^{173}Yb(n,γ) E=4.51-307.1 eV 1987Be53

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, Huo Junde	NDS 87, 15 (1999)	1-Nov-1998

The following neutron resonances are included:
$J^\pi=2^-$ (17.6, 31.4, 45.2, 68.9, 76.1, 105.8, 111.1, 124.3, 145.3 eV).
$J^\pi=3^-$ (4.51, 35.7, 53.5, 58.9, 66.2, 74.5, 96.4, 128.8, 134.8, 168.8, 210.2, 250.6, 256.6, 307.1 eV).

^{174}Yb Levels

E(level)	J^π[†]	Comments
0.0	0^+	
77.1	2^+	
253.7	4^+	
1561.2	$(2)^+$	
1606.5	$(3)^+$	
1624.2	$(1)^+$	
1633.8	$(2)^+$	
1674.7	2^+	
1700.4	4^+	
1709.4	$(3)^+$	
1715.2	4^+	
1733.7	$(3)^+$	
1805.3	4^+	
1858.7	(4^+)	
1958.3	(2^+)	
2016.2	$(2^+,3^+)$[‡]	
2067.8	(1^+)[‡]	
2101.9	$(2^+,3^+)$[‡]	J^π: see Adopted Levels for adopted J^π.
2111.2	$4^{(+)}$[‡]	
2123.0	$(4)^+$	
2161.1	$(2^+,3^+,4)$[‡]	
2163.3	(2^+)	
2172.7	(2^+)	
2237.5	(4^+)[‡]	J^π: see Adopted Levels for adopted J^π.
2246.7	$(2^+,3^+)$[‡]	
2256.3	$(2^+,3^+)$[‡]	
2295.2	$(2)^+$	
2335.9	(4^+)	
7464.58 *35*		Neutron capture state. E(level): from 1987Ge01. J^π: resonances with $J^\pi=2^-$ and 3^-.

[†] From Adopted Levels, unless otherwise specified.
[‡] From radiative strength functions assuming E1 multipolarity for all primary γ rays.

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γ(^{174}Yb)

Measured primary γ-ray energies and absolute (per 100 neutron captures) intensities. Deduced radiative strength functions.

E_γ	I_γ †#	E_i(level)	E_f	J^π_f	Iγ‡
5128.9	0.322 *28*	7464.58	2335.9	(4^+)	
5169.6	0.454 *36*	7464.58	2295.2	$(2)^+$	0.378 *39*
5208.5	0.504 *34*	7464.58	2256.3	$(2^+,3^+)$	0.260 *35*
5218.1	0.301 *27*	7464.58	2246.7	$(2^+,3^+)$	0.387 *39*
5227.3	0.489 *35*	7464.58	2237.5	(4^+)	
5292.3	0.462 *34*	7464.58	2172.7	(2^+)	0.507 *47*
5301.5	0.258 *42*	7464.58	2163.3	(2^+)	0.642 *67*
5303.7	0.186 *42*	7464.58	2161.1	$(2^+,3^+,4)$	
5341.8	0.547 *35*	7464.58	2123.0	$(4)^+$	
5353.9	0.153 *24*	7464.58	2111.2	$4^{(+)}$	
5362.9	0.231 *26*	7464.58	2101.9	$(2^+,3^+)$	0.336 *36*
5397.0		7464.58	2067.8	(1^+)	0.264 *33*
5448.6	0.408 *30*	7464.58	2016.2	$(2^+,3^+)$	0.273 *33*
5506.5	0.253 *27*	7464.58	1958.3	(2^+)	0.096 *26*
5606.1	0.597 *36*	7464.58	1858.7	(4^+)	
5659.5	0.842 *44*	7464.58	1805.3	4^+	
5731.1	0.321 *27*	7464.58	1733.7	$(3)^+$	0.940 *68*
5749.6	0.687 *40*	7464.58	1715.2	4^+	
5755.4	1.10 *6*	7464.58	1709.4	$(3)^+$	1.85 *13*
5764.4	0.137 *22*	7464.58	1700.4	4^+	
5790.1	0.525 *34*	7464.58	1674.7	2^+	0.565 *71*
5831.0	0.872 *47*	7464.58	1633.8	$(2)^+$	2.36 *16*
5840.6		7464.58	1624.2	$(1)^+$	0.765 *56*
5858.3	0.467 *39*	7464.58	1606.5	$(3)^+$	0.257 *29*
5903.6	0.890 *47*	7464.58	1561.2	$(2)^+$	0.833 *58*
7211.1	1.62 *8*	7464.58	253.7	4^+	
7387.7	2.06 *10*	7464.58	77.1	2^+	1.15 *8*

† Average absolute intensity (per 100 neutron captures) for primary γ rays from $J^\pi=3^-$ neutron resonances.
‡ Average absolute intensity (per 100 neutron captures) for primary γ rays from $J^\pi=2^-$ neutron resonances.
# Intensity per 100 neutron captures.

