^{48}Ca(^{18}O,4nγ) 1978Wa09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alan L. Nichols, Balraj Singh, Jagdish K. Tuli	NDS 113, 973 (2012)	15-Apr-2012

E=40-55 MeV, measured γ, $\gamma(\theta)$, $\gamma\gamma$ coincidences, $T_{1/2}$ by DSA or RDM.

^{62}Ni Levels

E(level)	J$^\pi$[#]	$T_{1/2}$[†]	Comments
0.0	0^+		
1172.73 *18*	2^+		
2335.90 *24*	4^+	<2 ps	
3176.0 *3*	4^+		
3276.8 *3*	4^+		
4018.2 *3*	$(6)^+$	0.62[‡] ps *28*	
4160.5 *3*	(5)	<1.4 ps	J$^\pi$: (5) from D+Q γ to 4^+ states and reaction mechanism.
4648.1 *3*	(7)[@]	509 ps *24*	J$^\pi$: from D+Q γ to (6^+) level and E2 γ to (5).
4862.5 *3*	5^-,6^-	8.39 ps *14*	J$^\pi$: (5,6,7) from lifetime and intense feeding.
5750.5 *4*	(9)[@]	0.55[‡] ps *21*	
5805.4 *4*	(7,8,9)	<1.4 ps	J$^\pi$: from lifetime and intense feeding.
6646.3 *4*	(9)[@]		
7558.7 *4*	(11)[@]	0.83[‡] ps *42*	

[†] From RDM, except where noted.
[‡] Lower limit from DSA combined with upper limit from RDM.
[#] From Adopted Levels, except as noted.
[@] Parity same as 4160 level.

$\gamma(^{62}Ni)$

δ from $\gamma(\theta)$, using the 1173 and 1163 transitions to fix the A_2 attenuation factor at 0.28.

E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	Comments
487.59 *13*	46	4648.1	(7)	4160.5	(5)	E2[#]	A_2=+0.19 *2*; A_4=−0.13 *2*
630.00 *14*	89	4648.1	(7)	4018.2	$(6)^+$	D+Q	A_2=−0.33 *2*; A_4=0 δ: −0.19 *4* or −2.3 *5*. I$_\gamma$: corrected for 10% contamination by γ of ^{63}Ni.
702.02 *14*	19	4862.5	5^-,6^-	4160.5	(5)		
883.54 *16*	17	4160.5	(5)	3276.8	4^+	D+Q	A_2=−0.33 *2*; A_4=0 δ: −0.24 *6* or −2.4 *4*.
895.75 *16*	10	6646.3	(9)	5750.5	(9)		
912.33 *16*	6	7558.7	(11)	6646.3	(9)	(E2)[#]	A_2=+0.28 *7*; A_4=0
1102.41 *17*	44	5750.5	(9)	4648.1	(7)	(E2)[#]	A_2=+0.30 *5*; A_4=0
1157.24 *22*	10	5805.4	(7,8,9)	4648.1	(7)		
1163.30 *18*	212	2335.90	4^+	1172.73	2^+	E2[#]	A_2=+0.16 *2*; A_4=−0.09 *3*
1172.72 *18*	258	1172.73	2^+	0.0	0^+	Q	A_2=+0.19 *2*; A_4=−0.09 *2*
[x]1402.05 *21*	5.7						
[x]1530.43 *21*	6.9						
1682.34 *21*	109	4018.2	$(6)^+$	2335.90	4^+	E2[#]	A_2=+0.21 *2*; A_4=−0.08 *2*
1808.43 *22*	12	7558.7	(11)	5750.5	(9)	(E2)[#]	A_2=+0.10 *3*; A_4=0

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^{48}Ca(^{18}O,4nγ) 1978Wa09 (continued)

$\gamma(^{62}Ni)$ (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
1824.66 *22*	60	4160.5	(5)	2335.90	4^+	D+Q	A_2=−0.30 *2*; A_4=0 δ: −0.16 *6* or −3.1 *4*.
1997.94 *24*	8	6646.3	(9)	4648.1	(7)		
2003.25 *25*	10	3176.0	4^+	1172.73	2^+	Q	A_2=+0.10 *5*; A_4=0
2103.78 *25*	19	3276.8	4^+	1172.73	2^+	Q	A_2=+0.17 *4*; A_4=0
[x]2490.92 *34*	4						
[x]2571.30 *30*	3						

[†] Relative γ intensity at E=50 MeV.
[‡] From $\gamma(\theta)$, except where noted.
[#] From $\gamma(\theta)$ and RUL.
[x] γ ray not placed in level scheme.

