

¹⁴⁴Sm(³He,3nγ),(α,4nγ) 1984La29

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 93, 599 (2001)	1-Dec-2000

Measured: γ, γ(θ), γγ, γ(t), excitation functions.

See ¹⁴⁴Sm(α,4nγ) dataset for additional (α,4nγ) studies.

Level scheme, J^π assignments are as given by the authors. Level scheme in Radford-style format. Intensities were not tabulated.

¹⁴⁴Gd Levels

E(level)	J ^π	T _{1/2}	Comments
0.0	0 ⁺		
742.8	2 ⁺		
1701.9	3 ⁻		
1744.2	4 ⁺		
2302.2	5 ⁻		
2329.9	(4 ⁻)		
2441.8	5 ⁻		
2471.3	7 ⁻	13 ns	
2786.3	7 ⁻		
2861.7	(6 ⁺)		
3017.7	8 ⁻		
3243.7	8 ⁻		
3345.5	9 ⁻		
3432.9	10 ⁺	131 ns	Configuration=(π 1h _{11/2}) ² .
3696.7	10 ⁺		Configuration=(ν 1h _{11/2}) ⁻² .
3909.7	10 ⁻		
4144.3	11 ⁺		Configuration=(π h _{11/2} ² x ν ₂₊ ⁻²) ¹¹⁺ .
4266.8	11 ⁻		
4450.7	12 ⁺		Configuration=(π h _{11/2} ² x ν ₂₊ ⁻²) ¹²⁺ .
4755.8	12 ⁺		
5133.6	13 ⁺		
5179.2	12		
5369.5	14		
5496.7	13		
5625.8	14		
5722	15		
5834	15		

γ(¹⁴⁴Gd)

E _γ	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ	E _i (level)	J _i ^π	E _f	J _f ^π
87.3	3432.9	10 ⁺	3345.5	9 ⁻	352.9	5722	15	5369.5	14
101.7	3345.5	9 ⁻	3243.7	8 ⁻	377.8	5133.6	13 ⁺	4755.8	12 ⁺
129.1	5625.8	14	5496.7	13	415.3	3432.9	10 ⁺	3017.7	8 ⁻
139.7 [†]	2441.8	5 ⁻	2302.2	5 ⁻	457.3	3243.7	8 ⁻	2786.3	7 ⁻
169.1	2471.3	7 ⁻	2302.2	5 ⁻	492.2	5625.8	14	5133.6	13 ⁺
208.5	5834	15	5625.8	14	546.4	3017.7	8 ⁻	2471.3	7 ⁻
226.1	3243.7	8 ⁻	3017.7	8 ⁻	558.0	2302.2	5 ⁻	1744.2	4 ⁺
231.5	3017.7	8 ⁻	2786.3	7 ⁻	564.3 [†]	3909.7	10 ⁻	3345.5	9 ⁻
235.9	5369.5	14	5133.6	13 ⁺	600.3	2302.2	5 ⁻	1701.9	3 ⁻
263.8 [†]	3696.7	10 ⁺	3432.9	10 ⁺	611.5	4755.8	12 ⁺	4144.3	11 ⁺
315.0	2786.3	7 ⁻	2471.3	7 ⁻	628.0 [†]	2329.9	(4 ⁻)	1701.9	3 ⁻
327.8	3345.5	9 ⁻	3017.7	8 ⁻	697.6 [†]	2441.8	5 ⁻	1744.2	4 ⁺
351.3	3696.7	10 ⁺	3345.5	9 ⁻	711.4	4144.3	11 ⁺	3432.9	10 ⁺

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$^{144}\text{Sm}({}^3\text{He},3n\gamma),(\alpha,4n\gamma)$ 1984La29 (continued) $\gamma(^{144}\text{Gd})$ (continued)

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
728.5	5179.2	12	4450.7	12 ⁺	989.3	5133.6	13 ⁺	4144.3	11 ⁺
742.8	742.8	2 ⁺	0.0	0 ⁺	1001.4	1744.2	4 ⁺	742.8	2 ⁺
892.0 [†]	3909.7	10 ⁻	3017.7	8 ⁻	1017.8	4450.7	12 ⁺	3432.9	10 ⁺
921.3	4266.8	11 ⁻	3345.5	9 ⁻	1046.0	5496.7	13	4450.7	12 ⁺
959.1	1701.9	3 ⁻	742.8	2 ⁺	1117.5 [†]	2861.7	(6 ⁺)	1744.2	4 ⁺

[†] Seen only in (${}^3\text{He},3n\gamma$).

$^{144}\text{Sm}(^3\text{He},3n\gamma),(\alpha,4n\gamma)$ 1984La29

Level Scheme

