Adopted Levels, Gammas

History

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

Q(β^-)=−421.66 *14*; S(n)=10095.37 *6*; S(p)=7808.615 *5*; Q(α)=−6222.94 *5* 2012Wa38
S(2n)=17894.990 *10*; S(2p)=20337.3 *17* (2012Wa38).
See ^{40}Ar(p,γ) dataset for primary Eγ's and branching ratios for about 45 resonances in a total of about 293 resonances listed in the range: E(p)(lab)=551 to 2958 keV.
See ^{40}K(n,γ) E=thermal dataset for primary Eγ's and Iγ's from thermal neutron capture state.
See ^{40}Ar(p,p),(p,α),(p,n): resonances dataset for relevant parameters for about 250 resonances from E(p)(lab)=1086 to 5320 keV.
See ^{40}K(n,p),(n,α):resonances dataset for relevant parameters for about 40 resonances from E(n)(lab)=1.128 to 69 keV.
α: Additional information 1.

^{41}K Levels

Cross Reference (XREF) Flags

A	^{41}Ar β^- decay (109.61 min)	I	^{40}Ar(^{3}He,d)	Q	^{42}Ca(t,α)
B	^{2}H(^{40}Ar,nγ)	J	^{40}K(n,γ) E=thermal	R	^{42}Ca(^{13}C,^{14}N)
C	^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ)	K	^{40}Ar(d,nγ)	S	^{44}Ca(p,α),(p,$\alpha\gamma$)
D	^{37}Cl(α,γ):3817 resonance	L	^{41}K(e,e′)	T	^{41}Ca ε decay (9.94×10^4 y)
E	^{38}Ar(α,pγ)	M	^{41}K(p,p′γ),(p,p′)	U	^{37}Cl(α,γ):4013 resonance
F	^{39}K(t,pγ)	N	^{41}K(n,n′γ)	V	^{42}Ca(μ^-,νnγ)
G	^{40}Ar(p,γ)	O	Coulomb excitation		
H	^{40}Ar(d,n)	P	^{42}Ca(d,^{3}He)		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	3/2$^+$	stable	ABCDEFGHIJKLMNOPQRSTUV	Q=+0.0711 *5* (1998Ke05); μ=+0.21487009 *22* (1974Be50) Q: Mossbauer effect, recalculated by 1998Ke05. Others: +0.073 *2* Mossbauer effect, recalculated by 1993Su05, +0.060 *5* Mossbauer effect, recalculated by 1971St12, 1969Ne03, 1967Bo40, 1960Bl15, 1953Le33. μ: atomic-beam resonance method (1974Be50). Others: +0.21489274 *12* (NMR 1974Sa24,1974Sa25), 0.2154 *10* (1982To02), 1967Lu02, 1954Br09, 1936Ma03. J$^\pi$: spin from atomic beam resonance method (1936Ma03). Parity from L(^{3}He,d)=L(d,^{3}He)=2.
980.476 *8*	1/2$^+$	0.30 ps *10*	B DEFGHIJKLMNOPQ S UV	B(E2)↑=0.0016 *4* B(E2)↑: weighted av of 0.0024 *4* from (e,e′) and 0.0029 *10* and 0.00139 *20* both from Coulomb Excitation. T$_{1/2}$: the measured T$_{1/2}$ values cluster into groups of values which differ significantly. The evaluators have adopted the weighted average of 0.35 ps *14* from ^{2}H(^{40}Ar,nγ), 0.29 ps *+21−10* from ^{39}K(t,pγ), and 0.25 ps *+14−10* from ^{40}Ar(d,nγ) as they form the most consistent set of measured values. There are also several measurements which indicate a larger half-life including >6.9 ps from ^{37}Cl(α,γ): 3817 Resonance, 3.5 ps *10* from ^{38}Ar(α,pγ), and >2.4 ps from ^{41}K(p,p′γ),(p,p′). Other: 76 fs *+21−4* from ^{40}Ar(p,γ). J$^\pi$: from L(d,n)=L(^{3}He,d)=L(d,^{3}He)=L(t,α)=0.
1293.609 *8*	7/2$^-$	7.35 ns *20*	ABCDEFGHIJK MN PQ S UV	μ=+4.42 *5* (1969Bl07) μ: $\gamma(\theta$,H,t), Time-dependent PAD method (1969Bl07). Other: +4.52 *10* (1975Bo44). J$^\pi$: L(d,n)=L(^{3}He,d)=L(d,^{3}He)=L(t,α)=3; $\gamma(\theta$,pol) in (α,pγ).

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: weighted average of 6.7 ns *5* from ^{41}Ar β^- decay (109.61 min), 8.1 ns *11* from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ), 8.3 ns *7* from ^{40}Ar(p,γ), 7.35 ns *20* from ^{41}K(p,p′γ),(p,p) Others: >3.5 ps from ^{2}H(^{40}Ar,nγ), >3.1 ps from ^{37}Cl(α,γ): 3817 Resonance, >3.1 ps from ^{38}Ar(α,pγ), >3.5 ps from ^{39}K(t,pγ).
1559.903 *12*	3/2$^+$	0.38 ps *5*	B DEFG JK MN p s U	Jπ: from $\gamma(\theta$,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: weighted average of 0.42 ps *+20−14* from ^{2}H(^{40}Ar,nγ), 0.42 ps *10* from ^{38}Ar(α,pγ), 0.40 ps *15* from ^{39}K(t,pγ), 0.35 ps *5* from ^{40}Ar(p,γ), 0.35 ps *15* from ^{40}Ar(d,nγ), 0.49 ps *14* from ^{41}K(p,p′γ),(p,p′). Other: 0.87 ps *28* from ^{37}Cl(α,γ): 3817 Resonance, 0.59 ps *17* from ^{37}Cl(α,γ): 4013 Resonance.
1582.001 *11*	3/2$^-$	9.3 ps *4*	B DEFG IJK MN p U	Jπ: from L(^{3}He,d)=1 and $\gamma(\theta$,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: from ^{40}Ar(p,γ). Others: >2.1 ps from ^{2}H(^{40}Ar,nγ), >1.7 ps from ^{37}Cl(α,γ): 3817 Resonance, >3.1 ps from ^{38}Ar(α,pγ), >1 ps from ^{39}K(t,pγ), >1 ps from ^{40}Ar(d,nγ), >2.8 ps from ^{41}K(p,p′γ),(p,p′), >1.4 ps from ^{37}Cl(α,γ): 3817 Resonance.
1593.107 *12*	1/2$^+$	88 fs *28*	B EFG JK MN pQ s U	Jπ: $\gamma(\theta)$ allows 1/2,3/2; 551γ from 5/2$^+$; L(d,^{3}He)=0+1+2 for the unresolved triplet of levels 1560(L=2), 1582(L=1), 1593(L=0). $T_{1/2}$: weighted average of 97 fs *35* from ^{38}Ar(α,pγ) and 83 fs *28* from ^{40}Ar(d,nγ). Others: 130 fs *50* from ^{41}K(p,p′γ),(p,p′), <0.24 ps from ^{40}Ar(p,γ), 0.30 ps *9* from ^{37}Cl(α,γ): 4013 Resonance.
1677.235 *11*	7/2$^+$	1.4 ps *3*	ABCDEFGh JK MN U	Jπ: from $\gamma(\theta$,pol) in ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ) and ^{38}Ar(α,pγ). $T_{1/2}$: weighted average of 1.6 ps *4* from ^{38}Ar(α,pγ) and 1.25 ps *35* from ^{41}K(p,p′γ),(p,p′). Others: 5.4 ps *22* from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ), >2.8 ps from 2H(^{40}Ar,nγ), >1.4 ps from ^{37}Cl(α,γ): 3817 Resonance, >3,5 ps from ^{39}K(t,pγ), >0.17 ps from ^{40}Ar(p,γ), >4.9 ps from ^{40}Ar(d,nγ), 2.7 ps *17* from ^{37}Cl(α,γ): 4013 Resonance.
1698.005 *15*	5/2$^+$	0.85 ps *21*	B DEFGhIJK MN Q U	Jπ: from $\gamma(\theta$,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: weighted average of 0.83 ps *21* from ^{38}A(α,pγ), 0.90 ps *28* from ^{39}K(t,pγ), and 0.83 ps *21* from ^{41}K(p,p′γ),(p,p′). Others: 0.07 ps *+14−7* from ^{2}H(^{40}Ar,nγ), 1.4 ps *7* from ^{37}Cl(α,γ): 3817 Resonance, 49 fs *28* from ^{40}Ar(p,γ), 0.24 ps *6* from ^{40}Ar(d,nγ), 0.83 ps *28* from ^{37}Cl(α,γ): 4013 Resonance.
2143.82 *2*	5/2$^+$	0.24 ps *6*	B DEFG JK MN s U	Jπ: 3/2$^+$,5/2$^+$ from $\gamma(\theta$,pol) in ^{38}Ar(α,pγ), γ from 7/2$^-$. $T_{1/2}$: weighted average of 0.55 ps *+21−14* from ^{2}H(^{40}Ar,nγ), 0.25 ps *9* from ^{40}Ar(d,nγ), 0.21 ps *6* from ^{41}K(p,p′γ),(p,p′). Others: 0.29 ps *6* from ^{37}Cl(α,γ): 3817 Resonance, 76 fs *21* from ^{38}Ar(α,pγ), <0.18 ps from ^{40}Ar(p,γ), 0.25 ps *7* from ^{37}Cl(α,γ): 4013 Resonance.
2166.70 *2*	3/2$^-$	1.9 ps *2*	B DEFG IJK MN s U	Jπ: 3/2 from $\gamma(\theta)$ in ^{38}Ar(α,pγ), π from L(^{3}He,d)=1. $T_{1/2}$: weighted average of 1.7 ps *6* from ^{38}Ar(α,pγ), 1.94 ps *14* from ^{40}Ar(p,γ). Others: >2.1 ps from ^{2}H(^{40}Ar,nγ), >1.25 ps from ^{37}Cl(α,γ): 3817 Resonance, >2.1 ps from ^{40}Ar(d,nγ), 0.22 ps *8* from ^{41}K(p,p′γ),(p,p′), 1.5 ps *7* from ^{37}Cl(α,γ): 4013 Resonance.
2316.62 *2*	5/2$^-$	0.57 ps *14*	B DEFG IJK MN U	Jπ: from L(^{3}He,d)=3 and $\gamma(\theta$,pol) in ^{38}Ar(α,pγ).

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: weighted average of 0.54 ps *15* from ^{38}Ar(α,pγ) and 0.59 ps *14* from ^{41}K(p,p′γ),(p,p′). Others: 0.34 ps *10* from ^{37}Cl(α,γ): 3817 Resonance, <0.21 ps from ^{40}Ar(p,γ), 0.062 ps *21* from ^{40}Ar(d,nγ), 0.18 ps *10* from ^{37}Cl(α,γ): 4013 Resonance.
2440.18 *5*	(3/2,5/2$^+$)	0.083 ps *35*	D G J MN q U	Jπ: from 847γ to 1/2$^+$ and RUL for 742γ to 5/2$^+$. $T_{1/2}$: from ^{41}K(p,p′γ),(p,p′). Others: 0.16 ps *3* from ^{37}Cl(α,γ): 3817 Resonance, 0.15 ps *3* from ^{37}Cl(α,γ): 4013 Resonance.
2447.83 *7*	(3/2$^+$,5/2,7/2$^+$)		B F J q	Jπ: from 2448γ to 3/2$^+$; 2376γ from (7/2$^+$,9/2$^+$).
2494.91 *3*	9/2$^+$	>3.1 ps	DEFG J M U	Jπ: from γ(θ,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: from ^{38}Ar(α,pγ). Others: >2.1 ps from ^{37}Cl(α,γ): 3817 Resonance, >2.8 ps from ^{41}K(p,p′γ),(p,p′), 1.7 ps *10* from ^{37}Cl(α,γ): 4013 Resonance.
2507.93 *3*	7/2$^+$	0.15 ps *4*	DEFG J MN U	Jπ: from γ(θ,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: weighted average of 0.16 ps *6* from ^{38}Ar(α,pγ) and 0.15 ps *4* from ^{41}K(p,p′γ),(p,p′). Others: 0.43 ps *10* from ^{37}Cl(α,γ): 3817 Resonance, 0.29 ps *6* from ^{37}Cl(α,γ): 4013 Resonance.
2527.66 *3*	11/2$^+$	151 ps *4*	C EFG J	μ=4.5 *10* (1981Le19) μ: γ(θ,H,t), recoil into gas or vacuum (1981Le19). Jπ: from γ(θ,pol) in ^{38}Ar(α,pγ) and ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). $T_{1/2}$: from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). Other: >3.1 ps from ^{38}Ar(α,pγ), >4.9 ps from ^{39}K(t,pγ).
2593.97 *3*	1/2$^-$,3/2$^-$	7.6 fs *42*	D G IJ M U	Jπ: from L(^{3}He,d)=1. 1/2$^-$ is favored in (p,p′γ) from comparisons with Hauser-Feshbach calculations, but 3/2$^-$ is favored by γ from 5/2$^+$ resonance in (p,γ). $T_{1/2}$: from ^{40}Ar(p,γ). Other: 0.19 ps *8* from ^{37}Cl(α,γ): 4013 Resonance,
2676.1 *7*	1/2$^+$		G I M PQ	Jπ: from L(^{3}He,d)=L(d,^{3}He)=0.
2710.48 *7*	3/2$^+$,5/2$^+$		G IJ N s	Jπ: from L(^{3}He,d)=2.
2712.57 *3*	(7/2)$^-$	0.54 ps *15*	DEFG J MN U	Jπ: γ(θ,pol) in (α,pγ) give 3/2$^-$,7/2$^-$. γ from (7/2$^+$). $T_{1/2}$: weighted average of 0.52 ps *15* from ^{38}Ar(α,pγ) and 0.59 ps *28* from ^{41}K(p,p′γ),(p,p′). Others: 0.62 ps *28* from ^{37}Cl(α,γ): 3817 Resonance, <0.54 ps from ^{40}Ar(p,γ), 0.83 ps *35* from ^{37}Cl(α,γ): 4013 Resonance.
2756.73 *3*	5/2$^+$	52 fs *21*	DEFG IJ MN Q s U	Jπ: from L(^{3}He,d)=2; 1079γ to 7/2$^+$, 1463γ to 7/2$^-$. $T_{1/2}$: from ^{41}K(p,p′γ),(p,p′). Others: <31 fs from ^{37}Cl(α,γ): 3817 Resonance, <69 fs from ^{38}Ar(α,pγ).
2761.73 *3*	11/2$^-$	0.48 ps *6*	BCDE J MN U	Jπ: from γ(θ,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: weighted average of 0.48 ps *6* from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ), 0.46 ps *12* from ^{38}Ar(α,pγ) and 0.53 ps *21* from ^{41}K(p,p′γ),(p,p′).
2774.25 *3*	13/2$^+$	51.3 ps *16*	C EF J	μ=3.0 *5* (1981Le19,1989Ra17) μ: γ(θ,H,t), recoil into gas or vacuum (1981Le19). Jπ: from γ(θ,pol) in ^{38}Ar(α,pγ). $T_{1/2}$: from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). Other: >3.1 ps from ^{38}Ar(α,pγ).

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
3048.22 *5*	1/2⁻,3/2⁻		G IJ MN	Jπ: from L(^{3}He,d)=1. 1/2⁻ is favored in (p,p′γ) from comparisons with Hauser-Feshbach calculations, but 3/2⁻ is favored by γ from from 5/2⁺ resonance in (p,γ).
3141.84 *3*	(7/2⁻)		fgh J m	Jπ: from 380γ to 11/2, 385γ to 5/2⁺, and 825γ to 5/2⁻.
3142.43 *3*	5/2⁻	0.15 ps *6*	B DEfgh J mN U	Jπ: 5/2⁻,9/2⁻ from γ(θ,pol) in ^{38}Ar(α,pγ), 998γ to 5/2⁺ and 381γ to 11/2⁻. $T_{1/2}$: weighted average of 0.16 ps *6* from ^{38}Ar(α,pγ) and 0.12 ps *8* from ^{41}K(p,p′γ),(p,p′). Others: 0.08 ps *5* from ^{37}Cl(α,γ): 3817 Resonance, 0.17 ps *4* from ^{37}Cl(α,γ): 4013 Resonance.
3162.2 *8*		<21 fs	M	E(level),$T_{1/2}$: from ^{41}K(p,p′γ),(p,p′). Jπ: 1/2 is favored from Hauser-Feshback analysis.
3179.8 *2*	3/2⁺,5/2⁺		G P	E(level): from ^{40}Ar(p,γ). Jπ: from L(d,^{3}He)=2.
3213.61 *4*	5/2⁻	125 fs *55*	B FG IJ MN	Jπ: from L(^{3}He,d)=3; 1631γ to 3/2⁻, 3214γ to 3/2⁺. $T_{1/2}$: from ^{41}K(p,p′γ),(p,p′).
3229.8 *6*	(1/2⁺,3/2,5/2⁺)		G q	E(level): from ^{40}Ar(p,γ). Jπ: from 1670γ to 3/2⁺, 2249γ to 1/2⁺, primary γ from 5/2⁺.
3235.57 *4*	(3/2⁻,5/2,7/2⁻)	38 fs *35*	EFG J M q	Jπ: from 1942γ to 7/2⁻, 3786γ from (3/2⁻). $T_{1/2}$: from ^{41}K(p,p′γ),(p,p′).
3240.65 *4*	(5/2⁺,7/2⁻)		J q	Jπ: from 746γ to 9/2⁺ and 2838γ from (3/2⁻).
3277.9 *5*	(1/2,3/2,5/2⁺)	76 fs *69*	G M	XREF: M(3281.7). Jπ: from possible 2297γ to 1/2⁺. $T_{1/2}$: from ^{41}K(p,p′γ),(p,p′).
3431.84 *4*	(9/2⁻,7/2⁻)		J	Jπ: from 670γ to 11/2⁻ and 1115γ to 5/2⁻. 7/2⁻ is unlikely from RUL for [E2] γ to 11/2⁻.
3450.1 *2*	5/2⁻,7/2⁻	4.2 fs *28*	G IJ N	E(level),$T_{1/2}$: from ^{40}Ar(p,γ). Jπ: from L(^{3}He,d)=3.
3480? *10*	5/2⁻,7/2⁻		I	Jπ: from L(^{3}He,d)=3.
3488.5 *3*	(5/2)⁺	<3.5 fs	G J N PQ S	E(level): 3480, L=2 in (d,^{3}He). Jπ: from L(d,^{3}He)=2, 2194γ to 7/2⁻. $T_{1/2}$: from ^{40}Ar(p,γ).
3521.38? *9*	(5/2⁺,7/2⁺)		J	Jπ: from 1026γ to 9/2⁺ and 3521γ to 3/2⁺.
3534.45 *4*	(7/2⁺,9/2,11/2⁺)		J	Jπ: from 1026γ to 7/2⁺ and 1007γ to 11/2⁺.
3560.61 *5*	(3/2⁻,5/2,7/2⁺)		J	Jπ: from 419γ to (7/2⁻) and 3561γ to 3/2⁺.
3572.38 *5*			G J N	
3578.3 *4*	(3/2⁺,5/2,7/2⁺)		N	Jπ: from 1900γ to 7/2⁺ and 2018γ to 3/2⁺.
3579.2 *5*			G	
3612.77 *5*			G iJ	Jπ: L(^{3}He,d)=1 for 3619 *10* group corresponds 3612.77 and/or 3626.1 level.
3626.1 *5*			G i	Jπ: L(^{3}He,d)=1 for 3619 *10* group corresponds 3612.77 and/or 3626.1 level. Additional information 2.
3651.46 *5*	(5/2,7/2⁻)		G J N	Jπ: from 1974γ to 7/2⁺, 2358γ to 7/2⁻, 593γ from (3/2)⁻.
3740.1 *10*	1/2⁻,3/2⁻		G I	E(level): from ^{40}Ar(p,γ). Jπ: from L(^{3}He,d)=1.
3761.54 *5*		4.9 fs *28*	G J N	$T_{1/2}$: from ^{40}Ar(p,γ).
3774.66 *5*	5/2⁻,7/2⁻		G IJ	XREF: I(3773). Jπ: from L(^{3}He,d)=3; but 2794γ to 1/2⁺ disfavors 7/2⁻.
3819 *10*	1/2⁻,3/2⁻		I	Jπ: from L(^{3}He,d)=1.

