

(HI,xn γ) **2004MoZT**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108, 455 (2007)	30-Sep-2006

The band structures and decay patterns are from [2004MoZT](#), which supersedes the preliminary band structures in [2003Mo22](#) and [2003MoZR](#); E γ 's are from [2004MoZT](#); I γ 's and DCO ratios are from [1997Ka21](#).

[2003Mo22](#): ¹²⁰Sn(⁷Li,5n γ) E=58 MeV; Compton suppressed Ge; γ , $\gamma\gamma$ -coin; presented band structures for the positive parity band (band 1) up to (23⁺), in analogy with ¹²⁰I and ¹²⁴I. But no detailed E γ , I γ and multipolarities of the transitions are presented.

[2004MoZT](#): from detailed analysis of [2003Mo22](#) data, presented extended band structures consisting of the positive-parity band 1 and band 10, and the negative-parity band 2 through band 9 without experimental details.

[2003MoZR](#): band structures for band 1 through band 7 were presented preliminary; evaluator notes that the J $^\pi$ (61.3-keV)=(2⁻) and J $^\pi$ (156-keV)=(4⁻) were later corrected as 2⁺ and 4⁺, respectively, in [2004MoZT](#).

[2004Mo09](#): presented systematic feature of the positive parity band for ¹¹⁶⁻¹²⁶I. Discussed signature splittings and inversion for the favored and unfavored states in (π h_{11/2}) \otimes (ν h_{11/2}) bands (relates band 1 in (HI,xn γ) for ¹²²I).

[1997KA21](#): ¹¹⁶Cd(¹¹B,5n γ) E=64 MeV, measured $\gamma\gamma$ -correlations, ¹¹⁰Pd(¹⁶O,3n γ) E=81 MeV, measured p- γ correlations, proposed band structures consisting of J $^\pi$ =8⁻ based band, J $^\pi$ =9⁻ based band and another band. J $^\pi$ =9⁻ based band is the same one to the band 1 (J $^\pi$ =10⁺ based) in [2003Mo22](#) and [2004MoZT](#), although the J $^\pi$ changed and cascade order of γ 's reversed. The band structures proposed in [1997Ka21](#) are not reflected in this dataset.

[1990Wu01](#): ¹¹⁶Cd(¹¹B,5n γ) E(¹¹B)=65 MeV; Compton suppressed Ge; γ , $\gamma\gamma$ -coin; presented information on T_{1/2}=80 μ s 8 isomer.

[1984Qu02](#): ¹¹⁶Cd(¹⁰B,4n γ) E(¹⁰B)=51 MeV, ¹¹⁸Sn(⁷Li,3n γ) E(⁷Li)=34 MeV; semi γ , $\gamma\gamma$ -coin, $\gamma(t)$, $\gamma(\theta)$, γ -ray excitation function; but no numerical γ information was presented by the authors.

¹²²I Levels

E(level) [†]	J $^\pi$ @	T _{1/2}	E(level) [†]	J $^\pi$ @	E(level) [†]	J $^\pi$ @
0.0	1 ⁺		786.3 5	(8 ⁺)	2333.8 ^g 5	(12 ⁻)
61.3 3	(2 ⁺)&		857.7 6	(7 ⁺)	2355.8 ^c 5	(13 ⁻)
90.59 23			1017.0 4	(9 ⁻)	2502.2 ^f 6	
109.71 22			1068.2 ⁱ 5	(10 ⁻)	2523.6 ^b 5	(14 ⁺)
154.4 3			1091.9 5		2546.0 ^j 6	(13 ⁻)
155.7 3	(4 ⁺) ^a	16.6 \ddagger ns	1108.7 ^d 5	(10 ⁻)	2649.1 ^h 5	(13 ⁻)
163.2 3			1166.2 ^b 4	(10 ⁺)	2679.9 ^d 5	(14 ⁻)
176.8 4			1208.9 5		2729.7 ⁱ 5	(14 ⁻)
246.7 3			1244.0 ^e 5	(10 ⁻)	2824.0 ^b 5	(15 ⁺)
299.4 4			1260.2 ^j 5	(10 ⁻)	2987.6 ^g 5	(14 ⁻)
314.9 4	(7 ⁻)	190 \ddagger ns	1429.2 ^k 7	(7 ⁺)	3007.9 ^b 5	(16 ⁺)
343.0 4	(6 ⁺)		1444.1 ⁱ 5	(11 ⁻)	3045.9 ^e 7	(14 ⁻)
356.7 4			1489.2 ^c 5	(11 ⁻)	3052.0 ^j 7	(14 ⁻)
379.4 5	(7 ⁻)	80 [#] μ s 8	1536.0 ^b 5	(11 ⁺)	3216.3 ⁱ 5	(15 ⁻)
389.9 5	(8 ⁺)		1623.9 ^j 5	(11 ⁻)	3290.3 ^f 7	
394.1 4	(8 ⁺)	80 [#] μ s 8	1719.9 ^f 5		3342.5 ^c 6	(15 ⁻)
444.1 ⁱ 5	(8 ⁻)	148 \ddagger ns	1774.8 ^g 5	(10 ⁻)	3406.0 ^h 5	(15 ⁻)
453.1 5			1824.9 ^b 5	(12 ⁺)	3597.4 6	(15 ⁻)
458.3 ^d 4	(8 ⁻)		1841.4 ⁱ 5	(12 ⁻)	3641.6 ^d 5	(16 ⁻)
502.1 5			1849.4 ^d 5	(12 ⁻)	3649.2 6	(17 ⁺)
519.2 ^e 4	(8 ⁻)		2012.5 ^h 5	(11 ⁻)	3674.1 ⁱ 6	(16 ⁻)
534.4 5			2067.3 ^j 6	(12 ⁻)	3774.0 ^g 5	(16 ⁻)
581.3 5	(6 ⁺)		2071.4 ^e 6	(12 ⁻)	3949.3 ^b 5	(17 ⁺)
717.5 ⁱ 5	(9 ⁻)		2184.2 ^b 5	(13 ⁺)	4166.7 ^c 7	(17 ⁻)
731.7 ^k 6	(5 ⁺)		2187.7 ^k 7	(9 ⁺)	4204.7 ^h 5	(17 ⁻)
746.0 ^c 4	(9 ⁻)		2272 9 ⁱ 5	(13 ⁻)	4217 1 ^b 6	(18 ⁺)

