^{98}Mo(^{36}S,3npγ),^{115}In(^{18}O,3nγ) 1987No07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93, 33 (2001)	11-May-2001

1987No07: ^{98}Mo(^{36}S,3npγ) E=150 MeV; ^{115}In(^{18}O,3nγ) E=65 MeV. Measured Eγ, Iγ, γγ, excitation functions, γ(θ).
1993Co09: ^{115}In(^{18}O,3nγ) E=65 MeV. Measured ce for four transitions.

^{130}La Levels

E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†	E(level)	Jπ†
0.0+x‡		455.5+x# *8*	(9⁻)	1249.1+x# *8*	(12⁻)	3768.5+x# *9*	(18⁻)
88.4+x‡# *7*	(6⁻)	522.9+x‡ *5*	(10⁺)	1595.4+x# *8*	(13⁻)	4269.4+x# *9*	(19⁻)
113.9+x‡ *4*		676.5+x# *8*	(10⁻)	1968.9+x# *9*	(14⁻)	4781.0+x?# *12*	
159.4+x# *7*	(7⁻)	802.2+x‡ *5*	(11⁺)	2382.9+x# *9*	(15⁻)		
278.2+x# *8*	(8⁻)	945.6+x# *8*	(11⁻)	2816.7+x# *9*	(16⁻)		
385.4+x‡ *4*	(9⁺)	1048.5+x‡ *5*	(12⁺)	3287.5+x# *9*	(17⁻)		

† From Adopted Levels. No Jπ's were listed by 1987No07.
‡ From Adopted Levels.
# Band(A): $\pi h_{11/2}\nu g_{7/2}$.

γ(^{130}La)

Eγ†	Iγ#	Ei(level)	J_i^π	E_f	J_f^π	Mult.	Comments
71.0 *7*	@	159.4+x	(7⁻)	88.4+x	(6⁻)		
113.9‡ *5*		113.9+x		0.0+x			
118.8 *2*	55.2 *3*	278.2+x	(8⁻)	159.4+x	(7⁻)	M1+E2	Mult.: α(L)exp=0.59 *14* (1993Co09). Additional information 1.
137.5 *3*		522.9+x	(10⁺)	385.4+x	(9⁺)		
177.4 *2*	83 *2*	455.5+x	(9⁻)	278.2+x	(8⁻)		
190 *1*	<5&	278.2+x	(8⁻)	88.4+x	(6⁻)		
221.0 *2*	100 *3*	676.5+x	(10⁻)	455.5+x	(9⁻)	M1+E2	Mult.: α(K)exp=0.070 *25* (1993Co09).
246.3‡ *3*		1048.5+x	(12⁺)	802.2+x	(11⁺)	M1+E2	Mult.: α(K)exp=0.096 *20*.
269.5 *7*	35& *2*	945.6+x	(11⁻)	676.5+x	(10⁻)		
271.5‡ *3*		385.4+x	(9⁺)	113.9+x			
279.4‡ *3*		802.2+x	(11⁺)	522.9+x	(10⁺)	M1+E2	Mult.: α(K)exp=0.035 *10* (1993Co09).
296.1 *2*	23.7 *13*	455.5+x	(9⁻)	159.4+x	(7⁻)		Br(296/177)=19.9 *12*/80.1 *12*.
303.7 *2*	25.0 *13*	1249.1+x	(12⁻)	945.6+x	(11⁻)		
346.4 *2*	16.2 *9*	1595.4+x	(13⁻)	1249.1+x	(12⁻)		
373.9 *7*	@	1968.9+x	(14⁻)	1595.4+x	(13⁻)		
398.2 *2*	64 *4*	676.5+x	(10⁻)	278.2+x	(8⁻)		Br(398/221)=37.0 *15*/63.0 *15*.
413.9 *5*	9.6 *10*	2382.9+x	(15⁻)	1968.9+x	(14⁻)		
434.2 *7*	10.2& *11*	2816.7+x	(16⁻)	2382.9+x	(15⁻)		
471.2 *5*	6.1 *9*	3287.5+x	(17⁻)	2816.7+x	(16⁻)		
490.2 *2*	43 *2*	945.6+x	(11⁻)	455.5+x	(9⁻)		Br(490/269)=54.8 *12*/45.2 *12*.
572.5 *2*	39.8 *23*	1249.1+x	(12⁻)	676.5+x	(10⁻)		Br(572/304)=60.5 *19*/39.5 *19*.
649.8 *2*	29.2 *14*	1595.4+x	(13⁻)	945.6+x	(11⁻)		Br(650/346)=64 *2*/36 *2*.
719.6 *7*	@	1968.9+x	(14⁻)	1249.1+x	(12⁻)		Br(720/374)=68 *2*/32 *2*.
787.1 *7*	30& *3*	2382.9+x	(15⁻)	1595.4+x	(13⁻)		Br(787/414)=76 *2*/24 *2*.
847.9 *2*	34 *2*	2816.7+x	(16⁻)	1968.9+x	(14⁻)		Br(848/434)=77 *2*/23 *2*.

