

$^{37}\text{Cl}(\alpha,\gamma)$:3817 resonance **1981BuZY**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. Mccutchan		NDS 133, 1 (2016)	30-Sep-2015

1981BuZY (also thesis by Burman): E=3-4 MeV. Measured lifetimes by DSAM. Data from two α resonances at E(α)(lab)=3817 5, 4013 5. See also $^{37}\text{Cl}(\alpha,\gamma)$:4013 Resonance.

Others:

1979Zy04 (also **1979ZyZZ**): E=2.9-5.23 MeV. Measured E_γ , cross sections for g.s., 980, 1294, 1560, 1677 and 1698 levels. Cross section data analyzed by Hauser-Feshbach calculations.

1973OkZX (also **1973OkZY**): E=2-4.2 MeV. Measured E_γ , $\gamma(\theta)$, cross sections. A total of 7 γ rays of 977, 1553, 1661, 1680, 1700, 2177 and 8827 assigned to ^{41}K in the bombardment of of natural barium chloride target. 977 γ , 1553 γ , 1680 γ and 1700 γ probably correspond to g.s. transitions from levels of known energy.

All data are taken from thesis by **1981BuZY**, except where noted.

 ^{41}K Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}^\ddagger$	Comments
0	$3/2^+$		
980	$1/2^+$	>6.9 ps	
1293	$7/2^-$	>3.1 ps	
1559	$3/2^+$	0.87 ps 28	
1581	$3/2^-$	>1.7 ps	
1677	$7/2^+$	>1.4 ps	
1697	$5/2^+$	1.4 ps 7	
2143	$5/2^+$	0.29 ps 6	
2167	$3/2^-$	>1.25 ps	
2317	$5/2^-$	0.34 ps 10	
2441	(3/2,5/2 $^+$)	0.16 ps 3	E(level): level proposed on the basis of (p, γ) results by evaluators.
2495	$9/2^+$	>2.1 ps	
2508	$7/2^+$	0.43 ps 10	
2713	(7/2) $^-$	0.62 ps 28	
2755	$5/2^+$	<31 fs	
2762	$11/2^-$		
3143	$5/2^-$	0.08 ps 5	

† From the Adopted Levels.

‡ From DSAM.

 $\gamma(^{41}\text{K})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
980 <i>I</i>	980	$1/2^+$	0	$3/2^+$	1697 <i>I</i>	1697	$5/2^+$	0	$3/2^+$
1023 <i>I</i>	2317	$5/2^-$	1293	$7/2^-$	1849 <i>I</i>	3143	$5/2^-$	1293	$7/2^-$
1186 <i>I</i>	2167	$3/2^-$	980	$1/2^+$	2143 <i>I</i>	2143	$5/2^+$	0	$3/2^+$
1201 <i>I</i>	2495	$9/2^+$	1293	$7/2^-$	$^{x2177^\dagger}$ 4				
1293 <i>I</i>	1293	$7/2^-$	0	$3/2^+$	2441 <i>I</i>	2441	(3/2,5/2 $^+$)	0	$3/2^+$
1417 <i>I</i>	2713	(7/2) $^-$	1293	$7/2^-$	2508 <i>I</i>	2508	$7/2^+$	0	$3/2^+$
1469 <i>I</i>	2762	$11/2^-$	1293	$7/2^-$	2755 <i>I</i>	2755	$5/2^+$	0	$3/2^+$
1559 <i>I</i>	1559	$3/2^+$	0	$3/2^+$	x2814 <i>I</i>				
1581 <i>I</i>	1581	$3/2^-$	0	$3/2^+$	x3182 <i>I</i>				
x1656 <i>I</i>					$^{x8827^\dagger}$ 4				
1677 <i>I</i>	1677	$7/2^+$	0	$3/2^+$					

Continued on next page (footnotes at end of table)

${}^{37}\text{Cl}(\alpha,\gamma)$:3817 resonance [1981BuZY](#) (continued)

$\gamma({}^{41}\text{K})$ (continued)

[†] From [1973OkZX](#).

^x γ ray not placed in level scheme.

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Level Scheme

