

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes		NDS 161, 1 (2019)	1-Apr-2019

$Q(\beta^-) = -6303$ 11; $S(n) = 11529$ 12; $S(p) = -2961$ 10; $Q(\alpha) = -731$ 11 **2017Wa10**

 ^{105}In LevelsCross Reference (XREF) Flags

A	^{105}Sn ε decay (32.7 s)	D	$^{51}\text{V}(^{58}\text{Ni}, 2p2n\gamma)$
B	^{105}In IT decay (48 s)	E	$^{58}\text{Ni}(^{50}\text{Cr}, 3p\gamma)$
C	$^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$		

E(level) [†]	J ^π	T _{1/2} [‡]	XREF	Comments
0.0 [#]	9/2 ⁺	5.07 min 7	ABCDE	$\% \varepsilon + \% \beta^+ = 100$ $\mu = +5.675$ 5 (2014StZZ); $Q = 0.79$ 5 (2016St14) J^π : $\pi = +$ from $\log ft = 5.77$ to $7/2^+$ 131 level; J from isotope shift and hfs measurements (1987Eb02). $T_{1/2}$: from $\gamma(t)$ in ^{105}In ε decay (1984Ve01); others: 5.1 min 3 (1975Ri06, 1974Bu20), 4.8 min 2 (1980Wi20).
674.09 25	(1/2 ⁻)	48 s 6	AB	$\% \text{IT} = 100$ $\% \text{IT}$: Only IT decay has been reported. J^π : 674.1 γ M4 to $9/2^+$; systematics. $T_{1/2}$: weighted average of 55 s 5 in 1975Ri06 and 43 s 4 in 1980Wi20.
992.05 [#] 16	11/2 ⁺		A CDE	J^π : 992.1 γ M1+E2 to $9/2^+$; band head; systematics.
1209.7 4			A	
1281.74 24	(5/2 ⁺ , 7/2 ⁺)		A	J^π : 1281.7 γ to $9/2^+$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1302.9 5			A	
1341.63 [#] 17	13/2 ⁺		CDE	J^π : 349.6 γ M1 to $11/2^+$ and 1341.6 γ E2 to $9/2^+$; band member.
1416.0 3	(7/2 ⁺)		A	J^π : 424.1 γ to $11/2^+$, 1415.9 γ to $9/2^+$, $\log ft < 5.9$ in ^{105}Sn ε decay.
1417.0 3	(5/2 ⁺ , 7/2 ⁺)		A	J^π : 1416.9 γ to $9/2^+$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1465.9 3	(5/2 ⁺ , 7/2 ⁺)		A	J^π : 1465.9 γ to $9/2^+$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1590.9 3			A	
1826.3 [#] 3	17/2 ⁺	416 ps 28	CDE	J^π : 484.7 γ E2 to $13/2^+$; band member. $T_{1/2}$: Others: 48 ps 15 (1992Is02) via recoil distance method; 330 ps 100 (1995Is06) via recoil distance method.
1881.6 8	(7/2 ⁺)		A	J^π : 889.9 γ to $11/2^+$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1932.2 5	(3/2 ⁺)		A	J^π : 1258.2 γ to $1/2^-$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1942.4 5	(5/2 ⁺ to 11/2 ⁺)		A	J^π : 1942.2 γ to $9/2^+$.
1978.8 6	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.
1984.5 3	(5/2 ⁺ , 7/2 ⁺)		A	J^π : 1984.5 γ to $9/2^+$; $\log ft < 5.9$ in ^{105}Sn ε decay.
1988.0 11			A	
2097.8 [#] 3	19/2 ⁺	2.61 ps 12	CDE	J^π : 271.5 γ M1 to $17/2^+$; band member. $T_{1/2}$: Others: 6 ps 3 (1992Is02); 4 ps 2 (1995Is06).
2222.1 8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.
2269.9 11			A	
2311.7 6	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.
2369.1? 6			A	
2370.4 11			A	
2399.1 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.
2426.3 8	(7/2 ⁺ to 13/2 ⁺)		A	J^π : 1434.2 γ to $11/2^+$, 2426 γ to $9/2^+$.
2471.2 8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.
2517.4 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J^π : $\log ft < 5.9$ in ^{105}Sn ε decay.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{105}In Levels (continued)				
E(level) [†]	J ^π	T _{1/2} [‡]	XREF	Comments
2590.3 4	(3/2 ⁺)		A	J ^π : 1916.2γ to 1/2 ⁻ ; log ft<5.9 in ^{105}Sn ε decay.
2626.0 11	(7/2 ⁺)		A	J ^π : 1633.9γ to 11/2 ⁺ ; log ft<5.9 in ^{105}Sn ε decay.
2664.9 11			A	
2752.4 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
2758.7 8			A	
2771.2 12			A	
2782.1 4	(3/2 ⁺)		A	J ^π : 2108.1γ to 1/2 ⁻ ; log ft<5.9 in ^{105}Sn ε decay.
2937.9# 4	21/2 ⁺	0.52 ps 10	CDE	J ^π : 840.0γ M1+E2 to 19/2 ⁺ ; band member.
2958.2 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
2964.4 8	(3/2 ⁺)		A	J ^π : 2290.3γ to 1/2 ⁻ ; log ft<5.9 in ^{105}Sn ε decay.
3024.6 5	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3082.1 8			C E	E(level): Level and decaying γ observed only by 1999De50.
3112.5 8	(7/2 ⁺)		A	J ^π : 2120.4γ to 11/2 ⁺ ; log ft<5.9 in ^{105}Sn ε decay.
3143.7 7	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3158.4 6	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3242.2 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3262.2 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3345.3# 4	23/2 ⁺	1.59 ps 28	CDE	J ^π : 407.4γ E2 to 21/2 ⁺ ; 1247.5γ to 19/2 ⁺ ; band member.
3414.2 5	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3435.7? 10			A	
3466.28 10	(5/2 ⁺ , 7/2 ⁺)		A	J ^π : 3466.22γ to 9/2 ⁺ ; log ft<5.9 in ^{105}Sn ε decay.
3471.5 5	(5/2 ⁺ , 7/2 ⁺)		A	J ^π : 3472γ to 9/2 ⁺ ; log ft<5.9 in ^{105}Sn ε decay.
3524.9 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3573.4? 10			A	
3593.7 8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3626.8 8	(3/2 ⁺)		A	J ^π : 2953γ to 1/2 ⁻ ; log ft<5.9 in ^{105}Sn ε decay.
3631.5# 4	25/2 ⁺	4.09 ps 14	CDE	J ^π : 286.2γ M1 to 23/2 ⁺ ; band member.
3636.1 6	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3654.2@ 4	19/2 ⁻	<1.4 ps	C E	J ^π : 1827.8γ (E1) to 17/2 ⁺ ; band member.
3655.6 8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3699.8 8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
3827.6@ 4	21/2 ⁻	0.55 ps 7	C E	J ^π : 173.4γ (M1) to 19/2 ⁻ , 483γ to 23/2 ⁺ , 888γ to 21/2 ⁺ , 1729.8γ (E1) to 19/2 ⁺ ; band member.
3952.2 6	(3/2 ⁺)		A	J ^π : 3278.0γ to 1/2 ⁻ ; log ft<5.9 in ^{105}Sn ε decay.
3957.9@ 4	23/2 ⁻	1.73 ps 14	CDE	J ^π : 130.2γ (M1) to 21/2 ⁻ , 612.5γ to 23/2 ⁺ , 1020.0γ E1 to 21/2 ⁺ ; band member.
3971.2 4	21/2 ⁻		C E	J ^π : 317.1γ (M1) to 19/2 ⁻ , 1033.4γ (E1) to 21/2 ⁺ ; near yrast state assumed.
4197.9? 11	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)		A	J ^π : log ft<5.9 in ^{105}Sn ε decay.
4310.2 4	23/2 ⁻		C E	J ^π : 339.0γ (M1) to 21/2 ⁻ .
4356.0@ 4	25/2 ⁻	<1.4 ps	CDE	J ^π : 398.2γ (M1) to 23/2 ⁻ , 1010.7γ (E1) to (23/2 ⁺); band member.
4490.1# 4	29/2 ⁺	0.97 ps 21	C E	J ^π : 858.5γ to 25/2 ⁺ ; band member.
4953.9 5	25/2 ⁻		C E	J ^π : 643.8γ (M1) to 23/2 ⁻ ; near yrast state.
5046.4@ 4	27/2 ⁻	<0.35 ps	CDE	J ^π : 690.4γ (M1) to 25/2 ⁻ , 1088.4γ to 23/2 ⁻ ; band member.
5249.9# 5	29/2 ⁽⁺⁾		C E	J ^π : 759.6γ to 29/2 ⁺ , 1620γ to 25/2 ⁺ ; band member.
5274.1 4	27/2 ⁻		C E	J ^π : 320.4γ (M1) to 25/2 ⁻ , 1642.5γ (E1) to 25/2 ⁺ ; band member.
5354.9 8			E	
5488.2@ 4	29/2 ⁻	1.04 ps 28	C E	J ^π : 441.7γ (M1) to 27/2 ⁻ , 998.1γ to 29/2 ⁺ , 1132.1γ to 25/2 ⁻ ; band member.
5620.2& 4	29/2 ⁻	0.62 ps 14	C E	J ^π : 346.2γ (M1) to 27/2 ⁻ , 1130.0γ (E1) to 29/2 ⁺ , 1264.2γ (E2) to 25/2 ⁻ ; band member.
5890.6@ 4	31/2 ⁻		CDE	J ^π : 402.5γ (M1) to 29/2 ⁻ ; band member.
6002.8 8			E	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{105}In Levels (continued)

