

$^{113}\text{In}(n,\gamma)$ E=th **2002SaZO**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 515 (2012)	1-Jan-2012

2002SaZO: E=th. Measured E_γ , I_γ . ce using bent-crystal spectrometer for γ rays and a magnetic spectrometer for conversion electrons in the 30-1300 keV range.

The level scheme was constructed on the basis of the Ritz combination principle and on the $\gamma\gamma$ coin data from [1975Ra07](#) and [1975Hu09](#). The transitions with energy uncertainties larger than 0.05 keV were not included in the level scheme, unless placement supported by $\gamma\gamma$ coincidences.

1975Ra07: Measured E_γ , I_γ , γ - γ coin; Enriched target, Ge(Li) detectors.

The data of **2002SaZO** supersede **1975Ra07**. The high energy resolution of the bent-crystal spectrometer has allowed to solve discrepancies quoted in the last evaluation.

 ^{114}In Levels

E(level) [†]	J ^π	Comments
0	1 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2}$.
190.2682 8	5 ⁺	Configuration= $\pi g_{9/2} \otimes v s_{1/2}$.
221.067 3	4 ⁺	Configuration= $\pi g_{9/2} \otimes v s_{1/2} + \pi g_{9/2} \otimes v d_{3/2}$.
287.739 3	2 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2}$.
497.161 3	5 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{3/2}$.
501.938 3	8 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
536.286 3	7 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
574.408 3	6 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
600.355 9	3 ⁻	
628.032 3	3 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2}$.
640.4 [‡] 1	9 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
641.738 3	7 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{5/2}$.
687.518 4	8 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2}$.
692.936 4	2 ⁻	
696.368 3	5 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
725.126 4	3 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{3/2}$.
728.5411 25	4 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{3/2} + \pi g_{9/2} \otimes v s_{1/2}$.
775.334 3	4 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2} + \pi g_{9/2} \otimes v d_{3/2}$.
824.994 4	2 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{5/2}$.
835.651 4	4 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
906.118 6	2 ⁻	
909.505 4	6 ⁺	
970.581 5	4 ⁺ , 5 ⁺ , 6 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{3/2}$.
1003.130 5	5 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{3/2}$.
1006.405 10	4 ⁻	
1018.670 4	4 ⁻ , 5 ⁻	
1019.742 4	7 ⁺	Configuration= $\pi g_{9/2} \otimes v g_{7/2} + \pi g_{9/2} \otimes v d_{5/2}$.
1032.039 4	3 ⁻	Configuration= $\pi g_{9/2} \otimes v h_{11/2}$.
1037.178 5	3 ⁺ , 4 ⁺ , 5 ⁺	
1044.894 5	6 ⁺	Configuration= $\pi g_{9/2} \otimes v d_{5/2}$.
1047.208 4	3 ⁺	
1059.49 5	1 ⁺ , 2 ⁺	
1062.534 3	3 ⁺	
1074.04 3	1 ⁺ , 2 ⁺	
1111.795 7	3	
1155.353 4	3 ⁺ , 4 ⁺	
1164.278 10	6 ⁺ , 7 ⁺ , 8 ⁺	
1168.822 7	2 ⁺ , 3 ⁺ , 4 ⁺	
1178.67 5	1 ⁻ , 2 ⁻ , 3 ⁻	
1198.937 4	4 ⁻	

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$^{113}\text{In}(n,\gamma)$ E=th **2002SaZO** (continued) ^{114}In Levels (continued)

E(level) [†]	J ^π	Comments
1201.506 8	3 ⁻	
1205.338 6	3 ⁺	
1216.8 [‡] 2	10 ⁻	Configuration= $\pi g_{9/2} \otimes \nu h_{11/2}$.
1270.986 8	3 ⁻	
1272.268 5	4 ⁺	
1303.547 5	3 ⁻	
1311.762 4	3 ⁺ , 4 ⁺ , 5 ⁺	
1319.569 9	2 ⁺ , 3 ⁺ , 4 ⁺	
1322.451 10	5 ⁺ , 6 ⁺ , 7 ⁺	
1328.950 6	6 ⁺	
1349.004 4	3 ⁻ , 4 ⁻ , 5 ⁻	
1394.234 7	5 ⁺ , 6 ⁺	
1406.487 9	2 ⁻ , 3 ⁻ , 4 ⁻	
1424.447 7	4 ⁺	
1431.608 9	4 ⁻	
1484.771 13	3 ⁺ , 4 ⁺ , 5 ⁺	
1575.532 7	3 ⁺ , 4 ⁺	
1615.914 19	3 ⁺ , 4 ⁺ , 5 ⁺	
1677.642 21	3, 4	

[†] From least-squares fit to E_γ's, multiply placed γ's were not included in this procedure.

[‡] From **1976Ei04**: Level not populated in (n,γ).

