^{184}W(n,γ) E=2,24 keV res: av 1987Br05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106, 619 (2005)	1-Nov-2005

Target: 94.3% enriched ^{184}W. Detector: Ge(Li) pair spectrometer. Other: 1987Ko37.

^{185}W Levels

All states with $J^\pi=1/2^-$ or $3/2^-$ are expected to be populated from the rather small number (9) of 2-keV s-wave neutron resonances. Although the number of resonances is small, the completeness of the set of $J^\pi=1/2^-,3/2^-$ levels is guaranteed because the probability for a state to be populated with a reduced intensity less than 10% of the mean is just 0.1% for 6 resonances involved (1987Br05).

E(level)	J^π[†]	Comments
0.0	$1/2^-,3/2^-$	
23.8 *4*	$1/2^-,3/2^-$	
63.8[‡] *4*	5/2	
93.4 *3*	$1/2^-,3/2^-$	
663.1 *4*	$1/2^-,3/2^-$	
729.8 *5*	$1/2^-,3/2^-$	
768.1 *3*	$1/2^-,3/2^-$	
823.3 *6*	$1/2^-,3/2^-$	
827.5 *5*	$1/2^-,3/2^-$	
842.0[‡] *9*	5/2	
888.6[‡] *5*	5/2	
917.6 *7*	1/2,3/2	
1005.7 *4*	$1/2^-,3/2^-$	
1036.0 *4*	$1/2^-,3/2^-$	
1068.1 *4*	$1/2^-,3/2^-$	
1101.7 *4*	$1/2^-,3/2^-$	
1145.5 *4*	$1/2^-,3/2^-$	
1181.7 *4*	$1/2^-,3/2^-$	
1218.9 *4*	$1/2^-,3/2^-$	
1286.9 *4*	$1/2^-,3/2^-$	
1365.7 *6*	$1/2^-,3/2^-$	
1424.5[‡] *5*	5/2	
1441.8 *4*	$1/2^-,3/2^-$	
1496.3 *4*	$1/2^-,3/2^-$	
S(n)+2		S(n)=5753.7 keV *3*. Jπ: $J^\pi=1/2^+$ for s-wave neutron capture.
S(n)+24		S(n)=5753.7 keV *3*. Jπ: $J^\pi=1/2^+$ for s-wave neutron capture; $J^\pi=1/2^-,3/2^-$ for p-wave neutron capture.

[†] From reduced intensities of primary γ-rays in average resonance capture. Parities were determined from ratios between reduced γ-ray intensities for the 2-keV and 24-keV n-capture. See Adopted Levels for adopted J^π's.

[‡] Populated from 24-keV resonance only.

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$\gamma(^{185}W)$

E_i(level)	E_γ[#]	Iγ/Eγ^5 (2-keV)[†]	E_f	J^π_f	Iγ/Eγ^5 (24-keV)[‡]
S(n)+2	4259.3 *2*	262 *28*	1496.3	1/2$^-$,3/2$^-$	142 *18*
	4313.8 *2*	194 *20*	1441.8	1/2$^-$,3/2$^-$	106 *14*
	4389.9 *4*	78 *15*	1365.7	1/2$^-$,3/2$^-$	51 *12*
	4468.7 *2*	339 *27*	1286.9	1/2$^-$,3/2$^-$	135 *14*
	4536.7 *2*	150 *16*	1218.9	1/2$^-$,3/2$^-$	88 *11*
	4573.9 *2*	170 *16*	1181.7	1/2$^-$,3/2$^-$	82 *12*
	4610.1 *2*	152 *15*	1145.5	1/2$^-$,3/2$^-$	92 *12*
	4653.9 *2*	109 *56*	1101.7	1/2$^-$,3/2$^-$	59 *21*
	4687.5 *2*	179 *22*	1068.1	1/2$^-$,3/2$^-$	20 *36*
	4719.6 *2*	163 *14*	1036.0	1/2$^-$,3/2$^-$	114 *13*
	4749.9 *2*	231 *18*	1005.7	1/2$^-$,3/2$^-$	134 *14*
	4838.0 *5*	34 *8*	917.6	1/2,3/2	103 *11*
	4928.1 *2*	379 *36*	827.5	1/2$^-$,3/2$^-$	86 *19*
	4932.3 *4*	123 *17*	823.3	1/2$^-$,3/2$^-$	183 *18*
	4987.5 *1*	254 *18*	768.1	1/2$^-$,3/2$^-$	81 *9*
	5025.8 *3*	67 *7*	729.8	1/2$^-$,3/2$^-$	104 *10*
	5092.5 *2*	119 *10*	663.1	1/2$^-$,3/2$^-$	82 *9*
	5662.2 *1*	219 *15*	93.4	1/2$^-$,3/2$^-$	172 *16*
	5731.8 *2*	168 *12*	23.8	1/2$^-$,3/2$^-$	138 *12*
	5755.6 *2*	100 *8*	0.0	1/2$^-$,3/2$^-$	100 *9*
S(n)+24	4353.4[@] *5*		1424.5	5/2	71 *13*
	4889.3[@] *5*		888.6	5/2	42 *8*
	4935.9[@] *9*		842.0	5/2	21 *9*
	5714.1[@] *4*		63.8	5/2	11 *4*