E(level) [†]	J ^π	XREF	Comments
6021.1 ^{& 4}	31/2 ⁻	C E	J ^π : 400.9γ (M1) to 29/2 ⁻ , band member.
6125.5 ⁹		E	
6381.8 ^{@ 5}	33/2 ⁻	C E	J ^π : 491.1γ (M1) to 31/2 ⁻ ; band member.
6586.1 ^{& 4}	33/2 ⁻	C E	J ^π : 565.0γ (M1) to 31/2 ⁻ , 1098 γ to 29/2 ⁻ , 1336γ to 29/2 ⁽⁺⁾ ; band member.
7055.9 ^{& 5}	35/2 ⁻	C E	J ^π : 469.6γ (M1) to 33/2 ⁻ , 1165γ to 31/2 ⁻ ; band member.
7106.4 ^{@ 5}	(35/2 ⁻)	C E	J ^π : 724.7γ (M1) to 33/2 ⁻ ; band member.
7552.9 ^{& 5}	37/2 ⁻	C E	J ^π : 496.8γ (M1) to 35/2 ⁻ , 1172γ to 33/2 ⁻ ; band member.
7739.8 ^{@ 6}		C E	
7800.9 ^{a 8}	33/2 ⁽⁺⁾	E	J ^π : 1780γ to 31/2 ⁻ ; band member.
8096.8 ^{a 8}	35/2 ⁽⁺⁾	E	J ^π : 296γ to 33/2 ⁽⁺⁾ , 1511γ to 33/2 ⁻ ; band member.
8479.2 ^{& 8}	39/2 ⁻	E	J ^π : 927γ to 37/2 ⁻ ; band member.
8552.4 ^{a 8}	37/2 ⁽⁺⁾	E	J ^π : 456γ to 35/2 ⁽⁺⁾ , 1497γ (E1) to 35/2 ⁻ ; band member.
8561.6 ^{@ 10}		C E	
8916.5 ¹⁰		E	
9130.6 ^{a 9}	39/2 ⁽⁺⁾	E	J ^π : 579γ to 37/2 ⁽⁺⁾ , 1577γ to 37/2 ⁻ ; band member.
9297.4 ^{& 11}	41/2 ⁻	E	J ^π : 818γ to 39/2 ⁻ ; band member.
9456.6 ^{b 11}	41/2 ⁽⁺⁾	E	J ^π : 978γ to 39/2 ⁻ ; band member.
9646.4 ^{a 10}	41/2 ⁽⁺⁾	E	J ^π : 516γ to 39/2 ⁽⁺⁾ , 1167γ to 39/2 ⁻ ; band member.
10151.4 ^{a 14}	43/2 ⁽⁺⁾	E	J ^π : 505γ to 41/2 ⁽⁺⁾ ; band member.
10196.4 ^{& 15}	43/2 ⁻	E	J ^π : 899γ to 41/2 ⁻ ; band member.
10554.1 ^{b 12}	45/2 ⁽⁺⁾	E	J ^π : 1098γ to 41/2 ⁽⁺⁾ ; band member.
10823.4 ^{a 18}	45/2 ⁽⁺⁾	E	J ^π : 672γ to 43/2 ⁽⁺⁾ ; band member.
11786.4 ^{a 20}	47/2 ⁽⁺⁾	E	J ^π : 963γ to 45/2 ⁽⁺⁾ ; band member.
11840.1 ^{b 16}	49/2 ⁽⁺⁾	E	J ^π : 1286γ to 45/2 ⁽⁺⁾ ; band member.
13345.1 ^{b 19}	53/2 ⁽⁺⁾	E	J ^π : 1505γ to 49/2 ⁽⁺⁾ ; band member.
15283.1 ^{b 21}	57/2 ⁽⁺⁾	E	J ^π : 1938γ to 53/2 ⁽⁺⁾ ; band member.

[†] From a least-squares fit to Eγ.[‡] From RDDS and DSAM in [1998Ka54](#), unless noted otherwise.# Band(A): ΔJ=1 band, based on the 9/2⁺ g.s.@ Band(B): ΔJ=1 band based on 19/2⁻.& Band(C): 29/2⁻, ΔJ=1 band.^a Band(D): 33/2⁽⁺⁾, ΔJ=1 band.^b Band(E): 41/2⁽⁺⁾ band.

