
[x]194.24 *4*	0.021 *10*							
[x]194.83 *7*	0.04 *3*							
195.602 *5*	6.4 *5*	586.122	(3^+)	390.519	$(4)^-$	E1	0.0118	α(K)=0.01033; α(L)=0.00109 α(K)exp=0.0100 *11* (1978Do06), 0.0169 *13* (1994HoZU). Mult.: M1 In 1994HoZU.

$^{80}_{35}Br_{45}$-6

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡ b]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	δ	α [c]	Comments
197.606 *5*	0.25 *3*	468.982	$(2)^+$	271.374	$(2)^+$	M1(+E2)			α(K)exp=0.021 *4* (1994HoZU)
[x]200.02 *2*	0.024 *6*								Possible assignment: 860.66-660.57 (evaluator).
[x]201.78 *5*	0.013 *4*								
[x]203.30 *2*	0.064 *27*								Possible assignment: 1320.26-1116.92 (evaluator).
204.59 *4*	0.007 *2*	1065.202	$(2^-,3,4^-)$	860.654	(2^+)				
205.4 *2*	0.012 *5*	1322.10	$(1^-,2,3^+)$	1116.922	$(1,2,3)^+$				
205.80 *6*	0.011 *6*	971.732		765.890	$(1,2)^+$				
[x]206.97 *5*	0.011 *4*								
[x]209.42 *2*	0.016 *4*								
210.88 *7*	0.012 *6*	1358.86	(3^-)	1148.047	$(1^-,2,3^+)$				
211.596 *5*	0.64 *5*	492.886	$(2)^-$	281.291	$(3)^-$	M1		0.0160	α(K)=0.01396; α(L)=0.00150 α(K)exp=0.015 *3* (1978Do06), 0.013 *2* (1994HoZU).
213.816[@ f] *5*	0.119 *16*	523.295?	(5^-)	309.472	$(4)^-$				
[x]214.748 *10*	0.066 *7*								
[x]215.99 *6*	0.014 *4*								
218.788[@ f] *5*	0.50 *6*	500.075?	$(4)^-$	281.291	$(3)^-$	M1+E2	0.7 *3*		α(K)exp=0.022 *5* (1978Do06).
219.375 *5*	5.3 *4*	256.431	$(2)^-$	37.054	2^-	M1		0.0085	α(K)=0.00741; α(L)=0.00078 α(K)exp=0.0079 *11* (1978Do06), 0.0111 *9* (1994HoZU). Mult.: from α(K)exp In 1994HoZU; α(K)exp In 1978Do06 gives E1.
[x]220.02 *5*	0.08 *4*								
[x]220.43 *4*	0.08 *4*								
221.508 *10*	0.057 *6*	492.886	$(2)^-$	271.374	$(2)^+$				
222.6 *2*	0.019 *16*	1053.631	(1,2,3)	830.876	$(2)^+$				
223.20 *6*	0.028 *24*	1075.53		852.351	$(3)^+$				
223.626 *5*	2.2 *3*	309.472	$(4)^-$	85.844	5^-	M1		0.0139	α(K)=0.01213; α(L)=0.00130 α(K)exp=0.014 *3* (1978Do06), 0.0118 *18* (1994HoZU).
226.50[e f] *2*	0.053[e] *10*	682.977?	$(3,4^-,5^-)$	456.377	$(4)^-$				E_γ: level-energy difference=226.60.
226.50[e] *2*	0.053[e] *10*	1198.224	(≤ 4)	971.732					
227.74 *5*	0.019 *4*	813.890	$(2,3)^+$	586.122	(3^+)				
[x]230.228 *13*	0.035 *10*								
[x]232.811 *11*	0.095 *12*								
233.32 *6*	0.041 *13*	1148.047	$(1^-,2,3^+)$	914.582	$(0^+,1,2)$				
234.318 *5*	2.9 *3*	271.374	$(2)^+$	37.054	2^-	E1		0.0070	α(K)=0.00613; α(L)=0.00064 α(K)exp=0.0062 *14* (1978Do06), 0.0060 *7* (1994HoZU).
235.3 *3*	0.011 *9*	1143.421	$(1^-,2,3^+)$	908.052	$(1^-,2,3)$				
236.454 *5*	0.59 *5*	492.886	$(2)^-$	256.431	$(2)^-$				α(K)exp=0.0073 *17* (1994HoZU) Mult.: E1 from α(K)exp In 1994HoZU is inconsistent with ΔJ^π.
[x]238.150 *9*	0.053 *10*								
238.47 *8*	0.029 *12*	1146.389	$(1,2,3)^+$	908.052	$(1^-,2,3)$				
240.091 *7*	0.14 *3*	549.562	$(3)^+$	309.472	$(4)^-$				α(K)exp=0.013 *5* (1994HoZU)

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	Comments
								Mult.: M1+E2 from α(K)exp In 1994HoZU is inconsistent with ΔJ^π.
[x]242.28 *2*	0.033 *26*							
[x]243.49 *5*	0.14 *7*							
244.238 *5*	5.1 *3*	281.291	$(3)^-$	37.054	2^-	M1+E2		α(K)=0.00971; α(L)=0.00104 α(K)exp=0.0098 *22* (1978Do06), 0.0121 *8* (1994HoZU).
245.198 *5*	10.8 *6*	331.049	5^+	85.844	5^-	E1	0.0061	α(K)=0.00539; α(L)=0.00056 α(K)exp=0.0047 *11* (1978Do06), 0.0066 *5* (1994HoZU). Placement from (d,2nγ) results.
[x]245.62 *4*	0.20 *6*							
247.495 *10*	0.096 *13*	908.052	$(1^-,2,3)$	660.565	$(2)^+$			
247.74[e@f] *10*	0.06[e] *1*	771.04?	$(4^-,5^-,6^-)$	523.295?	(5^-)			
247.74[e] *10*	0.06[e] *1*	971.732		723.989	(1,2)			
254.01 *2*	0.043 *8*	914.582	$(0^+,1,2)$	660.565	$(2)^+$			
255.02 *2*	0.018 *8*	723.989	(1,2)	468.982	$(2)^+$			
255.46 *3*	0.057 *8*	1021.325	(≤4)	765.890	$(1,2)^+$			
256.63 *9*	0.019 *8*	1022.392	$(1^-,2,3^+)$	765.890	$(1,2)^+$			
257.79 *4*	0.030 *4*	727.076	$(1^-,2,3)$	469.273	$(3)^-$			
262.170 *9*	0.061 *6*	731.151	$(2)^+$	468.982	$(2)^+$			
263.461[@f] *8*	0.13 *3*	572.931?	$(3,4,5)^-$	309.472	$(4)^-$			
[x]266.766 *6*	0.27 *5*							
[x]270.11 *2*	0.08 *4*							Possible assignment: 660.57-390.52 (evaluator).
271.372[d] *5*	6.3 *4*	271.374	$(2)^+$	0.0	1^+	M1+E2		α(K)=0.00745; α(L)=0.00080 α(K)exp=0.0092 *21* (1978Do06), 0.0144 *9* (1994HoZU).
271.372[d@f] *5*		357.215?	(6^+)	85.844	5^-			I_γ: small component may belong here.
[x]272.530 *5*	0.10 *3*							
274.532 *5*	2.2 *4*	860.654	(2^+)	586.122	(3^+)	M1	0.0083	α(K)=0.00724; α(L)=0.00077 α(K)exp=0.0089 *25* (1978Do06), 0.0074 *14* (1994HoZU).
[x]275.96 *2*	0.056 *15*							
276.1 *2*	0.07 *2*	1190.73	$(1^-,2,3^+)$	914.582	$(0^+,1,2)$			
277.05 *11*	0.042 *13*	1248.812	$(\leq 3)^+$	971.732				
278.2[&]		314.982	$(1)^+$	37.054	2^-			
278.205[@f] *8*	0.165 *25*	549.562	$(3)^+$	271.374	$(2)^+$			
[x]280.85 *3*	0.035 *7*							Possible assignment: 737.14-456.38 (evaluator).
283.67 *2*	0.027 *6*	1198.224	(≤4)	914.582	$(0^+,1,2)$			
285.1 *2*	0.026 *8*	1022.392	$(1^-,2,3^+)$	737.138?	$(1^-,2^-)$			
290.1 *2*	0.022 *13*	1198.224	(≤4)	908.052	$(1^-,2,3)$			
294.03[e@f] *1*	0.020[e] *4*	379.891?	(6^-)	85.844	5^-			
294.03[e] *1*	0.020[e] *4*	1146.389	$(1,2,3)^+$	852.351	$(3)^+$			
294.348 *9*	1.52 *13*	331.403	$(3)^-$	37.054	2^-	M1	0.0037	α(K)=0.00322; α(L)=0.00034 α(K)exp=0.0032 *9* (1978Do06), 0.0070 *9* (1994HoZU). Mult.: from α(K)exp In 1994HoZU. α(K)exp In 1978Do06 gives E1.
296.905 *6*	0.38 *4*	765.890	$(1,2)^+$	468.982	$(2)^+$			

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ [†]	I_γ [‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[c]	Comments
297.78 *7*	0.034 *12*	1212.30		914.582	$(0^+,1,2)$			
299.54[@f] *2*	0.23 *7*	685.263?	(3^-)	385.727	(4^-)			I_γ: from (d,2nγ), estimated Iγ≈0.05.
299.890[e] *5*	1.5[e] *3*	299.890	$(0^+,1^+,2^+)$	0.0	1^+			α(K)exp≤0.009 (1978Do06).
299.890[e@] *5*	1.5[e] *3*	385.727	(4^-)	85.844	5^-	M1		α(K)exp=0.0062 *15* (1994HoZU)
303.02[e@f] *3*	0.028[e] *6*	682.977?	$(3,4^-,5^-)$	379.891?	(6^-)			
303.02[e] *3*	0.028[e] *6*	1116.922	$(1,2,3)^+$	813.890	$(2,3)^+$			
[x]304.950 *13*	0.045 *8*							
305.29 *11*	0.028 *7*	1358.86	(3^-)	1053.631	(1,2,3)			
[x]305.66 *2*	0.039 *8*							
[x]307.73 *3*	0.025 *10*							
311.08 *3*	0.10 *2*	860.654	(2^+)	549.562	$(3)^+$			
312.20 *5*	0.021 *13*	805.125	(1,2,3)	492.886	$(2)^-$			
[x]312.761 *9*	0.081 *24*							
314.986 *5*	5.7 *3*	314.982	$(1)^+$	0.0	1^+	M1	0.0059	α(K)=0.00515; α(L)=0.00055 α(K)exp=0.0054 *10* (1978Do06), 0.0052 *4* (1994HoZU).
315.48[e@f] *2*	0.68[e] *11*	646.529?		331.049	5^+			
315.48[e] *2*	0.68[e] *11*	1146.389	$(1,2,3)^+$	830.876	$(2)^+$	M1+E2		α(K)exp=0.0101 *28* (1994HoZU)
[x]316.06 *9*	0.08 *7*							
[x]319.64 *10*	0.031 *9*							
321.912 *9*	0.22 *4*	908.052	$(1^-,2,3)$	586.122	(3^+)			
[x]322.31 *4*	0.18 *4*							
[x]324.24 *6*	0.042 *8*							
329.57 *2*	0.24 *3*	366.608	$(1,2)^-$	37.054	2^-			Placement from (p,nγ).
[x]333.75 *3*	0.056 *35*							
334.233 *10*	0.07 *4*	1248.812	$(\leq 3)^+$	914.582	$(0^+,1,2)$			
341.0 *3*	0.034 *18*	1065.202	$(2^-,3,4^-)$	723.989	(1,2)			
343.404 *5*	1.7 *3*	380.460	$(3)^-$	37.054	2^-			
344.92 *2*	0.11 *2*	813.890	$(2,3)^+$	468.982	$(2)^+$			
[x]345.27 *11*	0.27 *9*							
345.586 *5*	0.34 *4*	660.565	$(2)^+$	314.982	$(1)^+$			
345.89 *2*	0.070 *12*	1198.224	(≤ 4)	852.351	$(3)^+$			
346.53 *8*	0.05 *2*	727.076	$(1^-,2,3)$	380.460	$(3)^-$			
[x]349.30 *3*	0.026 *25*							
[x]351.050 *14*	0.21 *2*							Possible assignments: 1116.92-765.89 or 660.57-309.47 (evaluator).
[x]352.79 *3*	0.127 *14*							
[x]353.83 *6*	0.068 *17*							
357.39 *2*	0.06 *2*	723.989	(1,2)	366.608	$(1,2)^-$			
358.50 *9*	0.09 *5*	908.052	$(1^-,2,3)$	549.562	$(3)^+$			
360.44 *2*	0.054 *14*	727.076	$(1^-,2,3)$	366.608	$(1,2)^-$			
361.86 *2*	0.085 *13*	830.876	$(2)^+$	468.982	$(2)^+$			
364.6 *3*	0.05 *3*	731.151	$(2)^+$	366.608	$(1,2)^-$			
366.616 *5*	3.8 *3*	366.608	$(1,2)^-$	0.0	1^+	E1	0.0020	α(K)=0.00177; α(L)=0.00019 α(K)exp=0.0017 *7* (1978Do06), 0.00159 *17* (1994HoZU).

