^{64}Ni(^{48}Ca,α3nγ) 1988Ma38

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes	NDS 161, 1 (2019)	1-Apr-2019

1988Ma38: Facility: LBL 88-inch cyclotron; Beam: E(^{48}Ca)=200 MeV; Target: two stacked 0.50 mg/cm^2 thick, self supporting ^{64}Ni foils; Detectors: HERA, comprising 20 Compton-suppressed Ge detectors; Measured: γ-γ-γ coinc., Eγ, Iγ; Deduced: ^{105}Ru level scheme: Also from the same collaboration: 1988BeZG, 1988MaZJ.

^{105}Pd Levels

E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡
0	5/2$^+$	3296&	(23/2)$^+$	8128&	(43/2$^+$)	x+6955#	[63/2$^+$]
306&	7/2$^+$	3800@	(27/2$^-$)	8410@	(43/2$^-$)	x+8675#	[67/2$^+$]
489@	11/2$^-$	3874&	(27/2)$^+$	9441&	(47/2$^+$)	x+10521#	[71/2$^+$]
970@	(15/2$^-$)	4669&	(31/2$^+$)	10876&	(51/2$^+$)	x+12528#	[75/2$^+$]
1012&	(11/2$^+$)	4953@	(31/2$^-$)	x#	[43/2$^+$]	x+14669#	[79/2$^+$]
1742@	(19/2)$^-$	5683&	(35/2$^+$)	x+1209#	[47/2$^+$]	x+16909?#	[83/2$^+$]
1903&	(15/2)$^+$	6073@	(35/2$^-$)	x+2491#	[51/2$^+$]		
2700@	(23/2)$^-$	6861&	(39/2$^+$)	x+3870#	[55/2$^+$]		
2757&	(19/2)$^+$	7193@	(39/2$^-$)	x+5358#	[59/2$^+$]		

† From Eγ.
‡ From 1988Ma38, based on the observed band structure; SD band head J^π is based on the observed feeding to the (39/2$^+$) level.
# Band(A): Probable member of a ΔJ=2 Superdeformed band.
@ Band(B): Member of a ΔJ=2 band on 11/2$^-$ level.
& Band(C): Member of a ΔJ=2 band on 7/2$^+$ level.

γ(^{105}Pd)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
183		489	11/2$^-$	306	7/2$^+$	1178	24 *10*	6861	(39/2$^+$)	5683	(35/2$^+$)
306	50 *10*	306	7/2$^+$	0	5/2$^+$	1209	51 *10*	x+1209	[47/2$^+$]	x	[43/2$^+$]
481	50 *10*	970	(15/2$^-$)	489	11/2$^-$	1217		8410	(43/2$^-$)	7193	(39/2$^-$)
539	41 *10*	3296	(23/2)$^+$	2757	(19/2)$^+$	1267		8128	(43/2$^+$)	6861	(39/2$^+$)
578	41 *10*	3874	(27/2)$^+$	3296	(23/2)$^+$	1282	47 *10*	x+2491	[51/2$^+$]	x+1209	[47/2$^+$]
706	50 *10*	1012	(11/2$^+$)	306	7/2$^+$	1313		9441	(47/2$^+$)	8128	(43/2$^+$)
772	52 *10*	1742	(19/2)$^-$	970	(15/2$^-$)	1379	96 *10*	x+3870	[55/2$^+$]	x+2491	[51/2$^+$]
795	35 *10*	4669	(31/2$^+$)	3874	(27/2)$^+$	1435		10876	(51/2$^+$)	9441	(47/2$^+$)
854	45 *10*	2757	(19/2)$^+$	1903	(15/2)$^+$	1488	105 *10*	x+5358	[59/2$^+$]	x+3870	[55/2$^+$]
891	51 *10*	1903	(15/2)$^+$	1012	(11/2$^+$)	1597	110 *10*	x+6955	[63/2$^+$]	x+5358	[59/2$^+$]
958	53 *10*	2700	(23/2)$^-$	1742	(19/2)$^-$	1720	100 *10*	x+8675	[67/2$^+$]	x+6955	[63/2$^+$]
1014	35 *10*	5683	(35/2$^+$)	4669	(31/2$^+$)	1846	60 *10*	x+10521	[71/2$^+$]	x+8675	[67/2$^+$]
1100		3800	(27/2$^-$)	2700	(23/2)$^-$	2007	55 *10*	x+12528	[75/2$^+$]	x+10521	[71/2$^+$]
1120		6073	(35/2$^-$)	4953	(31/2$^-$)	2141	30 *10*	x+14669	[79/2$^+$]	x+12528	[75/2$^+$]
1120		7193	(39/2$^-$)	6073	(35/2$^-$)	2240‡	12 *10*	x+16909?	[83/2$^+$]	x+14669	[79/2$^+$]
1153		4953	(31/2$^-$)	3800	(27/2$^-$)						

