(HI,xnγ) 2009Po04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne	NDS 157, 260 (2019)	1-Mar-2019

Based on XUNDL compilation by B. Singh (McMaster): Feb 20, 2009.

2009Po04: ^{208}Pb(^{18}O,Xγ) E=85 MeV beam provided by the Vivitron accelerator at Strasbourg. Measured Eγ, Iγ, γγ, γγ(θ) using Euroball IV array spectrometer of 15 Cluster Ge detectors, 26 Clovers and 30 tapered single-crystals, cluster containing seven detectors. Comparisons with shell-model calculations.

Data includes from 2007Jo14: ^{192}Os(^{82}Se,Xγ) E=460 MeV beam provided by tandem XTU and LINAC ALPI at Legnaro. Enriched target. Measured Eγ, Iγ, γγ coin using GASP spectrometer of 40 HPGe detectors with Compton-suppression and an inner ball of 80 BGO detectors to serve as a multiplicity filter and calorimeter. Comparisons with shell-model calculations.

Other:

1998PoZX: ^{28}Si, ^{30}Si on ^{176}Yb, E=145 MeV. Measured γ, γγ, γγγ, Eurogamm2.

^{82}Se Levels

E(level)†	Jπ	E(level)†	Jπ	E(level)†	Jπ	E(level)†	Jπ
0.0‡	0+	2893.1 *4*	5−	4231.5 *9*		5686.7 *9*	(11)
654.6‡ *2*	2+	3144.5‡ *6*	6+	4983.0 *9*	(9+)	6128.6 *10*	(12)
1731.0 *4*	2+	3453.6 *7*		5046.3 *12*			
1734.8‡ *4*	4+	3517.5‡ *6*	8+	5191.7 *10*			
2549.9 *4*	4+	3794.3 *6*	(7−)	5456.7‡ *9*	(10+)		

† From least-squares fit to Eγ's.

‡ Seq.(A): Yrast sequence.

γ(^{82}Se)

Eγ	Iγ	Ei(level)	Jiπ	Ef	Jfπ	Comments
230.0 *3*	7 *2*	5686.7	(11)	5456.7	(10+)	
343.2 *2*	30 *5*	2893.1	5−	2549.9	4+	
373.0 *2*	30 *5*	3517.5	8+	3144.5	6+	
441.9 *5*	2.5 *10*	6128.6	(12)	5686.7	(11)	
473.7 *5*	1.5 *10*	5456.7	(10+)	4983.0	(9+)	
560.5 *5*	4 *2*	3453.6		2893.1	5−	
654.6 *2*	100 *10*	654.6	2+	0.0	0+	
815.2 *6*	4 *2*	2549.9	4+	1734.8	4+	
818.8 *4*	16 *5*	2549.9	4+	1731.0	2+	
901.2 *4*	10 *3*	3794.3	(7−)	2893.1	5−	
960.2 *5*	4 *2*	5191.7		4231.5		
1076.3 *5*	5 *2*	1731.0	2+	654.6	2+	
1080.2 *3*	60 *6*	1734.8	4+	654.6	2+	
1087.0 *7*	6 *2*	4231.5		3144.5	6+	
1158.3 *8*	3 *1*	2893.1	5−	1734.8	4+	
1252† *1*		5046.3		3794.3	(7−)	Iγ: weak γ ray.
1409.7 *4*	40 *6*	3144.5	6+	1734.8	4+	
1465.4 *8*	3 *1*	4983.0	(9+)	3517.5	8+	
1731.1 *6*	11 *4*	1731.0	2+	0.0	0+	
1895.3 *6*	18 *6*	2549.9	4+	654.6	2+	
1939.3 *8*	7 *3*	5456.7	(10+)	3517.5	8+	

† Placement of transition in the level scheme is uncertain.

