^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	30-Sep-2020

References: 1985To10, 1982ToZS, 1981En07, 1979BrZE, 1971Ra07.
Eγ, Iγ data: 2007ChZX, 1985To10, 1982ToZS, 1981En07, 1979BrZE, 1971Ra07.
γγ-coin data: 1985To10, 1971Ra07.
ce data: 1985To10.
γ(circular pol): 1971Kn06.
1985To10, 1982ToZS use a curved-crystal spectrometer for low-energy secondary transitions.
The level scheme is based on the γ, γγ data of 1985To10 and 1971Ra07. Placements suggested by 1979BrZE on the basis of energy sums are also included in cases where more precise Eγ values taken from 1985To10 agree with level energy differences.
2007ChZX: prompt γ activation analysis (PGAA database for elemental analysis), natural target. In the measurements at Budapest, 52 primary and 166 secondary γ rays were identified. The energies and relative intensities (deduced from measured elemental cross sections) are in good agreement with those from 1982ToZS and 1985To10, but the data in the latter are more complete and generally more precise, thus adopted here. For data from 2007ChZX, consult PGAA websites at IAEA and LBNL.

^{77}Se Levels

E(level)†	Jπ#	$T_{1/2}$	Comments
0.0	$1/2^-$	stable	
161.9223 *9*	$7/2^+$	17.36 s *5*	$T_{1/2}$: from the Adopted Levels.
175.3058 *16*	$9/2^+$		
238.9986 *12*	$3/2^-$		
249.7884 *11*	$5/2^-$		
301.1495 *11*	$5/2^+$		
439.4515 *14*	$5/2^-$		
520.6386 *15*	$3/2^-$		
581.0103 *17*	$7/2^-$		
680.1034 *17*	$5/2^+$		
796.151 *5*	$7/2^{(+)}$		
808.185 *3*	$7/2^-$		
817.8561 *20*	$1/2^-$&		
824.4307 *19*	$(5/2)^-$		
911.5316 *18*	$(3/2)^+$		
946.9821 *21*	$1/2^+$		
1005.1836 *19*	$3/2^-$		
1128.113 *4*	$1/2^+$		
1132.457 *4*			
1186.9835 *22*	(3/2)		
1230.627 *5*	$(5/2)^-$		
1252.962 *5*	$5/2^+$		
1364.273 *4*	$(3/2^-,5/2^+)$		
1402.484 *3*	$(3/2^-)$@&		
1411.626 *4*	$(3/2^-)$@&		
1488.237 *4*	$(3/2)^-$		
1511.023 *3*	(3/2)		
1607.702 *8*	$3/2^+,5/2^+$		
1623.145 *5*	$(1/2^-)$@&		
1714.755 *8*	$1/2^-,3/2^-$		
1817.637 *6*	$1/2^-$@&		
1830.861 *12*	$(1/2^-,3/2)$		
1888.64 *4*			
1916.064 *11*	$(1/2^+,3/2)$		
2142.55 *6*			

Continued on next page (footnotes at end of table)

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

^{77}Se Levels (continued)

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
2212.03 *3*	$1/2^-,3/2^-$	2982.94 *9*	(1/2,3/2)	3472.86 *14*	
2248.929 *8*	$3/2^+,5/2^+$	2994.14 *5*		3480.52 *11*	
2264.33 *5*	$(3/2^-)$	3040.34 *8*	$(3/2^-,5/2^+)$	3517.91 *10*	$(3/2^+)$
2320.14 *9*		3051.20 *9*		3545.65 *12*	$(3/2^+,5/2^+)$
2339.93 *4*	$(3/2^-,5/2^+)$	3063.93 *9*	$(3/2,5/2^+)$	3552.44 *15*	$(3/2^-)$
2375.3 *3*	$(3/2^+,5/2^+)$	3132.06 *11*		3561.25 *16*	
2392.952 *23*	$3/2^-$ @&	3168.22 *18*	$(3/2^+,5/2^+)$	3642.15 *15*	$(5/2^+)$
2455.456 *11*		3191.58 *16*		3694.43 *24*	$(3/2^+,5/2^+)$
2491.95 *4*		3232.83 *11*	(1/2,3/2)	3718.49 *9*	
2551.94 *8*	$(3/2^-)$	3243.95 *10*		3772.37 *14*	$(5/2^+)$
2553.82 *9*		3312.79 *13*	(1/2,3/2)	3798.21 *14*	$(3/2^+,5/2^+)$
2640.970 *24*	$(3/2^+,5/2^+)$	3327.05 *17*	$(3/2^-,5/2^+)$	3827.08 *24*	
2716.33 *6*	(3/2)	3348.67 *14*	(1/2,3/2)	3868.62 *11*	$(5/2^+)$
2776.74 *4*	$(1/2^-,3/2)$	3354.31 *14*	(1/2,3/2)	3934.71 *21*	$(3/2^-,5/2^+)$
2809.14 *6*	(1/2,3/2)	3362.25 *11*		4068.49 *15*	$(5/2^+)$
2815.49 *10*		3396.01 *17*		4212.23 *20*	
2853.09 *4*	$(1/2^-,3/2^-)$ @*a*	3412.45 *10*	(1/2,3/2)	4243.64 *10*	
2873.00 *7*	(3/2) @	3414.97 *6*	(1/2,3/2)	4289.0 *3*	(1/2,3/2)
2891.94 *4*	$(3/2^-)$	3450.46 *14*	$(3/2^+,5/2^+)$	(7418.878‡ *16*)	$1/2^+$ *b*

† From least-squares fit to Eγ data. All doubly placed γ rays were omitted in the fitting procedure, including the following γ rays which deviated by more than 5 standard deviations: 4963, 5170 and 5205 primary γ rays from the capture state and 678.68 weak γ from 2392 level. The resulting fit gives normalized χ^2=2.0 as compared to critical χ^2=1.2 with 11 γ rays deviating by 3-4 standard deviations as noted in comments. Other four γ rays which were omitted from the fit deviate by more than 5 standard deviations.

‡ From least-squares fit, agrees with S(n)=7418.86 *6* (2017Wa10).

Listed values are from the Adopted Levels, unless otherwise stated.

@ Strong primary transition from J=$1/2^+$ capture state restricts J to 1/2,3/2.

& From circular-polarization measurement (1971Kn06).

a Circular-polarization measurement favors J=1/2 (1971Kn06).

b s-wave capture in ^{76}Se g.s.

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se)

Iγ normalization: Per 100 thermal neutron captures. Normalization factor is in good agreement with that obtained from PGAA database (2007ChZX).

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ	α[9]	Comments
13.4		175.3058	9/2$^+$	161.9223	7/2$^+$				E_γ: from level energy difference.
51.3620 *13*	0.48 *5*	301.1495	5/2$^+$	249.7884	5/2$^-$	E1		0.570	α(K)exp=0.62 *7* α(K)=0.506 *7*; α(L)=0.0549 *8*; α(M)=0.00843 *12*; α(N)=0.000681 *10* δ: α(K)exp gives δ=0.11 *3*; however, from RUL, this δ would require $T_{1/2}$(301 level)>1 μs.
62.1503 *10*	0.047 *5*	301.1495	5/2$^+$	238.9986	3/2$^-$				
81.1862 *20*	0.0085 *22*	520.6386	3/2$^-$	439.4515	5/2$^-$				
87.8671 *14*	3.3 *4*	249.7884	5/2$^-$	161.9223	7/2$^+$	E1+M2	0.17 *3*	0.161 *17*	α(K)exp=0.130 *14*; α(L)exp=0.0180 *23* α(K)=0.142 *15*; α(L)=0.0163 *20*; α(M)=0.0025 *4*; α(N)=0.00021 *3* Mult.,δ: the α(K), α(L1) and α(L23) data all suggest an M2 admixture, and are consistent with δ=0.17 *3*; however, from RUL, one expect δ<0.010. The ce data are also not consistent with pure E1 including penetration effects.
99.5[c] *4*	0.03 *1*	680.1034	5/2$^+$	581.0103	7/2$^-$				
125.8437 *12*	1.09 *6*	301.1495	5/2$^+$	175.3058	9/2$^+$	E2[m]		0.354	α(K)exp=0.252 *13*; α(L)exp=0.0426 *38* α(K)=0.308 *5*; α(L)=0.0396 *6*; α(M)=0.00613 *9*; α(N)=0.000477 *7*
139.2266 *15*	9.0 *6*	301.1495	5/2$^+$	161.9223	7/2$^+$	M1+E2	0.75 *3*	0.114 *4*	α(K)exp=0.105 *7*; α(L)exp=0.0118 *10*; α(M)exp=0.00191 *15* α(K)=0.100 *4*; α(L)=0.0121 *5*; α(M)=0.00188 *7*; α(N)=0.000150 *6*
[x]141.309 *18*	0.0065 *12*								
141.558 *3*	0.0645 *23*	581.0103	7/2$^-$	439.4515	5/2$^-$				
159.461 *3*	0.0502 *23*	680.1034	5/2$^+$	520.6386	3/2$^-$				
161.9224 *11*	12.4 *6*	161.9223	7/2$^+$	0.0	1/2$^-$	E3[m]		0.881	α(K)exp=0.746 *38*; α(L)exp=0.130 *8*; α(M)exp=1.18×10^{-02} *26* α(K)=0.735 *11*; α(L)=0.1251 *18*; α(M)=0.0195 *3*; α(N)=0.001414 *20*
[x]165.039 *3*	0.0360 *22*								
[x]165.305 *5*	0.019 *4*								
177.289 *13*	0.0077 *10*	1364.273	(3/2$^-$,5/2$^+$)	1186.9835	(3/2)				
180.746 *4*	0.415 *16*	1005.1836	3/2$^-$	824.4307	(5/2)$^-$	M1		0.0210	α(K)exp=0.0191 *27* α(K)=0.0186 *3*; α(L)=0.00201 *3*; α(M)=0.000313 *5*; α(N)=2.66×10^{-5} *4*
181.117 *17*	0.009 *4*	1128.113	1/2$^+$	946.9821	1/2$^+$				

$^{77}_{34}Se_{43}$-3

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	δ	α 9	Comments
x186.92 *3*	0.0055 *14*								
187.323 *4*	0.105 *8*	1005.1836	3/2⁻	817.8561	1/2⁻				
189.663 *3*	0.024 *3*	439.4515	5/2⁻	249.7884	5/2⁻				
200.4506 *23*	3.26 *14*	439.4515	5/2⁻	238.9986	3/2⁻	M1(+E2)	<0.24	0.0174 *13*	α(K)exp=0.0146 *7*; α(L1)exp=2.08×10^{-03} *23* α(K)=0.0154 *12*; α(L)=0.00167 *14*; α(M)=0.000260 *22*; α(N)=2.20×10^{-5} *17*
x207.53 *3*	0.0044 *11*								
216.561 *13*	0.0070 *10*	1128.113	1/2⁺	911.5316	(3/2)⁺				
x216.71 *4*	0.0033 *9*								
x222.93 *5*	0.0065 *15*								
x225.439 *11*	0.0098 *13*								
231.4255 *20*	1.53 *9*	911.5316	(3/2)⁺	680.1034	5/2⁺	M1(+E2)	<0.34	0.0125 *14*	α(K)exp=0.0105 *14* α(K)=0.0111 *12*; α(L)=0.00120 *15*; α(M)=0.000187 *22*; α(N)=1.58×10^{-5} *18*
x235.275 *11*	0.0066 *8*								
238.9963 *21*	24.3 *12*	238.9986	3/2⁻	0.0	1/2⁻	M1+E2	0.25 *7*	0.0116 *8*	α(K)exp=0.0102 *5*; α(L1)exp=1.06×10^{-03} *5*; α(M)exp=1.74×10^{-04} α(K)=0.0103 *7*; α(L)=0.00112 *9*; α(M)=0.000174 *13*; α(N)=1.47×10^{-5} *11*
239.9981 *23*	0.180 *20*	1186.9835	(3/2)	946.9821	1/2⁺				
240.642 *15*	0.0111 *11*	680.1034	5/2⁺	439.4515	5/2⁻				
243.414 *3*	0.055 *5*	824.4307	(5/2)⁻	581.0103	7/2⁻				
x247.768 *4*	0.0213 *17*								
249.7862 *24*	6.7 *5*	249.7884	5/2⁻	0.0	1/2⁻	E2 *m*		0.0284	α(K)exp=0.0253 *15*; α(L)exp=3.12×10^{-03} *28*; α(M)exp=5.7×10^{-04} *9* α(K)=0.0251 *4*; α(L)=0.00285 *4*; α(M)=0.000443 *7*; α(N)=3.62×10^{-5} *5*
x264.654 *24*	0.0049 *20*								
266.872 *4*	0.0418 *23*	946.9821	1/2⁺	680.1034	5/2⁺				
270.847 *3*	0.220 *16*	520.6386	3/2⁻	249.7884	5/2⁻				
274.370 *5*	0.0236 *14*	1402.484	(3/2⁻)	1128.113	1/2⁺				
275.446 *4*	0.037 *3*	1186.9835	(3/2)	911.5316	(3/2)⁺				
277.523 *4*	0.047 *3*	439.4515	5/2⁻	161.9223	7/2⁺				
x279.194 *6*	0.0183 *17*								
279.849 *20*	0.0095 *19*	581.0103	7/2⁻	301.1495	5/2⁺				
x280.77 *3*	0.0031 *6*								
281.638 *3*	1.49 *9*	520.6386	3/2⁻	238.9986	3/2⁻	M1+E2	0.30 *8*	0.00124 *12*	α(K)exp=0.0069 *5* α(K)=0.0069 *5*; α(L)=0.00075 *6*; α(M)=0.000116 *9*; α(N)=9.8×10^{-6} *7*
283.501 *24*	0.0034 *6*	1411.626	(3/2⁻)	1128.113	1/2⁺				
x286.574 *4*	0.060 *4*								
x289.883 *6*	0.025 *3*								
297.2151 *25*	4.14 *22*	817.8561	1/2⁻	520.6386	3/2⁻	M1+E2	0.17 *13*	0.0062 *6*	α(K)exp=0.00557 *33*

$^{77}_{34}Se_{43}$-4

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ	α[9]	Comments
									α(K)=0.0056 *5*; α(L)=0.00059 *6*; α(M)=9.2×10^{-5} *9*; α(N)=7.8×10^{-6} *7*
[x]298.70 *5*	0.0021 *6*								
303.790 *4*	0.65 *4*	824.4307	(5/2)$^-$	520.6386	3/2$^-$	M1		0.00567 *8*	α(K)exp=0.0054 *7* α(K)=0.00504 *7*; α(L)=0.000536 *8*; α(M)=8.35×10^{-5} *12*; α(N)=7.11×10^{-6} *10*
[x]309.230 *8*	0.0106 *8*								
[x]310.521 *17*	0.0064 *9*								
[x]315.649 *6*	0.0058 *6*								
319.837 *11*	0.0043 *9*	1830.861	(1/2$^-$,3/2)	1511.023	(3/2)				
324.035 *4*	0.0161 *10*	1511.023	(3/2)	1186.9835	(3/2)				
325.079 *3*	0.0340 *18*	1005.1836	3/2$^-$	680.1034	5/2$^+$				
329.398 *5*	0.0154 *25*	1817.637	1/2$^-$	1488.237	(3/2)$^-$				
331.2201 *26*	0.59 *4*	581.0103	7/2$^-$	249.7884	5/2$^-$	M1+E2	1.00 *25*	0.0076 *9*	α(K)exp=0.0067 *9* α(K)=0.0067 *8*; α(L)=0.00073 *9*; α(M)=0.000114 *14*; α(N)=9.5×10^{-6} *11*
[x]335.738 *11*	0.0049 *9*								
[x]340.023 *11*	0.0040 *6*								
[x]341.42 *4*	0.0054 *10*								
342.011 *3*	0.065 *4*	581.0103	7/2$^-$	238.9986	3/2$^-$				
[x]345.08 *5*	0.0030 *5*								
[x]346.54 *3*	0.0022 *5*								
[x]348.292 *6*	0.009 *4*								
[x]351.481 *13*	0.0045 *8*								
[x]352.323 *22*	0.0048 *5*								
[x]355.699 *10*	0.0213 *11*								
360.109 *13*	0.0083 *6*	1488.237	(3/2)$^-$	1128.113	1/2$^+$				
[x]361.856 *5*	0.0284 *11*								
362.542[d] *4*	0.0252 *13*	1186.9835	(3/2)	824.4307	(5/2)$^-$				
[x]363.250 *8*	0.0092 *6*								
368.733 *3*	0.331 *21*	808.185	7/2$^-$	439.4515	5/2$^-$				
378.402 *5*	0.063 *5*	817.8561	1/2$^-$	439.4515	5/2$^-$				
378.944 *5*	0.283 *21*	680.1034	5/2$^+$	301.1495	5/2$^+$				
384.976 *5*	0.426 *24*	824.4307	(5/2)$^-$	439.4515	5/2$^-$				
390.890 *6*	0.423 *15*	911.5316	(3/2)$^+$	520.6386	3/2$^-$				
[x]396.75 *6*	0.0026 *9*								
397.291 *6*	0.302 *15*	1402.484	(3/2$^-$)	1005.1836	3/2$^-$				
[x]404.43 *3*	0.0022 *6*								
405.053 *17*	0.0078 *10*	1916.064	(1/2$^+$,3/2)	1511.023	(3/2)				
405.701 *10*	0.057 *3*	581.0103	7/2$^-$	175.3058	9/2$^+$				
[x]406.192 *22*	0.0103 *9*								
406.49 *3*	0.0039 *5*	1411.626	(3/2$^-$)	1005.1836	3/2$^-$				
[x]412.785 *10*	0.0201 *13*								

