^{154}Sm(^{31}P,5nγ) 2002Zh01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 126, 151 (2015)	1-Feb-2015

E(^{31}P)=150 to 170 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO) using array of 12 Compton-suppressed HPGe detectors. Most measurements were done at 160 MeV. Subset of results published in 1999Zh26.

^{180}Ir Levels

E(level)[†]	J$^\pi$[‡]	Comments
0+x[#]	(5$^+$)	E(level): this state may correspond to the ground state of ^{180}Ir. Additional information 1.
98.22+x[@] *19*	(6$^+$)	
164.00+x[#] *10*	(7$^+$)	
180.80+x[&] *17*	(7$^+$)	
296.94+x[@] *20*	(8$^+$)	
441.83+x[&] *19*	(9$^+$)	
454.50+x[#] *14*	(9$^+$)	
623.92+x[@] *22*	(10$^+$)	
825.36+x[&] *21*	(11$^+$)	
847.80+x[#] *18*	(11$^+$)	
1057.20+x[@] *23*	(12$^+$)	
1302.57+x[&] *23*	(13$^+$)	
1328.8+x[#] *4*	(13$^+$)	
1571.18+x[@] *24*	(14$^+$)	
1846.39+x[&] *24*	(15$^+$)	
1876.8+x[#] *5*	(15$^+$)	
2120.16+x[@] *25*	(16$^+$)	
2179.2+x *4*	(16$^+$)	
2385.4+x[&] *3*	(17$^+$)	
2406.8+x[#] *7*	(17$^+$)	
2495.8+x *7*	(17$^+$)	
2622.2+x[@] *4*	(18$^+$)	
2882.7+x[&] *4*	(19$^+$)	
2902.3+x[#] *9*	(19$^+$)	
3162.2+x[@] *4*	(20$^+$)	
3452.7+x[&] *6*	(21$^+$)	
3752.5+x[@] *5*	(22$^+$)	
4394.0+x[@] *7*	(24$^+$)	
5089.3+x[@] *9*	(26$^+$)	
0+y[a]	(8$^-$)	Additional information 2.
91.19+y[b] *22*	(9$^-$)	
146.48+y[a] *22*	(10$^-$)	
345.63+y[b] *24*	(11$^-$)	
431.53+y[a] *24*	(12$^-$)	
733.2+y[b] *3*	(13$^-$)	
852.1+y[a] *3*	(14$^-$)	
1224.4+y[b] *4*	(15$^-$)	
1389.7+y[a] *3*	(16$^-$)	

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^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)

^{180}Ir Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	Comments
1797.9+y[b] *4*	(17$^-$)	
2021.5+y[a] *3*	(18$^-$)	
2441.9+y[b] *4*	(19$^-$)	
2721.5+y[a] *3*	(20$^-$)	
3139.6+y[b] *4*	(21$^-$)	
3458.3+y[a] *5*	(22$^-$)	
3859.6+y[b] *7*	(23$^-$)	
0+z	(7$^+$)	Additional information 3.
78.49+z[c] *10*	(8$^-$)	
173.7+z[d] *4*	(9$^-$)	
304.7+z[c] *4*	(10$^-$)	
461.1+z[d] *5*	(11$^-$)	
648.4+z[c] *5*	(12$^-$)	
858.7+z[d] *5*	(13$^-$)	
1089.2+z[c] *5*	(14$^-$)	
1336.7+z[d] *5*	(15$^-$)	
1599.1+z[c] *5*	(16$^-$)	
1876.0+z[d] *5*	(17$^-$)	
2165.9+z[c] *5*	(18$^-$)	
2470.1+z[d] *5*	(19$^-$)	
2787.3+z[c] *5*	(20$^-$)	
3119.4+z[d] *6*	(21$^-$)	
3466.2+z[c] *6*	(22$^-$)	
3823.9+z[d] *6*	(23$^-$)	
4196.2+z[c] *8*	(24$^-$)	
4575.2+z[d] *8*	(25$^-$)	
0+u[e]	J	Additional information 4.
147.1+u[f] *3*	J+1	
315.4+u[e] *3*	J+2	
501.5+u[f] *4*	J+3	
701.6+u[e] *4*	J+4	
915.3+u[f] *4*	J+5	
1141.9+u[e] *4*	J+6	
1381.8+u[f] *4*	J+7	
1634.2+u[e] *4*	J+8	
1900.8+u[f] *4*	J+9	
2179.0+u[e] *5*	J+10	
2465.2+u[f] *5*	J+11	
2765.5+u[e] *6*	J+12	
3087.5+u[f] *6*	J+13	
3399.5+u[e] *6*	J+14	
3740.8+u[f] *8*	J+15	

[†] From a least-squares fit to Eγ's by the evaluator.
[‡] As given in 2002Zh01, 1999Zh26 based on DCO ratios, intraband B(M1)/B(E2) ratios, systematics of band properties in neighboring nuclei and proposed configurations.

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^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)

^{180}Ir Levels (continued)

Band(A): Doubly-decoupled band, $\pi 1/2[541]\nu 1/2[521]$, α=1.
@ Band(B): $\pi 1/2[541]\nu 5/2[512]$, α=0. $\pi 1/2[541]\nu 7/2[514]$ is also possible but less likely. Band crossing is observed at $\hbar\omega$=0.26 MeV.
& Band(b): $\pi 1/2[541]\nu 5/2[512]$, α=1. $\pi 1/2[541]\nu 7/2[514]$ is also possible.
a Band(C): $\pi 1/2[541]\nu(i_{13/2})$, α=0. Band crossing is observed at $\hbar\omega \approx 0.35$ MeV.
b Band(c): $\pi 1/2[514]\nu(i_{13/2})$, α=1.
c Band(D): $\pi 9/2[514]\nu(i_{13/2})$, α=0. Main component from $i_{13/2}$ orbital is 7/2[633].
d Band(d): $\pi 9/2[514]\nu(i_{13/2})$, α=1. Main component from $i_{13/2}$ orbital is 7/2[633].
e Band(E): π(5/2[402] or 9/2[514])ν9/2[624].
f Band(e): π(5/2[402] or 9/2[514])ν9/2[624].