(HI,xn γ) **2004MoZT (continued)**

^{122}I Levels (continued)

<u>E(level)[†]</u>	<u>J^{π}@</u>	<u>E(level)[†]</u>	<u>J^{π}@</u>	<u>E(level)[†]</u>	<u>J^{π}@</u>	<u>E(level)[†]</u>	<u>J^{π}@</u>
4247.2 ^f 7		4775.4 7		5460.2 8		7023.5 ^b 8	(24 ⁺)
4517.2 ^g 7	(18 ⁻)	4953.0 ^h 6	(19 ⁻)	5493.4 ^b 7	(22 ⁺)	8323.2 ^b 9	
4605.4 ^d 6	(18 ⁻)	5144.1 ^b 6	(20 ⁺)	6008.1 ^g 8			
4610.8 7		5220.0 ^g 8	(20 ⁻)	6217.4 ^b 8	(23 ⁺)		

[†] Calculated from the E γ from [2004MoZT](#) assuming $\Delta E_{\gamma}=0.3$ keV (evaluator).

[‡] From γ - γ delayed coincidence spectrometry; no details are presented in [2003Mo22](#), [2004Mo09](#) and [2004MoZT](#).

[1990Wu01](#) reported the T $_{1/2}=80$ μ s isomer associated with γ rays with energies: 32.5-, 51.5-, 61.9-, 95.0-, 160.1-, 188.0-keV which were assigned in the decay of the 379.4- and 394.1-keV levels by [2003Mo22](#), [2004Mo09](#), [2004MoZT](#).

@ From [2004MoZT](#) on the basis of DCO ratios and analogy with the band structures from ^{116}I through ^{126}I . No detailed information is available.

& From [2004MoZT](#). 2⁻ was assigned in [2003Mo22](#) and [2003MoZR](#).

^a From [2004MoZT](#). 4⁻ was assigned in [2003Mo22](#) and [2003MoZR](#).

^b Band(A): band 1 possible Configuration= $(\pi h_{11/2})\otimes(\nu h_{11/2})$.

^c Band(B): band 2 negative parity band based on (9⁻); $\alpha=1$ partner of band 3.

^d Band(C): band 3 negative parity band based on (8⁻); $\alpha=0$.

^e Band(D): band 4 negative parity band based on (8⁻).

^f Band(E): band 5 band based on 1720-keV level.

^g Band(F): band 6 negative parity band based on (10⁻); $\alpha=0$.

^h Band(G): band 7 negative parity band based on (11⁻); $\alpha=1$ partner of band 6.

ⁱ Band(H): band 8 negative parity band based on (8⁻); $\Delta J=1$ band.

^j Band(I): band 9 negative parity band based on (10⁻).

^k Band(J): band 10 positive parity band based on (5⁺).

$\gamma(^{122}\text{I})$

<u>Eγ[†]</u>	<u>E$_i$(level)</u>	<u>J$_i^{\pi}$</u>	<u>E$_f$</u>	<u>J$_f^{\pi}$</u>
10.1 [@] 3	389.9	(8 ⁺)	379.4	(7 ⁻)
13.6 3	176.8		163.2	
19.1 3	109.71		90.59	
22.4 3	176.8		154.4	
27.9 3	343.0	(6 ⁺)	314.9	(7 ⁻)
44.7 3	154.4		109.71	
46.0 3	155.7	(4 ⁺)	109.71	
51.0 3	394.1	(8 ⁺)	343.0	(6 ⁺)
52.7 3	299.4		246.7	
61.3 3	61.3	(2 ⁺)	0.0	1 ⁺
64.5 3	379.4	(7 ⁻)	314.9	(7 ⁻)
64.7 3	444.1	(8 ⁻)	379.4	(7 ⁻)
72.6 3	163.2		90.59	
74.2 3	1166.2	(10 ⁺)	1091.9	
79.2 3	581.3	(6 ⁺)	502.1	
83.6 3	246.7		163.2	
90.6 3	90.59		0.0	1 ⁺
92.3 3	246.7		154.4	
94.4 3	155.7	(4 ⁺)	61.3	(2 ⁺)
109.7 3	109.71		0.0	1 ⁺
122.6 3	299.4		176.8	

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(HI,xn γ) **2004MoZT (continued)**

$\gamma(^{122}\text{I})$ (continued)