$^{77}_{34}Se_{43}$-5

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ [‡]	I_γ [#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [†]	α [9]	Comments
[x]417.65 *3*	0.0058 *7*							
419.082 *5*	0.137 *7*	581.0103	7/2$^-$	161.9223	7/2$^+$			
[x]422.431 *8*	0.0118 *9*							
424.178 *11*	0.0292 *21*	1005.1836	3/2$^-$	581.0103	7/2$^-$			
426.333 *10*	0.037 *3*	946.9821	1/2$^+$	520.6386	3/2$^-$			
[x]426.90 *5*	0.0022 *6*							
427.84 *3*	0.0040 *6*	1916.064	(1/2$^+$,3/2)	1488.237	(3/2)$^-$			
[x]428.57 *3*	0.0041 *7*							
430.305 *6*	0.0404 *24*	680.1034	5/2$^+$	249.7884	5/2$^-$			
[x]431.121 *17*	0.0061 *6*							
[x]431.67 *3*	0.0034 *6*							
[x]434.98 *3*	0.0025 *4*							
[x]436.189 *14*	0.0053 *5*							
[x]436.73 *4*	0.0025 *6*							
439.453 *4*	3.7 *4*	439.4515	5/2$^-$	0.0	1/2$^-$	E2[m]	0.00413 *6*	α(K)exp=0.0038 *5* α(K)=0.00367 *6*; α(L)=0.000398 *6*; α(M)=6.19×10^{-5} *9*; α(N)=5.18×10^{-6} *8*
[x]440.44 *6*	0.0022 *6*							
[x]440.908 *11*	0.0078 *15*							
441.115 *8*	0.015 *3*	680.1034	5/2$^+$	238.9986	3/2$^-$			
[x]441.837 *22*	0.0031 *4*							
[x]442.54 *10*	0.0013 *4*							
[x]442.933 *22*	0.0026 *4*							
[x]444.769 *8*	0.0317 *5*							
[x]449.746 *17*	0.0086 *15*							
[x]450.105 *10*	0.0050 *14*							
452.352[g] *3*	0.029 *3*	1132.457		680.1034	5/2$^+$			
452.735 *5*	0.0071 *8*	1364.273	(3/2$^-$,5/2$^+$)	911.5316	(3/2)$^+$			
[x]453.165 *25*	0.0030 *8*							
455.503 *6*	0.055 *7*	1402.484	(3/2$^-$)	946.9821	1/2$^+$			
[x]455.84 *11*	0.0058 *10*							
[x]456.11 *5*	0.0045 *7*							
[x]456.905 *6*	0.0114 *8*							
[x]463.286 *15*	0.0073 *8*							
464.635 *15*	0.0045 *4*	1411.626	(3/2$^-$)	946.9821	1/2$^+$			
[x]465.48 *5*	0.0017 *4*							
[x]466.352 *11*	0.0043 *9*							
[x]467.77 *3*	0.0026 *5*							
[x]471.013 *11*	0.0069 *7*							
472.075 *3*	0.178 *19*	911.5316	(3/2)$^+$	439.4515	5/2$^-$			
[x]472.978 *20*	0.0063 *8*							
[x]473.43 *3*	0.0031 *6*							
[x]473.47 *6*	0.0030 *7*							
[x]475.008 *14*	0.0045 *6*							

$^{77}_{34}Se_{43}$-6

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	α 9	Comments
483.051 *5*	0.178 *25*	1488.237	$(3/2)^-$	1005.1836	$3/2^-$			
484.545 *8*	1.34 *20*	1005.1836	$3/2^-$	520.6386	$3/2^-$	M1(+E2)	0.0025 *6*	α(K)exp=0.00177 *32* α(K)=0.0022 *6*; α(L)=0.00023 *6*; α(M)=3.6×10^{-5} *9*; α(N)=3.1×10^{-6} *8*
x486.66 *3*	0.0041 *6*							
x487.05 *5*	0.0036 *7*							
x487.34 *3*	0.0052 *8*							
x488.02 *3*	0.0029 *5*							
x488.80 *3*	0.0047 *7*							
x489.14 *7*	0.0026 *7*							
x489.552 *14*	0.031 *4*							
x490.45 *6*	0.0017 *4*							
490.96 *7*	0.0068 *6*	1402.484	$(3/2^-)$	911.5316	$(3/2)^+$			
x493.426 *17*	0.0050 *14*							
494.992 *6*	0.178 *25*	796.151	$7/2^{(+)}$	301.1495	$5/2^+$			
x503.90 *3*	0.014 *3*							
504.795 *8*	0.31 *4*	680.1034	$5/2^+$	175.3058	$9/2^+$			
505.839 *5*	0.102 *17*	1511.023	(3/2)	1005.1836	$3/2^-$			
x506.461 *21*	0.0142 *18*							
506.896 *8*	0.037 *8*	1186.9835	(3/2)	680.1034	$5/2^+$			
513.553 *15*	0.0117 *15*	1916.064	$(1/2^+,3/2)$	1402.484	$(3/2^-)$			
x517.076 *14*	0.041 *12*							
518.178 *6*	3.3 *3*	680.1034	$5/2^+$	161.9223	$7/2^+$	M1	0.00160 *2*	α(K)exp=0.00124 *15* α(K)=0.001423 *20*; α(L)=0.0001494 *21*; α(M)=2.33×10^{-5} *4*; α(N)=1.99×10^{-6}
520.639 *4*	14.3 *14*	520.6386	$3/2^-$	0.0	$1/2^-$	M1	0.00158 *2*	α(K)exp=0.00124 *12*; α(L1)exp=0.000110 *20* α(K)=0.001408 *20*; α(L)=0.0001478 *21*; α(M)=2.30×10^{-5} *4*; α(N)=1.97×10^{-6}
523.277 *7*	0.032 *5*	824.4307	$(5/2)^-$	301.1495	$5/2^+$			
x524.19 *4*	0.0053 *10*							
x526.69 *4*	0.0069 *10*							
x527.43 *5*	0.0090 *12*							
527.79 *3*	0.0058 *9*	1714.755	$1/2^-,3/2^-$	1186.9835	(3/2)			
x528.41 *4*	0.0125 *14*							
x534.59 *4*	0.0030 *5*							
x535.411 *17*	0.0065 *11*							
x536.608 *9*	0.017 *3*							
x537.21 *5*	0.0033 *6*							
x538.32 *7*	0.0028 *8*							
x542.519 *25*	0.0062 *8*							
x549.178 *8*	0.039 *3*							
x550.50 *7*	0.0022 *6*							
x551.92 *4*	0.0048 *7*							

$^{77}_{34}Se_{43}$-7

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ [‡]	I_γ [#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [†]	α [9]	Comments
x553.60 *5*	0.0030 *6*							
x555.352 *18*	0.0057 *6*							
556.089 *22*	0.0090 *12*	1364.273	(3/2$^-$,5/2$^+$)	808.185	7/2$^-$			
558.400 *14*	0.0135 *22*	808.185	7/2$^-$	249.7884	5/2$^-$			
x558.85 *3*	0.028 *5*							
x559.11 *6*	0.012 *4*							
x559.63 *4*	0.0023 *14*							
x561.744 *18*	0.0076 *7*							
x562.35 *5*	0.0032 *6*							
x563.51 *11*	0.0051 *16*							
564.050 *10*	0.050 *7*	1511.023	(3/2)	946.9821	1/2$^+$			
x564.33 *6*	0.009 *3*							
565.732 *5*	0.54 *5*	1005.1836	3/2$^-$	439.4515	5/2$^-$			
568.067 *5*	1.44 *13*	817.8561	1/2$^-$	249.7884	5/2$^-$			
569.181 *8*	0.33 *3*	808.185	7/2$^-$	238.9986	3/2$^-$			
572.855[d] *7*	0.117 *10*	1252.962	5/2$^+$	680.1034	5/2$^+$			
x574.11 *10*	0.0103 *25*							
574.643 *5*	0.72 *7*	824.4307	(5/2)$^-$	249.7884	5/2$^-$			
x575.31 *13*	0.0060 *18*							
576.73 *17*	0.0030 *8*	1488.237	(3/2)$^-$	911.5316	(3/2)$^+$			
x577.45 *7*	0.0061 *14*							
578.853 *7*	3.3 *3*	817.8561	1/2$^-$	238.9986	3/2$^-$	M1	0.00124 *2*	α(K)exp=0.00110 *15* α(K)=0.001107 *16*; α(L)=0.0001160 *17*; α(M)=1.81×10^{-5} *3*; α(N)=1.544×10^{-6}
x582.549 *17*	0.0106 *12*							
584.631 *14*	0.040 *3*	1402.484	(3/2$^-$)	817.8561	1/2$^-$			
585.443 *8*	1.03 *9*	824.4307	(5/2)$^-$	238.9986	3/2$^-$			
587.192 *7*	0.058 *6*	1411.626	(3/2$^-$)	824.4307	(5/2)$^-$			
x591.40 *3*	0.0065 *12*							
x592.34 *8*	0.0058 *14*							
x593.559 *18*	0.058 *14*							
593.74 *5*	0.098 *9*	1411.626	(3/2$^-$)	817.8561	1/2$^-$			
x597.86 *7*	0.0043 *8*							
x599.13 *4*	0.018 *4*							
599.493 *10*	0.156 *13*	1511.023	(3/2)	911.5316	(3/2)$^+$			
x600.08 *3*	0.017 *3*							
x602.73 *4*	0.0150 *15*							
603.41 *3*	0.033 *3*	1411.626	(3/2$^-$)	808.185	7/2$^-$			
x605.20 *20*	0.0032 *15*							
606.32 *4*	0.0090 *13*	1402.484	(3/2$^-$)	796.151	7/2$^{(+)}$			
607.471 *5*	0.383 *20*	1128.113	1/2$^+$	520.6386	3/2$^-$			
610.381 *5*	0.50 *3*	911.5316	(3/2)$^+$	301.1495	5/2$^+$			
x614.980 *16*	0.0211 *25*							

$^{77}_{34}Se_{43}$-8

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α[9]	Comments
615.8 *3*	0.004 *3*	1411.626	(3/2$^-$)	796.151	7/2$^{(+)}$			
x618.19 *5*	0.0053 *8*							
620.844! *6*	0.145! *8*	796.151	7/2$^{(+)}$	175.3058	9/2$^+$			
620.844!j *5*	0.145! *8*	2994.14		2375.3	(3/2$^+$,5/2$^+$)			E_γ: placement by the evaluator on the basis of energy sums.
x623.55 *8*	0.0054 *6*							
x625.15 *7*	0.0076 *15*							
x628.24 *6*	0.0059 *8*							
630.47 *13*	0.0031 *5*	1817.637	1/2$^-$	1186.9835	(3/2)			
x631.54 *3*	0.0114 *16*							
632.85 *8*	0.0055 *6*	808.185	7/2$^-$	175.3058	9/2$^+$			
634.241 *8*	0.083 *5*	796.151	7/2$^{(+)}$	161.9223	7/2$^+$			
x635.63 *20*	0.033 *8*							
x640.59 *5*	0.0039 *10*							
x643.700 *19*	0.0165 *16*							
645.832 *4*	1.43 *7*	946.9821	1/2$^+$	301.1495	5/2$^+$	(E2)	0.00130 *2*	α(K)exp=8.9×10^{-04} *24* α(K)=0.001154 *17*; α(L)=0.0001228 *18*; α(M)=1.91×10^{-5} *3*; α(N)=1.614×10^{-6}
x647.2 *3*	0.004 *3*							
x648.56 *7*	0.004 *4*							
649.622e *6*	0.085 *5*	1230.627	(5/2)$^-$	581.0103	7/2$^-$			
x651.584 *16*	0.0170 *14*							
x652.07 *3*	0.007nr *5*							
x652.508 *25*	0.0224 *15*							
x653.3 *7*	0.0040 *20*							
x654.33 *3*	0.0130 *10*							
x655.05 *13*	0.0054 *12*							
x657.21 *6*	0.0077 *10*							
x657.67 *7*	0.0065 *11*							
x659.05 *6*	0.0095 *17*							
x659.40 *3*	0.0229 *22*							
x659.75 *5*	0.0179 *21*							
x660.23 *7*	0.0109 *17*							
660.75 *4*	0.0229 *16*	1607.702	3/2$^+$,5/2$^+$	946.9821	1/2$^+$			
x661.18 *10*	0.0079 *24*							
661.719 *24*	0.0104 *9*	911.5316	(3/2)$^+$	249.7884	5/2$^-$			
662.510 *7*	0.059 *3*	824.4307	(5/2)$^-$	161.9223	7/2$^+$			
x663.36 *6*	0.0103 *15*							
663.803 *8*	0.062 *4*	1488.237	(3/2)$^-$	824.4307	(5/2)$^-$			
x664.39 *5*	0.008 *3*							
x665.34 *18*	0.0037 *11*							
666.346 *6*	0.155 *8*	1186.9835	(3/2)	520.6386	3/2$^-$			
x666.78 *4*	0.0123 *23*							
x667.32 *14*	0.0035 *9*							

$^{77}_{34}Se_{43}$-9

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]
[x]668.22 5	0.0082 16					
[x]669.14 3	0.0090 9					
670.369 18	0.070 4	1488.237	(3/2)$^-$	817.8561	1/2$^-$	
671.953[d] 7	0.055 3	1252.962	5/2$^+$	581.0103	7/2$^-$	
[x]672.99 8	0.0059 11					
[x]675.057 16	0.0155 10					
676.173 14	0.0312 18	1623.145	(1/2$^-$)	946.9821	1/2$^+$	
[x]678.199 15	0.0502 24					
678.68[djs] 7	0.0059 25	2392.952	3/2$^-$	1714.755	1/2$^-$,3/2$^-$	
679.90 14	0.0030 8	1488.237	(3/2)$^-$	808.185	7/2$^-$	
[x]680.617 18	0.0149 10					
[x]682.13 11	0.0039 8					
[x]683.36 11	0.0056 9					
684.169 9	0.0364 20	1364.273	(3/2$^-$,5/2$^+$)	680.1034	5/2$^+$	
[x]685.38 6	0.0049 7					
686.565 15	0.0458 24	1511.023	(3/2)	824.4307	(5/2)$^-$	
[x]688.06 3	0.0090 16					
689.529 18	0.0435 24	1817.637	1/2$^-$	1128.113	1/2$^+$	
[x]691.46 7	0.0072 12					
692.12 15	0.0037 12	1488.237	(3/2)$^-$	796.151	7/2$^{(+)}$	[M2]
693.156 14	0.0301 21	1511.023	(3/2)	817.8561	1/2$^-$	
696.164 17	0.0248 17	1607.702	3/2$^+$,5/2$^+$	911.5316	(3/2)$^+$	
[x]697.11 3	0.008 3					
[x]698.07 4	0.0139 21					
[x]699.05 18	0.0034 11					
[x]699.97 14	0.0046 12					
[x]701.518 21	0.044 4					
[x]702.02 8	0.0082 12					
[x]702.55 6	0.0057 15					
[x]703.50 7	0.0082 17					
704.056 14	0.0321 19	1005.1836	3/2$^-$	301.1495	5/2$^+$	
[x]705.39 7	0.0077 10					
[x]706.44 10	0.0048 8					
707.983 6	0.404 17	946.9821	1/2$^+$	238.9986	3/2$^-$	
709.558 15	0.0339 25	1714.755	1/2$^-$,3/2$^-$	1005.1836	3/2$^-$	
[x]710.20 4	0.0174 17					
[x]711.00 5	0.0131 14					
711.604 6	0.186 9	1623.145	(1/2$^-$)	911.5316	(3/2)$^+$	
[x]712.452 16	0.045 3					
[x]713.29 21	0.0046 16					
[x]714.36 17	0.0039 9					
715.07 15	0.0035 8	1511.023	(3/2)	796.151	7/2$^{(+)}$	
[x]716.07 7	0.010 3					

$^{77}_{34}Se_{43}$-10

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π
[x]716.69 6	0.010 5				
[x]717.17 24	0.0043 15				
[x]718.65 10	0.0045 8				
[x]720.33 5	0.0116 11				
[x]721.76 5	0.039 3				
[x]722.56 7	0.0074 11				
724.19[f] 3	0.0144 16	2212.03	$1/2^-$,$3/2^-$	1488.237	$(3/2)^-$
[x]725.33 6	0.0078 11				
[x]726.35 8	0.0062 10				
[x]727.56 4	0.0129 15				
[x]728.523 22	0.0255 19				
[x]730.85 8	0.0162 17				
731.52 6	0.0228 20	1411.626	$(3/2^-)$	680.1034	$5/2^+$
732.336[f] 17	0.071 5	1252.962	$5/2^+$	520.6386	$3/2^-$
[x]732.96 3	0.0184 20				
733.9[d] 3	0.007 3	2551.94	$(3/2^-)$	1817.637	$1/2^-$
[x]734.6 3	0.006 3				
[x]735.39 8	0.0130 20				
[x]736.33 7	0.0119 17				
737.903[d] 7	0.217 12	2248.929	$3/2^+$,$5/2^+$	1511.023	(3/2)
740.697[d] 7	0.137 9	2455.456		1714.755	$1/2^-$,$3/2^-$
[x]742.78 5	0.0102 23				
[x]744.86 14	0.010 3				
747.540 8	0.098 7	1186.9835	(3/2)	439.4515	$5/2^-$
749.610 5	0.60 3	911.5316	$(3/2)^+$	161.9223	$7/2^+$
[x]751.90 13	0.015 3				
[x]753.70 21	0.015 3				
755.397 6	2.69 15	1005.1836	$3/2^-$	249.7884	$5/2^-$
[x]756.10 11	0.032 7				
[x]757.18 14	0.013 4				
[x]757.84 15	0.012 4				
[x]759.72 11	0.0115 18				
[x]762.60 4	0.029 4				
[x]763.28 18	0.0059 22				
[x]764.6 4	0.0048 14				
[x]765.19 11	0.0150 16				
766.171 13	0.076 5	1005.1836	$3/2^-$	238.9986	$3/2^-$
[x]768.13 4	0.0136 16				
[x]769.68 6	0.0094 13				
[x]771.73 11	0.0053 10				
[x]773.56 8	0.0073 11				
776.48[f] 17	0.0061 16	2264.33	$(3/2^-)$	1488.237	$(3/2)^-$
[x]777.395 14	0.052 5				

$^{77}_{34}Se_{43}$-11

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]
[x]778.22 *4*	0.014 *8*					
[x]781.89 *4*	0.023 *6*					
783.31 *5*	0.0157 *16*	1607.702	$3/2^+,5/2^+$	824.4307	$(5/2)^-$	
785.052[d] *20*	0.049 *3*	946.9821	$1/2^+$	161.9223	$7/2^+$	[M3]
[x]786.18 *4*	0.066 *12*					
[x]787.255 *23*	0.036 *3*					
[x]788.409 *23*	0.036 *3*					
[x]789.013 *14*	0.102 *9*					
[x]790.36 *7*	0.022 *4*					
[x]790.75 *3*	0.044 *7*					
791.160[d] *7*	0.232 *22*	1230.627	$(5/2)^-$	439.4515	$5/2^-$	
[x]793.319 *25*	0.032 *3*					
[x]794.84 *10*	0.0125 *18*					
[x]795.92 *8*	0.0135 *19*					
798.84 *20*	0.0058 *18*	1623.145	$(1/2^-)$	824.4307	$(5/2)^-$	
799.54 *5*	0.029 *3*	1607.702	$3/2^+,5/2^+$	808.185	$7/2^-$	
[x]800.54 *8*	0.0129 *16*					
[x]801.53 *11*	0.0111 *16*					
[x]802.33 *21*	0.0062 *21*					
803.25 *6*	0.018 *3*	1714.755	$1/2^-,3/2^-$	911.5316	$(3/2)^+$	
805.284 *11*	0.094 *6*	1623.145	$(1/2^-)$	817.8561	$1/2^-$	
[x]807.30 *13*	0.0056 *13*					
808.113 *15*	0.093 *5*	1488.237	$(3/2)^-$	680.1034	$5/2^+$	
[x]809.03 *6*	0.0132 *19*					
[x]809.9 *3*	0.0027 *9*					
811.58 *4*	0.0163 *13*	1607.702	$3/2^+,5/2^+$	796.151	$7/2^{(+)}$	
812.43 *3*	0.0330 *20*	1817.637	$1/2^-$	1005.1836	$3/2^-$	
[x]813.507 *11*	0.107 *8*					
[x]816.35 *8*	0.020 *3*					
817.856 *8*	2.44 *21*	817.8561	$1/2^-$	0.0	$1/2^-$	
[x]819.80 *10*	0.0123 *21*					
[x]821.39 *15*	0.0085 *20*					
[x]822.66 *4*	0.0221 *20*					
824.49 *11*	0.017 *4*	824.4307	$(5/2)^-$	0.0	$1/2^-$	
826.05 *20*	0.011 *3*	1830.861	$(1/2^-,3/2)$	1005.1836	$3/2^-$	
826.97 *10*	0.0113 *17*	1128.113	$1/2^+$	301.1495	$5/2^+$	
[x]828.93 *13*	0.020 *4*					
[x]829.65 *5*	0.033 *3*					
830.600 *9*	0.220 *19*	1411.626	$(3/2^-)$	581.0103	$7/2^-$	
831.304[g] *10*	0.178 *14*	1132.457		301.1495	$5/2^+$	
[x]832.10 *11*	0.0193 *25*					
[x]834.82 *7*	0.0123 *18*					
[x]835.68 *6*	0.0204 *23*					