$\gamma(^{180}Ir)$

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α #	Comments
55.3 *1*	≥25.0	146.48+y	(10$^-$)	91.19+y	(9$^-$)			
78.5 *1*	37.5	78.49+z	(8$^-$)	0+z	(7$^+$)	(E1)	0.747	DCO=1.08 *15*. α(exp)=0.89 *20* from Iγ(95.3γ)/Iγ(78.5γ)=0.23 *5* in 156γ gated spectrum and assuming pure M1 for the 95.3γ. Mult.: from α(exp).
82.5 *1*	≥21.7	180.80+x	(7$^+$)	98.22+x	(6$^+$)			
85.5 *3*	10.0	431.53+y	(12$^-$)	345.63+y	(11$^-$)			
91.2 *3*	≥13.7	91.19+y	(9$^-$)	0+y	(8$^-$)	D+Q		DCO=1.5 *5*.
95.3 *3*	11.4	173.7+z	(9$^-$)	78.49+z	(8$^-$)	(M1)	7.29	α(exp)=8.0 *20* from Iγ(131γ)/Iγ(95.3γ)=2.3 *6* in 156γ gated spectrum and assuming pure M1 for the 131γ. Mult.: from α(exp).
115.8 *3*	≥16.0	296.94+x	(8$^+$)	180.80+x	(7$^+$)	D+Q		DCO=0.55 *10*.
118.8 *5*	5.0	852.1+y	(14$^-$)	733.2+y	(13$^-$)			
131.0 *3*	13.0	304.7+z	(10$^-$)	173.7+z	(9$^-$)	D		DCO=1.8 *5*.
145.0 *3*	15.0	441.83+x	(9$^+$)	296.94+x	(8$^+$)	D+Q		DCO=0.47 *10*.
146.5 *3*	≥13.6	146.48+y	(10$^-$)	0+y	(8$^-$)			Iγ(146.5)/Iγ(55.3)=0.40 *10*.
147.1 *3*	12.5	147.1+u	J+1	0+u	J	D+Q		DCO=1.7 *5*.
156.4 *1*	22.3	461.1+z	(11$^-$)	304.7+z	(10$^-$)	D+Q		DCO=1.20 *15*.
164.0 *1*	≥52.0	164.00+x	(7$^+$)	0+x	(5$^+$)	E2	0.699	DCO=0.95 *15*. Mult.: Q from DCO, authors state use of an intensity balance to determine E2 character but provide no details.
168.3 *1*	21.8	315.4+u	J+2	147.1+u	J+1	D+Q		DCO=1.13 *20*.
182.0 *5*	6.7	623.92+x	(10$^+$)	441.83+x	(9$^+$)	D+Q		DCO=0.52 *10*.
186.0 *3*	18.0	501.5+u	J+3	315.4+u	J+2	D+Q		DCO=1.1 *3*.
187.3 *1*	24.7	648.4+z	(12$^-$)	461.1+z	(11$^-$)	D+Q		DCO=1.20 *20*.
198.8 *1*	≥20.0	296.94+x	(8$^+$)	98.22+x	(6$^+$)			Iγ(198.8)/Iγ(115.8)=1.2 *4*.
199.1 *1*	≥48.4	345.63+y	(11$^-$)	146.48+y	(10$^-$)	D+Q		DCO=0.50 *8*.
200.3 *3*	14.0	701.6+u	J+4	501.5+u	J+3	D+Q		DCO=1.28 *20*.
201.5 *5*	6.1	825.36+x	(11$^+$)	623.92+x	(10$^+$)	D+Q		DCO=0.50 *10*.
210.3 *1*	21.8	858.7+z	(13$^-$)	648.4+z	(12$^-$)	D+Q		DCO=1.24 *20*.
213.5 *3*	10.5	915.3+u	J+5	701.6+u	J+4	D+Q		DCO=1.3 *3*.
226.5 *5*	8.5	1141.9+u	J+6	915.3+u	J+5	D+Q		DCO=1.3 *4*.
230.3 *3*	17.0	1089.2+z	(14$^-$)	858.7+z	(13$^-$)	D+Q		DCO=1.13 *20*.
231.8 *5*	7.1	1057.20+x	(12$^+$)	825.36+x	(11$^+$)	D+Q		DCO=0.52 *10*.
236.5 *5*	≤5.0	2622.2+x	(18$^+$)	2385.4+x	(17$^+$)			
240.0 *5*	7.6	1381.8+u	J+7	1141.9+u	J+6	D+Q		DCO=1.6 *5*.
245.3 *5*	4.0	1302.57+x	(13$^+$)	1057.20+x	(12$^+$)			

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^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)

