^{148}Nd(d,3nγ) 1995Ur01

History

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

1995Ur01: E(d)=18 MeV; measured Eγ, Iγ, ce, ceγ coin, $\gamma\gamma$ using Orsay electron spectrometer and Ge detectors.

^{147}Pm Levels

E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡	E(level)†	J$^\pi$‡
0.0	7/2$^+$	489.36 *15*	7/2$^+$	730.70 *18*	9/2$^+$	1077.56 *24*	(11/2$^+$)
91.11 *9*	5/2$^+$	531.02 *14*	5/2$^+$	807.3 *4*		1434.2 *3*	(13/2$^+$)
410.66 *15*	3/2$^+$	686.06 *16*	5/2$^+$	1049.09 *25*	(7/2$^+$)		

† Deduced by evaluator from least-squares fit to Eγ data.
‡ As proposed by 1995Ur01 from multipolarities deduced form ce data, and previous assignments for low-lying levels.

γ(^{147}Pm)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†	α‡	Comments
91.1 *1*	100	91.11	5/2$^+$	0.0	7/2$^+$	M1+E2	2.6 *6*	α(K)exp=1.4 *3* α(K)=1.63 *9*; α(L)=0.75 *52*; α(M)=0.17 *12*
120.1 *3*	3 *1*	531.02	5/2$^+$	410.66	3/2$^+$	M1+E2	1.05 *13*	α(K)exp=1.3 *4* α(K)=0.74 *4*; α(L)=0.24 *13*; α(M)=0.053 *30*
196.6 *3*	5 *2*	686.06	5/2$^+$	489.36	7/2$^+$			
241.4 *3*	15 *3*	730.70	9/2$^+$	489.36	7/2$^+$	M1+E2	0.121 *13*	α(K)exp=0.10 *2* α(K)=0.098 *16*; α(L)=0.0180 *25*; α(M)=0.0039 *7*
275.5 *3*	7 *2*	686.06	5/2$^+$	410.66	3/2$^+$			α(K)exp=0.025 *12* Mult.: 1995Ur01 give E1 from α(K)exp, but M1 or M1+E2 is expected from their J^π assignments of the two levels connected by this transition.
319.5 *2*	36 *4*	410.66	3/2$^+$	91.11	5/2$^+$	M1+E2	0.054 *10*	α(K)exp=0.033 *8* α(K)=0.045 *10*; α(L)=0.00732 *11*; α(M)=0.00159 *3* δ: α(K)exp gives δ>1.5, but −0.37 *1* in the Adopted Gammas.
346.8 *3*	12 *3*	1077.56	(11/2$^+$)	730.70	9/2$^+$			
356.5 *3*	5 *2*	1434.2	(13/2$^+$)	1077.56	(11/2$^+$)			
363.1 *3*	5 *2*	1049.09	(7/2$^+$)	686.06	5/2$^+$			
398.2 *2*	43 *4*	489.36	7/2$^+$	91.11	5/2$^+$	M1+E2	0.029 *7*	α(K)exp=0.018 *5* α(K)=0.025 *6*; α(L)=0.0038 *4*; α(M)=0.00082 *7* δ: α(K)exp gives δ>1.3, but +0.30 *3* in the Adopted Gammas.
410.6 *3*	4 *2*	410.66	3/2$^+$	0.0	7/2$^+$			
439.9 *2*	31 *7*	531.02	5/2$^+$	91.11	5/2$^+$			
489.3 *3*	11 *3*	489.36	7/2$^+$	0.0	7/2$^+$			
518.0 *3*	6 *2*	1049.09	(7/2$^+$)	531.02	5/2$^+$			
531.1 *2*	25 *5*	531.02	5/2$^+$	0.0	7/2$^+$			
588.1 *3*	11 *3*	1077.56	(11/2$^+$)	489.36	7/2$^+$			
595.0 *3*	7 *2*	686.06	5/2$^+$	91.11	5/2$^+$			
639.6 *2*	21 *4*	730.70	9/2$^+$	91.11	5/2$^+$			
686.1 *3*	18 *4*	686.06	5/2$^+$	0.0	7/2$^+$			
703.7 *3*	10 *3*	1434.2	(13/2$^+$)	730.70	9/2$^+$			
716.2 *3*	12 *3*	807.3		91.11	5/2$^+$			

Continued on next page (footnotes at end of table)

^{148}Nd(d,3nγ) 1995Ur01 (continued)

$\gamma(^{147}Pm)$ (continued)

† Based on α(K)exp (1995Ur01).