E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #	Comments
132.4 3		3774.0	(16 ⁻)	3641.6	(16 ⁻)		
137.0 3		246.7		109.71			
143.4 3	82 12	458.3	(8 ⁻)	314.9	(7 ⁻)	D	$E_\gamma=143.2$ 4; DCO ratio=0.61 5.
145.4 3		502.1		356.7			
149.0 3	16 3	1166.2	(10 ⁺)	1017.0	(9 ⁻)	D	$E_\gamma=148.8$ 4; DCO ratio=0.77 10.
153.7 3		453.1		299.4			
159.3 3		314.9	(7 ⁻)	155.7	(4 ⁺)		
183.9 3	100 8	3007.9	(16 ⁺)	2824.0	(15 ⁺)	D	$E_\gamma=183.6$ 4; DCO ratio=0.61 5.
187.2 3		343.0	(6 ⁺)	155.7	(4 ⁺)		
201.0 3		356.7		155.7	(4 ⁺)		
204.3 3	81 12	519.2	(8 ⁻)	314.9	(7 ⁻)	D	$E_\gamma=204.1$ 4; DCO ratio=0.54 8.
219.5 3		534.4		314.9	(7 ⁻)		
226.8 3	46 7	746.0	(9 ⁻)	519.2	(8 ⁻)	D	$E_\gamma=226.3$ 4; DCO ratio=0.62 6.
237.5 3		2012.5	(11 ⁻)	1774.8	(10 ⁻)		
238.4 3		581.3	(6 ⁺)	343.0	(6 ⁺)		
240.2 3		5460.2		5220.0	(20 ⁻)		
267.8 3	13 2	4217.1	(18 ⁺)	3949.3	(17 ⁺)	D	$E_\gamma=267.2$ 4; DCO ratio=0.59 10.
273.4 3		717.5	(9 ⁻)	444.1	(8 ⁻)		
276.4 3		857.7	(7 ⁺)	581.3	(6 ⁺)		
278.6 3		731.7	(5 ⁺)	453.1			
287.7 3	53 7	746.0	(9 ⁻)	458.3	(8 ⁻)	D	$E_\gamma=287.2$ 4; DCO ratio=0.44 9.
288.9 3	20 3	1824.9	(12 ⁺)	1536.0	(11 ⁺)	D	$E_\gamma=288.4$ 4; DCO ratio=0.55 11.
300.4 3	84 7	2824.0	(15 ⁺)	2523.6	(14 ⁺)	D	$E_\gamma=300.0$ 4; DCO ratio=0.54 5.
307.7 3		2987.6	(14 ⁻)	2679.9	(14 ⁻)		
315.3 3		2649.1	(13 ⁻)	2333.8	(12 ⁻)		
321.3 3		2333.8	(12 ⁻)	2012.5	(11 ⁻)		
324.2 3		2679.9	(14 ⁻)	2355.8	(13 ⁻)		
338.5 3		2987.6	(14 ⁻)	2649.1	(13 ⁻)		
339.4 3	43 4	2523.6	(14 ⁺)	2184.2	(13 ⁺)	D	$E_\gamma=339.1$ 4; DCO ratio=0.56 5.
349.3 3	52 4	5493.4	(22 ⁺)	5144.1	(20 ⁺)	Q	$E_\gamma=349.0$ 4; DCO ratio=1.03 12.
350.7 3		1068.2	(10 ⁻)	717.5	(9 ⁻)		
351.9 3		3949.3	(17 ⁺)	3597.4	(15 ⁻)		
359.3 3	90 7	2184.2	(13 ⁺)	1824.9	(12 ⁺)	D	$E_\gamma=359.0$ 4; DCO ratio=0.50 6.
360.2 3	90 7	1849.4	(12 ⁻)	1489.2	(11 ⁻)	D	$E_\gamma=359.0$ 4; DCO ratio=0.50 6.
362.8 3		1108.7	(10 ⁻)	746.0	(9 ⁻)		
363.7 3		1623.9	(11 ⁻)	1260.2	(10 ⁻)		
368.0 3		3774.0	(16 ⁻)	3406.0	(15 ⁻)		
370.0 3	59 6	1536.0	(11 ⁺)	1166.2	(10 ⁺)	D	$E_\gamma=369.6$ 4; DCO ratio=0.60 6.
375.9 3		1444.1	(11 ⁻)	1068.2	(10 ⁻)		
380.3 3	100 12	1166.2	(10 ⁺)	786.3	(8 ⁺)	Q	$E_\gamma=379.6$ 4; DCO ratio=1.04 11.
391.9 3	21 3	786.3	(8 ⁺)	394.1	(8 ⁺)	D,Q	$E_\gamma=391.7$ 4; DCO ratio=0.89 17.
396.2 3	78 10	786.3	(8 ⁺)	389.9	(8 ⁺)	D,Q	$E_\gamma=396.0$ 4; DCO ratio=1.06 13.
397.2 3		1841.4	(12 ⁻)	1444.1	(11 ⁻)		
405.4 3		1849.4	(12 ⁻)	1444.1	(11 ⁻)		
418.3 3		3406.0	(15 ⁻)	2987.6	(14 ⁻)		
420.0 3	33 4	1166.2	(10 ⁺)	746.0	(9 ⁻)	D	$E_\gamma=419.7$ 4; DCO ratio=0.61 7.
430.7 3		4204.7	(17 ⁻)	3774.0	(16 ⁻)		
431.7 3		2272.9	(13 ⁻)	1841.4	(12 ⁻)		
443.4 3		2067.3	(12 ⁻)	1623.9	(11 ⁻)		
457.0 3		2729.7	(14 ⁻)	2272.9	(13 ⁻)		
457.8 3		3674.1	(16 ⁻)	3216.3	(15 ⁻)		
478.7 3		2546.0	(13 ⁻)	2067.3	(12 ⁻)		
484.3 3	28 3	3007.9	(16 ⁺)	2523.6	(14 ⁺)	Q	$E_\gamma=484.1$ 4; DCO ratio=0.97 15.
486.5 3		3216.3	(15 ⁻)	2729.7	(14 ⁻)		
497.8 3		1017.0	(9 ⁻)	519.2	(8 ⁻)		
498.0 3		1244.0	(10 ⁻)	746.0	(9 ⁻)		

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(HI,xn γ) **2004MoZT (continued)**

$\gamma(^{122}\text{I})$ (continued)

