Coulomb excitation 1973Kr02,1979Ha06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

1973Kr02: E(α)=15 MeV; target: natural thallium; detectors: twoGe(Li); measured: Eγ, I$\gamma(\theta)$.
1979Ha06: E(^{40}Ca)=120 MeV; target: natural thallium; detectors:Ge(Li); measured: Eγ, $\gamma(\theta$,H); transient magnetic fields in iron foil.
Others: 1958Mc02, 1967Ma45.

^{205}Tl Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0	1/2$^+$		J$^\pi$: From Adopted Levels.
203.70 *10*	3/2$^+$	1.50 ns *10*	$T_{1/2}$: From 1967Ma45. g=0.01 *8*, μ=0.02 *12* (1979Ha06).
619.40 *20*	5/2$^+$	0.90 ps *14*	$T_{1/2}$: From 1973Kr02. g=0.89 *26*, μ=2.2 *7* (1979Ha06).

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

$\gamma(^{205}Tl)$

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	δ	α#	Comments
203.7 *1*	420×10^1 *29*	203.70	3/2$^+$	0	1/2$^+$	M1+E2	+1.56 *15*	0.60 *4*	α(K)=0.39 *4*; α(L)=0.1639 *24*; α(M)=0.0413 *7* α(N)=0.01038 *16*; α(O)=0.00187 *3*; α(P)=0.000106 *5* Mult.: A$_2$=−0.949 *50* (1973Kr02); A$_2$=0.824 *24* (1979Ha06). δ: From 1973Kr02. Others: 1.4 *+3−2* (1979Ha06) and 1.46 *16* (1958Mc02). Penetration parameter λ=13.5 *25* (1973Kr02).
415.7 *2*	166×10^1 *12*	619.40	5/2$^+$	203.70	3/2$^+$	M1+E2	−0.066 *14*	0.1620	α(K)=0.1329 *19*; α(L)=0.0223 *4*; α(M)=0.00519 *8* α(N)=0.001311 *19*; α(O)=0.000255 *4*; α(P)=2.41×10^{-5} *4* Mult.: A$_2$=0.497 *25* (1973Kr02); A$_2$=−0.475 *34* (1979Ha06). δ: From 1973Kr02. Others: −0.073 *16* (1979Ha06) and −0.05 (1958Mc02).
619.4 *4*	128 *11*	619.40	5/2$^+$	0	1/2$^+$	E2		0.01712	α(K)=0.01287 *18*; α(L)=0.00323 *5*; α(M)=0.000787 *12* α(N)=0.000198 *3*; α(O)=3.68×10^{-5} *6*; α(P)=2.72×10^{-6} *4* Mult.: From $\gamma(\theta)$ in 1973Kr02 and 1979Ha06.

† From 1973Kr02.
‡ From $\gamma(\theta)$ in 1973Kr02 and 1979Ha06.
# Additional information 1.

Coulomb excitation 1973Kr02,1979Ha06