† From 1988Ma38.
‡ Placement of transition in the level scheme is uncertain.

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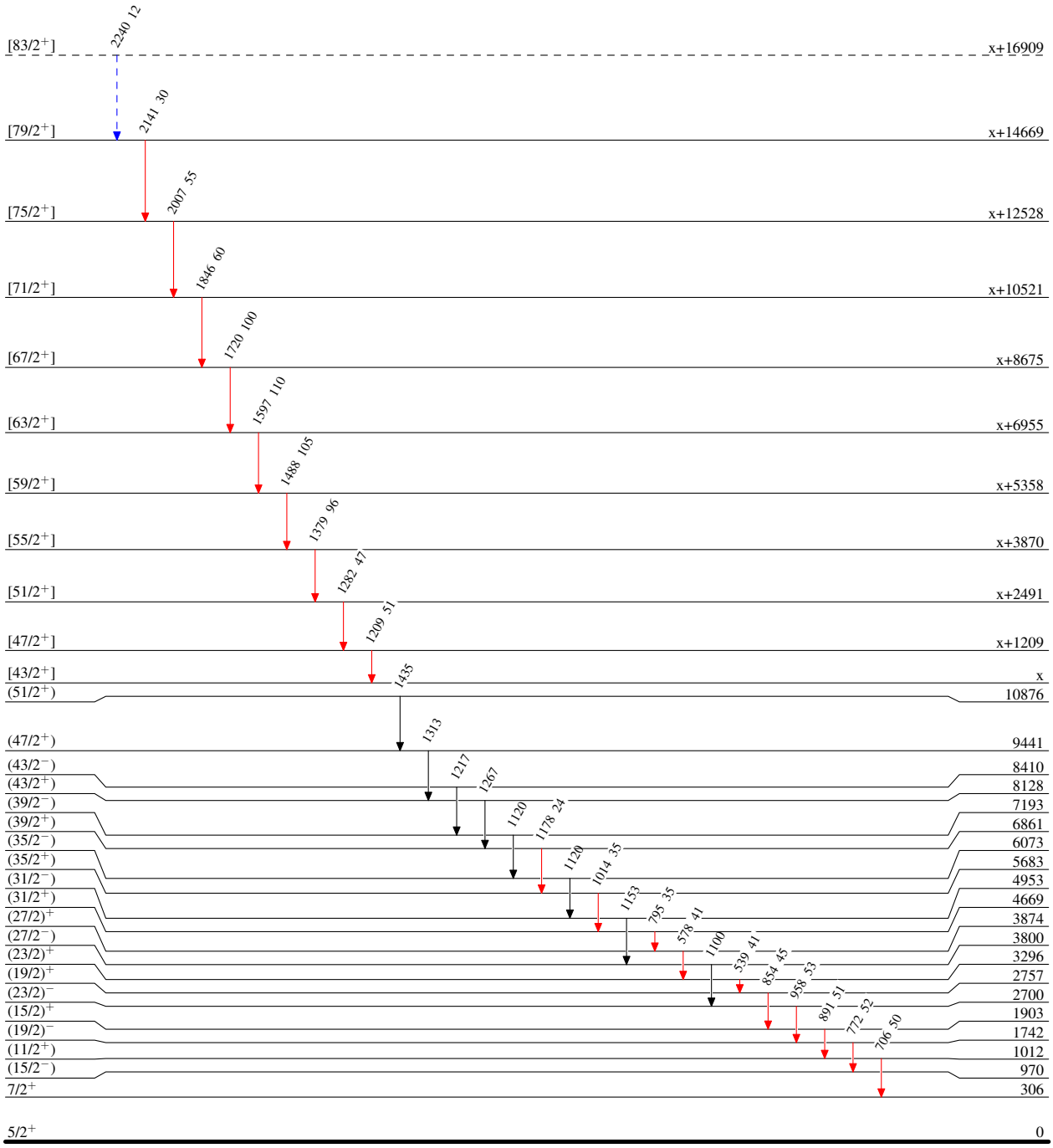
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

