^{115}In(γ,γ')　**1995Vo02**

	History		
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 2391 (2012)	1-Sep-2012

Resonance fluorescence.

(γ,γ'): bremsstrahlung excitation (1995Vo02), with S-DALINAC facility. End point energies 3.1, 4.6 and 5.2 MeV.

(γ,γ'): bremsstrahlung excitation (1981Ca10).

(γ,γ'): E=0.9-3.0 MeV (1969Al19),<2 MeV (1971Bo46), 1.1-1.65 MeV (1973Bo17). Other photon and electron excitation exp: 1965Ch11, 1967Bo10, 1968Ch27, 1968Bo17, 1969Bo29, 1970Bo37, 1975Bo40, 1977Ca14.

^{115}In Levels

Measured partial Γ for γ-decay of excited states to g.s.; level widths deduced.

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$	g$\Gamma_{\gamma0}^2/\Gamma$ (MeV)[#]	Comments
0.0	9/2$^+$	4.41×10^{14} y *25*		T$_{1/2}$: from Adopted Levels.
1078.1 *3*	5/2$^+$	1.12 ps *17*	0.42 *15*	T$_{1/2}$: from 1981Ca10. Others: 1.1 ps *2* (1977Ca14), 0.47 ps (1971Bo46), 0.64 ps *13* (1969Al19).
1132.6 *2*	11/2$^+$	0.065 ps *3*	9.4 *7*	T$_{1/2}$: 0.065 ps *3* (1975Bo40). Others: 0.064 ps *4* (1977Ca14), 0.072 ps *7* (1973Bo17), 0.075 ps *10* (1969Al19).
1290.8 *2*	13/2$^+$	0.46 ps *4*	1.2 *3*	T$_{1/2}$: from 1981Ca10. Others: 0.46 ps *4* (1977Ca14), 0.48 ps *22* (1973Bo17),≈0.45 ps (1969Al19).
1448.9 *3*	9/2$^+$	0.35 ps *4*	1.7 *4*	T$_{1/2}$: from 1981Ca10. Others: 0.50 ps *21* (1973Bo17);≈0.35 ps (1969Al19).
1463.0 *2*	7/2$^+$	0.064 ps *7*	4.0 *6*	T$_{1/2}$: average of 0.066 *8* (1981Ca10), 0.059 ps *15* (1973Bo17) res fluorescence.
1486.7 *2*	9/2$^+$	0.44 ps *6*	0.80 *21*	T$_{1/2}$: from 1981Ca10. Other: 0.52 ps *22* (1973Bo17).
1497.0 *3*	(7/2$^+$)	0.17 ps *2*	0.49 *18*	T$_{1/2}$: from 1981Ca10. 1981Ca10 report g$\Gamma_{\gamma0}^2/\Gamma$=1.33 MeV *16*. For J=7/2 and adopted g.s. branching=0.781. T$_{1/2}$=0.17 ps *2*.
1608.0 *3*	(7/2$^+$)	0.11 ps *2*	1.0 *3*	T$_{1/2}$: from 1981Ca10. 1981Ca10 report g$\Gamma_{\gamma0}^2/\Gamma$=1.54 MeV *24*. For J=7/2 and adopted g.s. branching=0.690. T$_{1/2}$=0.11 ps *2*.
2071.0 *4*	7/2,9/2$^-$		1.4 *4*	J$^{\pi}$: negative parity of the level from L=3.
2107.8 *2*	7/2$^-$,9/2$^-$,11/2$^-$		5.1 *6*	J$^{\pi}$: negative parity of the level from L=3.
2283.0 *2*	(7/2$^+$,9/2$^+$)		12.4 *13*	
2384.6 *3*	7/2$^-$,9/2$^-$,11/2$^-$		4.1 *7*	J$^{\pi}$: negative parity of the level from L=3.
2443.1 *2*	7/2$^-$,9/2$^-$,11/2$^-$		14.8 *16*	J$^{\pi}$: negative parity of the level from L=3.
2479.7 *3*	7/2$^-$,9/2$^-$,11/2$^-$		5.2 *8*	J$^{\pi}$: negative parity of the level from L=3.
2540.7 *2*	7/2$^-$,9/2$^-$,11/2$^-$		10.9 *14*	J$^{\pi}$: negative parity of the level from L=3.
2580.0 *3*			5.0 *9*	
2739.9 *2*			15.8 *24*	
2746.7 *4*			4.9 *12*	

Continued on next page (footnotes at end of table)

