Coulomb excitation 1984Dr03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 110, 507 (2009)	1-Oct-2008

^{145}Nd(x,x′γ).
X=p, E=2.2 MeV (1955Si12).
X=α, E=11.2 MeV (1984Dr03).
X=^{14}N, E=52 MeV (1963Al30).
X=^{16}O, E=45 MeV (1966Ec02), 35-45 MeV (1984Dr03).
Measured: σ(E), γ, $\gamma(\theta)$, yield.

^{145}Nd Levels

E(level)	J^{π}†	$T_{1/2}$	Comments
0.0	$7/2^-$		
67.1	$3/2^-$		
72.5	$5/2^-$		
657.4	$11/2^-$		
748.1	$9/2^-$	3.7 ps *11*	B(E2)↑=0.030 *2* (1984Dr03) B(E2)↑: Other: 0.017 (1963Al30). $T_{1/2}$: from B(E2)=0.030 *2*, branching=0.52 *1* and δ=+1.30 *45* (n,n′γ).
780.2	$3/2^-$	0.9 ps *2*	B(E2)↑=0.020 *3* (1984Dr03) $T_{1/2}$: from B(E2)=0.020 *3*, branching=0.18 *2*.
920.8	$9/2^-$	0.73 ps *15*	B(E2)↑=0.036 *2* (1984Dr03) B(E2)↑: Other: 0.026 (1963Al30). $T_{1/2}$: from B(E2)=0.036 *2*, branching=0.683 *3*, δ=+0.75 *11*.
1051.3	$7/2^-$,$5/2^-$		B(E2)↑=0.012 *5* (1984Dr03) B(E2)↑: Other: 0.058 (1963Al30).
1162.3	$9/2^-$		B(E2)↑=0.023 *4* (1984Dr03)

† Adopted values.

$\gamma(^{145}Nd)$

E_γ	I_γ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
67.1	100	67.1	$3/2^-$	0.0	$7/2^-$			
72.5	100	72.5	$5/2^-$	0.0	$7/2^-$			
91.0	2 *1*	748.1	$9/2^-$	657.4	$11/2^-$			
263.1	2 *2*	920.8	$9/2^-$	657.4	$11/2^-$			
303.0	6 *2*	1051.3	$7/2^-$,$5/2^-$	748.1	$9/2^-$			
504.6	5 *2*	1162.3	$9/2^-$	657.4	$11/2^-$			
657.4	100	657.4	$11/2^-$	0.0	$7/2^-$	E2		Mult.: A_2=+0.119 *1*, A_4=−0.002 *1*.
675.5	44 *1*	748.1	$9/2^-$	72.5	$5/2^-$	E2		Mult.: A_2=+0.077 *12*, A_4=−0.010 *14*.
707.8	44 *1*	780.2	$3/2^-$	72.5	$5/2^-$			
713.6	37 *1*	780.2	$3/2^-$	67.1	$3/2^-$			
748.1	54 *1*	748.1	$9/2^-$	0.0	$7/2^-$			
780.2	18 *1*	780.2	$3/2^-$	0.0	$7/2^-$			
848.2	30 *2*	920.8	$9/2^-$	72.5	$5/2^-$			
920.8	67 *2*	920.8	$9/2^-$	0.0	$7/2^-$	M1+E2	+0.75 *11*	Mult.: A_2=+0.018 *7*, A_4=−0.003 *7*.
979.0	55 *9*	1051.3	$7/2^-$,$5/2^-$	72.5	$5/2^-$			
1051.3	39 *9*	1051.3	$7/2^-$,$5/2^-$	0.0	$7/2^-$			
1089.8	15 *2*	1162.3	$9/2^-$	72.5	$5/2^-$			
1162.3	80 *2*	1162.3	$9/2^-$	0.0	$7/2^-$	M1+E2	−0.87 *+48−83*	Mult.: A_2=−0.168 *7*, A_4=+0.032 *8*.

† Branching from each of excited levels.