 $\gamma(^{114}\text{In})$

E _γ	I _γ ^{†&}	E _i (level)	J _i ^π	E _f	J _f ^π	Mult. [‡]	α ^a	Comments
^x 14.34 5	3.3 4							
30.807 4	19.3 10	221.067	4 ⁺	190.2682	5 ⁺	M1	15.3	E _γ , I _γ : from ce data; I _γ for M1. α(L1)exp/α(L2)exp=11.0 17, α(L1)exp/α(L3)exp>20, α(L2)exp/α(M1)exp=0.58 10, α(M1)exp/α(M3)exp>5.
34.350 2	20 3	536.286	7 ⁻	501.938	8 ⁻	M1	11.18	E _γ , I _γ : from ce data; I _γ for M1. α(L1)exp/α(L2)exp=10.0 19, α(L1)exp/α(L3)exp>23, α(L2)exp/α(M1)exp=0.33 6, α(M1)exp/α(M2)exp>9.
38.122 2	30.5 20	574.408	6 ⁻	536.286	7 ⁻	M1		E _γ , I _γ : from ce data; I _γ for M1. α(L1)exp/α(L2)exp=11.8 23, α(L1)exp/α(L3)exp>37, α(L2)exp/α(M1)exp=0.55 11.
45.78 3	0.6 3	687.518	8 ⁺	641.738	7 ⁺	M1	4.84	α(K)exp<7 E _γ , I _γ : from 1975Ra07 .
^x 48.202 6	1.6 4					M1		α(K)exp=5.0 18 E _γ , I _γ : from ce data, I _γ for mult=M1.
65.285 5	1.4 4	1394.234	5 ⁺ , 6 ⁺	1328.950	6 ⁺	M1	1.72	α(K)exp=1.53 4
67.26 8	1.0 5	641.738	7 ⁺	574.408	6 ⁻	E1 [@]	0.53	E _γ , I _γ : from 1975Ra07 .
^x 86.769 4	0.36 8							
92.828 3	4.8 10	1155.353	3 ⁺ , 4 ⁺	1062.534	3 ⁺	M1		α(K)exp=0.67 14; α(L1)exp=0.074 25; α(L2)exp<0.03
93.626 3	0.91 19	1003.130	5 ⁺	909.505	6 ⁺	M1		α(K)exp=0.84 25
^x 98.474 3	0.59 13					M1		α(K)exp=0.42 13

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¹¹³ In(n,γ) E=th 2002SaZO (continued)								
<u>γ(¹¹⁴In) (continued)</u>								
E _γ	I _γ ^{†&}	E _i (level)	J _i ^π	E _f	J _f ^π	Mult. [‡]	α ^a	Comments
^x 101.894 4	0.35 9							
105.458 3	3.9 8	641.738	7 ⁺	536.286	7 ⁻	E1	0.149	α(K)exp=0.12 4
^x 110.735 6	0.43 11							
121.962 2	150 30	696.368	5 ⁻	574.408	6 ⁻	M1		α(K)exp=0.21 5; α(L1)exp=0.027 6; α(L2)exp=0.0019 4; α(L3)exp<0.002; α(M)exp=0.0040 10
139.278 2	72 14	835.651	4 ⁻	696.368	5 ⁻	M1		α(K)exp=0.15 3; α(L1)exp=0.019 4; α(L2)exp<0.002; α(M1)exp=0.0040 10
139.795 3	0.48 12	641.738	7 ⁺	501.938	8 ⁻	E1 [@]		