E_γ †	I_γ ‡	E_i (level)	J_i^π	E_f	J_f^π	Mult. #	Comments
506.0 3		3052.0	(14 ⁻)	2546.0	(13 ⁻)		
542.7 3		1260.2	(10 ⁻)	717.5	(9 ⁻)		
547.9 3		6008.1		5460.2			
555.7 3		1623.9	(11 ⁻)	1068.2	(10 ⁻)		
558.7 3	30 5	1017.0	(9 ⁻)	458.3	(8 ⁻)	D	$E_\gamma=558.2$ 4; DCO ratio=0.55 18.
558.8 3		2333.8	(12 ⁻)	1774.8	(10 ⁻)		
611.1 3		1719.9		1108.7	(10 ⁻)		
624.1 3		1068.2	(10 ⁻)	444.1	(8 ⁻)		
633.5 3		1091.9		458.3	(8 ⁻)		
636.6 3		2649.1	(13 ⁻)	2012.5	(11 ⁻)		
639.8 3	73 8	2824.0	(15 ⁺)	2184.2	(13 ⁺)	Q	$E_\gamma=639.7$ 4; DCO ratio=0.98 12.
641.3 3	38 6	3649.2	(17 ⁺)	3007.9	(16 ⁺)		$E_\gamma=641.2$ 4.
648.2 3	39 4	2184.2	(13 ⁺)	1536.0	(11 ⁺)	Q	$E_\gamma=648.0$ 4; DCO ratio=0.90 14.
650.5 3		1108.7	(10 ⁻)	458.3	(8 ⁻)		
653.8 3		2987.6	(14 ⁻)	2333.8	(12 ⁻)		
658.9 3	155 10	1824.9	(12 ⁺)	1166.2	(10 ⁺)	Q	$E_\gamma=658.7$ 4; DCO ratio=1.07 10.
666.4 3		1774.8	(10 ⁻)	1108.7	(10 ⁻)		
689.8 3		1208.9		519.2	(8 ⁻)		
697.5 3		1429.2	(7 ⁺)	731.7	(5 ⁺)		
698.8 3	100 7	2523.6	(14 ⁺)	1824.9	(12 ⁺)	Q	$E_\gamma=698.6$ 4; DCO ratio=1.02 10.
702.1 3	14 3	1017.0	(9 ⁻)	314.9	(7 ⁻)	Q	$E_\gamma=702.2$ 4; DCO ratio=1.16 15.
702.8 3		5220.0	(20 ⁻)	4517.2	(18 ⁻)		
702.9 3		1719.9		1017.0	(9 ⁻)		
724.0 3	31 4	6217.4	(23 ⁺)	5493.4	(22 ⁺)	D	$E_\gamma=723.5$ 4; DCO ratio=0.43 7.
724.8 3		1244.0	(10 ⁻)	519.2	(8 ⁻)		
726.6 3		1444.1	(11 ⁻)	717.5	(9 ⁻)		
732.5 3		1841.4	(12 ⁻)	1108.7	(10 ⁻)		
740.7 3		1849.4	(12 ⁻)	1108.7	(10 ⁻)		
743.3 3	38 4	1489.2	(11 ⁻)	746.0	(9 ⁻)	Q	$E_\gamma=743.5$ 4; DCO ratio=1.22 17 for (743.3 γ +743.7 γ).
743.7 3		4517.2	(18 ⁻)	3774.0	(16 ⁻)	(Q)	$E_\gamma=743.5$ 4; DCO ratio=1.22 17 for (743.3 γ +743.7 γ).
748.3 3		4953.0	(19 ⁻)	4204.7	(17 ⁻)		
756.8 3		3406.0	(15 ⁻)	2649.1	(13 ⁻)		
758.2 3		1774.8	(10 ⁻)	1017.0	(9 ⁻)		
758.5 3		2187.7	(9 ⁺)	1429.2	(7 ⁺)		
772.2 3	28 4	1166.2	(10 ⁺)	394.1	(8 ⁺)	Q	$E_\gamma=772.3$ 4; DCO ratio=0.92 14.
773.1 3		1841.4	(12 ⁻)	1068.2	(10 ⁻)		
776.5 3	55 6	1166.2	(10 ⁺)	389.9	(8 ⁺)	Q	$E_\gamma=776.2$ 4; DCO ratio=1.00 11.
776.9 3		1091.9		314.9	(7 ⁻)		
781.3 3		1849.4	(12 ⁻)	1068.2	(10 ⁻)		
782.3 3		2502.2		1719.9			
786.3 3		3774.0	(16 ⁻)	2987.6	(14 ⁻)		
788.1 3		3290.3		2502.2			
788.1 3		6008.1		5220.0	(20 ⁻)		
798.0 3		2333.8	(12 ⁻)	1536.0	(11 ⁺)		
798.7 3		4204.7	(17 ⁻)	3406.0	(15 ⁻)		
803.6 @ 3		2987.6	(14 ⁻)	2184.2	(13 ⁺)		
803.7 3		2012.5	(11 ⁻)	1208.9			
806.1 3	21 3	7023.5	(24 ⁺)	6217.4	(23 ⁺)	Q	$E_\gamma=805.8$ 4; DCO ratio=1.03 15.
807.1 3		2067.3	(12 ⁻)	1260.2	(10 ⁻)		
816.1 3		1260.2	(10 ⁻)	444.1	(8 ⁻)		
824.2 3		4166.7	(17 ⁻)	3342.5	(15 ⁻)		
827.4 3		2071.4	(12 ⁻)	1244.0	(10 ⁻)		
828.9 3		2272.9	(13 ⁻)	1444.1	(11 ⁻)		
830.6 3		2679.9	(14 ⁻)	1849.4	(12 ⁻)		
838.3 3		2679.9	(14 ⁻)	1841.4	(12 ⁻)		

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(HI,xn γ) 2004MoZT (continued) $\gamma(^{122}\text{I})$ (continued)

E_γ [†]	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [#]	Comments
866.6 3	13 2	2355.8	(13 ⁻)	1489.2	(11 ⁻)		$E_\gamma=866.7$ 4.
868.0 3		4517.2	(18 ⁻)	3649.2	(17 ⁺)		this γ was shown as decaying from a separate level in decay scheme (2004MoZT), but evaluator assumes as decaying from the same level.
888.1 3		2729.7	(14 ⁻)	1841.4	(12 ⁻)		
922.1 3		2546.0	(13 ⁻)	1623.9	(11 ⁻)		
927.0 3	62 6	5144.1	(20 ⁺)	4217.1	(18 ⁺)	Q	$E_\gamma=926.9$ 4; DCO ratio=1.00 10.
941.4 3	10 1	3949.3	(17 ⁺)	3007.9	(16 ⁺)		$E_\gamma=941.1$ 4.
943.5 3		3216.3	(15 ⁻)	2272.9	(13 ⁻)		
944.3 3		3674.1	(16 ⁻)	2729.7	(14 ⁻)		
950.1 3		3774.0	(16 ⁻)	2824.0	(15 ⁺)		
956.9 3		4247.2		3290.3			
961.6 3		3641.6	(16 ⁻)	2679.9	(14 ⁻)		
961.6 3		4610.8		3649.2	(17 ⁺)		
963.8 3		4605.4	(18 ⁻)	3641.6	(16 ⁻)		
974.5 3		3045.9	(14 ⁻)	2071.4	(12 ⁻)		
986.7 3	7 2	3342.5	(15 ⁻)	2355.8	(13 ⁻)		$E_\gamma=986.2$ 4.
987.5 3		1774.8	(10 ⁻)	786.3	(8 ⁺)		E_γ : level energy difference=988.49 keV.
1073.8 3		3597.4	(15 ⁻)	2523.6	(14 ⁺)		
1125.3 3		3949.3	(17 ⁺)	2824.0	(15 ⁺)		
1126.2 3	9 2	4775.4		3649.2	(17 ⁺)		$E_\gamma=1125.4$ 4.
1209.2 3	54 5	4217.1	(18 ⁺)	3007.9	(16 ⁺)	Q	$E_\gamma=54.5$ 4; DCO ratio=1.02 13.
1299.7 3	7 1	8323.2		7023.5	(24 ⁺)	Q	$E_\gamma=1299.5$ 4; DCO ratio=0.96 20.