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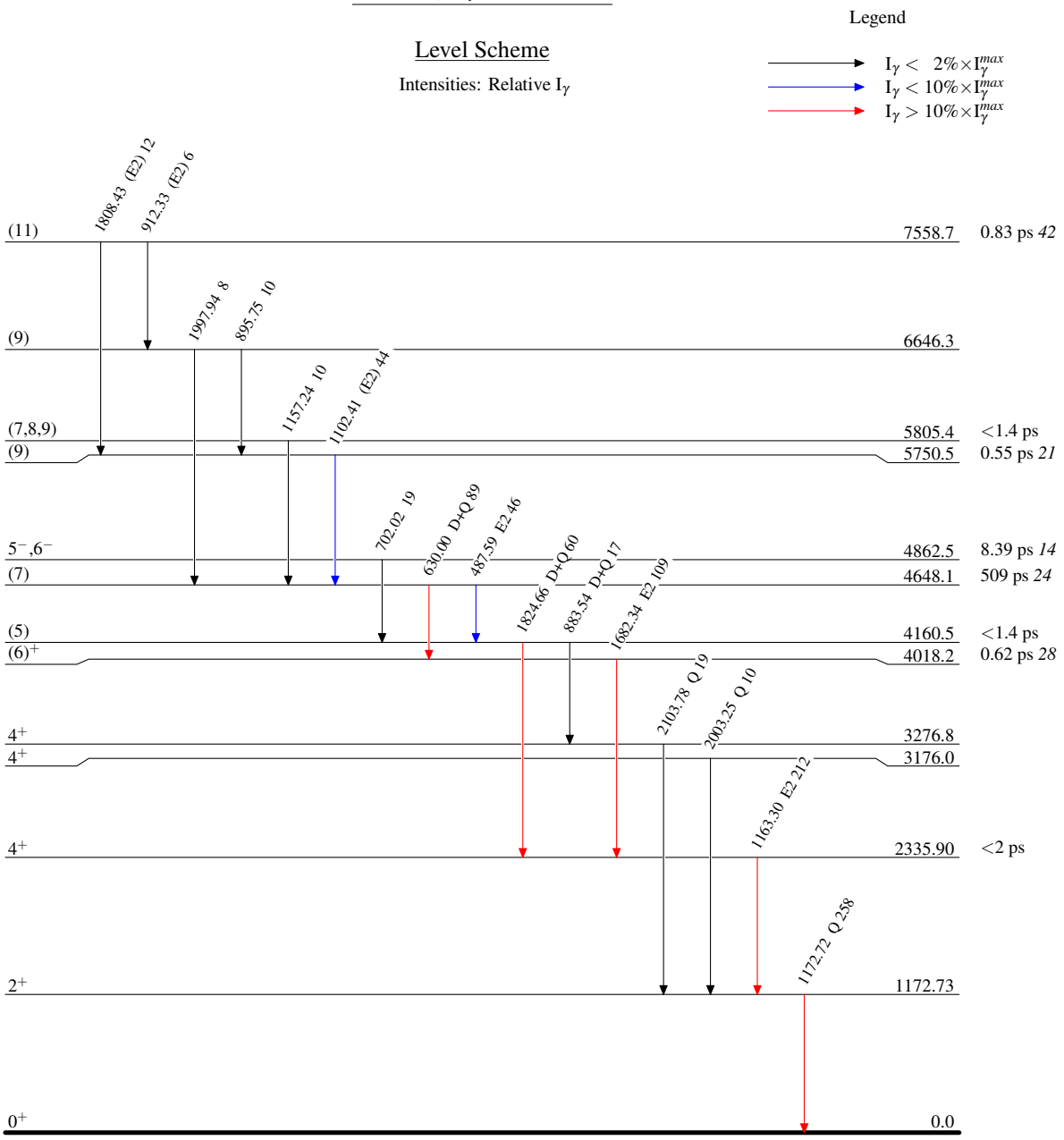
Level Scheme

Intensities: Relative I_γ



$^{62}_{28}Ni_{34}$