

$^{139}\text{La}(^{13}\text{C},5n\gamma)$ **1997Zh15**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh		NDS 181, 1 (2022)	9-Mar-2022

1997Zh15: E=98 MeV; measured E_γ , $\gamma\gamma$ and γ -ray angular distributions using an array of six HPGe detectors with anti-Compton shields at JAERI.

^{147}Eu Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0.0	5/2 ⁺	2994	23/2 ⁻ #	4904		6862	45/2
229	7/2 ⁺	3227	27/2 ⁻ #	5330	37/2	7064	
625	11/2 ⁻	3520	29/2 ⁺	5378	35/2 [#]	7625	
1345	15/2 ⁻	3792	31/2 ⁻ #	5591	39/2	7955	
1925	19/2 ⁻	4174	33/2 ⁺	5767	41/2	8005	
2291	23/2 ⁻	4240	31/2	6698	43/2	8052	
2347	21/2 ⁻	4282	31/2	6812		8137	
2898	27/2 ⁻	4609	33/2	6852			

[†] From **1997Zh15**.

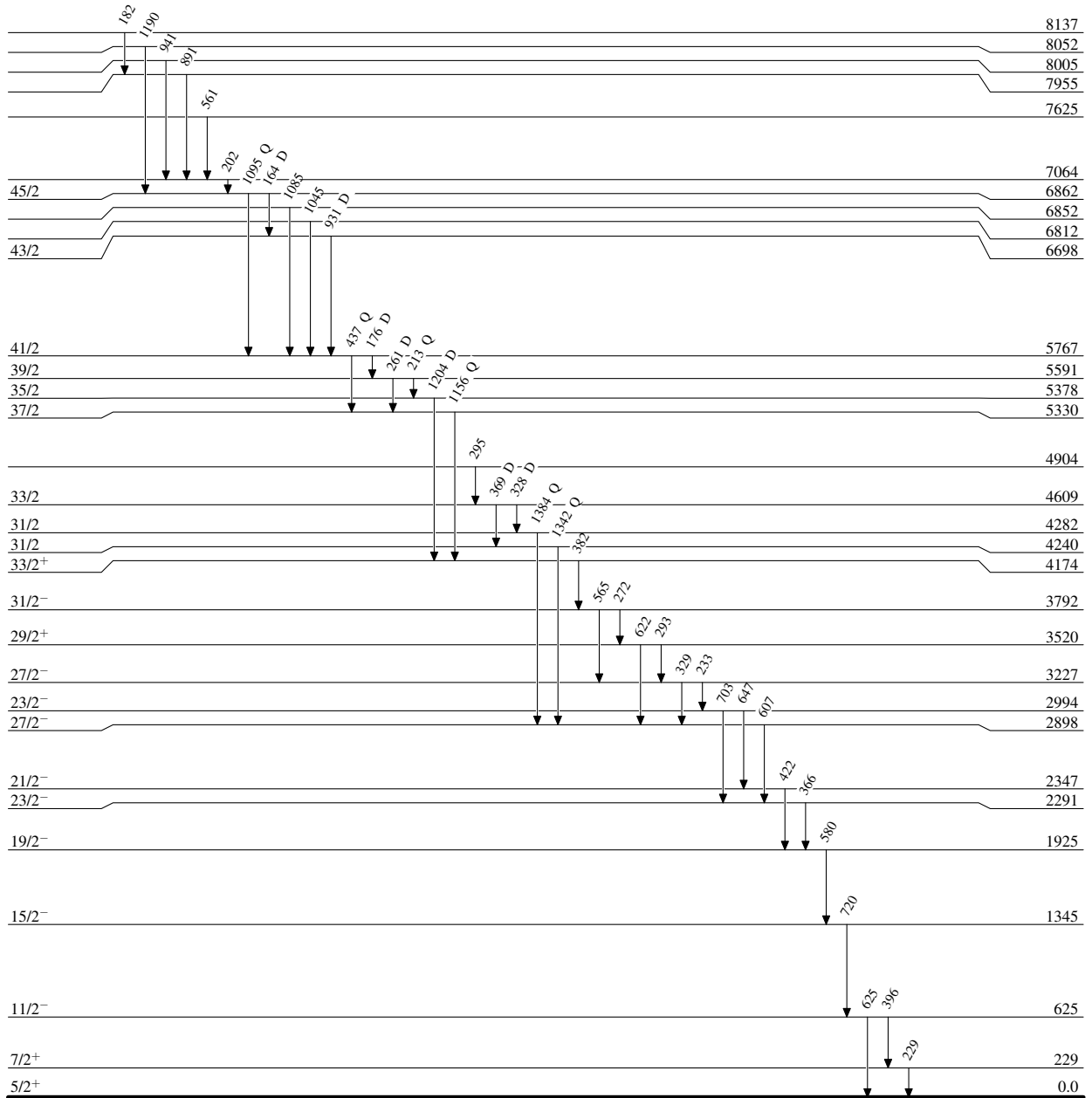
[‡] Deduced by **1997Zh15** based on measured mult's.

Differs from value in Adopted Levels.

$\gamma(^{147}\text{Eu})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]
164	6862	45/2	6698	43/2	D	565	3792	31/2 ⁻	3227	27/2 ⁻	
176	5767	41/2	5591	39/2	D	580	1925	19/2 ⁻	1345	15/2 ⁻	
182	8137		7955			607	2898	27/2 ⁻	2291	23/2 ⁻	
202	7064		6862	45/2		622	3520	29/2 ⁺	2898	27/2 ⁻	
213	5591	39/2	5378	35/2	Q	625	625	11/2 ⁻	0.0	5/2 ⁺	
229	229	7/2 ⁺	0.0	5/2 ⁺		647	2994	23/2 ⁻	2347	21/2 ⁻	
233	3227	27/2 ⁻	2994	23/2 ⁻		703	2994	23/2 ⁻	2291	23/2 ⁻	
261	5591	39/2	5330	37/2	D	720	1345	15/2 ⁻	625	11/2 ⁻	
272	3792	31/2 ⁻	3520	29/2 ⁺		891	7955		7064		
293	3520	29/2 ⁺	3227	27/2 ⁻		931	6698	43/2	5767	41/2	D
295	4904		4609	33/2		941	8005		7064		
328	4609	33/2	4282	31/2	D	1045	6812		5767	41/2	
329	3227	27/2 ⁻	2898	27/2 ⁻		1085	6852		5767	41/2	
366	2291	23/2 ⁻	1925	19/2 ⁻		1095	6862	45/2	5767	41/2	Q
369	4609	33/2	4240	31/2	D	1156	5330	37/2	4174	33/2 ⁺	Q
382	4174	33/2 ⁺	3792	31/2 ⁻		1190	8052		6862	45/2	
396	625	11/2 ⁻	229	7/2 ⁺		1204	5378	35/2	4174	33/2 ⁺	D
422	2347	21/2 ⁻	1925	19/2 ⁻		1342	4240	31/2	2898	27/2 ⁻	Q
437	5767	41/2	5330	37/2	Q	1384	4282	31/2	2898	27/2 ⁻	Q
561	7625		7064								

[†] Measured by **1997Zh15** (γ -ray angular distributions) but unreported; values adopted here are deduced by evaluator from ΔJ^π , only above $E_x=4174$ keV where mult's were not previously measured.

$^{139}\text{La}(^{13}\text{C},5n\gamma) \quad ^{1997}\text{Zh15}$ Level Scheme $^{147}_{63}\text{Eu}_{84}$