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]369.65 *22*	0.028 *15*						
370.531[e] *5*	<0.33[e]	456.377	(4)$^-$	85.844	5$^-$	(E2(+M1))	α(K)exp=0.0057 *17* (1994HoZU) I_γ: from (d,2nγ) most intensity belongs here.
370.531[e] *5*	<0.33[e]	737.138?	(1$^-$,2$^-$)	366.608	(1,2)$^-$		
[x]372.55 *20*	0.093 *15*						
373.560 *11*	0.16 *3*	682.977?	(3,4$^-$,5$^-$)	309.472	(4)$^-$		E_γ: level-energy difference=373.504.
375.75 *6*	0.058 *15*	685.263?	(3$^-$)	309.472	(4)$^-$		
377.398[@f] *14*	0.138 *23*	825.239?	(6,7$^+$)	447.853?	(7$^+$)		
[x]381.091 *8*	0.28 *4*						
382.21 *3*	0.10 *3*	1148.047	(1$^-$,2,3$^+$)	765.890	(1,2)$^+$		
385.61 *2*	0.39 *4*	971.732		586.122	(3$^+$)		
[x]388.30 *4*	0.10 *5*						
389.190 *7*	0.81 *8*	660.565	(2)$^+$	271.374	(2)$^+$		
392.8 *2*	0.038 *12*	1053.631	(1,2,3)	660.565	(2)$^+$		
395.7 *2*	0.034 *11*	727.076	(1$^-$,2,3)	331.403	(3)$^-$		
399.8 *5*	0.03 *2*	731.151	(2)$^+$	331.403	(3)$^-$		
[x]400.66 *2*	0.061 *22*						
[x]406.380 *8*	0.17 *4*						
408.54[@f] *8*	0.076 *15*	718.01?	(3,4$^-$,5)	309.472	(4)$^-$		
409.04 *6*	0.20 *3*	723.989	(1,2)	314.982	(1)$^+$		
[x]413.56 *3*	0.17 *7*						
[x]414.200 *8*	0.36 *4*						
419.25 *6*	0.046 *14*	1146.389	(1,2,3)$^+$	727.076	(1$^-$,2,3)		
[x]421.182 *14*	0.25 *2*						
422.14[e@f] *2*	0.17[e] *4*	737.138?	(1$^-$,2$^-$)	314.982	(1)$^+$		
422.14[e] *2*	0.17[e] *4*	971.732		549.562	(3)$^+$		
423.33 *4*	0.040 *15*	813.890	(2,3)$^+$	390.519	(4)$^-$		
[x]425.380 *16*	0.12 *3*						
[x]428.74 *24*	0.042 *14*						
432.236 *8*	1.22 *10*	469.273	(3)$^-$	37.054	2$^-$	E2(+M1)	α(K)exp=0.0037 *11* (1994HoZU)
[x]434.03 *4*	0.06 *3*						
436.31 *2*	0.068 *12*	1022.392	(1$^-$,2,3$^+$)	586.122	(3$^+$)		
438.56 *2*	0.15 *4*	805.125	(1,2,3)	366.608	(1,2)$^-$		
445.7 *2*	0.03 *2*	727.076	(1$^-$,2,3)	281.291	(3)$^-$		
450.89 *2*	0.20 *5*	765.890	(1,2)$^+$	314.982	(1)$^+$		
452.611 *5*	0.93 *9*	723.989	(1,2)	271.374	(2)$^+$		
455.84 *1*	0.43 *6*	492.886	(2)$^-$	37.054	2$^-$	E2	α(K)exp=0.0033 *11* (1994HoZU)
459.776 *6*	0.67 *7*	731.151	(2)$^+$	271.374	(2)$^+$	E2	α(K)exp=0.0035 *10* (1994HoZU)
464.3 *3*	0.08 *3*	830.876	(2)$^+$	366.608	(1,2)$^-$		
468.980 *5*	4.6 *4*	468.982	(2)$^+$	0.0	1$^+$	M1	α(K)exp=0.00217 *26* (1994HoZU)
470.66 *6*	0.28 *10*	727.076	(1$^-$,2,3)	256.431	(2)$^-$		
476.1 *2*	0.016 *9*	1203.01	(1$^-$,2,3$^+$)	727.076	(1$^-$,2,3)		

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡ b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
479.08 *1*	0.27 *4*	1065.202	$(2^-,3,4^-)$	586.122	(3^+)	
[x]481.81 *4*	0.30 *5*					
483.1 *2*	0.21 *3*	1143.421	$(1^-,2,3^+)$	660.565	$(2)^+$	
[x]483.74 *2*	0.21 *3*					
[x]484.33 *14*	0.42 *7*					
485.74 *2*	0.21 *3*	852.351	$(3)^+$	366.608	$(1,2)^-$	
[x]489.37 *3*	0.10 *5*					Possible assignments: 1320.26-830.88 or 1075.55-586.12 (evaluator).
[x]490.58 *2*	0.23 *5*					
492.89 *2*	0.49 *5*	492.886	$(2)^-$	0.0	1^+	
494.05[e@f] *5*	0.12[e] *5*	825.239?	$(6,7^+)$	331.049	5^+	
494.05[e] *5*	0.12[e] *5*	860.654	(2^+)	366.608	$(1,2)^-$	
498.18 *3*	0.36 *4*	1358.86	(3^-)	860.654	(2^+)	
502.69 *6*	0.06 *3*	971.732		468.982	$(2)^+$	
504.48 *5*	0.09 *4*	997.318	$(2,3)^+$	492.886	$(2)^-$	
[x]523.49 *14*	0.20 *3*					
[x]526.52 *3*	0.28 *12*					
529.28 *3*	0.26 *12*	860.654	(2^+)	331.403	$(3)^-$	
[x]531.10 *4*	0.18 *6*					
[x]538.79 *5*	0.12 *2*					
542.515 *7*	1.70 *12*	813.890	$(2,3)^+$	271.374	$(2)^+$	
[x]543.52 *12*	0.23 *14*					
545.6 *3*	0.12 *6*	860.654	(2^+)	314.982	$(1)^+$	
549.553 *7*	0.82 *12*	549.562	$(3)^+$	0.0	1^+	
557.34 *2*	0.54 *3*	1143.421	$(1^-,2,3^+)$	586.122	(3^+)	
557.4[&]		813.890	$(2,3)^+$	256.431	$(2)^-$	
[x]558.80 *6*	0.20 *2*					
[x]559.14 *25*	0.17 *3*					
560.63 *10*	0.10 *6*	1053.631	(1,2,3)	492.886	$(2)^-$	
567.2 *2*	0.12 *2*	1116.922	$(1,2,3)^+$	549.562	$(3)^+$	
[x]570.04 *2*	0.36 *3*					
[x]572.37 *2*	0.38 *4*					Possible assignment: 1065.21-492.89 (evaluator).
[x]579.45 *4*	0.09 *3*					Possible assignment: 860.66-281.29 (evaluator).
581.4 *2*	0.14 *4*	852.351	$(3)^+$	271.374	$(2)^+$	
583.17 *6*	0.14 *4*	914.582	$(0^+,1,2)$	331.403	$(3)^-$	
589.23 *6*	0.06 *3*	860.654	(2^+)	271.374	$(2)^+$	
[x]590.31 *9*	0.040 *25*					
[x]593.35 *4*	0.21 *5*					
594.95 *11*	0.10 *6*	1322.10	$(1^-,2,3^+)$	727.076	$(1^-,2,3)$	
595.94 *5*	0.25 *3*	852.351	$(3)^+$	256.431	$(2)^-$	
[x]598.89 *6*	0.23 *7*					
604.61 *6*	0.30 *4*	1190.73	$(1^-,2,3^+)$	586.122	(3^+)	
[x]606.38 *7*	0.14 *4*					Possible assignment: 1075.55-469.27 (evaluator).
608.815[a] *11*	0.64 *5*	608.815		0.0	1^+	E_γ: 607.5 (2002Va29); this γ may also correspond to 606.38 *7* in 1978Do06.

$^{80}_{35}Br_{45}$-11

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
619.3 *3*	0.10 *4*	1075.53		456.377	$(4)^-$	
[x]628.31 *26*	0.19 *3*					
630.6 *2*	0.030 *12*	997.318	$(2,3)^+$	366.608	$(1,2)^-$	
636.70 *6*	0.33 *4*	908.052	$(1^-,2,3)$	271.374	$(2)^+$	
643.1 *2*	0.08 *3*	914.582	$(0^+,1,2)$	271.374	$(2)^+$	
[x]648.26 *2*	0.50 *5*					
660.59 *2*	1.22 *20*	660.565	$(2)^+$	0.0	1^+	
662.0[&]		918.5		256.431	$(2)^-$	
[x]668.1 *3*	0.12 *4*					
[x]674.83 *5*	0.48 *4*					
678.6 *2*	0.15 *2*	1148.047	$(1^-,2,3^+)$	469.273	$(3)^-$	
684.90 *6*	0.41 *4*	1051.56	(≤ 3)	366.608	$(1,2)^-$	
687.0 *4*	0.19 *5*	723.989	(1,2)	37.054	2^-	
690.05 *2*	1.23 *7*	727.076	$(1^-,2,3)$	37.054	2^-	
[x]692.2 *4*	0.12 *6*					
702.06 *2*	0.98 *9*	958.458	$(1,2,3)^+$	256.431	$(2)^-$	
[x]704.70 *2*	0.40 *6*					
707.4 *2*	0.10 *4*	1022.392	$(1^-,2,3^+)$	314.982	$(1)^+$	
716.18 *12*	0.22 *3*	997.318	$(2,3)^+$	281.291	$(3)^-$	
721.46 *4*	0.56 *5*	1021.325	(≤ 4)	299.890	$(0^+,1^+,2^+)$	
724.00 *5*	0.17 *10*	723.989	(1,2)	0.0	1^+	
731.1 *2*	0.19 *4*	731.151	$(2)^+$	0.0	1^+	
731.2[&]		987.7		256.431	$(2)^-$	
751.05 *4*	0.43 *10*	1022.392	$(1^-,2,3^+)$	271.374	$(2)^+$	
755.53 *12*	0.19 *8*	1065.202	$(2^-,3,4^-)$	309.472	$(4)^-$	
765.91 *4*	0.88 *6*	1022.392	$(1^-,2,3^+)$	256.431	$(2)^-$	
766.2[&]		765.890	$(1,2)^+$	0.0	1^+	
[x]781.10 *12*	0.10 *5*					
[x]785.24 *7*	0.48 *5*					
786.9[&]		821.9		37.054	2^-	E_γ: level-energy difference=784.8.
[x]788.2 *3*	0.12 *4*					
794.3 *4*	0.10 *3*	830.876	$(2)^+$	37.054	2^-	
799.2[&]		1053.631	(1,2,3)	256.431	$(2)^-$	E_γ: level-energy difference=797.2.
808.9 *3*	0.09 *2*	1358.86	(3^-)	549.562	$(3)^+$	
[x]813.6 *3*	0.22 *6*					
815.4 *1*	0.68 *9*	852.351	$(3)^+$	37.054	2^-	
818.9 *4*	0.10 *3*	1075.53		256.431	$(2)^-$	
823.2 *7*	0.06 *3*	1203.01	$(1^-,2,3^+)$	380.460	$(3)^-$	
823.7[&]		860.654	(2^+)	37.054	2^-	
827.2 *2*	0.20 *3*	1320.244	(≤ 3)	492.886	$(2)^-$	
830.74 *9*	0.85 *13*	830.876	$(2)^+$	0.0	1^+	
845.69 *12*	0.39 *3*	1212.30		366.608	$(1,2)^-$	