$\gamma(^{180}Ir)$ (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
247.5 *3*	14.5	1336.7+z	(15$^-$)	1089.2+z	(14$^-$)	D+Q	DCO=1.24 *20*.
252.3 *5*	5.5	1634.2+u	J+8	1381.8+u	J+7		
254.4 *3*	≥18.6	345.63+y	(11$^-$)	91.19+y	(9$^-$)		Iγ(254.4)/Iγ(199.1)=0.38 *10*.
260.5 *5*	≤5.0	2882.7+x	(19$^+$)	2622.2+x	(18$^+$)		
261.0 *1*	20.5	441.83+x	(9$^+$)	180.80+x	(7$^+$)	Q	DCO=0.94 *15*. Iγ(261.0)/Iγ(145.0)=1.4 *4*.
262.3 *5*	8.9	1599.1+z	(16$^-$)	1336.7+z	(15$^-$)	D+Q	DCO=1.23 *20*.
265.5 *5*	≤5.0	2385.4+x	(17$^+$)	2120.16+x	(16$^+$)		
266.5 *5*	4.0	1900.8+u	J+9	1634.2+u	J+8		
268.5 *5*	7.0	1571.18+x	(14$^+$)	1302.57+x	(13$^+$)		
273.5 *5*	3.0	2120.16+x	(16$^+$)	1846.39+x	(15$^+$)		
273.7 *1*	24.0	454.50+x	(9$^+$)	180.80+x	(7$^+$)	Q	DCO=0.95 *15*.
275.3 *5*	4.5	1846.39+x	(15$^+$)	1571.18+x	(14$^+$)		
277.0 *5*	8.0	1876.0+z	(17$^-$)	1599.1+z	(16$^-$)	D+Q	DCO=1.30 *20*.
277.8 *5*		441.83+x	(9$^+$)	164.00+x	(7$^+$)	Q	DCO=1.08 *15*.
278.2 *5*	3.0	2179.0+u	J+10	1900.8+u	J+9		
280.0 *5*	≤5.0	3162.2+x	(20$^+$)	2882.7+x	(19$^+$)		
285.1 *1*	52.4	431.53+y	(12$^-$)	146.48+y	(10$^-$)	Q	DCO=1.10 *15*. Iγ(285.1)/Iγ(85.5)=5.8 *17*.
287.5 *5*	4.5	461.1+z	(11$^-$)	173.7+z	(9$^-$)	Q	DCO=1.31 *20*. Iγ(287.5)/Iγ(156.4)=0.19 *3*.
289.8 *5*	6.8	2165.9+z	(18$^-$)	1876.0+z	(17$^-$)	D+Q	DCO=1.4 *4*.
290.5 *1*	35.0	454.50+x	(9$^+$)	164.00+x	(7$^+$)	Q	DCO=1.04 *15*.
301.8 *3*	≤25.7	733.2+y	(13$^-$)	431.53+y	(12$^-$)	D+Q	DCO=0.48 *7*.
304.3 *5*	5.6	2470.1+z	(19$^-$)	2165.9+z	(18$^-$)		
315.5 *5*	8.0	315.4+u	J+2	0+u	J		Iγ(315.5)/Iγ(168.3)=0.37 *11*.
317.3 *5*	4.3	2787.3+z	(20$^-$)	2470.1+z	(19$^-$)		
327.0 *1*	51.6	623.92+x	(10$^+$)	296.94+x	(8$^+$)	Q	DCO=1.07 *15*. Iγ(327.0)/Iγ(182.0)=6.1 *17*.
332.0 *5*	3.6	3119.4+z	(21$^-$)	2787.3+z	(20$^-$)		
343.8 *3*	18.0	648.4+z	(12$^-$)	304.7+z	(10$^-$)	Q	DCO=1.06 *20*. Iγ(343.8)/Iγ(187.3)=0.50 *8*.
346.8 *5*	4.0	3466.2+z	(22$^-$)	3119.4+z	(21$^-$)		
354.8 *3*	11.5	501.5+u	J+3	147.1+u	J+1	Q	DCO=1.00 *20*. Iγ(354.8)/Iγ(186.0)=0.69 *20*.
372.3 *3*	≤16.4	1224.4+y	(15$^-$)	852.1+y	(14$^-$)	D+Q	DCO=0.40 *10*.
383.5 *1*	38.2	825.36+x	(11$^+$)	441.83+x	(9$^+$)	Q	DCO=0.94 *15*. Iγ(383.5)/Iγ(201.5)=6.3 *21*.
386.0 *3*	15.0	701.6+u	J+4	315.4+u	J+2	Q	DCO=0.88 *20*. Iγ(386.0)/Iγ(200.3)=1.0 *3*.
387.5 *3*	≤23.5	733.2+y	(13$^-$)	345.63+y	(11$^-$)		Iγ(387.5)/Iγ(301.8)=0.89 *20*.
393.3 *1*	23.0	847.80+x	(11$^+$)	454.50+x	(9$^+$)	Q	DCO=1.06 *15*.
397.8 *3*	17.4	858.7+z	(13$^-$)	461.1+z	(11$^-$)	Q	DCO=1.01 *15*. Iγ(397.8)/Iγ(210.3)=0.86 *12*.
408.1 *3*	≤14.1	1797.9+y	(17$^-$)	1389.7+y	(16$^-$)	D+Q	DCO=0.40 *6*.
413.8 *3*	19.0	915.3+u	J+5	501.5+u	J+3	Q	DCO=1.10 *20*. Iγ(413.8)/Iγ(213.5)=1.8 *5*.
418.0 *5*	≤1.0	3139.6+y	(21$^-$)	2721.5+y	(20$^-$)		
420.5 *5*		2441.9+y	(19$^-$)	2021.5+y	(18$^-$)		
420.6 *1*	100	852.1+y	(14$^-$)	431.53+y	(12$^-$)	Q	DCO=1.02 *15*. Iγ(420.6)/Iγ(118.8)=18 *5*.
433.3 *1*	51.2	1057.20+x	(12$^+$)	623.92+x	(10$^+$)	Q	DCO=0.99 *15*. Iγ(433.3)/Iγ(231.8)=8.7 *29*.
440.3 *1*	21.0	1141.9+u	J+6	701.6+u	J+4	Q	DCO=1.05 *20*. Iγ(440.3)/Iγ(226.5)=2.4 *7*.
440.8 *1*	21.3	1089.2+z	(14$^-$)	648.4+z	(12$^-$)	Q	DCO=1.10 *20*. Iγ(440.8)/Iγ(230.3)=1.41 *21*.

