

$^{115}\text{In}(\text{n},\text{n}'\gamma)$ 1972Ma05,1985Sm01

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

Others: 1961Li04, 1968Su09, 1976AvZV, 1978VaZW.

E(n)=0.78-1.80 MeV (1972Ma05) monoenergetic neutrons from $^3\text{H}(\text{p},\text{n})$ reaction E(n)=1.0-2.57 MeV (1978VaZW) E(n)=0.8-4.5 MeV (1985Sm01).

 ^{115}In Levels

ΔE : ± 0.2 -keV uncertainty for E(levels) ≤ 1.5 MeV; not stated for higher E(levels).

E(level)	J^π	Comments
0.0	$9/2^+$	
336.3	$1/2^-$	
597.1	$3/2^-$	
828.6	$3/2^+$	
864.1	$1/2^+$	
933.8	$7/2^+$	
941.3	$5/2^+$	Branching: $I_\gamma(344\gamma)/I_\gamma(941\gamma)=0.176$ (1978VaZW), 0.196 (1976AvZV), 0.184 (1972Ma05).
1041.5	$5/2^-$	E(level): probably corresponds with 1040-keV L=3 (d, ^3He) state (see 1974He11). Branching: $I_\gamma(444\gamma)/I_\gamma(705\gamma)=0.14$ (1978VaZW,1976AvZV).
1077.6	$5/2^+$	
1132.6	$11/2^+$	
1290.3	$13/2^+$	
1347.5	$(5/2^-)^\#$	
1418.2	$(9/2^+)^\#$	
1448.4	$9/2^+$	Branching: $I_\gamma(316\gamma)/I_\gamma(1448\gamma)=0.22$ (1978VaZW), 0.155 (1976AvZV), 0.09 (1972Ma05).
1463.0	$7/2^+$	
1485.3	$9/2^+$	Branching: $I_\gamma(353\gamma)/I_\gamma(1485\gamma)=0.20$ (1978VaZW), 0.15 (1976AvZV), 0.40 (1972Ma05).
1497.2	$(7/2^+)^\#$	
1601.7	$(7/2^+)^\#$	
1607.8	$(7/2^+)^\#$	
1736.9	$(9/2^+)^\#$	Branching: $I_\gamma(319\gamma)/I_\gamma(604\gamma)/I_\gamma(1737\gamma)=62/100/95$ (1978VaZW), $-/100/92$ (1976AvZV).
1801.1	$(5/2^+)^\#$	
1831.0	$(5/2^+)^\#$	
1872.4	$(9/2^-)^\#$	
1917.3		
1971.4	$(9/2^+)^\#$	
1978.3	$(7/2^+, 9/2^+)^\#$	
1999.0	$(7/2^+)^\#$	Branching: $I_\gamma(550\gamma)/I_\gamma(957\gamma)/I_\gamma(1999\gamma)=49/100/64$ (1978VaZW), 54/100/69 (1976AvZV).
2057.3	$(5/2^+)^\#$	
2071.0	$(5/2^+)^\#$	J^π : $J^\pi=7/2^-, 9/2^-$ in Adopted Levels and in (γ, γ') .
2107.7	$(5/2^+)^\#$	
2113.7	$(9/2^+)^\#$	
2170.7	$(5/2^+)^\#$	
2234.0	$(5/2^+)^\#$	
2264.0	$(5/2^+, 7/2^+)^\#$	
2283.0	$(7/2^+, 9/2^+)^\#$	Branching: $I_\gamma(2283\gamma)/I_\gamma(798\gamma)=0.80$ (1976AvZV).
2380.6		
2442.2		

Continued on next page (footnotes at end of table)

$^{115}\text{In}(n,n'\gamma)$ 1972Ma05,1985Sm01 (continued) ^{115}In Levels (continued)

[†] ± 0.2 -keV uncertainty for $E(\text{levels}) \leq 1.5$ MeV; not stated for higher $E(\text{levels})$.

[‡] Based partly on exp level excit curves compared with Hauser-Feshbach predictions.

[#] From 1985Sm01. Based on the same considerations as the other statistical model.

