^{142}Nd(α,2nγ) 1993Ri07

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

E=24.5 MeV; measured γ, $\gamma\gamma$, $\gamma(\theta)$, γ polarization, excitation function. OSIRIS array consisting of five Compton-suppressed Ge detectors plus Compton polarimeter (5 coaxial Ge detectors).

Authors report no γ-ray data. They mention the identification of 86 excited stated below the 5361 keV *13-* level, but list energies for only 35 of them.

See also the ^{142}Nd(α,2nγ),^{144}Nd(α,4nγ) dataset for additional (α,2nγ) data.

^{144}Sm Levels

E(level)	J$^\pi$†	E(level)	J$^\pi$†	E(level)	J$^\pi$†	E(level)	J$^\pi$†
0.0‡	0^+	2688@	3^+	3266#	6^-	3523	(4)
1660‡	2^+	2707@	5^+	3308*d*	4^-	3535*e*	(6^-)
1810#	3^-	2800*a*	2^+	3360*d*	3^-	3597*e*	(4^-)
2191‡	4^+	2826#	5^-	3376*e*	8^-	3669	5^-
2323@	6^+	2883*b*	4^+	3405	(3^-)	3698	(7^-)
2423&	2^+	3019*a*	4^+	3444*e*	7^-	3724	8^-
2478*a*	0^+	3079*a*	6^+	3461*e*	9^-	5361	13^-
2588@	4^+	3119#	(4^-)	3469*e*	5^-		
2645@	$1^{(+)}$	3124#	7^-	3493	(4^+)		
2661@	(2^+)	3196*c*	5^-	3519#	8^-		

† As given by authors, from $\gamma(\theta)$ and γ polarization.

‡ Configuration: $\pi\ d_{5/2}^{-2}$.

Configuration: $\pi\ d_{5/2}^{-1}\ h_{11/2}$.

@ Configuration: $\pi\ d_{5/2}^{-1}\ g_{7/2}^{-1}$.

& Configuration: $\pi\ d_{5/2}^{-1}\ s_{1/2}$.

a Configuration: $\pi\ g_{7/2}^{-2}$.

b Configuration: $\pi\ d_{5/2}^{-1}\ d_{3/2}$.

c Configuration: $2^+ \times 3^-$.

d Configuration: $\nu\ f_{7/2}\ d_{3/2}^{-1}$.

e Configuration: $\pi\ g_{7/2}^{-1}\ h_{11/2}$.