$^{80}_{35}Br_{45}$-12

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ †	I_γ ‡ b	E_i(level)	J_i^π	E_f	J_f^π	Comments
850.0 *9*	0.11 *8*	1320.244	(≤3)	469.273	$(3)^-$	
860.38 *8*	0.56 *3*	1116.922	$(1,2,3)^+$	256.431	$(2)^-$	
860.8 &		860.654	(2^+)	0.0	1^+	
865.5 *3*	0.14 *6*	1322.10	$(1^-,2,3^+)$	456.377	$(4)^-$	
870.2 &		908.052	$(1^-,2,3)$	37.054	2^-	
871.9 &		1143.421	$(1^-,2,3^+)$	271.374	$(2)^+$	
876.4 *3*	0.24 *4*	1148.047	$(1^-,2,3^+)$	271.374	$(2)^+$	
883.66 @ f *9*	0.42 *3*	883.66?	(≤3)	0.0	1^+	
886.8 &		1143.421	$(1^-,2,3^+)$	256.431	$(2)^-$	
888.0 *4*	0.23 *6*	1203.01	$(1^-,2,3^+)$	314.982	$(1)^+$	
890.0 *3*	0.29 *6*	1146.389	$(1,2,3)^+$	256.431	$(2)^-$	
908.89 *13*	0.25 *2*	1223.97	(≤3)	314.982	$(1)^+$	
914.47 *7*	0.83 *13*	914.582	$(0^+,1,2)$	0.0	1^+	
919.5 *2*	0.33 *4*	1190.73	$(1^-,2,3^+)$	271.374	$(2)^+$	
921.8 *7*	0.11 *4*	1203.01	$(1^-,2,3^+)$	281.291	$(3)^-$	
924.2 *6*	0.09 *4*	1223.97	(≤3)	299.890	$(0^+,1^+,2^+)$	
x927.9 *3*	0.14 *3*					
930.8 *9*	0.05 *3*	1212.30		281.291	$(3)^-$	
933.7 *4*	0.16 *3*	1248.812	$(\leq 3)^+$	314.982	$(1)^+$	
x949.4 *2*	0.21 *2*					
952.7 *2*	0.19 *2*	1223.97	(≤3)	271.374	$(2)^+$	
959.8 *6*	0.08 *3*	997.318	$(2,3)^+$	37.054	2^-	
x962.6 *7*	0.06 *3*					
967.9 *4*	0.11 *3*	1223.97	(≤3)	256.431	$(2)^-$	
x970.8 *3*	0.17 *3*					
977.3 *3*	0.21 *4*	1248.812	$(\leq 3)^+$	271.374	$(2)^+$	
987.7 &		987.7		0.0	1^+	
995.6 &		997.318	$(2,3)^+$	0.0	1^+	
x1002.11 *15*	0.24 *2*					
1004.0 &		1260.5		256.431	$(2)^-$	
x1006.2 *6*	0.10 *3*					
x1008.5 *4*	0.14 *3*					
1022.2 *2*	0.21 *2*	1022.392	$(1^-,2,3^+)$	0.0	1^+	
x1034.0 *3*	0.16 *2*					
x1036.9 *3*	0.16 *2*					
1051.0 *6*	0.23 *6*	1051.56	(≤3)	0.0	1^+	
1055.34 a *10*	0.62 *5*	1053.631	(1,2,3)	0.0	1^+	E_γ: poor fit; level-energy difference=1053.63. Additional information 2.
x1074.5 *2*	0.18 *2*					
x1078.70 *15*	0.24 *2*					Possible assignment: 1223.96-145.32 (evaluator).
x1085.7 *8*	0.11 *9*					

$^{80}_{35}Br_{45}$-13

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1087.6 *8*	0.12 *9*	1358.86	(3$^-$)	271.374	(2)$^+$	E_γ: 1089.9 (2002Va29).
1106.2[&]		1143.421	(1$^-$,2,3$^+$)	37.054	2$^-$	
[x]1107.92 *14*	0.25 *2*					
1143.36 *12*	0.30 *2*	1143.421	(1$^-$,2,3$^+$)	0.0	1$^+$	
1148.06 *9*	0.39 *6*	1148.047	(1$^-$,2,3$^+$)	0.0	1$^+$	
[x]1155.9 *9*	0.07 *6*					
[x]1157.9 *7*	0.14 *6*					
[x]1164.4 *4*	0.09 *2*					
1174.7 *3*	0.13 *2*	1212.30		37.054	2$^-$	
1182.1[a] *4*	0.10 *2*	1453.8		271.374	(2)$^+$	E_γ: 1179.8 (2002Va29).
1190.5 *3*	0.27 *5*	1190.73	(1$^-$,2,3$^+$)	0.0	1$^+$	
[x]1192.6 *7*	0.11 *5*					
[x]1197.3 *3*	0.17 *2*					
1201.5[a] *3*	0.13 *2*	1203.01	(1$^-$,2,3$^+$)	0.0	1$^+$	E_γ: poor fit; level-energy difference=1203.0. Additional information 3.
[x]1219.1 *3*	0.12 *2*					
[x]1224.4 *3*	0.13 *2*					
1226.4[&]		1223.97	(≤3)	0.0	1$^+$	E_γ: level-energy difference=1224.0.
[x]1237.6 *8*	0.05 *2*					
1241.8[a] *6*	0.06 *2*	1279.4		37.054	2$^-$	Additional information 4.
1248.75 *8*	0.84 *12*	1248.812	(≤3)$^+$	0.0	1$^+$	
[x]1253.4 *6*	0.07 *2*					
[x]1264.5 *4*	0.16 *4*					
1273.6 *5*	0.08 *3*	1358.86	(3$^-$)	85.844	5$^-$	
1286.4[&]		1322.10	(1$^-$,2,3$^+$)	37.054	2$^-$	
[x]1290.4 *5*	0.08 *2*					
[x]1298.9 *3*	0.15 *2*					
1319.9 *5*	0.15 *4*	1320.244	(≤3)	0.0	1$^+$	
1320.2[&]		1357.8		37.054	2$^-$	
1322.4 *5*	0.22 *4*	1322.10	(1$^-$,2,3$^+$)	0.0	1$^+$	
[x]1324.8 *4*	0.17 *4*					
[x]1329.5 *2*	0.20 *2*					
[x]1336.9 *9*	0.10 *7*					
[x]1351.5 *4*	0.08 *2*					
1357.8[a] *3*	0.14 *2*	1357.8		0.0	1$^+$	Additional information 5.
[x]1364.1 *3*	0.15 *3*					
[x]1379.9 *6*	0.08 *3*					
[x]1392.3 *2*	0.21 *2*					
[x]1401.7 *7*	0.06 *2*					
[x]1413.1 *3*	0.18 *2*					
1425.4[&]		1423.9		0.0	1$^+$	
[x]1429.1 *2*	0.28 *3*					

$^{80}_{35}Br_{45}$-14

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ †	I_γ ‡ b	E_i(level)	E_f	J_f^π	Comments
x1463.1 4	0.11 2				
x1480.9 6	0.08 2				
x1498.6 6	0.11 3				
1502.4 &		1773.8	271.374	$(2)^+$	
1518.5 &		1521.38	0.0	1^+	E_γ: level-energy difference=1521.4.
x1539.8 3	0.22 3				
x1551.5 2	0.35 3				
x1555.35 11	0.56 3				
1565.0 &		1600.6	37.054	2^-	
1581.1 a 8	0.02 1	1581.7	0.0	1^+	E_γ: 1583.1 (2002Va29).
1602.1		1600.6	0.0	1^+	
1618.6 &		1616.96	0.0	1^+	
1626.1 &		1624.4	0.0	1^+	
x1630.0 9	0.07 4				
1633.7 a 10	0.09 5	1668.1	37.054	2^-	Additional information 7. E_γ: level-energy difference=1631.1.
1645.2 a 3	0.17 3	1645.29	0.0	1^+	Additional information 6.
1667.5 &		1937.70	271.374	$(2)^+$	
1669.8 &		1668.1	0.0	1^+	
1697.1 &		1968.94	271.374	$(2)^+$	
1704.7 &		1975.70	271.374	$(2)^+$	
1712.0 &		1968.94	256.431	$(2)^-$	
x1715.7 5	0.11 3				
x1729.2 6	0.15 4				
x1734.6 8	0.12 6				
x1743.0 6	0.08 3				
x1753.6 3	0.17 3				
x1758.1 7	0.10 4				
x1761.2 6	0.12 4				
x1795.2 6	0.07 3				
x1811.3 8	0.06 2				
x1815.4 5	0.10 3				
x1851.6 8	0.07 3				
1865.8 &		2134.88	271.374	$(2)^+$	E_γ: level-energy difference=1863.6.
x1900.0 4	0.11 3				
x1905.5 8	0.06 2				
x1914.7 5	0.09 2				
1968.9 a 3	0.17 3	1968.94	0.0	1^+	Additional information 8.
1976.1 &		1975.70	0.0	1^+	
x1983.6 4	0.14 3				

$^{80}_{35}Br_{45}$-15

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡ b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
2019.5 [&]		2277.4		256.431	$(2)^-$	
2048.1 [&]		2303.7		256.431	$(2)^-$	
2048.9 [&]		2320.29		271.374	$(2)^+$	
[x]2072.3 *5*	0.13 *3*					
2075.6 [&]		2346.0		271.374	$(2)^+$	
2150.2 [&]		2149.5		0.0	1^+	
2200.9 [&]		2470.3		271.374	$(2)^+$	
2206.7 [&]		2463.2		256.431	$(2)^-$	
2220.2 [&]		2218.95		0.0	1^+	
2237.7 [&]		2508.8		271.374	$(2)^+$	
[x]2311.5 *5*	0.13 *3*					
2320.1 [&]		2591.5		271.374	$(2)^+$	
2320.3 [&]		2320.29		0.0	1^+	
2347.3 [&]		2382.91		37.054	2^-	
2351.9 [&]		2620.6		271.374	$(2)^+$	E_γ: level-energy difference=2349.4.
2390.4 [&]		2661.31		271.374	$(2)^+$	
2420.9 [&]		2692.3		271.374	$(2)^+$	
2486.8 [&]		2525.82		37.054	2^-	E_γ: level-energy difference=2488.9.
2494.3 [&]		2750.8		256.431	$(2)^-$	
2499.1 [&]		2772.8		271.374	$(2)^+$	E_γ: level-energy difference=2501.5.
[x]2515.8 *9*	0.14 *7*					
[x]2526.0 *5*	0.16 *4*					
[x]2595.5 *5*	0.15 *5*					
2613.4 [&]		2868.78		256.431	$(2)^-$	
2615.8 [&]		2887.2		271.374	$(2)^+$	
2624.3 [&]		2880.31		256.431	$(2)^-$	
2655.2 [&]		2692.3		37.054	2^-	
2684.5 [&]		2941.0		256.431	$(2)^-$	
2685.8 [&]		2684.26		0.0	1^+	
2692.3 [&]		2692.3		0.0	1^+	
2710.2 [&]		2979.19		271.374	$(2)^+$	E_γ: level-energy difference=2707.9.
2740.3 [&]		3010.1		271.374	$(2)^+$	
2755.2 [&]		3010.1		256.431	$(2)^-$	
2758.1 [&]		3031.10		271.374	$(2)^+$	
2768.6 [&]		2805.7		37.054	2^-	
2773.0 [&]		3031.10		256.431	$(2)^-$	

$^{80}_{35}Br_{45}$-16

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ †	I_γ ‡ b	E_i(level)	J_i^π	E_f	J_f^π	Comments
2800.1 &		2800.67		0.0	1^+	
2869.9 &		2868.78		0.0	1^+	
2965.2 &		2967.7		0.0	1^+	E_γ: level-energy difference=2967.7.
2971.9 &		3228.4		256.431	$(2)^-$	
3029.5 &		3031.10		0.0	1^+	
3040.0 &		3039.4		0.0	1^+	
3060.6 &		3060.6		0.0	1^+	
3065.2 &		3338.7		271.374	$(2)^+$	E_γ: level-energy difference=3067.4.
3105.4 &		3105.4		0.0	1^+	
3161.0 &		3161.0		0.0	1^+	
x3166.7 5	0.06 2					
3170.1 &		3167.7		0.0	1^+	E_γ: level-energy difference=3167.7.
3174.9 &		3212.6		37.054	2^-	
x3202.3 7	0.05 2					
x3259.1 5	0.06 1					
3266.0 &		(7892.40)	$1^-,2^-$	4625.0		
3401.0 a 4	0.08 1	3438.1		37.054	2^-	Additional information 9.
x3415.3 4	0.07 1					
x3430.7 9	0.02 1					
x3449.3 5	0.06 1					
x3520.7 4	0.08 1					
3546.4 &		3817.9		271.374	$(2)^+$	
3557.2 &		3559.0		0.0	1^+	
x3571.3 5	0.06 1					
x3598.6 3	0.14 4					
3601.6 &		3640.4		37.054	2^-	
x3609.3 4	0.08 1					
x3636.3 5	0.07 1					
x3687.6 6	0.06 2					
x3691.5 8	0.05 2					
3695.1 &		3695.1		0.0	1^+	
x3726.0 9	0.05 2					
3750.2 &		3750.2		0.0	1^+	
x3758.8 5	0.06 1					
x3773.0 5	0.06 1					
3785.9 &		3788.5		0.0	1^+	E_γ: level-energy difference=3788.5.
x3816.1 5	0.06 1					
x3829.3 6	0.06 1					
x3906.1 5	0.07 2					

