Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	John Cameron, Jun Chen and Balraj Singh, Ninel Nica	NDS 113,365 (2012)	15-Jan-2012

Q(β^-)=−11664.1 *7*; S(n)=15454.5 *4*; S(p)=1857.63 *9*; Q(α)=−6221.8 *4* 2012Wa38
Note: Current evaluation has used the following Q record −11664.47 80 *15454.2 4* 1857.63 *9*−6221.8 *5* 2011AuZZ.
S(2n)=29769.93 *52*, S(2p)=10364.62 *10* (2011AuZZ).
Values in 2003Au03 are slightly different: Q(β^-)=−11638 *22*, S(n)=15445 *8*, S(2n)=29774 *20*. Others are the same as in 2011AuZZ.
Everywhere in comments in this dataset "36Ar(p,p)" is used as abbreviation for "36Ar(p,p),(p,p′),(p,γ),(p,p′γ):resonances".
Isotope shift and quadrupole moment measurement: 1997Be35.

^{37}K Levels

Cross Reference (XREF) Flags

A	^{37}Ca ε decay (181.1 ms)	E	^{36}Ar(d,nγ)	I	^{39}K(p,t)
B	^{39}Ti ε2p decay (31 ms)	F	^{36}Ar(d,n)	J	^{40}Ca(μ^-,ν3nγ)
C	^{35}Cl(^{3}He,n)	G	^{36}Ar(^{3}He,d)	K	^{40}Ca(p,α)
D	^{36}Ar(p,p),(p,p′),(p,γ),	H	^{36}Ar(^{7}Li,^{6}He)	L	^{40}Ca(^{3}He,^{6}Li)

E(level)†	J$^\pi$	T$_{1/2}$†	XREF	Comments
0.0	3/2$^+$	1.225 s *7*	ABCDEFGHIJKL	%ε+%β$^+$=100 μ=+0.20321 *6* (1971Vo03,1989Ra17,2011StZZ) Q=0.106 *4* (2008Mi07) μ: measured by optical pumping with radiative detection (1971Vo03); hyperfine splitting of ^{37}K g.s. (1968Be19). Q: β-NQR method on polarized ^{37}K nuclei produced in fragmentation reaction. The quoted uncertainty includes both the statistical and systematic resulting from the line shape of the β-NQR spectrum presented in 2008Mi07. Other: 0.10 *4* (1997Be35, optical isotope shift measurement using polarized ^{37}K nuclei in magneto-optic trap at TISOL, TRIUMF). J$^\pi$: from L=0 in ^{39}K(p,t). T$_{1/2}$: weighted mean of: 1.23 s *2* (1958Sc29), 1.25 s *4* (1964Ka24), and 1.223 s *8* (1977Az01); others: 1.2 s *2* (1951Bo56), 1.20 s *12* (1958Su60), 1.15 s *15* (1960Wa04).
1370.85 *2*	1/2$^+$	52 ps *51*	A DEF IJK	J$^\pi$: L=0 in ^{40}Ca(p,α). T$_{1/2}$: <104 ps in ^{36}Ar(d,nγ) and >1 ps in ^{36}Ar(p,p).
1380.25 *3*	7/2$^-$	10.4 ns *5*	DEFGH J L	μ=+5.25 *35* (1971Ra22,1989Ra17,2011StZZ) μ: 1971Ra22 measured g=+1.5 *1* by time-dependent perturbed angular distribution based on which 2005St24 adopted the g-factor. J$^\pi$: based on RUL and L=3 from ^{36}Ar(d,n). T$_{1/2}$: weighted average of 9.6 ns *14* (1967Go^{18,36}Ar(p,p)) and 10.5 ns *5* (1971Ra^{22,40}Ca(p,α)); other: >8.3 ns (^{36}Ar(d,nγ)).
2170.18 *13*	3/2$^-$	104 fs +*69*−*31*	B DEFGH JK	J$^\pi$: 1/2$^-$,3/2$^-$ from L=1 (^{36}Ar(^{3}He,d)); ΔJ=1, M1+E2 912γ connecting 5/2$^-$,7/2$^-$, 3082 with 1/2$^-$,3/2$^-$, 2170 (this level) selects 5/2$^-$ for 3082 and 3/2$^-$ for 2170. T$_{1/2}$: from ^{36}Ar(p,p); other: ls 69 ps (^{36}Ar(d,nγ)).
2285.24 *12*	(5/2$^+$,7/2$^+$)	>243 fs	D IJKL	J$^\pi$: 5/2,7/2,9/2 from D(+Q) γ from 7/2$^+$, 4732 (^{36}Ar(p,p)); 5/2$^+$,(7/2$^+$,9/2$^+$) from L=2(+4) in ^{39}K(p,t); (5/2$^+$,7/2$^+$) from (Q+O) γ to 3/2$^+$, g.s. (^{36}Ar(p,p)).
2750.22 *8*	5/2$^+$	1.4 fs *3*	A DEFG IJKL	J$^\pi$: L=2 from σ(θ) and Ay(θ) (^{40}Ca(p,α)). T$_{1/2}$: weighted average of 0.5 fs *4* (^{36}Ar(p,p)) and 1.52 fs 14