$^{77}_{34}Se_{43}$-12

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x836.66 8	0.0137 17					
x837.51 13	0.0060 12					
x839.72 14	0.0085 17					
x840.54 11	0.0101 18					
x842.73 14	0.0245 24					
843.23 20	0.025 12	1005.1836	$3/2^-$	161.9223	$7/2^+$	
843.665 21	0.082 8	1364.273	$(3/2^-,5/2^+)$	520.6386	$3/2^-$	
x845.20 6	0.0151 21					
x845.89 10	0.024 4					
x846.44 7	0.033 5					
x847.11 4	0.042 8					
x849.44 8	0.0151 21					
x850.42 10	0.0192 25					
x851.26 17	0.0104 20					
x852.53 11	0.0093 15					
x855.38 6	0.0183 22					
x857.34 10	0.0099 15					
x858.70 7	0.0155 20					
x860.477 26	0.034 3					
x861.90 10	0.0113 17					
x865.79 24	0.013 3					
x866.72 25	0.016 3					
x867.55 6	0.032 4					
x869.55 17	0.0058 16					
x870.85 5	0.029 3					
x872.22 8	0.0162 24					
x873.39 8	0.0145 23					
x875.21 13	0.0113 25					
x876.16 5	0.035 4					
878.91[jdt] 14	0.0218 25	1128.113	$1/2^+$	249.7884	$5/2^-$	
881.844 8	0.33 4	1402.484	$(3/2^-)$	520.6386	$3/2^-$	
883.76 18	0.027 11	1830.861	$(1/2^-,3/2)$	946.9821	$1/2^+$	
884.43[e] 15	0.067 17	2248.929	$3/2^+,5/2^+$	1364.273	$(3/2^-,5/2^+)$	
885.832 8	2.01 24	1186.9835	(3/2)	301.1495	$5/2^+$	
888.764[d] 22	0.20 4	1128.113	$1/2^+$	238.9986	$3/2^-$	Eγ=888.84 4, Iγ=0.180 5 identified in PGAA database (2007ChZX) cannot correspond to 888.764γ since the relative intensity of the former γ is too high by a factor of ≈14.
890.32 3	0.099 8	1714.755	$1/2^-,3/2^-$	824.4307	$(5/2)^-$	
890.983 9	0.88 12	1411.626	$(3/2^-)$	520.6386	$3/2^-$	
x892.26 22	0.021 6					
x892.91 22	0.019 7					
896.910 14	0.159 15	1714.755	$1/2^-,3/2^-$	817.8561	$1/2^-$	
x897.969 26	0.066 5					
x899.895 25	0.120 10					

$^{77}_{34}Se_{43}$-13

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]901.96 *8*	0.014 *3*					
[x]904.697 *26*	0.087 *6*					
[x]905.96 *4*	0.045 *4*					
[x]908.86 *13*	0.0088 *15*					
[x]910.56 *15*	0.0133 *23*					
911.58 *3*	0.100 *7*	911.5316	$(3/2)^+$	0.0	$1/2^-$	
[x]913.50 *20*	0.011 *3*					
[x]915.45 *6*	0.0201 *25*					
[x]916.41 *8*	0.0185 *23*					
[x]917.28 *10*	0.0133 *22*					
[x]918.99 *5*	0.049 *5*					
[x]920.70 *4*	0.019 *7*					
[x]926.13 *10*	0.0128 *13*					
927.578 *12*	0.098 *12*	1607.702	$3/2^+,5/2^+$	680.1034	$5/2^+$	
929.492 *14*	0.095 *7*	1230.627	$(5/2)^-$	301.1495	$5/2^+$	Eγ=929.91 *23*, Iγ=0.0129 *20* in PGAA database (2007ChZX).
930.619[d] *25*	0.075 *5*	1511.023	(3/2)	581.0103	$7/2^-$	
[x]934.09 *20*	0.0103 *24*					
[x]935.18 *22*	0.0099 *24*					
937.15 *6*	0.032 *3*	1186.9835	(3/2)	249.7884	$5/2^-$	
[x]940.00 *15*	0.011 *3*					
[x]941.34 *5*	0.047 *9*					
[x]942.08 *13*	0.022 *4*					
[x]942.90 *5*	0.057 *7*					
[x]945.40 *18*	0.026 *5*					
[x]946.04 *14*	0.033 *8*					
946.970 *8*	1.04 *13*	946.9821	$1/2^+$	0.0	$1/2^-$	
948.03 *6*	0.082 *10*	1186.9835	(3/2)	238.9986	$3/2^-$	
[x]948.75 *22*	0.030 *18*					
[x]951.37 *5*	0.101 *18*					
951.752[d] *24*	0.50 *8*	1252.962	$5/2^+$	301.1495	$5/2^+$	
[x]954.76 *17*	0.018 *5*					
957.129[f] *24*	0.075 *6*	1132.457		175.3058	$9/2^+$	
959.10[d] *4*	0.044 *5*	2776.74	$(1/2^-,3/2)$	1817.637	$1/2^-$	
[x]960.3 *3*	0.014 *4*					
[x]961.88 *5*	0.041 *10*					
963.041[n] *18*	0.17[nr] *4*	1402.484	$(3/2^-)$	439.4515	$5/2^-$	
[x]965.034 *19*	0.17 *4*					
[x]965.773 *23*	0.069 *5*					
967.611 *15*	0.212 *25*	1488.237	$(3/2)^-$	520.6386	$3/2^-$	
969.02 *7*	0.027 *3*	1916.064	$(1/2^+,3/2)$	946.9821	$1/2^+$	
970.54[f] *4*	0.056 *5*	1132.457		161.9223	$7/2^+$	
[x]972.03[o] *8*	0.045 *7*					

$^{77}_{34}Se_{43}$-14

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	Comments
972.26 *5*	0.089 *14*	1411.626	(3/2$^-$)	439.4515	5/2$^-$		
975.55[e] *7*	0.042 *2*	2339.93	(3/2$^-$,5/2$^+$)	1364.273	(3/2$^-$,5/2$^+$)		
x977.01 *20*	0.017 *3*						
x978.542 *26*	0.181 *12*						
980.986[!d] *21*	0.161[!] *16*	1230.627	(5/2)$^-$	249.7884	5/2$^-$		
980.986[!d] *21*	0.161[!] *16*	2392.952	3/2$^-$	1411.626	(3/2$^-$)		
990.405 *22*	0.40 *4*	1511.023	(3/2)	520.6386	3/2$^-$		
991.627[d] *19*	0.44 *5*	1230.627	(5/2)$^-$	238.9986	3/2$^-$		
993.22 *6*	0.031 *6*	1817.637	1/2$^-$	824.4307	(5/2)$^-$		
x995.18 *15*	0.027 *5*						
999.75 *5*	0.070 *7*	1817.637	1/2$^-$	817.8561	1/2$^-$		
x1001.21 *11*	0.030 *4*						
1003.66[d] *5*	0.107 *24*	2491.95		1488.237	(3/2)$^-$		
1005.193 *11*	1.36 *19*	1005.1836	3/2$^-$	0.0	1/2$^-$		
x1008.35 *15*	0.034 *9*						
1009.6[p] *5*	0.026 *8*	1817.637	1/2$^-$	808.185	7/2$^-$	[M3]	Placement is considered unlikely (by evaluator) since deduced B(M3)(W.u.) is much greater than allowed by RUL.
x1018.46 *6*	0.034 *6*						
x1020.43 *11*	0.068 *6*						
x1021.8 *4*	0.011 *4*						
x1022.9 *3*	0.026 *4*						
1025.02[e] *3*	0.116 *9*	2212.03	1/2$^-$,3/2$^-$	1186.9835	(3/2)		
1026.21[d] *7*	0.053 *5*	1607.702	3/2$^+$,5/2$^+$	581.0103	7/2$^-$		Eγ=1025.67 *19*, Iγ=0.016 *3* in PGAA database (2007ChZX).
x1027.35 *10*	0.027 *3*						
x1028.55 *13*	0.023 *4*						
x1030.52 *18*	0.020 *6*						
x1032.58 *18*	0.022 *5*						
x1033.64 *10*	0.040 *7*						
x1035.39 *10*	0.056 *9*						
x1036.43 *20*	0.023 *7*						
x1037.88 *7*	0.044 *6*						
x1039.407 *21*	0.15 *4*						
x1045.8 *3*	0.007 *2*						
x1048.11	0.037 *5*						
1048.787 *23*	0.155 *25*	1488.237	(3/2)$^-$	439.4515	5/2$^-$		
x1051.27 *25*	0.022 *3*						
x1052.23 *7*	0.040 *12*						
x1053.66 *15*	0.013 *3*						
x1055.50 *25*	0.012 *3*						
x1056.77 *20*	0.017 *3*						
x1057.9 *4*	0.009 *3*						
x1061.381 *22*	0.130 *8*						
1063.120 *12*	0.29 *3*	1364.273	(3/2$^-$,5/2$^+$)	301.1495	5/2$^+$		

$^{77}_{34}Se_{43}$-15

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x1065.3 3	0.016 3					
x1066.71 8	0.022 9					
1071.596 18	0.23 3	1511.023	(3/2)	439.4515	5/2$^-$	
x1073.85 25	0.030 4					
1075.02 f 6	0.120 14	3414.97	(1/2,3/2)	2339.93	(3/2$^-$,5/2$^+$)	
x1076.35 21	0.022 4					
x1077.49 17	0.051 5					
x1080.42 7	0.095 7					
x1081.9 6	0.017 6					
1083.66 d 3	0.100 15	2212.03	1/2$^-$,3/2$^-$	1128.113	1/2$^+$	Eγ=1083.74 24, Iγ=0.010 4 in PGAA database (2007ChZX).
x1086.41 21	0.017 3					
x1089.43 18	0.021 4					
1091.069 d 22	0.37 4	1916.064	(1/2$^+$,3/2)	824.4307	(5/2)$^-$	Eγ=1091.05 11, Iγ=0.027 5 in PGAA database (2007ChZX).
x1092.97 6	0.065 8					
x1094.38 7	0.059 6					
x1096.92 4	0.0067 25					
x1100.72 21	0.034 3					
x1104.643 8	0.087 10					
1105.45 f 4	0.076 8	2994.14		1888.64		
x1107.46 21	0.018 4					
1110.3 c 4	0.071 9	1411.626	(3/2$^-$)	301.1495	5/2$^+$	
x1111.598 26	0.108 16					
1115.24 d 24	0.031 5	1364.273	(3/2$^-$,5/2$^+$)	249.7884	5/2$^-$	
x1117.263 11	0.52 7					
x1120.34 24	0.018 4					
x1123.5 3	0.024 5					
x1124.34 18	0.043 11					
x1125.21 3	0.153 19					
1128.106 11	0.32 4	1128.113	1/2$^+$	0.0	1/2$^-$	
x1131.48 11	0.025 5					
x1133.08 4	0.075 6					
x1136.4 4	0.024 14					
1137.41 10	0.052 6	2142.55		1005.1836	3/2$^-$	
1139.98 e 3	0.127 21	2392.952	3/2$^-$	1252.962	5/2$^+$	
x1141.01 3	0.159 21					
1142.0 3	0.045 11	2553.82		1411.626	(3/2$^-$)	
x1148.01 21	0.030 8					
1150.63 f 6	0.121 8	3414.97	(1/2,3/2)	2264.33	(3/2$^-$)	
x1152.80 4	0.083 7					
x1158.8 3	0.033 5					
1161.843 12	1.00 13	1411.626	(3/2$^-$)	249.7884	5/2$^-$	
1163.481 9	1.15 15	1402.484	(3/2$^-$)	238.9986	3/2$^-$	
x1164.92 11	0.093 9					

$^{77}_{34}Se_{43}$-16

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
1168.32 *8*	0.074 *10*	1607.702	3/2$^+$,5/2$^+$	439.4515	5/2$^-$
x1171.14 *11*	0.065 *10*				
1172.614 *18*	0.75 *10*	1411.626	(3/2$^-$)	238.9986	3/2$^-$
x1175.67 *14*	0.045 *8*				
x1177.17 *20*	0.037 *8*				
x1178.980 *23*	0.22 *3*				
x1180.0 *3*	0.05 *3*				
x1181.70 *15*	0.042 *8*				
1183.7 *6*	0.018 *7*	1623.145	(1/2$^-$)	439.4515	5/2$^-$
x1185.52 *24*	0.030 *7*				
1186.992 *21*	0.39 *4*	1186.9835	(3/2)	0.0	1/2$^-$
x1188.8 *3*	0.048 *7*				
x1189.7 *4*	0.025 *15*				
x1192.22 *15*	0.033 *5*				
1194.080[d] *16*	0.33 *4*	1714.755	1/2$^-$,3/2$^-$	520.6386	3/2$^-$
x1197.74 *10*	0.048 *6*				
x1200.82 *20*	0.037 *7*				
x1202.355 *21*	0.53 *9*				
x1204.79 *15*	0.036 *6*				
x1205.9 *4*	0.045 *5*				
1208.45[d] *4*	0.174 *17*	1888.64		680.1034	5/2$^+$
1209.93 *21*	0.033 *6*	1511.023	(3/2)	301.1495	5/2$^+$
x1212.1 *3*	0.040 *9*				
x1213.85 *20*	0.053 *9*				
x1218.44 *18*	0.031 *9*				
x1221.1 *4*	0.044 *6*				
x1223.20 *14*	0.034 *6*				
x1226.50 *8*	0.068 *6*				
1227.82[d] *21*	0.040 *7*	2716.33	(3/2)	1488.237	(3/2)$^-$
x1229.17 *17*	0.034 *4*				
1230.89[!d] *14*	0.080[!] *6*	1230.627	(5/2)$^-$	0.0	1/2$^-$
1230.89[!e] *14*	0.080[!] *6*	2853.09	(1/2$^-$,3/2$^-$)	1623.145	(1/2$^-$)
x1233.93 *13*	0.026 *3*				
x1236.10 *8*	0.076 *7*				
1238.492[f] *24*	0.181 *22*	2640.970	(3/2$^+$,5/2$^+$)	1402.484	(3/2$^-$)
x1243.20 *11*	0.094 *8*				
x1244.81 *8*	0.043 *6*				
x1247.56 *15*	0.029 *4*				
1249.28[d] *3*	0.211 *14*	1488.237	(3/2)$^-$	238.9986	3/2$^-$
x1252.15 *7*	0.054 *7*				
1261.28 *15*	0.056 *10*	1511.023	(3/2)	249.7884	5/2$^-$
x1264.59 *13*	0.151 *14*				

$^{77}_{34}Se_{43}$-17

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x1265.6 4	0.063 20				
x1266.50 17	0.052 7				
x1268.86 13	0.077 9				
x1269.7 7	0.018 9				
x1270.48 11	0.081 17				
1272.07 8	0.234 17	1511.023	(3/2)	238.9986	3/2$^-$
x1273.65 24	0.056 7				
1275.28 25	0.034 15	1714.755	1/2$^-$,3/2$^-$	439.4515	5/2$^-$
x1277.61 20	0.028 6				
x1282.65 6	0.154 14				
1284.28[d] 4	0.209 16	2891.94	(3/2$^-$)	1607.702	3/2$^+$,5/2$^+$
x1286.18 3	0.35 4				
x1288.1 3	0.026 11				
x1293.43 6	0.181 17				
1297.001 19	3.4 3	1817.637	1/2$^-$	520.6386	3/2$^-$
x1298.83 15	0.20 3				
x1299.6 3	0.050 24				
1301.25[d] 14	0.136 16	2248.929	3/2$^+$,5/2$^+$	946.9821	1/2$^+$
x1302.70 18	0.083 13				
x1305.1 3	0.079 16				
1306.557 19	0.92 11	1607.702	3/2$^+$,5/2$^+$	301.1495	5/2$^+$
1310.07 22	0.066 12	1830.861	(1/2$^-$,3/2)	520.6386	3/2$^-$
x1314.89 20	0.107 9				
1317.83[d] 6	0.197 16	2264.33	(3/2$^-$)	946.9821	1/2$^+$
1321.31[d] 8	0.133 11	2551.94	(3/2$^-$)	1230.627	(5/2)$^-$
x1324.9 3	0.031 5				
x1327.6 4	0.025 4				
x1330.81 14	0.055 7				
x1334.31 10	0.109 12				
1336.73[f] 18	0.080 10	3051.20		1714.755	1/2$^-$,3/2$^-$
x1339.5 4	0.036 9				
x1341.84 20	0.051 10				
1349.85[d] 3	0.029 5	1511.023	(3/2)	161.9223	7/2$^+$
x1352.2 4	0.028 5				
x1355.9 4	0.018 4				
x1359.7 6	0.013 4				
x1362.9 4	0.028 9				
1363.9[d] 8	0.023 12	2551.94	(3/2$^-$)	1186.9835	(3/2)
1365.32[e] 11	0.104 11	2776.74	(1/2$^-$,3/2)	1411.626	(3/2$^-$)
1367.07 13	0.145 14	2553.82		1186.9835	(3/2)
1368.72 18	0.065 10	1607.702	3/2$^+$,5/2$^+$	238.9986	3/2$^-$
1372.99[d] 8	0.134 12	1623.145	(1/2$^-$)	249.7884	5/2$^-$

$^{77}_{34}Se_{43}$-18

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x1376.19 7	0.211 17					
1378.190 25	0.72 6	1817.637	1/2⁻	439.4515	5/2⁻	
x1379.9 4	0.078 13					
x1382.64 17	0.107 15					
1384.160 21	1.25 10	1623.145	(1/2⁻)	238.9986	3/2⁻	
1387.76d 10	0.086 7	2212.03	1/2⁻,3/2⁻	824.4307	(5/2)⁻	
1391.40 11	0.061 7	1830.861	(1/2⁻,3/2)	439.4515	5/2⁻	
1392.96 6	0.228 13	2339.93	(3/2⁻,5/2⁺)	946.9821	1/2⁺	
1395.7d 3	0.350 19	1916.064	(1/2⁺,3/2)	520.6386	3/2⁻	
1402.466 25	0.48 4	1402.484	(3/2⁻)	0.0	1/2⁻	
x1406.78 17	0.121 19					
1408.7d 3	0.179 22	2320.14		911.5316	(3/2)⁺	
1411.628 18	1.50 18	1411.626	(3/2⁻)	0.0	1/2⁻	
x1415.37 13	0.135 18					
1417.95!jf 6	0.298! 24	3132.06		1714.755	1/2⁻,3/2⁻	
1417.95!je 6	0.298! 24	3561.25		2142.55		
x1422.6 6	0.031 11					
x1425.59 24	0.066 13					
x1435.14 13	0.102 13					
x1437.38 25	0.047 9					
x1441.70 22	0.044 8					
1446.33d 13	0.17 3	2264.33	(3/2⁻)	817.8561	1/2⁻	
x1447.8 4	0.040 23					
1450.74d 4	0.32 8	2455.456		1005.1836	3/2⁻	Eγ=1450.74 11, Iγ=0.0201 24 in PGAA database (2007ChZX).
x1452.5 3	0.072 14					
x1454.83 22	0.110 19					
1456.2d 3	0.082 17	2264.33	(3/2⁻)	808.185	7/2⁻	
x1458.3 4	0.036 10					
1461.03d 18	0.120 17	2873.00	(3/2)	1411.626	(3/2⁻)	
x1462.8 7	0.027 13					
x1465.64 15	0.072 10					
x1472.23 14	0.087 12					
1475.78 3	0.44 3	1714.755	1/2⁻,3/2⁻	238.9986	3/2⁻	
x1481.0 3	0.043 9					
1485.2e 3	0.050 9	2716.33	(3/2)	1230.627	(5/2)⁻	
1488.18 15	0.23 4	1488.237	(3/2)⁻	0.0	1/2⁻	
1489.8d 3	0.078 20	2891.94	(3/2⁻)	1402.484	(3/2⁻)	
x1492.66 15	0.085 12					
x1495.9 6	0.026 8					
x1502.28 17	0.071 11					
1506.96f 6	0.31 3	2994.14		1488.237	(3/2)⁻	Eγ=1506.7 3, Iγ=0.015 3 in PGAA database (2007ChZX).