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

E_γ [†]	I_γ [#]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ [†]	I_γ [#]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
231.5	10	828.6	3/2 ⁺	597.1	3/2 ⁻	933.8	100	933.8	7/2 ⁺	0.0	9/2 ⁺
260.8	100	597.1	3/2 ⁻	336.3	1/2 ⁻	938.6	100	1872.4	(9/2 ⁻)	933.8	7/2 ⁺
315.7	15.5	1448.4	9/2 ⁺	1132.6	11/2 ⁺	941.3	100	941.3	5/2 ⁺	0.0	9/2 ⁺
318.8	62	1736.9	(9/2 ⁺)	1418.2	(9/2 ⁺)	957.5	100	1999.0	(7/2 ⁺)	1041.5	5/2 ⁻
336.3	100	336.3	1/2 ⁻	0.0	9/2 ⁺	981.1		2113.7	(9/2 ⁺)	1132.6	11/2 ⁺
344.2	18	941.3	5/2 ⁺	597.1	3/2 ⁻	1077.6	100	1077.6	5/2 ⁺	0.0	9/2 ⁺
352.7	20	1485.3	9/2 ⁺	1132.6	11/2 ⁺	1132.6	100	1132.6	11/2 ⁺	0.0	9/2 ⁺
444.3	14	1041.5	5/2 ⁻	597.1	3/2 ⁻	1290.3	100	1290.3	13/2 ⁺	0.0	9/2 ⁺
455.7	28	1497.2	(7/2 ⁺)	1041.5	5/2 ⁻	1448.4	100	1448.4	9/2 ⁺	0.0	9/2 ⁺
480.5	16	1077.6	5/2 ⁺	597.1	3/2 ⁻	1463.0	100	1463.0	7/2 ⁺	0.0	9/2 ⁺
484.4	100	1418.2	(9/2 ⁺)	933.8	7/2 ⁺	1485.3	100	1485.3	9/2 ⁺	0.0	9/2 ⁺
492.3	100	828.6	3/2 ⁺	336.3	1/2 ⁻	1497.2	100	1497.2	(7/2 ⁺)	0.0	9/2 ⁺
518.9	100	1347.5	(5/2 ⁻)	828.6	3/2 ⁺	1602.3 [‡]	100	1601.7	(7/2 ⁺)	0.0	9/2 ⁺
523.0	33	1971.4	(9/2 ⁺)	1448.4	9/2 ⁺	1607.8	100	1607.8	(7/2 ⁺)	0.0	9/2 ⁺
527.8	100	864.1	1/2 ⁺	336.3	1/2 ⁻	1736.9	95	1736.9	(9/2 ⁺)	0.0	9/2 ⁺
530.2	45	1607.8	(7/2 ⁺)	1077.6	5/2 ⁺	1971.4	100	1971.4	(9/2 ⁺)	0.0	9/2 ⁺
550.6	49	1999.0	(7/2 ⁺)	1448.4	9/2 ⁺	1978.3	12	1978.3	(7/2 ⁺ , 9/2 ⁺)	0.0	9/2 ⁺
604.3	100	1736.9	(9/2 ⁺)	1132.6	11/2 ⁺	1999.0	64	1999.0	(7/2 ⁺)	0.0	9/2 ⁺
627.0	100	1917.3		1290.3	13/2 ⁺	2057.3	100	2057.3	(5/2 ⁺)	0.0	9/2 ⁺
652.8		2071.0	(5/2 ⁺)	1418.2	(9/2 ⁺)	2071.0		2071.0	(5/2 ⁺)	0.0	9/2 ⁺
705.3	100	1041.5	5/2 ⁻	336.3	1/2 ⁻	2107.7	100	2107.7	(5/2 ⁺)	0.0	9/2 ⁺
750.3	56	1347.5	(5/2 ⁻)	597.1	3/2 ⁻	2113.7		2113.7	(9/2 ⁺)	0.0	9/2 ⁺
797.7	100	2283.0	(7/2 ⁺ , 9/2 ⁺)	1485.3	9/2 ⁺	2170.7	100	2170.7	(5/2 ⁺)	0.0	9/2 ⁺
830.9	49	1872.4	(9/2 ⁻)	1041.5	5/2 ⁻	2234.0	100	2234.0	(5/2 ⁺)	0.0	9/2 ⁺
845.7	100	1978.3	(7/2 ⁺ , 9/2 ⁺)	1132.6	11/2 ⁺	2264.0		2264.0	(5/2 ⁺ , 7/2 ⁺)	0.0	9/2 ⁺
867.2	100	1801.1	(5/2 ⁺)	933.8	7/2 ⁺	2283.0	80	2283.0	(7/2 ⁺ , 9/2 ⁺)	0.0	9/2 ⁺
897.1	100	1831.0	(5/2 ⁺)	933.8	7/2 ⁺	2380.6	100	2380.6		0.0	9/2 ⁺
916.5		2264.0	(5/2 ⁺ , 7/2 ⁺)	1347.5	(5/2 ⁻)	2442.2	100	2442.2		0.0	9/2 ⁺

[†] γ -ray energies and placements are from 1978VaZW.