[†] From 2004MoZT, $\Delta E=0.3$ assumed by evaluator; E_γ 's from $^{116}\text{Cd}(^{10}\text{B},5n\gamma)$ (1997Ka21) are included in gamma comments.

Evaluator notes that $E_\gamma>500$ keV in 1997Ka21 are systematically lower by 0.2 to 0.3 keV.

[‡] Relative to $I(698.6\gamma)=100$ in $^{116}\text{Cd}(^{11}\text{B},5n\gamma)$ at $E=64$ MeV (1997Ka21).

[#] From DCO ratios measured at four angles between 90° and 150° (1997Ka21) as given in gamma comments.

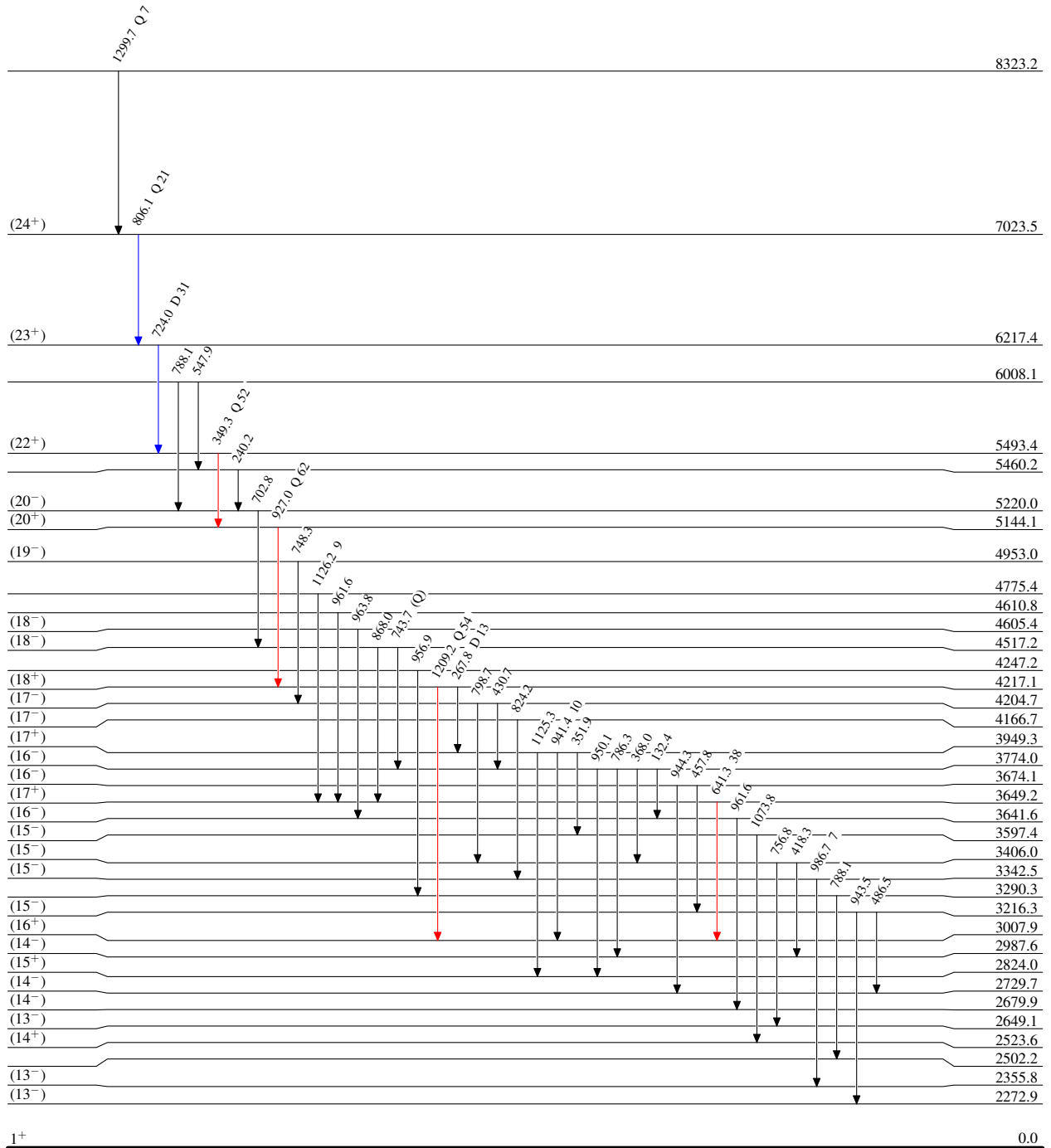
[@] Placement of transition in the level scheme is uncertain.