^x 142.180 3	0.49 12							
147.3025 15	32 6	775.334	4 ⁺	628.032	3 ⁺	M1		α(K)exp=0.127 24; α(L1)exp=0.019 4; α(L2)exp<0.006; α(M)exp=0.0040 10
150.0667 16	5.6 12	1349.004	3 ⁻ ,4 ⁻ ,5 ⁻	1198.937	4 ⁻	M1		α(K)exp=0.15 3
151.085 3	1.02 22	1575.532	3 ⁺ ,4 ⁺	1424.447	4 ⁺	M1,E2	0.26	α(K)exp=0.19 6
153.463 8	0.59 15	1424.447	4 ⁺	1270.986	3 ⁻			
156.4085 9	7.6 6	1311.762	3 ⁺ ,4 ⁺ ,5 ⁺	1155.353	3 ⁺ ,4 ⁺	M1		α(K)exp=0.097 10
^x 158.0862 18	2.0 4					M1		α(K)exp=0.12 3
158.167 24	0.18 9	1322.451	5 ⁺ ,6 ⁺ ,7 ⁺	1164.278	6 ⁺ ,7 ⁺ ,8 ⁺			
166.890 14	0.35 11	1198.937	4 ⁻	1032.039	3 ⁻			
^x 170.5000 23	0.81 14							
^x 176.646 4	0.56 8							
185.5784 18	2.08 18	687.518	8 ⁺	501.938	8 ⁻	E1 [@]		
^x 187.40 18	4.9 8							
190.2684 8	8.7 6	190.2682	5 ⁺	0	1 ⁺	E4	5.04	α(K)exp=2.7 3; α(L1)exp=0.28 10; α(L2)exp=1.3 3; α(L3)exp=0.98 23; α(M)exp=0.66 6
192.525 13	0.38 8	1198.937	4 ⁻	1006.405	4 ⁻			α(N)exp=0.11 1
^x 192.929 3	0.64 11							
196.3870 7	14.5 10	1032.039	3 ⁻	835.651	4 ⁻	M1		α(K)exp=0.061 5; α(L1)exp=0.0076 12
199.207 6	0.20 6	696.368	5 ⁻	497.161	5 ⁺	E1 [@]		
^x 201.567 3	0.78 18							
^x 202.773 6	0.88 22							
205.675 4	0.94 13	1111.795	3	906.118	2 ⁻			
213.184 15	0.75 19	906.118	2 ⁻	692.936	2 ⁻			
222.2143 16	3.04 24	1047.208	3 ⁺	824.994	2 ⁺	M1		α(K)exp=0.049 10
231.372 5	1.91 21	728.5411	4 ⁺	497.161	5 ⁺	M1		α(K)exp=0.042 12
237.546 6	0.74 11	1062.534	3 ⁺	824.994	2 ⁺			
243.330 3	1.86 20	1018.670	4 ⁻ ,5 ⁻	775.334	4 ⁺			
^x 244.192 4	0.92 12							
257.018 24	0.85 24	1319.569	2 ⁺ ,3 ⁺ ,4 ⁺	1062.534	3 ⁺			
261.844 3	8.15 17	1037.178	3 ⁺ ,4 ⁺ ,5 ⁺	775.334	4 ⁺	M1		α(K)exp=0.032 3
^x 267.209 5	1.24 13							
^x 268.615 7	1.05 11							
269.129 16	0.65 10	1272.268	4 ⁺	1003.130	5 ⁺			
^x 273.404 15	3.4 5					M1,E2		α(K)exp=0.033 10
276.092 5	41.3 25	497.161	5 ⁺	221.067	4 ⁺	M1		α(K)exp=0.0278 24; α(L1)exp=0.0027 6
								Additional information 1.

