^{248}Cm SF decay 1996Be06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 113, 715 (2012)	31-May-2011

Parent: ^{248}Cm: E=0.0; $J^\pi=0^+$; $T_{1/2}=3.48\times10^5$ y *6*; %SF decay=8.39 *16*

Eurogam with 5 LEPS, 45 Compton suppressed Ge detectors.

Measured $\gamma\gamma\gamma$, x$\gamma\gamma$. Observed coincidence with γ transitions in the fission-fragment pair ^{102}Mo.

^{143}Xe Levels

E(level)	J^π
0.0	$5/2^-$
78.8†	$(3/2,5/2,7/2)^+$
322.9†	
547.3	
567.0	
741.1†	
1008.2†	
1428.9†	
1962.7†	

† Band(A): γ cascade.

$\gamma(^{143}Xe)$

E_γ	I_γ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α‡	Comments
78.8		78.8	$(3/2,5/2,7/2)^+$	0.0	$5/2^-$	E1	0.411	α(K)exp=0.40 *34* α(K)=0.351 *5*; α(L)=0.0477 *7*; α(M)=0.00963 *14*; α(N+..)=0.00300 *5* Mult.: from α(K)exp.
174.0		741.1		567.0				
193.7	40 *2*	741.1		547.3				
224.4	62 *3*	547.3		322.9				
244.1	100 *3*	322.9		78.8	$(3/2,5/2,7/2)^+$			
244.1		567.0		322.9				
267.1	46 *2*	1008.2		741.1				
418.2	59 *3*	741.1		322.9				
420.7	34 *3*	1428.9		1008.2				
533.8		1962.7		1428.9				

† Intensity in coincidence with the 78.8γ. Authors state 3% to 10% uncertainty for strong to weak transitions.

‡ 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

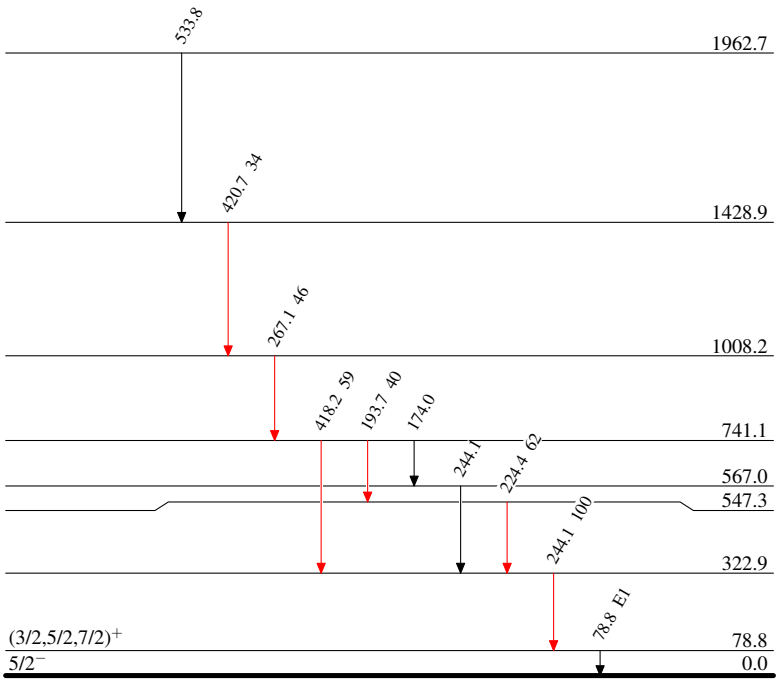
Intensities: Type not specified

Legend

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

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

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



$^{143}_{54}Xe_{89}$

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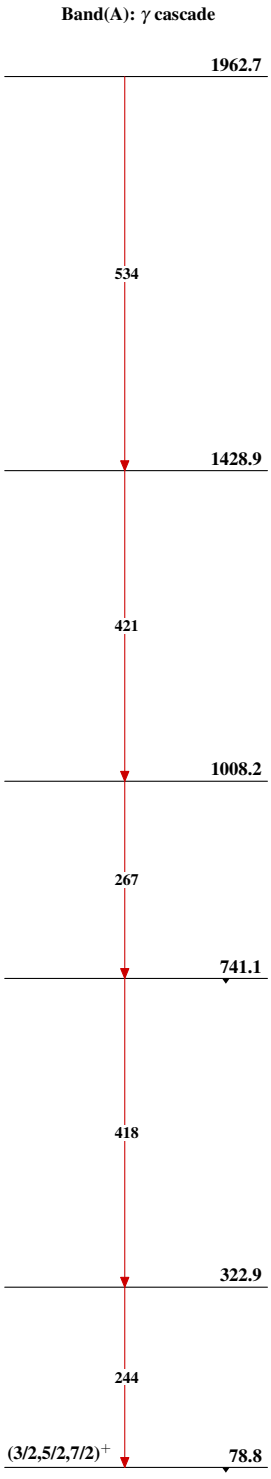

$^{143}_{54}Xe_{89}$