(HI,xn γ) 2004MoZT

Level Scheme
Intensities: Relative I $_{\gamma}$

Legend

- I $_{\gamma}$ < 2% \times I $_{\gamma}^{max}$
- I $_{\gamma}$ < 10% \times I $_{\gamma}^{max}$
- I $_{\gamma}$ > 10% \times I $_{\gamma}^{max}$

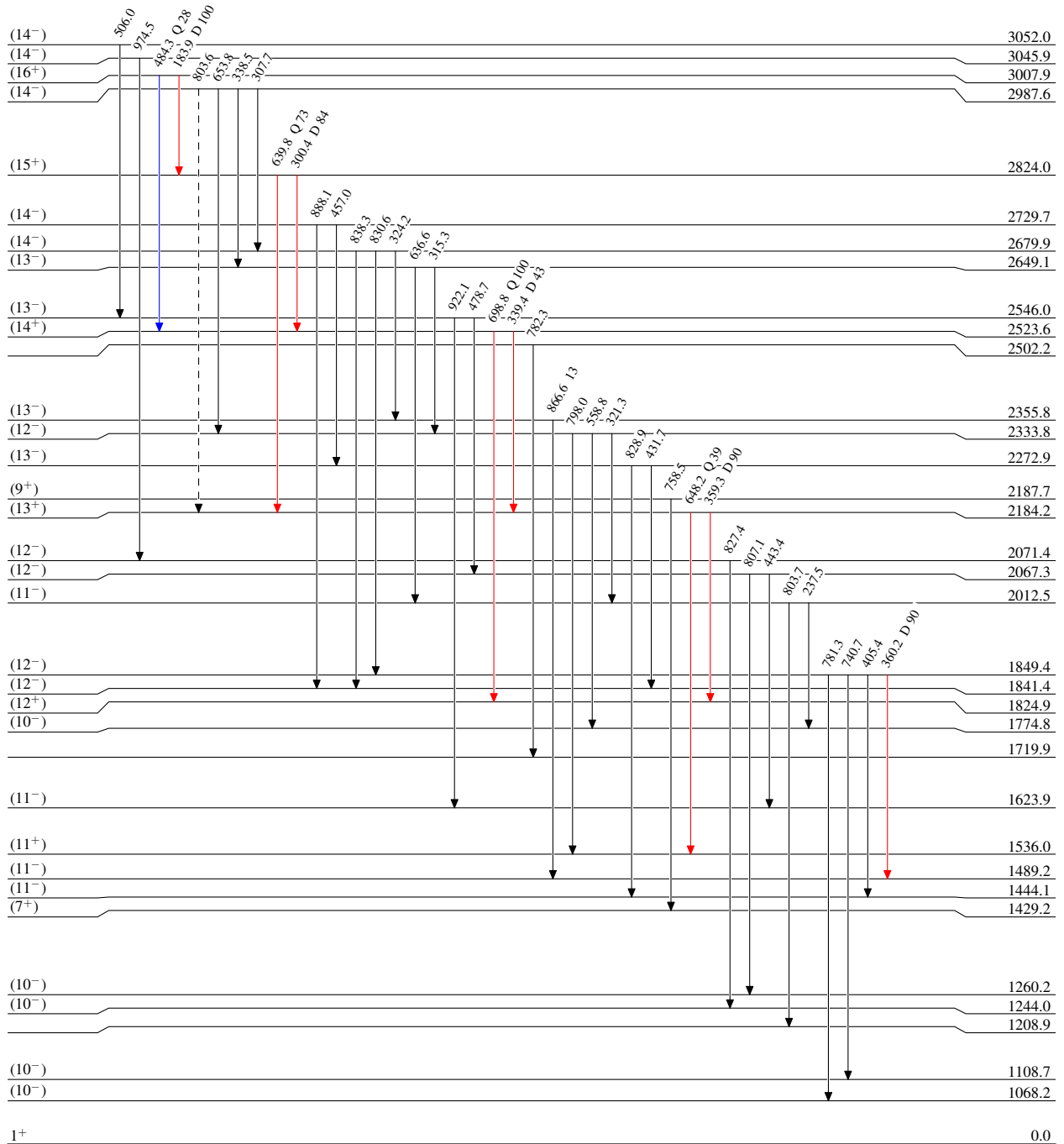


(HI,xn γ) 2004MoZT

Legend

Level Scheme (continued)Intensities: Relative I_γ

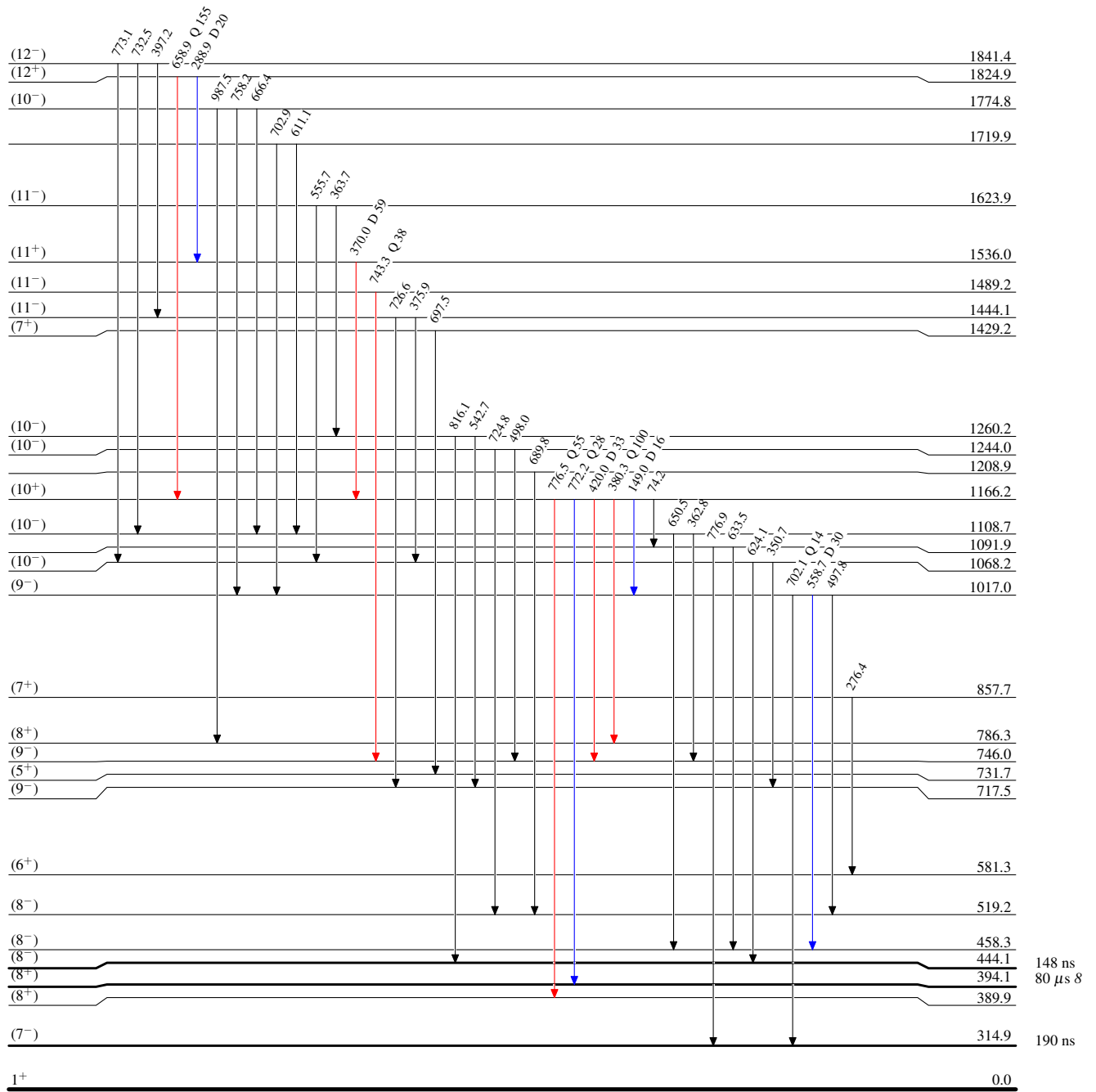
- \longrightarrow $I_\gamma < 2\% \times I_\gamma^{max}$
- \longrightarrow $I_\gamma < 10\% \times I_\gamma^{max}$
- \longrightarrow $I_\gamma > 10\% \times I_\gamma^{max}$
- \dashrightarrow γ Decay (Uncertain)



