^{192}Os(^{82}Se,Xγ) 2004Zh27,2004Po06

History

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

Based on 2004Po06 in XUNDL compiled by B. Singh (McMaster), August 5, 2004. Updated (to include 2004Zh27) by J. Roediger and B. Singh (McMaster), August 19, 2004.

2004Zh27, 2004Po06: E=460 MeV, GASP array. Measured Eγ, Iγ, $\gamma\gamma$ with the 4π spectrometer GASP comprising 40 Compton-suppressed Ge detectors and an inner BGO ball acting both as a multiplicity filter and a total-energy spectrometer.

All data have been taken from 2004Zh27 unless otherwise stated.

^{82}Ge Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0[@]	0$^+$	
1347.6[@] *1*	(2$^+$)[#]	
2028.6?[@] *4*	(4$^+$)	
2213.8 *4*	(2$^+$)[#]	
3606.1?[@] *5*	(6$^+$)	
3681.8? *5*		E(level): level proposed from gating on the 866.2 and 1347.6 transitions.

[†] From Eγ's.
[‡] Assigned on the basis of systematics, unless otherwise stated.
[#] From Adopted Levels. The low intensity of the 866.2 and 1347.6 transitions in 2004Zh27 did not permit determination of the γ-ray anisotropies.
[@] Band(A): Yrast structure.

γ(^{82}Ge)

E$_\gamma$[†‡]	I$_\gamma$[#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
681.0[@&] *3*	10 *2*	2028.6?	(4$^+$)	1347.6	(2$^+$)
866.2 *3*	12 *2*	2213.8	(2$^+$)	1347.6	(2$^+$)
1347.6 *1*	100 *20*	1347.6	(2$^+$)	0.0	0$^+$
1468.0[&] *5*		3681.8?		2213.8	(2$^+$)
1577.5[@&] *3*	18 *4*	3606.1?	(6$^+$)	2028.6?	(4$^+$)

[†] γ-rays have been assigned in 2004Zh27 based on the cross-coincidence relationship with the binary products and according to the expected systematic behaviour. 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.
[‡] 2004Zh27 state that uncertainty ranges from 0.1-0.5 keV; Based on this statement, the evaluators have assigned uncertainties with the following criterion: $\Delta E\gamma$=0.1 keV for Iγ>30 and $\Delta E\gamma$=0.3 keV for 10≤Iγ≤30.
[#] 2004Zh27 quote that the uncertainties in relative intensities are within 20%.
[@] Transition observed in double coincidence with the 1347.6 line and with the 316.5 transition of the binary reaction partner (−2p+2n)^{192}Pt but also present in ^{87}Kr (not in coincidence with the 1347.6γ).
[&] Placement of transition in the level scheme is uncertain.

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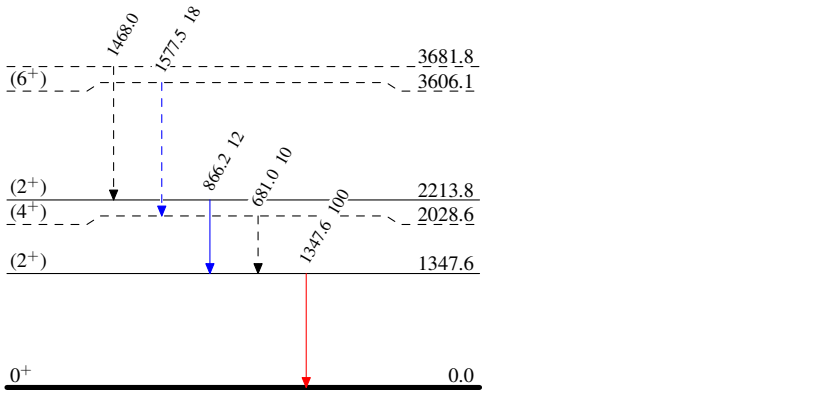
Level Scheme

Intensities: Relative I_γ



$^{82}_{32}Ge_{50}$

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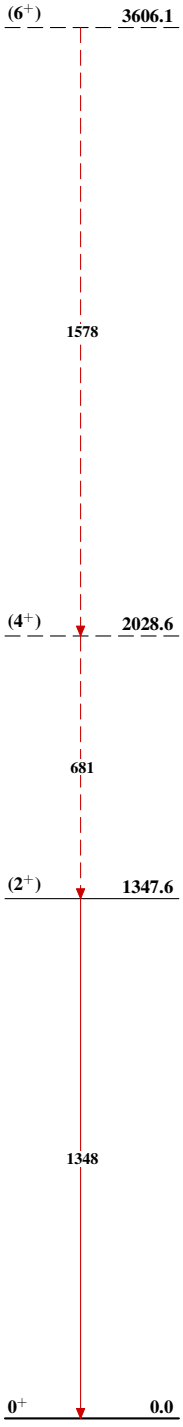
Band(A): Yrast structure



$^{82}_{32}Ge_{50}$