^{48}Ca(^{15}N,4nγ) 1977Wa10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 151, 1 (2018)	1-Apr-2018

E(^{15}N)=25-55 MeV. Measured excit, $\gamma\gamma$ coin, $\gamma(\theta)$, DSA (1977Wa10).

^{59}Co Levels

E(level)†	Jπ‡	$T_{1/2}$#	E(level)†	Jπ‡	$T_{1/2}$#	E(level)†	Jπ‡	$T_{1/2}$#
0.0	7/2−@		3325.7 *4*	(15/2)	0.11 ps *21*	4909.0 *5*		0.08 ps *4*
1190.6 *3*	9/2−@		3842.9 *3*	(11/2)		5256.2 *9*	(21/2)	
1459.64 *25*	11/2−@		4086.5 *4*	(17/2)	<0.4 ps	5368.1 *4*	(19/2)	0.07 ps *4*
2153.5 *3*	(13/2)		4177.0 *3*	(13/2)		6362.2 *5*	(21/2)	<0.14 ps
2183.4 *3*	(11/2)		4412.7 *3*	(15/2)		6878.8 *8*		<0.10 ps
3081.4 *3*	(9/2)	<0.4 ps	4715.1 *4*	(17/2)	0.8 ps *3*	7457.3 *10*	(23/2)	<0.10 ps
3224.1 *3*	(13/2)	<0.7 ps	4798.7 *5*	(19/2)	<0.14 ps			

† From 1977Wa10.
‡ Authors′ assignment, based on excit, $\gamma(\theta)$, and $T_{1/2}$ (1977Wa10).
# From DSA measurements.
@ Adopted value.

γ(^{59}Co)

E_i(level)	J_i^π	E_γ	I_γ†	E_f	J_f^π	Comments
1190.6	9/2−	1190.6#	100	0.0	7/2−	A_2=−0.3 *7*.
1459.64	11/2−	269.01 *11*	5 *1*	1190.6	9/2−	A_2=−0.41 *3*.
		1459.62 *26*	95 *1*	0.0	7/2−	A_2=+0.23 *1*.
2153.5	(13/2)	693.94 *20*	100	1459.64	11/2−	
2183.4	(11/2)	992.88 *12*	100	1190.6	9/2−	A_2=−0.15 *2*.
3081.4	(9/2)	1890.8 *5*	100	1190.6	9/2−	A_2=+0.43 *16*.
3224.1	(13/2)	1040.84 *18*	55 *3*	2183.4	(11/2)	A_2=+0.03 *6*.
		1764.22 *23*	45 *3*	1459.64	11/2−	A_2=−0.06 *8*.
3325.7	(15/2)	1172.13 *20*	100	2153.5	(13/2)	
3842.9	(11/2)	2383.3 *3*	47‡ *6*	1459.64	11/2−	A_2=+0.41 *17*.
		2651.6 *5*	53‡ *5*	1190.6	9/2−	A_2<0.
4086.5	(17/2)	760.81 *13*	100	3325.7	(15/2)	A_2=−0.59 *8*.
4177.0	(13/2)	333.9 *3*	43 *10*	3842.9	(11/2)	A_2<0.
		1095.57 *18*	12 *3*	3081.4	(9/2)	A_2=−0.3 *1*.
		1993.60 *23*	35 *5*	2183.4	(11/2)	A_2=−0.34 *3*.
		2023.5#	4 *2*	2153.5	(13/2)	
		2716.4 *5*	6 *2*	1459.64	11/2−	
4412.7	(15/2)	235.72 *11*	68 *5*	4177.0	(13/2)	A_2=−0.30 *1*.
		1188.6#	10 *3*	3224.1	(13/2)	
		2259.28 *25*	22 *4*	2153.5	(13/2)	A_2=−0.33 *2*.
4715.1	(17/2)	302.35 *30*	100	4412.7	(15/2)	A_2<0.
4798.7	(19/2)	712.2 *3*	100	4086.5	(17/2)	A_2=−0.33 *8*.
4909.0		1583.3 *3*	100	3325.7	(15/2)	A_2=+0.49 *6*.
5256.2	(21/2)	457.5 *7*	100	4798.7	(19/2)	A_2=−0.21 *33*.
5368.1	(19/2)	653.00 *10*	100	4715.1	(17/2)	A_2=−0.28 *1*.
6362.2	(21/2)	994.1 *3*	100	5368.1	(19/2)	
6878.8		2080.0 *6*	100	4798.7	(19/2)	
7457.3	(23/2)	1095.1 *9*	100	6362.2	(21/2)	A_2=−0.3 *1*.