$^{80}_{35}Br_{45}$-17

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

γ(^{80}Br) (continued)

E_γ[†]	I_γ[‡][b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]3924.8 5	0.07 2					
[x]3948.5 10	0.05 2					
[x]3951.8 10	0.06 2					
[x]3959.1 5	0.06 1					
[x]3997.5 5	0.09 2					
[x]4024.4 3	0.10 2					
[x]4038.7 4	0.08 1					
[x]4058.0 6	0.07 2					
4074.5[a] 5	0.08 1	(7892.40)	1⁻,2⁻	3817.9		Additional information 10.
[x]4079.3 4	0.10 2					
4102.6[a] 7	0.04 1	(7892.40)	1⁻,2⁻	3788.5		E_γ: 4106.5 (2002Va29).
[x]4111.8 8	0.04 1					
[x]4117.1 5	0.07 1					
4142.1[&]		(7892.40)	1⁻,2⁻	3750.2		
[x]4155.0 4	0.09 1					
[x]4162.8 3	0.12 2					
[x]4191.1 7	0.05 1					
4197.2[&]		(7892.40)	1⁻,2⁻	3695.1		
[x]4229.8 5	0.07 1					
[x]4235.5 4	0.11 2					
[x]4245.3 8	0.04 1					
4251.7[a] 4	0.08 1	(7892.40)	1⁻,2⁻	3640.4		E_γ: 4253.7 (2002Va29).
[x]4273.3 8	0.04 1					
[x]4291.6 5	0.06 1					
[x]4309.8 5	0.06 1					
[x]4318.3 5	0.06 1					
4332.9[a] 5	0.08 1	(7892.40)	1⁻,2⁻	3559.0		E_γ: 4335.1 (2002Va29).
[x]4337.6 6	0.07 1					
[x]4350.1 5	0.06 1					
4355.0[&]		4625.0		271.374	(2)⁺	
[x]4359.9 5	0.07 1					
[x]4372.1 5	0.07 1					
[x]4395.5 3	0.14 3					
[x]4403.1 7	0.04 1					
[x]4434.3 5	0.08 1					
[x]4440.2 6	0.06 1					
4454.2[a] 4	0.07 1	(7892.40)	1⁻,2⁻	3438.1		Additional information 11.
[x]4466.6 3	0.11 2					
[x]4488.7 5	0.09 2					
[x]4506.2 2	0.16 3					
[x]4515.4 4	0.12 2					
[x]4520.9 3	0.16 2					
[x]4539.3 9	0.02 1					

$^{80}_{35}Br_{45}$-18

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ[†]	I_γ[‡][b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]4547.0 *4*	0.09 *1*					
4553.4[a] *4*	0.10 *2*	(7892.40)	1$^-$,2$^-$	3338.7		E_γ: 4555.8 (2002Va29).
[x]4568.2 *3*	0.10 *2*					
[x]4601.5 *9*	0.04 *2*					
[x]4609.8 *4*	0.08 *1*					
4624.8[a] *3*	0.09 *2*	4625.0		0.0	1$^+$	E_γ: 4626.4 (2002Va29).
[x]4636.8 *4*	0.13 *2*					
[x]4641.2 *6*	0.12 *2*					
[x]4646.0 *5*	0.11 *2*					
[x]4651.0 *4*	0.11 *2*					
4664.0[&]		(7892.40)	1$^-$,2$^-$	3228.4		
4679.6[a] *6*	0.05 *1*	(7892.40)	1$^-$,2$^-$	3212.6		Additional information 12.
4725.3[a] *5*	0.07 *2*	(7892.40)	1$^-$,2$^-$	3167.7		E_γ: 4722.3 (2002Va29).
4731.4[&]		(7892.40)	1$^-$,2$^-$	3161.0		
[x]4740.6 *3*	0.15 *3*					
[x]4773.4 *3*	0.10 *2*					
4787.0[&]		(7892.40)	1$^-$,2$^-$	3105.4		
[x]4795.0 *9*	0.04 *1*					
[x]4815.3 *6*	0.05 *1*					
4831.8[&]		(7892.40)	1$^-$,2$^-$	3060.6		
[x]4846.6 *3*	0.11 *2*					
4853.0[a] *3*	0.11 *2*	(7892.40)	1$^-$,2$^-$	3039.4		Additional information 13.
4861.1[a] *2*	0.16 *3*	(7892.40)	1$^-$,2$^-$	3031.10		E_γ: 4862.9 (2002Va29).
4882.8[a] *4*	0.07 *1*	(7892.40)	1$^-$,2$^-$	3010.1		E_γ: 4880.7 (2002Va29).
[x]4898.1 *4*	0.11 *2*					
4913.3[a] *2*	0.19 *2*	(7892.40)	1$^-$,2$^-$	2979.19		E_γ: 4910.8 (2002Va29).
[x]4920.3 *6*	0.09 *2*					
4924.3[a] *4*	0.15 *2*	(7892.40)	1$^-$,2$^-$	2967.7		E_γ: 4927.1 (2002Va29).
[x]4934.1 *2*	0.13 *3*					
4951.4[&]		(7892.40)	1$^-$,2$^-$	2941.0		
[x]4968.7 *3*	0.08 *1*					
[x]4987.1 *4*	0.07 *1*					
[x]5000.3 *4*	0.06 *1*					
5005.2[&]		(7892.40)	1$^-$,2$^-$	2887.2		
5012.1[a] *2*	0.19 *4*	(7892.40)	1$^-$,2$^-$	2880.31		Additional information 14.
5023.7[a] *2*	0.25 *4*	(7892.40)	1$^-$,2$^-$	2868.78		Additional information 15.
[x]5030.4 *5*	0.06 *1*					
[x]5049.9 *2*	0.20 *3*					
[x]5058.5 *3*	0.10 *2*					
[x]5079.4 *3*	0.10 *2*					
5086.7[&]		(7892.40)	1$^-$,2$^-$	2805.7		

$^{80}_{35}Br_{45}$-19

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡b]	E_i(level)	J_i^π	E_f	Comments
5091.7[a] 2	0.16 2	(7892.40)	1$^-$,2$^-$	2800.67	Additional information 16.
[x]5110.6 3	0.12 2				
5119.4[a] 3	0.09 1	(7892.40)	1$^-$,2$^-$	2772.8	E_γ: 5121.9 (2002Va29).
5141.6[&]		(7892.40)	1$^-$,2$^-$	2750.8	
[x]5150.7 3	0.09 1				
[x]5162.0 8	0.05 1				
[x]5173.8 7	0.06 2				
[x]5191.9 3	0.11 2				
5200.1[&]		(7892.40)	1$^-$,2$^-$	2692.3	
5208.2[a] 2	0.21 3	(7892.40)	1$^-$,2$^-$	2684.26	E_γ: 5206.6 (2002Va29).
[x]5217.4 3	0.10 2				
5231.1[a] 2	0.19 3	(7892.40)	1$^-$,2$^-$	2661.31	Additional information 17.
5272.4[a] 5	0.17 5	(7892.40)	1$^-$,2$^-$	2620.6	E_γ: 5269.1 (2002Va29).
[x]5279.5 3	0.10 2				
[x]5288.9 2	0.18 2				
5300.9[&]		(7892.40)	1$^-$,2$^-$	2591.5	
[x]5316.8 1	0.54 1				
[x]5336.6 3	0.11 2				
[x]5353.3 3	0.25 2				
[x]5357.0 6	0.09 2				
5366.5[a] 2	0.24 4	(7892.40)	1$^-$,2$^-$	2525.82	E_γ: 5368.5 (2002Va29).
5383.9[&]		(7892.40)	1$^-$,2$^-$	2508.8	
[x]5393.8 3	0.11 2				
[x]5401.8 2	0.21 3				
5422.3[a] 3	0.15 3	(7892.40)	1$^-$,2$^-$	2470.3	E_γ: 5420.1 (2002Va29).
5429.2[&]		(7892.40)	1$^-$,2$^-$	2463.2	
[x]5446.7 4	0.09 1				
[x]5462.2 6	0.05 1				
[x]5472.7 3	0.13 2				
[x]5494.6 9	0.03 1				
5509.5[a] 1	0.70 10	(7892.40)	1$^-$,2$^-$	2382.91	Additional information 18.
[x]5534.2 2	0.15 3				
5546.8[a] 6	0.05 1	(7892.40)	1$^-$,2$^-$	2346.0	Additional information 19.
[x]5567.2 7	0.18 3				
5572.1[a] 2	0.36 6	(7892.40)	1$^-$,2$^-$	2320.29	Additional information 20.
5589.0[a] 6	0.16 7	(7892.40)	1$^-$,2$^-$	2303.7	Additional information 21.
5614.8[a] 4	0.16 3	(7892.40)	1$^-$,2$^-$	2277.4	E_γ: 5616.4 (2002Va29).
[x]5628.4 2	0.23 4				
[x]5652.2 2	0.14 2				
[x]5660.3 6	0.05 1				
5673.5[a] 2	0.22 4	(7892.40)	1$^-$,2$^-$	2218.95	Additional information 22.

$^{80}_{35}Br_{45}$-20

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ[†]	I_γ[‡b]	E_i(level)	J_i^π	E_f	Comments
[x]5679.6 *2*	0.20 *4*				
[x]5694.0 *4*	0.07 *1*				
[x]5729.8 *3*	0.11 *2*				
[x]5736.7 *4*	0.08 *1*				
5743.0[a] *3*	0.14 *2*	(7892.40)	1$^-$,2$^-$	2149.5	Additional information 23.
5757.6[a] *2*	0.14 *2*	(7892.40)	1$^-$,2$^-$	2134.88	E_γ: 5755.2 (2002Va29).
[x]5782.7 *5*	0.05 *1*				
[x]5833.4 *6*	0.07 *1*				
[x]5838.9 *5*	0.10 *2*				
[x]5868.7 *2*	0.42 *6*				
[x]5873.5 *4*	0.13 *2*				
[x]5883.9 *3*	0.13 *2*				
[x]5906.8 *2*	0.16 *3*				
5916.7[a] *1*	0.59 *7*	(7892.40)	1$^-$,2$^-$	1975.70	Additional information 24.
5923.4[a] *2*	0.28 *4*	(7892.40)	1$^-$,2$^-$	1968.94	Additional information 25.
[x]5929.0 *4*	0.11 *2*				
[x]5942.6 *3*	0.11 *2*				If primary γ, E(level)=1950.4. In (d,p), E(level)=1953 *4*.
5954.7[a] *1*	0.49 *5*	(7892.40)	1$^-$,2$^-$	1937.70	Additional information 26.
[x]5973.5 *3*	0.10 *2*				
[x]5985.5 *5*	0.07 *2*				
[x]5991.7 *8*	0.04 *1*				
[x]6005.2 *2*	0.14 *2*				If primary γ, E(level)=1887.2. In (d,p), E(level)=1880 *8*.
[x]6041.8 *3*	0.09 *1*				If primary γ, E(level)=1850.6. In (d,p), E(level)=1857 *4*.
[x]6054.4 *2*	0.26 *4*				
[x]6059.9 *2*	0.23 *4*				
[x]6079.4 *3*	0.21 *2*				
6118.6[&]		(7892.40)	1$^-$,2$^-$	1773.8	
[x]6148.0 *2*	0.42 *6*				If primary γ, E(level)=1744.4. In (d,p), E(level)=1746 *4*.
[x]6173.1 *2*	0.36 *5*				If primary γ, E(level)=1719.3. In (d,p), E(level)=1724 *4*.
[x]6219.9 *3*	0.14 *2*				
6225.0[a] *4*	0.08 *2*	(7892.40)	1$^-$,2$^-$	1668.1	E_γ: 6222.6 (2002Va29).
6247.1[a] *1*	0.32 *5*	(7892.40)	1$^-$,2$^-$	1645.29	Additional information 27.
6268.2[a] *3*	0.10 *2*	(7892.40)	1$^-$,2$^-$	1624.4	E_γ: 6266.2 (2002Va29).
6275.5[a] *2*	0.15 *3*	(7892.40)	1$^-$,2$^-$	1616.96	E_γ: 6273.7 (2002Va29).
6292.1[a] *3*	0.09 *2*	(7892.40)	1$^-$,2$^-$	1600.6	E_γ: 6290.3 (2002Va29).
6310.6[a] *3*	0.17 *3*	(7892.40)	1$^-$,2$^-$	1581.7	Additional information 28.
[x]6342.7 *5*	0.06 *1*				
[x]6356.5 *1*	0.62 *12*				
6370.9 *2*	0.14 *3*	(7892.40)	1$^-$,2$^-$	1521.38	E_γ: 6373.9 (2002Va29).
[x]6402.2 *3*	0.17 *3*				If primary γ, E(level)=1490.2. In (d,p), E(level)=1499 *4*.
6438.3[a] *4*	0.21 *4*	(7892.40)	1$^-$,2$^-$	1453.8	E_γ: 6441.2 (2002Va29).
6468.7[a] *4*	0.09 *2*	(7892.40)	1$^-$,2$^-$	1423.9	E_γ: 6467.0 (2002Va29).