Adopted Levels, Gammas (continued)

E _i (level)	J ^π _i	$\gamma(^{105}\text{In})$		E _f	J ^π _f	Mult. [‡]	$\delta^{\#}$	Comments
		E _γ [†]	I _γ [†]					
674.09	(1/2 ⁻)	674.1 3	100	0.0	9/2 ⁺	M4		Mult.: from α(K)exp in ¹⁰⁵ In IT decay.
992.05	11/2 ⁺	992.1 2	100	0.0	9/2 ⁺	M1+E2	0.5 1	
1209.7		535.5 3	100	674.09	(1/2 ⁻)			
1281.74	(5/2 ⁺ ,7/2 ⁺)	1281.7 3	100	0.0	9/2 ⁺			
1302.9		628.7 5	100	674.09	(1/2 ⁻)			
1341.63	13/2 ⁺	349.6 2	35.7 2	992.05	11/2 ⁺	M1		
		1341.6 2	100.0 5	0.0	9/2 ⁺	E2		
1416.0	(7/2 ⁺)	424.1 5	36 2	992.05	11/2 ⁺			
		1415.9 3	100 5	0.0	9/2 ⁺			
1417.0	(5/2 ⁺ ,7/2 ⁺)	1416.9 3	100	0.0	9/2 ⁺			
1465.9	(5/2 ⁺ ,7/2 ⁺)	1465.9 3	100	0.0	9/2 ⁺			
1590.9		287.9 10	7.4 14	1302.9				
		309.1 3	100 2	1281.74	(5/2 ⁺ ,7/2 ⁺)			
		1590.8 10	35 8	0.0	9/2 ⁺			
1826.3	17/2 ⁺	484.7 2	100.0 5	1341.63	13/2 ⁺	E2		B(E2)(W.u.)=1.73 12
1881.6	(7/2 ⁺)	599.6 10	100 11	1281.74	(5/2 ⁺ ,7/2 ⁺)			
		889.9 10	78 16	992.05	11/2 ⁺			
1932.2	(3/2 ⁺)	341.2 10	24 12	1590.9				
		629.3 5	76 15	1302.9				
		722.5 10	59 6	1209.7				
		1258.2 5	100 2	674.09	(1/2 ⁻)			
1942.4	(5/2 ⁺ to 11/2 ⁺)	476.6 5	100 11	1465.9	(5/2 ⁺ ,7/2 ⁺)			
		1942.2 10	55 25	0.0	9/2 ⁺			
1978.8	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	388.0 10	50 8	1590.9				
		561.7 10	83 17	1417.0	(5/2 ⁺ ,7/2 ⁺)			
		697.0 10	100 58	1281.74	(5/2 ⁺ ,7/2 ⁺)			
1984.5	(5/2 ⁺ ,7/2 ⁺)	1984.5 3	100	0.0	9/2 ⁺			
1988.0		778.3 10	100	1209.7				
2097.8	19/2 ⁺	271.5 2	100 5	1826.3	17/2 ⁺	M1		B(M1)(W.u.)=0.422 20
2222.1	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	756.2 10	100 15	1465.9	(5/2 ⁺ ,7/2 ⁺)			
		1012.4 10	63 12	1209.7				
		1547.5 & 10	29 6	674.09	(1/2 ⁻)			
2269.9		1060.2 10	100	1209.7				
2311.7	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	895.7 5	100	1416.0	(7/2 ⁺)			
2369.1?		903.2 & 5	100	1465.9	(5/2 ⁺ ,7/2 ⁺)			
2370.4		954.4 10	100 7	1416.0	(7/2 ⁺)			
2399.1	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	933.2 10	100	1465.9	(5/2 ⁺ ,7/2 ⁺)			
2426.3	(7/2 ⁺ to 13/2 ⁺)	1434.2 10	75 12	992.05	11/2 ⁺			
		2426 10	100 18	0.0	9/2 ⁺			
2471.2	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	880.1 10	100 17	1590.9				
		1189.7 10	61 17	1281.74	(5/2 ⁺ ,7/2 ⁺)			
2517.4	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1051.5 10	100	1465.9	(5/2 ⁺ ,7/2 ⁺)			

Adopted Levels, Gammas (continued)

$\gamma(^{105}\text{In})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	Comments
2590.3	(3/2 ⁺)	1916.2 3	100	674.09	(1/2 ⁻)		
2626.0	(7/2 ⁺)	1633.9 10	100 5	992.05	11/2 ⁺		
2664.9		733.7& 10	64 18	1932.2	(3/2 ⁺)		
		1074.0 10	100 54	1590.9			
2752.4	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1161.5 10	100	1590.9			
2758.7		1167.8 10	100 50	1590.9			
		1477.0 10	<83	1281.74	(5/2 ⁺ ,7/2 ⁺)		
2771.2		402.1& 10	100	2369.1?			
2782.1	(3/2 ⁺)	1364.7 10	81 7	1417.0	(5/2 ⁺ ,7/2 ⁺)		
		1500.4 5	90 12	1281.74	(5/2 ⁺ ,7/2 ⁺)		
		2108.1 5	100 8	674.09	(1/2 ⁻)		
2937.9	21/2 ⁺	840.0 2	100 7	2097.8	19/2 ⁺	M1+E2	M1+E2 suggested by 1992Is02 , no mixing ratio given.
		1111.6 3	6.8 4	1826.3	17/2 ⁺		
2958.2	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1026.0 10	74 4	1932.2	(3/2 ⁺)		
		2283.6& 10	100 17	674.09	(1/2 ⁻)		
2964.4	(3/2 ⁺)	1547.5 10	100 21	1417.0	(5/2 ⁺ ,7/2 ⁺)		
		2290.3 10	93 43	674.09	(1/2 ⁻)		
3024.6	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1433.9 10	80 13	1590.9			
		1742.8 5	100 20	1281.74	(5/2 ⁺ ,7/2 ⁺)		
3082.1		984		2097.8	19/2 ⁺		
3112.5	(7/2 ⁺)	1521.7 10	100 18	1590.9			
		2120.4 10	71 13	992.05	11/2 ⁺		
3143.7	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	832.3& 10	<22	2311.7	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)		
		1934.0@ 5	100@ 26	1209.7			
3158.4	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1692.5 5	100	1465.9	(5/2 ⁺ ,7/2 ⁺)		
3242.2	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1651.3@ 10	100@	1590.9			
3262.2	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1671.3 10	54 10	1590.9			
		2589& 10	100 5	674.09	(1/2 ⁻)		
3345.3	23/2 ⁺	263		3082.1			
		407.4 2	100 11	2937.9	21/2 ⁺	E2	B(E2)(W.u.)=630 12 exceeds the RUL of 300 W.u.
		1247.5 2	70 17	2097.8	19/2 ⁺	[E2]	
3414.2	(3/2 ⁺ ,5/2 ⁺ ,7/2 ⁺)	1822.9 10	23 5	1590.9			
		2132.5 5	100 4	1281.74	(5/2 ⁺ ,7/2 ⁺)		
3435.7?		2019.7& 10	100	1416.0	(7/2 ⁺)		
3466.28	(5/2 ⁺ ,7/2 ⁺)	1040.0 10	100 45	2426.3	(7/2 ⁺ to 13/2 ⁺)		
		3466.22 10	55 15	0.0	9/2 ⁺		
3471.5	(5/2 ⁺ ,7/2 ⁺)	1486.8 10	77 29	1984.5	(5/2 ⁺ ,7/2 ⁺)		
		2005.9 10	68 26	1465.9	(5/2 ⁺ ,7/2 ⁺)		
		2189.8@ 10	80@ 9	1281.74	(5/2 ⁺ ,7/2 ⁺)		
		2261.2 10	100 11	1209.7			
		3472 1	94 17	0.0	9/2 ⁺		