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Level Scheme

Intensities: Relative I_γ

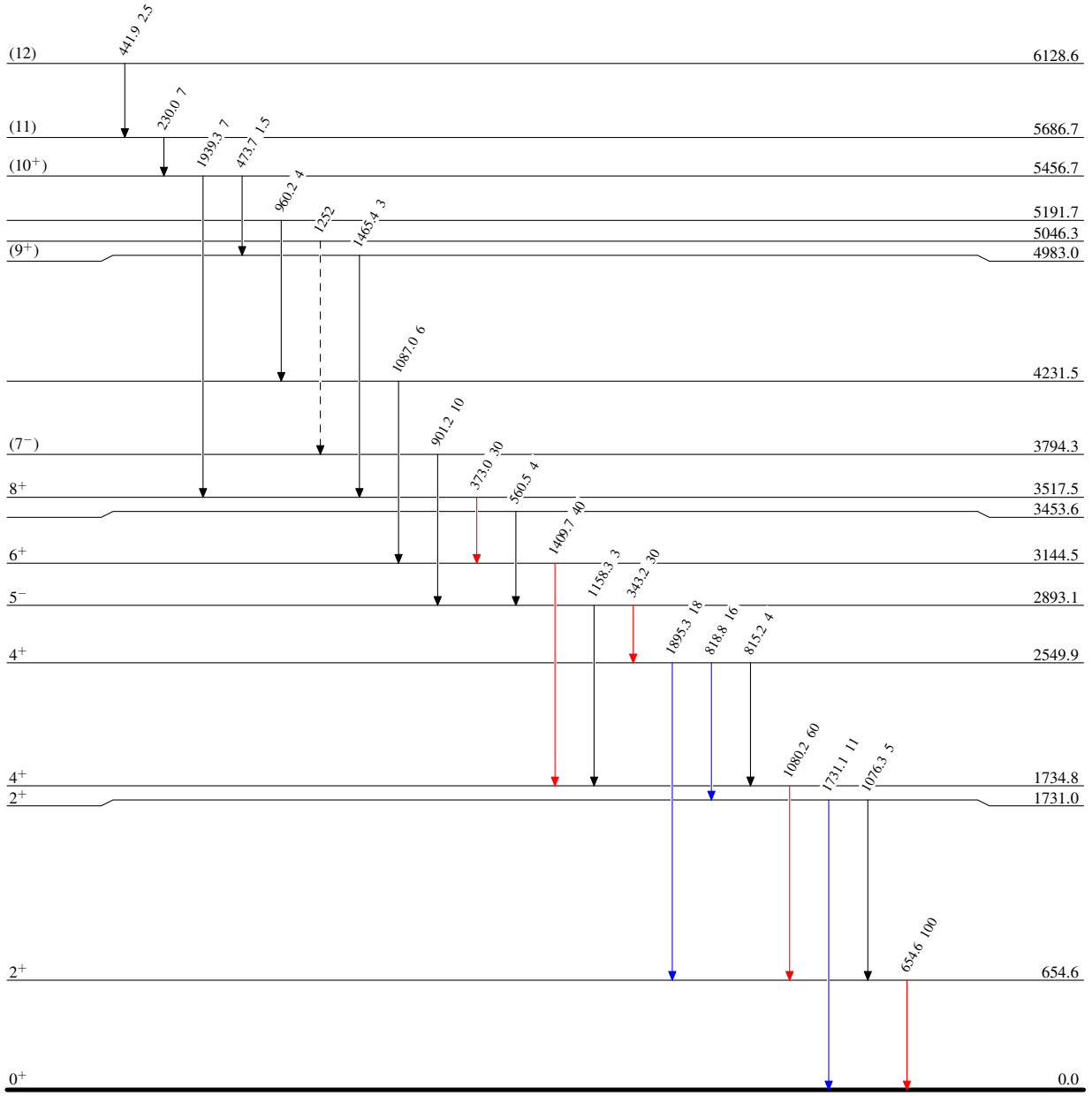
Legend

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

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

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

γ Decay (Uncertain)



$^{82}_{34}Se_{48}$

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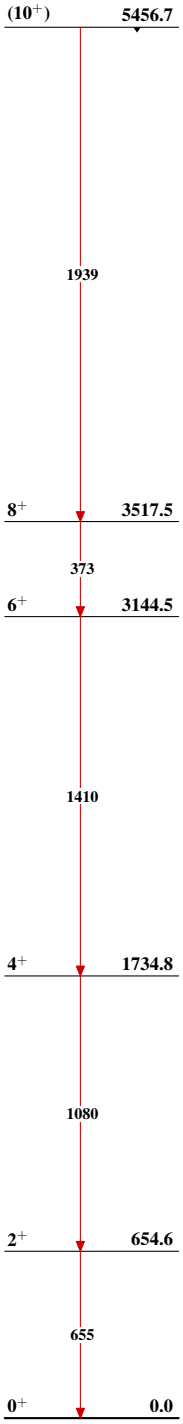
Seq.(A): Yrast sequence



$^{82}_{34}Se_{48}$