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
3826.90 *10*	(5/2,7/2$^+$)		J N	Jπ: from 685γ to (7/2$^-$), 2150γ to 7/2$^+$, 3827γ to 3/2$^+$. Additional information 3.
3861.3 *5*	(1/2,3/2,5/2$^+$)		G	E(level): from ^{40}Ar(p,γ). Jπ: from 2882γ to 1/2$^+$.
3870.52 *6*	5/2$^-$,7/2$^-$		IJ	XREF: I(3858). Jπ: from L(^{3}He,d)=3.
3897.0 *5*	(11/2,15/2)	0.31 ps *8*	C E	Jπ: from γ(θ) in ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). $T_{1/2}$: from ^{38}Ar(α,pγ). Other: >0.14 ps from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ).
3911.7 *6*	1/2$^-$,3/2$^-$		G I	E(level): from ^{40}Ar(p,γ). Jπ: from L(^{3}He,d)=1.
3990.40? *5*			J	
3996.49 *4*	(5/2$^+$)	97 fs *35*	J N U	Jπ: from 2319γ to 7/2$^+$, 2703γ to 7/2$^-$, 3016γ to 1/2$^+$. $T_{1/2}$: from ^{37}Cl(α,γ): 4013 Resonance.
4026.7 *5*			G i	Jπ: L(^{3}He,d)=2 for a 4032 *10* group gives 3/2$^+$,5/2$^+$.
4026.94 *7*			iJ	Jπ: L(^{3}He,d)=2 for a 4032 *10* group gives 3/2$^+$,5/2$^+$.
4075 *10*			Q	
4146.15 *6*	5/2$^-$,7/2$^-$		IJ	Jπ: from L(^{3}He,d)=3.
4164.57 *4*			G J	
4220.62 *5*	(5/2)		J N	Jπ: from 2543γ to 7/2$^+$, 2927γ to 7/2$^-$, 4221γ to 3/2$^+$, 1858γ from (3/2)$^-$.
4228.99 *5*	(5/2)$^-$		IJ N	XREF: I(4237). Jπ: from L(^{3}He,d)=3, 1721γ to 7/2$^+$, 2935γ to 7/2$^-$.
4244.22 *5*	(3/2)$^-$		IJ	XREF: I(4237). Jπ: from L(^{3}He,d)=1, 2951γ to 7/2$^-$.
4260.36 *13*			J	
4274.2 *3*	15/2$^-$	0.10 ps *6*	C E	Jπ: from γ(θ,pol) in ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). $T_{1/2}$: from ^{38}Ar(α,pγ). Other: <0.14 ps from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ).
4274.96 *5*	(7/2$^-$,9/2$^+$)		J s	Jπ: from 2576γ to 5/2$^+$ and 1513γ to 11/2$^-$.
4303.01 *5*	(5/2$^+$,7/2$^+$)		J N s	Jπ: from 1809γ to 9/2$^+$, 4303γ to 3/2$^+$.
4340.9 *5*	(1/2,3/2,5/2)		G i	Jπ: from 4341γ to 3/2$^+$; primary γ from 3/2$^-$; L(^{3}He,d)=3 for 4339 *10* level.
4345.66 *5*	(5/2,7/2$^-$)		iJ N	Jπ: from 2669γ to 7/2$^+$, 2763γ to 3/2$^-$, 3052γ to 7/2$^-$; L(^{3}He,d)=3 for 4339 *10* level.
4400 *20*	3/2$^+$,5/2$^+$		H P	Jπ: from L(d,^{3}He)=2.
4459.72 *5*	1/2$^-$,3/2$^-$		IJ	XREF: I(4443). Jπ: from L(^{3}He,d)=1.
4478 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
4525.37 *5*			J	
4568.75 *5*	(9/2$^+$,11/2$^-$)		J	Jπ: from 294γ to (7/2$^-$,9/2$^+$), 1795γ to 13/2$^+$.
4587 *10*	5/2$^-$,7/2$^-$		I	Jπ: from L(^{3}He,d)=3. Additional information 4.
4609.48 *7*	(5/2$^+$,7/2,9/2$^+$)		J	Jπ: from 1853γ to 5/2$^+$ and 2114γ to 9/2$^+$.
4661 *10*			I	E(level): doublet.
4674 *3*			G	
4730.70 *5*	(3/2)$^-$		IJ	Jπ: from L(^{3}He,d)=1; 3437γ to 7/2$^-$.
4735.86 *6*	(5/2$^+$,7/2$^+$)		J	Jπ: from 2241γ to 9/2$^+$, 4736γ to 3/2$^+$.
4745.49 *10*	(5/2$^+$)		G J	Jπ: from 2250γ to 9/2$^+$, 3164γ to 3/2$^-$, 4745γ to 3/2$^+$.
4749.47 *8*	(3/2$^-$,5/2,7/2$^+$)		J	Jπ: from 3456γ to 7/2$^-$, 4749γ to 3/2$^+$.
4823.33 *5*	(7/2$^+$,9/2$^+$)		J	Jπ: from 2066γ to 5/2$^+$ and 2996γ to 11/2$^+$.
4848.5 *5*	(3/2)$^-$		G I	Jπ: from L(^{3}He,d)=1; 2705γ to 5/2$^+$.
4862.43 *6*	(3/2$^+$,5/2)		J	Jπ: from 2268γ to 1/2$^-$,3/2$^-$, 3185γ to 7/2$^+$, 4862γ to 3/2$^+$.

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
4922 *10*			I s	Jπ: L(^{3}He,d)=1+3 implies 1/2$^-$,3/2$^-$ and 5/2$^-$,7/2$^-$ doublet. E(level): this group is most likely different from 4927.8 level.
4927.83 *6*	(5/2)$^+$		J P s	E(level): 4900, L=2 in (d,^{3}He). In (p,α) E=4900 corresponds to 4922 and/or 4928. Jπ: from L(d,^{3}He)=2; 3253γ to 7/2$^+$, 3335γ to 1/2$^+$, 3634γ to 7/2$^-$.
4948.94 *6*	(3/2$^-$,5/2,7/2$^-$)		J	Jπ: from 3367γ to 3/2$^-$, 3655γ to 7/2$^-$.
4962.3 *5*	(1/2,3/2,5/2)		G	Jπ: from 4962γ to 3/2$^+$; primary γ from 3/2$^-$ (1102) resonance in (p,γ).
4982.9 *2*	19/2$^-$	70.7 ps *21*	C E	μ=7.0 *29* (1981Le19,1989Ra17) μ: $\gamma(\theta$,H,t), recoil into gas or vacuum (1981Le19). Jπ: from $\gamma(\theta$,pol) in ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). $T_{1/2}$: from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ). Other: >3.1 ps from ^{38}Ar(α,pγ).
4995 *10*	5/2$^-$,7/2$^-$		I	Jπ: from L(^{3}He,d)=3.
5021.23? *8*			J	
5060 *20*	3/2$^+$,5/2$^+$		P	Jπ: from L(d,^{3}He)=2.
5091 *10*	1/2$^-$,3/2$^-$		I s	Jπ: from L(^{3}He,d)=1.
5096.20 *8*			J s	
5101.2 *20*	1/2$^-$,3/2$^-$		G I s	Jπ: from L(^{3}He,d)=1.
5129.4? *5*			N	
5160 *10*	5/2$^-$,7/2$^-$		I s	Jπ: from L(^{3}He,d)=3.
5185.27 *6*	(5/2,7/2$^-$)		J	Jπ: from 455γ to 3/2$^-$, 2677γ to 7/2$^+$; primary γ from 7/2$^-$,9/2$^-$.
5235 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5270 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5298.86 *6*	(3/2$^-$,5/2,7/2$^-$)		J	Jπ: from 568γ to 3/2$^-$, 3155γ to 5/2$^+$; primary γ from 7/2$^-$,9/2$^-$.
5335 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5401.7 *5*	1/2$^-$,3/2$^-$		G I	Jπ: from L(^{3}He,d)=1.
5448 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5496.61 *7*	(7/2$^+$)		J N	Jπ: from 2969γ to 11/2$^+$, 5496γ to 3/2$^+$.
5543 *10*			I	Jπ: doublet group in (^{3}He,d) assigned as L=1+3. The L=1 component may be associated with 5557.38 level.
5548.19 *7*	(3/2$^+$,5/2$^+$,7/2$^+$)		J p s	Jπ: from 3871γ to 7/2$^+$, 5548γ to 3/2$^+$.
5557.39 *9*			IJ p	
5575.24? *8*	(3/2$^-$,5/2,7/2$^+$)		J s	Jπ: from 2863γ to (7/2)$^-$, 5574γ to 3/2$^+$.
5604.58 *8*	(3/2$^-$,5/2,7/2$^+$)		J	Jπ: from 5604γ to 3/2$^+$; primary γ from 7/2$^-$,9/2$^-$.
5610.83 *6*	(5/2,7/2$^+$)		J	Jπ: from 3933γ to 7/2$^+$, 5610γ to 3/2$^+$; primary γ from 7/2$^-$,9/2$^-$.
5620 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5655.66 *8*	(3/2$^-$,5/2$^+$)		IJ N	XREF: I(5669). Jπ: from 2514γ to (7/2$^-$), 4063γ to 1/2$^+$.
5659.25 *8*	(3/2$^-$,5/2,7/2$^+$)		IJ	XREF: I(5669). Jπ: from 5659γ to 3/2$^+$; primary γ from 7/2$^-$,9/2$^-$.
5717 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5800.80 *7*	(3/2$^+$,5/2$^+$)		J	Jπ: from 3293γ to 7/2$^+$, 4820γ to 1/2$^+$.
5816 *10*	1/2$^+$		I	Jπ: from L(^{3}He,d)=0.
5826.66 *7*	(5/2)$^+$		J P	Jπ: from L(d,^{3}He)=2, 4533γ to 7/2$^-$.
5852 *10*	5/2$^-$,7/2$^-$		I	Jπ: from L(^{3}He,d)=3.
5886.95 *8*	(3/2)$^-$		IJ	Jπ: from L(^{3}He,d)=1, 3130γ to 5/2$^+$.
5912.50 *8*	(9/2$^+$)		J N	Jπ: from 2671γ to (5/2$^+$,7/2$^-$), 3138γ to 13/2$^+$.
5933 *10*	1/2$^-$,3/2$^-$		I	Jπ: from L(^{3}He,d)=1.
5952.41 *8*	(7/2$^-$,9/2$^-$)		J	Jπ: from 2810γ to 5/2$^-$, 3191γ to 11/2$^-$, primary γ

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)†	Jπ	XREF	Comments
			from 7/2⁻,9/2⁻.
5968.89 *8*	(9/2⁺,11/2⁻)	J	Jπ: from 3195γ to 13/2⁺; primary γ from 7/2⁻,9/2⁻.
5986 *10*	(1/2 to 7/2)⁻	I	E(level),Jπ: doublet: (1/2,3/2)⁻ and (5/2,7/2)⁻ from L(^{3}He,d)=1+3.
6040.67 *10*	(3/2⁻,5/2,7/2)	J N	Jπ: from 3283γ to 5/2⁺, 3724γ to 5/2⁻; primary γ from 7/2⁻,9/2⁻.
6062 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6070.76 *9*	(5/2,7/2,9/2⁺)	J	Jπ: from 4373γ to 5/2⁺, 4777γ to 7/2⁻, primary γ from 7/2⁻,9/2⁻.
6078.56 *7*	(3/2)⁻	IJ	Jπ: from L(^{3}He,d)=1; primary γ from 7/2⁻,9/2⁻.
6109 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6186.04 *11*	(5/2,7/2,9/2⁻)	J	Jπ: from 3043γ to 5/2⁻, 4510γ to 7/2⁺, primary γ from 7/2⁻,9/2⁻.
6190 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6211.50 *7*	(7/2⁺,9/2⁻)	J	Jπ: from 3684γ to 11/2⁺, 3895γ to 5/2⁻.
6229.88? *10*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 1771γ to 1/2⁻,3/2⁻, primary γ from 7/2⁻,9/2⁻.
6255.96 *8*	(5/2,7/2⁻)	J	Jπ: from 3748γ to 7/2⁺, 4674γ to 3/2⁻, primary γ from 7/2⁻,9/2⁻.
6261 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6290.05 *14*	(3/2)⁻	IJ	XREF: I(6303).
			Jπ: from L(^{3}He,d)=1, primary γ from 7/2⁻,9/2⁻.
6350 *10*	5/2⁻,7/2⁻	I	Jπ: from L(^{3}He,d)=3.
6394.31 *10*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 4227γ to 3/2⁻; primary γ from 7/2⁻,9/2⁻.
6434.51 *9*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 3386γ to 1/2⁻,3/2⁻, primary γ from 7/2⁻,9/2⁻.
6450.15? *10*	(3/2⁻,5/2,7/2⁺)	J	Jπ: from 3386γ to 1/2⁻,3/2⁻, primary γ from 7/2⁻,9/2⁻.
6497.00 *10*	(3/2)⁻	IJ	Jπ: from L(^{3}He,d)=1; 5203γ to 7/2⁻.
6528.13 *9*	(3/2⁻,5/2,7/2⁻)	J P	XREF: P(6500).
			Jπ: from 1065γ from (3/2)⁻; primary γ from 7/2⁻,9/2⁻. L(d,^{3}He)=2 supports 5/2⁺.
6601 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6630 *20*	3/2⁺,5/2⁺	P	Jπ: from L(d,^{3}He)=2.
6654 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6704 *10*	5/2⁻,7/2⁻	I	Jπ: from L(^{3}He,d)=3.
6769.77 *10*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 4176γ to 1/2⁻,3/2⁻, 5476γ to 7/2⁻.
6782.54 *10*		J	
6791.36 *9*	(5/2,7/2⁻)	J	Jπ: from 904γ to (3/2⁻), 5115γ to 7/2⁺, primary γ from 7/2⁻,9/2⁻.
6809 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6835.43 *9*	(5/2,7/2⁻)	J	Jπ: from 4668γ to 3/2⁻, 5158γ to 7/2⁺, 5542γ to 7/2⁻.
6874 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6919 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6980 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
6995.53 *11*	(5/2,7/2,9/2⁺)	J	Jπ: from 4238γ to 5/2⁺, 5319.5γ to 7/2⁺; primary γ from 7/2⁻,9/2⁻.
7020.97 *10*	(3/2)⁻	IJ	XREF: I(7037).
			Jπ: from L(^{3}He,d)=1, 3025γ to (5/2⁺), 5727γ to 7/2⁻.
7035.28 *14*	(5/2)⁻	IJ	XREF: I(7037).
			Jπ: from L(^{3}He,d)=3, 5476γ to 3/2⁺.
7085 *10*	5/2⁻,7/2⁻	I	Jπ: from L(^{3}He,d)=3.
7159 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
7232 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
7319 *10*	(1/2 to 7/2)⁻	I	Jπ,E(level): doublet: (1/2,3/2)⁻ and (5/2,7/2)⁻ from L(^{3}He,d)=1+3.
7361.15? *11*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 5777γ to 3/2⁻; primary γ from 7/2⁻,9/2⁻.
7420 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
7471 *10*	5/2⁻,7/2⁻	I	Jπ: from L(^{3}He,d)=3.
7511 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
7593.06 *9*		J	
7617 *10*	1/2⁻,3/2⁻	I	Jπ: from L(^{3}He,d)=1.
7654.93 *9*	(3/2⁻,5/2,7/2⁻)	J	Jπ: from 3380γ to (7/2⁻,9/2⁺), 3411γ to (3/2⁻).
7836 *15*	(1/2⁻,3/2,5/2⁺)	I	Jπ: from L(^{3}He,d)=(1),2.
7893 *15*	(1/2⁻,3/2,5/2⁺)	I	Jπ: from L(^{3}He,d)=(1),2.
7938.98 *10*		IJ M	XREF: I(7940).
8041 *15*		I P	E(level): 8000 in (d,^{3}He).

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Adopted Levels, Gammas (continued)

^{41}K Levels (continued)

E(level)†	Jπ	XREF		Comments
				Jπ: L(^{3}He,d)=(3) gives (5/2$^-$,7/2$^-$); but L(d,^{3}He)=(2) gives (3/2$^+$,5/2$^+$). There may be two levels near this energy.
8116 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8152 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8190.21 *12*	(3/2$^-$,5/2,7/2$^-$)	J		Jπ: from 3945γ to (3/2)$^-$; primary γ from 7/2$^-$,9/2$^-$.
8200.11 *9*	(5/2$^-$,7/2$^-$,3/2$^+$)	IJ		XREF: I(8229). Jπ: from 2121γ to (3/2)$^-$, 6522γ to 7/2$^+$; L(^{3}He,d)=(3).
8268 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8349 *15*	5/2$^-$,7/2$^-$	I	S	T=3/2 Jπ: from L(^{3}He,d)=L(p,α)=3. E(level): IAR of g.s., 7/2$^-$ in ^{41}Ar.
8464 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8548 *15*	(5/2$^-$,7/2$^-$)	I		Jπ: from L(^{3}He,d)=(3).
8660 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8748 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
8801 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
8873 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
9050 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
9116 *15*	(5/2$^-$,7/2$^-$)	I		Jπ: from L(^{3}He,d)=(3).
9203 *15*	(1/2 to 7/2$^-$)	I		Jπ: from L(^{3}He,d)=(1),3.
9243 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
9376 *15*	(3/2$^+$,5/2$^+$)	I		Jπ: from L(^{3}He,d)=(2).
9420 *50*	3/2$^+$,5/2$^+$		S	T=3/2 Jπ: from L(p,α)=2. E(level): possible IAR of 1035, 3/2$^+$ in ^{41}Ar.
9471 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
9626 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
9740.70 *10*	(3/2)$^-$	IJ		Jπ: from L(^{3}He,d)=1, 8446γ to 7/2$^-$.
9789 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
9857 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
9936 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
10093 *15*	1/2$^-$,3/2$^-$	I		Jπ: from L(^{3}He,d)=1.
10195 *15*	1/2$^+$&1/2$^-$,3/2$^-$	I		Jπ,E(level): doublet: 1/2$^+$ and 1/2$^-$,3/2$^-$ from L(^{3}He,d)=0+1.
10239 *15*	(1/2$^-$,3/2$^-$)	I		Jπ: from L(^{3}He,d)=(1).
12220 *50*	3/2$^+$,5/2$^+$		S	T=3/2 Jπ: from L(p,α)=2. E(level): IAR of 3592, 3/2$^+$,5/2$^+$ in ^{41}Ar.

† From least-squares fit to Eγ's for levels populated in γ-ray studies. Others are weighted averages of values from different particle reactions.