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Adopted Levels, Gammas (continued)

^{37}K Levels (continued)

E(level)†	J^π	$T_{1/2}$†	XREF	Comments
				(^{37}Ca ε decay).
2967 *2*			K	J^π: (9/2$^-$) assumed from analog of 3185 in ^{37}Ar (^{40}Ca(p,α)).
3081.99 *9*	5/2$^-$	7 fs *3*	DEF K	J^π: from 1967Go18: 7/2$^-$,5/2$^-$ from ΔJ=0,1 M1+E2 1702γ to 7/2$^-$, 1380 (1967Go18); ΔJ=1, M1+E2 912γ connecting 7/2$^-$,5/2$^-$, 3082 (this level) with 3/2$^-$,1/2$^-$, 2170 level selects 5/2$^-$ for 3082 and 3/2$^-$ for 2170.
3239.5 *2*	5/2$^+$	97 fs *28*	A D I KL	E(level),$T_{1/2}$: from ^{37}Ca ε decay. J^π: 5/2$^+$,7/2$^+$ from L=2+4 (^{39}K(p,t)); 7/2$^+$ excluded by log *ft*=4.9 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
3272 *2*			K	J^π: (7/2$^-$) assumed by 1995Ma36 from analog of 3527 in ^{37}Ar.
3315.0 *17*	3/2$^-$	2.2 keV *3*	DEFG K	E(level): weighted average of 3315 *3* (^{36}Ar(p,p)) and 3315 *2* (^{40}Ca(p,α)). J^π: 1/2$^-$, 3/2$^-$ from L=1; 3/2$^-$ from ΔJ=1 γ to 1/2$^+$, 1370; also, the elastic scattering anomaly can Be fitted only for J^π=3/2$^-$ and $\Gamma=\Gamma_p$=2.2 *3* keV thus excluding 1/2$^-$ (all arguments from ^{36}Ar(p,p)).
3622.8 *20*	3/2$^+$		A D I L	E(level): from ^{37}Ca ε decay. J^π: L=0+2 in ^{39}K(p,t).
3839 *3*	1/2$^+$,3/2$^+$,5/2$^+$		A D I	E(level): weighted average of 3840 *3* (^{37}Ca ε decay) and 3844 *10* (^{36}Ar(p,p)). J^π: log *ft*=4.9 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
3853 *3*			A	
3900?			L	
3962 *15*		10 keV *4*	D I	
4001 *4*	1/2$^-$‡	35 keV	D	
4018 *5*			K	
4127? *15*			D	This energy denotes a pair of close levels (^{36}Ar(p,p)).
4192 *9*	(1/2,3/2,5/2)		A	J^π: log *ft*=6.5 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
4281 *19*			D I K	E(level): from ^{40}Ca(p,α).
4412.8 *13*	(1/2,3/2,5/2)$^+$		A	J^π: log *ft*=5.2 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
4413.2 *4*	7/2$^+$	<2.1 fs	De K	XREF: e(4424). J^π: 7/2 from ΔJ=2 γ to 3/2$^+$ g.s.; 7/2$^+$ from RUL (^{36}Ar(p,p)).
4432.6 *3*	3/2	<3.5 fs	De	XREF: e(4424). J^π: ΔJ=1 d(+Q) γ to 1/2$^+$, 1371.
4500 *4*	1/2$^+$‡	0.5 keV *3*	A D K	E(level): weighted average of 4496 *3* (^{37}Ca ε decay), 4498 *4* (^{40}Ca(p,α)), and 4508 *4* (^{36}Ar(p,p)).
4583 *3*	1/2$^-$‡	83 keV *11*	D	
4669.6 *8*		<0.8 keV	D	
4692 *9*	(7/2)$^+$		K	J^π: from L=4 and shell model calculations (^{40}Ca(p,α)).
4721	1/2 to 7/2$^+$		I	J^π: from L=2 (^{39}K(p,t)).
4732.2 *4*	7/2$^+$	<4.2 fs	D	J^π: 7/2 from ΔJ=2 γ to 3/2$^+$, g.s.; 7/2$^+$ based on RUL (^{36}Ar(p,p)).
4737.9 *6*	(5/2$^-$,7/2)	<0.3 keV	D K	J^π: from (p,p′$\gamma(\theta)$) (^{36}Ar(p,p)).
4814.8 *8*	5/2$^+$	<0.3 keV	D	J^π: from (p,p′$\gamma(\theta)$) (^{36}Ar(p,p)).
4842.6 *6*	3/2$^+$,5/2$^+$	0.20 keV *8*	D	J^π: from L=2 (^{36}Ar(p,p)).
5018.9 *11*	3/2$^+$#	1.3 keV *1*	A D	
5049.8 *8*	3/2$^+$	0.040 keV *5*	A D I	J^π: L=0 in ^{39}K(p,t); also from $\sigma(\theta)$ and analyzing power (^{36}Ar(p,p)).
5120.2 *16*	1/2$^+$	0.2 keV *1*	A D	E(level): from ^{37}Ca ε decay.

