

$^{35}\text{Cl}(\text{n},\text{n}'\gamma)$ 1989Ge09,1984El12,1966Ni03

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, John Cameron and Balraj Singh		NDS 112,2715 (2011)	20-Oct-2011

1966Ni03: $E_n=2.5\text{--}4.2$ MeV neutrons produced by $\text{T}(\text{p},\text{n})$ 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 $\text{NaI}(\text{Tl})$ detector for detecting γ -rays. Measured E_γ , I_γ , $\gamma(\theta)$. Deduced levels, J^π .

1971Fr05: E_n up to 10 MeV from a 5 Ci Pu-Be neutron source. Ge(Li) detector. Measured E_γ . Deduced levels.

1984El12,1989Ge09: $^{35}\text{Cl}(\text{n},\text{n}'\gamma)$, fast neutrons from the reactor IRT-2000 at Sofia. Ge(Li) detector. Measured E_γ . Deduced levels, half-lives using Doppler Shift Attenuation Method (DSAM).

Others: **1955To32**, **1974Si25**, **1977Ko19**, **1983Gl07**, **1992Be60**.

 ^{35}Cl Levels

$E(\text{level})^\dagger$	$J^\pi\#$	$T_{1/2}^\ddagger$
0	$3/2^+$	
1219.0 10	$1/2^+@$	139 fs 56
1763.1 7	$5/2^+@$	
2645.6 8	$7/2^+@$	187 fs 62
2693.6 8	$3/2^+$	43 fs 6
3002.1 10	$3/2^+$	50 fs 9
3163.2 10		

† From least-squares fit to E_γ 's.

‡ From **1984El12** and **1989Ge09** using DSAM.

$\#$ From Adopted Levels, unless otherwise noted.

$@$ From $\gamma(\theta)$ in **1966Ni03**.

 $\gamma(^{35}\text{Cl})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
882	2645.6	$7/2^+$	1763.1	$5/2^+$	$\text{B}(\text{M}1)(\text{W.u.})=0.014$ 1, $\text{B}(\text{E}2)(\text{W.u.})=4.3$ 14 (1989Ge09).
930	2693.6	$3/2^+$	1763.1	$5/2^+$	$\text{B}(\text{M}1)(\text{W.u.})=0.087$ 11, $\text{B}(\text{E}2)(\text{W.u.})=3.1$ 4 (1989Ge09).
1219	1219.0	$1/2^+$	0	$3/2^+$	$\text{B}(\text{M}1)(\text{W.u.})=0.085$ 34, $\text{B}(\text{E}2)(\text{W.u.})=3.6$ 14 (1989Ge09).
1762	1763.1	$5/2^+$	0	$3/2^+$	$A_0=+0.942$ 8, $A_2=-0.148$ 23 (1966Ni03).
2646	2645.6	$7/2^+$	0	$3/2^+$	$A_0=+1.078$ 5, $A_2=+0.165$ 12 (1966Ni03).
					$\text{B}(\text{E}2)(\text{W.u.})=3.1$ 11 (1989Ge09).
2694	2693.6	$3/2^+$	0	$3/2^+$	$\text{B}(\text{M}1)(\text{W.u.})=0.020$ 3, $\text{B}(\text{E}2)(\text{W.u.})=0.3$ 1 (1989Ge09).
3002	3002.1	$3/2^+$	0	$3/2^+$	$\text{B}(\text{M}1)(\text{W.u.})=0.016$ 3, $\text{B}(\text{E}2)(\text{W.u.})=0.4$ 1 (1989Ge09).
3163 †	3163.2		0	$3/2^+$	

† From **1966Ni03**.

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Level Scheme

