^{143}Nd(γ,γ') 1995He05

History

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

Bremsstrahlung radiation ≤3 MeV.
Others: 1992ZiZX, 1993Vo05, 1993Zi03, 1994KnZZ (all are same group as 1995He05).
Levels above 2.8 MeV have large B(E1)↑ values and are expected to be of two-phonon-particle, $2^+\otimes3^-\otimes$f7/2, structure.

^{143}Nd Levels

E(level)	J^π	$T_{1/2}$	L	$g\Gamma_{\gamma0}$ or $\Gamma_{\gamma0}$ (meV)[†]	Comments
1407 *1*	$9/2^-$[@]	53 fs *+26–13*	E2	9 *3*	
1431 *1*	$11/2^-$[‡]	68 fs *+33–17*	E2	6.7 *22*	$T_{1/2}$: from integrated cross section. $T_{1/2}$=135 fs *14* in Coul ex.
1555 *1*	$5/2^-$[‡]	186 fs *+70–43*	E2	22 *6*	$T_{1/2}$: assuming 11% branch to 742 level.
1690 *1*				11 *4*	
1739 *1*	$9/2^-$[@]	63 fs *+25–14*	E2	7.1 *20*	$T_{1/2}$: assuming 2% branch to 1431 level.
1851 *1*	$7/2^-$[‡]	50 fs *+19–11*	E2	9 *3*	
1911 *1*	$5/2^-$[‡]	67 fs *+24–14*	E2	6.8 *18*	
1995 *1*	$5/2^+$[#]	<0.1 ps	E1	5.7 *23*	
2011 *1*	$9/2^+$[#]	27 fs *+3–2*	E1	17.2 *15*	
2091 *1*	$7/2^+$[#]	≈30 fs	E1	15 *8*	
2222 *1*	$5/2^+$	<0.1 ps	E1	6.2 *16*	
2317 *1*	(7/2)		(E1,M1)	2.7 *14*	
2415 *1*				7.4 *17*	
2493 *1*				7.1 *16*	
2554 *1*				6.0 *20*	
2558 *1*	$(9/2)^+$	25 fs *+5–4*	E1	19 *3*	
2629 *1*				4.2 *14*	
2926 *1*				79 *6*	
2968 *1*				27 *3*	
3046 *1*				34 *3*	
3073 *1*				24 *3*	
3081 *1*				12.0 *25*	
3089 *1*				10.3 *12*	
3214 *1*				45 *10*	
3246 *1*				66 *6*	
3269 *1*				47 *5*	
3317 *1*				26 *4*	
3448 *1*				20 *4*	
3519 *1*				26 *4*	
3759 *1*				43 *8*	

[†] g=(2J+1)/(2J_0+1). $\Gamma_{\gamma0}$ given where J is known.
[‡] Member of $2^+\otimes$f7/2 multiplet.
[#] Member of $3^-\otimes$f7/2 multiplet.
[@] Configuration=((ν h9/2)+$2^+\otimes$f7/2).