$^{77}_{34}Se_{43}$-19

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	Comments
1510.72 d 11	0.161 18	1511.023	(3/2)	0.0	1/2⁻		Eγ=1510.4 3, Iγ=0.010 3 in PGAA database (2007ChZX).
x1513.5 4	0.028 8						
x1518.40 22	0.062 10						
x1523.25 17	0.090 12						
x1526.96 @ 25	0.059 10						
1529.51 d 7	0.49 8	2716.33	(3/2)	1186.9835	(3/2)		
1531.62 f 24	0.098 15	3348.67	(1/2,3/2)	1817.637	1/2⁻		
x1534.01 17	0.103 14						
1538.77 f 24	0.22 3	3051.20		1511.023	(3/2)		Additional information 1.
x1541.63 21	0.066 10						
x1548.48 21	0.079 12						
x1551.21 21	0.077 12						
x1562.22 25	0.067 12						
1568.44 d 6	0.32 4	1817.637	1/2⁻	249.7884	5/2⁻		Eγ=1568.55 20, Iγ=0.018 3 in PGAA database (2007ChZX).
x1571.5 3	0.055 15						
x1575.25 20	0.145 15						
1578.63 8	0.61 4	1817.637	1/2⁻	238.9986	3/2⁻		
1581.0 6	0.043 12	1830.861	(1/2⁻,3/2)	249.7884	5/2⁻		
1584.6 7	0.29 5	2392.952	3/2⁻	808.185	7/2⁻		
1587.52 d 15	0.124 16	1888.64		301.1495	5/2⁺		
x1590.98 @ 21	0.086 13						
1594.35 f 22	0.074 12	3412.45	(1/2,3/2)	1817.637	1/2⁻		
1604.22 d 14	0.147 18	2551.94	(3/2⁻)	946.9821	1/2⁺		
1606.79 18	0.107 15	2553.82		946.9821	1/2⁺		
x1612.7 3	0.058 13						
1615.2 !q 4	0.065 ! 13	1916.064	(1/2⁺,3/2)	301.1495	5/2⁺		
1615.2 !q 4	0.063 ! 13	3827.08		2212.03	1/2⁻,3/2⁻		
1619.83 d 14	0.175 19	2873.00	(3/2)	1252.962	5/2⁺		
x1621.74 19	0.13 3						
1623.15 15	0.62 6	1623.145	(1/2⁻)	0.0	1/2⁻		
x1625.1 3	0.085 22						
x1628.19 13	0.07 4						
1635.22 d 13	0.131 15	2640.970	(3/2⁺,5/2⁺)	1005.1836	3/2⁻		Eγ=1635.4 3, Iγ=0.0105 24 in PGAA database (2007ChZX).
x1638.37 14	0.098 14						
1641.96 e 14	0.099 14	1817.637	1/2⁻	175.3058	9/2⁺	[M4]	Placement in (n,γ) is considered unlikely (by evaluator) since deduced B(M4)(W.u.) is much greater than allowed by RUL.
x1645.93 21	0.064 11						
x1649.18 20	0.067 12						
x1655.91 15	0.095 14						
x1659.76 7	0.30 4						
x1665.71 20	0.070 12						

$^{77}_{34}Se_{43}$-20

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ‡	I_γ#8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x1669.8 3	0.091 23					
1672.3d 9	0.08 5	2491.95		817.8561	1/2−	
x1674.4 5	0.13 5					
1677.07 6	0.33 5	1916.064	(1/2+,3/2)	238.9986	3/2−	
x1685.03 16	0.093 14					
1692.15d 13	0.108 15	2212.03	1/2−,3/2−	520.6386	3/2−	
1697.84f 12	0.122 16	3412.45	(1/2,3/2)	1714.755	1/2−,3/2−	
x1704.23 14	0.101 15					
x1710.2 3	0.068 15					
1712.99d 6	0.33 4	2392.952	3/2−	680.1034	5/2+	
1714.79 6	0.48 4	1714.755	1/2−,3/2−	0.0	1/2−	
x1721.10 20	0.067 16					
x1725.17 9	0.29 3					
1727.21jdu 16	0.181 23	1888.64		161.9223	7/2+	
1729.32d 14	0.23 3	2640.970	(3/2+,5/2+)	911.5316	(3/2)+	
x1734.5 4	0.046 12					
1742.91e 12	0.174 22	2551.94	(3/2−)	808.185	7/2−	
1745.4d 3	0.074 15	2873.00	(3/2)	1128.113	1/2+	
x1751.25 21	0.17 4					
x1756.1 4	0.10 4					
1759.6e 4	0.12 4	2339.93	(3/2−,5/2+)	581.0103	7/2−	
x1764.5 6	0.07 3					
1771.3d 4	0.12 4	2776.74	(1/2−,3/2)	1005.1836	3/2−	
1774.1d 6	0.08 4	2455.456		680.1034	5/2+	
x1778.4 4	0.14 3					
x1786.0 4	0.10 3					
1790.24e 5	0.47 5	3396.01		1607.702	3/2+,5/2+	Eγ=1789.9 7, Iγ=0.039 4 in PGAA database (2007ChZX).
x1799.71 13	0.153 19					
1803.89d 11	0.185 22	2809.14	(1/2,3/2)	1005.1836	3/2−	
x1810.67 23	0.085 14					
x1815.65 19	0.105 16					
x1820.2 3	0.073 13					
x1824.4 3	0.066 13					
1830.99!q 15	0.183! 22	1830.861	(1/2−,3/2)	0.0	1/2−	
1830.99!q 15	0.183! 22	3545.65	(3/2+,5/2+)	1714.755	1/2−,3/2−	
1837.52!f 16	0.136! 18	3348.67	(1/2,3/2)	1511.023	(3/2)	
1837.52!q 16	0.136! 18	3552.44	(3/2−)	1714.755	1/2−,3/2−	
x1841.1 4	0.054 13					
1847.89d 5	0.65 7	2853.09	(1/2−,3/2−)	1005.1836	3/2−	
1852.4e 4	0.084 21	3362.25		1511.023	(3/2)	

$^{77}_{34}Se_{43}$-21

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ[‡]	I_γ[#8]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]1855.2 *3*	0.092 *21*					
[x]1868.78 *22*	0.112 *17*					
1872.23[d] *5*	0.68 *9*	2392.952	3/2$^-$	520.6386	3/2$^-$	
[x]1878.62 *21*	0.088 *14*					
[x]1883.5 *4*	0.026 *7*					
[x]1892.15 *17*	0.120 *16*					
[x]1902.2 *3*	0.072 *13*					
[x]1909.6 *4*	0.058 *12*					
1916.23[d] *7*	0.32 *5*	1916.064	(1/2$^+$,3/2)	0.0	1/2$^-$	
[x]1920.9 *4*	0.08 *3*					
[x]1924.0 *4*	0.08 *3*					
[x]1936.2 *4*	0.085 *17*					
1939.21[e] *22*	0.172 *23*	3191.58		1252.962	5/2$^+$	
[x]1941.9 *4*	0.097 *19*					
1945.05[f] *11*	0.27 *9*	3132.06		1186.9835	(3/2)	
[x]1947.9 *4*	0.086 *21*					
[x]1950.7 *3*	0.10 *3*					
[x]1953.7 *4*	0.07 *3*					
[x]1957.03 *24*	0.12 *3*					
1960.4[d] *3*	0.11 *3*	2776.74	(1/2$^-$,3/2)	817.8561	1/2$^-$	
1963.41[e] *10*	0.52 *5*	2264.33	(3/2$^-$)	301.1495	5/2$^+$	
[x]1967.2 *3*	0.11 *3*					
1970.92[e] *20*	0.32 *4*	2551.94	(3/2$^-$)	581.0103	7/2$^-$	
[x]1973.95 *16*	0.45 *5*					
[x]1976.7 *5*	0.13 *3*					
1980.06[d] *19*	0.33 *4*	2891.94	(3/2$^-$)	911.5316	(3/2)$^+$	
[x]1985.78 *17*	0.16 *3*					
[x]1988.51 *14*	0.15 *4*					
[x]1992.02 *12*	0.19 *3*					
[x]1994.90 *11*	0.17 *3*					
[x]1998.29 *12*	0.13 *3*					
[x]2001.52 *10*	0.19 *3*					
[x]2006.87 *20*	0.10 *3*					
2009.09[d] *11*	0.23 *4*	2248.929	3/2$^+$,5/2$^+$	238.9986	3/2$^-$	Eγ=2008.4 *4*, Iγ=0.016 *3* in PGAA database (2007ChZX).
[x]2016.65 *14*	0.12 *3*					
2018.88[d] *25*	0.08 *3*	2320.14		301.1495	5/2$^+$	
2027.7[d] *5*	0.12 *3*	2853.09	(1/2$^-$,3/2$^-$)	824.4307	(5/2)$^-$	
[x]2031.4 *4*	0.18 *3*					
2034.87[d] *19*	0.63 *5*	2853.09	(1/2$^-$,3/2$^-$)	817.8561	1/2$^-$	
[x]2039.3 *4*	0.17 *3*					
[x]2045.8 *8*	0.08 *3*					
[x]2048.7 *9*	0.056 *24*					

$^{77}_{34}Se_{43}$-22

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	Comments
x2052.4 5	0.077 24						
x2055.9 5	0.08 3						
x2058.8 3	0.14 3						
x2062.5 5	0.086 25						
x2065.5 7	0.057 24						
x2068.7 9	0.040 23						
2073.67 d 13	0.48 4	2891.94	(3/2⁻)	817.8561	1/2⁻		
x2077.4 3	0.14 3						
x2080.6 4	0.115 25						
x2085.42 25	0.20 3						
2088.4 e 8	0.19 7	2264.33	(3/2⁻)	175.3058	9/2⁺	[E3]	
2090.7 d 13	0.11 7	2339.93	(3/2⁻,5/2⁺)	249.7884	5/2⁻		
x2097.2 3	0.144 24						
x2101.9 7	0.056 23						
x2104.9 4	0.130 25						
x2108.6 4	0.14 3						
2111.11 e 25	0.26 3	3718.49		1607.702	3/2⁺,5/2⁺		
x2115.6 8	0.063 21						
x2120.5 8	0.068 21						
2125.2 e 3	0.19 4	3312.79	(1/2,3/2)	1186.9835	(3/2)		
x2127.3 4	0.16 3						
2132.3 e 3	0.179 25	3362.25		1230.627	(5/2)⁻		
x2136.12 21	0.21 3						
2139.6 f 3	0.17 3	3051.20		911.5316	(3/2)⁺		
2142.68 d 12	0.59 4	2142.55		0.0	1/2⁻		
x2146.0 6	0.069 22						
x2149.7 4	0.104 23						
x2153.1 3	0.137 25						
x2156.2 3	0.117 24						
2161.22 f 18	0.22 3	3348.67	(1/2,3/2)	1186.9835	(3/2)		
x2166.3 5	0.080 22						
x2169.1 4	0.093 23						
x2182.0 3	0.137 23						
2185.5 e 6	0.053 21	3312.79	(1/2,3/2)	1128.113	1/2⁺		
2189.06 e 15	0.30 3	2491.95		301.1495	5/2⁺		Eγ=2188.94 23, Iγ=0.015 3 in PGAA database (2007ChZX).
x2192.2 4	0.072 22						
x2197.06 24	0.136 22						
x2201.3 4	0.098 20						
x2206.8 3	0.108 21						
2211.79 !d 12	0.48 ! 4	2212.03	1/2⁻,3/2⁻	0.0	1/2⁻		
2211.79 !jd 12	0.48 ! 4	2375.3	(3/2⁺,5/2⁺)	161.9223	7/2⁺		Eγ=2212.2 3, Iγ=0.024 5 in PGAA database (2007ChZX).
x2215.40 14	0.41 4						

$^{77}_{34}Se_{43}$-23

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x2218.12 15	0.44 4				
x2222.09& 15	0.35 4				
x2224.7& 5	0.104 25				
x2227.9 3	0.168 24				
x2233.2 6	0.086 19				
x2238.3 7	0.070 20				
x2241.6 4	0.147 22				
2249.0e 3	0.32 3	3480.52		1230.627	(5/2)$^-$
x2252.60 25	0.33 3				
2256.3f 6	0.098 22	3168.22	(3/2$^+$,5/2$^+$)	911.5316	(3/2)$^+$
x2259.3 9	0.070 21				
x2264.34 21	0.46 5				
2265.5e 4	0.24 4	3517.91	(3/2$^+$)	1252.962	5/2$^+$
x2270.1 3	0.126 21				
x2274.86 18	0.225 25				
x2278.7 3	0.133 21				
x2282.6 3	0.120 21				
x2286.3 6	0.057 21				
x2289.1 5	0.076 23				
x2292.0 5	0.078 20				
x2298.7 5	0.045 17				
x2304.05 15	0.209 24				
2307.50!f 21	0.18! 4	3132.06		824.4307	(5/2)$^-$
2307.50!e 21	0.18! 4	3312.79	(1/2,3/2)	1005.1836	3/2$^-$
x2309.7 5	0.09 4				
x2314.33 15	0.190 22				
x2318.3 3	0.078 18				
x2322.35 23	0.14 4				
x2324.5 13	0.033 31				
2329.16jdv 21	0.123 22	2491.95		161.9223	7/2$^+$
x2332.13 17	0.191 25				
x2335.4 3	0.077 20				
x2338.7 3	0.087 19				
x2344.0 3	0.112 19				
x2349.9 6	0.076 21				
x2352.9 3	0.194 24				
x2357.1 4	0.107 23				
2359.8f 6	0.13 3	3040.34	(3/2$^-$,5/2$^+$)	680.1034	5/2$^+$
x2362.2 6	0.13 3				
x2371.10 19	0.274 25				
x2374.7 4	0.125 21				
x2377.9 9	0.08 3				
x2380.4 5	0.17 3				
x2385.0 4	0.095 18				
2391.6d 3	0.177 22	2392.952	3/2$^-$	0.0	1/2$^-$
x2394.7 3	0.152 21				
x2401.89 20	0.309 25				
x2406.3 3	0.149 20				
x2409.8 4	0.102 18				
2415.0d 4	0.18 3	2716.33	(3/2)	301.1495	5/2$^+$
2417.4e 3	0.36 5	3545.65	(3/2$^+$,5/2$^+$)	1128.113	1/2$^+$
x2420.0 10	0.16 3				
x2423.4 24	0.068 22				
x2426.03 22	0.158 20				
x2430.6 7	0.053 22				
x2433.37 24	0.214 25				
x2437.26 21	0.171 20				
x2441.8 3	0.095 17				
x2446.74 24	0.131 18				
x2451.9 3	0.104 19				
x2455.26 18	0.266 25				
2458.9f 3	0.128 20	3040.34	(3/2$^-$,5/2$^+$)	581.0103	7/2$^-$
x2462.1 3	0.146 21				
x2465.2 3	0.134 20				
x2469.6 4	0.203 22				
x2476.0 5	0.25 3				
x2478.8 5	0.19 3				
x2483.0 3	0.215 21				
x2487.2 7	0.095 17				
x2491.4 8	0.077 17				
2494.6e 14	0.054 19	3312.79	(1/2,3/2)	817.8561	1/2$^-$
x2497.6 4	0.189 22				
x2503.5 10	0.046 16				
x2506.7 4	0.109 18				
x2513.1 5	0.091 17				
x2516.6 12	0.042 16				
x2519.8 9	0.052 16				
x2523.9 14	0.07 3				
2526.6d 9	0.12 3	2776.74	(1/2$^-$,3/2)	249.7884	5/2$^-$
x2530.4 8	0.104 21				
x2533.3 9	0.083 23				
x2537.8 3	0.134 17				
x2543.8 7	0.059 14				
x2548.9 8	0.043 14				