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$^{113}\text{In}(n,\gamma) \text{E=th}$ 2002SaZO (continued) $\gamma(^{114}\text{In})$ (continued)

E_γ	$I_\gamma^{\dagger\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	α^a	Comments
277.82 3	0.9 3	1006.405	4 ⁻	728.5411	4 ⁺			
278.175 8	1.18 13	775.334	4 ⁺	497.161	5 ⁺	M1 @		
287.734 5	198 12	287.739	2 ⁺	0	1 ⁺	M1		$\alpha(\text{K})\text{exp}=0.0218$ 15; $\alpha(\text{L1})\text{exp}=0.00051$ 11
290.136 8	0.88 22	1018.670	4 ⁻ ,5 ⁻	728.5411	4 ⁺			
^x 296.407 12	1.34 17							
306.879 6	68 4	497.161	5 ⁺	190.2682	5 ⁺	M1		$\alpha(\text{K})\text{exp}=0.0196$ 22; $\alpha(\text{L1})\text{exp}=0.0024$ 5
311.665 6	240 1	501.938	8 ⁻	190.2682	5 ⁺	E3	0.112	$\alpha(\text{K})\text{exp}=0.076$ 3; $\alpha(\text{L1})\text{exp}=0.0090$ 3; $\alpha(\text{L2})\text{exp}=0.0055$ 3; $\alpha(\text{L3})\text{exp}=0.0043$ 4 $\alpha(\text{M})\text{exp}=0.0050$ 9; $\alpha(\text{N})\text{exp}=0.00096$ 13 $\alpha(\text{K})\text{exp}=0.0065$ 8
312.617 9	13.7 11	600.355	3 ⁻	287.739	2 ⁺	E1		
^x 313.516 9	0.65 9							
^x 314.2039 22	5.2 5					M1,E2		$\alpha(\text{K})\text{exp}=0.020$ 5
^x 317.671 3	1.8 3							
^x 320.660 3	3.00 21							
^x 321.363 5	1.37 13							
322.306 4	13.3 13	1018.670	4 ⁻ ,5 ⁻	696.368	5 ⁻	M1,E2		$\alpha(\text{K})\text{exp}=0.018$ 3
325.824 7	0.96 13	1328.950	6 ⁺	1003.130	5 ⁺			
333.9934 24	2.32 23	1062.534	3 ⁺	728.5411	4 ⁺	M1,E2		$\alpha(\text{K})\text{exp}=0.023$ 6
336.494 20	3.3 3	1111.795	3	775.334	4 ⁺			
339.08 3	1.5 3	1032.039	3 ⁻	692.936	2 ⁻	M1 @		
340.290 3	105 10	628.032	3 ⁺	287.739	2 ⁺	M1		$\alpha(\text{K})\text{exp}=0.0151$ 15; $\alpha(\text{L1})\text{exp}=0.0020$ 4
^x 344.158 8	1.90 22					M1,E2#		
351.870 9	2.26 18	1322.451	5 ⁺ ,6 ⁺ ,7 ⁺	970.581	4 ⁺ ,5 ⁺ ,6 ⁺			
^x 354.340 8	0.96 13							
357.372 4	3.7 4	1044.894	6 ⁺	687.518	8 ⁺			
^x 360.086 6	1.24 14							
363.2808 25	3.8 4	1198.937	4 ⁻	835.651	4 ⁻	M1,E2		$\alpha(\text{K})\text{exp}=0.022$ 6
365.854 7	4.6 6	1201.506	3 ⁻	835.651	4 ⁻	M1#		
370.189 8	0.96 24	1575.532	3 ⁺ ,4 ⁺	1205.338	3 ⁺			
374.447 8	2.17 18	1406.487	2 ⁻ ,3 ⁻ ,4 ⁻	1032.039	3 ⁻	M1,E2#		
375.555 11	1.40 18	1394.234	5 ⁺ ,6 ⁺	1018.670	4 ⁻ ,5 ⁻			
378.0039 20	11.5 9	1019.742	7 ⁺	641.738	7 ⁺	M1,E2		$\alpha(\text{K})\text{exp}=0.0088$ 13
^x 378.578 8	1.02 16							
380.031 16	0.67 12	1155.353	3 ⁺ ,4 ⁺	775.334	4 ⁺			
384.08 4	4.8 15	574.408	6 ⁻	190.2682	5 ⁺	E1		$\alpha(\text{K})\text{exp}<0.008$
^x 390.89 4	1.2 4							
391.05 5	1.3 4	1394.234	5 ⁺ ,6 ⁺	1003.130	5 ⁺			
^x 391.650 4	2.4 3					M1,E2		$\alpha(\text{K})\text{exp}=0.021$ 6
^x 395.567 22	0.51 10							
397.427 9	1.55 18	1303.547	3 ⁻	906.118	2 ⁻			
399.569 8	1.64 18	1431.608	4 ⁻	1032.039	3 ⁻	M1,E2#		
^x 400.496 16	1.40 21							
^x 400.757 14	1.65 21							
^x 402.92 2	0.63 13							
403.181 10	1.27 24	1044.894	6 ⁺	641.738	7 ⁺			
405.20 5	0.86 14	692.936	2 ⁻	287.739	2 ⁺	E1 @		
406.050 11	1.56 18	1006.405	4 ⁻	600.355	3 ⁻	M1,E2#		
^x 409.354 23	1.33 15							

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$^{113}\text{In}(n,\gamma) \text{ E=th}$ **2002SaZO (continued)** $\gamma(^{114}\text{In})$ (continued)