Level Scheme

Intensities: Type not specified



$^{105}_{46}Pd_{59}$

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Level Scheme (continued)

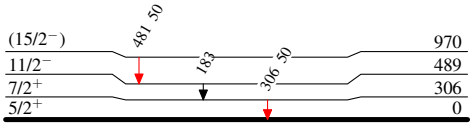
Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



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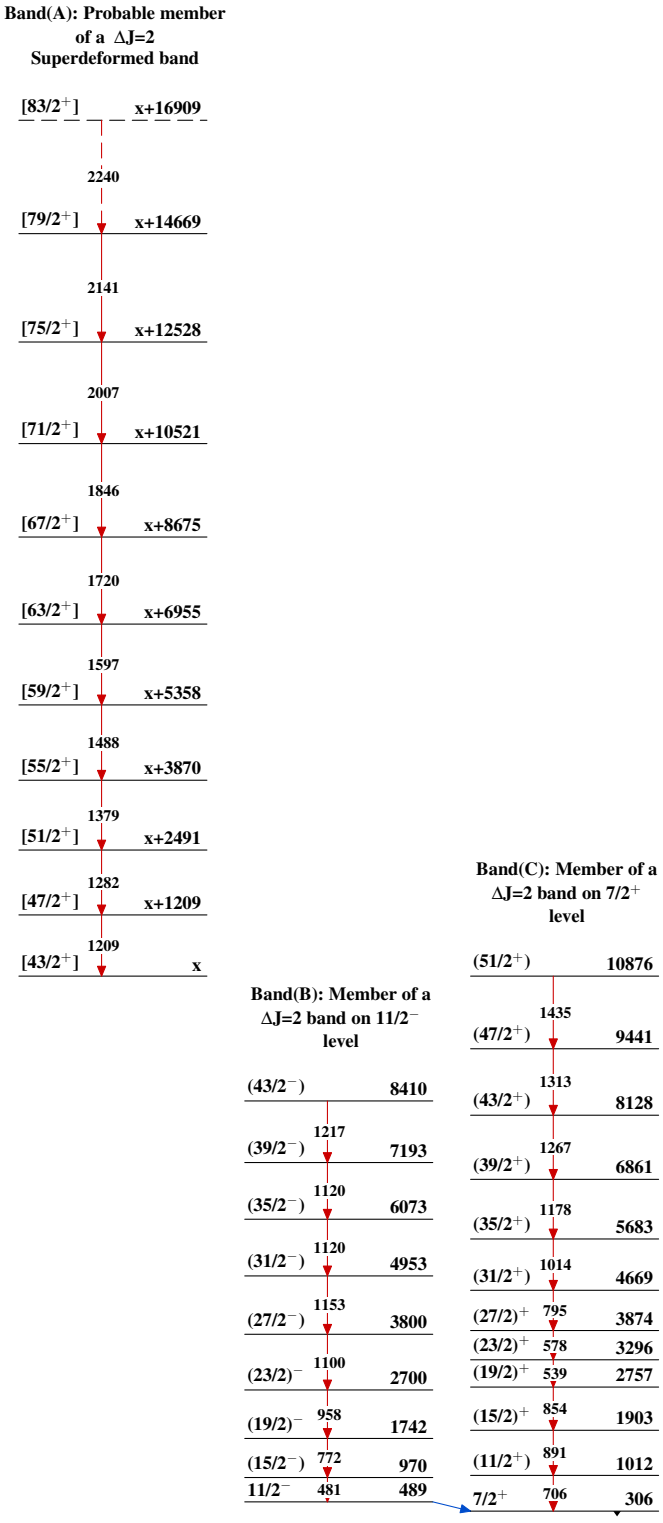

$^{105}_{46}Pd_{59}$