$^{80}_{35}Br_{45}$-21

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ [†]	I_γ [‡] [b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]6476.0 *6*	0.05 *1*					
[x]6489.0 *3*	0.10 *2*					If primary γ, E(level)=1403.4. In (d,p), E(level)=1401 *4*.
[x]6501.7 *3*	0.16 *3*					If primary γ, E(level)=1390.7. In (d,p), E(level)=1383 *4*.
[x]6525.3 *4*	0.09 *1*					
6531.1[&]		(7892.40)	$1^-,2^-$			E_γ: level-energy difference=6533.6.
6533.49 *10*	0.39 *5*	(7892.40)	$1^-,2^-$	1358.86	(3^-)	E_γ: 6535.1 (2002Va29).
6570.1 *4*	0.19 *3*	(7892.40)	$1^-,2^-$	1322.10	$(1^-,2,3^+)$	
6571.9 *4*	0.16 *3*	(7892.40)	$1^-,2^-$	1320.244	(≤ 3)	
6612.8[a] *3*	0.18 *3*	(7892.40)	$1^-,2^-$	1279.4		Additional information 29.
6631.9[&]		(7892.40)	$1^-,2^-$	1260.5		
6643.7 *2*	0.40 *3*	(7892.40)	$1^-,2^-$	1248.812	$(\leq 3)^+$	Additional information 30.
[x]6646.9 *3*	0.25 *3*					
6668.6 *3*	0.28 *4*	(7892.40)	$1^-,2^-$	1223.97	(≤ 3)	E_γ: 6666.0 (2002Va29).
[x]6671.0 *4*	0.24 *4*					
6689.6 *4*	0.24 *4*	(7892.40)	$1^-,2^-$	1203.01	$(1^-,2,3^+)$	Additional information 31.
6694.2 *5*	0.30 *3*	(7892.40)	$1^-,2^-$	1198.224	(≤ 4)	
6701.7 *6*	0.18 *2*	(7892.40)	$1^-,2^-$	1190.73	$(1^-,2,3^+)$	Additional information 32.
[x]6705.2 *4*	0.17 *2*					
6744.2 *3*	0.20 *3*	(7892.40)	$1^-,2^-$	1148.047	$(1^-,2,3^+)$	Additional information 33.
6749.1 *2*	0.33 *5*	(7892.40)	$1^-,2^-$	1143.421	$(1^-,2,3^+)$	Additional information 34.
[x]6778.2 *4*	0.07 *1*					
[x]6786.8 *4*	0.07 *1*					
6827.3 *4*	0.07 *1*	(7892.40)	$1^-,2^-$	1065.202	$(2^-,3,4^-)$	
6838.4 *3*	0.15 *2*	(7892.40)	$1^-,2^-$	1053.631	(1,2,3)	E_γ: 6836.7 (2002Va29).
[x]6866.2 *7*	0.05 *1*					
6871.3 *3*	0.17 *2*	(7892.40)	$1^-,2^-$	1021.325	(≤ 4)	
6895.6 *2*	0.16 *2*	(7892.40)	$1^-,2^-$	997.318	$(2,3)^+$	Additional information 35.
6904.7[&]		(7892.40)	$1^-,2^-$	987.7		
6973.9[&]		(7892.40)	$1^-,2^-$	918.5		
6978.0 *3*	0.22 *2*	(7892.40)	$1^-,2^-$	914.582	$(0^+,1,2)$	Additional information 36.
6983.9 *6*	0.10 *2*	(7892.40)	$1^-,2^-$	908.052	$(1^-,2,3)$	Additional information 37.
7031.74 *10*	0.80 *3*	(7892.40)	$1^-,2^-$	860.654	(2^+)	Additional information 38.
7070.7[a] *3*	0.14 *2*	(7892.40)	$1^-,2^-$	821.9		E_γ: 7068.4 (2002Va29).
7078.44 *10*	0.95 *8*	(7892.40)	$1^-,2^-$	813.890	$(2,3)^+$	Additional information 39.
7126.64 *11*	0.30 *4*	(7892.40)	$1^-,2^-$	765.890	$(1,2)^+$	Additional information 40.
7154.8 *8*	0.03 *1*	(7892.40)	$1^-,2^-$	737.138?	$(1^-,2^-)$	
7160.8 *3*	0.07 *3*	(7892.40)	$1^-,2^-$	731.151	$(2)^+$	E_γ: 7158.9 (2002Va29).
7165.4 *3*	0.06 *4*	(7892.40)	$1^-,2^-$	727.076	$(1^-,2,3)$	
7168.3 *3*	0.12 *5*	(7892.40)	$1^-,2^-$	723.989	(1,2)	Additional information 41.
7231.7 *1*	0.32 *5*	(7892.40)	$1^-,2^-$	660.565	$(2)^+$	Additional information 42.
7284.9[&]		(7892.40)	$1^-,2^-$	608.815		
7343.0 *4*	0.06 *3*	(7892.40)	$1^-,2^-$	549.562	$(3)^+$	

$^{80}_{35}Br_{45}$-22

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29 (continued)

$\gamma(^{80}Br)$ (continued)

E_γ †	I_γ ‡ b	E_i(level)	J_i^π	E_f	J_f^π	Comments
7423.35 *10*	0.98 *11*	(7892.40)	$1^-,2^-$	468.982	$(2)^+$	Additional information 43.
7511.9 *9*	0.22 *9*	(7892.40)	$1^-,2^-$	380.460	$(3)^-$	Additional information 44.
7561.5 *6*	0.05 *1*	(7892.40)	$1^-,2^-$	331.049	5^+	
7577.6 *2*	2.2 *3*	(7892.40)	$1^-,2^-$	314.982	$(1)^+$	Additional information 45.
7611.0 *2*	0.20 *3*	(7892.40)	$1^-,2^-$	281.291	$(3)^-$	
7620.8 *3*	0.12 *2*	(7892.40)	$1^-,2^-$	271.374	$(2)^+$	Additional information 46.
7635.9 *3*	0.12 *2*	(7892.40)	$1^-,2^-$	256.431	$(2)^-$	
7892.5 *2*	0.14 *2*	(7892.40)	$1^-,2^-$	0.0	1^+	

† From 1978Do06 (and 1977DoZP), unless otherwise noted. Values from 1978Do06 are recoil corrected. The authors did not include systematic error associated with energy calibration. In several cases the evaluator has rounded as well as increased the quoted (1977DoZP) uncertainties to a minimum value of 5 eV as suggested by the fitting procedure. The realistic uncertainty may be even larger for many weak transitions. Recoil correction is 0.1-0.4 for primary γ's from 4000 to 8000; 0.01-0.1 for γ's from 1500 to 4000; 0.0017-0.011 for γ's from 500 to 1500; and <0.0017 for γ's of <500.

‡ Photon intensities per 100 n-captures in ^{79}Br deduced from determination of γ-ray intensities following the decay of the residual nucleus ^{80}Br. In some cases uncertainties have been rounded off.

From ce data of 1978Do06 and 1994HoZU.

@ Tentative placement suggested by the evaluator based on (d,2nγ) and (p,nγ) reactions.

& From $\gamma\gamma$ cascade study of 2002Va29. From least-squares fit procedure, the uncertainty seems to be≈2 keV for Eγ's above 700.

a Placement from $\gamma\gamma$ cascade study of 2002Va29. The Eγ taken from unplaced gammas of 1978Do06 and 1977DoZP if it agreed within 2 keV or so of the value quoted by 2002Va29.

b Intensity per 100 neutron captures.

c 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.

d Multiply placed.

e Multiply placed with undivided intensity.

f Placement of transition in the level scheme is uncertain.

x γ ray not placed in level scheme.

$^{80}_{35}Br_{45}$-23

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme

Intensities: Photon intensities per 100 neutron captures

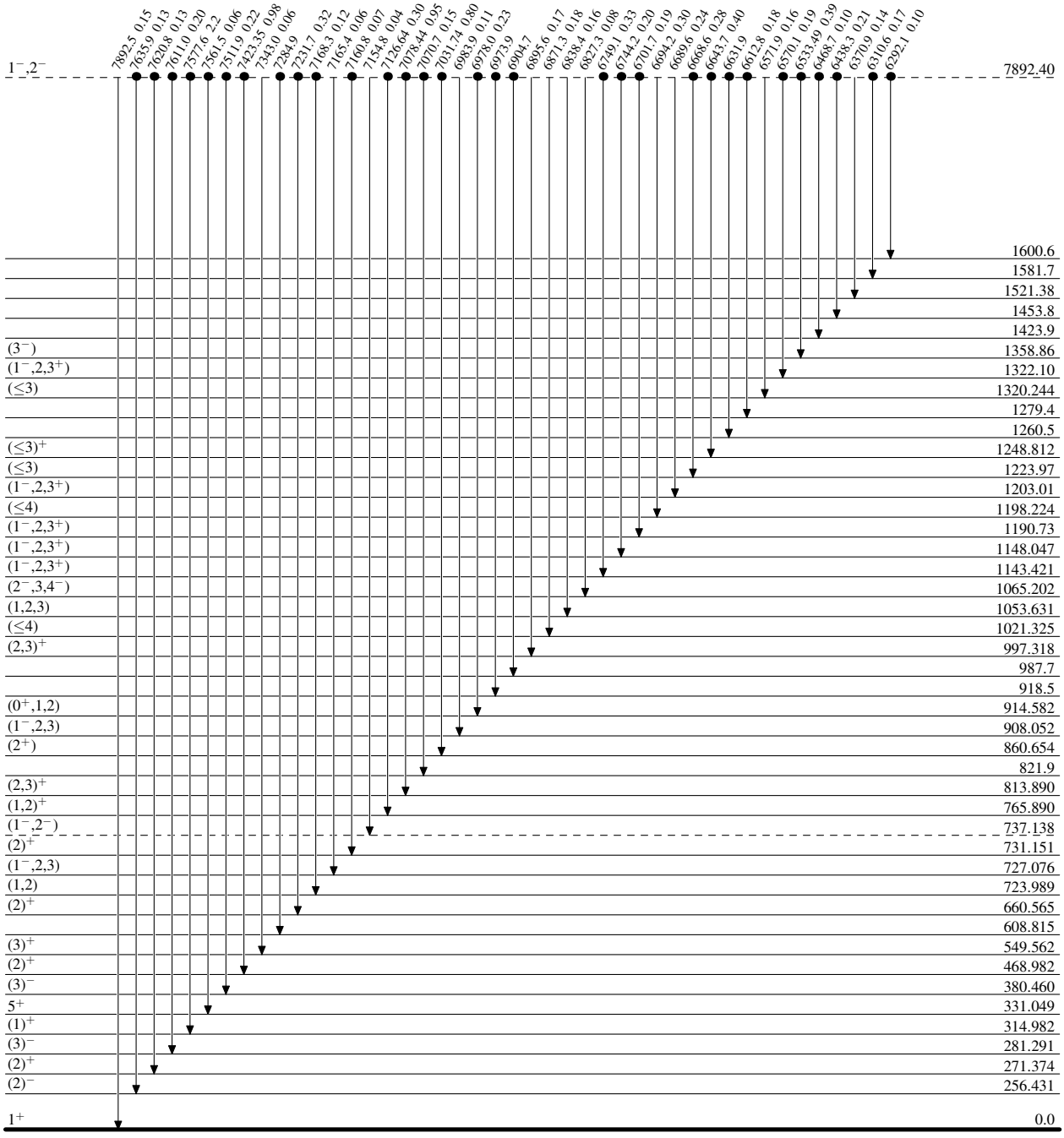
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{80}_{35}Br_{45}$