Adopted Levels, Gammas (continued)

$\gamma(^{105}\text{In})$ (continued)							
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	Comments
3524.9	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	1934.0 @ 10	100 @	1590.9			
3573.4?		2291.6 & 10	100	1281.74	(5/2 ⁺ , 7/2 ⁺)		
3593.7	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	1651.3 @ 10	62 @ 12	1942.4	(5/2 ⁺ to 11/2 ⁺)		
		2311.9 10	100 19	1281.74	(5/2 ⁺ , 7/2 ⁺)		
3626.8	(3/2 ⁺)	2344.8 10	100 19	1281.74	(5/2 ⁺ , 7/2 ⁺)		
		2953 1	89 15	674.09	(1/2 ⁻)		
3631.5	25/2 ⁺	286.2 2	100	3345.3	23/2 ⁺	M1	B(M1)(W.u.)=0.230 8
3636.1	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	1046.0 10	46 24	2590.3	(3/2 ⁺)		
		2219.9 10	100 7	1416.0	(7/2 ⁺)		
		3636 1	34 7	0.0	9/2 ⁺		
3654.2	19/2 ⁻	1556.4 & 4	9 3	2097.8	19/2 ⁺		
		1827.8 3	100 31	1826.3	17/2 ⁺	(E1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
3655.6	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	1713.0 10	96 7	1942.4	(5/2 ⁺ to 11/2 ⁺)		
		2189.8 10	100 11	1465.9	(5/2 ⁺ , 7/2 ⁺)		
3699.8	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	2283.6 10	79 14	1416.0	(7/2 ⁺)		
		3700 1	100 17	0.0	9/2 ⁺		
3827.6	21/2 ⁻	173.4 3	10 5	3654.2	19/2 ⁻	(M1)	B(M1)(W.u.)=0.71 10
							Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		483		3345.3	23/2 ⁺		
		888		2937.9	21/2 ⁺		
		1729.8 2	100 5	2097.8	19/2 ⁺	(E1)	B(E1)(W.u.)=9.7×10 ⁻⁵ 13
							Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
3952.2	(3/2 ⁺)	1361.9 10	32 1	2590.3	(3/2 ⁺)		
		3278.0 5	100 6	674.09	(1/2 ⁻)		
3957.9	23/2 ⁻	130.2 2	36.9 3	3827.6	21/2 ⁻	(M1)	B(M1)(W.u.)=1.50 13
							Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		612.5 3	4.8 3	3345.3	23/2 ⁺	[E1]	
		1020.0 2	100 1	2937.9	21/2 ⁺	E1	B(E1)(W.u.)=0.000117 10
3971.2	21/2 ⁻	317.1 2	100 4	3654.2	19/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		1033.4 4	45 9	2937.9	21/2 ⁺	(E1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
4197.9?	(3/2 ⁺ , 5/2 ⁺ , 7/2 ⁺)	1607.6 10	100	2590.3	(3/2 ⁺)		
4310.2	23/2 ⁻	339.0 2	100 3	3971.2	21/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		1372.3 4	17 3	2937.9	21/2 ⁺	(E1)	E_γ : Not observed by 1999De50.
							Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
4356.0	25/2 ⁻	398.2 2	100 1	3957.9	23/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		1010.7 2	13.8 21	3345.3	23/2 ⁺	(E1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
4490.1	29/2 ⁺	858.5 2	100	3631.5	25/2 ⁺		
4953.9	25/2 ⁻	643.8 3	100	4310.2	23/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
5046.4	27/2 ⁻	690.4 2	100 1	4356.0	25/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in $^{50}\text{Cr}(^{58}\text{Ni}, 3p\gamma)$.
		1088.4 3	12.3 9	3957.9	23/2 ⁻		
5249.9	29/2 ⁽⁺⁾	759.6 3	100	4490.1	29/2 ⁺		
		1620		3631.5	25/2 ⁺		

Adopted Levels, Gammas (continued)

$\gamma(^{105}\text{In})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	Comments
5274.1	27/2 ⁻	320.4 4	36 6	4953.9	25/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		918.0 2	100 6	4356.0	25/2 ⁻		
		1642.5 3	25 3	3631.5	25/2 ⁺	(E1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
5354.9		308		5046.4	27/2 ⁻		
5488.2	29/2 ⁻	214.1 2	15 4	5274.1	27/2 ⁻		
		441.7 2	100.0 8	5046.4	27/2 ⁻	(M1)	B(M1)(W.u.)=0.19 5 Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		998.1 3	8.0 4	4490.1	29/2 ⁺	[E1]	
		1132.1 3	8.5 8	4356.0	25/2 ⁻	[E2]	
5620.2	29/2 ⁻	346.2 3	16.7 7	5274.1	27/2 ⁻	(M1)	B(M1)(W.u.)=0.095 22 Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		573.7 2	100 2	5046.4	27/2 ⁻		
		1130.0 3	11.5 11	4490.1	29/2 ⁺	(E1)	B(E1)(W.u.)=2.6×10 ⁻⁵ 7 E γ : Not observed by 1999De50. Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		1264.2 3	23.0 11	4356.0	25/2 ⁻	(E2)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
5890.6	31/2 ⁻	270		5620.2	29/2 ⁻		
		402.5 2	100	5488.2	29/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
6002.8		647		5354.9			
		957		5046.4	27/2 ⁻		
6021.1	31/2 ⁻	400.9 2	100 3	5620.2	29/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		532.9 2	42 6	5488.2	29/2 ⁻		
		975		5046.4	27/2 ⁻		
6125.5		771		5354.9			
6381.8	33/2 ⁻	361.0 6	25 8	6021.1	31/2 ⁻		
		491.1 2	100.0 9	5890.6	31/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
6586.1	33/2 ⁻	461		6125.5			
		565.0 3	100 4	6021.1	31/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		583		6002.8			
		695.6 3	51 4	5890.6	31/2 ⁻		
		1098		5488.2	29/2 ⁻		
		1336		5249.9	29/2 ⁽⁺⁾		
7055.9	35/2 ⁻	469.6 3	100 5	6586.1	33/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		673.9 4	75 8	6381.8	33/2 ⁻		
		1165		5890.6	31/2 ⁻		
7106.4	(35/2 ⁻)	522		6586.1	33/2 ⁻		
		724.7 3	100	6381.8	33/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
7552.9	37/2 ⁻	449		7106.4	(35/2 ⁻)		
		496.8 2	100	7055.9	35/2 ⁻	(M1)	Mult.: from $\gamma\gamma(\theta)$ and band structure in ⁵⁰ Cr(⁵⁸ Ni,3p γ).
		1172		6381.8	33/2 ⁻		
7739.8		633.3 4	100	7106.4	(35/2 ⁻)		
		684		7055.9	35/2 ⁻		
7800.9	33/2 ⁽⁺⁾	1780		6021.1	31/2 ⁻		

