

$^{208}\text{Pb}(^{18}\text{O},\text{X}\gamma)$ 2009Po04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 125, 201 (2015)	31-Dec-2014

2009Po04: E(^{18}O)=85 MeV. Measured E γ , I γ , $\gamma\gamma$, $\gamma\gamma(\theta)$ using Euroball IV array consisting of 15 Cluster, 26 Clover, and 30 tapered single-crystal HPGe detectors. ^{83}Se identified through coincidences with known transitions in the complementary fragments of $^{138,139,140}\text{Ba}$.

2006Fo13: E(^{18}O)=91 MeV. Measured E γ , I γ , $\gamma\gamma$ using Gammasphere array consisting of 100 Compton-suppressed HPGe detectors. ^{83}Se identified through coincidences with known transitions in the complementary fragments of $^{138,139,140}\text{Ba}$.

The level scheme is that of 2009Po04. The level schemes of 2009Po04 and 2006Fo13 are in agreement, with 2009Po04 observing three additional transitions from higher excitation energy levels.

 ^{83}Se Levels

E(level) [†]	J π [‡]
0.0 [#]	9/2 ⁺
1297.0 [#] 2	(11/2 ⁺)
1808.3 [#] 2	(13/2 ⁺)
2299.1 [#] 3	(15/2 ⁺)
2478.3 5	(17/2)
3899.2 7	
4286.7 9	

[†] From a least-squares fit to E γ , by evaluator.

[‡] From the Adopted Levels.

[#] Band(A): Yrast sequence. Configuration suggested as $\nu g9/2$ hole coupled to yrast states of ^{84}Se .

 $\gamma(^{83}\text{Se})$

E γ [†]	I γ [†]	E $_i$ (level)	J π _{i}	E $_f$	J π _{f}	Mult. [‡]	I γ [#]
179.2 3	34 8	2478.3	(17/2)	2299.1	(15/2 ⁺)	D	50 15
388 1	3 1	4286.7		3899.2			
490.8 3	66 10	2299.1	(15/2 ⁺)	1808.3	(13/2 ⁺)	D	70 10
511.0 3	29 8	1808.3	(13/2 ⁺)	1297.0	(11/2 ⁺)		35 15
1002.0 5	4 2	2299.1	(15/2 ⁺)	1297.0	(11/2 ⁺)		7 2
1296.9 3	25 8	1297.0	(11/2 ⁺)	0.0	9/2 ⁺		30 10
1421.0 5	8 3	3899.2		2478.3	(17/2)		
1808 1	3 2	4286.7		2478.3	(17/2)		
1808.3 2	100 10	1808.3	(13/2 ⁺)	0.0	9/2 ⁺	Q	100

[†] From 2009Po04. I γ are given relative to I γ (1808.5 γ)=100.

[‡] From $\gamma\gamma(\theta)$ in 2009Po04. The 179 γ -1808 γ and 491 γ -1808 γ cascades both indicate a D-Q cascade and the presence of the 511 γ -1297 γ cascade suggests the 1808 γ to have Q character.

[#] From 2006Fo13. I γ are given relative to I γ (1808.5 γ)=100.

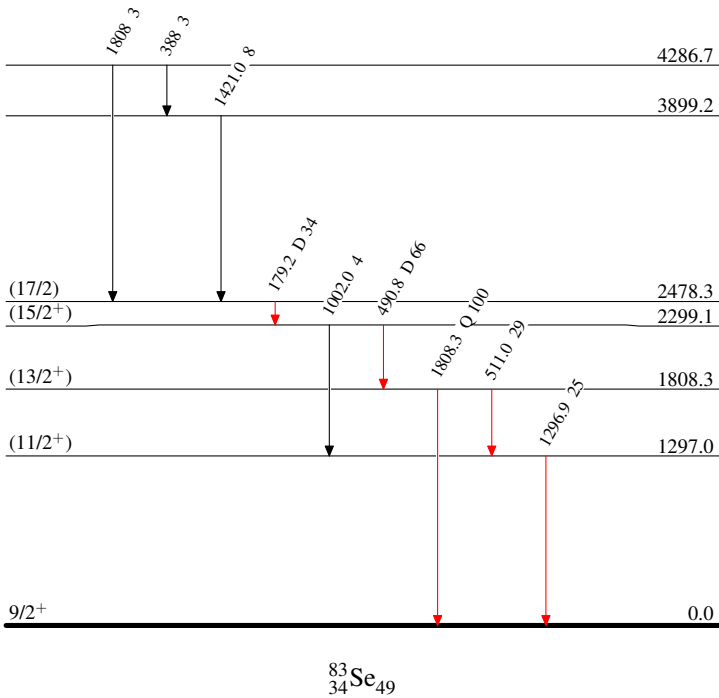
$^{208}\text{Pb}(^{18}\text{O},\text{X}\gamma)$ 2009Po04

Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



$^{208}\text{Pb}(^{18}\text{O},\text{X}\gamma)$ 2009Po04