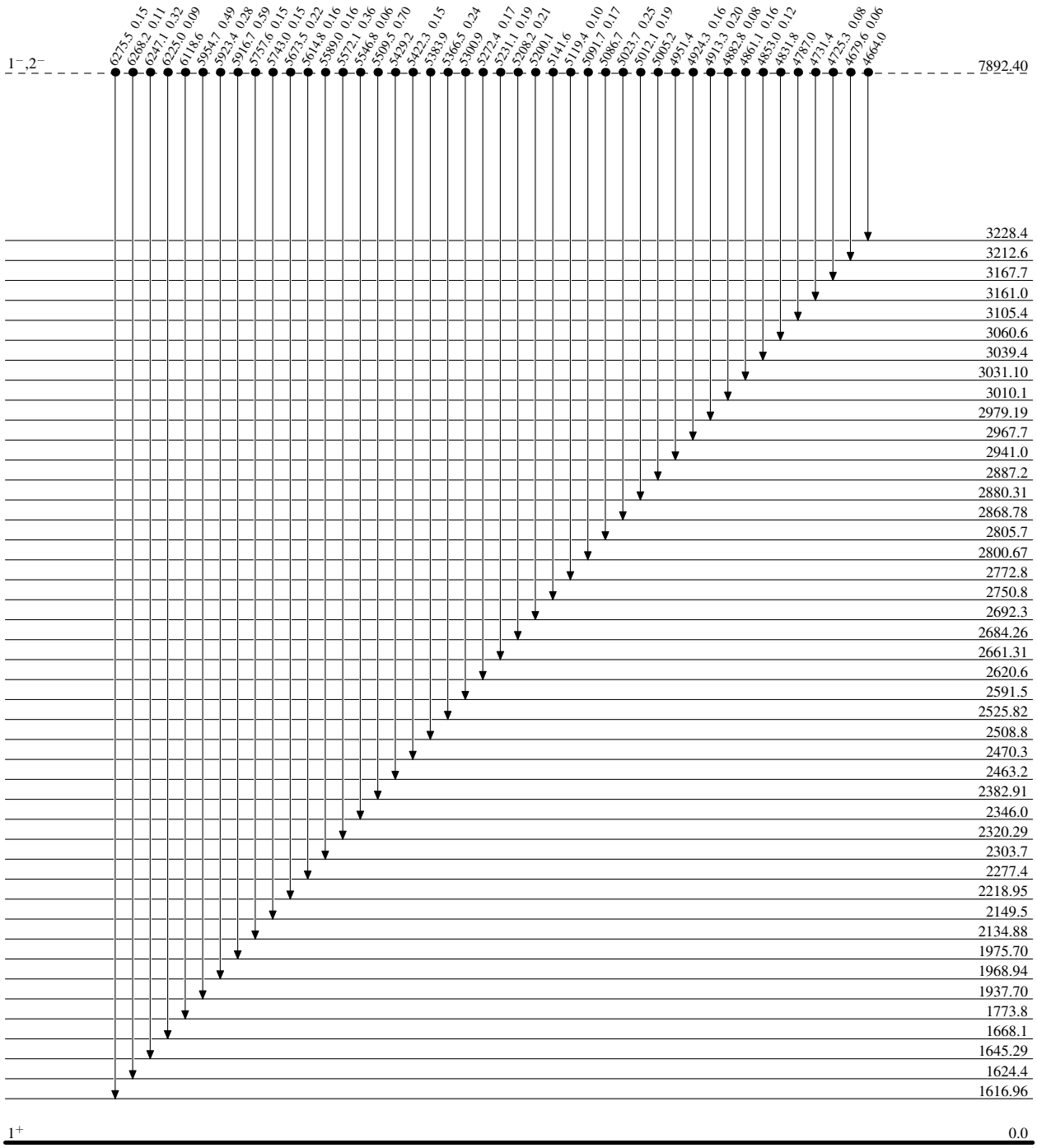
^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures



$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures

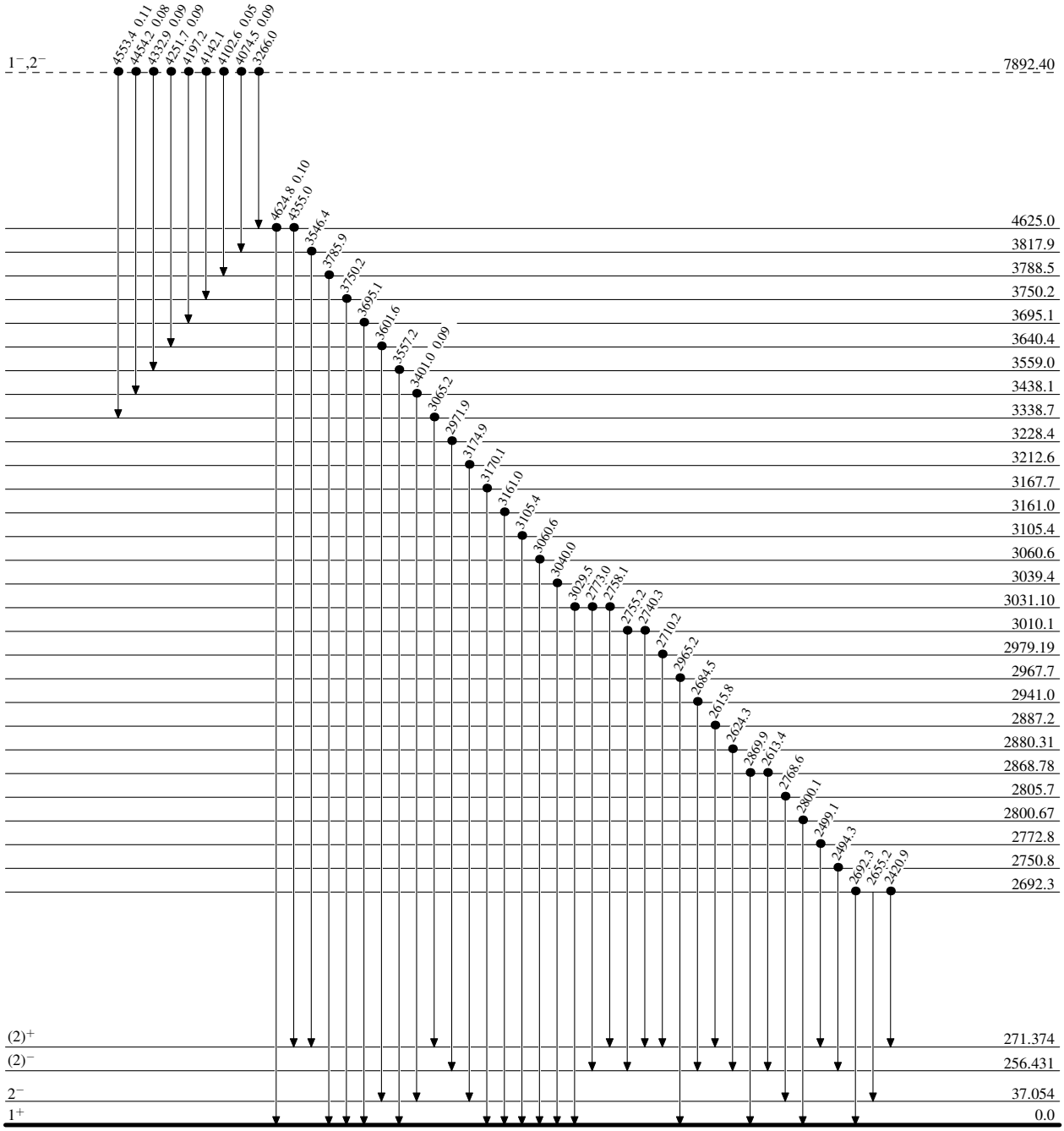
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

Coincidence



$^{80}_{35}Br_{45}$

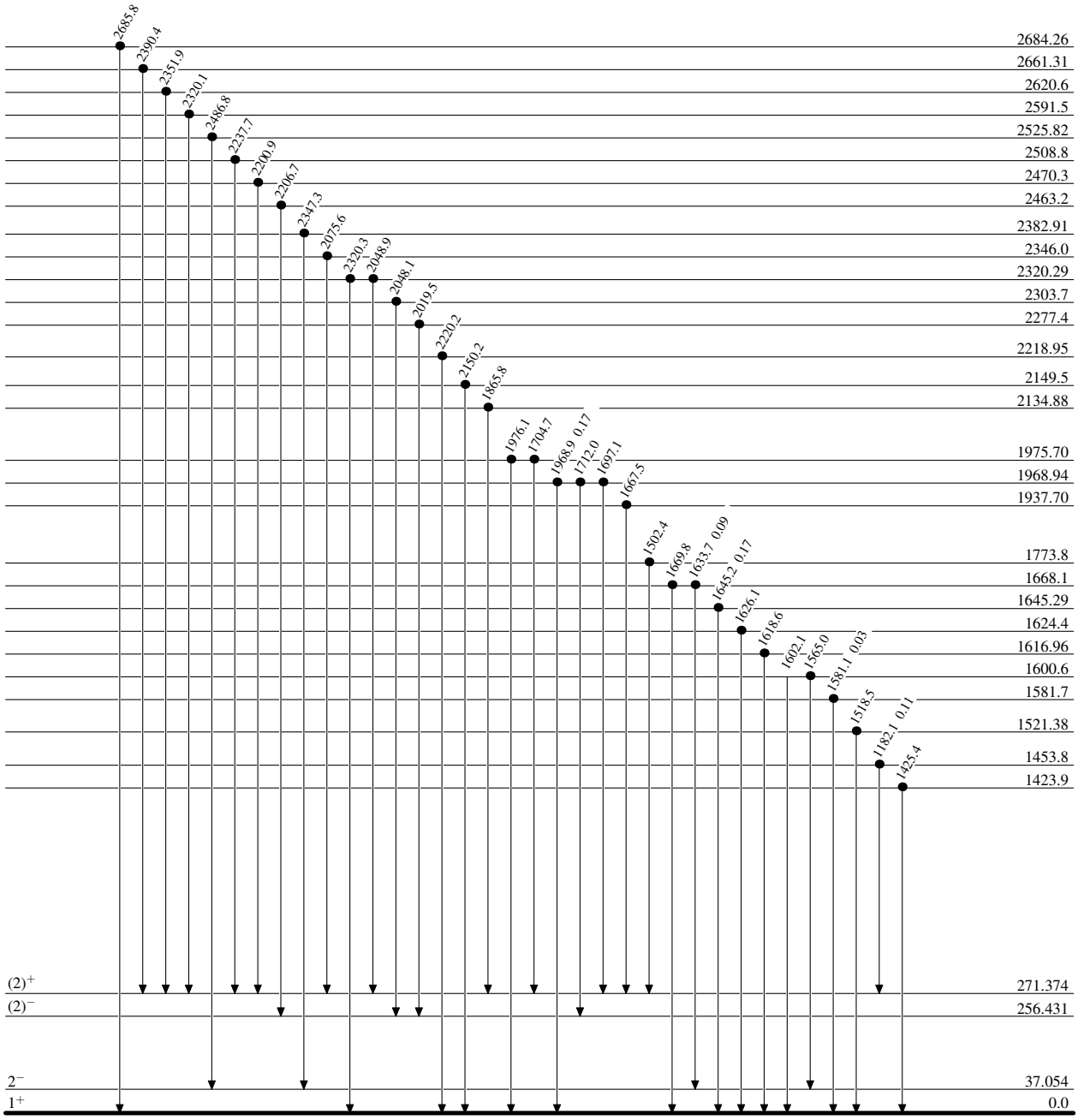
^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures

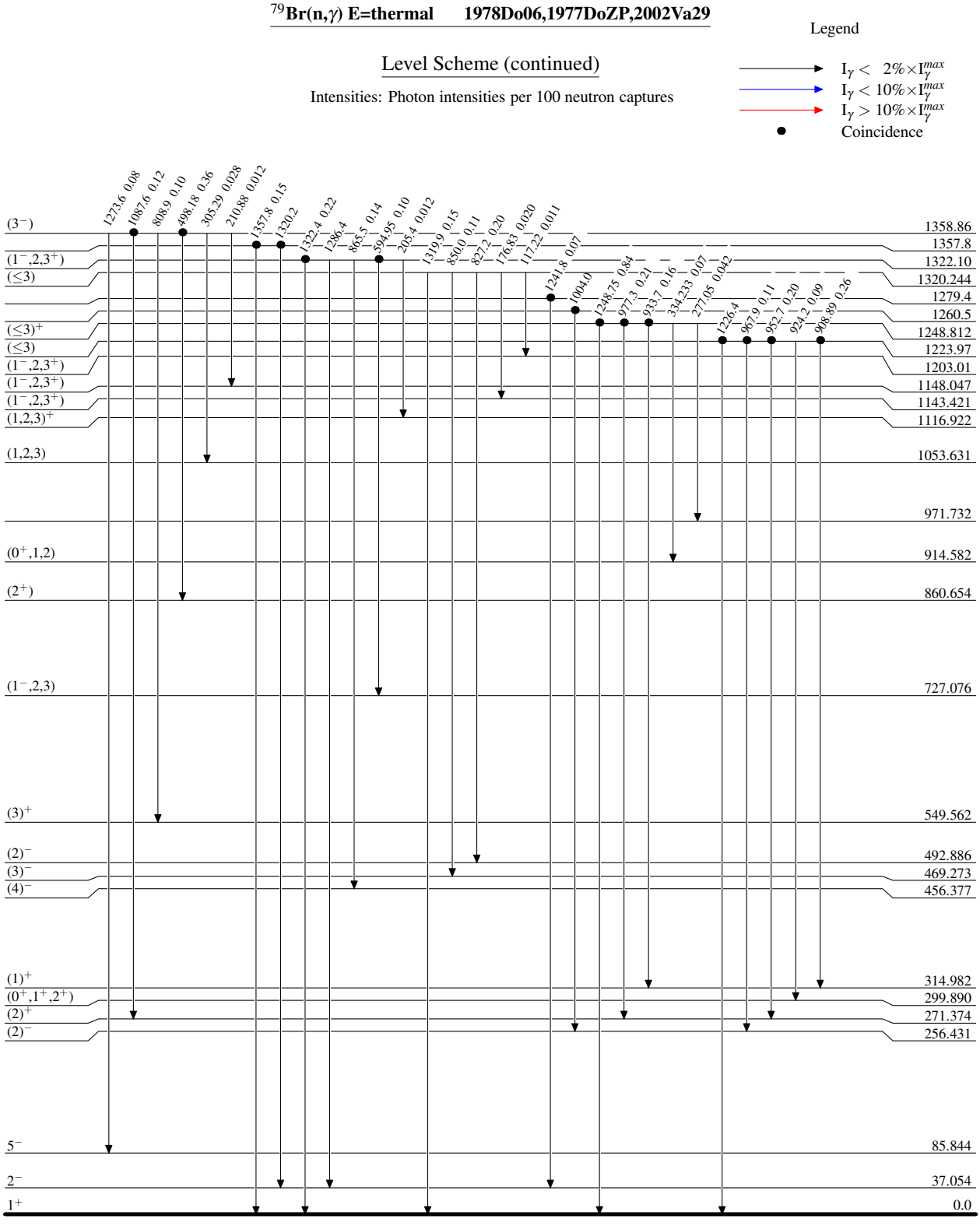


$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures



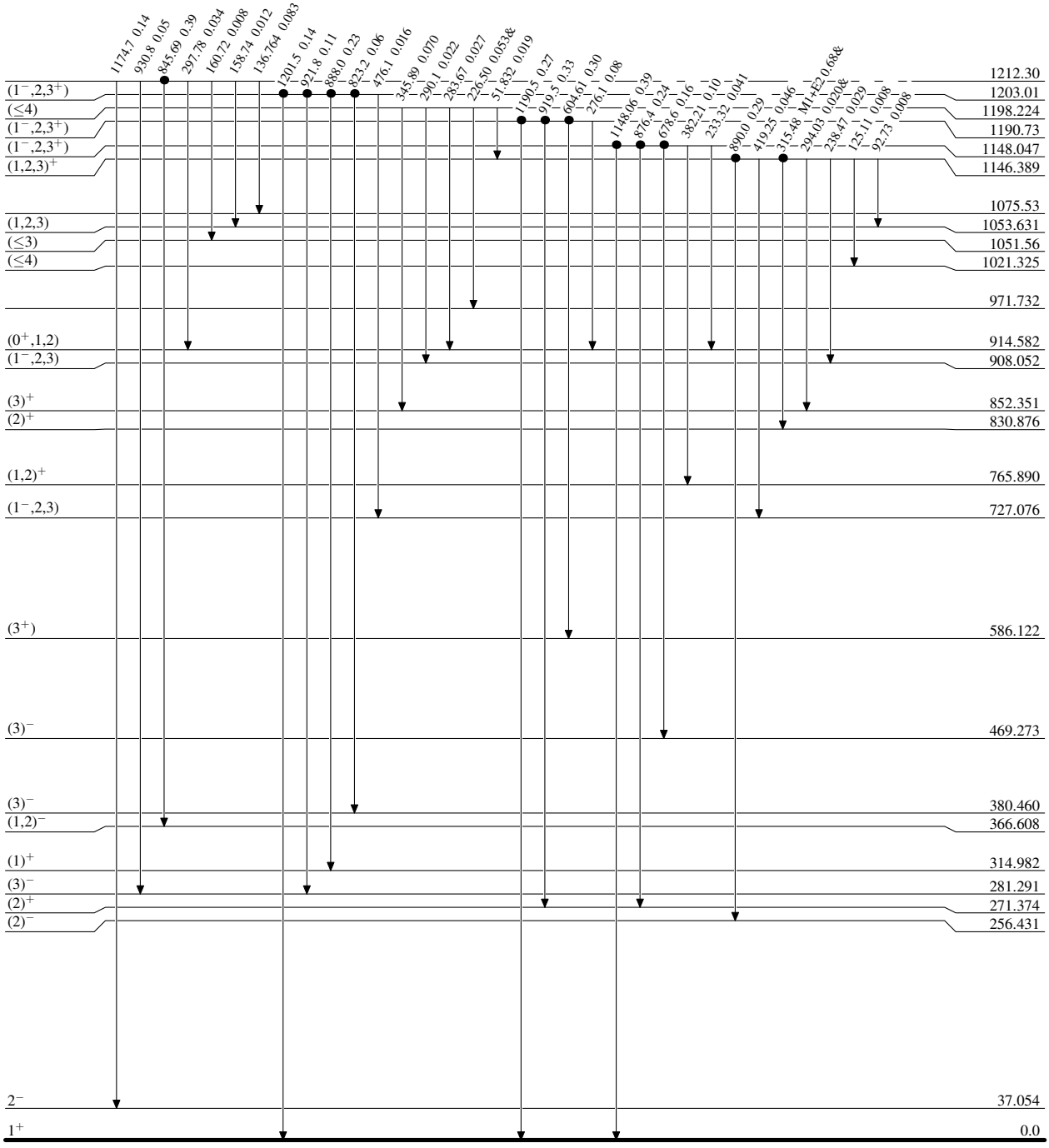
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



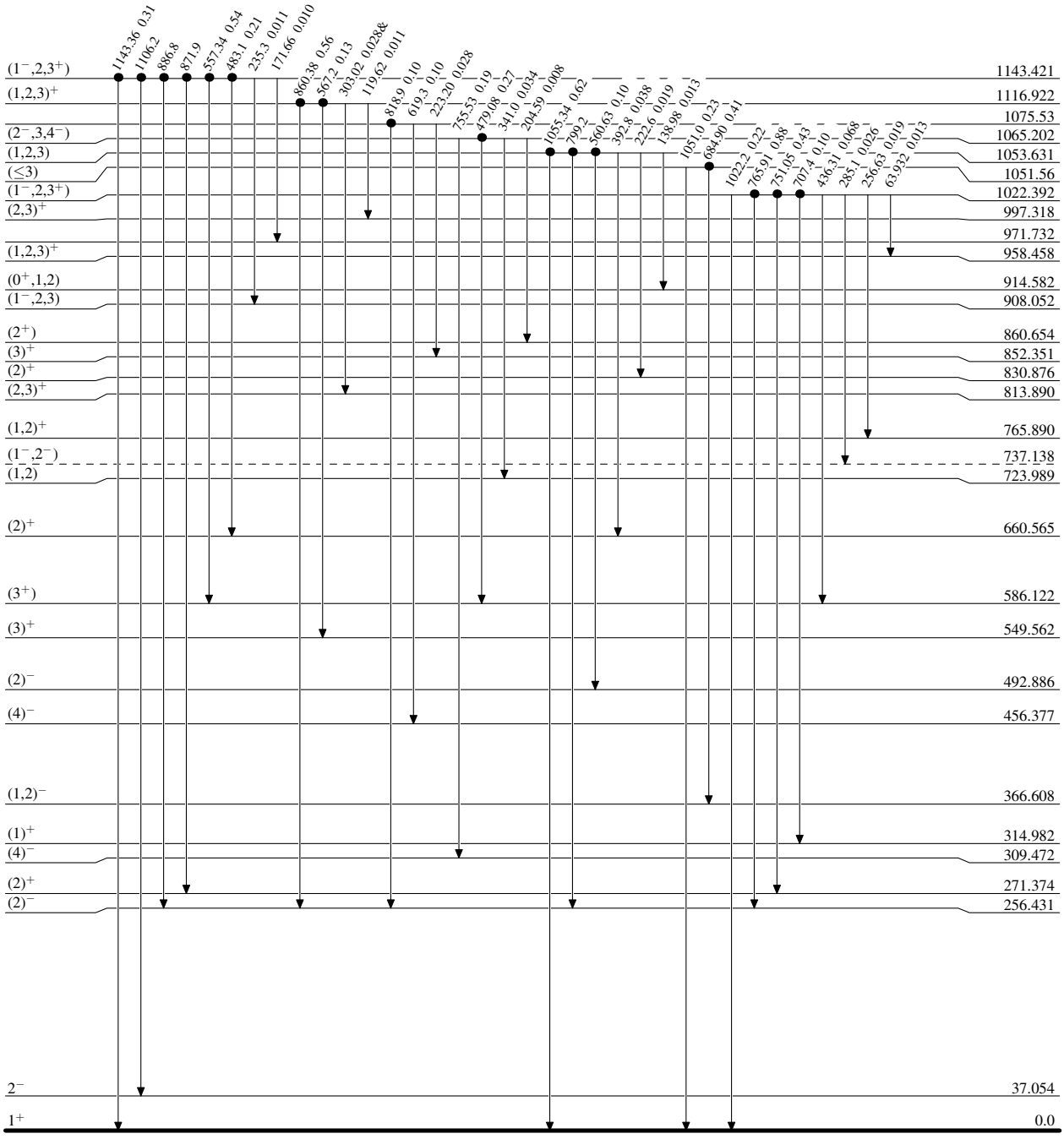
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



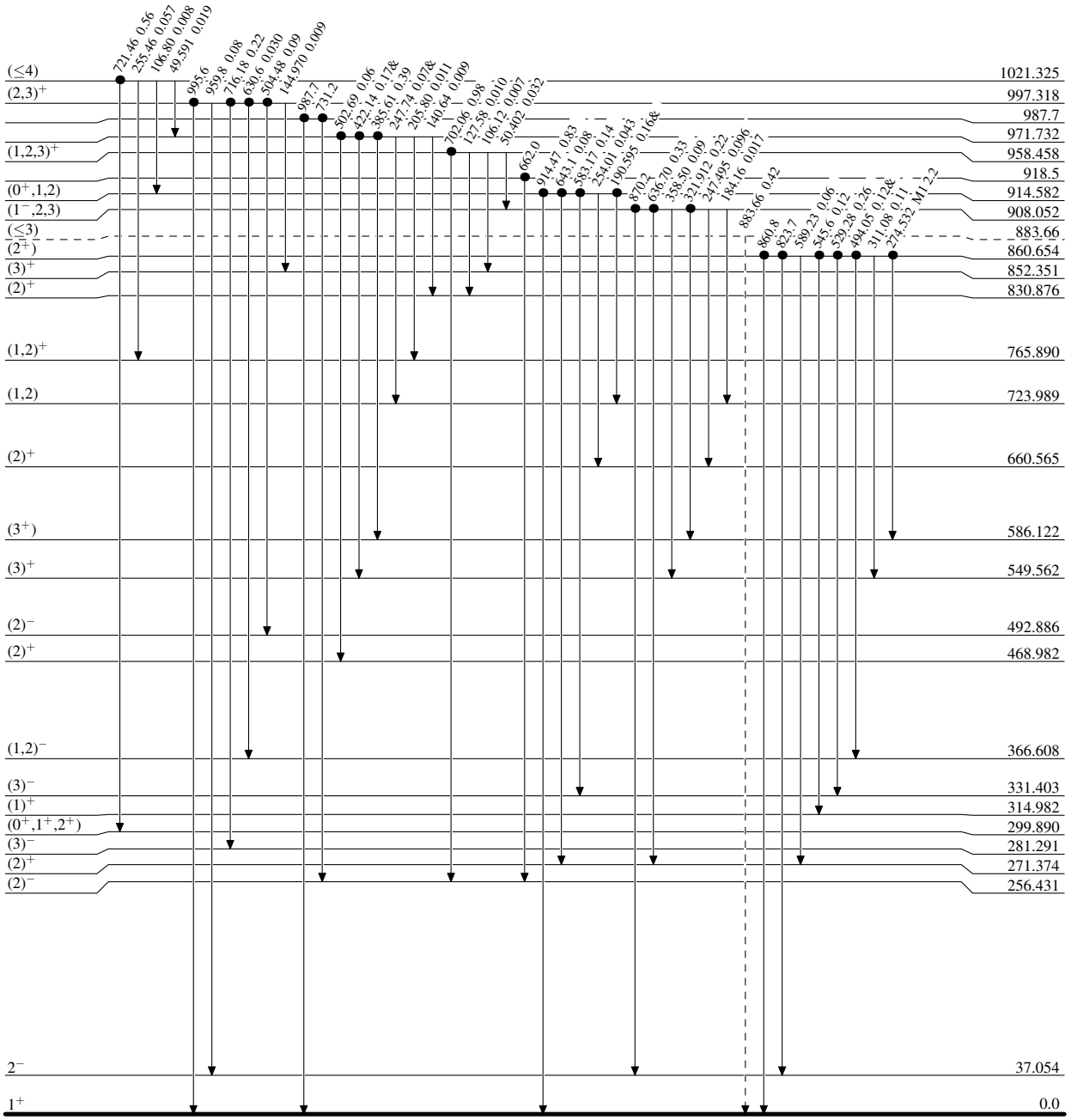
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& 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)
- Coincidence