[‡] Others: 1603.6 5 (1972Ma05), 1601.3 5 (1976AvZV).

[#] Relative photon branchings are from 1978VaZW, except as noted.

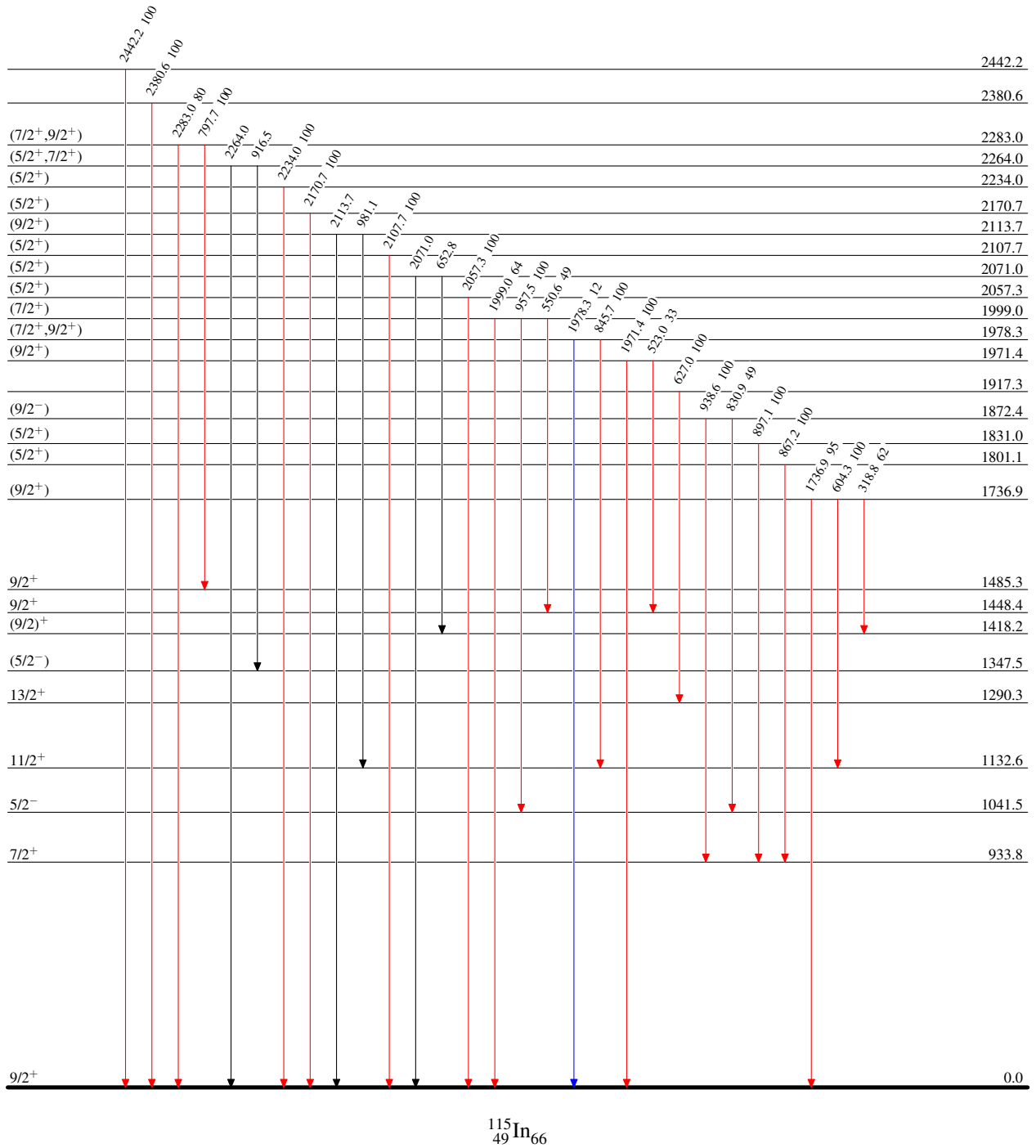
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Level Scheme

Intensities: Relative I_γ

Legend

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



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Level Scheme (continued)

Intensities: Relative I_γ

Legend

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