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^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)

$\gamma(^{180}Ir)$ (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
443.0 *5*	9.0	2622.2+x	(18^+)	2179.2+x	(16^+)	Q	DCO=0.92 *20*.
466.5 *1*	23.7	1381.8+u	J+7	915.3+u	J+5	Q	DCO=1.02 *20*.
							Iγ(466.5)/Iγ(240.0)=3.3 *10*.
477.2 *1*	53.0	1302.57+x	(13^+)	825.36+x	(11^+)	Q	DCO=0.94 *15*.
							Iγ(477.2)/Iγ(245.3)=9.5 *24*.
477.9 *1*	27.3	1336.7+z	(15^-)	858.7+z	(13^-)	Q	DCO=1.05 *15*.
							Iγ(477.9)/Iγ(247.5)=2.1 *3*.
481.0 *3*	18.0	1328.8+x	(13^+)	847.80+x	(11^+)	Q	DCO=1.05 *15*.
491.2 *3*	≤17.8	1224.4+y	(15^-)	733.2+y	(13^-)		Iγ(491.2)/Iγ(372.3)=1.06 *15*.
492.3 *1*	21.0	1634.2+u	J+8	1141.9+u	J+6	Q	DCO=1.10 *20*.
							Iγ(492.3)/Iγ(252.3)=3.8 *11*.
495.5 *5*	5.8	2902.3+x	(19^+)	2406.8+x	(17^+)	Q	DCO=0.96 *20*.
497.5 *3*	10.4	2882.7+x	(19^+)	2385.4+x	(17^+)	Q	DCO=0.95 *15*.
502.0 *3*	17.0	2622.2+x	(18^+)	2120.16+x	(16^+)	Q	DCO=1.00 *15*.
510.0 *1*	26.8	1599.1+z	(16^-)	1089.2+z	(14^-)	Q	DCO=1.00 *15*.
							Iγ(510.0)/Iγ(262.3)=2.9 *5*.
514.0 *1*	53.0	1571.18+x	(14^+)	1057.20+x	(12^+)	Q	DCO=0.97 *15*.
							Iγ(514.0)/Iγ(268.5)=7.5 *35*.
519.0 *1*	20.2	1900.8+u	J+9	1381.8+u	J+7	Q	DCO=0.87 *20*.
							Iγ(519.0)/Iγ(266.5)=3.3 *10*.
530.0 *5*	7.0	2406.8+x	(17^+)	1876.8+x	(15^+)	Q	DCO=1.02 *15*.
537.6 *1*	74.0	1389.7+y	(16^-)	852.1+y	(14^-)	Q	DCO=1.03 *15*.
539.0 *1*	25.6	2385.4+x	(17^+)	1846.39+x	(15^+)	Q	DCO=0.96 *15*.
539.3 *1*	24.8	1876.0+z	(17^-)	1336.7+z	(15^-)	Q	DCO=1.00 *15*.
							Iγ(539.3)/Iγ(277.0)=3.5 *6*.
539.8 *3*	12.0	3162.2+x	(20^+)	2622.2+x	(18^+)	Q	DCO=0.92 *15*.
543.8 *1*	45.0	1846.39+x	(15^+)	1302.57+x	(13^+)	Q	DCO=0.96 *15*.
							Iγ(543.8)/Iγ(275.3)=9.9 *31*.
544.8 *3*	14.6	2179.0+u	J+10	1634.2+u	J+8	Q	DCO=1.08 *20*.
							Iγ(544.8)/Iγ(278.2)=4.0 *15*.
548.0 *3*	18.0	1876.8+x	(15^+)	1328.8+x	(13^+)	Q	DCO=1.08 *15*.
549.0 *1*	32.8	2120.16+x	(16^+)	1571.18+x	(14^+)	Q	DCO=1.02 *15*.
							Iγ(549.0)/Iγ(273.5)=10.5 *33*.
564.4 *3*	15.0	2465.2+u	J+11	1900.8+u	J+9	Q	DCO=0.91 *25*.
566.8 *1*	22.0	2165.9+z	(18^-)	1599.1+z	(16^-)	Q	DCO=1.06 *15*.
							Iγ(566.8)/Iγ(289.8)=3.5 *6*.
570.0 *5*	8.0	3452.7+x	(21^+)	2882.7+x	(19^+)	Q	DCO=0.80 *20*.
573.5 *3*	≤15.5	1797.9+y	(17^-)	1224.4+y	(15^-)		Iγ(573.5)/Iγ(408.1)=1.5 *3*.
586.5 *3*	12.0	2765.5+u	J+12	2179.0+u	J+10	Q	DCO=1.10 *25*.
590.3 *3*	12.0	3752.5+x	(22^+)	3162.2+x	(20^+)	Q	DCO=1.10 *20*.
594.1 *1*	20.0	2470.1+z	(19^-)	1876.0+z	(17^-)	Q	DCO=1.00 *20*.
							Iγ(594.1)/Iγ(304.3)=5.1 *10*.
608.0 *3*	15.0	2179.2+x	(16^+)	1571.18+x	(14^+)	Q	DCO=0.90 *15*.
619.0 *5*	6.0	2495.8+x	(17^+)	1876.8+x	(15^+)		
621.4 *3*	16.0	2787.3+z	(20^-)	2165.9+z	(18^-)	Q	DCO=0.93 *20*.
							Iγ(621.4)/Iγ(317.3)=4.5 *12*.
622.3 *3*	12.3	3087.5+u	J+13	2465.2+u	J+11		
631.8 *1*	53.8	2021.5+y	(18^-)	1389.7+y	(16^-)	Q	DCO=1.17 *25*.
634.0 *3*	10.1	3399.5+u	J+14	2765.5+u	J+12		
641.5 *5*	6.0	4394.0+x	(24^+)	3752.5+x	(22^+)	Q	DCO=1.08 *20*.
644.0 *1*	22.0	2441.9+y	(19^-)	1797.9+y	(17^-)		
649.3 *3*	15.7	3119.4+z	(21^-)	2470.1+z	(19^-)		Iγ(649.3)/Iγ(332.0)=5.3 *12*.
653.3 *5*	7.8	3740.8+u	J+15	3087.5+u	J+13		
678.8 *5*	8.9	3466.2+z	(22^-)	2787.3+z	(20^-)		Iγ(678.8)/Iγ(346.8)=2.0 *10*.
695.3 *5*	5.0	5089.3+x	(26^+)	4394.0+x	(24^+)		
697.8 *3*	14.0	3139.6+y	(21^-)	2441.9+y	(19^-)		

