^{238}U(^{82}Se,Xγ), ^{192}Os(^{82}Se,Xγ) 2007De37

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)	NDS 129, 1 (2015)	27-Jul-2015

Multi-nucleon transfer and deep-inelastic reactions.

2007De37: E(^{82}Se)=505 MeV for ^{238}U target, 460 MeV for ^{192}Os target; isotopically enriched targets; thin target of ^{238}U studied with CLARA γ-ray spectrometer coupled with PRISMA magnetic spectrometer at Legnaro for A, Q identification; measured Eγ. Used thick target of ^{192}Os and GASP array (40 Compton-suppressed Ge detectors and an inner ball of BGO detectors) to measure $\gamma\gamma$ coin. Shell model calculations.

^{87}Kr Levels

E(level)†	J$^\pi$‡	Comments
0	$5/2^+$	J$^\pi$: From Adopted Levels.
1420	$(7/2^+)$	
1578	$(9/2^+)$	
1842	$(11/2^+)$	J$^\pi$: Adopted: $(9/2^+)$.
2106	$(11/2^-)$	J$^\pi$: Adopted: $(11/2^+)$ Not reported in (d,p).
2260	$(13/2^+)$	J$^\pi$: Adopted: $(11/2^-)$ L=(5) in the (d,p) dataset suggests π=− for this level. It seems unlikely that a $13/2^+$ level could be populated in (d,p).
2615		J$^\pi$: Adopted: $(13/2^+)$.
3526	$(17/2^+)$	J$^\pi$: Adopted: $(15/2^-)$.
4089		J$^\pi$: Adopted: $(17/2^-)$.

† From Eγ based on the assumption that the uncertainties are the same for all the Eγ values.

‡ Authors′ suggested values, based on shell model calculations including $1f_{5/2}$, $2p_{3/2}$, $2p_{1/2}$ and $1g_{9/2}$ active proton orbitals and a ^{78}Ni core. Assignments differ from those of 2006Po09 in (^{18}F,Fγ) above the 1578 keV level.

γ(^{87}Kr)

E$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
264	2106	$(11/2^-)$	1842	$(11/2^+)$
422	1842	$(11/2^+)$	1420	$(7/2^+)$
509	2615		2106	$(11/2^-)$
563	4089		3526	$(17/2^+)$
682	2260	$(13/2^+)$	1578	$(9/2^+)$
911	3526	$(17/2^+)$	2615	
1266	3526	$(17/2^+)$	2260	$(13/2^+)$
1420	1420	$(7/2^+)$	0	$5/2^+$
1578	1578	$(9/2^+)$	0	$5/2^+$

† From 2007De37, uncertainty unstated by authors.

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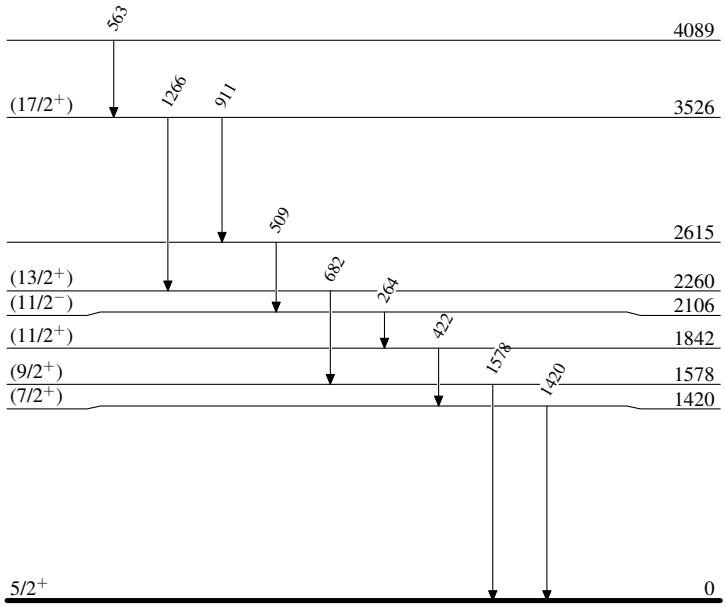
Level Scheme



$^{87}_{36}Kr_{51}$