Adopted Levels, Gammas (continued)

$\gamma(^{41}K)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
980.476	$1/2^+$	980.461 *16*	100	0.0	$3/2^+$	M1+E2	0.13 *2*	6.03×10^{-5} *9*	α(K)=5.51×10^{-5} *8*; α(L)=4.63×10^{-6} *7*; α(M)=5.02×10^{-7} *8*; α(N)=1.85×10^{-8} *3* B(E2)(W.u.)=4.1 *19*; B(M1)(W.u.)=0.08 *3* Mult.,δ: from B(E2) and $T_{1/2}$.
1293.609	$7/2^-$	1293.586 *7*	100	0.0	$3/2^+$	M2+E3[a]	+0.118[a] *12*	7.44×10^{-5} *11*	α(K)=6.36×10^{-5} *9*; α(L)=5.34×10^{-6} *8*; α(M)=5.80×10^{-7} *9*; α(N)=2.14×10^{-8} *3* B(E3)(W.u.)=3.7 *8*; B(M2)(W.u.)=0.097 *3* δ: other: +0.03 *+1−2* from ^{38}Ar(α,pγ).
1559.903	$3/2^+$	579.418 *7*	22.0 *12*	980.476	$1/2^+$	M1+E2	+0.12 *4*	1.76×10^{-4} *4*	α(K)=0.000161 *3*; α(L)=1.356×10^{-5} *25*; α(M)=1.47×10^{-6} *3*; α(N)=5.41×10^{-8} *10* B(E2)(W.u.)=6.9 *10*; B(M1)(W.u.)=0.053 *8* I_γ: weighted average of 21.4 *7* (^{38}Ar(α,pγ)), 19.0 *12* (^{40}Ar(p,γ)), 22 *4* (^{40}K(n,γ) E=thermal), 24.8 *9* (^{41}K(p,p′γ),(p,p′)).
		1559.89 *3*	100.0 *7*	0.0	$3/2^+$	M1+E2	−0.27 *2*	1.10×10^{-4}	α(K)=2.36×10^{-5} *4*; α(L)=1.97×10^{-6} *3*; α(M)=2.14×10^{-7} *3*; α(N)=7.91×10^{-9} *12* B(E2)(W.u.)=1.07 *21*; B(M1)(W.u.)=0.0117 *16*
1582.001	$3/2^-$	288.388 *6*	0.9 *3*	1293.609	$7/2^-$	[E2]		0.00399	α(K)=0.00365 *6*; α(L)=0.000310 *5*; α(M)=3.34×10^{-5} *5*; α(N)=1.207×10^{-6} *17* B(E2)(W.u.)=27 *10*
		601.517 *12*	18.0 *8*	980.476	$1/2^+$	E1+M2	−0.06 *+9−3*	1.05×10^{-4} *2*	α(K)=9.62×10^{-5} *20*; α(L)=8.07×10^{-6} *17*; α(M)=8.75×10^{-7} *18*; α(N)=3.22×10^{-8} *7* B(E1)(W.u.)=4.2×10^{-5} *3*; B(M2)(W.u.)=1.93 *12* I_γ: weighted average of 18.8 *8* (^{38}Ar(α,pγ)), 16.8 *9* (^{40}Ar(p,γ)), 21 *5* (^{40}K(n,γ) E=thermal).
		1581.98 *4*	100.0 *8*	0.0	$3/2^+$	E1+M2	−0.08 *2*	3.43×10^{-4}	α(K)=1.435×10^{-5} *23*; α(L)=1.201×10^{-6} *19*; α(M)=1.303×10^{-7} *21*; α(N)=4.81×10^{-9} *8* B(E1)(W.u.)=1.29×10^{-5} *6*; B(M2)(W.u.)=0.15 *8*
1593.107	$1/2^+$	612.637 *8*	62 *3*	980.476	$1/2^+$				I_γ: weighted average of 65.3 *18* (^{38}Ar(α,pγ)), 57.5 *20* (^{40}Ar(p,γ)), 8.E+1 *3* (^{40}K(n,γ) E=thermal).
		1593.4[&] *4*	100 *2*	0.0	$3/2^+$				
1677.235	$7/2^+$	383.617 *6*	0.72 *11*	1293.609	$7/2^-$	[E1]		3.33×10^{-4}	α(K)=0.000305 *5*; α(L)=2.56×10^{-5} *4*; α(M)=2.77×10^{-6} *4*; α(N)=1.016×10^{-7} *15* B(E1)(W.u.)=5.1×10^{-5} *14*
		1677.23 *4*	100 *1*	0.0	$3/2^+$	E2[a]		1.88×10^{-4}	α(K)=2.33×10^{-5} *4*; α(L)=1.95×10^{-6} *3*; α(M)=2.12×10^{-7} *3*; α(N)=7.81×10^{-9} *11* B(E2)(W.u.)=3.6 *8*
1698.005	$5/2^+$	1697.93 *4*	100	0.0	$3/2^+$	M1+E2	−2.1 *2*	1.89×10^{-4}	α(K)=2.23×10^{-5} *4*; α(L)=1.87×10^{-6} *3*; α(M)=2.02×10^{-7} *3*; α(N)=7.46×10^{-9} *11* B(E2)(W.u.)=4.6 *12*; B(M1)(W.u.)=0.0010 *3*
2143.82	$5/2^+$	445.814 *5*	4.9 *11*	1698.005	$5/2^+$				

$^{41}_{19}K_{22}$-9

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
2143.82	$5/2^+$	550.73 *3*	0.19 *6*	1593.107	$1/2^+$	[E2]		4.24×10^{-4}	α(K)=0.000388 *6*; α(L)=3.27×10^{-5} *5*; α(M)=3.54×10^{-6} *5*; α(N)=1.295×10^{-7} *19* B(E2)(W.u.)=7 *3*
		561.842 *22*	0.30 *6*	1582.001	$3/2^-$	[E1]		1.23×10^{-4}	α(K)=0.0001122 *16*; α(L)=9.42×10^{-6} *14*; α(M)=1.021×10^{-6} *15*; α(N)=3.75×10^{-8} *6* B(E1)(W.u.)=2.8×10^{-5} *10*
		583.900 *15*	30 *6*	1559.903	$3/2^+$				
		1162.8[#d] *3*	6.3[#] *14*	980.476	$1/2^+$	[E2]		6.01×10^{-5} *9*	α(K)=5.06×10^{-5} *7*; α(L)=4.25×10^{-6} *6*; α(M)=4.61×10^{-7} *7*; α(N)=1.696×10^{-8} *24* B(E2)(W.u.)=5.9 *21*
		2143.71 *4*	100 *11*	0.0	$3/2^+$	M1+E2	−0.15 *6*	3.25×10^{-4}	α(K)=1.364×10^{-5} *20*; α(L)=1.141×10^{-6} *16*; α(M)=1.238×10^{-7} *18*; α(N)=4.57×10^{-9} *7* B(E2)(W.u.)=0.10 *8*; B(M1)(W.u.)=0.0064 *19*
2166.70	$3/2^-$	573.597 *9*	8.7 *20*	1593.107	$1/2^+$	[E1]		1.17×10^{-4}	α(K)=0.0001066 *15*; α(L)=8.95×10^{-6} *13*; α(M)=9.70×10^{-7} *14*; α(N)=3.56×10^{-8} *5* B(E1)(W.u.)=6.1×10^{-5} *18*
		584.685 *11*	37 *8*	1582.001	$3/2^-$				I_γ: other: 11.5 *13* from ^{40}Ar(p,γ).
		606.824 *18*	4.5 *13*	1559.903	$3/2^+$	[E1]		1.02×10^{-4}	α(K)=9.31×10^{-5} *13*; α(L)=7.81×10^{-6} *11*; α(M)=8.47×10^{-7} *12*; α(N)=3.11×10^{-8} *5* B(E1)(W.u.)=2.7×10^{-5} *9*
		1186.170 *17*	100 *27*	980.476	$1/2^+$	E1+M2	−0.14 *+9−18*	7.29×10^{-5} *14*	α(K)=2.4×10^{-5} *4*; α(L)=2.0×10^{-6} *4*; α(M)=2.2×10^{-7} *4*; α(N)=8.1×10^{-9} *14* B(E1)(W.u.)=7.7×10^{-5} *24* Mult.: D+Q from $\gamma(\theta)$ in ^{38}Ar(α,pγ); $\Delta\pi$=yes from level scheme.
		2166.72 *5*	76 *3*	0.0	$3/2^+$	[E1]		7.66×10^{-4}	α(K)=8.86×10^{-6} *13*; α(L)=7.41×10^{-7} *11*; α(M)=8.04×10^{-8} *12*; α(N)=2.97×10^{-9} *5* B(E1)(W.u.)=9.9×10^{-6} *17* I_γ: weighted average of 75 *3* (^{40}Ar(p,γ)), 82 *8* (^{40}K(n,γ) E=thermal).
2316.62	$5/2^-$	639.345 *11*	0.28 *15*	1677.235	$7/2^+$	[E1]		8.99×10^{-5} *13*	α(K)=8.22×10^{-5} *12*; α(L)=6.90×10^{-6} *10*; α(M)=7.48×10^{-7} *11*; α(N)=2.75×10^{-8} *4* B(E1)(W.u.)=1.0×10^{-5} *6*
		734.605 *8*	6.1 *4*	1582.001	$3/2^-$	M1+E2	−0.14 *7*	1.08×10^{-4} *2*	α(K)=9.83×10^{-5} *21*; α(L)=8.26×10^{-6} *18*; α(M)=8.96×10^{-7} *19*; α(N)=3.30×10^{-8} *7* B(E2)(W.u.)=0.59 *19*; B(M1)(W.u.)=0.0053 *17* Mult.: D+Q from $\gamma(\theta)$ in ^{38}Ar(α,pγ); $\Delta\pi$=no from level scheme. I_γ: weighted average of 6.4 *3* (^{38}Ar(α,pγ)), 4.0 *10* (^{40}K(n,γ) E=thermal), 5.8 *7* (^{41}K(p,p′γ),(p,p′)).
		1022.996 *7*	100 *22*	1293.609	$7/2^-$	M1+E2	−0.08 *1*	5.53×10^{-5} *8*	α(K)=5.06×10^{-5} *7*; α(L)=4.25×10^{-6} *6*; α(M)=4.61×10^{-7}

$^{41}_{19}K_{22}$-10

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
									7; α(N)=1.700×10^{-8} *24* B(E2)(W.u.)=0.61 *24*; B(M1)(W.u.)=0.033 *13*
2316.62	5/2$^-$	2316.55 *20*	3.4 *7*	0.0	3/2$^+$	[E1]		8.63×10^{-4}	α(K)=8.07×10^{-6} *12*; α(L)=6.74×10^{-7} *10*; α(M)=7.32×10^{-8} *11*; α(N)=2.70×10^{-9} *4* B(E1)(W.u.)=2.5×10^{-6} *10*
2440.18	(3/2,5/2$^+$)	742.142 *13*	11.6 *24*	1698.005	5/2$^+$				I$_\gamma$: other: 22.9 in ^{41}K(p,p′γ),(p,p′).
		846.967 *23*	7.8 *17*	1593.107	1/2$^+$				
		880[#]	9[#] *3*	1559.903	3/2$^+$				
		1459[b]	26	980.476	1/2$^+$				
		2440.28 *6*	100 *10*	0.0	3/2$^+$				
2447.83	(3/2$^+$,5/2,7/2$^+$)	2447.77 *6*	100	0.0	3/2$^+$				
2494.91	9/2$^+$	796.926 *20*	39.5 *21*	1698.005	5/2$^+$	E2		1.43×10^{-4}	α(K)=0.0001306 *19*; α(L)=1.098×10^{-5} *16*; α(M)=1.191×10^{-6} *17*; α(N)=4.37×10^{-8} *7* B(E2)(W.u.)<13 I$_\gamma$: from ^{38}Ar(α,pγ). Mult.: Q from $\gamma(\theta)$ in ^{38}Ar(α,pγ), $\Delta\pi$=no from level scheme.
		817.659 *9*	100 *3*	1677.235	7/2$^+$	M1+E2	+0.38 *2*	9.15×10^{-5} *14*	α(K)=8.37×10^{-5} *13*; α(L)=7.03×10^{-6} *11*; α(M)=7.63×10^{-7} *12*; α(N)=2.81×10^{-8} *5* B(E2)(W.u.)<4; B(M1)(W.u.)<0.005
		1201.303 *17*	67.1 *23*	1293.609	7/2$^-$	E1+M2	+0.06 *2*	8.14×10^{-5} *12*	α(K)=2.27×10^{-5} *4*; α(L)=1.90×10^{-6} *3*; α(M)=2.06×10^{-7} *4*; α(N)=7.60×10^{-9} *12* B(E1)(W.u.)<3.4×10^{-5}; B(M2)(W.u.)<0.65 I$_\gamma$: from ^{38}Ar(α,pγ).
2507.93	7/2$^+$	191.24 *6*	0.25 *6*	2316.62	5/2$^-$	[E1]		0.00259	α(K)=0.00237 *4*; α(L)=0.000199 *3*; α(M)=2.15×10^{-5} *3*; α(N)=7.83×10^{-7} *11* B(E1)(W.u.)=0.00060 *23*
		364.089 *7*	6.0 *9*	2143.82	5/2$^+$				
		830.679 *9*	83 *18*	1677.235	7/2$^+$	M1+E2	+0.36 *+27–35*	8.8×10^{-5} *8*	α(K)=8.0×10^{-5} *7*; α(L)=6.8×10^{-6} *6*; α(M)=7.3×10^{-7} *7*; α(N)=2.70×10^{-8} *24* B(E2)(W.u.)=48 *17*; B(M1)(W.u.)=0.08 *3* Mult.: D+Q from $\gamma(\theta)$ in ^{38}Ar(α,pγ), $\Delta\pi$=no from level scheme.
		948.001 *13*	16 *3*	1559.903	3/2$^+$	E2		9.05×10^{-5} *13*	α(K)=8.28×10^{-5} *12*; α(L)=6.96×10^{-6} *10*; α(M)=7.54×10^{-7} *11*; α(N)=2.77×10^{-8} *4* B(E2)(W.u.)=41 *14* Mult.: Q from $\gamma(\theta)$ in ^{38}Ar(α,pγ), $\Delta\pi$=no from level scheme.
		1214.327 *22*	21 *4*	1293.609	7/2$^-$	[E1]		8.93×10^{-5} *13*	α(K)=2.21×10^{-5} *3*; α(L)=1.85×10^{-6} *3*; α(M)=2.01×10^{-7} *3*; α(N)=7.39×10^{-9} *11* B(E1)(W.u.)=0.00020 *7*
		2507.88 *4*	100 *10*	0.0	3/2$^+$	E2		5.73×10^{-4}	α(K)=1.125×10^{-5} *16*; α(L)=9.41×10^{-7} *14*;

$^{41}_{19}K_{22}$-11

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
									α(M)=1.021×10^{-7} *15*; α(N)=3.77×10^{-9} *6* B(E2)(W.u.)=2.0 *6*
2527.66	11/2$^+$	850.417 *7*	100	1677.235	7/2$^+$	E2[a]		1.20×10^{-4}	α(K)=0.0001096 *16*; α(L)=9.22×10^{-6} *13*; α(M)=1.000×10^{-6} *14*; α(N)=3.67×10^{-8} *6* B(E2)(W.u.)=1.00 *3*
2593.97	1/2$^-$,3/2$^-$	895.4[d]	<1	1698.005	5/2$^+$				E_γ,I_γ: from (p,γ). An 895.95γ shown as the most intense transition from 2593.97 level in (n,γ) is not confirmed in (p,γ), where an upper limit of ≈1% is suggested.
		1011.89 *21*	100.0 *23*	1582.001	3/2$^-$				
		2593.9	13.6 *23*	0.0	3/2$^+$				E_γ,I_γ: from ^{40}Ar(p,γ).
2676.1	1/2$^+$	1115.8[b]	100[b]	1559.903	3/2$^+$				
		2676.0[b]	56[b]	0.0	3/2$^+$				
2710.48	3/2$^+$,5/2$^+$	566.650	46 *10*	2143.82	5/2$^+$				
		1117.3[#]		1593.107	1/2$^+$				
		1729.8[#]		980.476	1/2$^+$				
		2710.41 *16*	100 *11*	0.0	3/2$^+$				
2712.57	(7/2)$^-$	395.945 *2*	15.9 *13*	2316.62	5/2$^-$	M1+E2	+0.15 *8*	0.00042 *3*	α(K)=0.000381 *24*; α(L)=3.21×10^{-5} *20*; α(M)=3.48×10^{-6} *22*; α(N)=1.28×10^{-7} *8* B(E2)(W.u.)=30 *9*; B(M1)(W.u.)=0.068 *20* I_γ: weighted average of 14.9 *6* (^{38}Ar(α,pγ)), 19 *4* (^{40}K(n,γ) E=thermal), 19.1 *11* (^{41}K(p,p′γ),(p,p′)).
		545.876 *7*	2.2 *5*	2166.70	3/2$^-$	[E2]		4.36×10^{-4}	α(K)=0.000399 *6*; α(L)=3.37×10^{-5} *5*; α(M)=3.64×10^{-6} *6*; α(N)=1.332×10^{-7} *19* B(E2)(W.u.)=38 *14*
		1014.498 *18*	10.3 *22*	1698.005	5/2$^+$	[E1]		3.36×10^{-5} *5*	α(K)=3.08×10^{-5} *5*; α(L)=2.58×10^{-6} *4*; α(M)=2.80×10^{-7} *4*; α(N)=1.030×10^{-8} *15* B(E1)(W.u.)=7.0×10^{-5} *25*
		1130.76 *20*	21 *4*	1582.001	3/2$^-$	[E2]		6.13×10^{-5} *9*	α(K)=5.40×10^{-5} *8*; α(L)=4.53×10^{-6} *7*; α(M)=4.92×10^{-7} *7*; α(N)=1.81×10^{-8} *3* B(E2)(W.u.)=9 *4* I_γ: weighted average of 35 *11* (^{40}Ar(p,γ)), 20 *3* (^{40}K(n,γ) E=thermal).
		1418.975 *15*	100 *1*	1293.609	7/2$^-$	M1(+E2)	−0.4 *5*	7.7×10^{-5} *8*	α(K)=2.83×10^{-5} *17*; α(L)=2.37×10^{-6} *14*; α(M)=2.57×10^{-7} *15*; α(N)=9.5×10^{-9} *6* B(E2)(W.u.)=2.0 *6*; B(M1)(W.u.)=0.0082 *23*
2756.73	5/2$^+$	612.925 *8*	12 *3*	2143.82	5/2$^+$				I_γ: other: 26 *14* in ^{40}Ar(p,γ).
		1058.708 *15*	17 *3*	1698.005	5/2$^+$				I_γ: weighted average of 21 *5* (^{40}Ar(p,γ)), 15 *3* (^{40}K(n,γ) E=thermal).
		1079.44 *4*	5 *2*	1677.235	7/2$^+$				I_γ: weighted average of 6.9 *17* (^{40}Ar(p,γ)), 2.4 *6* (^{40}K(n,γ) E=thermal).

$^{41}_{19}K_{22}$-12

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
2756.73	5/2$^+$	1196.785 *17*	19 *4*	1559.903	3/2$^+$				I_γ: weighted average of 19 *5* (^{40}Ar(p,γ)), 19 *4* (^{40}K(n,γ) E=thermal).
		1463.35 *12*	26 *9*	1293.609	7/2$^-$				I_γ: weighted average of 26 *9* (^{40}K(n,γ) E=thermal), 27 *9* (^{41}K(n,n′γ)).
		2756.68 *4*	100 *5*	0.0	3/2$^+$	M1+E2	−32 *+17−18*	6.86×10^{-4}	α(K)=9.62×10^{-6} *14*; α(L)=8.04×10^{-7} *12*; α(M)=8.73×10^{-8} *13*; α(N)=3.22×10^{-9} *5* B(E2)(W.u.)=4.5 *19*; B(M1)(W.u.)=1.1×10^{-5} *5*
2761.73	11/2$^-$	266.841 *19*	0.27 *9*	2494.91	9/2$^+$	(E1)		9.46×10^{-4}	α(K)=0.000865 *13*; α(L)=7.26×10^{-5} *11*; α(M)=7.86×10^{-6} *11*; α(N)=2.87×10^{-7} *4* B(E1)(W.u.)=0.00017 *7*
		1468.090 *12*	100 *22*	1293.609	7/2$^-$	E2[a]		1.10×10^{-4}	α(K)=3.05×10^{-5} *5*; α(L)=2.55×10^{-6} *4*; α(M)=2.77×10^{-7} *4*; α(N)=1.021×10^{-8} *15* B(E2)(W.u.)=21 *7*
2774.25	13/2$^+$	246.587 *3*	100	2527.66	11/2$^+$	M1(+E2)[a]	+0.013[a] *14*	1.18×10^{-3}	α(K)=0.001080 *16*; α(L)=9.16×10^{-5} *13*; α(M)=9.93×10^{-6} *15*; α(N)=3.63×10^{-7} *6* B(E2)(W.u.)=0.243 *8*; B(M1)(W.u.)=0.0286 *9* δ: other: +0.04 *4* from γ(θ) in ^{38}Ar(α,pγ).
3048.22	1/2$^-$,3/2$^-$	454.4[#]		2593.97	1/2$^-$,3/2$^-$				
		904.38[cd] *3*	<16[c]	2143.82	5/2$^+$				
		1454.0[#]	22[#] *7*	1593.107	1/2$^+$				
		1465.0[#]		1582.001	3/2$^-$				
		2067.2[#]		980.476	1/2$^+$				
		3047.8 *3*	100 *7*	0.0	3/2$^+$				
3141.84	(7/2$^-$)	380.13 *7*	0.7 *3*	2761.73	11/2$^-$				
		385.107 *7*	14 *3*	2756.73	5/2$^+$				
		633.891 *8*	100 *24*	2507.93	7/2$^+$				
		646.924 *4*	56 *13*	2494.91	9/2$^+$				
		825.19 *3*	5.3 *11*	2316.62	5/2$^-$				
3142.43	5/2$^-$	380.696[d] *8*	1.9 *3*	2761.73	11/2$^-$				
		614.766[d] *7*	2.6 *7*	2527.66	11/2$^+$				
		998.45 *7*	1.2 *3*	2143.82	5/2$^+$	[E1]		3.47×10^{-5}	B(E1)(W.u.)=3.5×10^{-5} *14*
		1465.10 *5*	34 *8*	1677.235	7/2$^+$	[E1]		2.55×10^{-4}	B(E1)(W.u.)=0.00031 *12*
		1848.82 *4*	100 *10*	1293.609	7/2$^-$	M1+E2	+0.87 *35*	2.30×10^{-4}	α(K)=1.82×10^{-5} *5*; α(L)=1.53×10^{-6} *5*; α(M)=1.66×10^{-7} *5*; α(N)=6.11×10^{-9} *17* B(E2)(W.u.)=6 *3*; B(M1)(W.u.)=0.009 *4*
3162.2		3162.1[b]	100[b]	0.0	3/2$^+$				
3179.8	3/2$^+$,5/2$^+$	1619.8[#]	32[#] *7*	1559.903	3/2$^+$				
		3179.7[#]	100[#] *7*	0.0	3/2$^+$				
3213.61	5/2$^-$	1631.5[d] *4*	12 *3*	1582.001	3/2$^-$				I_γ: other: 67 *20* in ^{41}K(n,n′γ).
		1919.95 *4*	100 *10*	1293.609	7/2$^-$				

