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^{238}U(^{82}Se,^{83}Asγ)   **2012Sa46**

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

E(^{82}Se)=515 MeV. Reaction products separated by the PRISMA magnetic spectrometer and identified by ΔE measurement at the focal plane of the spectrometer. Measured Eγ, Iγ, γ(θ), γγ and recoil-γ coincidences using CLARA array consisting of 23 Compton-suppressed HPGe clover detectors. In a separate experiment, Eγ, Iγ, γγ and ADO ratios measured with the GASP array. Similar measurements are reported in 2008SaZY, 2008SaZU, 2008DeZP, 2007De37, 2006GaZV, and 2005Lu07.

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^{83}As Levels

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E(level)[†]	J$^\pi$[‡]
0	(5/2$^-$)
306 *1*	(3/2$^-$)
1542 *1*	(9/2)
1865 *1*	(11/2)
2776 *1*	
3093 *2*	(13/2)
3206 *2*	
3457 *2*	(15/2$^-$)

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

[‡] From the Adopted Levels. Based on systematics of neighboring N=50 nuclei, 2012Sa46 propose negative parity for the 1542-, 1865-, 3093-, and 3457-keV levels.

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γ(^{83}As)

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E$_\gamma$[†]	I$_\gamma$[#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	Comments
306 *1*	16 *6*	306	(3/2$^-$)	0	(5/2$^-$)		a$_2$=−0.7 *9*.
323 *1*	54 *8*	1865	(11/2)	1542	(9/2)	D	R$_{ADO}$=0.8 *1*; a$_2$=−0.14 *6*.
364 *1*	17 *7*	3457	(15/2$^-$)	3093	(13/2)	D	R$_{ADO}$=0.7 *1*; a$_2$=−0.01 *15*.
430 *1*	13 *3*	3206		2776		D	R$_{ADO}$=0.8 *2*; a$_2$=−0.08 *16*.
911 *1*	16 *4*	2776		1865	(11/2)	D	R$_{ADO}$=0.8 *1*.
1228 *1*	25 *7*	3093	(13/2)	1865	(11/2)	D	R$_{ADO}$=0.8 *1*; a$_2$=−0.17 *18*.
1234 *1*	17 *6*	2776		1542	(9/2)		
1542 *1*	100 *9*	1542	(9/2)	0	(5/2$^-$)	Q	R$_{ADO}$=1.2 *1*; a$_2$=0.45 *7*.

[†] Authors provide only a general statement that uncertainties are within 1 keV.

[‡] From γ(θ) and R$_{ADO}$. R$_{ADO}$ is γ-ray angular distribution from oriented nuclei where R=Iγ$_1$(at 35°(145°) gated by γ$_2$)/Iγ$_1$(at 90° gated by γ$_2$). R$_{ADO}$ ratios centered at 1.2 and 0.8 for stretched quadrupole and stretched dipole transitions, respectively.

[#] Relative intensities normalized to Iγ(1542γ)=100.

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Level Scheme

Intensities: Relative I$_\gamma$

Legend

→ I$_\gamma$ < 2%×I$_\gamma^{max}$
→ I$_\gamma$ < 10%×I$_\gamma^{max}$
→ I$_\gamma$ > 10%×I$_\gamma^{max}$

$^{83}_{33}$As$_{50}$

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