Adopted **Levels**

Q(β^-)=-1.595×10^4 *11*; S(n)=17757 *17*; S(p)=83.6 *5*; Q(α)=-6563 *3*   2021Wa16

Q(β^-),S(n): Deduced by the evaluator using mass excesses of 4777 *105* for ^{35}Ca measured by 2023La09, and -1487 *17* for ^{34}K measured by 2024Dr01; -11172.9 *5* for ^{35}K from 2021Wa16. Values from 2021Wa16: Q(β^-)=-16360 *200* (syst), S(n)=18020 *200* (syst).

S(2n)=34860 *200* (syst), S(2p)=4747.5 *6*, Q(ε)=11874.4 *9*, Q(εp)=5978.2 *5* (2021Wa16).

Isotope discovery (2012Th10): ^{40}Ca(^{3}He,^{8}Li)^{35}K at Michigan State (1976Be08).

Mass measurements: 1976Be08, ISOLTRAP at CERN (2007Ya08).

Theoretical studies: 2003Sm02, 1978Gu10, 1977Sh13, 1975Sh10.

^{35}K Levels

Cross Reference (XREF) Flags

A	^{35}Ca ε decay (25.7 ms)
B	^{9}Be(^{36}Ca,^{35}K)
C	^{40}Ca(^{3}He,^{8}Li)

E(level)	J$^{\pi\dagger}$	T$_{1/2}$	XREF	Comments
0.0	3/2$^+$	175 ms *2*	ABC	%ε+%β^+=100; %εp=0.37 *15* μ= (+)0.392 *7* (2006Me04,2019StZV) %εp: from 1980Ew02. μ: from β-NMR spectroscopy (2006Me04). Other: 0.36 *3* (1998Sc19, β-NMR spectroscopy). Positive sign from analogy with mirror state of ^{35}S g.s. J$^{\pi}$: L(^{36}Ca,^{35}K)=2 from 0$^+$. Allowed ε+β^+ feedings to 1/2$^+$, 3/2$^+$, 5/2$^+$ levels in ^{35}Ar. Mirror level: 1/2$^+$ ^{35}S g.s. T$_{1/2}$: weighted average of 175 ms *2* (2018Sa54), 178 ms *8* (1998Sc19), and 190 ms *30* (1980Ew02).
1553 *5*	1/2$^+$		A C	E(level): from ^{35}Ca ε decay. Other: 1560 *40* from (^{3}He,^{8}Li). J$^{\pi}$: mirror level: 1/2$^+$ at 1572 keV in ^{35}S.
2690 *50*			C	
3781 *26*	1/2$^+$,3/2$^+$		A	
4018 *37*	1/2$^+$,3/2$^+$		A	
4788 *49*	1/2$^+$,3/2$^+$		A	
4982 *13*	1/2$^+$,3/2$^+$		A	
5249 *73*	1/2$^+$,3/2$^+$		A	
5533 *49*	1/2$^+$,3/2$^+$		A	
5710 *49*	1/2$^+$,3/2$^+$		A	
5865 *38*	1/2$^+$,3/2$^+$		A	
6089 *62*	1/2$^+$,3/2$^+$		A	
6335 *73*	1/2$^+$,3/2$^+$		A	
9168 *23*	1/2$^+$		A	T=5/2 J$^{\pi}$: isobaric analog state of 1/2$^+$ ^{35}Ca g.s. with log ft=3.3 *1*.

† Allowed ε+β^+ feeding from 1/2$^+$ ^{35}Ca parent, unless otherwise noted.