(HI,xn γ) 2004MoZT**Level Scheme (continued)**Intensities: Relative I_γ

Legend





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

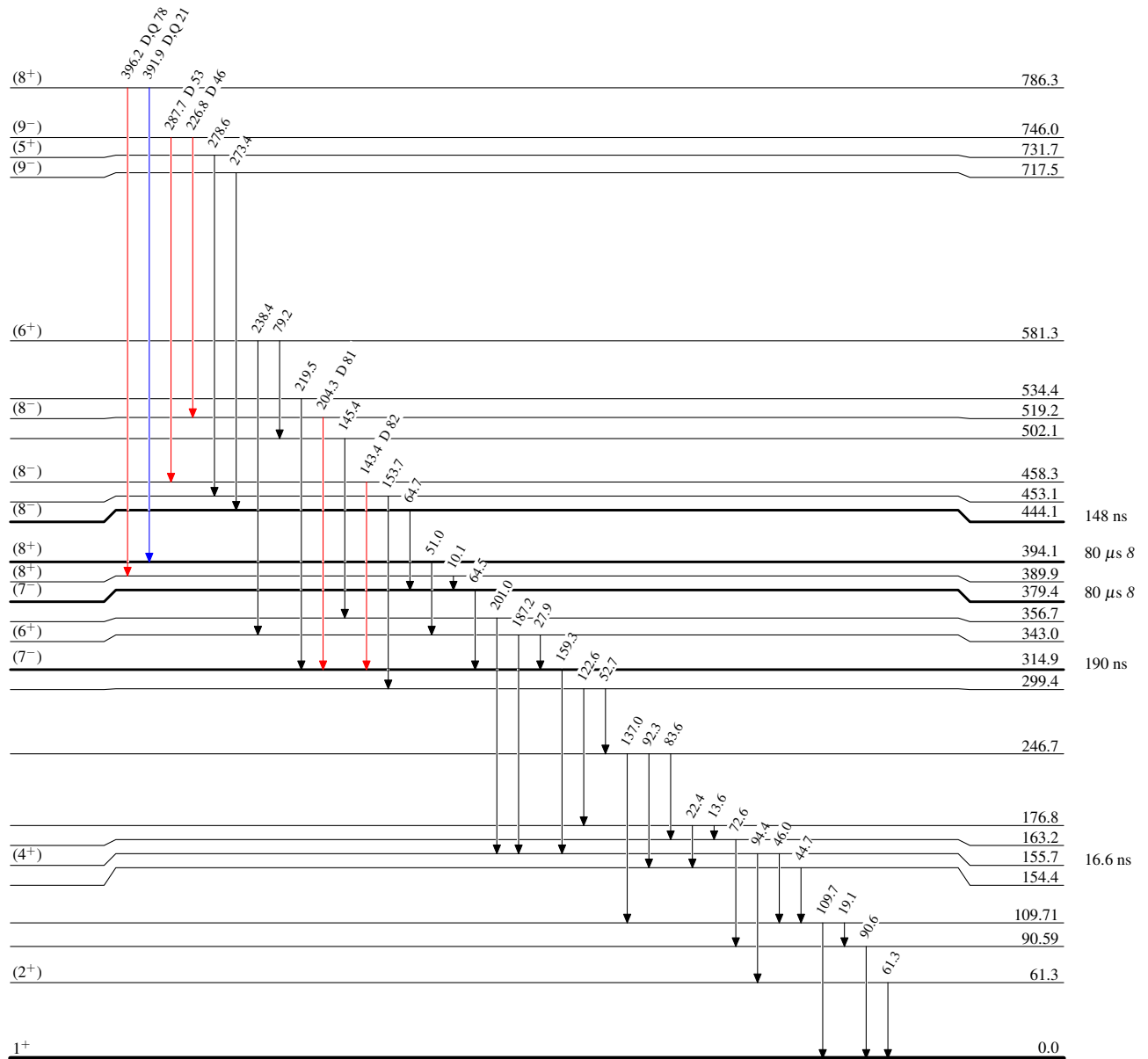
 $^{122}_{53}\text{I}_{69}$

(HI,xn γ) 2004MoZT

Legend

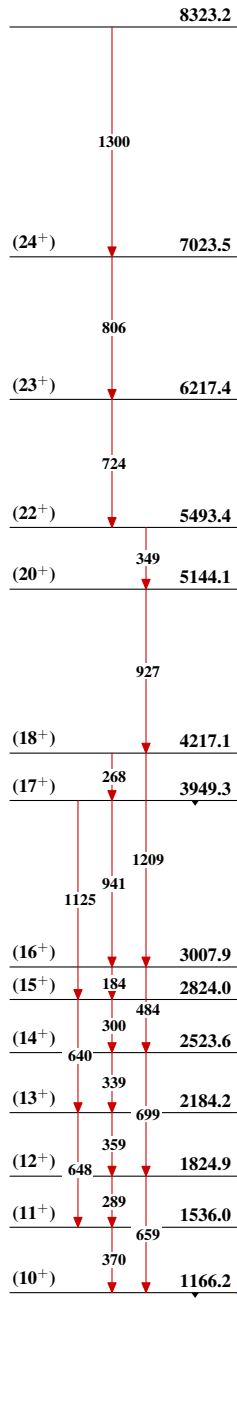
Level Scheme (continued)Intensities: Relative I_γ

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

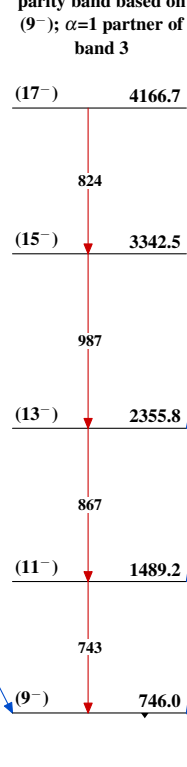
 $^{122}_{53}\text{I}_{69}^{-9}$

(HI,xn γ) 2004MoZT

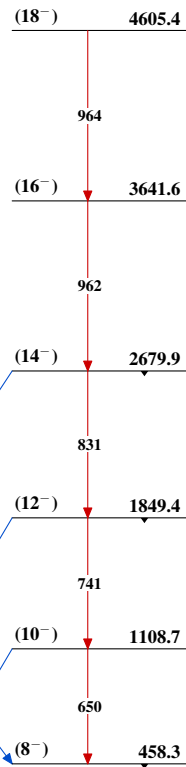
Band(A): Band 1 possible
 Configuration= $(\pi h_{11/2}) \otimes (v h_{11/2})$



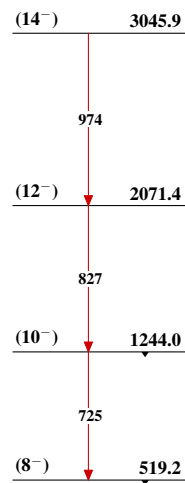
Band(B): Band 2 negative parity band based on (9⁻); $\alpha=1$ partner of band 3