$^{77}_{34}Se_{43}$-24

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x2555.58 19	0.299 24				
x2559.0 8	0.070 23				
x2561.6 10	0.068 21				
2565.56[e] 20	0.32 3	2815.49		249.7884	5/2$^-$
x2568.95 21	0.263 23				
x2574.4 10	0.061 18				
x2577.3 4	0.122 21				
x2582.06 21	0.220 20				
x2588.4 7	0.14 6				
2590.64[d] 22	0.58 6	2891.94	(3/2$^-$)	301.1495	5/2$^+$
x2595.2 6	0.061 15				
2600.36[f] 19	0.32 3	3040.34	(3/2$^-$,5/2$^+$)	439.4515	5/2$^-$
x2603.5 3	0.185 22				
x2606.7 3	0.171 21				
x2610.4 3	0.180 23				
2613.54[d] 22	0.69 5	2853.09	(1/2$^-$,3/2$^-$)	238.9986	3/2$^-$
x2616.2 3	0.39 4				
x2619.5 6	0.127 19				
2623.2[d] 3	0.199 25	2873.00	(3/2)	249.7884	5/2$^-$
x2625.9 3	0.24 3				
x2629.67 25	0.203 21				
x2633.18 20	0.271 23				
x2638.4 4	0.120 21				
x2641.2 4	0.173 23				
x2644.1 6	0.087 18				
x2647.8 6	0.18 6				
2649.9[e] 5	0.26 6	3561.25		911.5316	(3/2)$^+$
x2654.3 4	0.112 16				
x2659.3 6	0.035 14				
x2663.0 3	0.147 24				
x2668.8 8	0.036 16				
x2672.2 4	0.063 16				
x2675.93 16	0.246 21				
x2680.9 3	0.163 19				
x2684.1 6	0.081 17				
x2687.7 3	0.119 16				
x2692.0 4	0.123 19				
x2695.0 6	0.104 19				
x2698.0 7	0.070 18				
x2704.3 13	0.033 18				
x2707.1 4	0.121 20				
2710.4[e] 3	0.142 18	3517.91	(3/2$^+$)	808.185	7/2$^-$
x2715.08 20	0.196 20				
x2718.77 18	0.44 6				
x2720.78 21	0.42 6				
x2724.7 5	0.11 3				
x2727.6 11	0.081 21				
x2730.4 8	0.07 3				
x2734.9 13	0.026 14				
x2738.3 6	0.065 15				
x2741.9 6	0.081 17				
2745.0[e jw] 3	0.151 19	3327.05	(3/2$^-$,5/2$^+$)	581.0103	7/2$^-$
x2748.5 3	0.21 3				
2750.78[j f x] 22	0.34 4	3051.20		301.1495	5/2$^+$
2755.13[e] 19	0.158 17	2994.14		238.9986	3/2$^-$
x2759.3 9	0.030 15				
2762.43[e] 19	0.192 19	3063.93	(3/2,5/2$^+$)	301.1495	5/2$^+$
x2767.4 4	0.068 14				
x2770.94 21	0.132 16				
2776.1[e] 3	0.18 6	2776.74	(1/2$^-$,3/2)	0.0	1/2$^-$
x2778.1 6	0.11 6				
x2782.8 4	0.071 16				
x2785.6 6	0.045 16				
x2789.50 20	0.092 14				
x2794.70 21	0.120 20				
x2797.48 17	0.183 21				
x2802.5 3	0.079 19				
x2805.33 18	0.190 22				
2809.05[d] 15	0.50 3	2809.14	(1/2,3/2)	0.0	1/2$^-$
x2812.22 23	0.131 20				
2815.26[f] 19	0.172 20	3063.93	(3/2,5/2$^+$)	249.7884	5/2$^-$
x2818.30 24	0.084 16				
x2824.9 3	0.163 15				
x2831.1 5	0.107 14				
x2835.10 25	0.230 19				
x2840.50 24	0.220 18				
x2844.9 6	0.069 13				
x2849.8 6	0.096 16				
x2852.9 6	0.102 16				
x2857.1 4	0.102 14				
x2861.9 3	0.126 14				
x2866.6 3	0.173 18				
x2869.9 4	0.137 21				
2873.00[d] 17	0.67 4	2873.00	(3/2)	0.0	1/2$^-$
x2876.3 3	0.249 24				
x2879.60 20	0.41 3				

$^{77}_{34}Se_{43}$-25

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x2882.3 5	0.094 21				
2886.7 e 3	0.23 3	3798.21	(3/2+,5/2+)	911.5316	(3/2)+
x2889.4 6	0.102 22				
x2892.7 4	0.151 21				
2894.13 eh 11	0.26 4	3718.49		824.4307	(5/2)−
x2895.4 5	0.099 20				
x2902.6 5	0.090 15				
x2906.0 3	0.232 22				
x2908.9 4	0.133 19				
x2914.0 3	0.174 18				
x2917.2 4	0.104 16				
2922.75 e 22	0.31 3	3362.25		439.4515	5/2−
x2925.4 4	0.163 23				
x2929.02 21	0.258 20				
x2936.1 5	0.092 17				
x2939.3 13	0.050 18				
x2942.0 8	0.063 20				
x2946.5 6	0.050 13				
2952.2 !e 4	0.20 ! 7	3191.58		238.9986	3/2−
2952.2 !e 4	0.20 ! 7	3472.86		520.6386	3/2−
x2953.9 6	0.15 7				
2960.36 e 19	0.201 17	3480.52		520.6386	3/2−
2964.66 e 18	0.230 18	3772.37	(5/2+)	808.185	7/2−
2970.8 e 5	0.13 3	3552.44	(3/2−)	581.0103	7/2−
x2973.0 6	0.09 3				
x2980.5 3	0.16 4				
2982.72 f 19	0.45 4	2982.94	(1/2,3/2)	0.0	1/2−
x2986.7 3	0.156 19				
2989.7 e 4	0.087 16	3934.71	(3/2−,5/2+)	946.9821	1/2+
2994.01 e 20	0.279 24	3243.95		249.7884	5/2−
x2997.0 3	0.167 21				
x3002.8 8	0.08 6				
x3004.8 4	0.19 6				
x3009.9 3	0.112 14				
3014.0 e 4	0.15 3	3694.43	(3/2+,5/2+)	680.1034	5/2+
x3016.4 10	0.05 3				
x3022.1 5	0.055 13				
x3025.4 4	0.061 13				
x3030.8 3	0.062 11				
x3037.4 4	0.066 17				
3040.52 e 16	0.55 3	3561.25		520.6386	3/2−
3045.03 jey 24	0.125 14	3868.62	(5/2+)	824.4307	(5/2)−

$^{77}_{34}Se_{43}$-26

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x3051.04 *21*	0.150 *15*				
x3055.0 *3*	0.086 *12*				
x3060.58 *25*	0.099 *12*				
x3066.2 *3*	0.095 *13*				
x3070.28 *24*	0.128 *14*				
x3075.0 *11*	0.07 *6*				
x3077.6 *22*	0.10 *3*				
x3080.1 *7*	0.16 *8*				
x3085.1 *8*	0.038 *16*				
x3088.1 *3*	0.167 *18*				
x3091.5 *8*	0.036 *13*				
x3097.00 *23*	0.112 *12*				
3106.4[e] *3*	0.116 *15*	3545.65	$(3/2^+,5/2^+)$	439.4515	$5/2^-$
3110.21[e] *21*	0.272 *23*	3934.71	$(3/2^-,5/2^+)$	824.4307	$(5/2)^-$
3114.0[e] *10*	0.12 *5*	3354.31	(1/2,3/2)	238.9986	$3/2^-$
x3116.6 *7*	0.18 *4*				
x3120.1 *6*	0.124 *24*				
x3122.4 *6*	0.07 *3*				
3129.8[b] *3*	0.101 *18*	(7418.878)	$1/2^+$	4289.0	(1/2,3/2)
x3132.7 *5*	0.090 *18*				
x3135.8 *3*	0.128 *18*				
x3138.8 *21*	0.017 *15*				
x3142.1 *6*	0.047 *13*				
x3147.0 *6*	0.027 *11*				
x3150.6 *5*	0.045 *13*				
x3154.1 *3*	0.122 *20*				
x3157.3 *10*	0.10 *9*				
3159.7[e] *15*	0.10 *5*	4289.0	(1/2,3/2)	1128.113	$1/2^+$
x3162.5 *7*	0.10 *6*				
x3166.8 *4*	0.051 *12*				
x3170.74 *21*	0.112 *13*				
3175.15[b] *17*	0.220 *18*	(7418.878)	$1/2^+$	4243.64	
x3178.7 *3*	0.074 *13*				
x3184.6 *6*	0.08 *6*				
x3186.6 *3*	0.19 *6*				
x3190.32 *16*	0.266 *20*				
x3196.5 *4*	0.080 *12*				
x3200.5 *8*	0.054 *14*				
x3203.9 *12*	0.053 *21*				
3206.59[b] *20*	0.39 *3*	(7418.878)	$1/2^+$	4212.23	
3211.7[e] *4*	0.194 *20*	3450.46	$(3/2^+,5/2^+)$	238.9986	$3/2^-$
x3214.9 *4*	0.244 *23*				
3217.8[e] *4*	0.189 *21*	3517.91	$(3/2^+)$	301.1495	$5/2^+$

$^{77}_{34}Se_{43}$-27

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x3223.1 11	0.056 16				
x3226.1 6	0.128 17				
x3230.9 13	0.12 5				
3233.1[e] 6	0.28 6	3232.83	(1/2,3/2)	0.0	1/2−
x3237.8 3	0.114 17				
3241.01[e] 22	0.260 22	3480.52		238.9986	3/2−
x3244.19 24	0.175 19				
x3248.8 4	0.105 16				
3251.9[!e] 3	0.128[!] 17	3552.44	(3/2−)	301.1495	5/2+
3251.9[!e] 3	0.128[!] 17	3772.37	(5/2+)	520.6386	3/2−
x3256.3 4	0.087 14				
3260.3[e] 3	0.24 3	4068.49	(5/2+)	808.185	7/2−
x3263.5 8	0.21 5				
3266.1[e] 17	0.11 6	4212.23		946.9821	1/2+
x3269.5 16	0.032 22				
x3277.3 8	0.20 11				
3279.4[e] 9	0.32 7	3718.49		439.4515	5/2−
3283.0[e] 23	0.15 8	4289.0	(1/2,3/2)	1005.1836	3/2−
x3285.4 14	0.17 12				
x3289.3 4	0.125 18				
x3294.5 3	0.31 4				
3296.95[e] 25	0.39 4	4243.64		946.9821	1/2+
x3302.9 3	0.184 15				
x3307.89 23	0.354 24				
x3311.3 3	0.230 19				
x3317.1 5	0.126 18				
x3320.1 8	0.110 17				
x3323.6 4	0.200 20				
x3326.7 6	0.121 18				
x3330.84 21	0.349 22				
x3336.9 8	0.065 14				
3340.4[e] 7	0.156 23	3642.15	(5/2+)	301.1495	5/2+
x3342.9 6	0.097 25				
x3347.4 4	0.26 4				
3349.9[b] 4	0.26 4	(7418.878)	1/2+	4068.49	(5/2+)
3354.00[!e] 21	0.244[!] 19	3354.31	(1/2,3/2)	0.0	1/2−
3354.00[!e] 21	0.244[!] 19	3934.71	(3/2−,5/2+)	581.0103	7/2−
x3358.2 5	0.108 24				
x3360.6 6	0.119 25				
x3365.5 4	0.100 11				
x3370.2 3	0.149 13				
x3374.2 9	0.030 10				
x3379.4 4	0.101 14				
3383.1[e] 3	0.26 3	3545.65	(3/2+,5/2+)	161.9223	7/2+
x3385.54 24	0.30 3				
x3390.8 5	0.067 13				
x3394.1 3	0.160 16				
x3398.8 14	0.024 12				
x3402.09 22	0.186 16				
3412.1[e] 3	0.222 24	3412.45	(1/2,3/2)	0.0	1/2−
3415.0[f] 3	0.30 3	3414.97	(1/2,3/2)	0.0	1/2−
x3418.1 5	0.098 18				
x3424.2 8	0.052 17				
x3427.3 6	0.094 16				
x3430.8 4	0.115 14				
3434.9[e] 3	0.151 14	4243.64		808.185	7/2−
x3439.7 13	0.07 4				
x3442.0 7	0.12 4				
x3446.9 4	0.159 22				
x3449.7 4	0.155 21				
x3453.8 8	0.035 10				
x3462.6 4	0.061 10				
3466.87[e] 16	0.311 20	3642.15	(5/2+)	175.3058	9/2+
x3472.9 3	0.062 9				
x3479.26 19	0.235 19				
x3483.01 15	0.55 3				
3487.38[e] 19	0.293 21	4068.49	(5/2+)	581.0103	7/2−
x3490.8 3	0.118 15				
x3497.4 3	0.064 9				
x3504.71 16	0.227 16				
x3509.9 6	0.030 10				
x3513.9 7	0.042 14				
3517.26[e j z] 15	0.47 3	3517.91	(3/2+)	0.0	1/2−
x3522.0 5	0.040 9				
x3526.6 4	0.043 9				
x3533.5 3	0.26 5				
x3536.0 5	0.22 3				
x3539.2 3	0.23 3				
x3543.4 3	0.171 22				
x3546.0 8	0.14 3				
3550.37[b] 20	0.62 4	(7418.878)	1/2+	3868.62	(5/2+)
x3554.1 7	0.164 22				
x3557.1 14	0.085 19				
3560.5[e] 15	0.056 15	3798.21	(3/2+,5/2+)	238.9986	3/2−

$^{77}_{34}Se_{43}$-28

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x3563.7 8	0.075 15					
x3568.3 3	0.138 12					
x3573.9 15	0.023 9					
x3577.6 13	0.030 10					
x3582.9 10	0.054 15					
x3586.1 5	0.28 6					
x3588.6 8	0.18 5					
3591.8[b] 3	0.24 3	(7418.878)	1/2+	3827.08		
x3598.3 4	0.092 17					
x3601.3 3	0.145 17					
x3605.6 4	0.061 10					
x3610.6 6	0.074 19					
x3613.4 7	0.060 19					
x3618.7 12	0.09 4					
3621.2[b] 3	0.40 4	(7418.878)	1/2+	3798.21	(3/2+,5/2+)	
x3625.3 7	0.073 10					
3630.7[e] 3	0.196 14	3868.62	(5/2+)	238.9986	3/2−	Additional information 2.
3636.35[e] 17	0.417 24	3798.21	(3/2+,5/2+)	161.9223	7/2+	
x3644.5 3	0.143 23					
3647.21[jb1] 22	0.266 25	(7418.878)	1/2+	3772.37	(5/2+)	
x3652.2 11	0.027 10					
x3655.9 7	0.041 10					
x3662.6 3	0.107 10					
x3667.6 7	0.053 10					
x3671.4 9	0.053 10					
x3675.7 7	0.049 9					
x3681.5 7	0.087 17					
x3684.5 10	0.081 16					
x3688.08 18	0.329 22					
3692.97[e] 15	0.350 21	3868.62	(5/2+)	175.3058	9/2+	
3700.62[b] 14	0.50 3	(7418.878)	1/2+	3718.49		
x3705.4 4	0.081 11					
x3709.3 6	0.043 9					
x3716.1 5	0.049 8					
x3721.0 9	0.035 12					
3724.2[b] 3	0.098 14	(7418.878)	1/2+	3694.43	(3/2+,5/2+)	
x3730.72 23	0.121 11					
x3735.2 14	0.016 8					
x3740.8 18	0.010 7					
x3748.1 4	0.086 17					
x3751.2 4	0.120 16					
x3755.3 3	0.110 12					
x3759.3 8	0.030 9					

$^{77}_{34}Se_{43}$-29

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Comments
x3765.0 9	0.022 7					
x3775.2 5	0.19 5					
3777.4 b 5	0.21 5	(7418.878)	1/2+	3642.15	(5/2+)	
x3783.1 3	0.142 16					
x3786.2 3	0.156 18					
x3792.5 3	0.128 12					
x3796.45 21	0.190 14					
x3804.98 24	0.119 11					
x3810.35 20	0.145 12					
x3820.5 5	0.047 8					
3828.0 e 7	0.053 11	4068.49	(5/2+)	238.9986	3/2−	
x3831.75 24	0.197 15					
x3836.3 5	0.064 9					
x3846 3	0.008 7					
x3856.6 4	0.17 3					
3859.01 b 19	0.49 4	(7418.878)	1/2+	3561.25		Eγ=3858.0 3, Iγ=0.044 5 in PGAA database (2007ChZX) possibly the same as the 3859.01γ.
3866.28 b 15	0.336 20	(7418.878)	1/2+	3552.44	(3/2−)	
3873.03 b 15	0.368 22	(7418.878)	1/2+	3545.65	(3/2+,5/2+)	
x3882.92 13	0.66 4					
x3888.12 25	0.188 14					
x3892.6 14	0.021 9					
3900.67 b 17	0.84 7	(7418.878)	1/2+	3517.91	(3/2+)	
x3902.9 3	0.31 5					
x3908.85 24	0.39 4					
x3911.3 11	0.10 3					
x3914.9 8	0.064 13					
x3919.2 14	0.021 9					
x3927.3 8	0.033 8					
x3934.3 4	0.120 13					
3938.11 b 19	0.266 10	(7418.878)	1/2+	3480.52		
3945.92 b 14	0.48 3	(7418.878)	1/2+	3472.86		
x3952.70 23	0.146 11					
x3964.1 4	0.106 12					
3968.35 b 14	0.56 3	(7418.878)	1/2+	3450.46	(3/2+,5/2+)	
x3972.96 13	0.60 3					
x3978.73 25	0.114 10					
x3986.6 4	0.065 8					
x3999.5 7	0.050 11					
4003.6 b 3	0.33 4	(7418.878)	1/2+	3414.97	(1/2,3/2)	
4006.3 f 3	0.20 3	(7418.878)	1/2+	3412.45	(1/2,3/2)	
x4015.7 16	0.023 14					

$^{77}_{34}Se_{43}$-30

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π
x4019.0 *10*	0.054 *14*				
4022.76 b *17*	0.326 *22*	(7418.878)	1/2+	3396.01	
x4028.9 *22*	0.010 *8*				
x4033.75 *13*	0.388 *23*				
x4040.12 *22*	0.113 *10*				
x4047.2 *5*	0.054 *9*				
x4051.92 *21*	0.173 *13*				
4056.77 b *13*	0.434 *25*	(7418.878)	1/2+	3362.25	
4064.43 b *14*	0.332 *20*	(7418.878)	1/2+	3354.31	(1/2,3/2)
4069.6 d *4*	0.057 *8*	(7418.878)	1/2+	3348.67	(1/2,3/2)
x4075.2 *3*	0.088 *9*				
x4080.7 *4*	0.061 *8*				
x4087.7 *9*	0.028 *11*				
4091.27 b *20*	0.163 *14*	(7418.878)	1/2+	3327.05	(3/2−,5/2+)
x4100.58 *25*	0.091 *9*				
4105.88 b *15*	0.244 *16*	(7418.878)	1/2+	3312.79	(1/2,3/2)
x4110.6 *4*	0.051 *8*				
x4117.4 *10*	0.020 *7*				
x4121.9 *4*	0.057 *8*				
x4131.3 *6*	0.073 *19*				
x4134.3 *8*	0.061 *18*				
x4138.84 *19*	0.144 *12*				
x4158.02 *18*	0.104 *10*				
x4162.8 *5*	0.031 *7*				
x4168.2 *3*	0.054 *8*				
4174.78 b *11*	0.54 *3*	(7418.878)	1/2+	3243.95	
x4180.4 *3*	0.056 *9*				
4185.94 b *11*	0.61 *3*	(7418.878)	1/2+	3232.83	(1/2,3/2)
x4199.3 *4*	0.049 *7*				
x4206.32 *17*	0.155 *11*				
x4214.3 *22*	0.008 *6*				
x4222.71 *18*	0.184 *13*				
4227.79 b *22*	0.212 *18*	(7418.878)	1/2+	3191.58	
x4231.1 *8*	0.048 *13*				
x4239 k *5*	<0.012				
4243.48 e *14*	0.319 *19*	4243.64		0.0	1/2−
4250.50 b *18*	0.152 *11*	(7418.878)	1/2+	3168.22	(3/2+,5/2+)
x4257.6 *3*	0.095 *9*				
x4263.96 *17*	0.185 *12*				
x4273.2 *6*	0.055 *10*				
x4276.9 *7*	0.047 *10*				