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
3213.61	5/2$^-$	3213.7[d] *4*	5.9 *9*	0.0	3/2$^+$	[E1]	1.35×10^{-3}	α(K)=5.23×10^{-6} *8*; α(L)=4.37×10^{-7} *7*; α(M)=4.74×10^{-8} *7*; α(N)=1.750×10^{-9} *25* B(E1)(W.u.)=7.E−6 *4*
3229.8	(1/2$^+$,3/2,5/2$^+$)	1669.8[#]	100[#] *27*	1559.903	3/2$^+$			
		2249.2[#]	73[#] *18*	980.476	1/2$^+$			
		3229.7[#]	49[#] *18*	0.0	3/2$^+$			
3235.57	(3/2$^-$,5/2,7/2$^-$)	918.949 *13*	45 *10*	2316.62	5/2$^-$			I_γ: others: 22 *7* in ^{40}Ar(p,γ) and 52 in ^{41}K(p,p′γ),(p,p′).
		1941.91 *4*	100 *10*	1293.609	7/2$^-$			
3240.65	(5/2$^+$,7/2$^-$)	732.714[c] *6*	52[c] *12*	2507.93	7/2$^+$			
		745.733 *13*	18 *4*	2494.91	9/2$^+$			
		1096.832 *17*	24 *5*	2143.82	5/2$^+$			
		1542.19 *21*	6.8 *8*	1698.005	5/2$^+$			
		1946.95 *4*	100 *10*	1293.609	7/2$^-$			
3277.9	(1/2,3/2,5/2$^+$)	2297.4[bd]	140[b]	980.476	1/2$^+$			
		3277.8[b]	100[b]	0.0	3/2$^+$			
3431.84	(9/2$^-$,7/2$^-$)	670.112 *8*	38 *10*	2761.73	11/2$^-$			
		719.272 *12*	30 *6*	2712.57	(7/2)$^-$			
		1115.20 *3*	19 *4*	2316.62	5/2$^-$			
		2138.12 *4*	100 *10*	1293.609	7/2$^-$			
3450.1	5/2$^-$,7/2$^-$	2156.17 *6*	100	1293.609	7/2$^-$			
3488.5	(5/2)$^+$	1041.51[d] *5*	13 *3*	2447.83	(3/2$^+$,5/2,7/2$^+$)			
		1790.5	9.2 *16*	1698.005	5/2$^+$			I_γ: weighted average of 12.2 *19* (^{40}Ar(p,γ)), 8.4 *10* (^{40}K(n,γ) E=thermal).
		1895.5[#]	4.1[#] *13*	1593.107	1/2$^+$			
		2194.8[#]	3.8[#] *13*	1293.609	7/2$^-$			I_γ: other: 30 *4* in ^{40}K(n,γ),E=thermal.
		2507.9[#]	6.6[#] *15*	980.476	1/2$^+$			
		3488.3	100 *8*	0.0	3/2$^+$			
3521.38?	(5/2$^+$,7/2$^+$)	1026.48[c] *6*	18[c] *5*	2494.91	9/2$^+$			
		3520.84 *15*	100 *8*	0.0	3/2$^+$			
3534.45	(7/2$^+$,9/2,11/2$^+$)	293.786[c] *10*	3.7[c] *8*	3240.65	(5/2$^+$,7/2$^-$)			
		1006.81 *3*	72 *15*	2527.66	11/2$^+$			
		1026.48[c] *6*	14[c] *4*	2507.93	7/2$^+$			
		1039.532 *12*	100 *21*	2494.91	9/2$^+$			
3560.61	(3/2$^-$,5/2,7/2$^+$)	418.80 *4*	1.3 *4*	3141.84	(7/2$^-$)			
		3561.0 *5*	100 *27*	0.0	3/2$^+$			
3572.38		1255.71 *7*	16 *6*	2316.62	5/2$^-$			
		1895.09 *4*	100 *10*	1677.235	7/2$^+$			
3578.3	(3/2$^+$,5/2,7/2$^+$)	1880.6[@] *6*	100[@] *19*	1698.005	5/2$^+$			
		1900.0[@] *9*	98[@] *23*	1677.235	7/2$^+$			

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	Comments
3578.3	(3/2$^+$,5/2,7/2$^+$)	2018.3[@] *4*	58[@] *8*	1559.903	3/2$^+$		
3579.2		1435.5[#]		2143.82	5/2$^+$		
		2019.2[#]		1559.903	3/2$^+$		E_γ: this γ may correspond to 2018.3γ from 3578.3 level.
		3579.0[#]		0.0	3/2$^+$		
3612.77		2019.61[#]	29[#] *7*	1593.107	1/2$^+$		E_γ: from (p,γ) only.
		2030.51 *20*	48 *5*	1582.001	3/2$^-$		I_γ: weighted average of 53 *9* (^{40}Ar(p,γ)), 46 *5* (^{40}K(n,γ) E=thermal).
		3612.91 *11*	100 *5*	0.0	3/2$^+$		
3626.1		2043.9[#]	100	1582.001	3/2$^-$		
3651.46	(5/2,7/2$^-$)	1974.22 *4*	100 *10*	1677.235	7/2$^+$		
		2358.46 *23*	22 *3*	1293.609	7/2$^-$		
3740.1	1/2$^-$,3/2$^-$	2157.9[#]	100[#] *20*	1582.001	3/2$^-$		
		3739.9[#]	100[#] *20*	0.0	3/2$^+$		
3761.54		1004.87 *3*	5.4 *11*	2756.73	5/2$^+$		I_γ: other: 7 *3* in ^{40}Ar(p,γ).
		1266.45[cd] *22*	8.3[c] *18*	2494.91	9/2$^+$		
		2063.5[#]	10[#] *3*	1698.005	5/2$^+$		E_γ: from (p,γ). A 2062.7γ in (n,γ) is placed from 4229 level and a a 2061.2γ is unplaced in (n,n$'\gamma$).
		2201.53[c] *9*	15.4[c] *18*	1559.903	3/2$^+$		I_γ: other: 24 *6* in ^{40}Ar(p,γ).
		3761.21 *7*	100 *5*	0.0	3/2$^+$		
3774.66	5/2$^-$,7/2$^-$	539.09 *3*	2.9 *6*	3235.57	(3/2$^-$,5/2,7/2$^-$)		
		561.05 *4*	1.8 *5*	3213.61	5/2$^-$		
		1266.45[cd] *22*	23[c] *5*	2507.93	7/2$^+$		
		2192.21 *12*	40 *7*	1582.001	3/2$^-$		I_γ: weighted average of 27 *9* (^{40}Ar(p,γ)), 44 *5* (^{40}K(n,γ) E=thermal).
		2480.92 *5*	100 *10*	1293.609	7/2$^-$		
		2794.04[d] *20*	41 *11*	980.476	1/2$^+$		
		3774.74 *12*	90 *13*	0.0	3/2$^+$		I_γ: weighted average of 55 *18* (^{40}Ar(p,γ)), 95 *6* (^{40}K(n,γ) E=thermal).
3826.90	(5/2,7/2$^+$)	586.26 *4*	2.1 *9*	3240.65	(5/2$^+$,7/2$^-$)		
		685.056[c] *8*	19[c] *5*	3141.84	(7/2$^-$)		
		2128.6 *3*	28 *3*	1698.005	5/2$^+$		
		2149.73 *5*	100 *10*	1677.235	7/2$^+$		
		3826.55 *15*	93 *7*	0.0	3/2$^+$		
3861.3	(1/2,3/2,5/2$^+$)	2301.3[#]	82[#] *8*	1559.903	3/2$^+$		
		2880.7[#]	14[#] *4*	980.476	1/2$^+$		
		3861.1[#]	100[#] *8*	0.0	3/2$^+$		
3870.52	5/2$^-$,7/2$^-$	1727.24[c] *24*	100[c] *12*	2143.82	5/2$^+$		
		2576.48[c] *25*	87[c] *11*	1293.609	7/2$^-$		

$^{41}_{19}K_{22}$-15

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
3897.0	(11/2,15/2)	1123.17 *20*	100	2774.25	13/2$^+$	D(+Q)[a]	<+0.02[a]	E_γ: from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ).
3911.7	1/2$^-$,3/2$^-$	2931.1[#]	100[#] *8*	980.476	1/2$^+$			
		3911.5[#]	25[#] *8*	0.0	3/2$^+$			
3990.40?		429.790 *10*	54 *10*	3560.61	(3/2$^-$,5/2,7/2$^+$)			
		1228.59 *5*	100 *21*	2761.73	11/2$^-$			
3996.49	(5/2$^+$)	344.79 *8*	59 *9*	3651.46	(5/2,7/2$^-$)			
		854.043 *20*	100 *28*	3142.43	5/2$^-$			
		854.642 *20*	0.15 *6*	3141.84	(7/2$^-$)			
		1488.54 *4*	14 *3*	2507.93	7/2$^+$			
		2298.55 *12*	18 *2*	1698.005	5/2$^+$			
		2319.27 *5*	55 *6*	1677.235	7/2$^+$			
		2436.61 *9*	39 *4*	1559.903	3/2$^+$			
		2702.64 *7*	20 *2*	1293.609	7/2$^-$			
		3015.8 *4*	5.3 *10*	980.476	1/2$^+$			
		3996.25 *6*	100 *5*	0.0	3/2$^+$			
4026.7		1709.9[#]	66[#] *12*	2316.62	5/2$^-$			
		2732.9[#]	100[#] *12*	1293.609	7/2$^-$			
4026.94		2466.90[d] *7*	100	1559.903	3/2$^+$			
4146.15	5/2$^-$,7/2$^-$	371.51 *6*	5.8 *10*	3774.66	5/2$^-$,7/2$^-$			
		2852.25 *17*	100 *12*	1293.609	7/2$^-$			
4164.57		403.03 *3*	1.2 *3*	3761.54				
		732.714[c] *6*	33[c] *8*	3431.84	(9/2$^-$,7/2$^-$)			
		1716.2 *5*	2.1 *5*	2447.83	(3/2$^+$,5/2,7/2$^+$)			
		2466.6[#]	33[#] *11*	1698.005	5/2$^+$			
		2487.27 *4*	100 *10*	1677.235	7/2$^+$			
4220.62	(5/2)	193.73 *11*	0.5 *3*	4026.94				
		607.846[c] *9*	15[c] *4*	3612.77				
		659.92[c] *9*	4.3[c] *10*	3560.61	(3/2$^-$,5/2,7/2$^+$)			
		2521.84[c] *24*	19[c] *2*	1698.005	5/2$^+$			
		2543.49 *19*	36 *4*	1677.235	7/2$^+$			
		2926.96 *6*	100 *10*	1293.609	7/2$^-$			
		4220.63 *12*	43 *3*	0.0	3/2$^+$			
4228.99	(5/2)$^-$	358.465 *13*	15 *4*	3870.52	5/2$^-$,7/2$^-$			
		402.08 *3*	1.9 *5*	3826.90	(5/2,7/2$^+$)			
		988.47 *6*	6.8 *15*	3240.65	(5/2$^+$,7/2$^-$)			
		993.21 *8*	3.8 *9*	3235.57	(3/2$^-$,5/2,7/2$^-$)			
		1721.02 *4*	53 *5*	2507.93	7/2$^+$			
		2062.7 *3*	21 *2*	2166.70	3/2$^-$			
		2935.07 *5*	100 *10*	1293.609	7/2$^-$			
		4228.8 *3*	11.4 *15*	0.0	3/2$^+$			
4244.22	(3/2)$^-$	592.777 *25*	1.0 *3*	3651.46	(5/2,7/2$^-$)			

$^{41}_{19}K_{22}$-16

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α	Comments
4244.22	$(3/2)^-$	1101.71 *3*	9.2 *20*	3142.43	$5/2^-$				
		1649.96[c] *14*	9.6[c] *18*	2593.97	$1/2^-,3/2^-$				
		2077.55 *12*	17 *2*	2166.70	$3/2^-$				
		2950.55 *5*	100 *10*	1293.609	$7/2^-$				
4260.36		1666.51 *15*	14 *2*	2593.97	$1/2^-,3/2^-$				
		2562.55 *11*	100 *10*	1698.005	$5/2^+$				
		4259.73 *11*	52 *3*	0.0	$3/2^+$				
4274.2	$15/2^-$	1500.14 *20*	24.2 *13*	2774.25	$13/2^+$	E1(+M2)[a]	−0.06[a] *12*	2.80×10^{-4} *7*	α(K)=1.55×10^{-5} *9*; α(L)=1.30×10^{-6} *8*; α(M)=1.41×10^{-7} *8*; α(N)=5.2×10^{-9} *3* B(E1)(W.u.)=3.2×10^{-4} *19*; B(M2)(W.u.)=2.4 *14* E_γ,I_γ: from ^{26}Mg(^{18}O, p2nγ),^{27}Al(^{16}O,2pγ).
		1512.79 *15*	100.0 *13*	2761.73	$11/2^-$	E2[a]		1.24×10^{-4}	α(K)=2.86×10^{-5} *4*; α(L)=2.40×10^{-6} *4*; α(M)=2.60×10^{-7} *4*; α(N)=9.60×10^{-9} *14* B(E2)(W.u.)=7.E+1 *5* E_γ,I_γ: from ^{26}Mg(^{18}O, p2nγ),^{27}Al(^{16}O,2pγ).
4274.96	$(7/2^-,9/2^+)$	740.51 *4*	1.3 *4*	3534.45	$(7/2^+,9/2,11/2^+)$				
		1513.31 *8*	15.5 *16*	2761.73	$11/2^-$				
		2576.48[c] *25*	4.2[c] *5*	1698.005	$5/2^+$				
		2981.26 *5*	100 *10*	1293.609	$7/2^-$				
4303.01	$(5/2^+,7/2^+)$	768.531 *19*	18 *5*	3534.45	$(7/2^+,9/2,11/2^+)$				
		1808.7[c] *3*	14[c] *6*	2494.91	$9/2^+$				
		1986.36[c] *23*	18[c] *2*	2316.62	$5/2^-$				
		2605.08 *7*	100 *10*	1698.005	$5/2^+$				
		4302.7 *3*	22 *3*	0.0	$3/2^+$				
4340.9	(1/2,3/2,5/2)	4340.7[#]	100[#]	0.0	$3/2^+$				
4345.66	$(5/2,7/2^-)$	694.199 *10*	17 *4*	3651.46	$(5/2,7/2^-)$				
		1110.083 *14*	66 *13*	3235.57	$(3/2^-,5/2,7/2^-)$				
		1203.21 *5*	14 *4*	3142.43	$5/2^-$				
		2201.53[c] *9*	22[c] *2*	2143.82	$5/2^+$				
		2647.83[c] *25*	9.6[c] *11*	1698.005	$5/2^+$				
		2668.55 *10*	100 *10*	1677.235	$7/2^+$				
		2763.40 *6*	49 *5*	1582.001	$3/2^-$				
		3051.7 *3*	31 *4*	1293.609	$7/2^-$				
4459.72	$1/2^-,3/2^-$	685.056[c] *8*	10.6[c] *25*	3774.66	$5/2^-,7/2^-$				
		846.967 *23*	8.5 *19*	3612.77					
		2899.77 *6*	100 *10*	1559.903	$3/2^+$				
		3479.8 *3*	24 *3*	980.476	$1/2^+$				

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π
4459.72	1/2⁻,3/2⁻	4459.0 *6*	75 *4*	0.0	3/2⁺
4525.37		296.340 *23*	4.9 *12*	4228.99	(5/2)⁻
		304.76 *4*	3.7 *12*	4220.62	(5/2)
		2381.1 *4*	100 *16*	2143.82	5/2⁺
4568.75	(9/2⁺,11/2⁻)	293.786[c] *10*	6.1[c] *13*	4274.96	(7/2⁻,9/2⁺)
		1794.6 *9*	53 *5*	2774.25	13/2⁺
		2041.02 *7*	100 *10*	2527.66	11/2⁺
4609.48	(5/2⁺,7/2,9/2⁺)	1368.47 *12*	14 *4*	3240.65	(5/2⁺,7/2⁻)
		1852.85 *6*	48 *5*	2756.73	5/2⁺
		2114.10 *25*	100 *10*	2494.91	9/2⁺
4674		4674[#]	100[#]	0.0	3/2⁺
4730.70	(3/2)⁻	1588.68 *11*	30 *3*	3141.84	(7/2⁻)
		3437.10 *12*	100 *7*	1293.609	7/2⁻
4735.86	(5/2⁺,7/2⁺)	2240.95 *7*	100 *10*	2494.91	9/2⁺
		2419.03 *8*	70 *7*	2316.62	5/2⁻
		3038.4 *3*	47 *6*	1698.005	5/2⁺
		4735.9 *3*	11.2 *13*	0.0	3/2⁺
4745.49	(5/2⁺)	2250.38[d] *15*	35 *4*	2494.91	9/2⁺
		2428.92 *18*	38 *4*	2316.62	5/2⁻
		3067.79[d] *20*	60 *6*	1677.235	7/2⁺
		3163.67 *10*	100 *6*	1582.001	3/2⁻
		4744.6 *6*	71 *4*	0.0	3/2⁺
4749.47	(3/2⁻,5/2,7/2⁺)	974.67 *7*	10 *2*	3774.66	5/2⁻,7/2⁻
		3455.86 *9*	100 *6*	1293.609	7/2⁻
		4749.05 *11*	64 *4*	0.0	3/2⁺
4823.33	(7/2⁺,9/2⁺)	548.365 *10*	8 *2*	4274.96	(7/2⁻,9/2⁺)
		2066.1 *4*	14 *2*	2756.73	5/2⁺
		2295.9 *3*	39 *5*	2527.66	11/2⁺
		2315.33 *20*	100 *16*	2507.93	7/2⁺
		2328.34 *15*	31 *3*	2494.91	9/2⁺
		2375.7 *3*	16 *2*	2447.83	(3/2⁺,5/2,7/2⁺)
		3124.5 *7*	10 *3*	1698.005	5/2⁺
		3146.19 *13*	87 *6*	1677.235	7/2⁺
		3529.4 *4*	29 *5*	1293.609	7/2⁻
4848.5	(3/2)⁻	2704.6[#]	61[#] *16*	2143.82	5/2⁺
		4848.2[#]	100[#] *16*	0.0	3/2⁺
4862.43	(3/2⁺,5/2)	2268.13 *19*	67 *8*	2593.97	1/2⁻,3/2⁻
		3185.2 *3*	95 *12*	1677.235	7/2⁺
		4862.43 *10*	100 *6*	0.0	3/2⁺
4927.83	(5/2)⁺	2171.01 *6*	100 *10*	2756.73	5/2⁺
		2215.33 *21*	33 *4*	2712.57	(7/2)⁻
		2611.15 *12*	70 *7*	2316.62	5/2⁻

$^{41}_{19}K_{22}$-18

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
4927.83	$(5/2)^+$	3229.6 *5*	93 *23*	1698.005	$5/2^+$			
		3253.1 *9*	66 *34*	1677.235	$7/2^+$			
		3334.6 *3*	36 *4*	1593.107	$1/2^+$			
		3634.1 *3*	15 *2*	1293.609	$7/2^-$			
4948.94	$(3/2^-,5/2,7/2^-)$	339.41 *4*	2.3 *6*	4609.48	$(5/2^+,7/2,9/2^+)$			
		3366.78 *13*	100 *7*	1582.001	$3/2^-$			
		3655.0 *3*	67 *8*	1293.609	$7/2^-$			
4962.3	$(1/2,3/2,5/2)$	4962.0[#]	100[#]	0.0	$3/2^+$			
4982.9	$19/2^-$	708.31 *10*	100	4274.2	$15/2^-$	E2[a]	1.99×10^{-4}	α(K)=0.000182 *3*; α(L)=1.529×10^{-5} *22*; α(M)=1.656×10^{-6} *24*; α(N)=6.07×10^{-8} *9* B(E2)(W.u.)=5.35 *16* E_γ: from ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ).
5021.23?		4041.0 *6*	41 *10*	980.476	$1/2^+$			
		5021.19 *17*	100 *7*	0.0	$3/2^+$			
5096.20		1321.33 *9*	46 *12*	3774.66	$5/2^-,7/2^-$			
		2383.4 *4*	96 *15*	2712.57	$(7/2)^-$			
		2588.3 *5*	100 *19*	2507.93	$7/2^+$			
		2647.83[c] *25*	61[c] *7*	2447.83	$(3/2^+,5/2,7/2^+)$			
5101.2	$1/2^-,3/2^-$	2784.3[#]	100[#] *27*	2316.62	$5/2^-$			
		5100.9[#]	82[#] *27*	0.0	$3/2^+$			
5129.4?		2813.1[@d] *6*	100[@] *14*	2316.62	$5/2^-$			
		3835.6[@] *11*	26[@] *7*	1293.609	$7/2^-$			
5185.27	$(5/2,7/2^-)$	361.99 *3*	2.6 *5*	4823.33	$(7/2^+,9/2^+)$			
		454.557 *7*	5.2 *12*	4730.70	$(3/2)^-$			
		659.92[c] *9*	5.9[c] *14*	4525.37				
		1624.76 *16*	27 *3*	3560.61	$(3/2^-,5/2,7/2^+)$			
		1753.64 *18*	21 *2*	3431.84	$(9/2^-,7/2^-)$			
		2677.27 *10*	100 *10*	2507.93	$7/2^+$			
5298.86	$(3/2^-,5/2,7/2^-)$	568.170 *17*	34 *7*	4730.70	$(3/2)^-$			
		773.471 *19*	38 *11*	4525.37				
		1808.7[c] *3*	22[c] *9*	3488.5	$(5/2)^+$			
		1867.45[c] *25*	24[c] *3*	3431.84	$(9/2^-,7/2^-)$			
		2850.2 *4*	100 *20*	2447.83	$(3/2^+,5/2,7/2^+)$			
		3155.0 *3*	53 *8*	2143.82	$5/2^+$			
		3715.9[c] *4*	33[c] *5*	1582.001	$3/2^-$			
5401.7	$1/2^-,3/2^-$	3084.8[#]	19[#] *6*	2316.62	$5/2^-$			
		5401.3[#]	100[#] *6*	0.0	$3/2^+$			
5496.61	$(7/2^+)$	887.13[c] *5*	5.3[c] *16*	4609.48	$(5/2^+,7/2,9/2^+)$			
		1499.78 *13*	19 *4*	3996.49	$(5/2^+)$			
		2784.08 *17*	20 *2*	2712.57	$(7/2)^-$			
		2968.61[c] *18*	16[c] *2*	2527.66	$11/2^+$			