Continued on next page (footnotes at end of table)

^{98}Mo(^{36}S,3npγ),^{115}In(^{18}O,3nγ) 1987No07 (continued)

γ(^{130}La) (continued)

E_γ[†]	I_γ[#]	E_i(level)	J_i^π	E_f	J_f^π	Comments
904.6 *2*	30[&] *2*	3287.5+x	(17$^-$)	2382.9+x	(15$^-$)	Br(905/471)=83 *2*/17 *2*.
951.8 *2*	19 *3*	3768.5+x	(18$^-$)	2816.7+x	(16$^-$)	
981.9 *2*	11 *3*	4269.4+x	(19$^-$)	3287.5+x	(17$^-$)	
1012.5[a] *7*		4781.0+x?		3768.5+x	(18$^-$)	E_γ: seen in (^{36}S,3npγ) only. Placement treated as uncertain (evaluator) since no such γ shown by 1989Go04 in this band; instead, a 1013.9γ is shown from another band member.

† Δ(Eγ)=0.2 keV for Iγ>10, 0.5 keV for Iγ≤10 and 0.7 keV for doublets and weak lines based on a general comment by 1987No07.
‡ From adopted gammas.
# From ^{115}In(^{18}O,3nγ).
@ Doublet, Iγ not available.
& Doublet, Iγ from branching ratio.
a Placement of transition in the level scheme is uncertain.

