^{152}Sm(p,2nγ) E=18.8 MeV 1976Ta10

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 110, 1 (2009)	20-Nov-2008

1976Ta10: measured γ, $\gamma\gamma$, $\gamma(\theta)$.
For levels and radiation data, consult ENSDF database (http://www.nndc.bnl.gov/ensdf/) and/or Nuclear Data Sheets 80, 263 (1997).

^{151}Eu Levels

E(level)	J$^\pi$†
0.0	5/2$^+$
21.542 *3*	7/2$^+$
196.2 *1*	11/2$^-$
260.5 *3*	5/2$^+$
415.9 *3*	(7/2$^+$)
600.4 *5*	
611.9 *5*	13/2$^-$
1041.4 *8*	17/2$^-$

† From 'Adopted Levels'.

$\gamma(^{151}Eu)$

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Comments
21.542 *3*		21.542	7/2$^+$	0.0	5/2$^+$	E$_\gamma$: from 'adopted gammas'.
155.5 *5*	14 *3*	415.9	(7/2$^+$)	260.5	5/2$^+$	
174.7 *1*		196.2	11/2$^-$	21.542	7/2$^+$	E$_\gamma$: from 'adopted gammas'.
184.5 *5*	13.5 *20*	600.4		415.9	(7/2$^+$)	
239.0 *5*	100	260.5	5/2$^+$	21.542	7/2$^+$	
^{x}244.8† *5*	50 *25*					Deexcitation from a 845 level (1976Ta10) seems incorrect. It is considered suspect since not reported in any other study.
260.5 *5*	62 *10*	260.5	5/2$^+$	0.0	5/2$^+$	
340.0 *5*	27 *6*	600.4		260.5	5/2$^+$	
394.4 *5*	53 *6*	415.9	(7/2$^+$)	21.542	7/2$^+$	
415.7 *5*		415.9	(7/2$^+$)	0.0	5/2$^+$	I$_\gamma$: 38 *11* from Iγ(416γ)/Iγ(394γ)=0.72 *20* in 'adopted gammas'. 1976Ta10 show this γ as deexciting the 416 level only, but it mainly deexcites the 612 level.
415.7 *5*	160 *15*	611.9	13/2$^-$	196.2	11/2$^-$	I$_\gamma$: based on Iγ(416γ)/Iγ(394γ)=0.72 *20* in 'adopted gammas', I$\gamma\approx$38 should be associated with 416 level.
429.5 *5*	35 *7*	1041.4	17/2$^-$	611.9	13/2$^-$	Deexcitation from a 845 level (1976Ta10) seems incorrect.

† Placement of transition in the level scheme is uncertain.
^{x} γ ray not placed in level scheme.

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Level Scheme

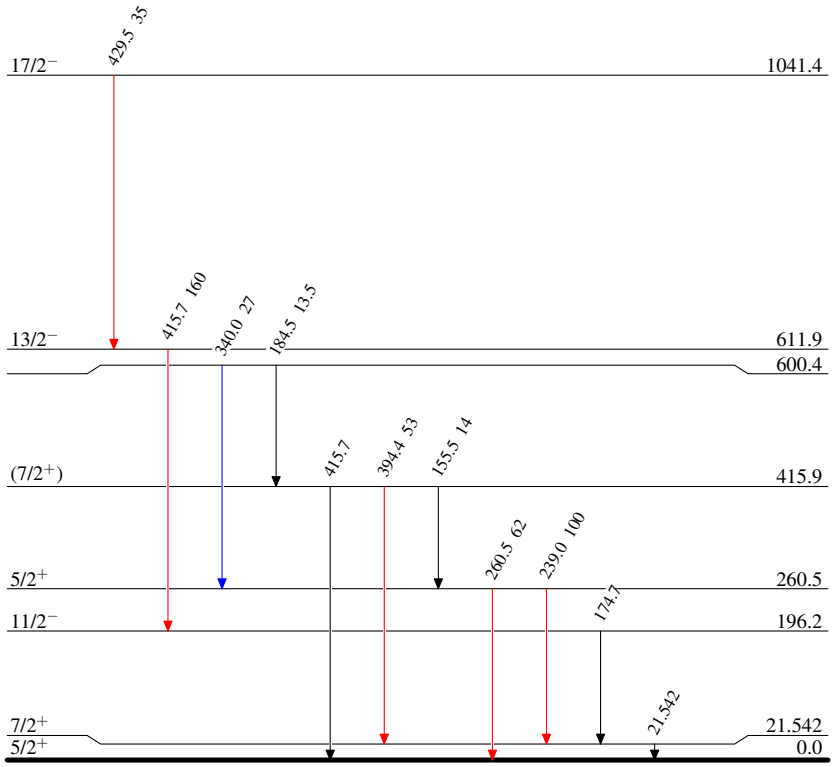
Intensities: Relative I_γ

Legend

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

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

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



$^{151}_{63}Eu_{88}$