Continued on next page (footnotes at end of table)

^{48}Ca(^{15}N,4nγ) 1977Wa10 (continued)

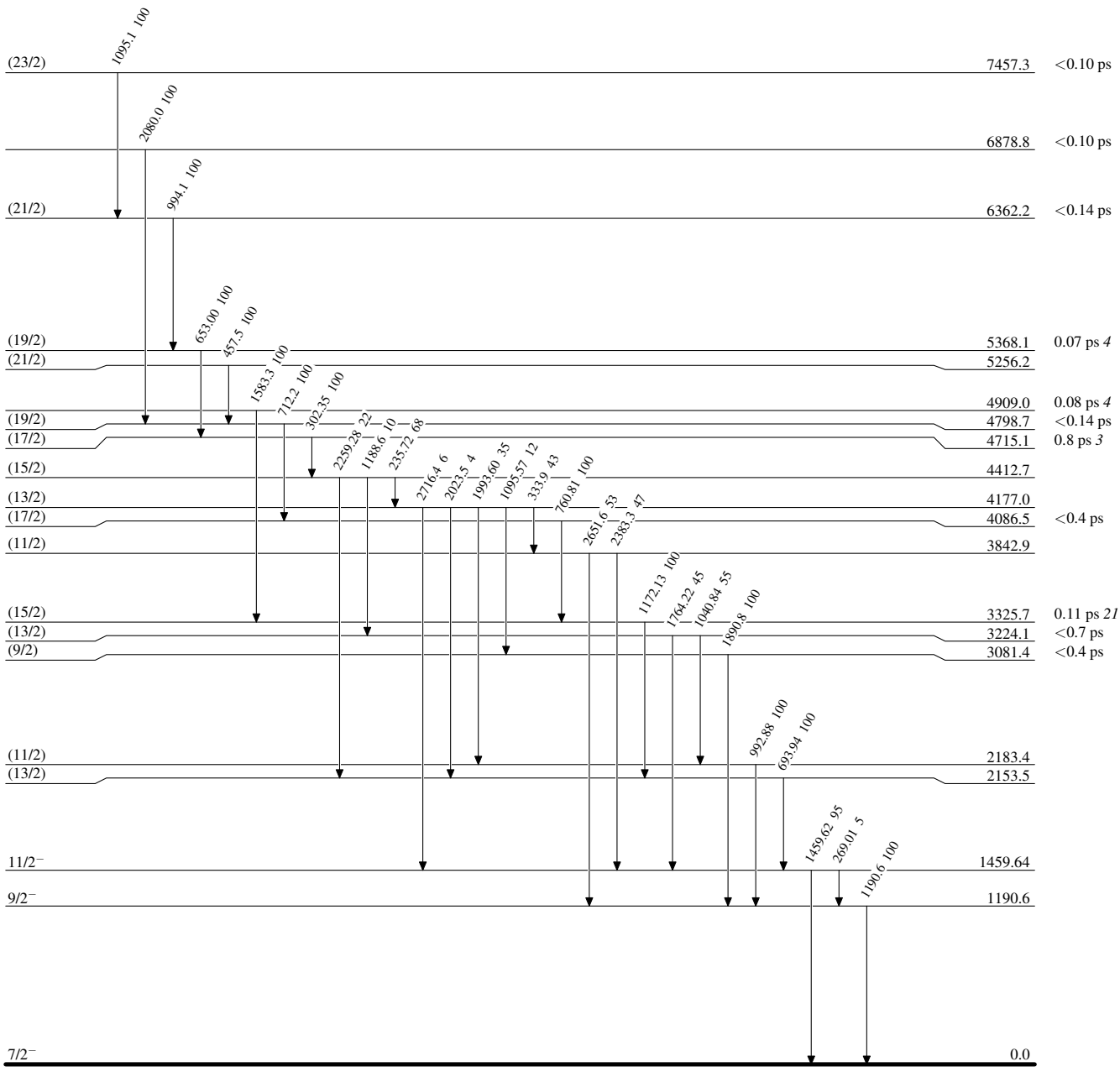
γ(^{59}Co) (continued)

† Photon branching ratio. See 1977Wa10 for relative Iγ (E(^{15}N) unstated).
‡ The γ-feeding into the 3843 level is greater than the γ intensity depopulating it. Hence, one or more depopulating γ rays may have been overlooked (1977Wa10).
# From authors′ level energy difference.

^{48}Ca(^{15}N,4nγ) 1977Wa10

Level Scheme

Intensities: % photon branching from each level



$^{59}_{27}Co_{32}$