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Adopted Levels, Gammas (continued)

^{37}K Levels (continued)

E(level)†	Jπ	T1/2†	XREF	Comments
				Jπ: from L=0 in ^{36}Ar(p,p).
5134 *4*	5/2−	0.5 keV *2*	D	Jπ: from (p,p′γ(θ)) (^{36}Ar(p,p)). T1/2: from ^{36}Ar(p,p).
5207 *7*		<0.4 keV	D	
5264 *4*	3/2−	18 keV	D	Jπ: from L=1 and (p,p′γ(θ)) (^{36}Ar(p,p)).
5323.0 *18*	3/2+,5/2+	0.4 keV	A D	E(level): from ^{36}Ar(p,p). Jπ: from L=2 (^{36}Ar(p,p)).
5342 *6*	5/2−,7/2−	0.12 keV	D	Jπ: from L=3 (^{36}Ar(p,p)).
5357 *7*	(1/2,3/2,5/2)		A	Jπ: log *ft*=6.2 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
5422 *3*	3/2+,5/2+	5.0 keV	A D	E(level): weighted average of 5418 *5* (^{36}Ar(p,p)) and 5424 *3* (^{37}Ca ε decay). Jπ: from L=2 (^{36}Ar(p,p)).
5456 *4*	1/2+‡	5.0 keV	A D	E(level): weighted average of 5459 *4* (^{37}Ca ε decay) and 5451 *5* (^{36}Ar(p,p)).
5478 *3*	3/2+,5/2+	1.0 keV	A D	E(level): weighted average of 5479.8 *21* (^{37}Ca ε decay) and 5470 *5* (^{36}Ar(p,p)). Jπ: from L=2 (^{36}Ar(p,p)).
5568 *4*	5/2−	0.12 keV	A D	E(level): weighted average of 5565 *7* (^{36}Ar(p,p)) and 5569 *5* (^{37}Ca ε decay). Jπ: 5/2−,7/2− from L=3 (^{36}Ar(p,p)); 7/2− excluded by log *ft*=6.2 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
5624.1 *20*	(1/2,3/2,5/2)+	<0.6 keV	A D	E(level): from ^{37}Ca ε decay. Jπ: log *ft*=5.6 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
5690			K	
5714 *4*		<0.6 keV	A D	E(level): weighted average of 5718 *9* (^{36}Ar(p,p)) and 5713 *4* (^{37}Ca ε decay).
5736 *9*	5/2−,7/2−	0.2 keV	D	Jπ: from L=3 (^{36}Ar(p,p)).
5788 *4*	3/2+#	2.7 keV *5*	A D	E(level): weighted average of 5786 *6* (^{36}Ar(p,p)) and 5789 *5* (^{37}Ca ε decay).
5932 *4*	5/2+#	11.4 keV *23*	A D	E(level): weighted average of 5929 *6* (^{36}Ar(p,p)) and 5933 *4* (^{37}Ca ε decay).
6014.9 *21*	5/2+#	6.7 keV *13*	A D	E(level): weighted average of 6014.7 *23* (^{37}Ca ε decay) and 6016 *6* (^{36}Ar(p,p)).
6047 *4*	1/2−‡	30 keV	A D K	E(level): weighted average of 6047 *4* (^{37}Ca ε decay) and 6045 *9* (^{36}Ar(p,p)).
6054 *10*	1/2+‡	0.4 keV	D	
6092.3 *22*	1/2+‡	1.0 keV	A D	E(level): weighted average of 6091 *10* (^{36}Ar(p,p)) and 6092.4 *23* (^{37}Ca ε decay).
6111 *9*		<0.6 keV	D	
6125 *9*	5/2+‡	12 keV	D	
6138 *10*	5/2−,7/2−	4.0 keV	D	Jπ: from L=3 (^{36}Ar(p,p)).
6153 *10*		<0.6 keV	D	
6223 *9*	3/2+,5/2+	10 keV	D	Jπ: from L=2 (^{36}Ar(p,p)).
6237 *10*	5/2−,7/2−	0.6 keV	D	Jπ: from L=3 (^{36}Ar(p,p)).
6274 *5*		<0.6 keV	A D	E(level): weighted average of 6274 *5* (^{37}Ca ε decay) and 6275 *9* (^{36}Ar(p,p)).
6323 *5*	5/2+#	2.3 keV *5*	A D	E(level): weighted average of 6324 *5* (^{37}Ca ε decay) and 6321 *6* (^{36}Ar(p,p)).
6345 *9*		<0.6 keV	D	
6371 *19*			D	

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Adopted Levels, Gammas (continued)