E_γ	$I_\gamma^{+ \&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
412.3420 24	10.7 8	909.505	6 ⁺	497.161	5 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0071$ 19
^x 413.200 7	1.64 14						
423.59 ^b 3	0.54 ^b 14	1198.937	4 ⁻	775.334	4 ⁺		
423.59 ^b 3	0.54 ^b 14	1394.234	5 ⁺ ,6 ⁺	970.581	4 ⁺ ,5 ⁺ ,6 ⁺		I_γ : total $I_\gamma=1.08$. Additional information 2.
^x 426.904 10	1.53 22						
^x 429.68 3	1.33 17						
435.332 9	6.8 5	1270.986	3 ⁻	835.651	4 ⁻	M1,E2	$\alpha(\text{K})\text{exp}=0.00963$ 20
436.577 17	3.3 3	1272.268	4 ⁺	835.651	4 ⁻		
437.384 4	8.2 7	725.126	3 ⁺	287.739	2 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0095$ 20
^x 441.48 5	0.66 14						
^x 444.463 22	1.20 14						
^x 444.720 17	0.79 12						
451.471 3	21.0 15	641.738	7 ⁺	190.2682	5 ⁺	E2	$\alpha(\text{K})\text{exp}=0.0080$ 9; $\alpha(\text{L})\text{exp}=0.0014$ 5 Mult.: M1 is possible from ce data but excluded from $\Delta J^\pi=2$.
^x 457.431 13	1.09 14						
^x 461.345 12	0.76 10						
467.894 4	4.0 7	1303.547	3 ⁻	835.651	4 ⁻	M1,E2	$\alpha(\text{K})\text{exp}=0.008$ 3
^x 469.849 9	1.26 25						
473.420 3	16 4	970.581	4 ⁺ ,5 ⁺ ,6 ⁺	497.161	5 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0070$ 20
^x 473.829 4	4.6 9					M1,E2	$\alpha(\text{K})\text{exp}=0.009$ 3
475.23 3	0.64 20	696.368	5 ⁻	221.067	4 ⁺	E1 [@]	
476.794 5	2.99 22	1205.338	3 ⁺	728.5411	4 ⁺		
487.558 18	2.8 4	775.334	4 ⁺	287.739	2 ⁺	E2 [@]	
496.99 4	0.64 13	1272.268	4 ⁺	775.334	4 ⁺		
502.5671 24	15 3	1198.937	4 ⁻	696.368	5 ⁻	M1,E2	$\alpha(\text{K})\text{exp}=0.0069$ 20
504.060 4	31 4	725.126	3 ⁺	221.067	4 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0055$ 9
505.995 ^b 5	6.3 ^b 14	696.368	5 ⁻	190.2682	5 ⁺	E1 [@]	E_γ : poor fit; level-energy difference=506.099 3.
505.995 ^b 5	6.3 ^b 14	1003.130	5 ⁺	497.161	5 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.009$ 3 I_γ : total $I_\gamma=12.6$.
507.482 4	12.8 22	728.5411	4 ⁺	221.067	4 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0074$ 15
508.617 ^b 11	4.3 ^b 5	1044.894	6 ⁺	536.286	7 ⁻		
508.617 ^b 11	4.3 ^b 5	1201.506	3 ⁻	692.936	2 ⁻		E_γ : level-energy difference=508.569 4. I_γ : total $I_\gamma=8.6$.
522.538 10	1.55 20	1164.278	6 ⁺ ,7 ⁺ ,8 ⁺	641.738	7 ⁺	M1,E2 [#]	
527.325 6	5.2 7	1155.353	3 ⁺ ,4 ⁺	628.032	3 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0083$ 19
528.24 4	0.63 13	1303.547	3 ⁻	775.334	4 ⁺		
536.473 21	1.18 13	1311.762	3 ⁺ ,4 ⁺ ,5 ⁺	775.334	4 ⁺		
537.253 4	5.8 8	824.994	2 ⁺	287.739	2 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0076$ 20
538.277 4	28 5	728.5411	4 ⁺	190.2682	5 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0060$ 13
540.789 6	1.5 4	1168.822	2 ⁺ ,3 ⁺ ,4 ⁺	628.032	3 ⁺	M1,E2 [#]	
543.730 5	2.8 6	1272.268	4 ⁺	728.5411	4 ⁺		
547.140 5	7.1 13	1272.268	4 ⁺	725.126	3 ⁺	M1,E2	$\alpha(\text{K})\text{exp}=0.0065$ 20
^x 565.501 15	0.76 13						
570.902 6	8.0 11	1198.937	4 ⁻	628.032	3 ⁺	E1	$\alpha(\text{K})\text{exp}<0.0025$
573.675 12	1.67 21	1349.004	3 ⁻ ,4 ⁻ ,5 ⁻	775.334	4 ⁺		
578.09 3	1.5 3	1270.986	3 ⁻	692.936	2 ⁻		
^x 584.39 5	0.52 12						
585.12 5	0.69 15	775.334	4 ⁺	190.2682	5 ⁺		
^x 588.979 12	1.39 18						
^x 590.74 3	1.25 17						
^x 602.082 18	4.4 8						