Adopted Levels, Gammas (continued)

$\gamma(^{105}\text{In})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	$I_\gamma^\dagger$	E_f	J_f^π	Mult. [‡]	Comments
7800.9	33/2 ⁽⁺⁾	1910		5890.6	31/2 ⁻		
8096.8	35/2 ⁽⁺⁾	296		7800.9	33/2 ⁽⁺⁾		
		1511		6586.1	33/2 ⁻		
8479.2	39/2 ⁻	739		7739.8			
		927		7552.9	37/2 ⁻		
8552.4	37/2 ⁽⁺⁾	456		8096.8	35/2 ⁽⁺⁾		
		1497		7055.9	35/2 ⁻	(E1)	E_γ : Other placement by 1997Ko51 .
8561.6		822 I	100	7739.8			
8916.5		1363		7552.9	37/2 ⁻		
9130.6	39/2 ⁽⁺⁾	579		8552.4	37/2 ⁽⁺⁾		
		1577		7552.9	37/2 ⁻		
9297.4	41/2 ⁻	736		8561.6			
		818		8479.2	39/2 ⁻		
9456.6	41/2 ⁽⁺⁾	978		8479.2	39/2 ⁻		
9646.4	41/2 ⁽⁺⁾	516		9130.6	39/2 ⁽⁺⁾		
		1167		8479.2	39/2 ⁻		
10151.4	43/2 ⁽⁺⁾	505		9646.4	41/2 ⁽⁺⁾		
10196.4	43/2 ⁻	899		9297.4	41/2 ⁻		
10554.1	45/2 ⁽⁺⁾	1098		9456.6	41/2 ⁽⁺⁾		
		1637		8916.5			
10823.4	45/2 ⁽⁺⁾	672		10151.4	43/2 ⁽⁺⁾		
11786.4	47/2 ⁽⁺⁾	963		10823.4	45/2 ⁽⁺⁾		
11840.1	49/2 ⁽⁺⁾	1286		10554.1	45/2 ⁽⁺⁾		
13345.1	53/2 ⁽⁺⁾	1505		11840.1	49/2 ⁽⁺⁾		
15283.1	57/2 ⁽⁺⁾	1938		13345.1	53/2 ⁽⁺⁾		

[†] Either from ε decay or (HI,xn γ). If no uncertainty given from (HI,xn γ) ([1999De50](#)).

[‡] From $\gamma(\theta)$ and $\gamma(\text{lin pol})$ in ⁵¹V(⁵⁸Ni,2p2n γ), except where noted.

From $\gamma\gamma(\theta)$ in ⁵⁰Cr(⁵⁸Ni,3p γ).

@ Multiply placed with intensity suitably divided.

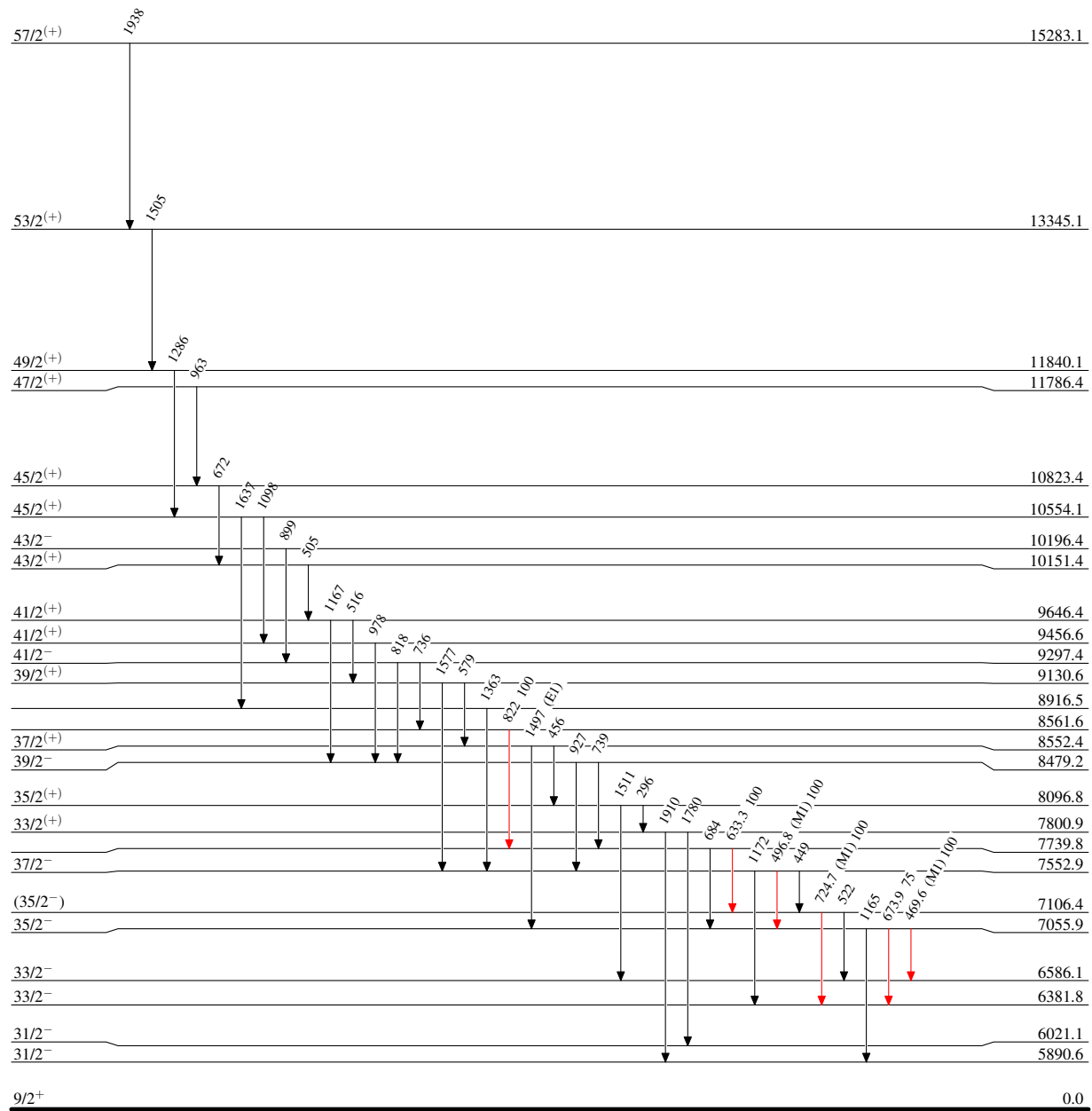
& Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas**Level Scheme**