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

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
5496.61	(7/2$^+$)	2988.2 *10*	2.6 *6*	2507.93	7/2$^+$
		3001.4 *3*	10.1 *12*	2494.91	9/2$^+$
		3179.67 *10*	49 *3*	2316.62	5/2$^-$
		5495.88[d] *8*	100 *5*	0.0	3/2$^+$
5548.19	(3/2$^+$,5/2$^+$,7/2$^+$)	620.34 *3*	2.1 *5*	4927.83	(5/2)$^+$
		1557.67 *18*	37 *4*	3990.40?	
		2405.64 *21*	21 *2*	3142.43	5/2$^-$
		3870.84 *11*	65 *4*	1677.235	7/2$^+$
		5547.91 *12*	100 *6*	0.0	3/2$^+$
5557.39		258.53 *5*	7.5 *15*	5298.86	(3/2$^-$,5/2,7/2$^-$)
		1529.97 *25*	29 *4*	4026.94	
		2963.0 *4*	43 *7*	2593.97	1/2$^-$,3/2$^-$
		4576.65 *11*	100 *6*	980.476	1/2$^+$
5575.24?	(3/2$^-$,5/2,7/2$^+$)	712.800[c] *17*	8[c] *2*	4862.43	(3/2$^+$,5/2)
		2862.57 *15*	100 *11*	2712.57	(7/2)$^-$
		5573.9 *3*	42 *5*	0.0	3/2$^+$
5604.58	(3/2$^-$,5/2,7/2$^+$)	419.31[c] *3*	2.7[c] *8*	5185.27	(5/2,7/2$^-$)
		655.60 *3*	4.2 *11*	4948.94	(3/2$^-$,5/2,7/2$^-$)
		742.142 *13*	38 *8*	4862.43	(3/2$^+$,5/2)
		1953.0 *3*	39 *5*	3651.46	(5/2,7/2$^-$)
		5604.26 *18*	100 *7*	0.0	3/2$^+$
5610.83	(5/2,7/2$^+$)	880.14 *3*	76 *15*	4730.70	(3/2)$^-$
		3932.7 *5*	100 *18*	1677.235	7/2$^+$
		5610.3 *5*	82 *12*	0.0	3/2$^+$
5655.66	(3/2$^-$,5/2$^+$)	2414.92 *7*	59 *6*	3240.65	(5/2$^+$,7/2$^-$)
		2513.88 *12*	30 *3*	3141.84	(7/2$^-$)
		3488.59 *21*	100 *12*	2166.70	3/2$^-$
		4063.0 *3*	17 *2*	1593.107	1/2$^+$
5659.25	(3/2$^-$,5/2,7/2$^+$)	1356.0 *3*	20 *5*	4303.01	(5/2$^+$,7/2$^+$)
		4099.69 *24*	33 *3*	1559.903	3/2$^+$
		5658.9 *15*	100 *7*	0.0	3/2$^+$
5800.80	(3/2$^+$,5/2$^+$)	1051.27 *4*	22 *5*	4749.47	(3/2$^-$,5/2,7/2$^+$)
		1064.926[c] *20*	100[c] *22*	4735.86	(5/2$^+$,7/2$^+$)
		2026.4 *3*	31 *9*	3774.66	5/2$^-$,7/2$^-$
		3292.64 *19*	93 *9*	2507.93	7/2$^+$
		4820.08 *18*	58 *4*	980.476	1/2$^+$
5826.66	(5/2)$^+$	1090.74 *5*	31 *7*	4735.86	(5/2$^+$,7/2$^+$)
		1606.05[c] *8*	52[c] *5*	4220.62	(5/2)
		2304.83 *17*	37 *4*	3521.38?	(5/2$^+$,7/2$^+$)
		2590.6 *7*	35 *9*	3235.57	(3/2$^-$,5/2,7/2$^-$)
		4532.7 *3*	100 *12*	1293.609	7/2$^-$
5886.95	(3/2)$^-$	1156.32 *12*	54 *16*	4730.70	(3/2)$^-$
		2059.8 *3*	47 *6*	3826.90	(5/2,7/2$^+$)

$^{41}_{19}K_{22}$-20

Adopted Levels, Gammas (continued)

γ(^{41}K) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
5886.95	$(3/2)^-$	3129.59 *15*	100 *9*	2756.73	$5/2^+$
		4905.3 *9*	58 *17*	980.476	$1/2^+$
5912.50	$(9/2^+)$	891.260 *20*	18 *4*	5021.23?	
		1747.88 *16*	22 *2*	4164.57	
		2671.1 *4*	51 *7*	3240.65	$(5/2^+,7/2^-)$
		3138.25 *14*	56 *5*	2774.25	$13/2^+$
		3150.6 *3*	50 *6*	2761.73	$11/2^-$
		3404.78 *15*	100 *7*	2507.93	$7/2^+$
		3416.8 *3*	55 *6*	2494.91	$9/2^+$
5952.41	$(7/2^-,9/2^-)$	2809.9 *4*	30 *4*	3142.43	$5/2^-$
		3191.2 *3*	100 *11*	2761.73	$11/2^-$
5968.89	$(9/2^+,11/2^-)$	1804.7 *3*	16 *4*	4164.57	
		3194.8 *6*	60 *16*	2774.25	$13/2^+$
		3206.7 *3*	100 *11*	2761.73	$11/2^-$
6040.67	$(3/2^-,5/2,7/2)$	2278.5 *6*	16 *3*	3761.54	
		2805.21 *13*	100 *10*	3235.57	$(3/2^-,5/2,7/2^-)$
		2827.06 *24*	47 *6*	3213.61	$5/2^-$
		3282.8 *5*	68 *16*	2756.73	$5/2^+$
		3723.9 *3*	41 *5*	2316.62	$5/2^-$
6070.76	$(5/2,7/2,9/2^+)$	1247.40 *4*	100 *21*	4823.33	$(7/2^+,9/2^+)$
		2458.5 *3*	38 *4*	3612.77	
		4372.6[c] *5*	45[c] *5*	1698.005	$5/2^+$
		4776.65 *22*	46 *4*	1293.609	$7/2^-$
6078.56	$(3/2)^-$	419.31[c] *3*	3.7[c] *10*	5659.25	$(3/2^-,5/2,7/2^+)$
		1857.90 *10*	100 *10*	4220.62	(5/2)
		2838.1 *3*	63 *7*	3240.65	$(5/2^+,7/2^-)$
		4380.2 *10*	32 *6*	1698.005	$5/2^+$
		4496.0 *4*	35 *5*	1582.001	$3/2^-$
6186.04	$(5/2,7/2,9/2^-)$	887.13[c] *5*	11[c] *3*	5298.86	$(3/2^-,5/2,7/2^-)$
		2158.93 *8*	86 *9*	4026.94	
		2945.08 *12*	52 *5*	3240.65	$(5/2^+,7/2^-)$
		3042.81 *20*	100 *8*	3142.43	$5/2^-$
		4509.6 *3*	23 *3*	1677.235	$7/2^+$
6211.50	$(7/2^+,9/2^-)$	3683.71 *7*	100 *6*	2527.66	$11/2^+$
		3715.9[c] *4*	10.5[c] *17*	2494.91	$9/2^+$
		3895.0 *4*	8.6 *12*	2316.62	$5/2^-$
6229.88?	$(3/2^-,5/2,7/2^-)$	1770.55[c] *22*	22[c] *2*	4459.72	$1/2^-,3/2^-$
		2083.64 *7*	100 *10*	4146.15	$5/2^-,7/2^-$
		3086.7 *7*	28 *9*	3142.43	$5/2^-$
6255.96	$(5/2,7/2^-)$	645.17 *6*	5.5 *11*	5610.83	$(5/2,7/2^+)$
		2011.7 *9*	82 *9*	4244.22	$(3/2)^-$
		3747.9[c] *6*	35[c] *7*	2507.93	$7/2^+$
		4673.52 *11*	100 *6*	1582.001	$3/2^-$

$^{41}_{19}K_{22}$-21

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
6290.05	$(3/2)^-$	2046.31 *16*	60 *6*	4244.22	$(3/2)^-$
		4696.38[c] *17*	100[c] *7*	1593.107	$1/2^+$
		4705.8 *8*	20 *5*	1582.001	$3/2^-$
		5309.3 *5*	19 *3*	980.476	$1/2^+$
		6289.24 *21*	97 *8*	0.0	$3/2^+$
6394.31	$(3/2^-,5/2,7/2^-)$	2567.4 *4*	34 *4*	3826.90	$(5/2,7/2^+)$
		2619.41 *19*	76 *8*	3774.66	$5/2^-,7/2^-$
		2833.7 *3*	49 *6*	3560.61	$(3/2^-,5/2,7/2^+)$
		4227.4 *3*	32 *5*	2166.70	$3/2^-$
		4696.38[c] *17*	100[c] *7*	1698.005	$5/2^+$
6434.51	$(3/2^-,5/2,7/2^-)$	607.846[c] *9*	23[c] *6*	5826.66	$(5/2)^+$
		2089.12 *24*	22 *3*	4345.66	$(5/2,7/2^-)$
		3385.88 *10*	100 *6*	3048.22	$1/2^-,3/2^-$
		4117.87 *8*	84 *5*	2316.62	$5/2^-$
6450.15?	$(3/2^-,5/2,7/2^+)$	623.486 *14*	14 *4*	5826.66	$(5/2)^+$
		1840.93 *15*	32 *4*	4609.48	$(5/2^+,7/2,9/2^+)$
		2688.19 *12*	100 *12*	3761.54	
		6450.6 *4*	20 *2*	0.0	$3/2^+$
6497.00	$(3/2)^-$	5203.2 *3*	100	1293.609	$7/2^-$
6528.13	$(3/2^-,5/2,7/2^-)$	2531.48 *12*	66 *7*	3996.49	$(5/2^+)$
		2875.7 *3*	18.2 *22*	3651.46	$(5/2,7/2^-)$
		3815.21 *10*	100 *6*	2712.57	$(7/2)^-$
6769.77	$(3/2^-,5/2,7/2^-)$	1470.99 *17*	84 *39*	5298.86	$(3/2^-,5/2,7/2^-)$
		3627.74 *14*	100 *7*	3141.84	$(7/2^-)$
		4175.64 *23*	43 *4*	2593.97	$1/2^-,3/2^-$
		5476.0[c] *3*	56[c] *7*	1293.609	$7/2^-$
6782.54		1286.03 *10*	100 *28*	5496.61	$(7/2^+)$
		2521.84[c] *24*	66[c] *8*	4260.36	
		3540.8 *9*	59 *24*	3240.65	$(5/2^+,7/2^-)$
		4465.7 *4*	38 *5*	2316.62	$5/2^-$
6791.36	$(5/2,7/2^-)$	712.800[c] *17*	18[c] *4*	6078.56	$(3/2)^-$
		904.38[c] *3*	32[c] *7*	5886.95	$(3/2)^-$
		1606.05[c] *8*	100[c] *10*	5185.27	$(5/2,7/2^-)$
		1770.55[c] *22*	37[c] *4*	5021.23?	
		4474.0 *7*	16 *4*	2316.62	$5/2^-$
		5114.5 *4*	79 *9*	1677.235	$7/2^+$
6835.43	$(5/2,7/2^-)$	338.47 *6*	1.2 *6*	6497.00	$(3/2)^-$
		1649.96[c] *14*	48[c] *5*	5185.27	$(5/2,7/2^-)$
		1739.14 *7*	82 *9*	5096.20	
		2559.9 *3*	57 *8*	4274.96	$(7/2^-,9/2^+)$
		3693.2 *3*	35 *5*	3141.84	$(7/2^-)$
		4668.25[c] *24*	30[c] *3*	2166.70	$3/2^-$

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

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
6835.43	(5/2,7/2$^-$)	5157.8 *7*	26 *5*	1677.235	7/2$^+$
		5541.64 *17*	100 *7*	1293.609	7/2$^-$
6995.53	(5/2,7/2,9/2$^+$)	2692.14 *22*	91 *10*	4303.01	(5/2$^+$,7/2$^+$)
		2968.61[c] *18*	100[c] *11*	4026.94	
		4238.51 *20*	76 *6*	2756.73	5/2$^+$
		5319.5 *9*	13 *4*	1677.235	7/2$^+$
7020.97	(3/2)$^-$	492.821 *23*	1.1 *3*	6528.13	(3/2$^-$,5/2,7/2$^-$)
		3024.88 *21*	39 *4*	3996.49	(5/2$^+$)
		3785.6 *3*	100 *29*	3235.57	(3/2$^-$,5/2,7/2$^-$)
		5727.03 *22*	95 *8*	1293.609	7/2$^-$
7035.28	(5/2)$^-$	2211.93 *19*	41 *4*	4823.33	(7/2$^+$,9/2$^+$)
		3421.2 *5*	30 *5*	3612.77	
		4322.00 *18*	28 *2*	2712.57	(7/2)$^-$
		4891.12 *14*	23 *2*	2143.82	5/2$^+$
		5357.7 *3*	100 *10*	1677.235	7/2$^+$
		5476.0[c] *3*	27[c] *3*	1559.903	3/2$^+$
7361.15?	(3/2$^-$,5/2,7/2$^-$)	1534.2 *5*	10.3 *17*	5826.66	(5/2)$^+$
		2433.16 *21*	100 *11*	4927.83	(5/2)$^+$
		2615.48 *25*	68 *7*	4745.49	(5/2$^+$)
		3747.9[c] *6*	33[c] *7*	3612.77	
		4647.89 *17*	36 *3*	2712.57	(7/2)$^-$
		5776.8 *10*	34 *11*	1582.001	3/2$^-$
7593.06		1064.926[c] *20*	92[c] *20*	6528.13	(3/2$^-$,5/2,7/2$^-$)
		3317.59 *22*	100 *9*	4274.96	(7/2$^-$,9/2$^+$)
		4880.8 *6*	8.7 *16*	2712.57	(7/2)$^-$
7654.93	(3/2$^-$,5/2,7/2$^-$)	2106.50 *19*	30 *3*	5548.19	(3/2$^+$,5/2$^+$,7/2$^+$)
		2355.9 *6*	25 *5*	5298.86	(3/2$^-$,5/2,7/2$^-$)
		2727.07 *18*	47 *5*	4927.83	(5/2)$^+$
		2919.06 *13*	68 *7*	4735.86	(5/2$^+$,7/2$^+$)
		3379.76 *12*	82 *5*	4274.96	(7/2$^-$,9/2$^+$)
		3410.75 *21*	77 *7*	4244.22	(3/2)$^-$
		5510.82 *15*	100 *6*	2143.82	5/2$^+$
7938.98		1727.24[c] *24*	40[c] *5*	6211.50	(7/2$^+$,9/2$^-$)
		1867.45[c] *25*	23[c] *3*	6070.76	(5/2,7/2,9/2$^+$)
		1986.36[c] *23*	26[c] *3*	5952.41	(7/2$^-$,9/2$^-$)
		3792.6 *3*	66 *8*	4146.15	5/2$^-$,7/2$^-$
		5225.9 *4*	38 *6*	2712.57	(7/2)$^-$
		6644.90 *15*	100 *7*	1293.609	7/2$^-$
8190.21	(3/2$^-$,5/2,7/2$^-$)	2534.4 *4*	100 *13*	5655.66	(3/2$^-$,5/2$^+$)
		3944.8 *5*	88 *14*	4244.22	(3/2)$^-$
		4429.0 *5*	40 *6*	3761.54	
		4668.25[c] *24*	61[c] *6*	3521.38?	(5/2$^+$,7/2$^+$)

$^{41}_{19}K_{22}$-23

Adopted Levels, Gammas (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π
8190.21	$(3/2^-,5/2,7/2^-)$	4701.3 *5*	90 *10*	3488.5	$(5/2)^+$
8200.11	$(5/2^-,7/2^-,3/2^+)$	1909.74 *14*	98 *10*	6290.05	$(3/2)^-$
		2121.40 *25*	36 *4*	6078.56	$(3/2)^-$
		3740.45 *23*	87 *9*	4459.72	$1/2^-,3/2^-$
		3939.9 *3*	85 *9*	4260.36	
		4372.6[c] *5*	37[c] *4*	3826.90	$(5/2,7/2^+)$
		4639.50 *19*	30 *2*	3560.61	$(3/2^-,5/2,7/2^+)$
		5151.7 *3*	100 *9*	3048.22	$1/2^-,3/2^-$
		6522.4 *6*	10 *2*	1677.235	$7/2^+$
9740.70	$(3/2)^-$	6308.8 *8*	100 *24*	3431.84	$(9/2^-,7/2^-)$
		7028.03 *25*	90 *8*	2712.57	$(7/2)^-$
		8445.5 *7*	18 *4*	1293.609	$7/2^-$

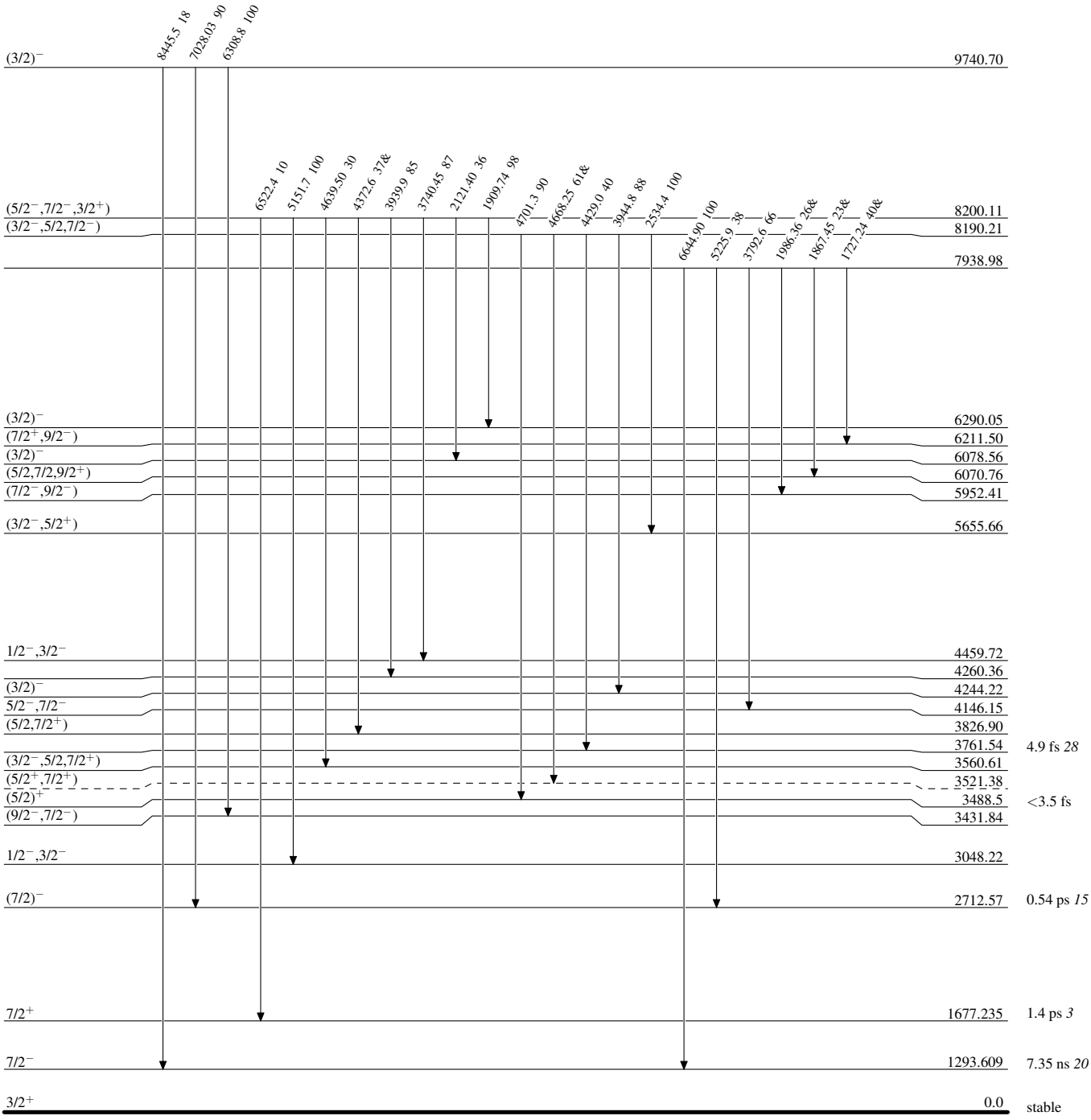
† From ^{40}K(n,γ), E=thermal, except where noted.
‡ From ^{38}Ar(α,pγ), except where noted.
# From ^{40}Ar(p,γ).
@ From ^{41}K(n,n$'\gamma$).
& From ^{38}Ar(α,pγ).
[a] From $\gamma(\theta$,lin pol) in ^{26}Mg(^{18}O,p2nγ),^{27}Al(^{16}O,2pγ).
[b] From ^{41}K(p,p$'\gamma$),(p,p$'$).
[c] Multiply placed with undivided intensity.
[d] Placement of transition in the level scheme is uncertain.

