^{40}Ar(d,nγ) 1978Ra13

History

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

E(d)=2.99 MeV. Measured Eγ, Iγ using a Ge(Li) detector; deduced $T_{1/2}$ using Doppler Shift Attenuation method (DSAM).

^{41}K Levels

E(level)	J$^\pi$[†]	$T_{1/2}$[‡]	E(level)	J$^\pi$[†]	$T_{1/2}$[‡]	E(level)	J$^\pi$[†]	$T_{1/2}$[‡]
0	3/2$^+$		1582[#]	3/2$^-$	>1.0 ps	2144	5/2$^+$	0.25 ps *9*
980[#]	1/2$^+$	0.25 ps *+14−10*	1594	1/2$^+$	0.083 ps *28*	2166[@]	3/2$^-$	>2.1 ps
1294	7/2$^-$		1677	7/2$^+$	>4.9 ps	2317	5/2$^-$	0.062 ps *21*
1560[#]	3/2$^+$	0.39 ps *15*	1698[#]	5/2$^+$	0.24 ps *6*			

[†] From the Adopted Levels.
[‡] From DSAM measurements. Quoted uncertainties include a 25% contribution from uncertainties in stopping power theory, added in quadrature.
[#] Corrected for feeding from higher energy levels.
[@] Very small value of observed Doppler shift suggests that $T_{1/2}$ is probably in ns range (1978Ra13).

γ(^{41}K)

Eγ	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Eγ	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
584[†]	2144	5/2$^+$	1560	3/2$^+$	1560	1560	3/2$^+$	0	3/2$^+$
584[†]	2166	3/2$^-$	1582	3/2$^-$	1582	1582	3/2$^-$	0	3/2$^+$
602	1582	3/2$^-$	980	1/2$^+$	1594	1594	1/2$^+$	0	3/2$^+$
614	1594	1/2$^+$	980	1/2$^+$	1677	1677	7/2$^+$	0	3/2$^+$
980	980	1/2$^+$	0	3/2$^+$	1698	1698	5/2$^+$	0	3/2$^+$
1023	2317	5/2$^-$	1294	7/2$^-$	2144	2144	5/2$^+$	0	3/2$^+$
1186[†]	2166	3/2$^-$	980	1/2$^+$	2166	2166	3/2$^-$	0	3/2$^+$
1294[†]	1294	7/2$^-$	0	3/2$^+$					

[†] From spectrum given in Figure 3 of 1978Ra13.

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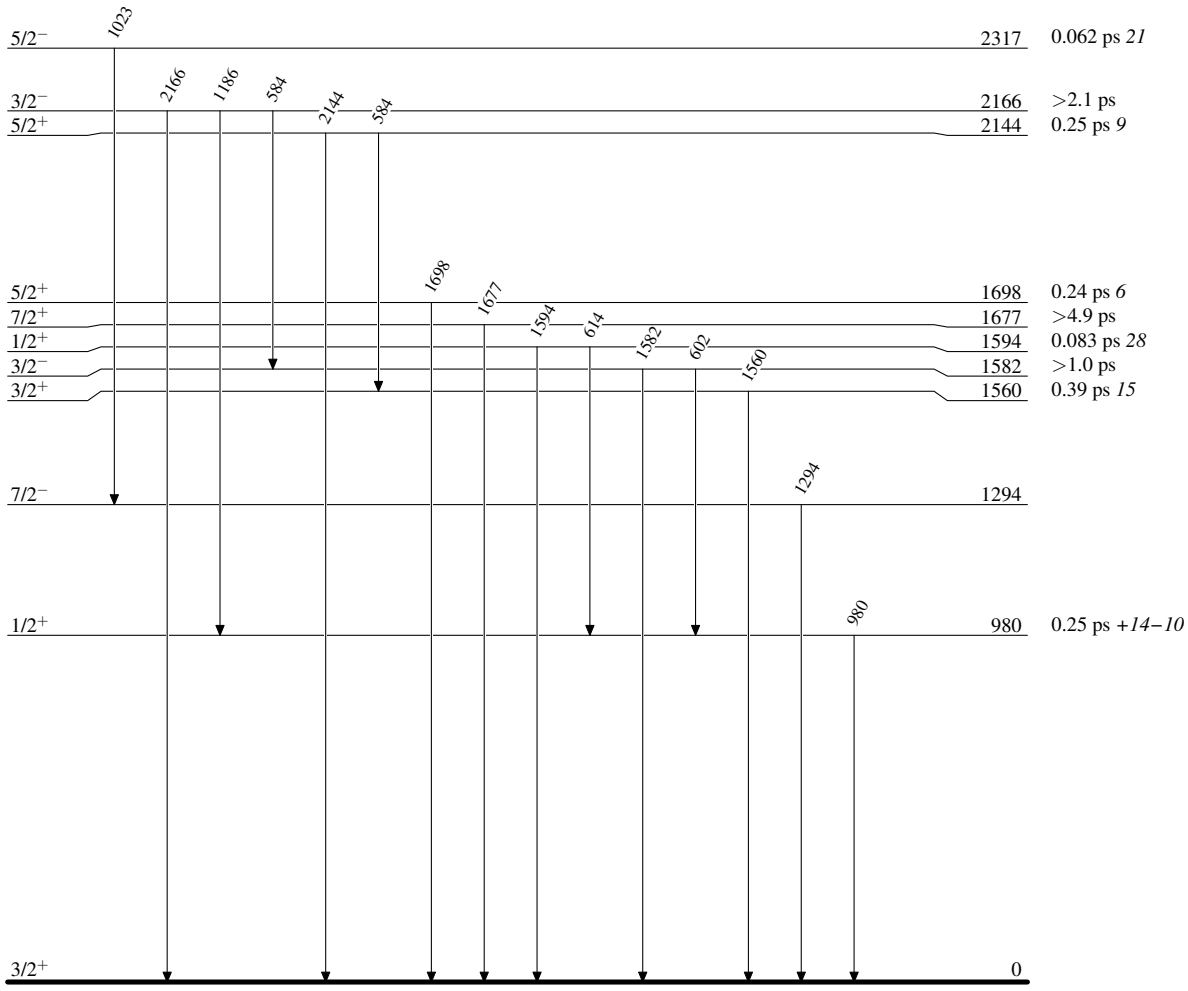
Level Scheme



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