[†] Reduced intensity from 2-keV capture, relative to 100 for 5755.6γ.
[‡] Reduced intensity from 24-keV capture, relative to 100 for 5755.6γ.
[#] From 2-keV capture, unless otherwise specified.
[@] From 24-keV capture.

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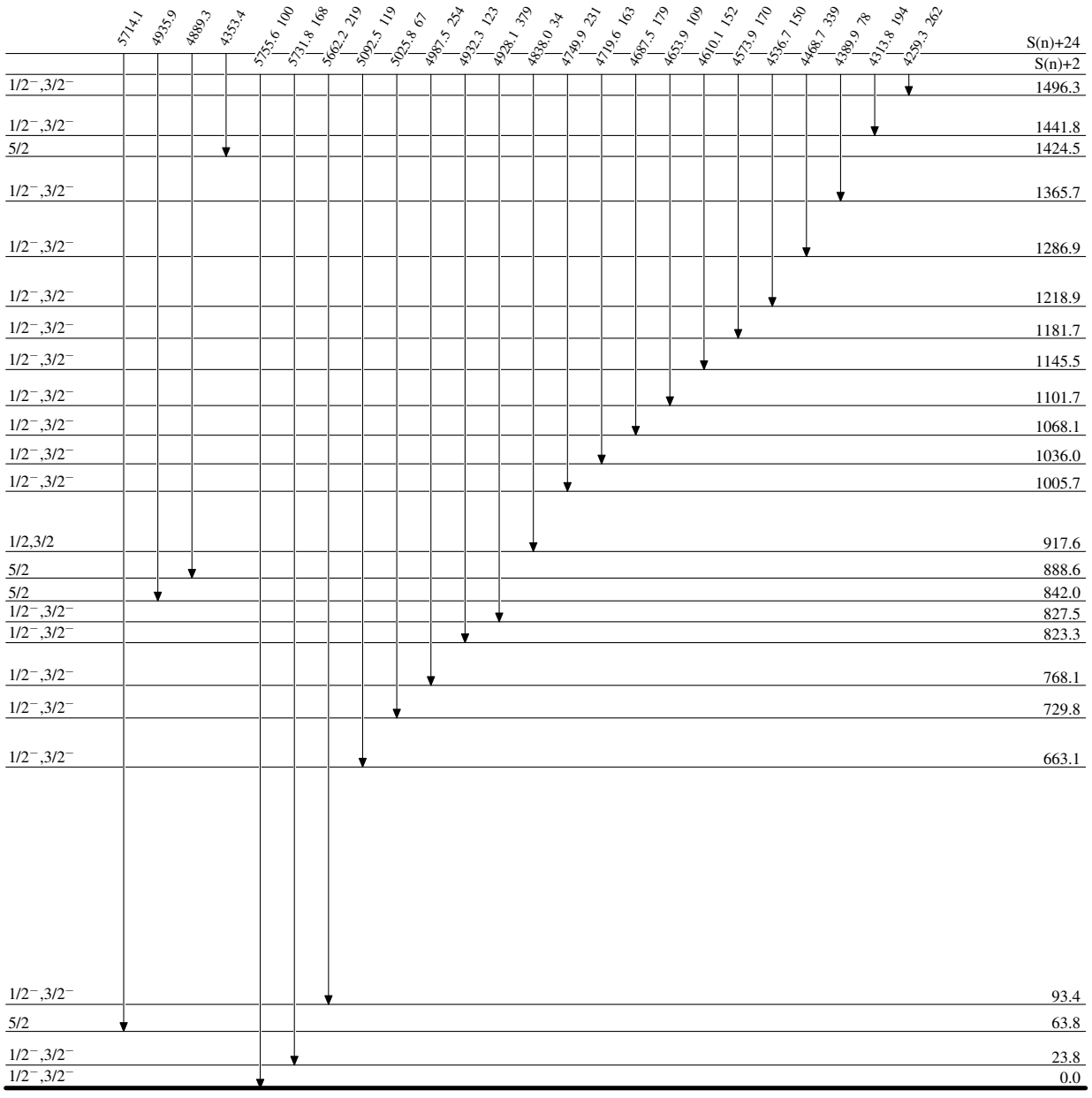
Level Scheme

Intensities: Intensities: relative Iγ/Eγ^5



$^{185}_{74}W_{111}$