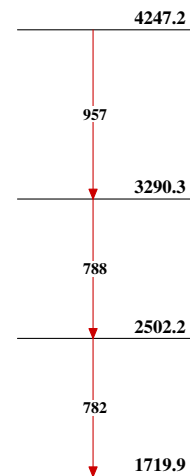
Band(C): Band 3 negative parity band based on (8⁻); $\alpha=0$



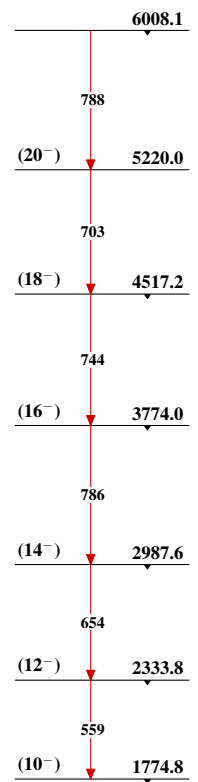
Band(D): Band 4 negative parity band based on (8⁻)



Band(E): Band 5 band based on 1720-keV level

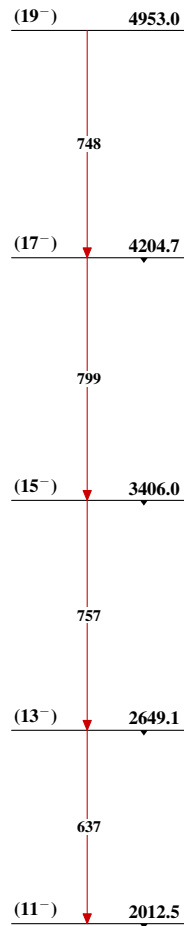


Band(F): Band 6 negative parity band based on (10⁻); $\alpha=0$

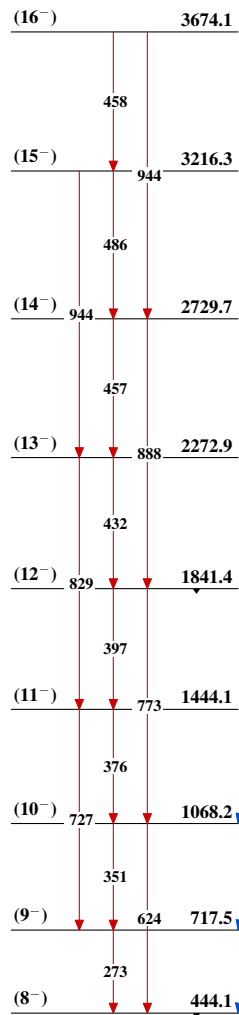


(HI,xn γ) 2004MoZT (continued)

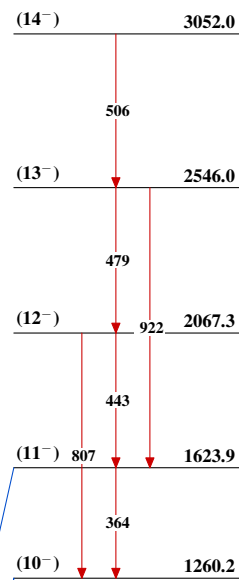
Band(G): Band 7 negative parity band based on (11⁻); $\alpha=1$ partner of band 6



Band(H): Band 8 negative parity band based on (8⁻); $\Delta J=1$ band



Band(I): Band 9 negative parity band based on (10⁻)



Band(J): Band 10 positive parity band based on (5⁺)