$^{115}\text{In}(\gamma,\gamma')$ **1995Vo02** (continued)

^{115}In Levels (continued)

E(level)[†]	$g\Gamma^2_{\gamma 0}/\Gamma$ (MeV)[#]	E(level)[†]	$g\Gamma^2_{\gamma 0}/\Gamma$ (MeV)[#]
2827.5 3	5.1 13	3231.5 3	32 3
2852.2 4	7.1 14	3271.9 3	35 3
2896.7 4	14.5 19	3288.5 4	11.2 18
2994.4 6	6.5 14	3386.5 5	7.0 8
3042.9 5	6.8 18	3395.0 5	8.2 18
3158.2 7	5.2 14	3684.6 9	13 4
3220.7 6	6.2 15	3701.0 5	27 5

[†] From 1995Vo02. For excitations up to 2.7 MeV, see also 1969Al19, 1971Bo46, 1973Bo17.
[‡] From Adopted Levels, see also comments.
[#] From 1995Vo02, unless otherwise noted. Experimental limit≤7 MeV for E(level)=4000, rising to≈45 MeV at 5 MeV.

$\gamma(^{115}\text{In})$

E_γ	I_γ[†]	E_i(level)	J^π_i	E_f	J^π_f	Mult.
1078.1 3	1.4 5	1078.1	$5/2^+$	0.0	$9/2^+$	(E2)
1132.6 2	28.1 21	1132.6	$11/2^+$	0.0	$9/2^+$	
1290.8 2	2.9 6	1290.8	$13/2^+$	0.0	$9/2^+$	
1448.9 3	3.1 5	1448.9	$9/2^+$	0.0	$9/2^+$	
1463.0 2	8.9 11	1463.0	$7/2^+$	0.0	$9/2^+$	
1486.7 2	1.4 4	1486.7	$9/2^+$	0.0	$9/2^+$	
1497.0 3	0.8 3	1497.0	$(7/2^+)$	0.0	$9/2^+$	
1608.0 3	1.5 4	1608.0	$(7/2^+)$	0.0	$9/2^+$	
2071.0 4	1.3 3	2071.0	$7/2,9/2^-$	0.0	$9/2^+$	(E1)
2107.8 2	4.4 5	2107.8	$7/2^-,9/2^-,11/2^-$	0.0	$9/2^+$	(E1)
2283.0 2	9.1 9	2283.0	$(7/2^+,9/2^+)$	0.0	$9/2^+$	
2384.6 3	2.8 5	2384.6	$7/2^-,9/2^-,11/2^-$	0.0	$9/2^+$	(E1)
2443.1 2	9.5 10	2443.1	$7/2^-,9/2^-,11/2^-$	0.0	$9/2^+$	(E1)
2479.7 3	3.3 5	2479.7	$7/2^-,9/2^-,11/2^-$	0.0	$9/2^+$	(E1)
2540.7 2	6.5 8	2540.7	$7/2^-,9/2^-,11/2^-$	0.0	$9/2^+$	(E1)
2580.0 3	2.9 5	2580.0		0.0	$9/2^+$	
2739.9 2	8.1 12	2739.9		0.0	$9/2^+$	
2746.7 4	2.5 6	2746.7		0.0	$9/2^+$	
2827.5 3	2.5 6	2827.5		0.0	$9/2^+$	
2852.2 4	3.4 6	2852.2		0.0	$9/2^+$	
2896.7 4	6.6 9	2896.7		0.0	$9/2^+$	
2994.4 6	2.8 6	2994.4		0.0	$9/2^+$	
3042.9 5	2.8 7	3042.9		0.0	$9/2^+$	
3158.2 7	2.0 5	3158.2		0.0	$9/2^+$	
3220.7 6	2.3 6	3220.7		0.0	$9/2^+$	
3231.5 3	11.9 11	3231.5		0.0	$9/2^+$	
3271.8 3	12.4 11	3271.9		0.0	$9/2^+$	
3288.4 4	4.0 6	3288.5		0.0	$9/2^+$	
3386.4 5	2.3 6	3386.5		0.0	$9/2^+$	
3394.9 5	2.7 6	3395.0		0.0	$9/2^+$	
3684.5 9	3.5 10	3684.6		0.0	$9/2^+$	
3700.9 5	7.7 13	3701.0		0.0	$9/2^+$	

[†] Relative intensity given in eV from 1995Vo02.

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Level Scheme

Intensities: Type not specified

Legend

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

$^{115}_{49}$In$_{66}$