Coulomb excitation 1973Kr02,1979Ha06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 105,1 (2005)	1-Mar-2005

1973Kr02: (α,$\alpha'\gamma$); E(α)=15 MeV; Detectors: two Ge(Li) detectors; Measured: Eγ, $\gamma(\theta)$; Deduced: B(E2), B(M1), δ.
1979Ha06: (^{40}Ca,^{40}Ca$'\gamma$); E(^{40}Ca)=120 MeV; Detectors: two Ge(Li); Measured: Eγ, $\gamma(\theta)$; Deduced: A_2, A_4, δ, g-factor.
Other: 1958Mc02, 1956Ba56.

^{203}Tl Levels

E(level)†	J$^\pi$‡	$T_{1/2}$‡	Comments
0.0	1/2$^+$		
279.1956 *10*	3/2$^+$	283 ps *4*	g=−0.01 *11* (1979Ha06). B(E2)↑=0.111 *8* (using δ=1.16 *7*, 1973Kr02), 0.124 *14* (using δ=1.50 *8*, 1958Mc02).
680.5161 *22*	5/2$^+$	0.88 ps *8*	g=1.03 *43* (1979Ha06). B(E2)↑=0.211 *19* (using 680γ, 1973Kr02) and 0.210 *27* (using 680γ, 1958Mc02).

† From a least-squares fit to Eγ.
‡ From Adopted Levels.

$\gamma(^{203}Tl)$

E$_\gamma$†	I$_\gamma$‡	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†	δ†	α#	Comments
279.1952 *10*	503 *33*	279.1956	3/2$^+$	0.0	1/2$^+$	M1+E2	+1.686 *6*	0.2261 *9*	α(K)=0.1580; α(L)=0.0515; α(M)=0.01279 α(N)=0.00321; α(O)=0.000587; α(P)=3.80×10^{-5} E$_\gamma$: 279.16 keV *2* (1973Kr02). Mult.: A_2=0.765 *38* (1979Ha06); $\gamma(\theta)$ in 1973Kr02 and 1958Mc02. δ: Others (from Coulex): +1.10 *8* (1979Ha06), +1.15 *10* (1973Kr02) and +1.50 *8* (1958Mc02). α: From adopted gammas.
401.320 *3*	203 *14*	680.5161	5/2$^+$	279.1956	3/2$^+$	M1+E2	−0.030 *8*	0.1784	E$_\gamma$: 401.27 keV *5* (1973Kr02). Mult.: A_2=−0.44 *7* (1979Ha06); $\gamma(\theta)$ in 1973Kr02. δ: Others: −0.079 *29* (1973Kr02), −0.035 *45* (1979Ha06) and ≤0.05 (1958Mc02).
680.515 *3*	57 *6*	680.5161	5/2$^+$	0.0	1/2$^+$	E2		0.01393	E$_\gamma$: 680.43 keV *6* (1973Kr02). Mult.: $\gamma(\theta)$ in 1973Kr02.

† From adopted gammas.
‡ From 1973Kr02, unless otherwise stated.
# 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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