Continued on next page (footnotes at end of table)

^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)

$\gamma(^{180}Ir)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
700.0 *1*	31.7	2721.5+y	(20^-)	2021.5+y	(18^-)	Q	DCO=0.92 *25*.
704.5 *3*	12.8	3823.9+z	(23^-)	3119.4+z	(21^-)		
720.0 *5*	9.8	3859.6+y	(23^-)	3139.6+y	(21^-)		
730.0 *5*	≤4.0	4196.2+z	(24^-)	3466.2+z	(22^-)		
736.8 *3*	15.5	3458.3+y	(22^-)	2721.5+y	(20^-)		
751.3 *5*	≤4.0	4575.2+z	(25^-)	3823.9+z	(23^-)		

[†] Uncertainties assigned by the evaluator as 0.1 keV for Iγ>20, 0.3 keV for Iγ=10-20, 0.5 keV for Iγ<10, based on a general comment by 2002Zh01.

[‡] 2002Zh01 given only a general statement that uncertainties are 5-30%. Branching ratios are given in the comments.

[#] 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.

$^{154}Sm(^{31}P,5n\gamma)$ 2002Zh01

Level Scheme

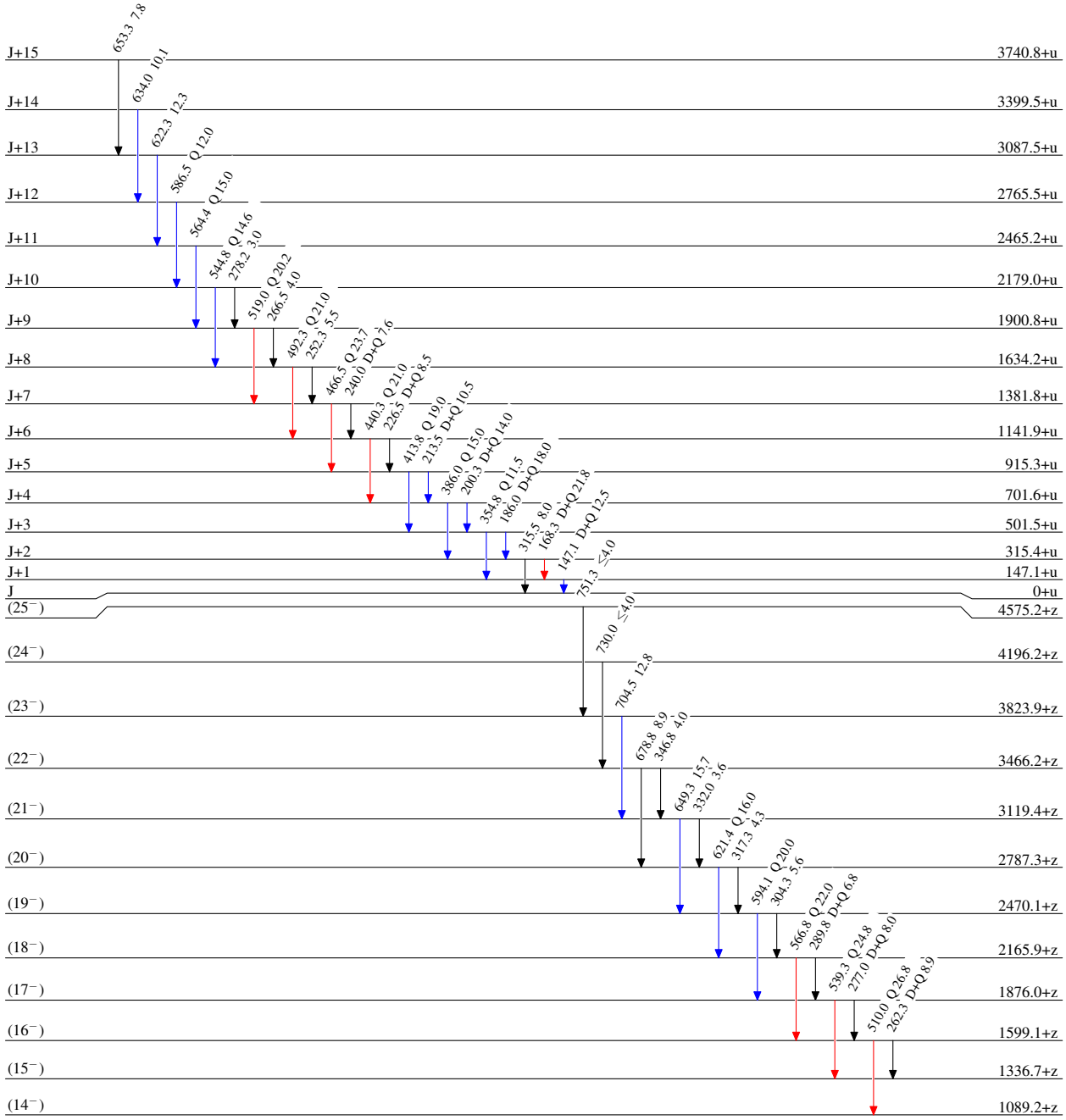
Intensities: Relative I_γ

Legend

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

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

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

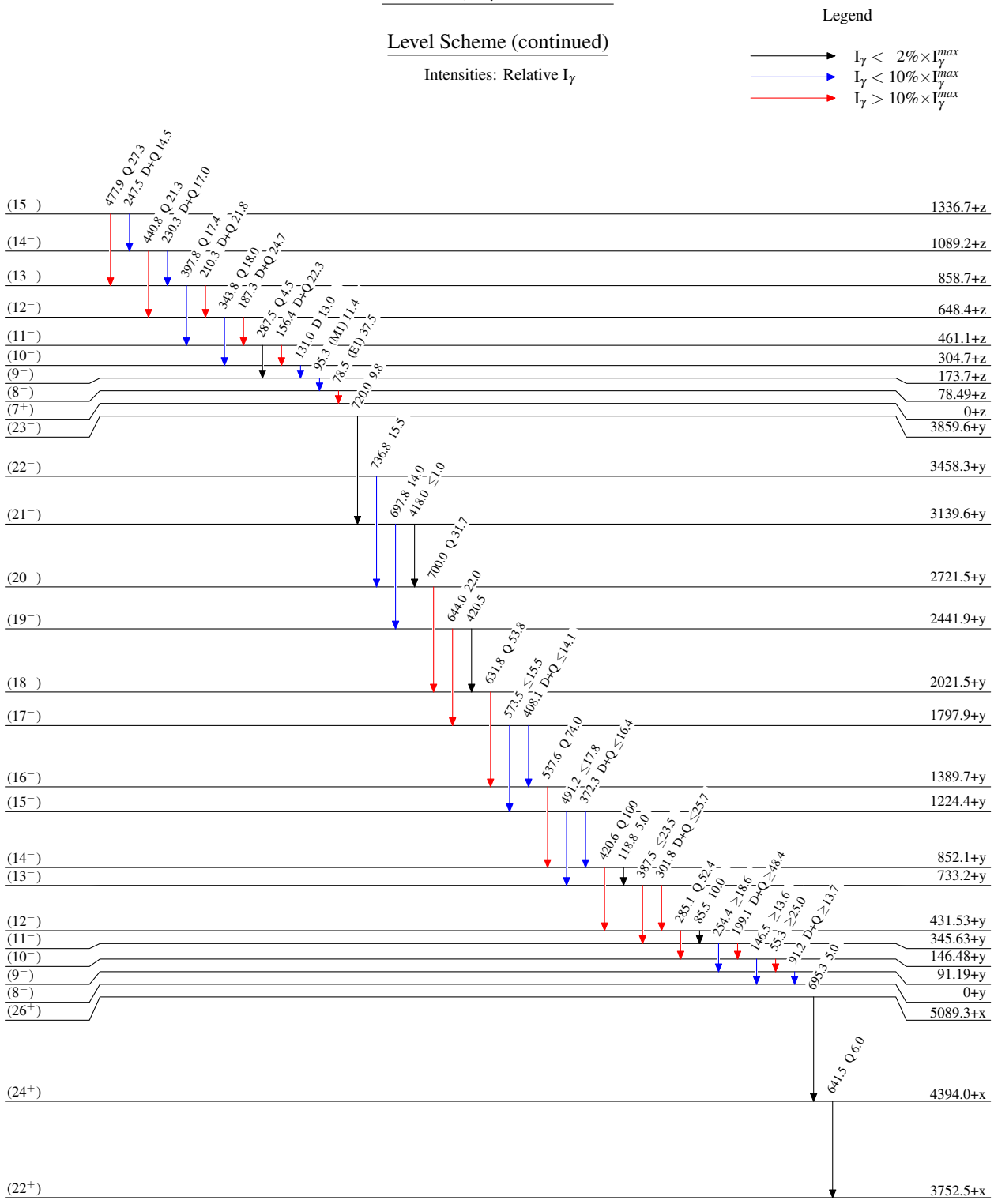


$^{180}_{77}Ir_{103}$

^{154}Sm(^{31}P,5nγ) 2002Zh01

Level Scheme (continued)