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$^{113}\text{In}(n,\gamma) \text{ E=th } 2002\text{SaZO (continued)}$							
$\gamma(^{114}\text{In}) \text{ (continued)}$							
E_γ	$I_\gamma^{\dagger\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ‡	Comments
$^x616.747 \ 24$	1.64 23					M1,E2 $^\#$	
618.380 10	2.9 5	906.118	2 $^-$	287.739	2 $^+$		
$^x625.96 \ 4$	1.21 19						
$^x628.96 \ 3$	1.4 3						
$^x629.06 \ 3$	1.46 20						
632.587 16	3.7 5	1328.950	6 $^+$	696.368	5 $^-$		
$^x635.37 \ 11$	1.7 3						
$^x639.794 \ 25$	0.92 18						
644.25 4	1.06 23	1272.268	4 $^+$	628.032	3 $^+$	M1,E2 $^\#$	
$^x645.52 \ 3$	1.29 25					M1,E2 $^\#$	
649.118 12	2.9 5	1484.771	3 $^+,4^+,5^+$	835.651	4 $^-$		
$^x652.152 \ 15$	2.9 4						
$^x652.47 \ 4$	1.8 4						
$^x665.74 \ 2$	1.9 4						
$^x670.50 \ 2$	1.38 18						
$^x675.577 \ 12$	1.97 23						
$^x677.23 \ 6$	0.97 13						
$^x679.423 \ 14$	3.3 5						
691.538 9	6.2 7	1319.569	2 $^+,3^+,4^+$	628.032	3 $^+$	M1,E2	$\alpha(\text{K})_{\text{exp}}=0.0037 \ 10$
692.934 4	32 4	692.936	2 $^-$	0	1 $^+$	E1	$\alpha(\text{K})_{\text{exp}}<0.0013$
$^x694.06 \ 3$	1.79 25						
$^x710.81 \ 4$	7.7 9						
$^x712.60 \ 4$	5.9 7						
719.29 14	8.7 10	909.505	6 $^+$	190.2682	5 $^+$		E_γ : level-energy difference=719.234 4.
728.078 14	4.0 5	1424.447	4 $^+$	696.368	5 $^-$		
$^x732.69 \ 5$	0.90 16						
$^x737.77 \ 5$	1.32 23						
$^x752.78 \ 5$	0.41 9						
$^x754.41 \ 5$	0.67 11						
754.41 5	0.67 11	1328.950	6 $^+$	574.408	6 $^-$		
$^x760.03 \ 10$	0.84 17						
$^x761.08 \ 9$	0.91 17						
771.70 5	3.3 6	1059.49	1 $^+,2^+$	287.739	2 $^+$		
774.796 4	17.4 20	1062.534	3 $^+$	287.739	2 $^+$	M1,E2 $^\#$	
$^x777.89 \ 4$	1.44 21						
780.260 18	3.1 4	1615.914	3 $^+,4^+,5^+$	835.651	4 $^-$		
$^x782.54 \ 4$	1.78 24						
786.29 3	1.8 3	1074.04	1 $^+,2^+$	287.739	2 $^+$		
$^x787.95 \ 7$	1.05 19						
792.668 12	4.6 6	1328.950	6 $^+$	536.286	7 $^-$		
$^x794.76 \ 5$	1.06 18						
$^x797.638 \ 11$	5.4 6						
812.825 16	3.6 5	1003.130	5 $^+$	190.2682	5 $^+$	M1,E2 $^\#$	
816.136 b 10	4.4 b 7	1006.405	4 $^-$	190.2682	5 $^+$		
816.136 b 10	4.4 b 7	1037.178	3 $^+,4^+,5^+$	221.067	4 $^+$		I_γ : total $I_\gamma=8.8$. $\alpha(\text{K})_{\text{exp}}=0.0025 \ 7$
825.000 6	11.5 14	824.994	2 $^+$	0	1 $^+$	M1,E2	
826.142 19	5.3 7	1047.208	3 $^+$	221.067	4 $^+$		
$^x827.04 \ 8$	1.6 4						
$^x830.86 \ 4$	2.9 5						
$^x832.09 \ 6$	1.8 3						
$^x839.46 \ 9$	2.0 5						
841.460 16	7.8 13	1062.534	3 $^+$	221.067	4 $^+$		
841.973 23	3.7 6	1677.642	3,4	835.651	4 $^-$		
$^x850.27 \ 10$	1.3 3						
$^x857.009 \ 24$	3.7 7						

Continued on next page (footnotes at end of table)

$^{113}\text{In}(\text{n},\gamma) \text{E=th}$ **2002SaZO (continued)** $\gamma(^{114}\text{In})$ (continued)

E_γ	$I_\gamma^{\dagger\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]
^x 865.24 5	1.65 23					
^x 872.20 7	1.16 21					
^x 873.776 10	6.2 7					M1,E2 [#]
^x 890.93 5	2.0 3	1178.67	1 ⁻ ,2 ⁻ ,3 ⁻	287.739	2 ⁺	E1 [#]
^x 896.81 11	1.24 23					
^x 906.102 10	8.5 11	906.118	2 ⁻	0	1 ⁺	E1 [#]
^x 917.66 5	11.2 17	1205.338	3 ⁺	287.739	2 ⁺	
^x 934.44 3	2.76 25	1431.608	4 ⁻	497.161	5 ⁺	
^x 940.432 20	6.8 21					M1 [#]
^x 944.68 8	5.4 8					
^x 947.72 10	1.9 3					
^x 952.55 4	4.0 7	1677.642	3,4	725.126	3 ⁺	
^x 983.17 10	17 3					
^x 986.12 15	2.7 5					
^x 987.3 2	2.3 5					
^x 992.42 7	2.6 7					
^x 994.88 8	3.9 8					
^x 1013.43 6	11.0 15					
^x 1017.63 20	3.2 7					
^x 1026.00 12	5.3 7					
^x 1031.03 21	1.6 3					
^x 1033.97 15	3.4 5					
^x 1047.88 10	3.5 5					
^x 1059.64 9	5.6 7	1059.49	1 ⁺ ,2 ⁺	0	1 ⁺	
^x 1070.82 15	2.4 4					
^x 1074.12 10	2.9 5	1074.04	1 ⁺ ,2 ⁺	0	1 ⁺	
^x 1083.25 20	2.0 4					
^x 1103.05 4	7.5 13					
^x 1119.79 6	5.4 10					
^x 1125.30 7	2.9 4					
^x 1151.83 7	7.1 11					
^x 1226.09 24	8.1 17					
^x 1240.20 15	3.7 6					
^x 1254.58 24	6.3 14					
^x 1268.43 14	11.7 14					
^x 1333.33 24	5.5 9					

[†] For doublets, equal intensities are assigned to the two components (by 2002SaZO or by the Evaluator).