^{37}K Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[†]	XREF	Comments
6415 *4*	1/2+[‡]	2.0 keV	A D	E(level): weighted average of 6412 *10* (^{36}Ar(p,p)) and 6416 *5* (^{37}Ca ε decay).
6432 *3*	(1/2,3/2,5/2)+	<0.6 keV	A D	E(level): weighted average of 6431 *10* (^{36}Ar(p,p)) and 6432 *3* (^{37}Ca ε decay). J^π: log *ft*=5.3 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
6452 *9*	5/2−,7/2−	2.0 keV	D	J^π: from L=3 (^{36}Ar(p,p)).
6480 *10*		<0.6 keV	D	
6534 *9*	3/2−[‡]	30 keV	D	
6543 *5*			A	
6604 *5*	3/2+[#]	4.9 keV *10*	A D	E(level): weighted average of 6601 *6* (^{36}Ar(p,p)) and 6606 *5* (^{37}Ca ε decay).
6619 *6*	5/2+[#]	2.9 keV *6*	D	
6626 *6*	5/2−[#]	5.9 keV *12*	D	
6683 *4*	(1/2+)	<0.6 keV	A D I	E(level): weighted average of 6678 *10* (^{36}Ar(p,p)), 6684 *5* (^{37}Ca ε decay), and 6670 *20* (^{39}K(p,t)). J^π: from isobaric multiplet mass equation (^{39}K(p,t)).
6685.6 *19*	1/2+	2.75 keV *11*	D	J^π: from $\sigma(\theta)$ and analyzing power (^{39}K(p,t)).
6714 *10*	3/2−[‡]	60 keV	D	
6726 *10*	(1/2,3/2,5/2)	<0.6 keV	a D	E(level): from ^{36}Ar(p,p), 6740 *5* from (^{37}Ca ε decay). J^π: log *ft*=6.4 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
6748 *10*	1/2+[‡]	6.0 keV	a D	E(level): from ^{36}Ar(p,p)), 6740 *5* from (^{37}Ca ε decay).
6802 *10*	5/2−,7/2−	0.3 keV	D	J^π: from L=3 (^{36}Ar(p,p)).
6824 *5*	1/2−[‡]	2.0 keV	A D	E(level): weighted average of 6822 *10* (^{36}Ar(p,p)), 6824 *5* (^{37}Ca ε decay).
6866 *8*		40 keV	D	
6912 *5*	5/2−,7/2−	0.2 keV	A D	J^π: from L=3 (^{36}Ar(p,p)). E(level): weighted average of 6912 *10* (^{36}Ar(p,p)), 6912 *5* (^{37}Ca ε decay).
6974 *5*	5/2+[‡]	26 keV	A D	E(level): weighted average of 6976 *9* (^{36}Ar(p,p)), 6974 *5* (^{37}Ca ε decay).
7006 *10*		<0.6 keV	D K	
7073 *7*	(1/2,3/2,5/2)+		A D	E(level): weighted average of 7093 *15* (^{36}Ar(p,p)), 7071 *5* (^{37}Ca ε decay). J^π: log *ft*=5.0 from 3/2+ g.s. of ^{37}Ca (^{37}Ca ε decay).