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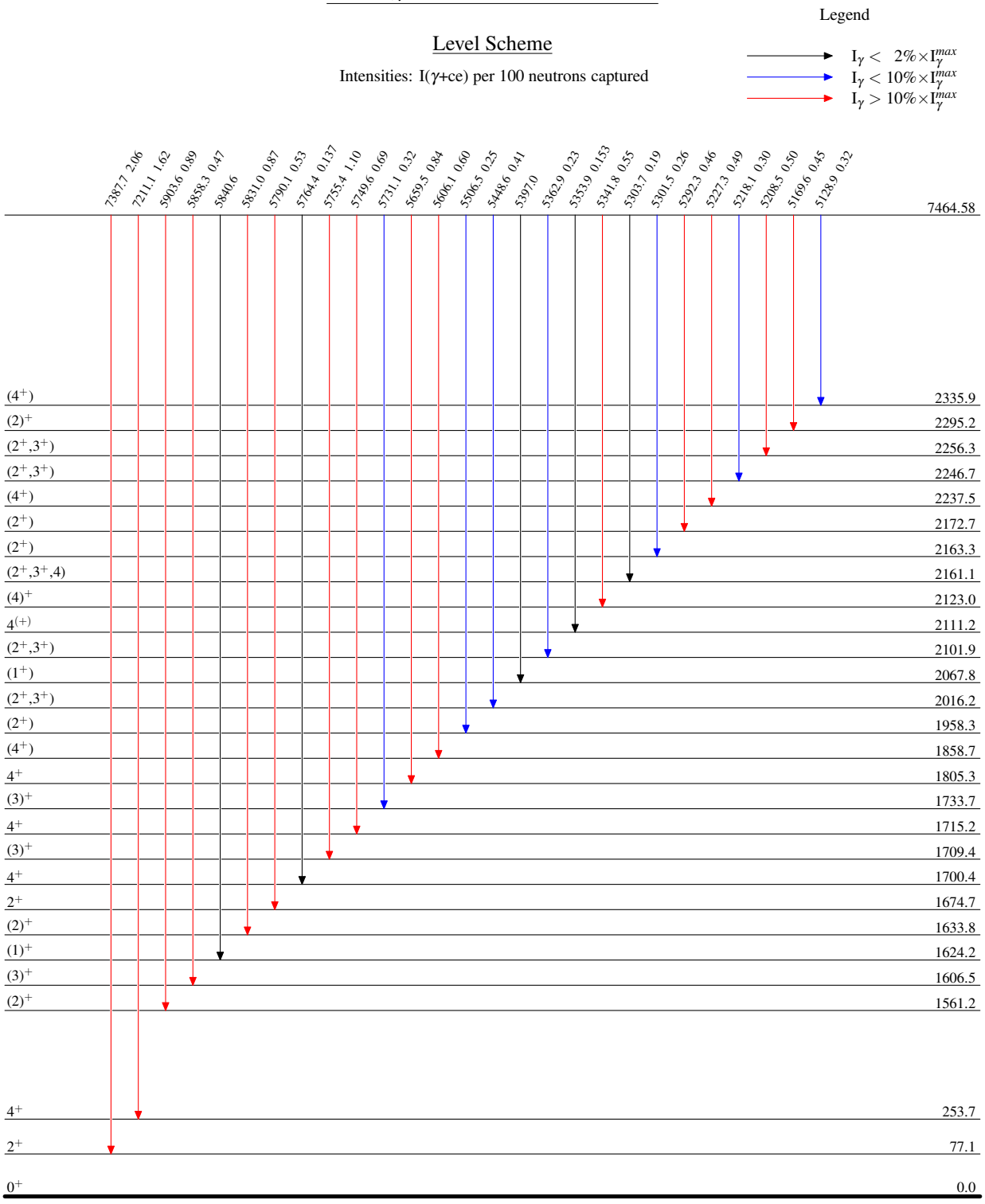
Level Scheme

Intensities: I(γ+ce) per 100 neutrons captured



$^{174}_{70}Yb_{104}$