^{192}Os(^{82}Se,Xγ) 2004Zh27

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni, M. Fadil, and B. Pfeiffer	NDS 110,2815 (2009)	30-Sep-2009

E=460 MeV. Measured Eγ, Iγ, γγ, γγ(θ) with the 4π spectrometer GASP consisting of 40 Compton-suppressed, large-volume Ge detectors and of an inner BGO ball acting as a multiplicity filter and total-energy spectrometer.
Other works that quote these data from the same experiment: 2008SaZY, 2005Lu07, 2007De37, 2006ReZY, 2006ReZX, 2005Lu07.

^{84}Se Levels

E(level)[†]	Jπ[‡]	Comments
0.0[#]	0^+	
1454.71[#] *10*	(2^+)	
2121.72[#] *14*	(4^+)	
3370.7 *3*		
3537.1 *3*	(5^+)	
3701.9[#] *3*	(6^+)	
3862.7 *11*		
4406.2 *4*	(7^+)	Jπ: based on systematics, with reference to the N=50 ^{86}Kr nucleus.

[†] From least-squares fit to Eγ′s, assuming ΔEγ=1 keV when unknown.
[‡] From Adopted Levels.
[#] Band(A): Ground state sequence.

γ(^{84}Se)

R(ADO)=Iγ(34°)/Iγ(90°).

E_γ[†#]	I_γ[@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡&]	Comments
164.7 *5*	7.0 *14*	3701.9	(6^+)	3537.1	(5^+)	D	R(ADO)=0.60 *10*.
492.0[a]		3862.7		3370.7			
667.0 *1*	92 *18*	2121.72	(4^+)	1454.71	(2^+)	Q	R(ADO)=1.37 *5*.
704.3 *3*	12 *2*	4406.2	(7^+)	3701.9	(6^+)		
1249.0 *3*	11 *2*	3370.7		2121.72	(4^+)		
1415.3 *3*	28 *6*	3537.1	(5^+)	2121.72	(4^+)		R(ADO)=1.40 *15*.
1454.7 *1*	100 *20*	1454.71	(2^+)	0.0	0^+		R(ADO)=1.34 *7*.
1580.2 *3*	18 *4*	3701.9	(6^+)	2121.72	(4^+)	Q	R(ADO)=1.56 *22*.

[†] Cross γ-ray coincidences (the γ rays coming from the decay of the "target-like" fragments in coincidence with those coming from the "beam-like" reaction products) were used to distinguish between the different reaction partners, due to the nature of the binary reaction mechanism used in 2004Zh27.
[‡] Pure quadrupole (ΔJ=2) transitions have R(ADO) values ≈1.4, whereas R(ADO)≈0.8 for pure dipole; stretched quadrupole transitions cannot be distinguished from ΔJ=0 dipole transitions or certain M1+E2 admixtures of ΔJ=1 transitions (as stated by 2004Zh27).
[#] 2004Zh27 state that uncertainty ranges from 0.1-0.5 keV; Based on this statement, the compilers have assigned uncertainties with the following criterion: ΔEγ=0.1 keV for Iγ>30; ΔEγ=0.3 keV for 10≤Iγ≤30; ΔEγ=0.5 keV for Iγ<10.
[@] 2004Zh27 quote that the uncertainties in relative intensities are within 20%.
[&] From R(ADO).
[a] Placement of transition in the level scheme is uncertain.

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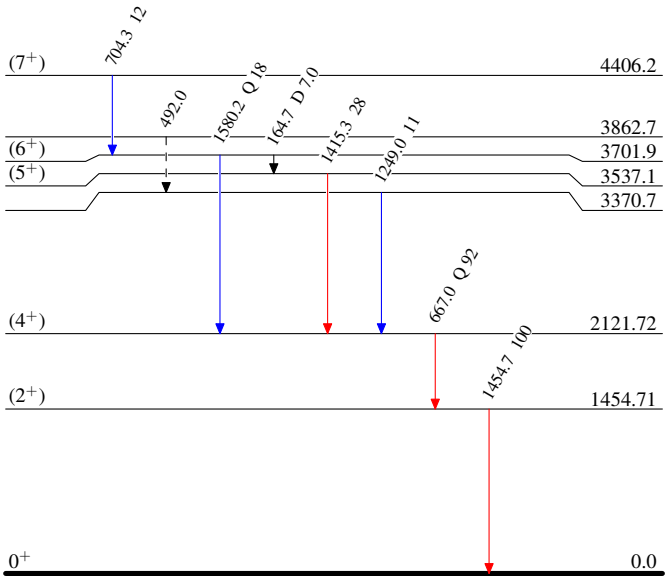
Level Scheme

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)



$^{84}_{34}Se_{50}$

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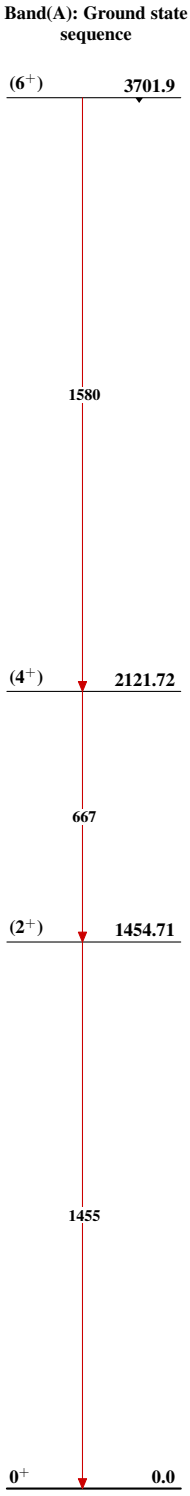

$^{84}_{34}Se_{50}$