Coulomb excitation **1988Os01,1978Br20,1965Er08**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 112,2497 (2011)	1-Jun-2011

Additional information 1.

Data are primarily from 1988Os01 (with 250-MeV ^{58}Ni beam) and secondarily from 1978Br20 (with 12-MeV α beam) and 1965Er08 (with 52-MeV N beam). Others: 1967As03, 1960Be16.

^{161}Dy Levels

E(level)†	Jπ‡	$T_{1/2}$#	Comments
0	$5/2^+$	stable	
44.0	$7/2^+$	0.78 ns *6*	B(E2)↑=2.43 *7* B(E2)↑: from 1978Br20. Other: 2.4 *6* (1960Be16). $T_{1/2}$: from 1967As03.
74.5	$3/2^-$		
100.6	$9/2^+$	0.22 ns *3*	B(E2)↑=0.79 *4* B(E2)↑: from 1978Br20. Other: 0.59 *14* (1960Be16). $T_{1/2}$: computed by the evaluator from the listed B(E2) and the properties of the deexciting γ's as taken from the Adopted Gammas.
184.5	$11/2^+$	156 ps *14*	
267.7	$13/2^+$	100 ps *9*	
407.2	$15/2^+$	42 ps *5*	
508.3	$17/2^+$	33 ps *3*	
550	$(3/2^+)$		B(E2)↑=0.032 *10* B(E2)↑: from 1965Er08. $T_{1/2}$: half-life could be deduced from B(E2) value, but conflicting values have been given for δ of the 550 G.
718.6	$19/2^+$	11.2 ps *12*	
770			B(E2)↑=0.077 *24* E(level): this is presumably the same as the 772.1 level ($J^\pi=7/2^+$), seen in the ^{161}Ho ε decay. B(E2)↑: from 1965Er08.
826.2	$21/2^+$	10.3 ps *10*	
1118.3	$23/2^+$	3.5 ps *4*	
1221.9	$25/2^+$	3.0 ps *6*	
1601.9	$27/2^+$		

† From least-squares fit to γ energies.

‡ From Coul. ex. data; values agree with the Adopted Values.

All values are from measurements following Coul. ex. See Adopted Levels for values from other excitation modes for the 44.0 level. Values are from 1988Os01 by Doppler-shift, recoil-distance method.

$\gamma(^{161}Dy)$

E_γ†	I_γ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ#
56.64 *30*	100	100.6	$9/2^+$	44.0	$7/2^+$	[M1,E2]	
83.2 *3*	75 *10*	267.7	$13/2^+$	184.5	$11/2^+$	[M1+E2]	−0.14 *2*
83.83 *30*	100	184.5	$11/2^+$	100.6	$9/2^+$	[M1+E2]	−0.25 *7*
100.64 *10*	29 *4*	100.6	$9/2^+$	0	$5/2^+$	[E2]	
101.1 *3*	21.4 *8*	508.3	$17/2^+$	407.2	$15/2^+$	[M1+E2]	−0.05 *2*
103.6 *3*		1221.9	$25/2^+$	1118.3	$23/2^+$	[M1+E2]	−0.03 *3*
107.6 *3*	6.1 *14*	826.2	$21/2^+$	718.6	$19/2^+$	[M1+E2]	−0.05 *2*
139.5 *3*	78 *11*	407.2	$15/2^+$	267.7	$13/2^+$	[M1+E2]	−0.27 *3*

Continued on next page (footnotes at end of table)

Coulomb excitation 1988Os01,1978Br20,1965Er08 (continued)

$\gamma(^{161}Dy)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[#]	Comments
140.38 *30*	74 *10*	184.5	$11/2^+$	44.0	$7/2^+$			Additional information 2.
167.0 *3*	100	267.7	$13/2^+$	100.6	$9/2^+$			
210.3 *3*	25.8 *14*	718.6	$19/2^+$	508.3	$17/2^+$	[M1+E2]	−0.27 *4*	
222.8 *3*	100	407.2	$15/2^+$	184.5	$11/2^+$			
240.7 *3*	100	508.3	$17/2^+$	267.7	$13/2^+$			
292.1 *3*	23 *5*	1118.3	$23/2^+$	826.2	$21/2^+$	[M1+E2]	−0.23 *7*	
311.6 *3*	100	718.6	$19/2^+$	407.2	$15/2^+$			
318.1 *3*	100	826.2	$21/2^+$	508.3	$17/2^+$			
380.0 *3*		1601.9	$27/2^+$	1221.9	$25/2^+$			
395.9 *3*		1221.9	$25/2^+$	826.2	$21/2^+$			
399.6 *3*	100	1118.3	$23/2^+$	718.6	$19/2^+$			
470[@]		550	$(3/2^+)$	74.5	$3/2^-$			
482.9 *3*		1601.9	$27/2^+$	1118.3	$23/2^+$			
550[@]		550	$(3/2^+)$	0	$5/2^+$			
670[@]		770		100.6	$9/2^+$			
770[@]		770		0	$5/2^+$			

[†] From 1988Os01, unless otherwise noted. Other: 1965Er08.
[‡] Normalized to 100 for one γ from each level; from 1988Os01. Others: 1966Bo16 (one ratio); and 1965Er08 (two ratios).
[#] From $\gamma\gamma(\theta)$ (DCO ratios), measured by 1988Os01, and are adopted.
[@] From 1965Er08 only.