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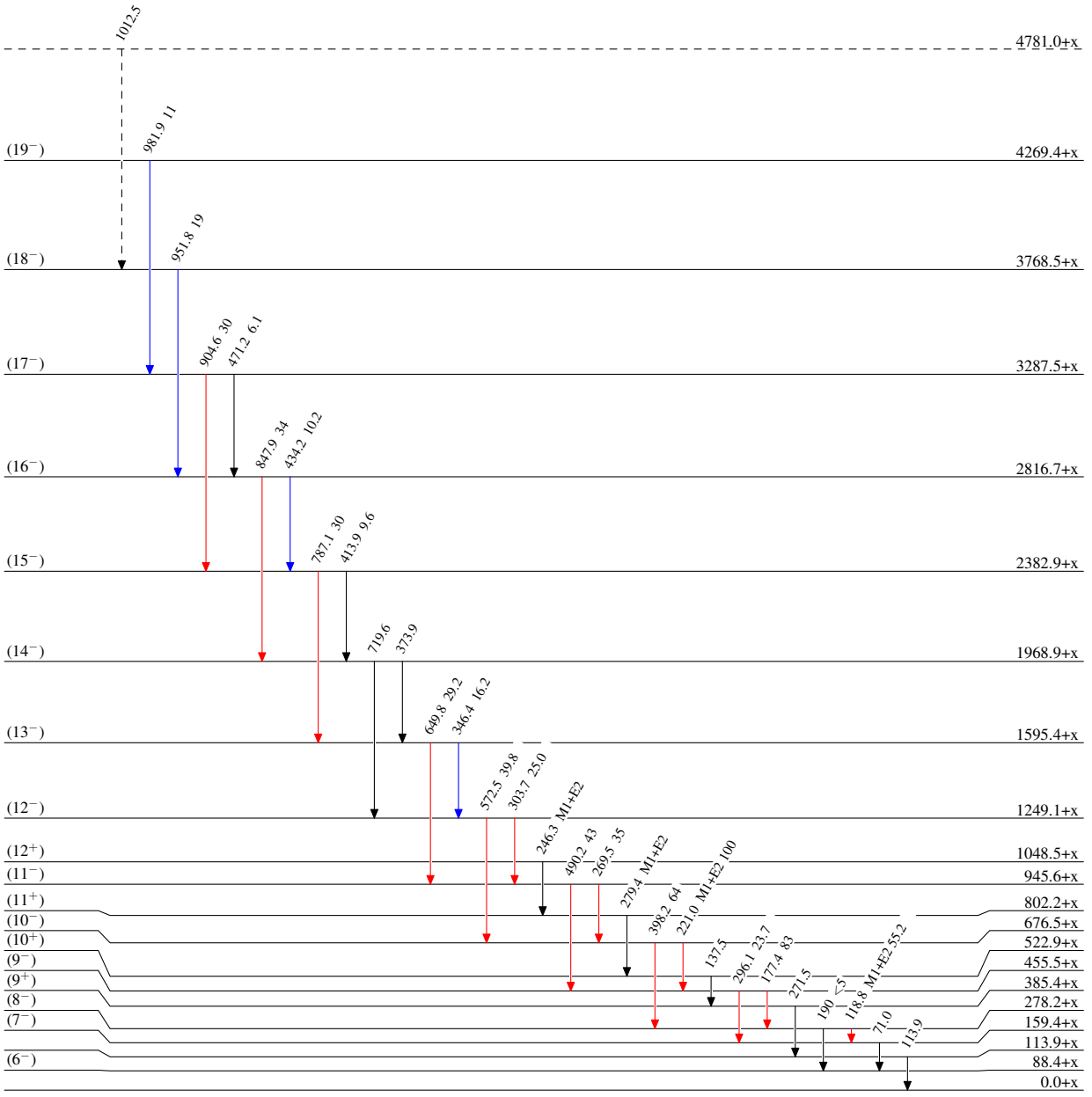
Level Scheme

Intensities: Relative I_γ

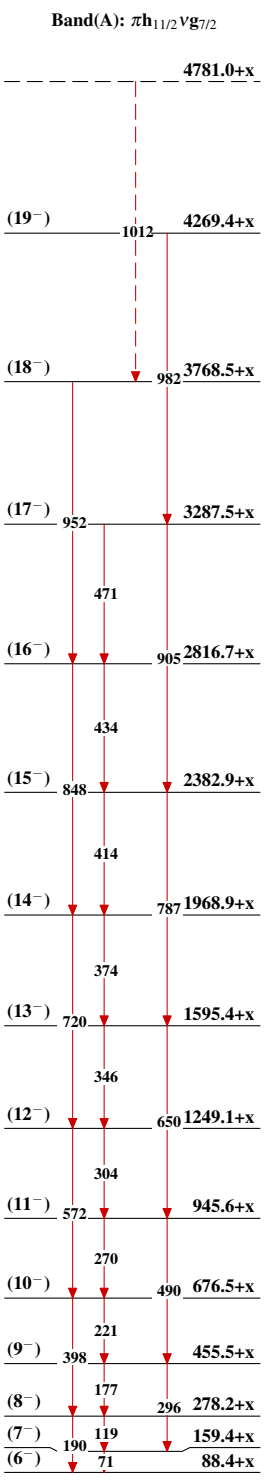
Legend

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



$^{130}_{57}La_{73}$

^{98}Mo(^{36}S,3npγ),^{115}In(^{18}O,3nγ) 1987No07



$^{130}_{57}La_{73}$