^{239}Pu(n,Fγ) 2002Ge07,2000Pi03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh	NDS 121, 143 (2014)	31-May-2014

Includes ^{241}Pu(n,Fγ).
2002Ge07, 2000Pi03: Measured Eγ, Iγ, $\gamma\gamma$, lifetimes using LOHENGRIN spectrometer, Ge and Si(Li) detectors.
All data are from 2002Ge07, unless otherwise stated.

^{129}Sn Levels

E(level)†	J$^\pi$‡	T$_{1/2}$@	Comments
0.0#	3/2$^+$#		
35.2# *3*	11/2$^-$#	6.9 min *1*	%β^-=100
1171.2 *3*	(15/2$^-$)		
1359.0 *3*	(13/2$^-$)		
1741.3 *3*	(15/2$^+$)		
1761.0 *4*	(19/2$^+$)	3.6 μs *2*	%IT=100
1802.0 *5*	(23/2$^+$)	2.4 μs *2*	%IT=100

† From Eγ data assuming Δ(Eγ)=0.2 keV as suggested in 2000Pi03.
‡ Based on the energy systematic arguments deduced from comparison with the known lighter Sn isotopes and shell model theory considerations, unless otherwise stated (2000Pi03).
# From Adopted Levels.
@ From 2002Ge07.

γ(^{129}Sn)

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	α‡	Comments
19.7		1761.0	(19/2$^+$)	1741.3	(15/2$^+$)	(E2)	963	α(L)=776 *11*; α(M)=159.7 *23*; α(N)=27.4 *4*; α(O)=0.578 *8* Mult.: half-life is characteristic of an E2 transition (2002Ge07).
41.0		1802.0	(23/2$^+$)	1761.0	(19/2$^+$)	(E2)	39.9	α(K)=13.64 *19*; α(L)=21.1 *3*; α(M)=4.37 *7*; α(N)=0.756 *11*; α(O)=0.0195 *3* Mult.: from K x ray intensity and L-conversion intensity.
382.2	46	1741.3	(15/2$^+$)	1359.0	(13/2$^-$)			
570.1	56	1741.3	(15/2$^+$)	1171.2	(15/2$^-$)			
1136.0	56	1171.2	(15/2$^-$)	35.2	11/2$^-$			
1323.8	44	1359.0	(13/2$^-$)	35.2	11/2$^-$			

† From 2000Pi03.
‡ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Level Scheme

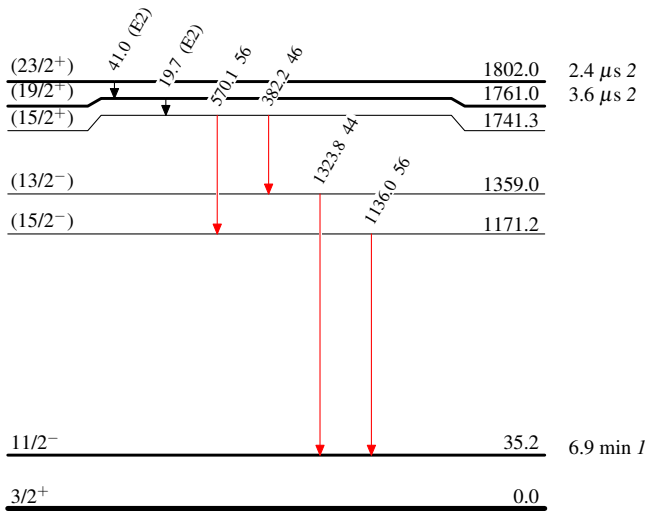
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{129}_{50}Sn_{79}$