[‡] From $\alpha(\text{K})\text{exp}$ in 2002SaZO.

[#] From 1986Ti01.

[@] Deduced from comparison of experimental $T_{1/2}$ (1975Ra07,1975Hu09) and calculated $T_{1/2}(\text{W.u.})$; L-transfers used to determine change in parity.

[&] For intensity per 100 neutron captures, multiply by 0.1.

^a Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

^b Multiply placed with intensity suitably divided.

^x γ ray not placed in level scheme.

$^{113}\text{In}(n,\gamma) \text{E=th}$ 2002SaZO

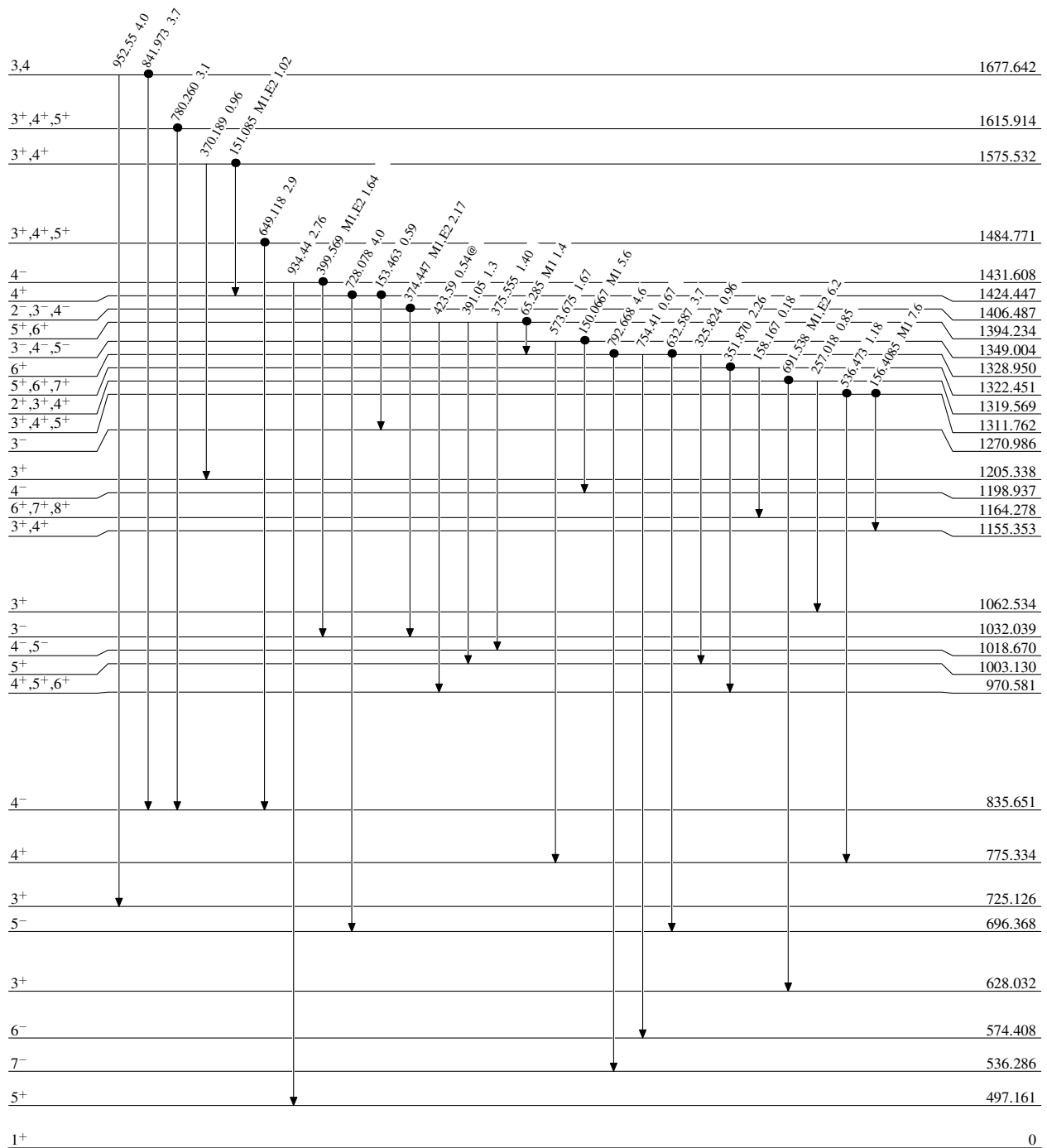
Level Scheme

Intensities: Relative I_γ