$^{41}_{19}K_{22}$-24

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

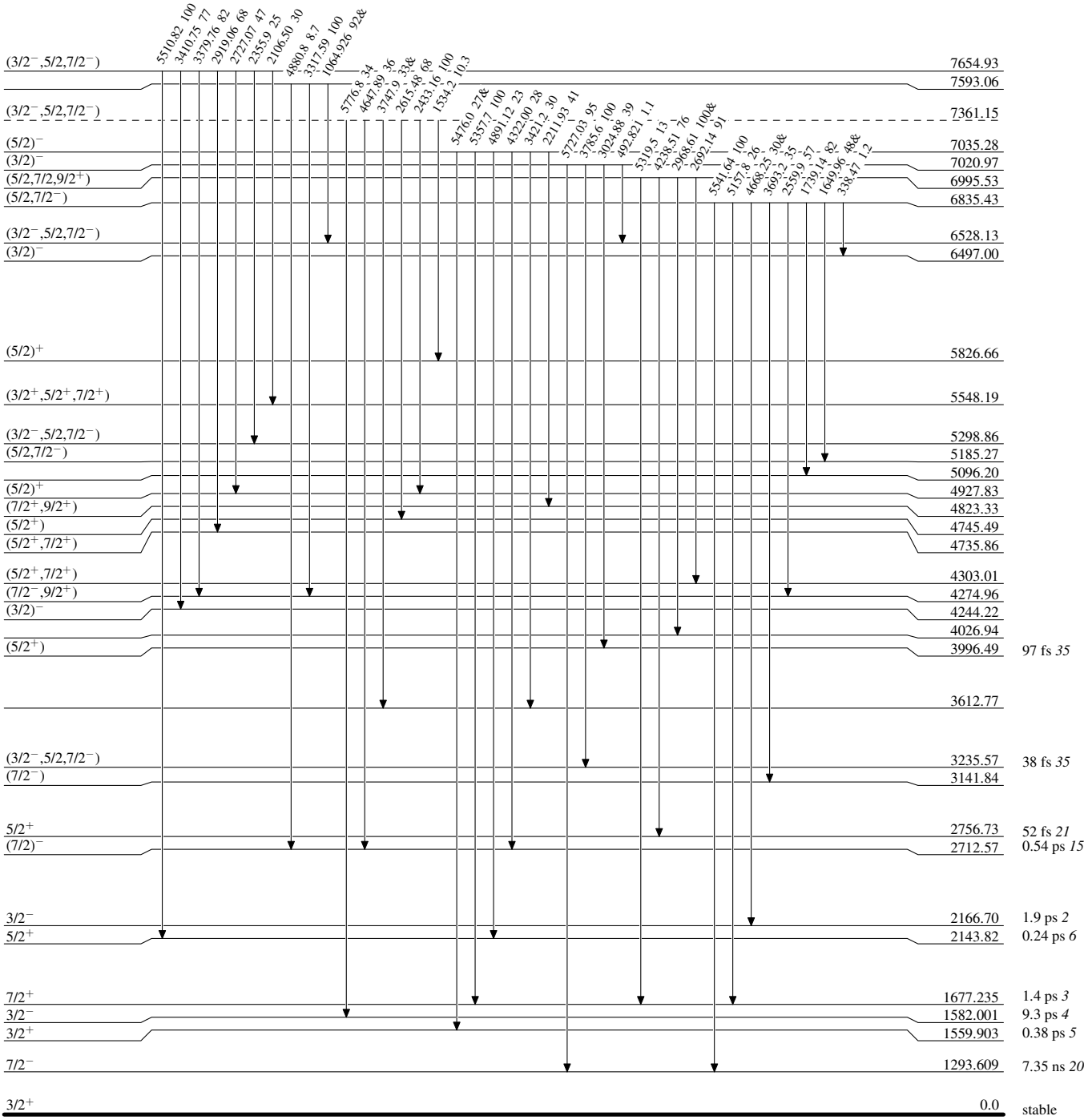


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

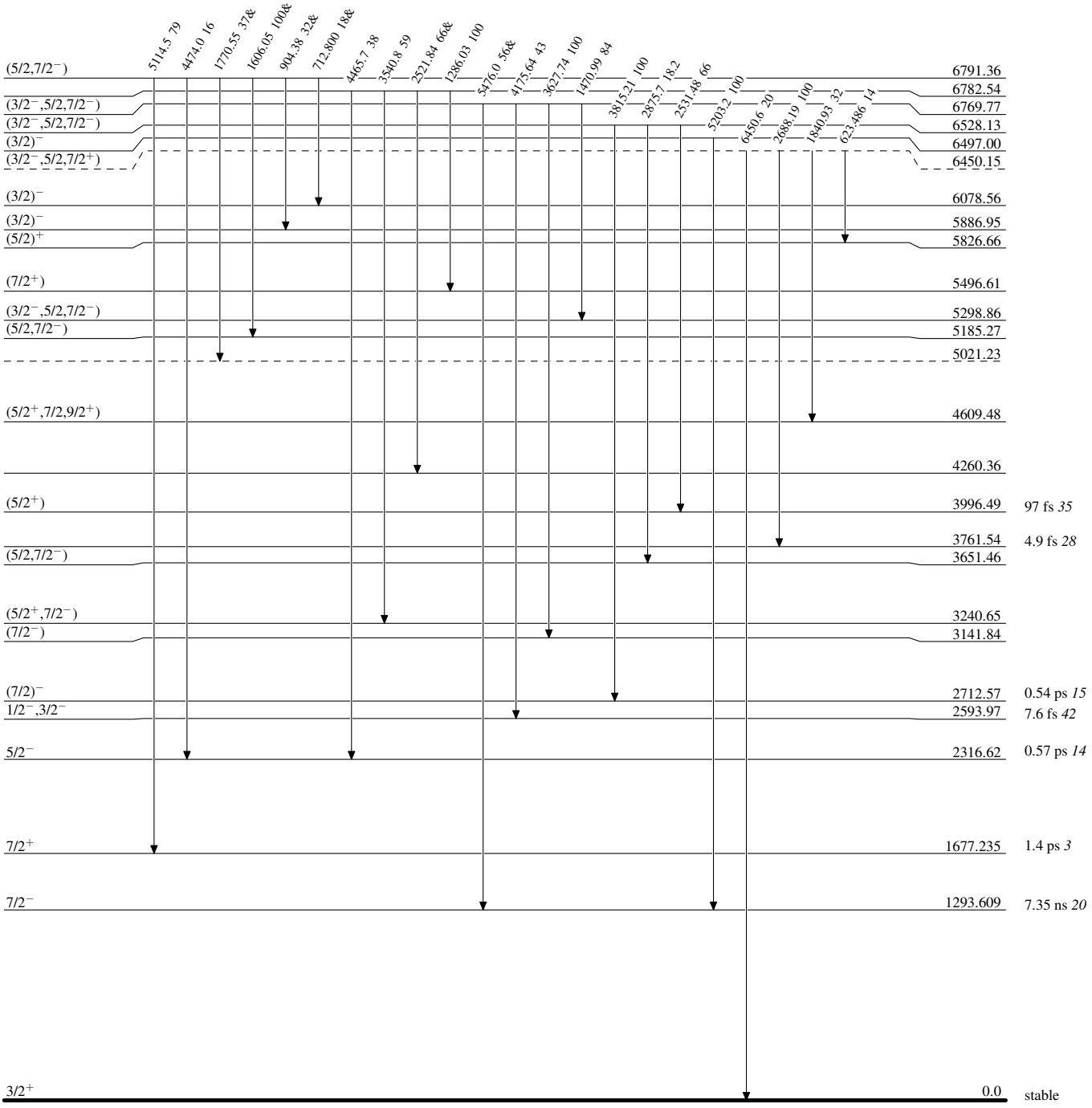


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

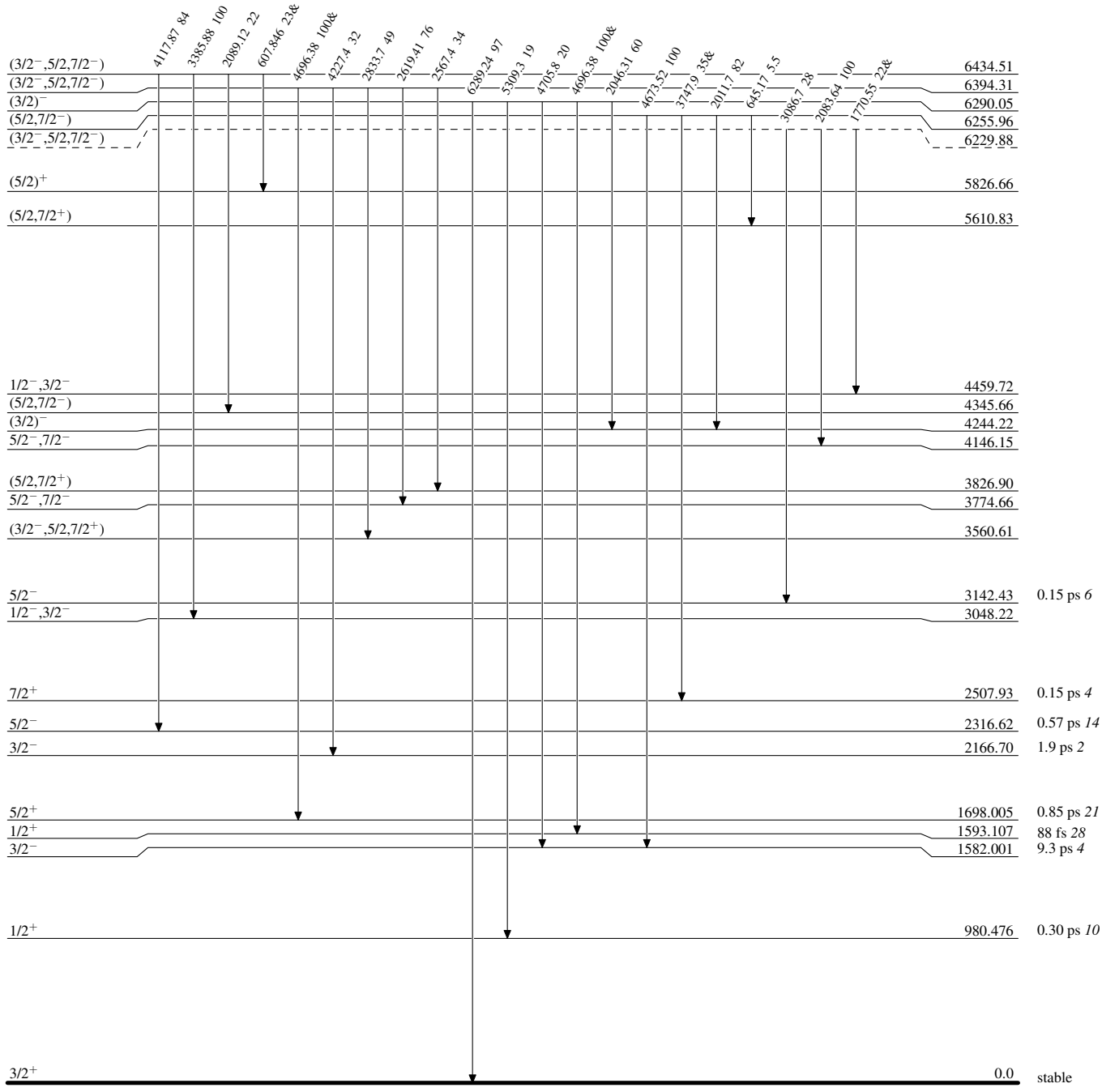


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

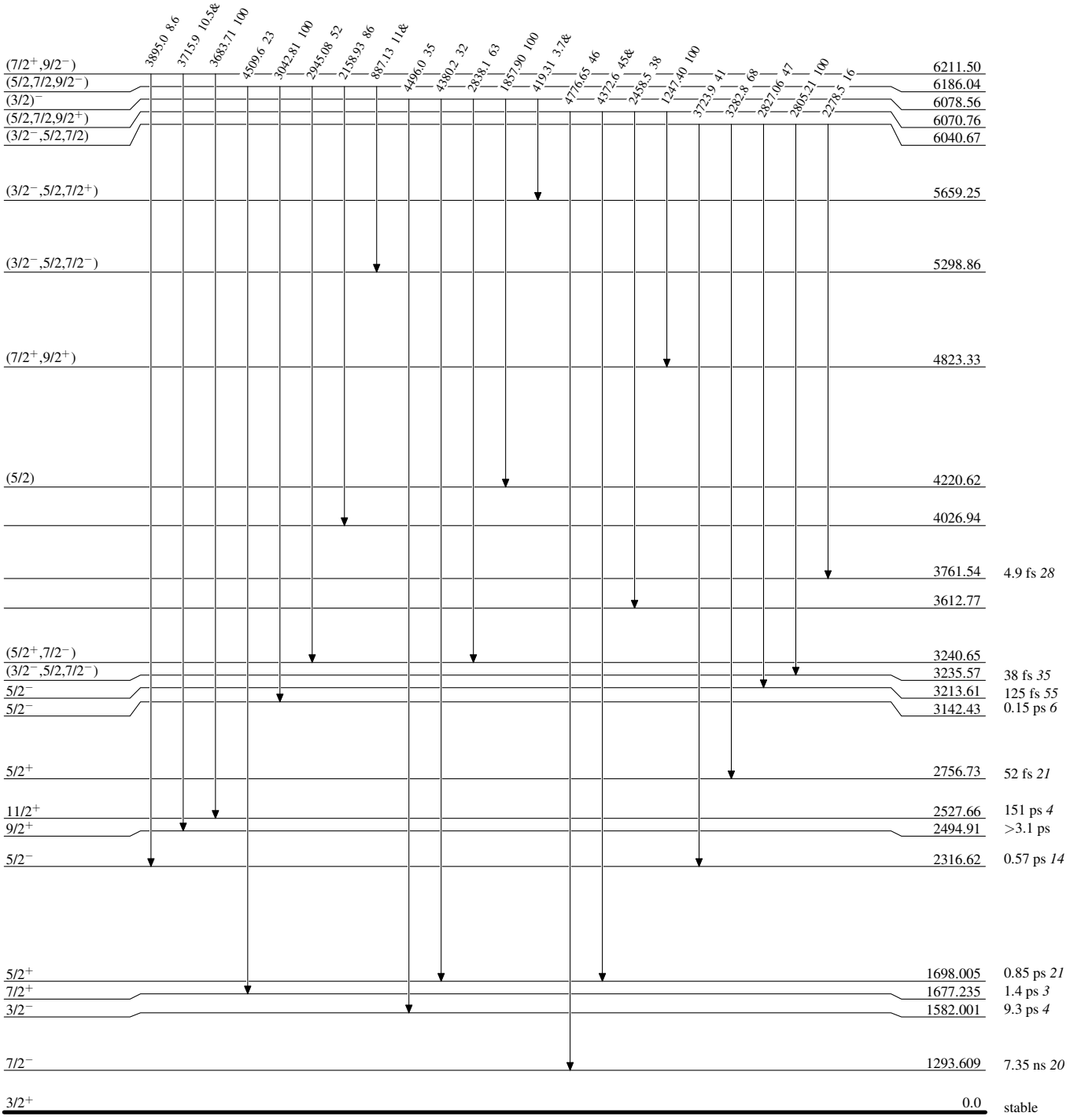


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

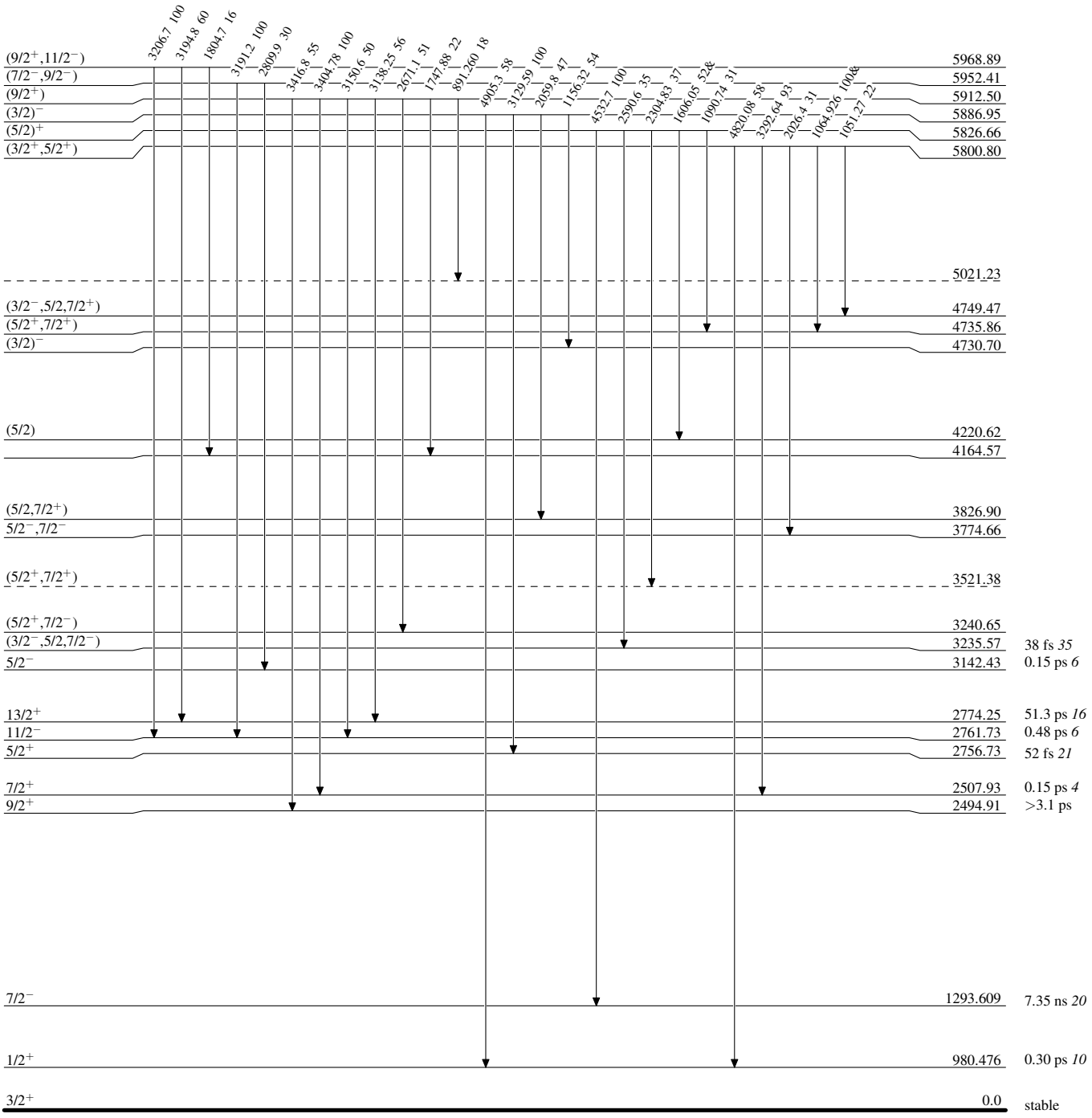