Intensities: Type not specified

Legend

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



5.07 min 7

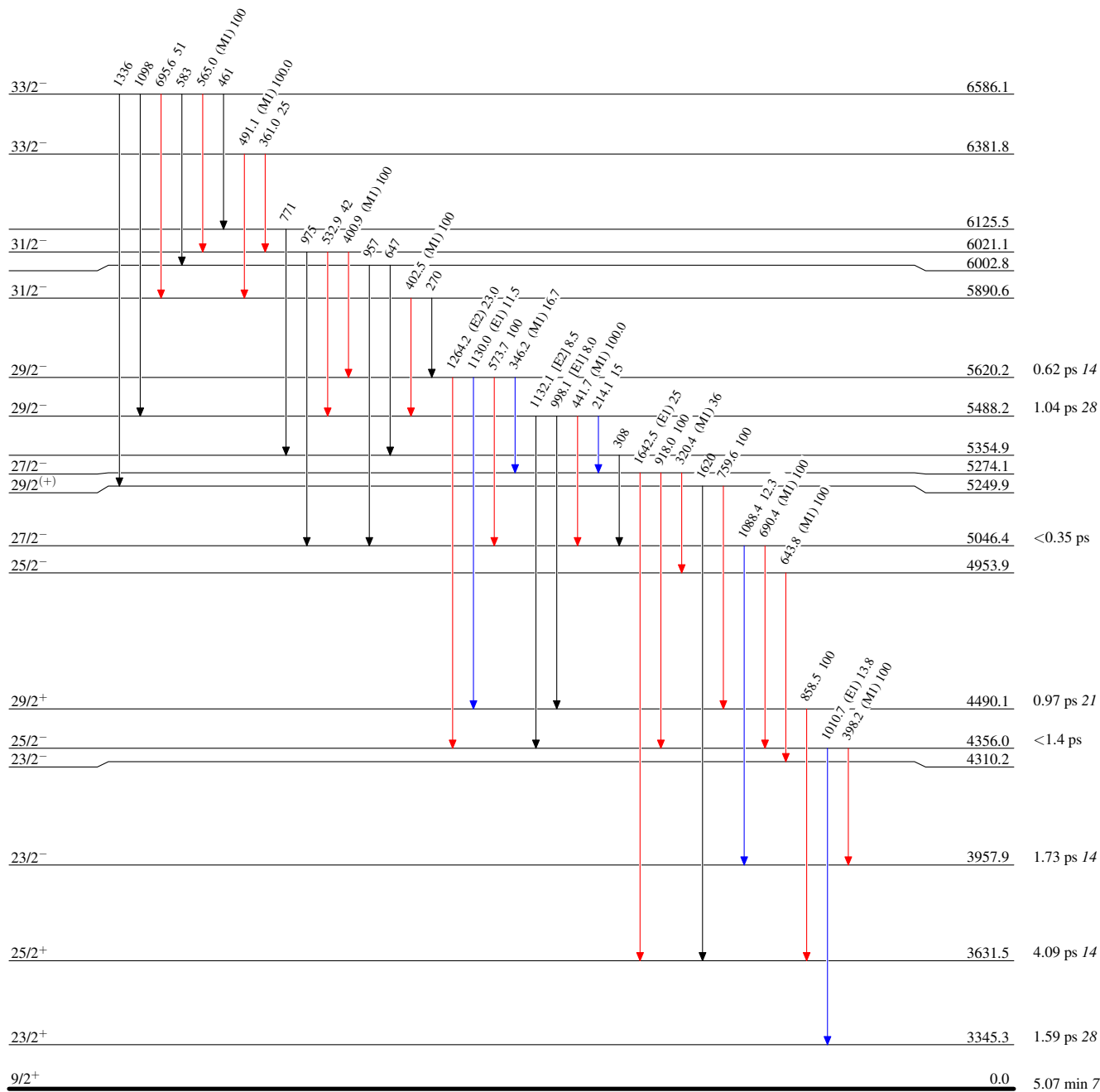
 $^{105}_{49}\text{In}_{56}$

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified

Legend

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



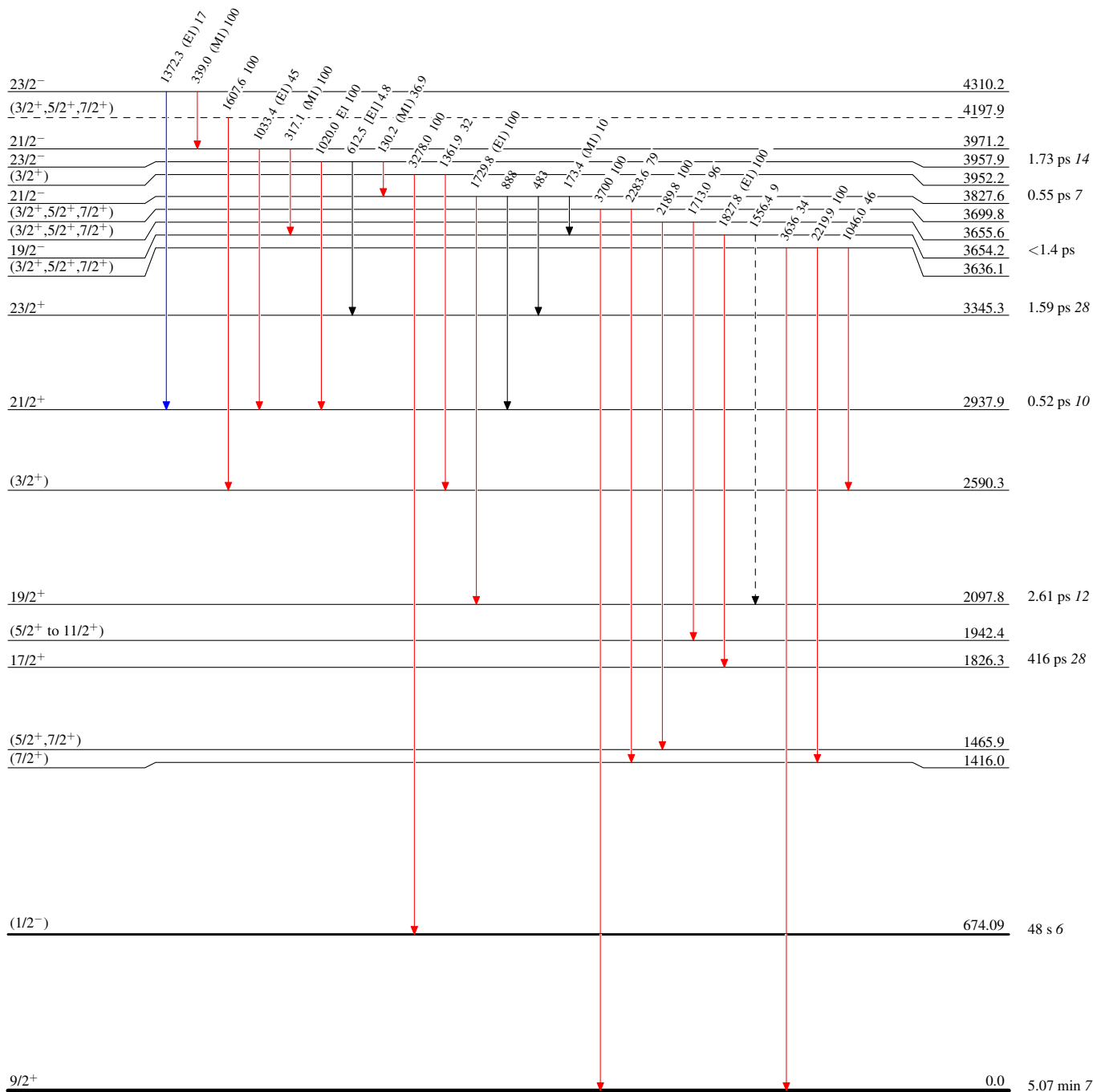
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Type not specified