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Level Scheme

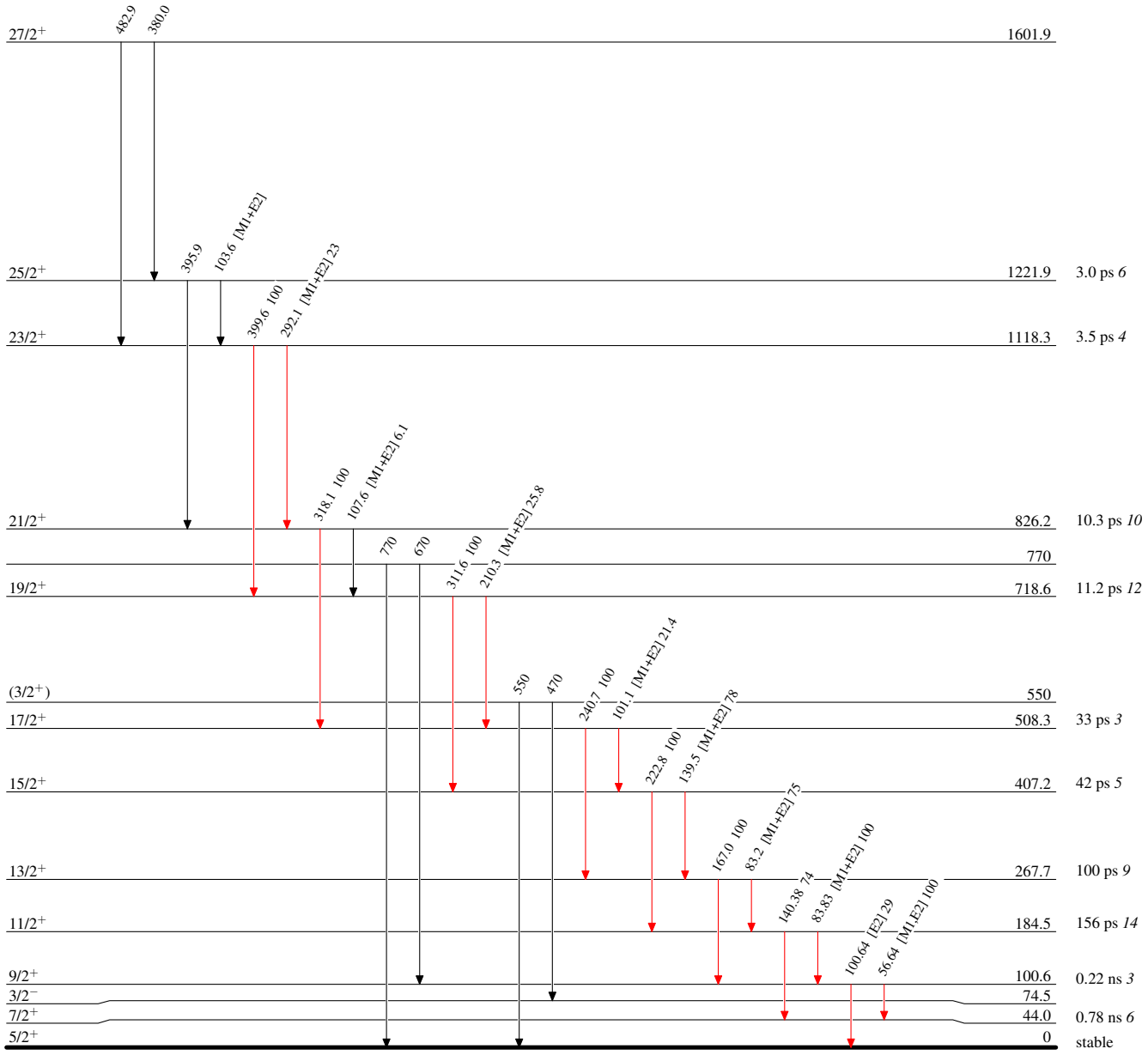
Intensities: Type not specified

Legend

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

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

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



$^{161}_{66}Dy_{95}$