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

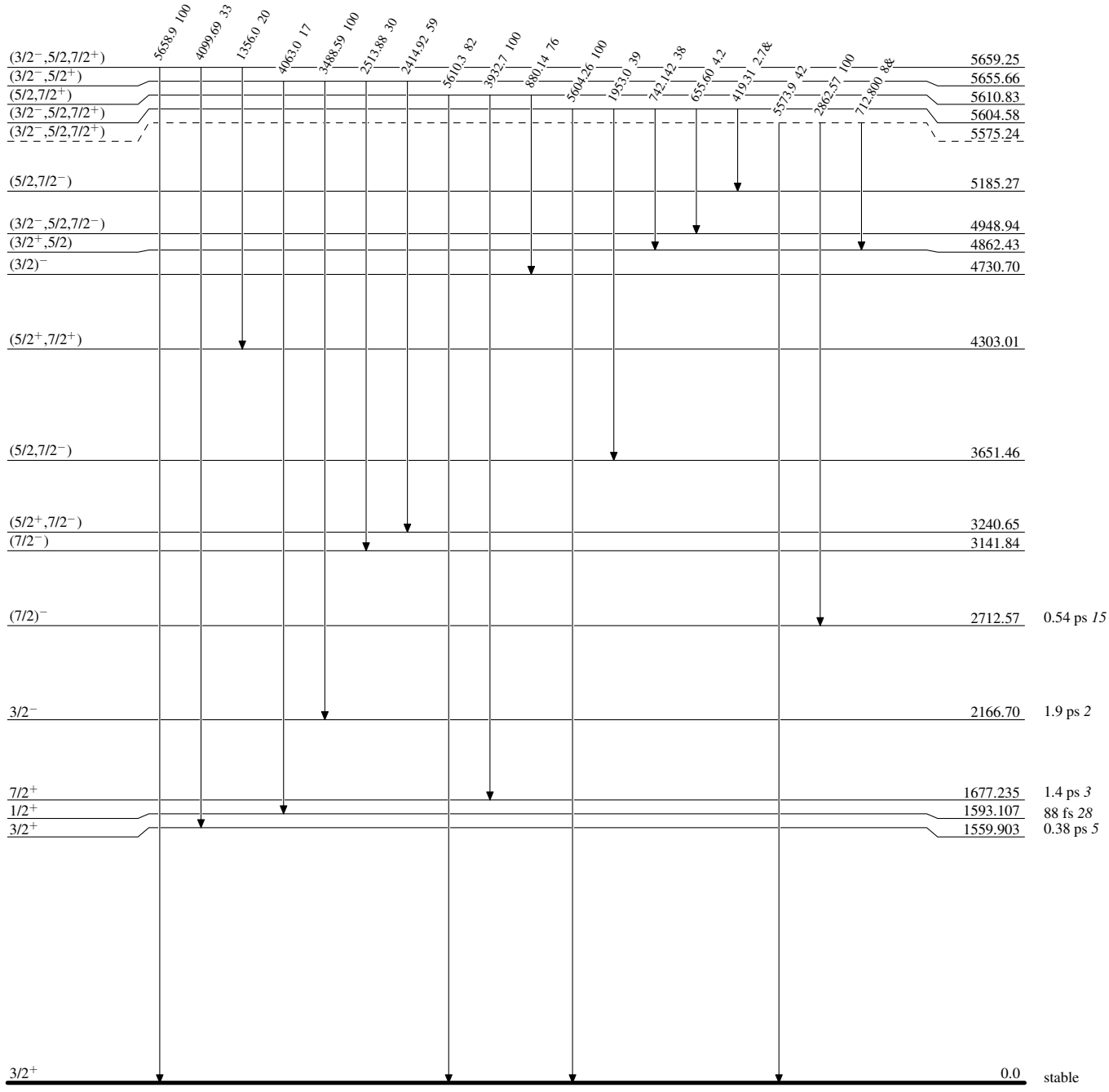


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

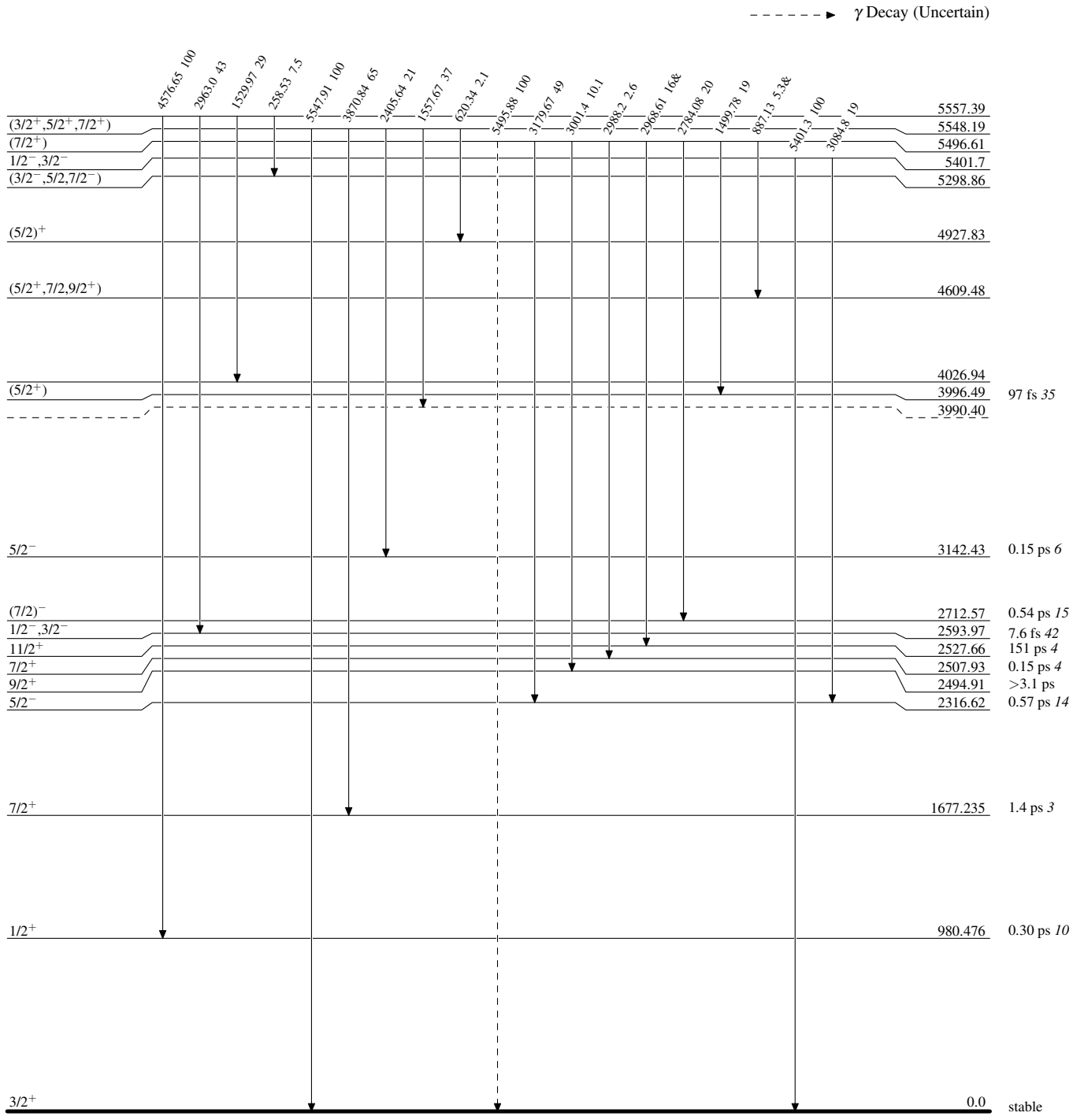


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



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

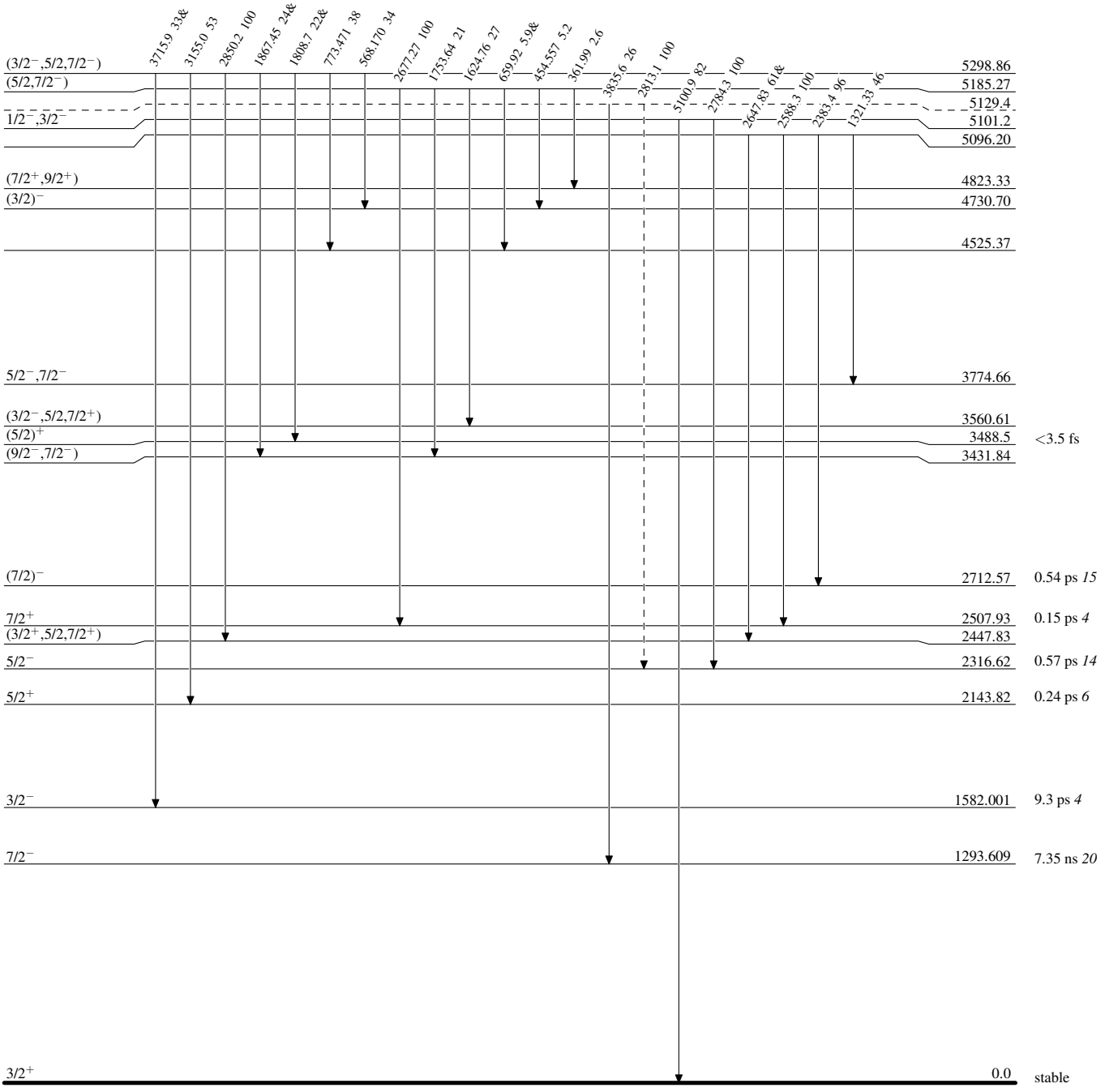
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



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

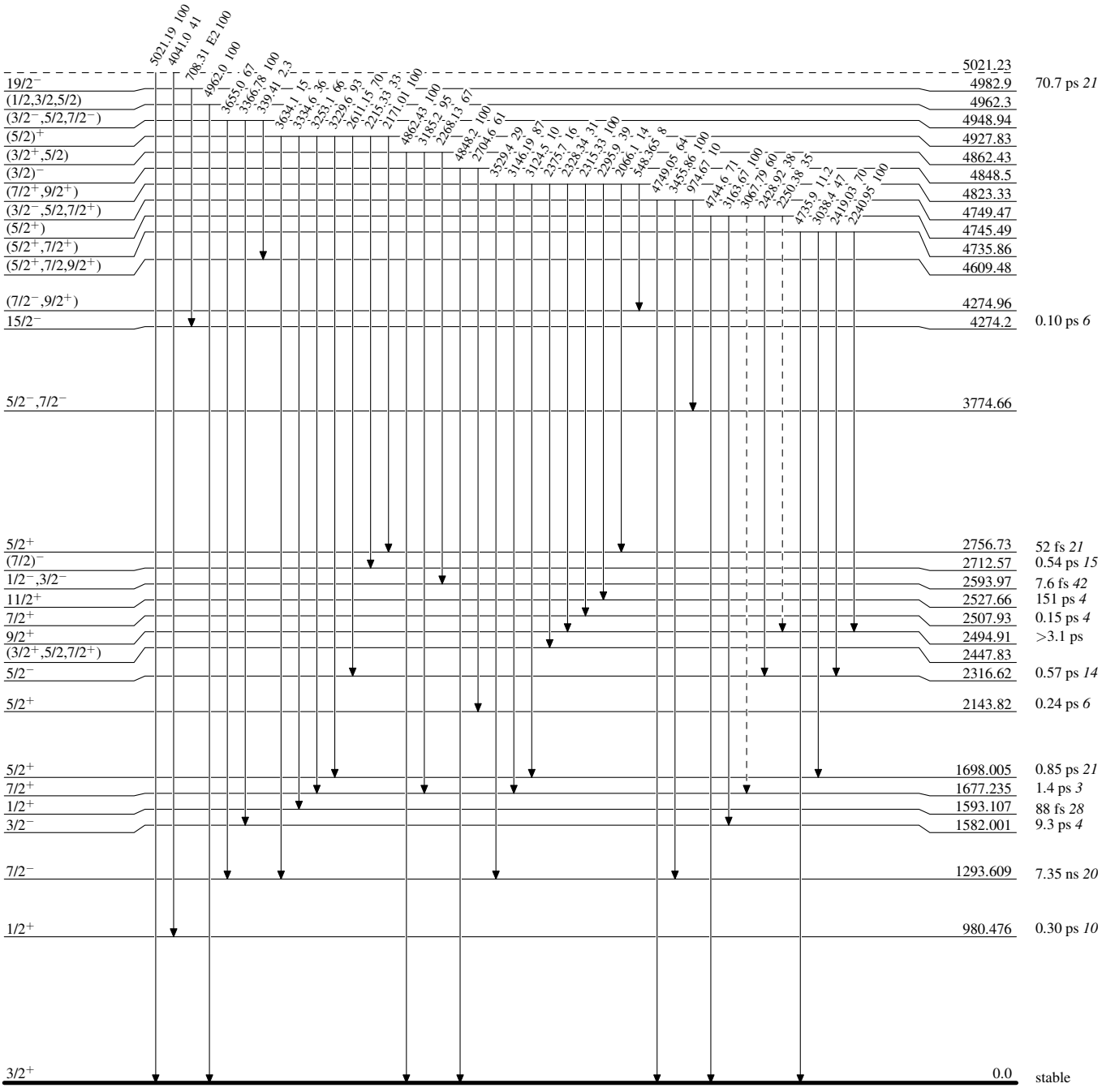
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)