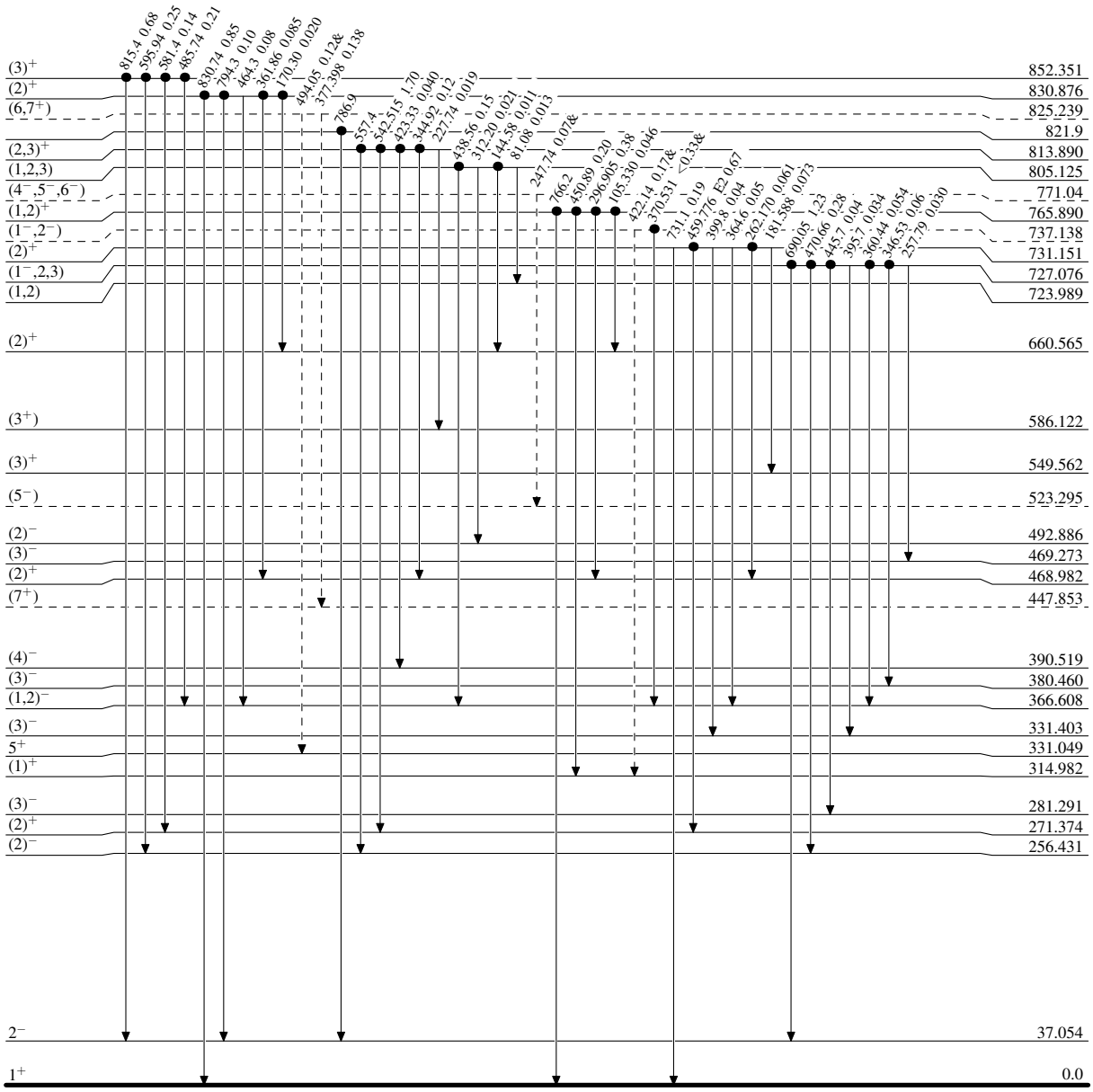
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& 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)
- Coincidence



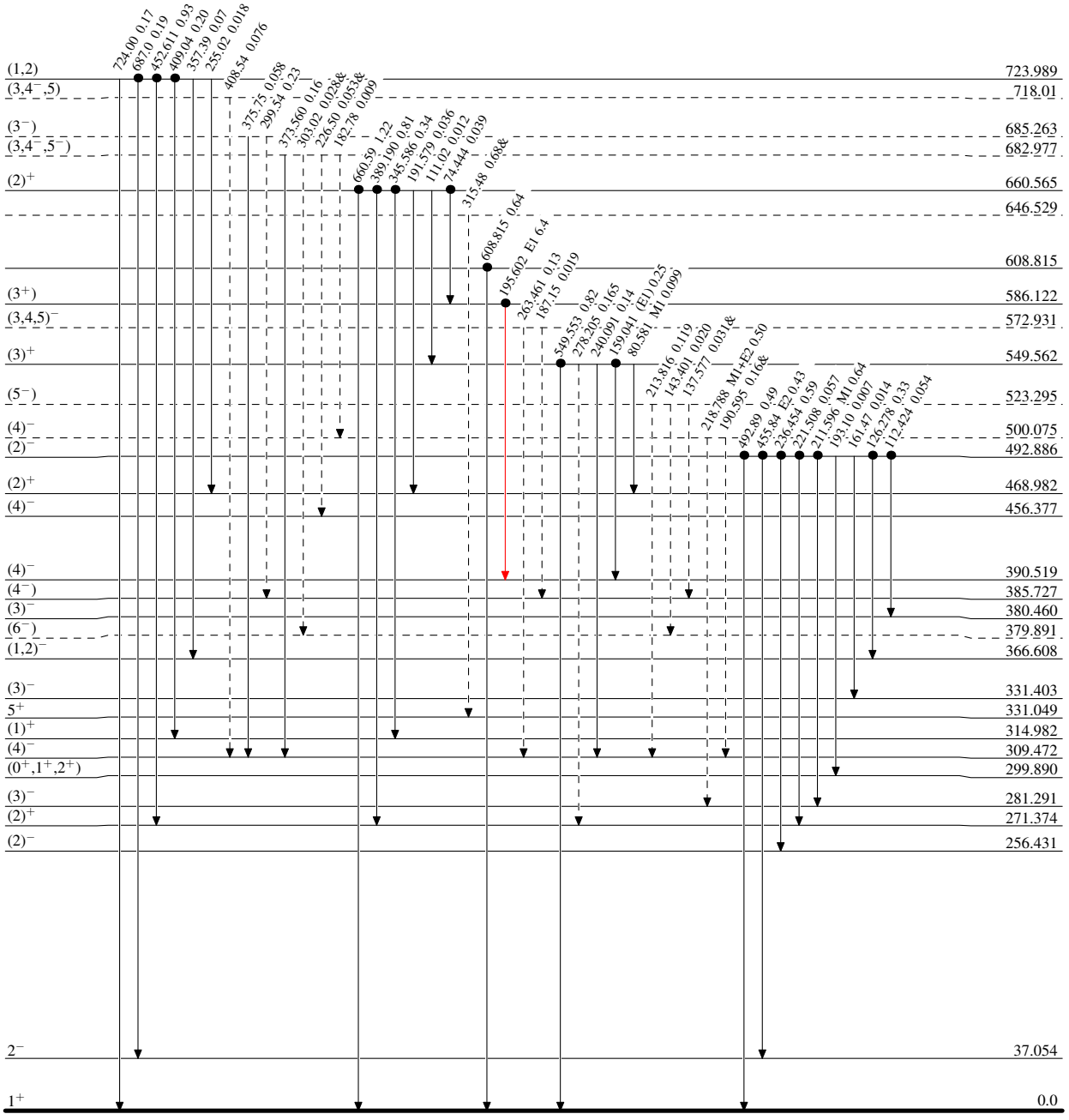
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& 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)
- Coincidence



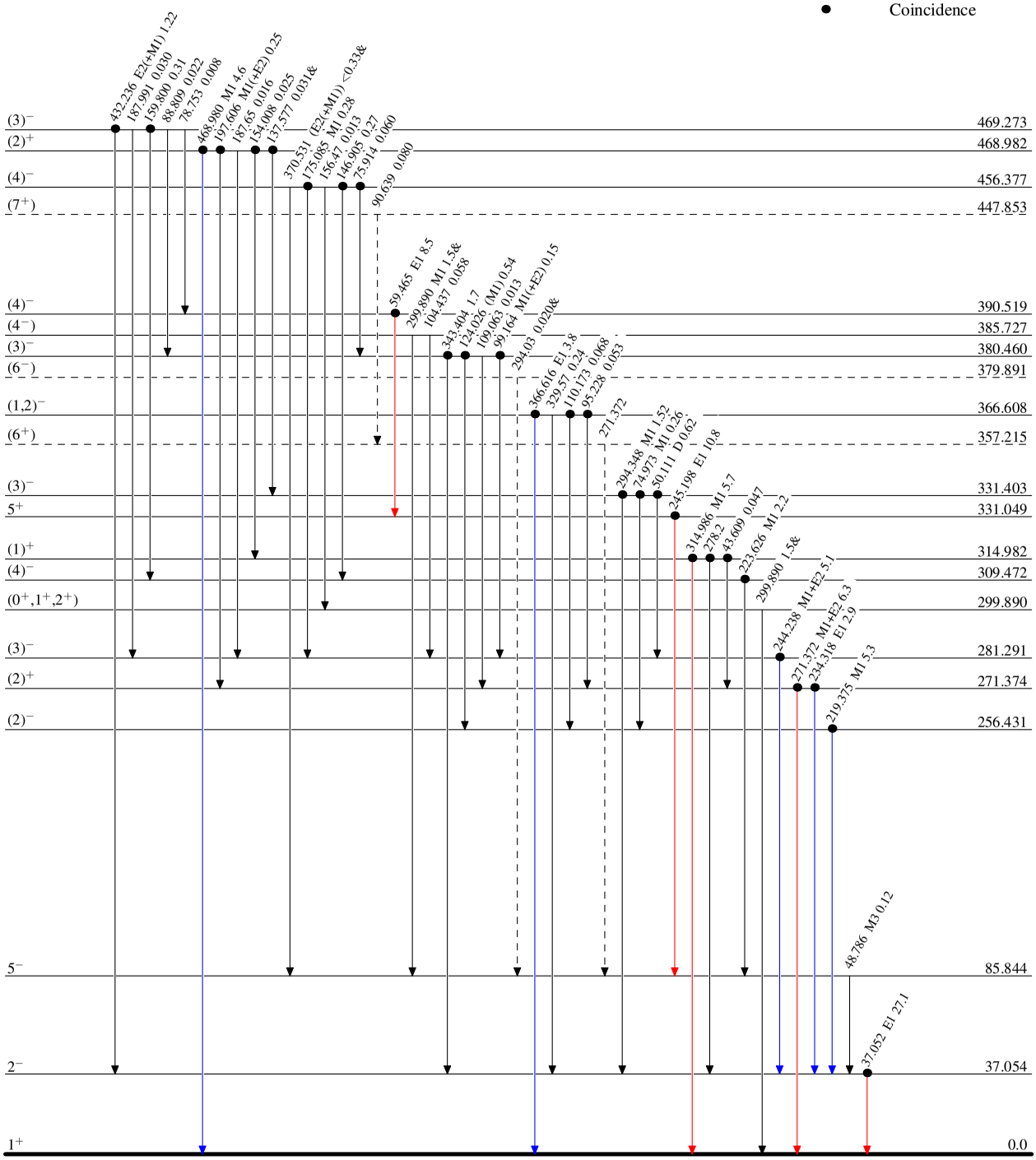
$^{80}_{35}Br_{45}$

^{79}Br(n,γ) E=thermal 1978Do06,1977DoZP,2002Va29

Level Scheme (continued)

Intensities: Photon intensities per 100 neutron captures
& 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)
- Coincidence



$^{80}_{35}Br_{45}$