^{35}Cl(α,nγ) 1975Io01,1977De02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

1975Io01: E=12-27 MeV pulsed beam. Measured Eγ, Iγ, γ(t), isomeric σ ratios. Deduced levels, J, π, conversion coefficients, isomer $T_{1/2}$.
1977De02: E=7.31 and 7.00 MeV. Measured Eγ, Iγ, lifetime. Ge(Li) detector. Deduced levels, $T_{1/2}$.
1976Sh24: measured γ spectrum, deduced threshold Q value.
1974Io01: E=22 MeV; measured g-factor by $\gamma(\theta$,H,t).
1974Ya04: E=10-16 MeV; measured threshold Eα for Eγ=38 keV.
1971En02: E=7.5 MeV; measured lifetime of 459 level by recoil-distance Doppler shift method.
Yield of ^{38}K using ^{35}Cl(α,nγ) reaction: 1991Ta24, 1990Bl15, 1988Qa01, 1988Gu01, 1985Va14, 1984Pi07, 1981Va30, 1975Ma44 (also thesis by 1975MaXV), 1975Sq01, 1962Ne11.

^{38}K Levels

E(level)	J$^{\pi}$[#]	$T_{1/2}$	Comments
0	3$^+$		
130.2[†] *4*	0$^+$		
458.7[†] *3*	1$^+$	<35 ps	$T_{1/2}$: from 1977De02. Others: 0.10 ns *6* (quoted by 1977De02 from thesis of 1973GoZQ), 0.51 ns *11* (1971En02).
2650[‡]			
3420[‡]	(6)$^-$		
3460[‡]	(7)$^+$	22.1 μs *7*	g=+0.548 *2* (1974Io01) $T_{1/2}$: from γ(t) in 1975Io01.

[†] From 1977De02.
[‡] From 1975Io01.
[#] From Adopted Levels.

γ(^{38}K)

E$_i$(level)	J$_i^{\pi}$	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J$_f^{\pi}$	Mult.	Comments
458.7	1$^+$	328.5 *3*	100	130.2	0$^+$		E$_\gamma$: from 1977De02.
		458.7 *3*	0.96 *10*	0	3$^+$		E$_\gamma$: from 1977De02. I$_\gamma$: Iγ(458.7γ)/Iγ(328.5γ)=0.0096 *10* (1977De02).
2650		2650	100	0	3$^+$		
3420	(6)$^-$	770	100	2650			
		3420	67	0	3$^+$		
3460	(7)$^+$	37.9	100	3420	(6)$^-$	(E1)	E$_\gamma$: from 1974Ya04. Mult.: from α(exp)=0.47 *18* (1975Io01).
		810	23	2650			

[†] From level-energy differences, unless otherwise noted.
[‡] From 1975Io01, unless otherwise noted.

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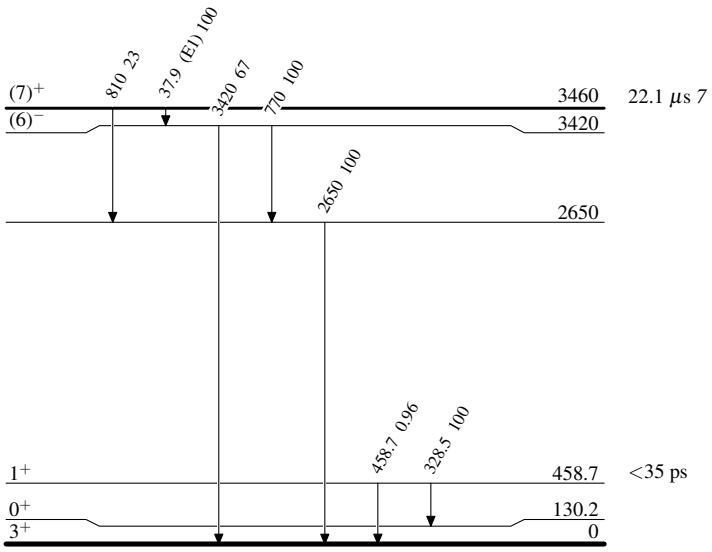
Level Scheme

Intensities: Relative photon branching from each level



$^{38}_{19}K_{19}$