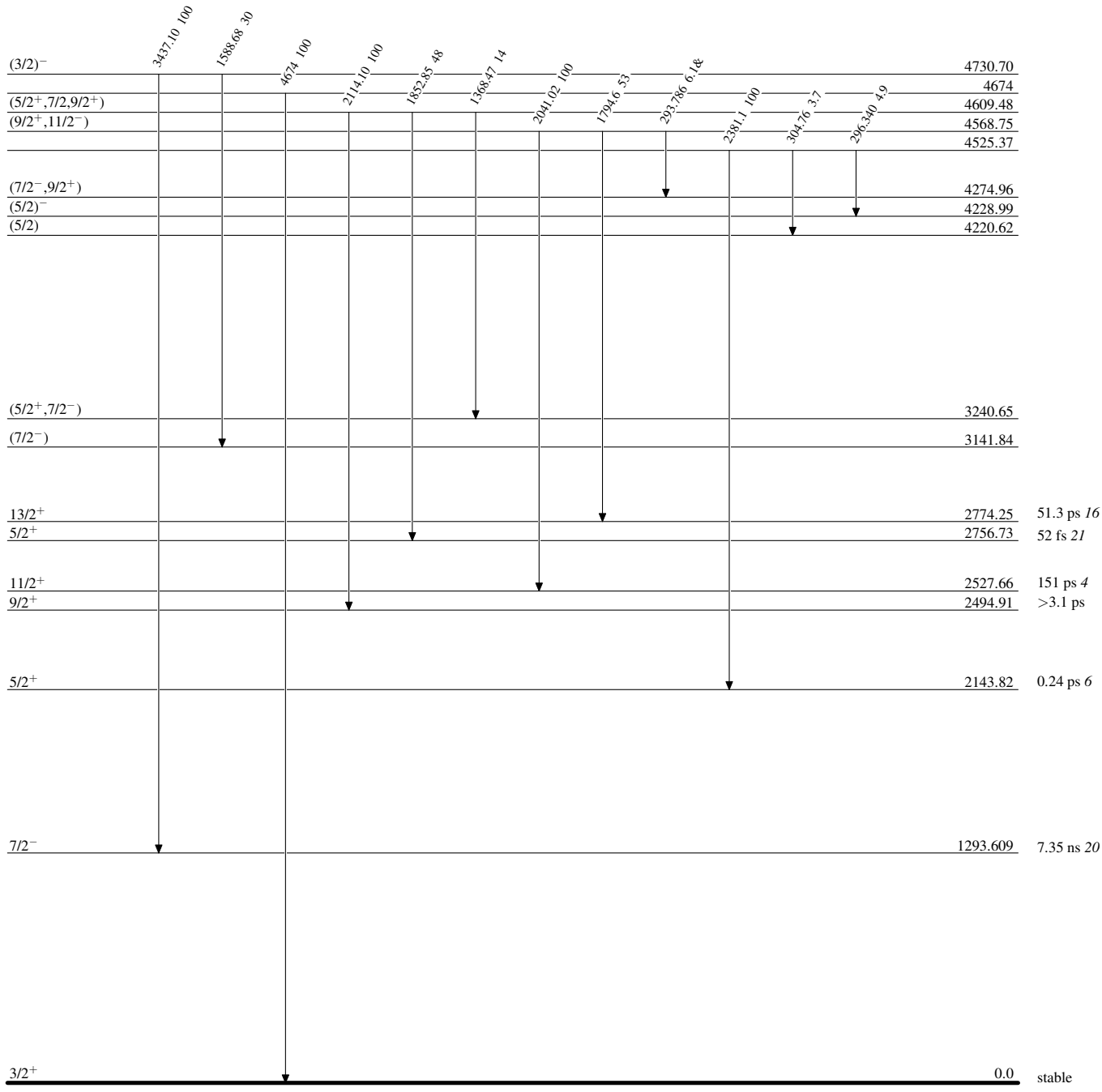


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

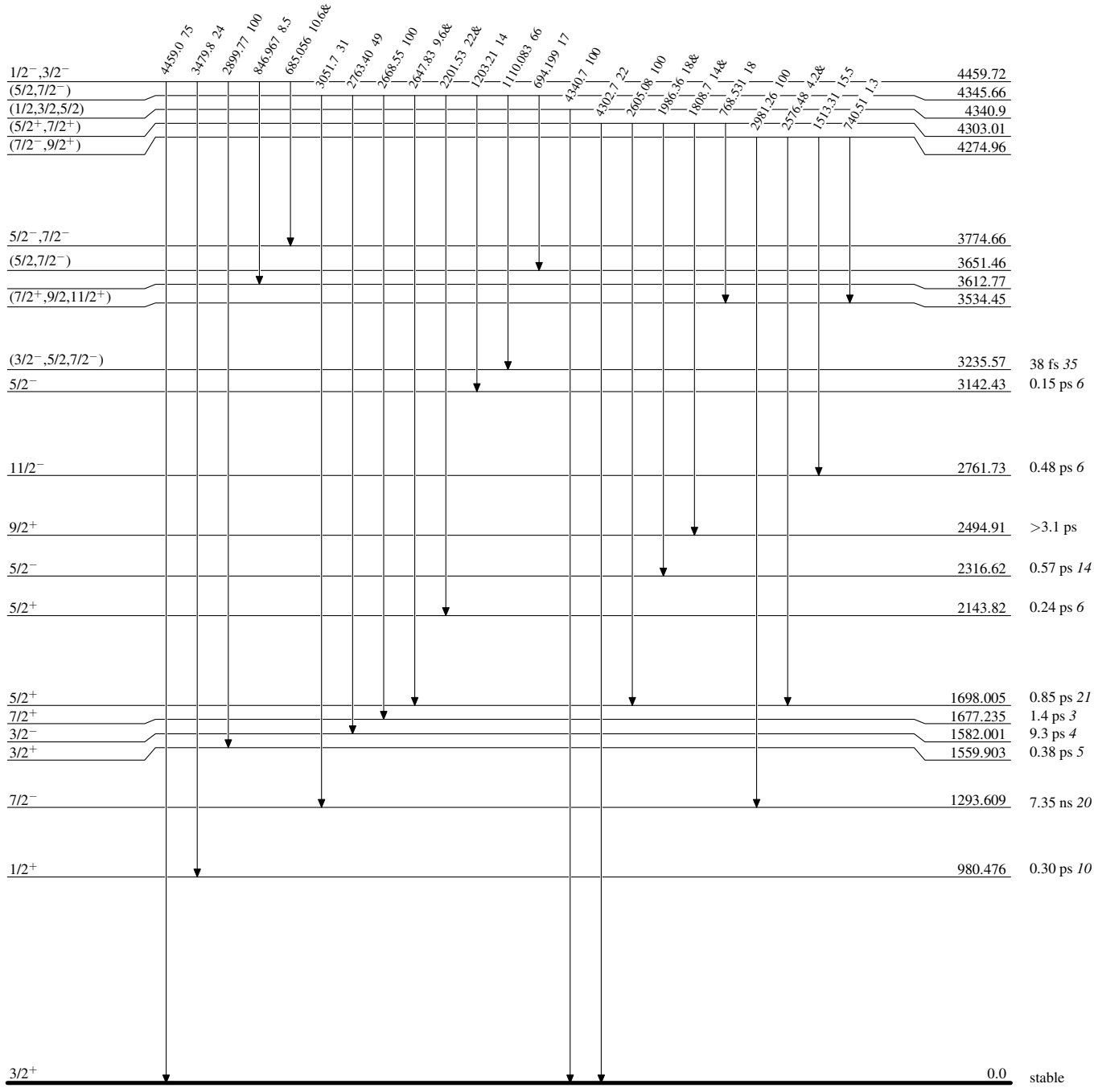


$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



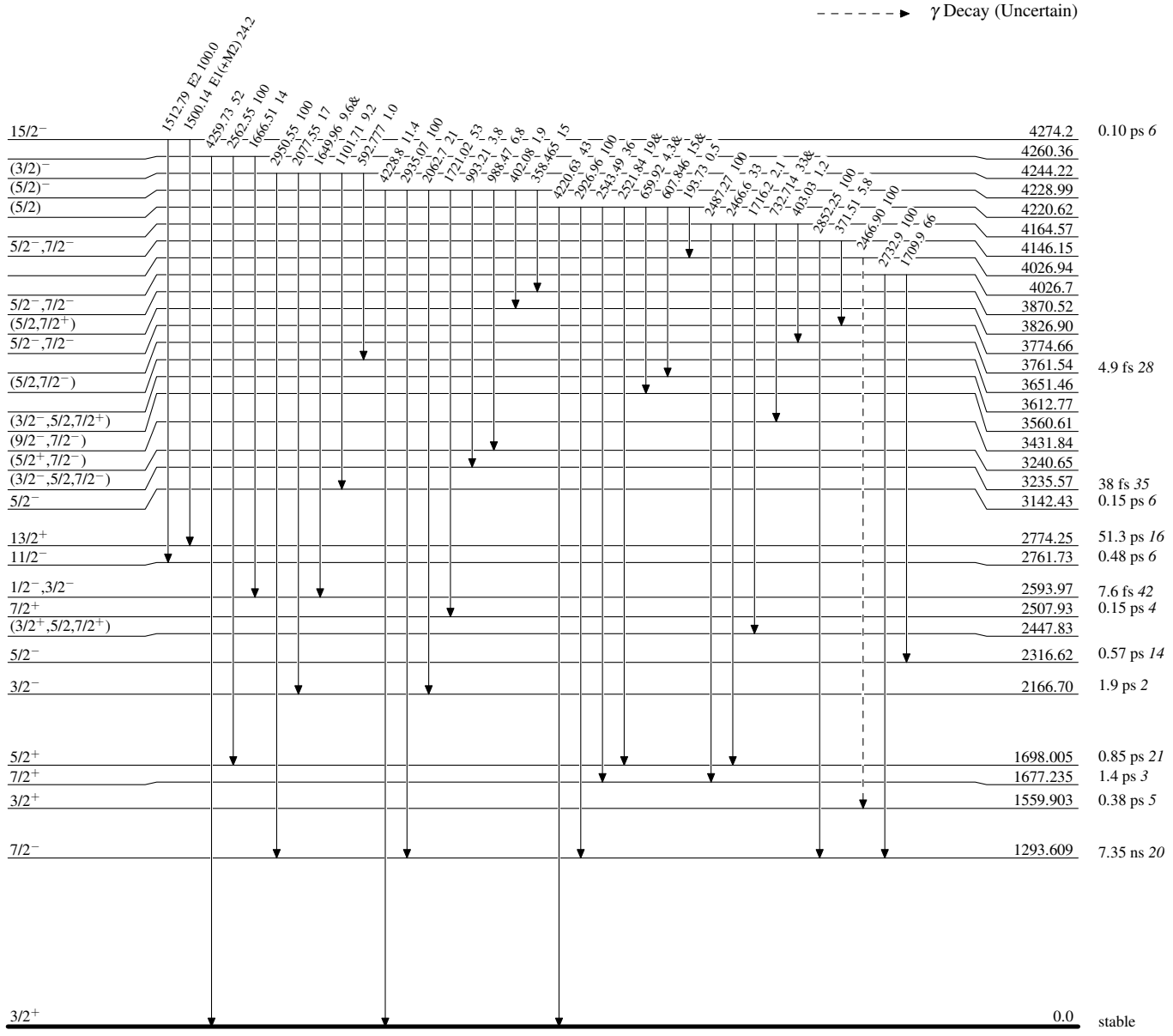
$^{41}_{19}K_{22}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



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

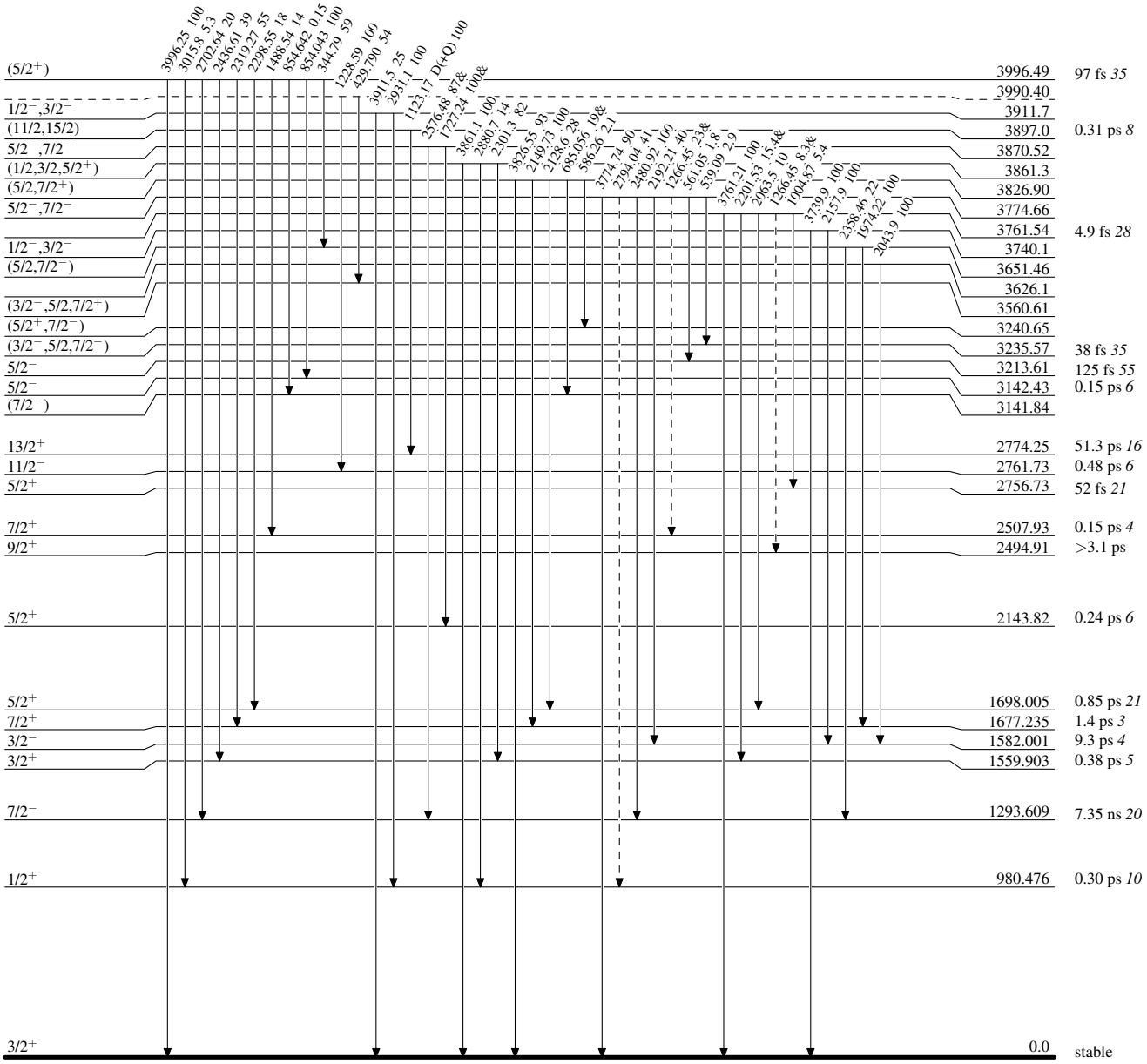
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



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

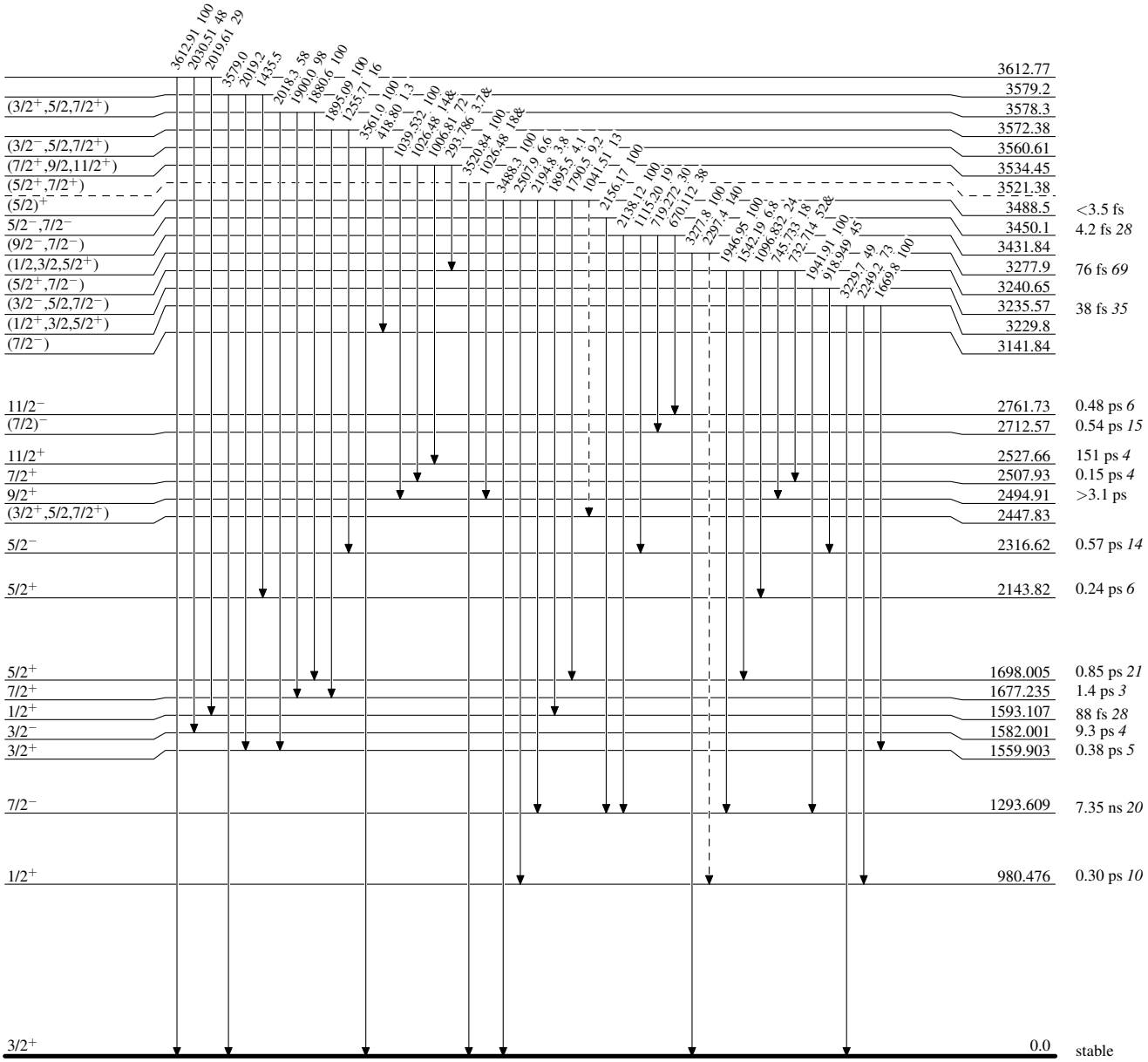
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



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

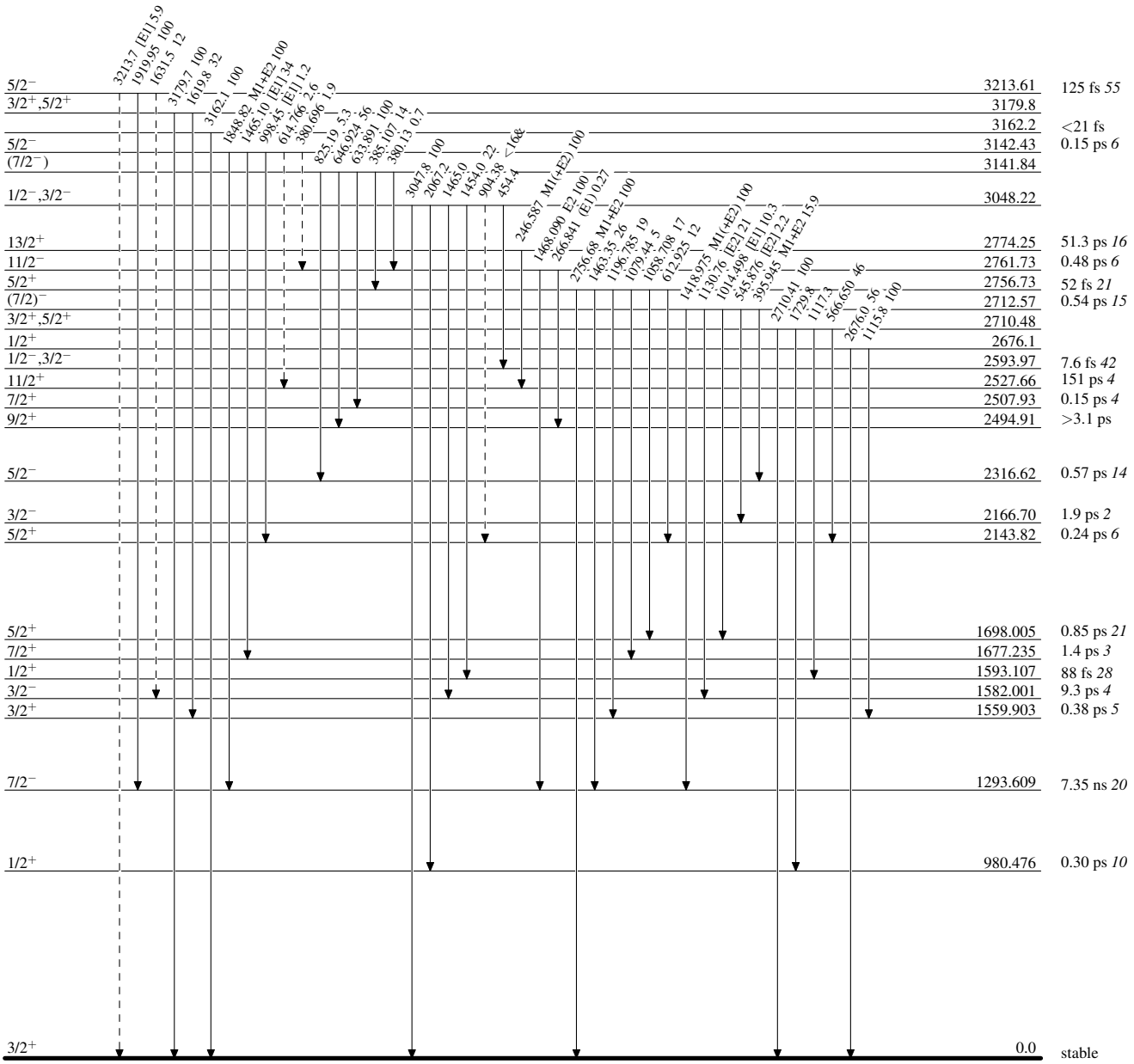
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



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

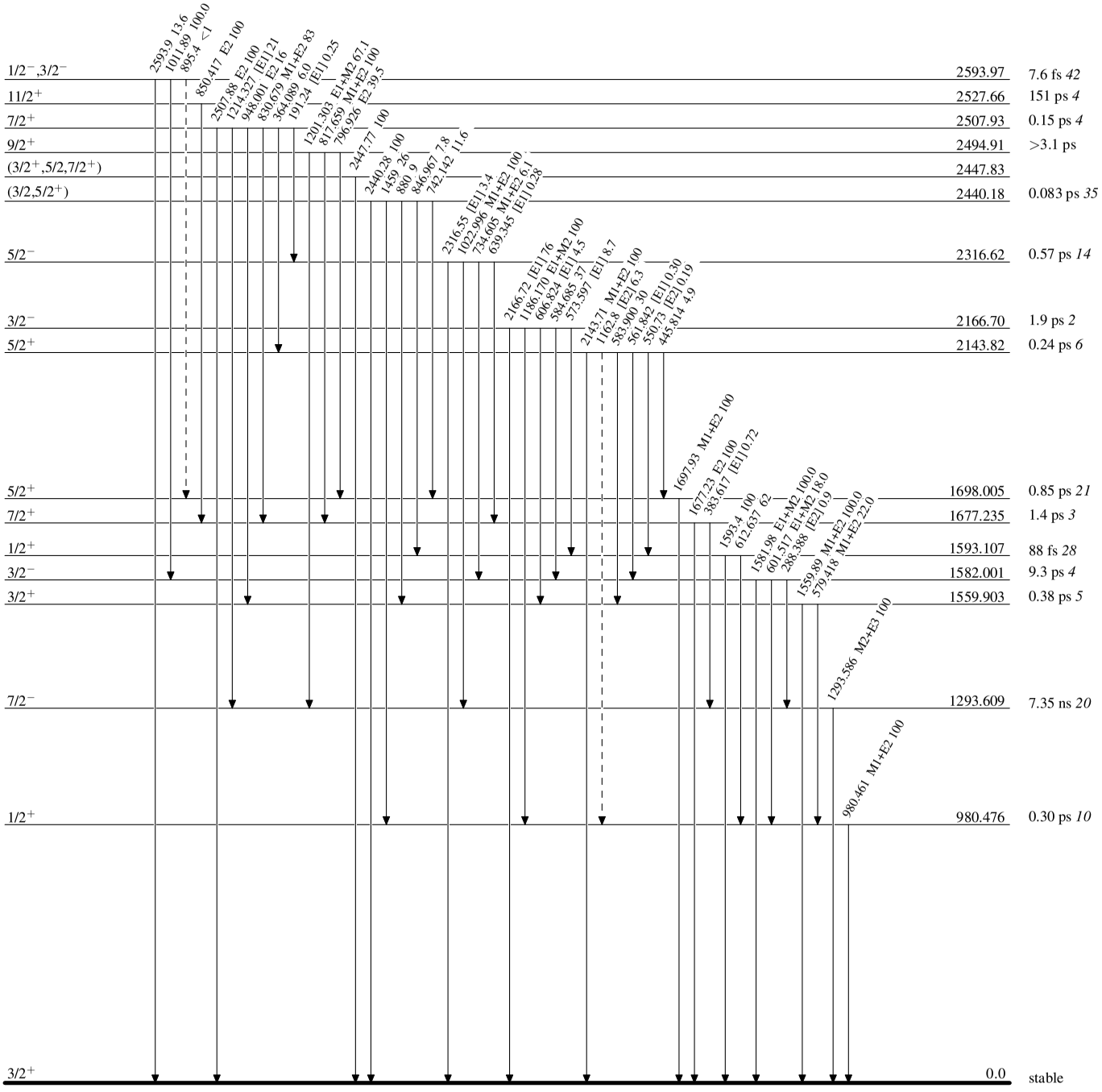
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



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