$^{77}_{34}Se_{43}$-31

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †
4288.18!e 15	0.220! 14	4289.0	(1/2,3/2)	0.0	1/2$^-$	
4288.18!f 15	0.220! 14	(7418.878)	1/2$^+$	3132.06		
x4296.1 6	0.037 7					
x4304.29 24	0.098 9					
x4313.7 9	0.023 6					
x4320.0 5	0.043 7					
x4333.5 6	0.032 8					
x4338.5 4	0.048 8					
x4343.2 12	0.014 7					
4354.73 10	0.59 3	(7418.878)	1/2$^+$	3063.93	(3/2,5/2$^+$)	
x4360.2 13	0.014 7					
4367.91j2 12	0.334 20	(7418.878)	1/2$^+$	3051.20		
4378.25 9	1.25 7	(7418.878)	1/2$^+$	3040.34	(3/2$^-$,5/2$^+$)	
x4387.8 5	0.032 7					
x4408.1 8	0.027 9					
x4412.55 15	0.234 16					
x4418.1 7	0.026 8					
4424.22 13	0.244 16	(7418.878)	1/2$^+$	2994.14		
x4429.3 9	0.023 8					
4435.76 10	0.47 3	(7418.878)	1/2$^+$	2982.94	(1/2,3/2)	
x4445.5 8	0.023 7					
x4451.4 8	0.022 7					
x4459.53 19	0.116 10					
x4465.1 14	0.013 7					
x4471.69 19	0.107 10					
x4484.4 6	0.022 7					
x4489.3 5	0.025 7					
x4504.25 12	0.210 14					
x4509.35h 25	0.03 1					
x4517k 4	<0.010					
4526.81 9	1.63 9	(7418.878)	1/2$^+$	2891.94	(3/2$^-$)	(E1)
4545.64 9	0.70 4	(7418.878)	1/2$^+$	2873.00	(3/2)	
x4554.8 15	0.012 8					
x4561.66i 10	0.79 5					
4565.50 8	2.20 12	(7418.878)	1/2$^+$	2853.09	(1/2$^-$,3/2$^-$)	(E1)
x4572.73h 17	0.08 1					
4603.21 11	0.299 18	(7418.878)	1/2$^+$	2815.49		
4609.56 8	0.86 5	(7418.878)	1/2$^+$	2809.14	(1/2,3/2)	
x4623.2 5	0.041 10					
x4636k 3	<0.015					
4642.07 10	0.402 24	(7418.878)	1/2$^+$	2776.74	(1/2$^-$,3/2)	
x4648.0 8	0.024 8					
x4667.6 8	0.017 7					

$^{77}_{34}Se_{43}$-32

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

γ(^{77}Se) (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †
x4672.0 4	0.037 8					
x4683.38 h 16	0.03 1					
x4694.5 12	0.018 9					
x4698.9 i 3	0.165 16					
4702.82 j3 13	0.326 22	(7418.878)	1/2+	2716.33	(3/2)	
x4733.4 9	0.017 6					
x4739.68 h 16	0.05 1					
x4754.8 10	0.017 7					
x4759.4 7	0.028 7					
x4769.8 5	0.032 7					
4778.11 j4 12	0.188 13	(7418.878)	1/2+	2640.970	(3/2+,5/2+)	
x4798.0 11	0.022 11					
x4801.2 7	0.037 11					
x4808.1 8	0.018 6					
x4818.0 3	0.049 7					
x4832.2 h 2	0.02 1					
x4835.40 19	0.087 8					
x4837.0 h 2	0.09 1					
x4842.7 7	0.019 6					
4865.11 14	0.124 9	(7418.878)	1/2+	2553.82		
x4873.45 h 15	0.03 1					
x4891.4 5	0.025 6					
x4909.99 23	0.064 7					
x4917.6 17	0.008 6					
4926.58 7	0.71 4	(7418.878)	1/2+	2491.95		
x4946.5 a 3	0.050 8					
x4959.5 5	0.087 22					
4962.62 j5 11	0.55 4	(7418.878)	1/2+	2455.456		
x4969.3 10	0.016 8					
x4981.07 22	0.069 8					
5025.85 7	2.22 12	(7418.878)	1/2+	2392.952	3/2−	(E1)
x5038.7 8	0.035 10					
5043.4 3	0.106 12	(7418.878)	1/2+	2375.3	(3/2+,5/2+)	
x5067.3 8	0.024 8					
5078.72 9	0.49 3	(7418.878)	1/2+	2339.93	(3/2−,5/2+)	
5098.56 9	0.45 3	(7418.878)	1/2+	2320.14		
x5109.0 8	0.022 l					
x5123.9 3	0.032 7					
x5139.6 10	0.010 6					
x5148.3 8	0.017 7					
5154.47 6	0.79 4	(7418.878)	1/2+	2264.33	(3/2−)	
x5164.5 13	0.011 7					
5170.33 j6 7	0.445 25	(7418.878)	1/2+	2248.929	3/2+,5/2+	

$^{77}_{34}Se_{43}$-33

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07 (continued)

$\gamma(^{77}Se)$ (continued)

E_γ ‡	I_γ #8	E_i(level)	J_i^π	E_f	J_f^π	Mult. †	Comments
x5186.0 *9*	0.022 *10*						
5205.47 j7 *8*	0.63 *4*	(7418.878)	1/2+	2212.03	1/2−,3/2−		
x5228.14 h *8*	0.04 *1*						
5276.25 *8*	0.345 *19*	(7418.878)	1/2+	2142.55			
x5291.6 *11*	0.010 *5*						
x5330.1 *5*	0.035 *6*						
x5344.6 *5*	0.033 *6*						
x5362.7 *5*	0.030 *6*						
x5432.4 *5*	0.030 *6*						
x5446.94 h *11*	0.04 *1*						
x5483.4 *7*	0.017 *5*						
5502.47 *9*	0.231 *14*	(7418.878)	1/2+	1916.064	(1/2+,3/2)		
5587.82 *24*	0.164 *17*	(7418.878)	1/2+	1830.861	(1/2−,3/2)		
5600.99 *6*	4.58 *23*	(7418.878)	1/2+	1817.637	1/2−	(E1)	
x5628.6 h *5*	0.037 *8*						
5703.92 *8*	0.408 *23*	(7418.878)	1/2+	1714.755	1/2−,3/2−		
x5716.8 i *6*	0.023 *6*						
x5773.3 i *7*	0.020 *6*						
5795.46 *6*	1.87 *10*	(7418.878)	1/2+	1623.145	(1/2−)		
5810.67 *14*	0.099 *9*	(7418.878)	1/2+	1607.702	3/2+,5/2+		
x5838.6 i *10*	0.010 *6*						
5907.54 *9*	0.300 *17*	(7418.878)	1/2+	1511.023	(3/2)		
5930.31 *16*	0.111 *9*	(7418.878)	1/2+	1488.237	(3/2)−		
6006.97 *6*	4.34 *22*	(7418.878)	1/2+	1411.626	(3/2−)	(E1)	α(IPF)=0.00229 *4*
6016.16 *7*	1.50 *8*	(7418.878)	1/2+	1402.484	(3/2−)		
6054.59 *15*	0.124 *10*	(7418.878)	1/2+	1364.273	(3/2−,5/2+)		
6231.57 *7*	1.49 *8*	(7418.878)	1/2+	1186.9835	(3/2)		
6290.87 *22*	0.076 *7*	(7418.878)	1/2+	1128.113	1/2+		
6413.40 *7*	2.83 *15*	(7418.878)	1/2+	1005.1836	3/2−	(E1)	α(IPF)=0.00239 *4*
6507.02 *11*	0.254 *15*	(7418.878)	1/2+	911.5316	(3/2)+		
6600.73 *8*	9.4 *5*	(7418.878)	1/2+	817.8561	1/2−	(E1)	α(IPF)=0.00243 *4*
x6887.5 i *12*	0.006 *3*						
6897.90 *18*	0.082 *6*	(7418.878)	1/2+	520.6386	3/2−		
x6906.3 i *10*	0.008 *3*						
7179.49 *16*	3.88 *20*	(7418.878)	1/2+	238.9986	3/2−	(E1)	α(IPF)=0.00255 *4*
7418.47 *22*	5.5 *3*	(7418.878)	1/2+	0.0	1/2−	(E1)	α(IPF)=0.00260 *4*

† From ce data (1985To10) for secondary transitions. For primary γ rays the assignments are based on transition strengths. Iγ and Ice scales were normalized by assuming mult=E2 for 125, 250 and 439 γ rays and mult=E3 for 162γ.

‡ From 1982ToZS. For Eγ up to 1620, the values have been increased by (1.77×10^{-5}) and the uncertainties increased by a factor of 1.4 (see 1985To10). Most of

$^{77}_{34}Se_{43}$-34

$\gamma(^{77}Se)$ (continued)

the transitions up to 1830 are also given in 1985To10. The uncertainties quoted by 1982ToZS and 1985To10 are statistical only. Additional systematic uncertainty of (5×10^{-6})(Eγ) arising from the absolute energy calibration has been added in quadrature by the evaluator. Primary Eγ data given in 1985To10 and 1982ToZS were decorrected for recoil correction.

From 1985To10 for γ rays below 1830 keV and from 1982ToZS above this value. A systematic error ≤20% should be taken into account.
@ Possible contamination from the ^{27}Al(n,γ) reaction.
& Possible contamination from the ^{1}H(n,γ) reaction.
a Possible contamination from the ^{12}C(n,γ) reaction.
b Placement as primary γ is from 1979BrZE.
c γ reported by 1971Ra07 only.
d Placement from 1971Ra07, treated as uncertain by evaluator.
e Placement of secondary γ from 1979BrZE, based on energy sums.
f Placement by the evaluator on the basis of energy sums.
g Placement by the evaluator on the basis of (α,nγ).
h γ reported by 1979BrZE only.
i γ reported by 1982ToZS only.
j Poor energy fit.
k Existence questionable.
l Uncertainty not available.
m From Adopted Gammas.
n From 1985To10, not reported in 1982ToZS.
o From 1985To10. Reported as 973.01 *6* in 1982ToZS.
p This transition ($1/2^-$ to $7/2^-$) is considered suspect (by evaluator) since deduced B(M3)(W.u.) is much greater than allowed by RUL.
q Placement from 1979BrZE.
r 1982ToZS reported Iγ=0.024 *9*.
s Level-energy difference=678.19.
t Level-energy difference=878.32.
u Level-energy difference=1726.99.
v Level-energy difference=2329.99.
w Level-energy difference=2745.99.
x Level-energy difference=2749.99.
y Level-energy difference=3044.12.
z Level-energy difference=3517.83.
1 Level-energy difference=3646.41.
2 Level-energy difference=4367.55.
3 Level-energy difference=4702.40.
4 Level-energy difference=4778.75.
5 Level-energy difference=4963.25.
6 Level-energy difference=5169.76.
7 Level-energy difference=5206.66.

$^{77}_{34}Se_{43}$-35

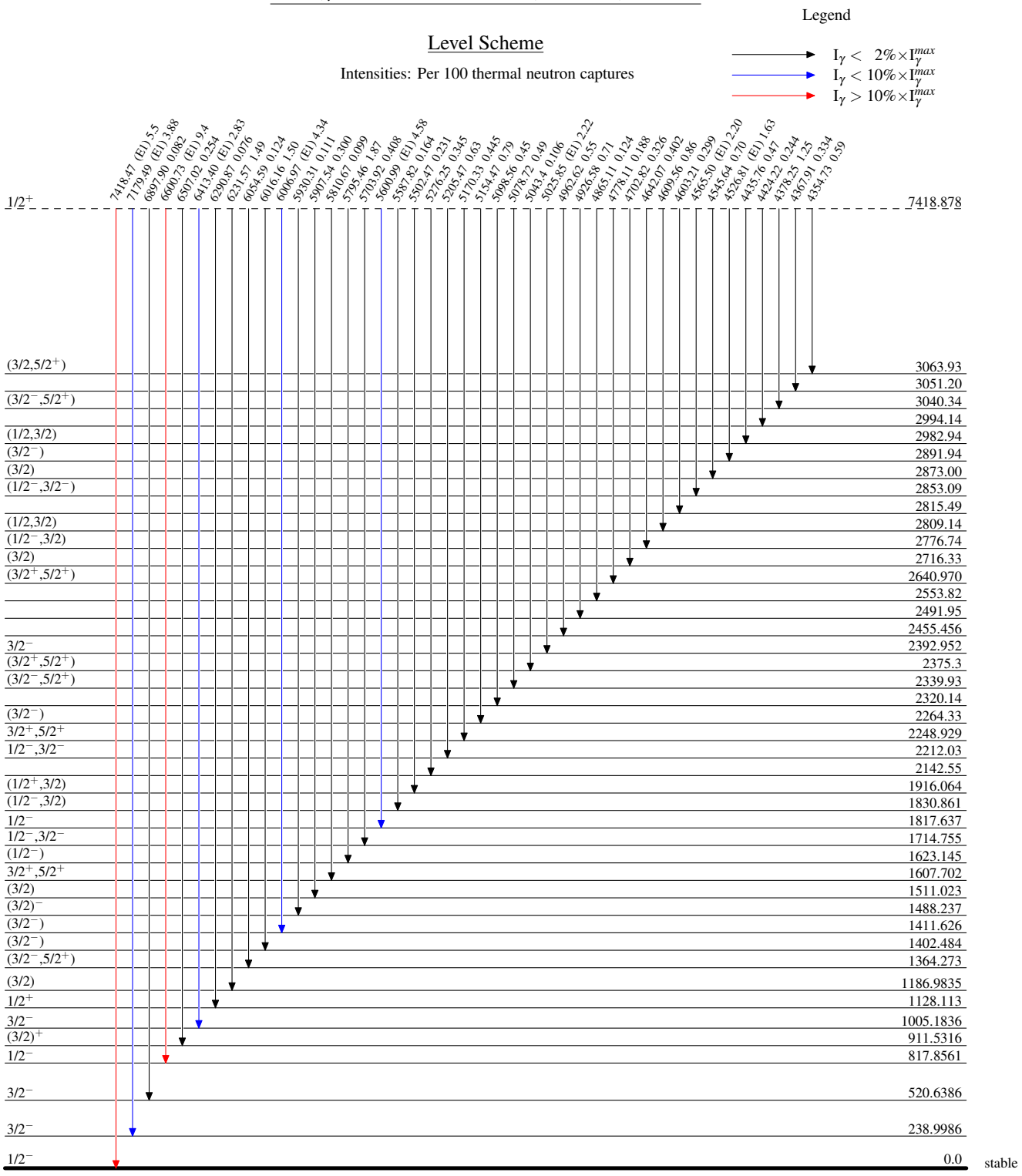
$\gamma(^{77}Se)$ (continued)

[8] Intensity per 100 neutron captures.
[9] 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.
[!] Multiply placed with undivided intensity.
Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme

Intensities: Per 100 thermal neutron captures

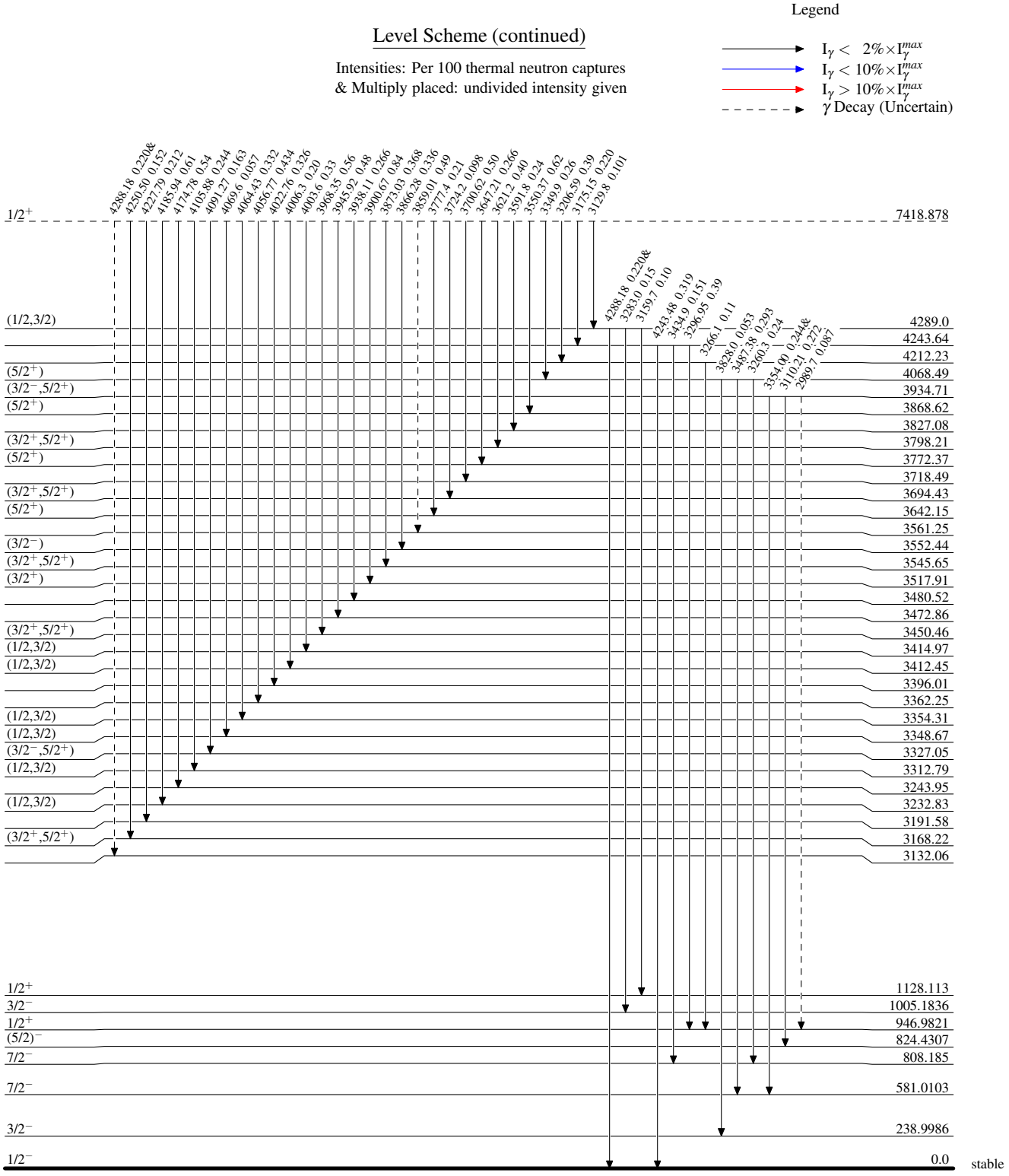


$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given



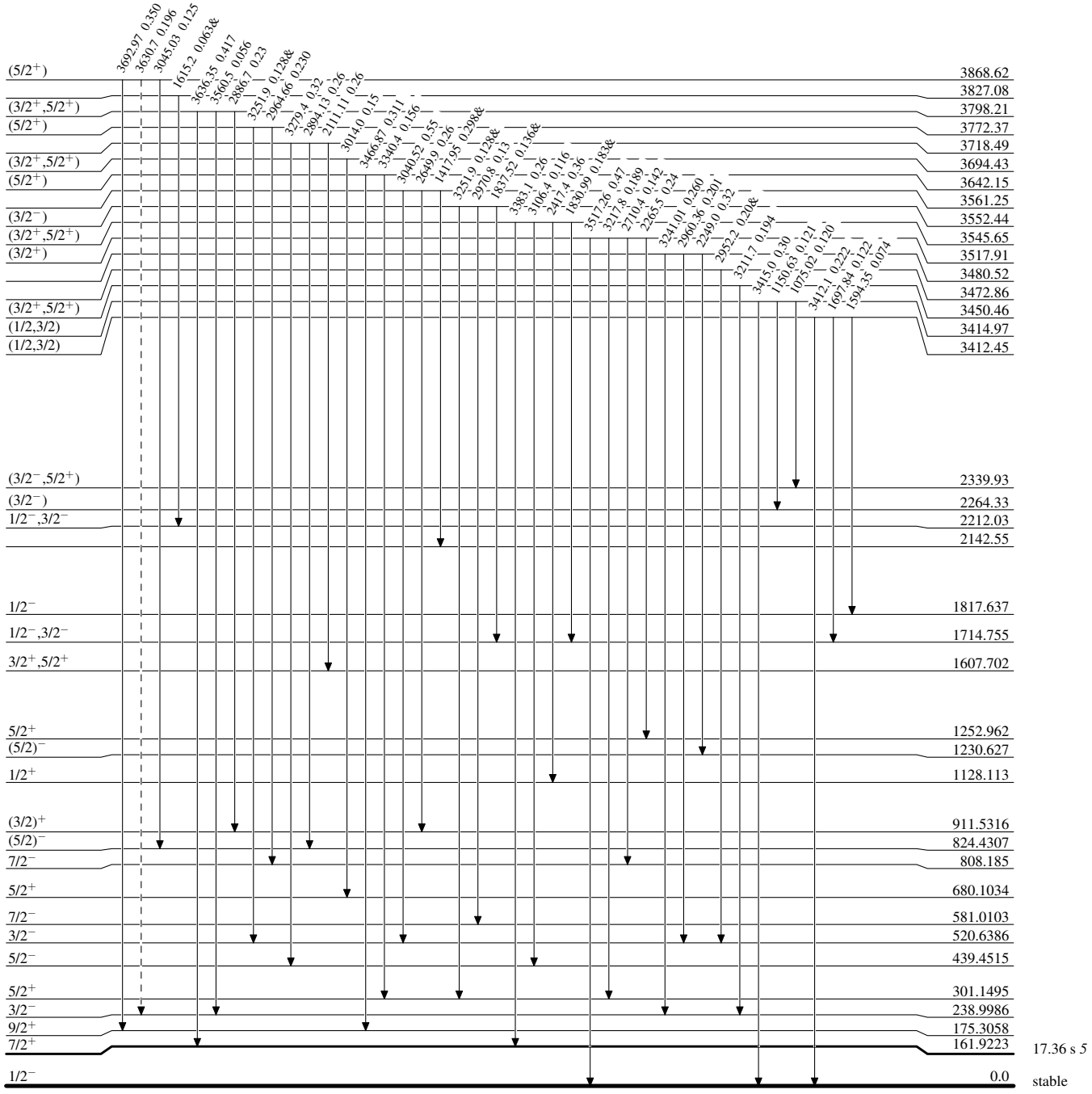
$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal 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)

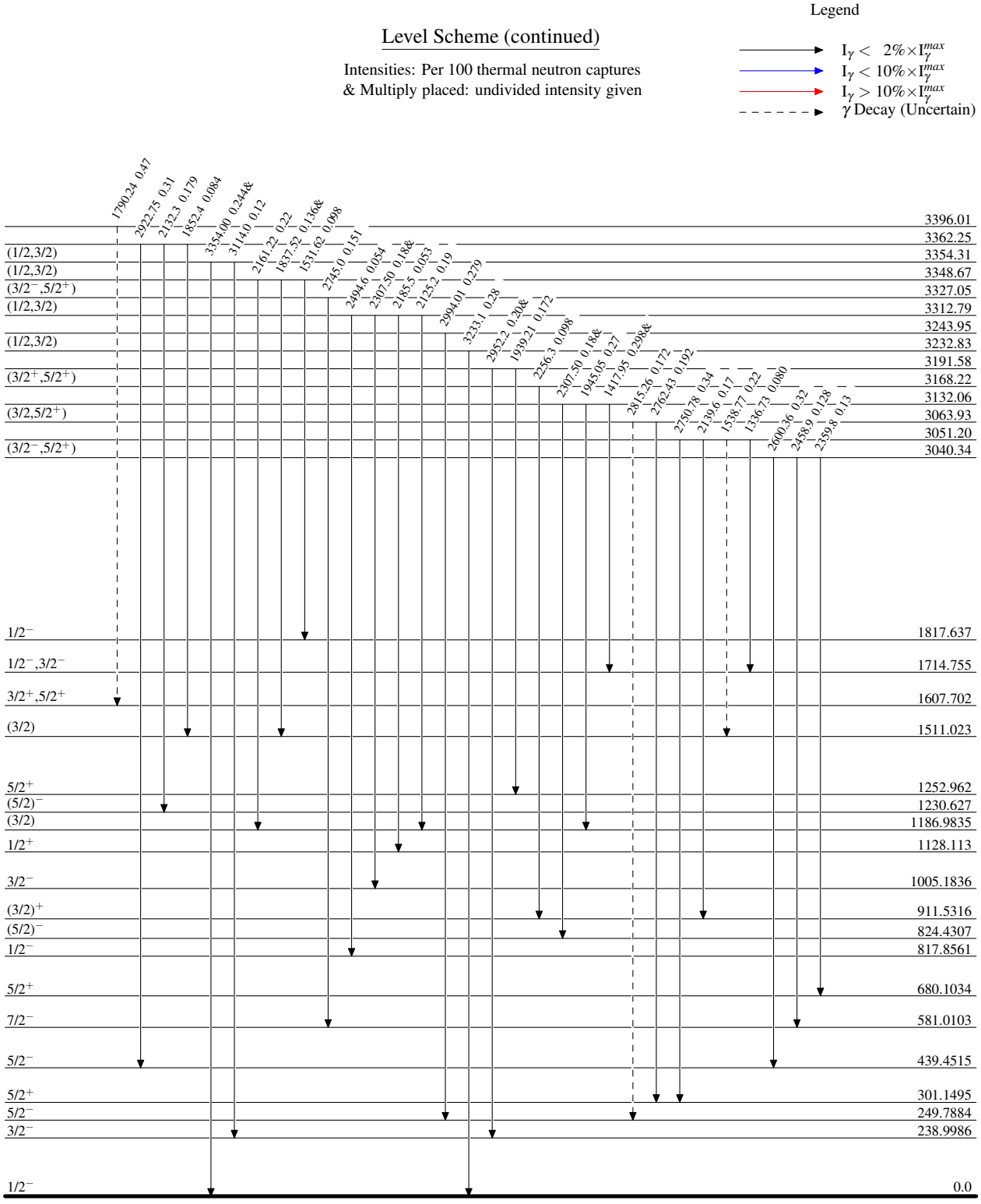


$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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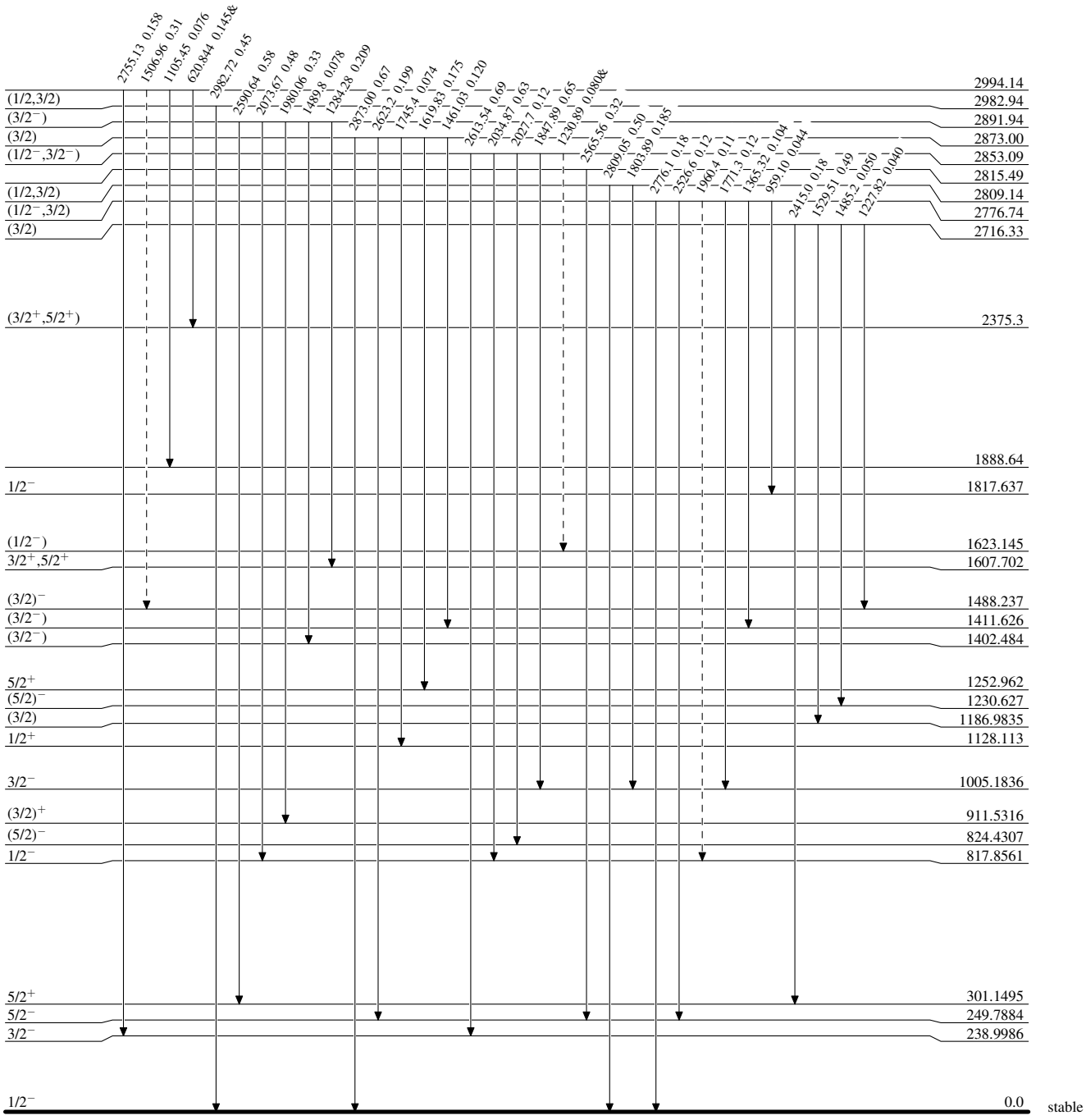
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
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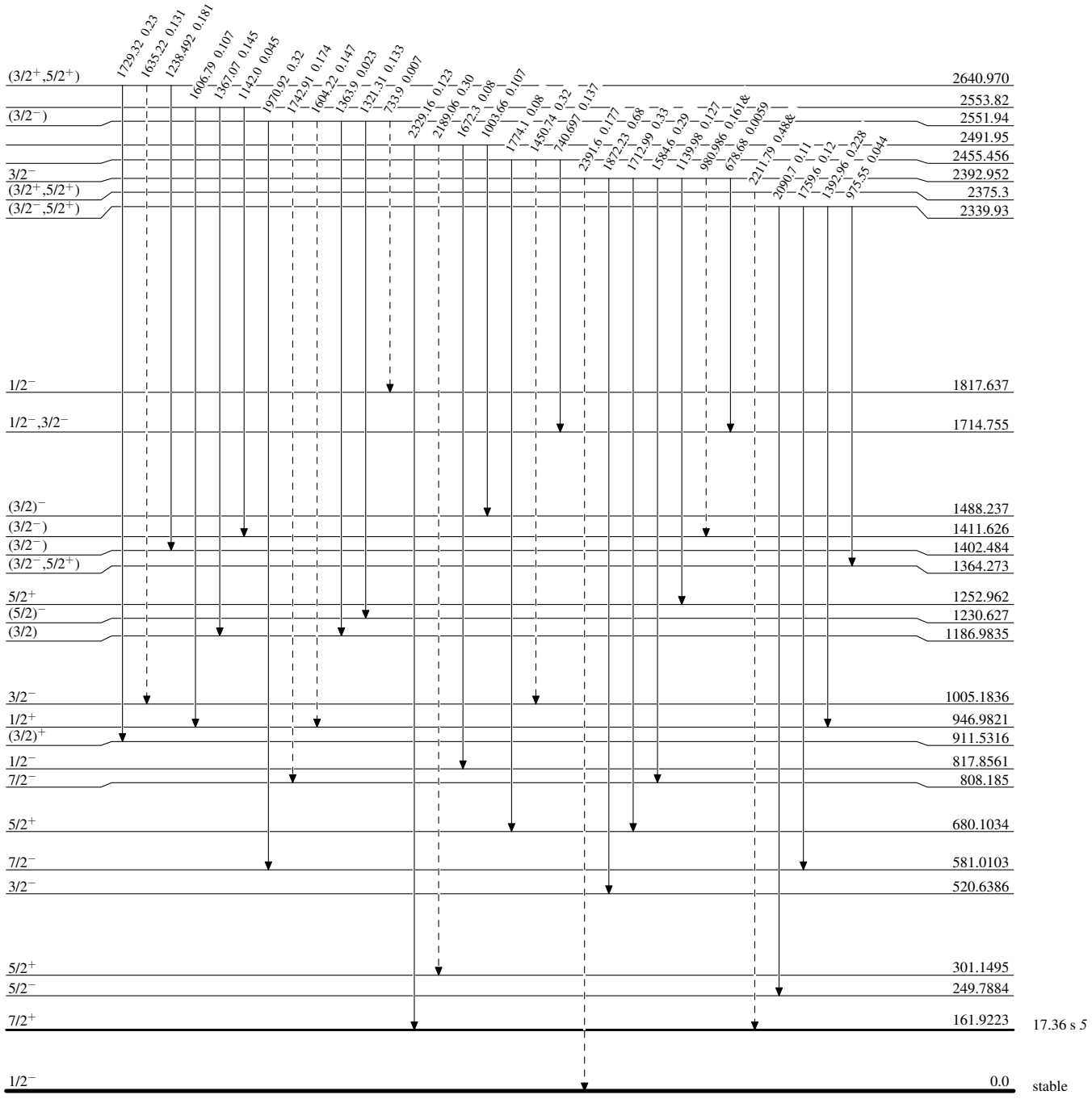
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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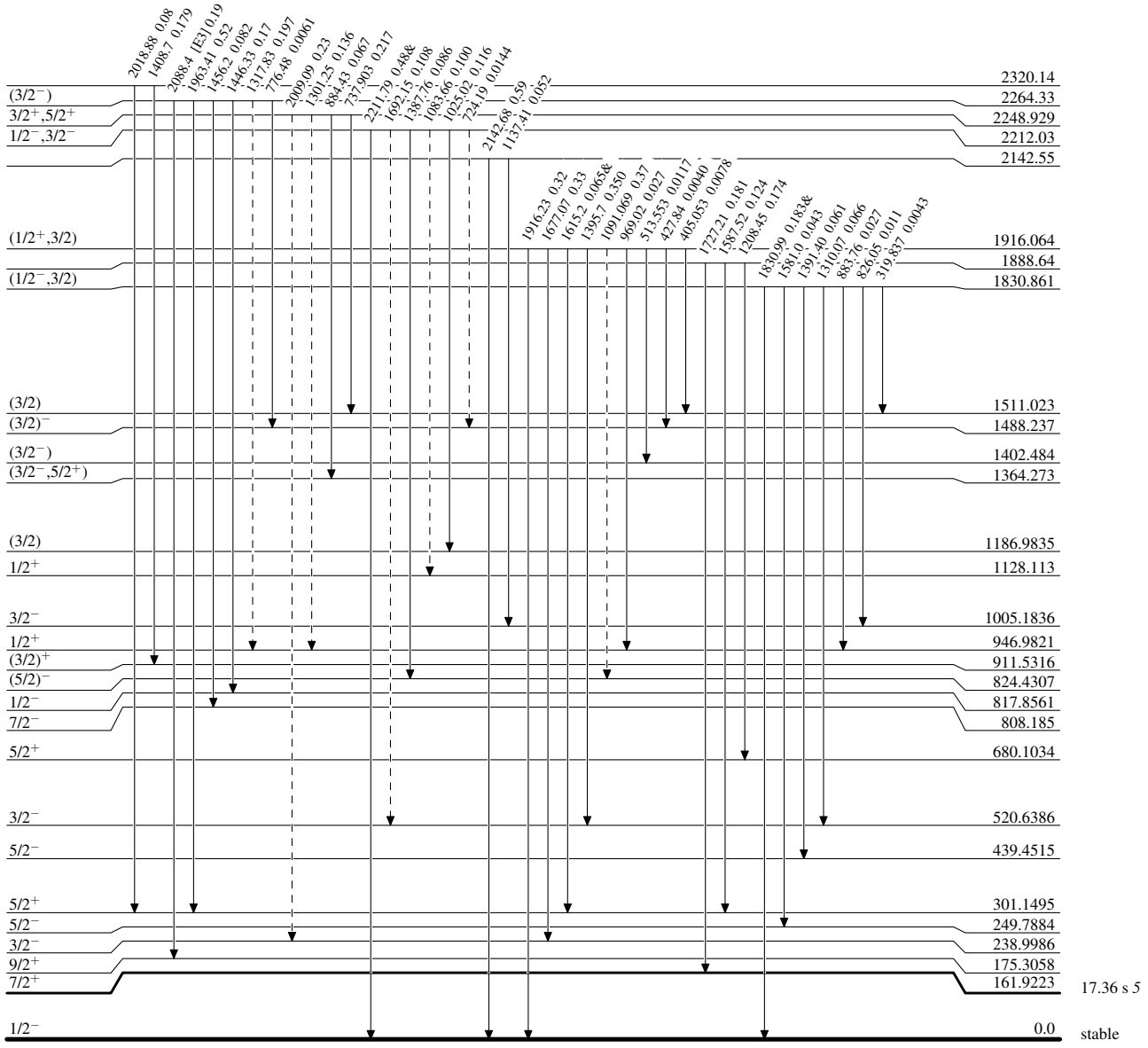
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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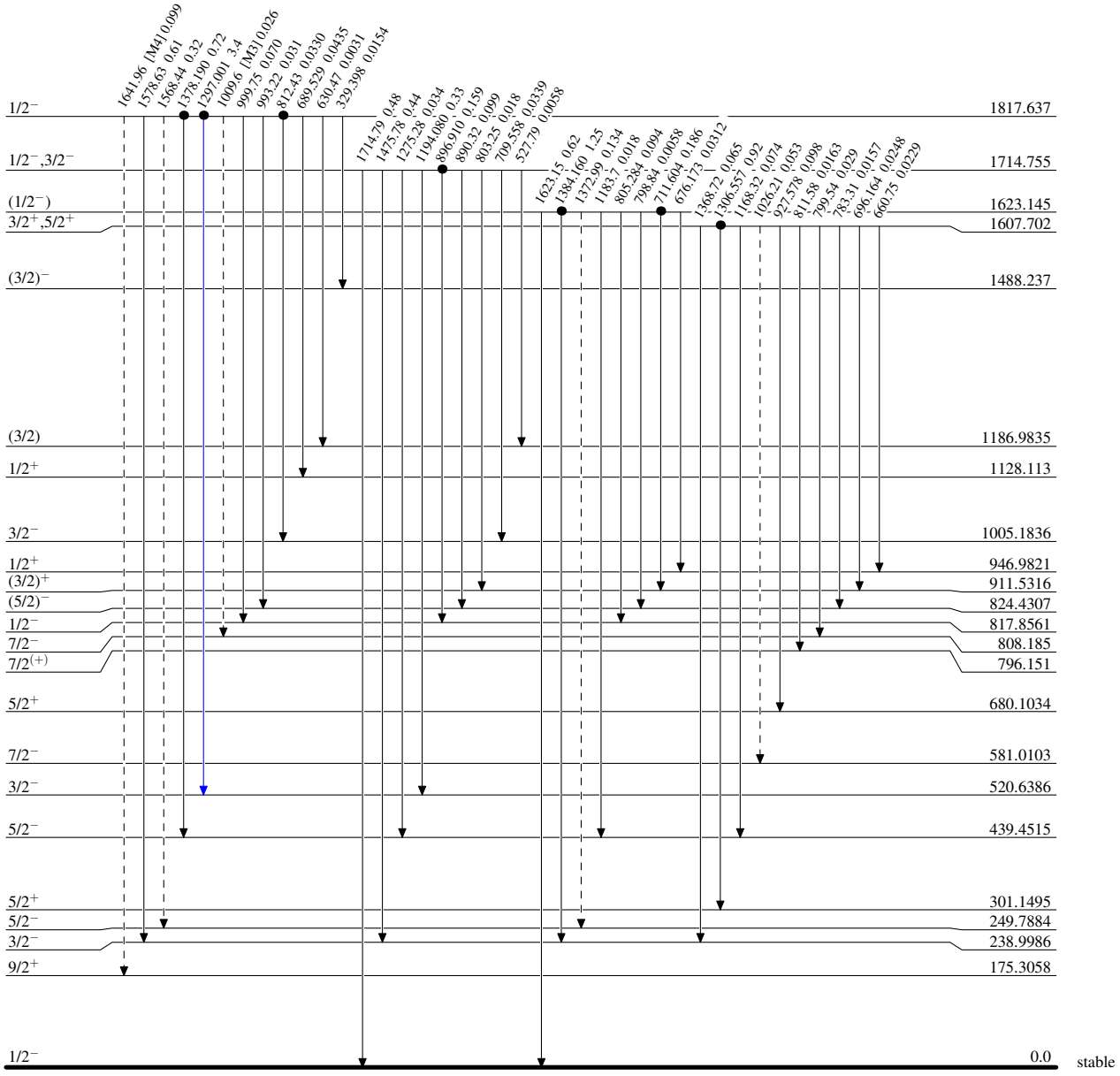
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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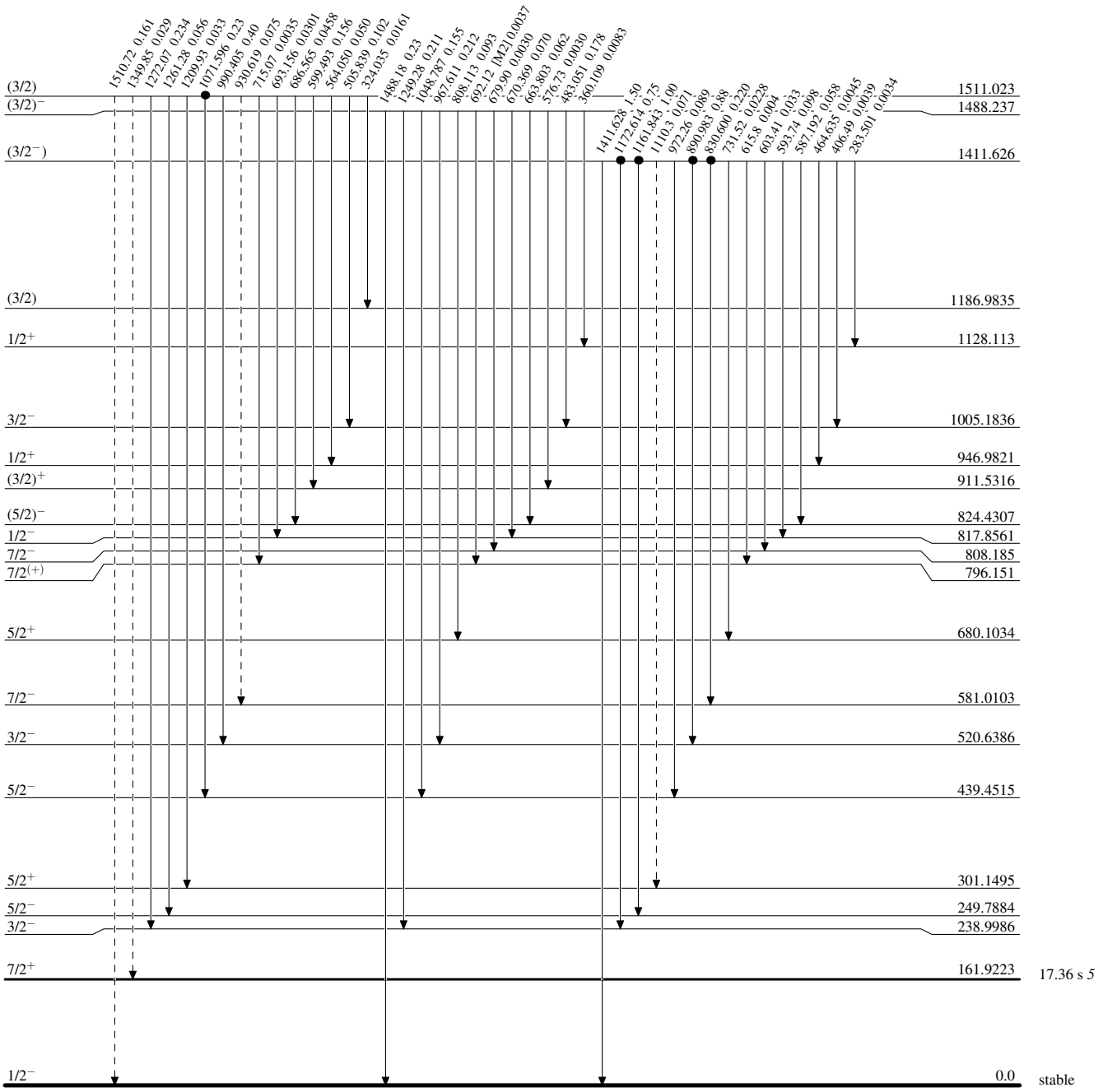
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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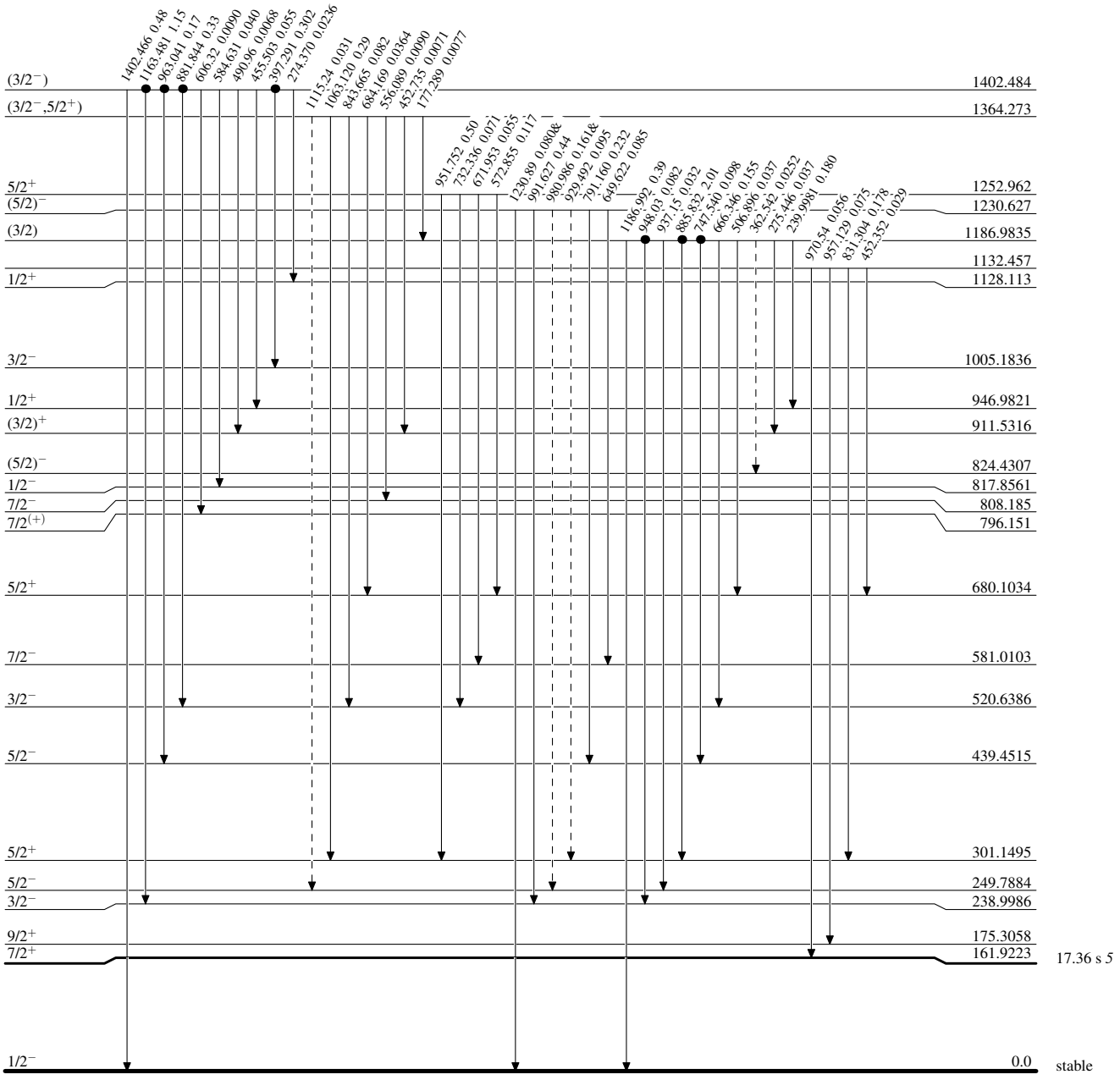
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
& Multiply placed: undivided intensity given