Intensities: Relative I_γ

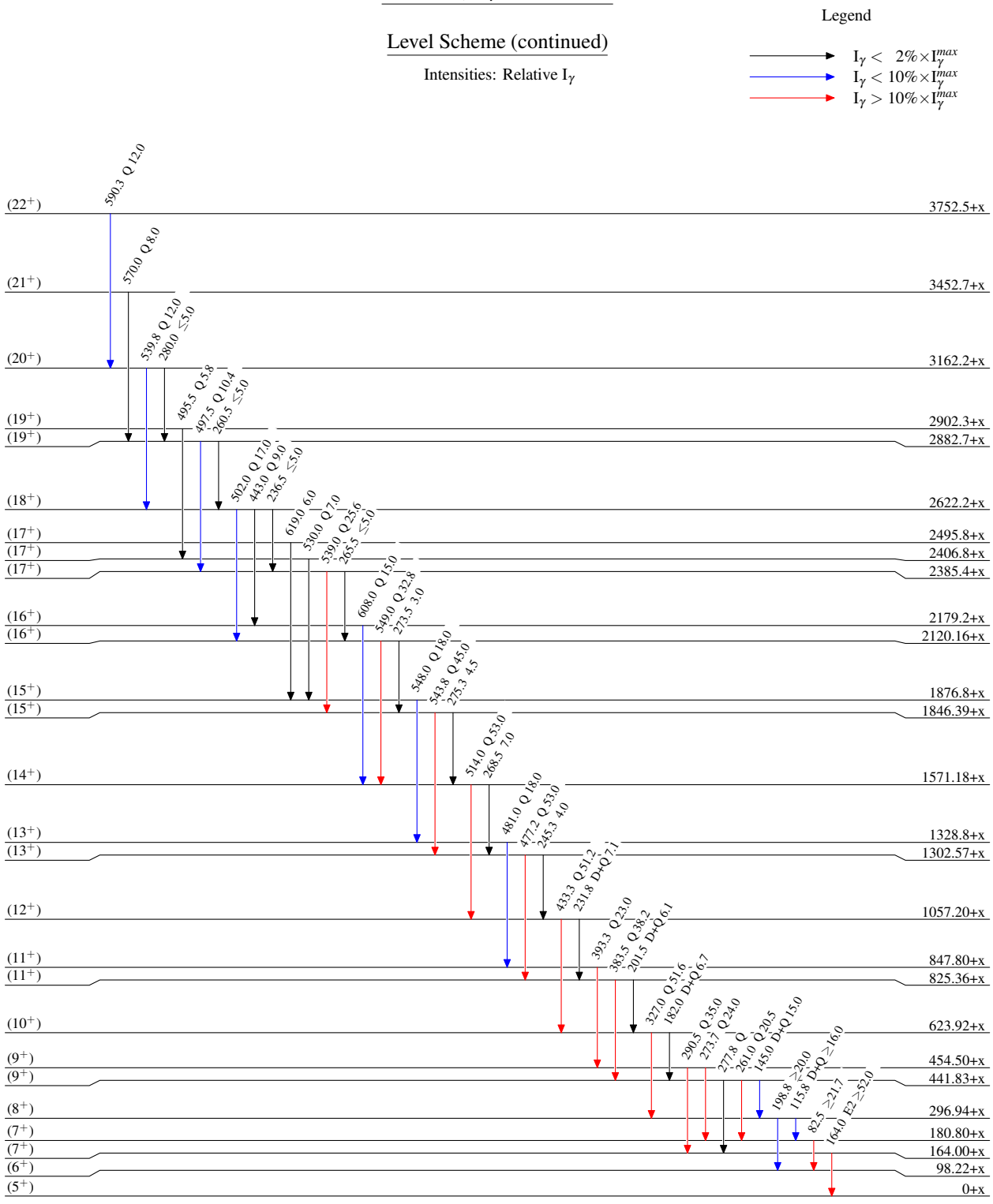


$^{180}_{77}Ir_{103}$

^{154}Sm(^{31}P,5nγ) 2002Zh01

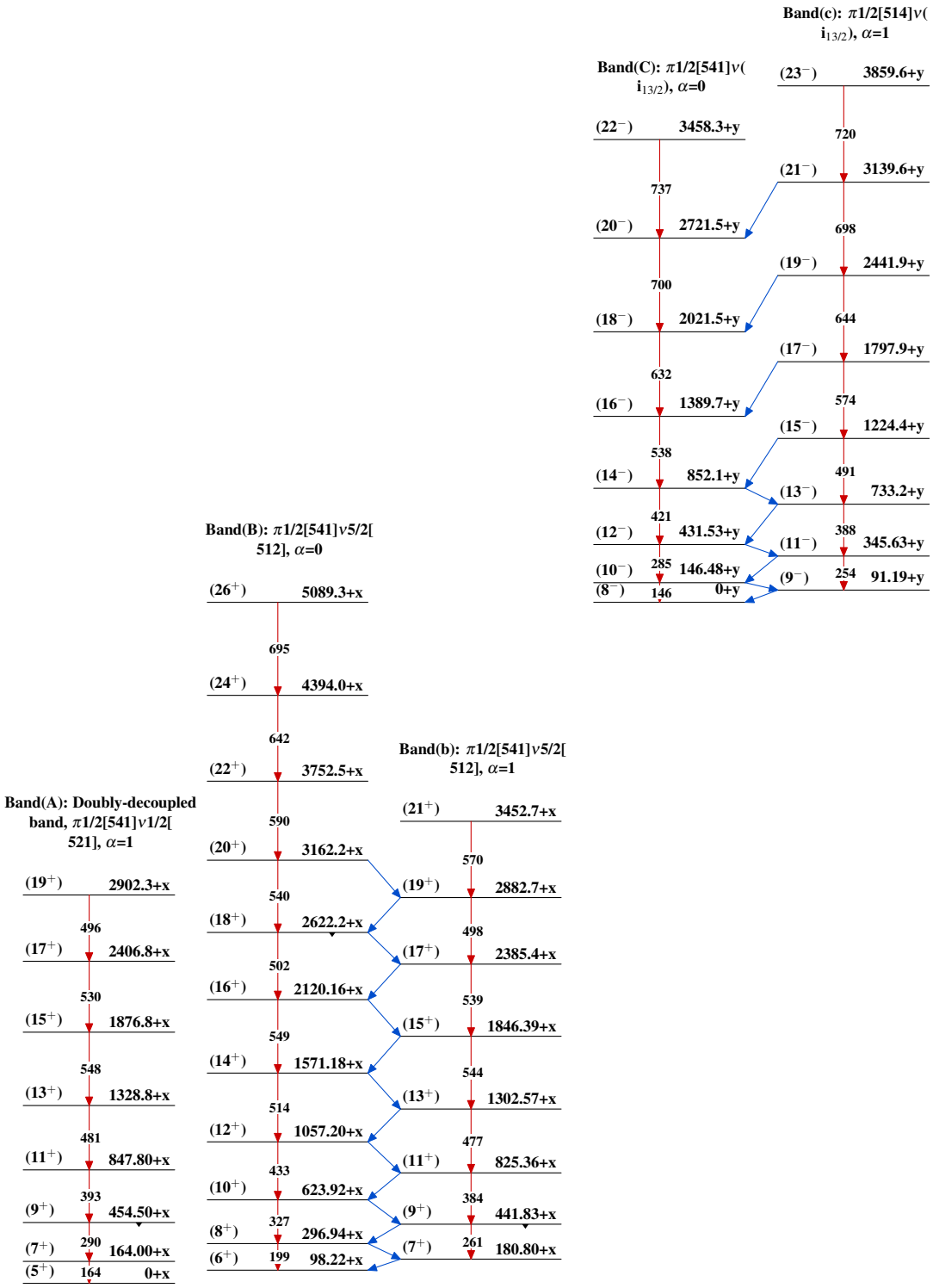
Level Scheme (continued)

