Coulomb excitation 1968Fr01,1966Ry01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. M. Baglin[1], E. A. Mccutchan[2], S. Basunia[1]	NDS 153, 1 (2018)	1-Oct-2018

1968Fr01: ^{170}Tm(d,d′), E=5.5 MeV; measured B(E2).
1966Ry01: ^{170}Tm(^{16}O,^{16}Oγ), E=42 MeV; targets containing 21% to 61% ^{170}Yb impurity, scin; measured ^{16}O′γ coin, Eγ, Iγ.

^{170}Tm Levels

E(level)†	J$^\pi$†	T$_{1/2}$‡	Comments
0.0	1$^-$		
39	2$^-$	1.71 ns *17*	B(E2)↑=3.2 *3* (1968Fr01)
115	3$^-$	0.60 ns *3*	B(E2)↑=2.38 *10* (1968Fr01)
183	4$^-$		Not observed by 1968Fr01, but possibly obscured by impurity.
220	2$^-$	0.25 ns *3*	B(E2)↑=0.085 *10* (1968Fr01)
320	5$^-$		Out of range of spectrum in 1968Fr01.

† From Adopted Levels; energies have been rounded to the nearest keV.
‡ From measured B(E2) and adopted branching and δ.

γ(^{170}Tm)

E$_\gamma$†	I$_\gamma$‡	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.#	α@
115	158.2	115	3$^-$	0.0	1$^-$	E2	1.82
144	96.4	183	4$^-$	39	2$^-$	(E2)	0.805
181		220	2$^-$	39	2$^-$		
205	87.8	320	5$^-$	115	3$^-$	(E2)	0.239
220		220	2$^-$	0.0	1$^-$		

† Rounded-off values from Adopted Gammas for lines observed by 1966Ry01. Additional transitions having Eγ≈39, 68, 76, 137 were expected, but not observed, by 1966Ry01.
‡ Relative photon intensity from 1966Ry01; contributions from unresolved γ rays may be included (1966Ry01), especially for 144γ and 205γ whose measured yields are much greater than expected from authors′ Winther and de Boer multiple Coulomb excitation calculation.
# Based on comparison of calculated and observed photon yields.
@ 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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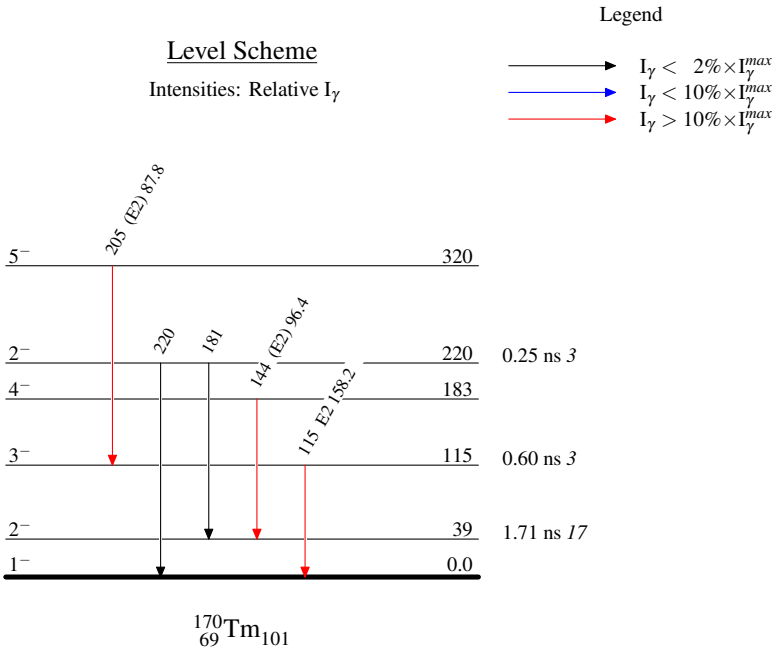

$^{170}_{69}Tm_{101}$