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

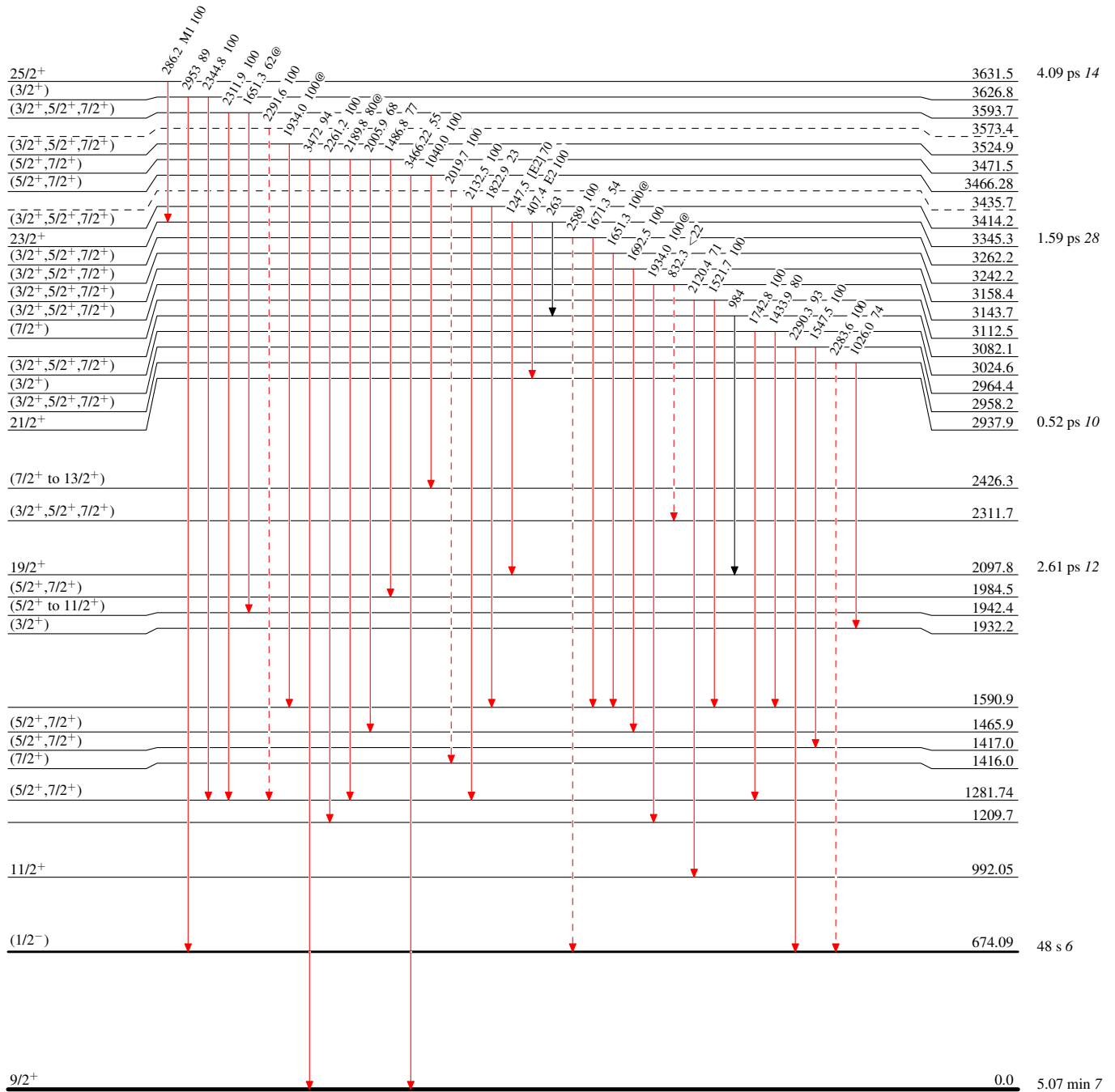


Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified
 @ Multiply placed: intensity suitably divided