Intensities: Relative I_γ



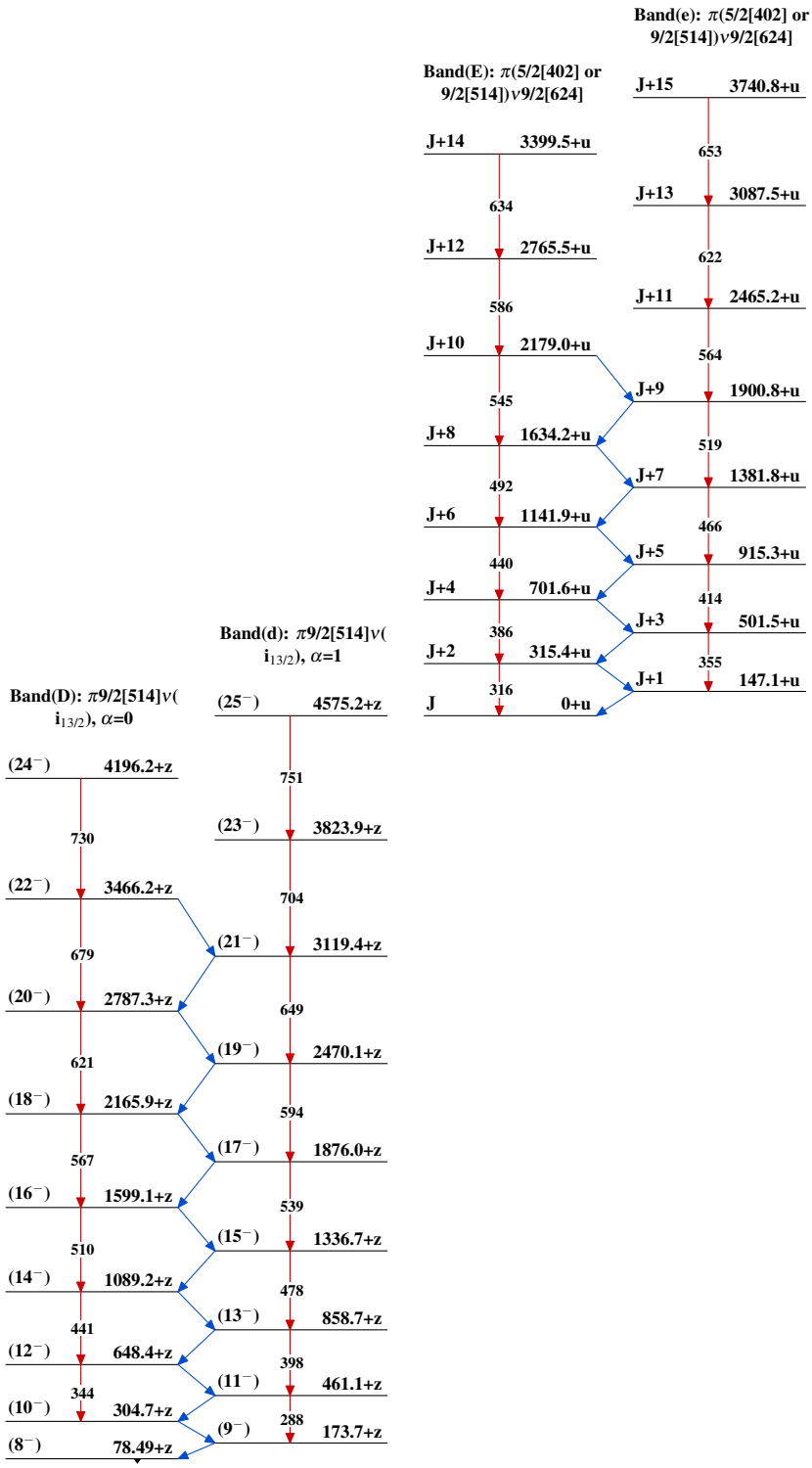
$^{180}_{77}Ir_{103}$

$^{154}Sm(^{31}P,5n\gamma)$ 2002Zh01



$^{180}_{77}Ir_{103}$

^{154}Sm(^{31}P,5nγ) 2002Zh01 (continued)



$^{180}_{77}Ir_{103}$