^{37}Cl(n,n′γ) 1989Ge09,1966Ni03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	John Cameron, Jun Chen and Balraj Singh, Ninel Nica	NDS 113, 365 (2012)	15-Jan-2012

1989Ge09: Fast neutrons from the reactor IRT-2000 at Sofia. Ge(Li) detector. Measured Eγ. Deduced levels, half-lives using Doppler Shift Attenuation Method (DSAM).

1966Ni03: E_n=2.5-4.2 MeV neutrons produced by T(p,n) reactions with protons from the University of Kentucky 6-MeV accelerator. Targets of a cylinder of CCl_4 and a 5.6-cm-diam sphere of C_2Cl_6. A 6.35-cm by 6.35-cm NaI(Tl) detector for detecting γ-rays. Measured Eγ, Iγ, γ(θ). Deduced levels, J^π.

Other: 1971Fr05.

^{37}Cl Levels

E(level)†	Jπ#	$T_{1/2}$@	Comments
0	$3/2^+$		
1726‡ *4*	$1/2^+$	143 fs *14*	
3086	$5/2^+$	69 fs *20*	
3103	$7/2^-$	1.5 ps *4*	
3710‡ *20*	$3/2^+$		Jπ: 5/2 from γ(θ) in 1966Ni03.

† From 1989Ge09, unless otherwise noted.
‡ From 1966Ni03.
# From Adopted Levels.
@ From 1989Ge09 using DSAM.

γ(^{37}Cl)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
1726	1726	$1/2^+$	0	$3/2^+$	
3086	3086	$5/2^+$	0	$3/2^+$	B(M1)(W.u.)=0.003 *1*, B(E2)(W.u.)=2.8 *9* (1989Ge09).
3103	3103	$7/2^-$	0	$3/2^+$	B(M2)(W.u.)=0.21 *6*, B(E3)(W.u.)=3.7 *11* (1989Ge09).
3710	3710	$3/2^+$	0	$3/2^+$	

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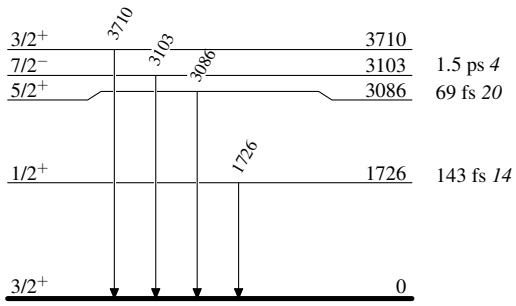
Level Scheme



$^{37}_{17}Cl_{20}$