^{44}Ca(p,α),(p,$\alpha\gamma$) 1971MaXU

History

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

1971MaXU (also 1971MaXT,1972MaXL): (p,α) E=56.6 MeV. Measured $\sigma(\theta)$ from 10°−50° and cross sections.
Others:
1972Gr04: E=4.235 MeV. Measured lifetime for 980 level by DSAM.
1976BhZX: (p,α) E=35 MeV. Measured $\sigma(\theta)$.
1977Li22: (p,$\alpha\gamma$) E=4.235 MeV. No γ rays near 980 observed.

^{41}K Levels

E(level)	J$^{\pi}$[†]	$T_{1/2}$	L	dσ/dΩ (μb/sr) (At 20°)	Comments
0	3/2$^+$		2	11.6	
980 *30*	1/2$^+$	0.28 ps *+28−14*	0	6.0	$T_{1/2}$: from 1972Gr04. 1977Li22 consider this measurement as questionable since no 980γ was observed in their ^{44}Ca(p,$\alpha\gamma$) spectrum.
1290 *30*			3	15.0	
1600 *30*			0+2	5.9	E(level): doublet.
2140 *30*			(2,3)	2.8	
2730 *30*			(2,3)	12.4	
3470 *30*			2	35.2	
4280 *30*			(>3)	18.9	
4900 *30*				11.0	
5120 *30*				14.5	
5540 *30*			(>3)	14.0	
8390 *50*	5/2$^-$,7/2$^-$		3	32.7	E(level): IAR of g.s., 7/2$^-$ in ^{41}Ar.
9420 *50*	3/2$^+$,5/2$^+$		2	13.3	E(level): IAR of 1035, 3/2$^+$ in ^{41}Ar.
12220 *50*	3/2$^+$,5/2$^+$		2	18.4	E(level): IAR of 3592, (3/2,5/2)$^+$ in ^{41}Ar.

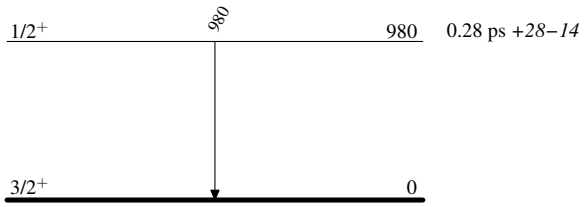
[†] From L-transfers and Adopted Levels.

$\gamma(^{41}K)$

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
980	980	1/2$^+$	0	3/2$^+$	E_γ: assignment considered as questionable by 1977Li22.

^{44}Ca(p,α),(p,$\alpha\gamma$) 1971MaXU

Level Scheme



$^{41}_{19}K_{22}$