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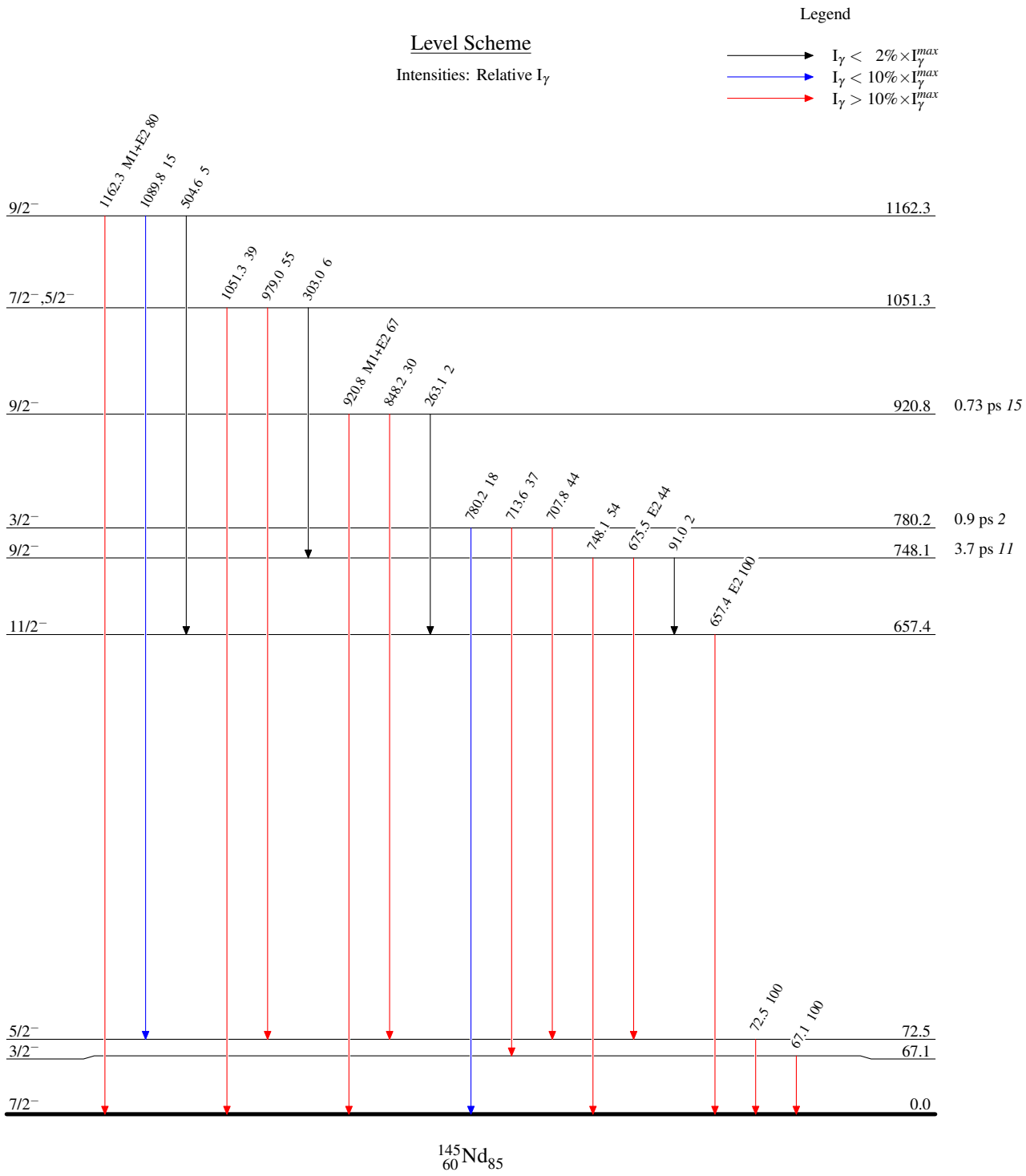
Level Scheme

Intensities: Relative I_γ



$^{145}_{60}Nd_{85}$