‡ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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Level Scheme

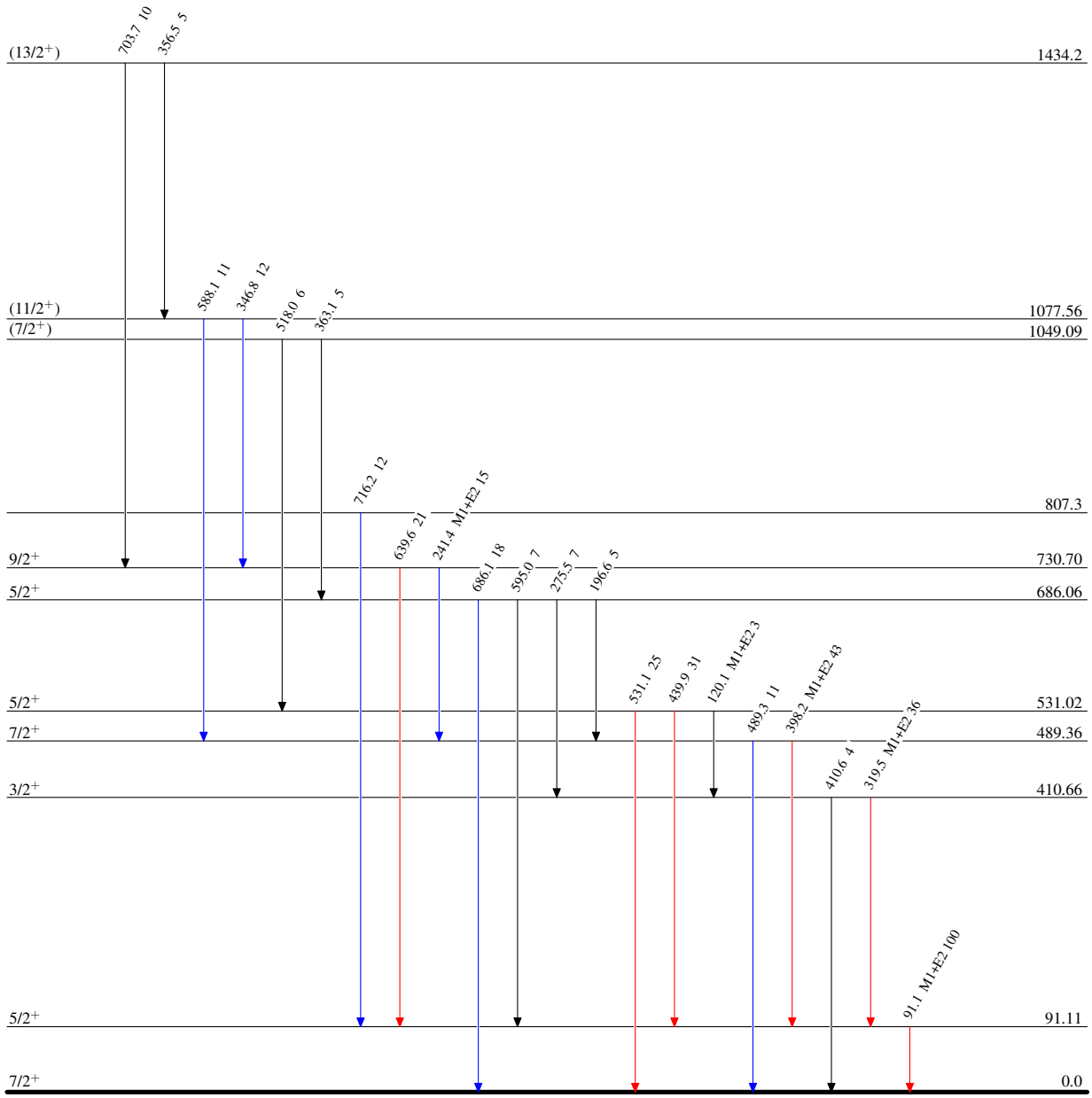
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{147}_{61}Pm_{86}$