@ Multiply placed: intensity suitably divided

Legend

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



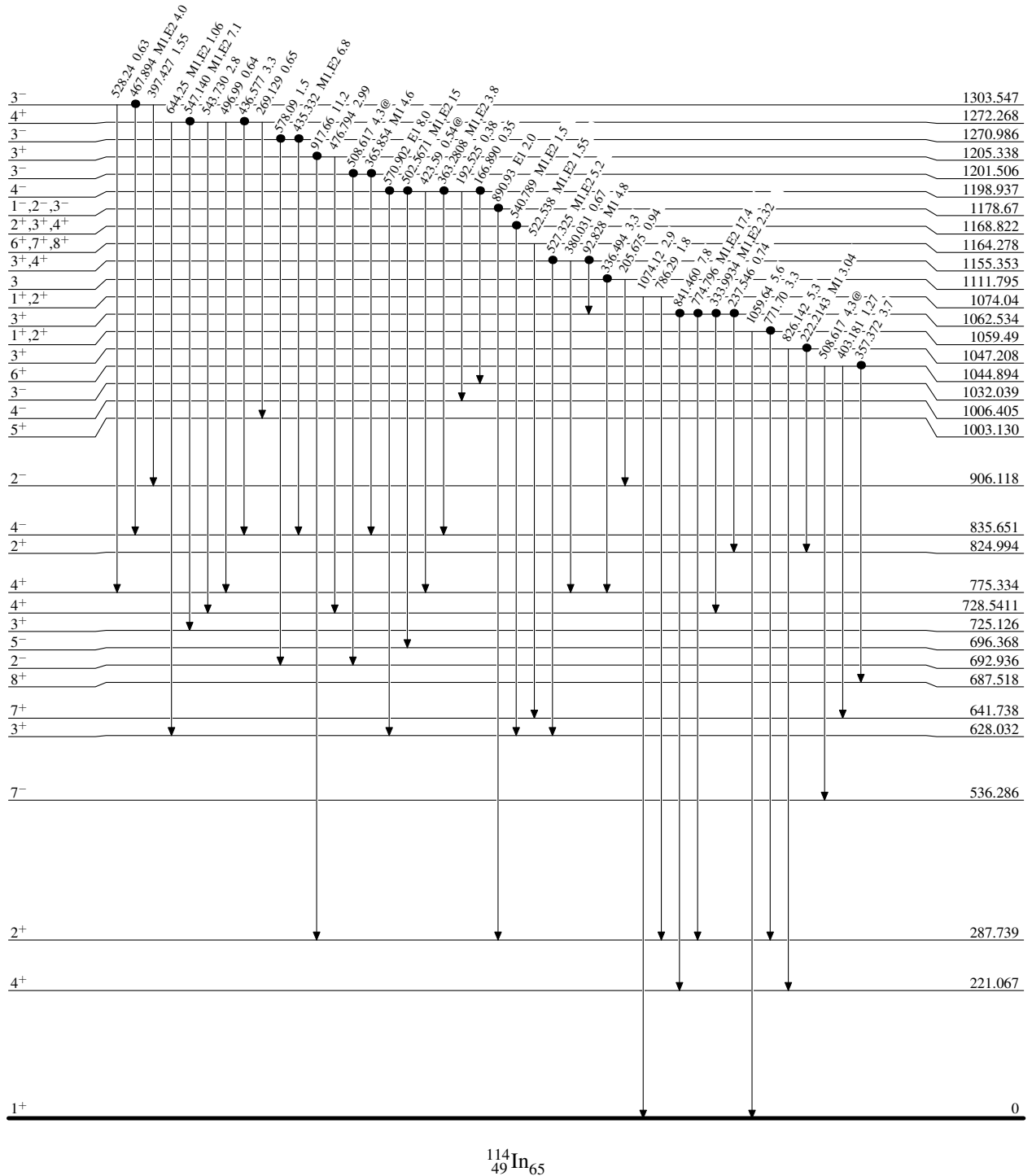
$^{113}\text{In}(n,\gamma) \text{E=th}$ 2002SaZO

Level Scheme (continued)

Intensities: Relative I_γ
 @ Multiply placed: intensity suitably divided

Legend

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



$^{113}\text{In}(n,\gamma) \text{E=th}$ 2002SaZO

Level Scheme (continued)

Intensities: Relative I_γ

@ Multiply placed: intensity suitably divided

Legend

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