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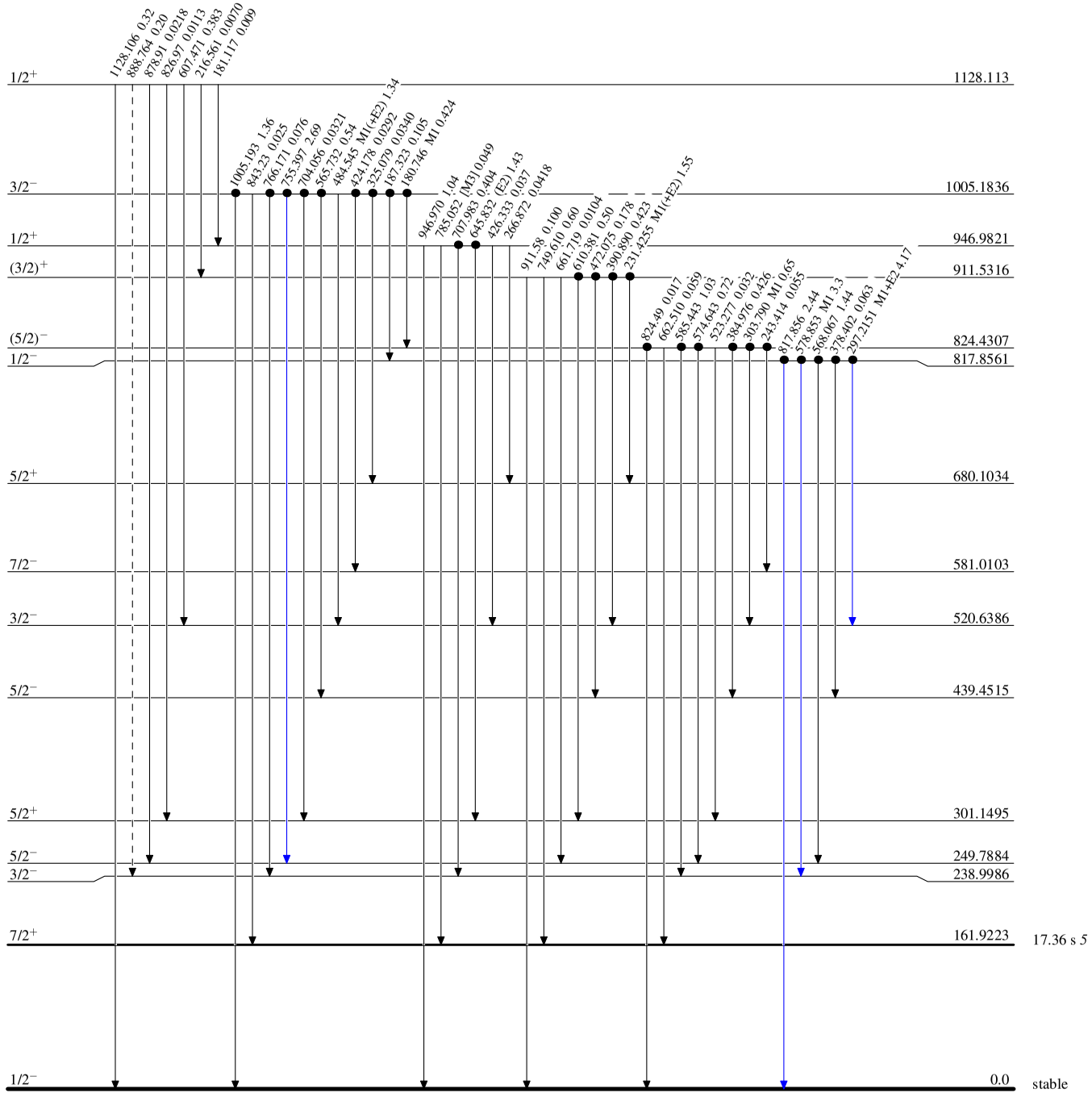
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{77}_{34}Se_{43}$

^{76}Se(n,γ) E=thermal 1985To10,1982ToZS,1981En07

Level Scheme (continued)

Intensities: Per 100 thermal neutron captures
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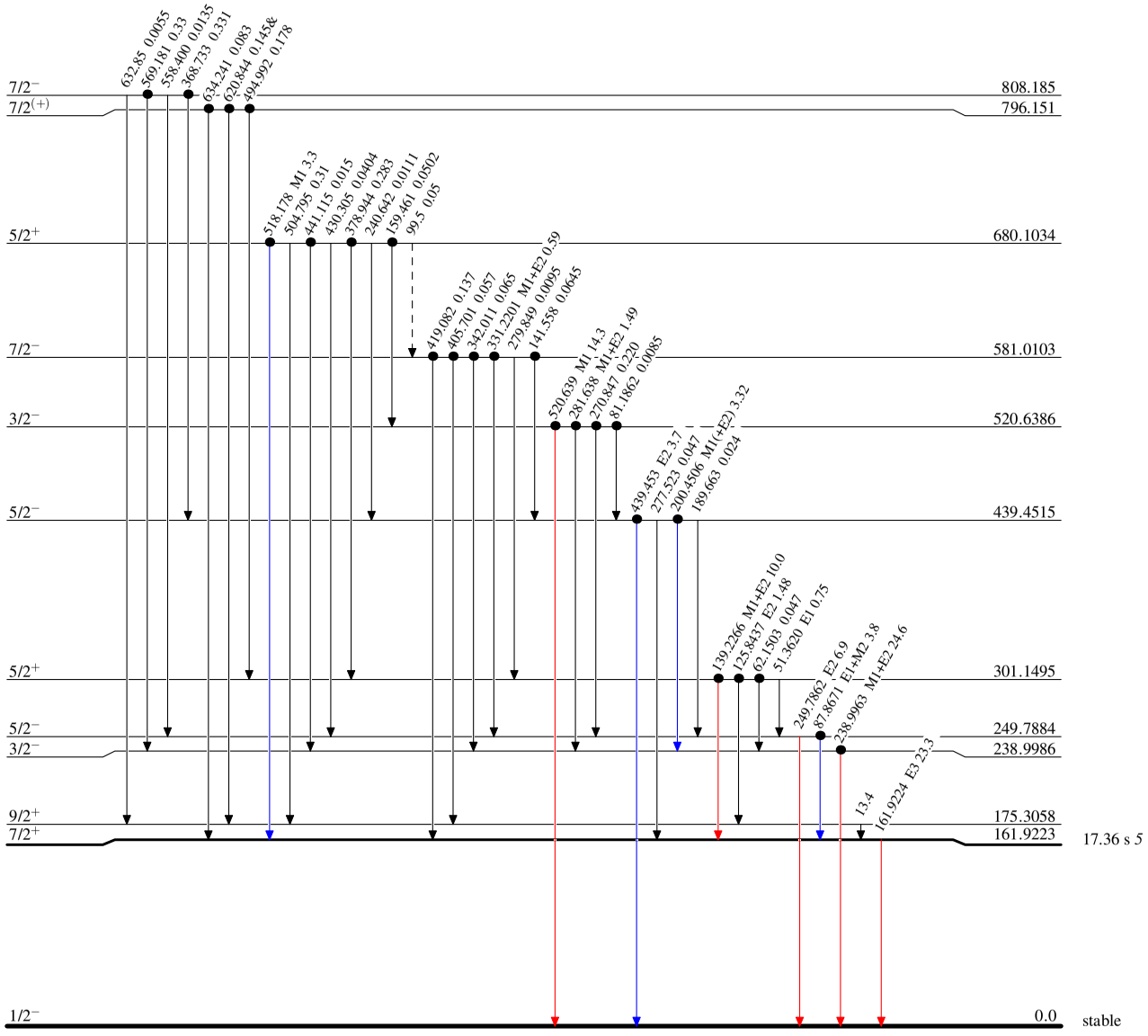
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{77}_{34}Se_{43}$