Legend

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

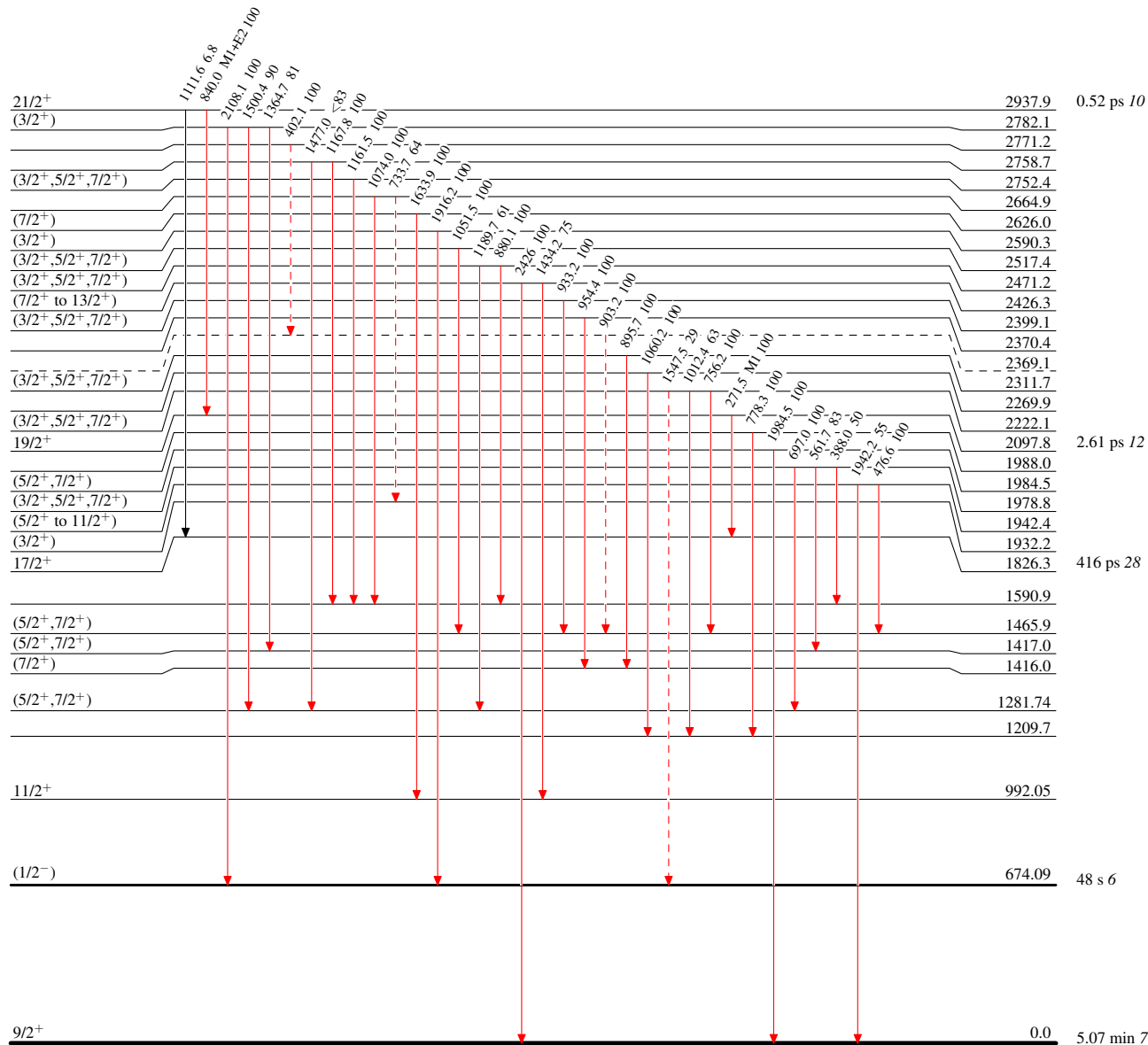


Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified
@ Multiply placed: intensity suitably divided

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)

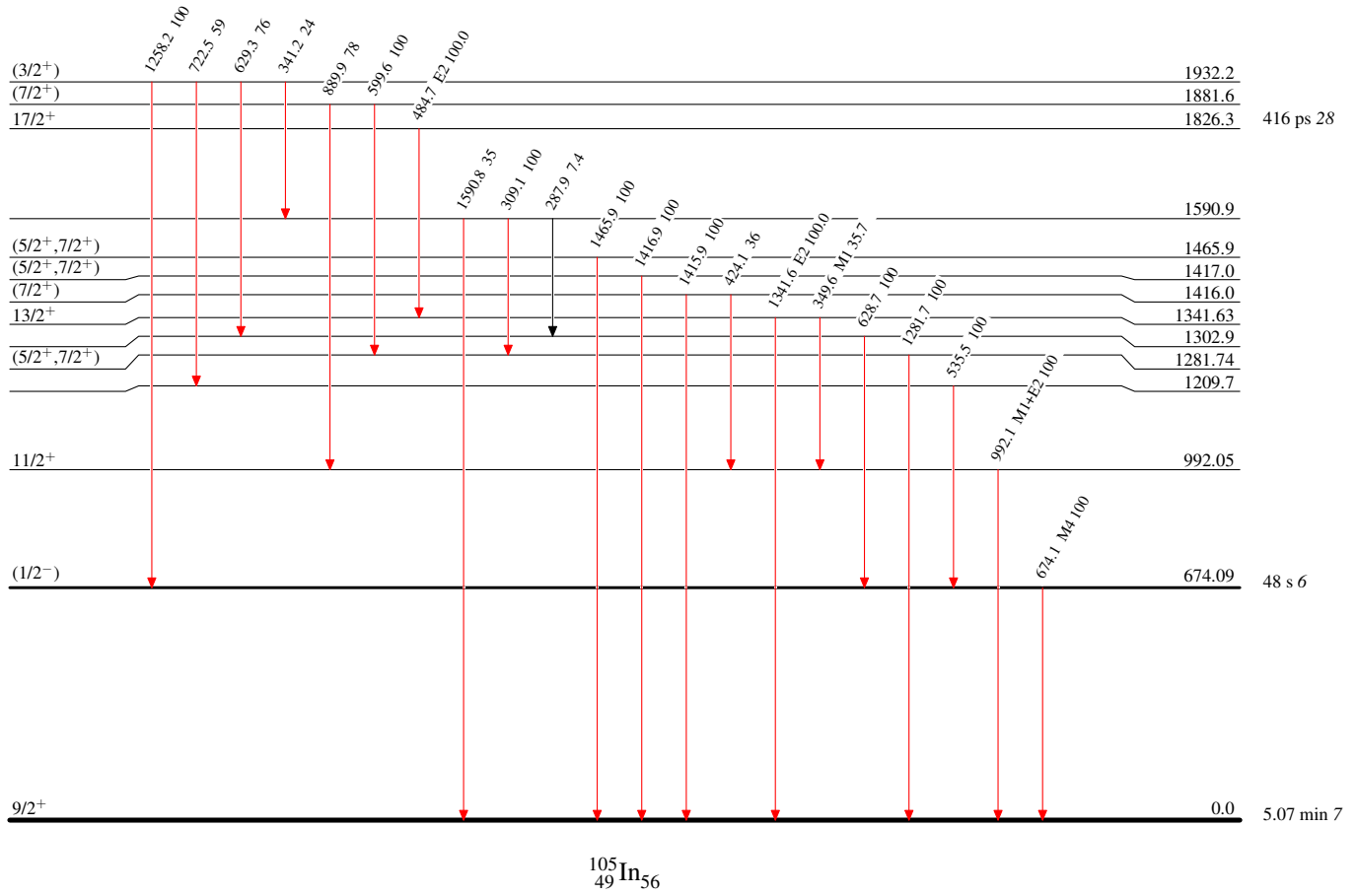
 $^{105}_{49}\text{In}_{56}$

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Type not specified
 @ Multiply placed: intensity suitably divided

Legend

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



Adopted Levels, Gammas