7183 *4*	5/2+[#]	2.5 keV *5*	A D	E(level): weighted average of 7180 *8* (^{36}Ar(p,p)), 7183 *4* (^{37}Ca ε decay).
7237 *5*	3/2+[#]	6.1 keV *12*	A D	E(level): weighted average of 7230 *8* (^{36}Ar(p,p)), 7240 *5* (^{37}Ca ε decay).
7320			K	
7369 *4*	5/2+[#]	19 keV *4*	A D	E(level): weighted average of 7359 *8* (^{36}Ar(p,p)), 7370 *3* (^{37}Ca ε decay).
7473.8 *18*	5/2+[#]	6.8 keV	A D	E(level): weighted average of 7471 *8* (^{36}Ar(p,p)), 7473.8 *18* (^{37}Ca ε decay).
7495 *8*	7/2−[#]	0.1 keV	D	
7540 *5*	3/2+[#]	4.2 keV	A D	E(level): weighted average of 7527 *8* (^{36}Ar(p,p)), 7542 *3* (^{37}Ca ε decay).
7634 *3*	5/2+[#]	14.7 keV	A D	E(level): weighted average of 7638 *8* (^{36}Ar(p,p)), 7634 *3* (^{37}Ca ε decay).
7661 *4*	3/2+[#]	11.5 keV	A D	E(level): weighted average of 7657 *8* (^{36}Ar(p,p)), 7662 *5* (^{37}Ca

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Adopted Levels, Gammas (continued)

^{37}K Levels (continued)

E(level)†	J$^{\pi}$	XREF	Comments
			ε decay).
7807 *4*	(1/2,3/2,5/2)$^+$	A	J$^{\pi}$: log *ft*=4.4 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
7835 *4*	(1/2,3/2,5/2)$^+$	A	J$^{\pi}$: log *ft*=4.6 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
7836 *14*	(11/2)$^+$	K	J$^{\pi}$: from L=6 and shell model calculations.
8029 *5*	(1/2,3/2,5/2)$^+$	A	J$^{\pi}$: log *ft*=4.9 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
8273 *5*	(1/2,3/2,5/2)$^+$	A	J$^{\pi}$: log *ft*=5.3 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
8314 *5*	(1/2,3/2,5/2)$^+$	A	J$^{\pi}$: log *ft*=5.1 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).
8378 *5*	(1/2,3/2,5/2)	A	J$^{\pi}$: log *ft*=5.7 from 3/2$^+$ g.s. of ^{37}Ca (^{37}Ca ε decay).

† From ^{36}Ar(p,p), unless noted otherwise.

‡ From fit based on single-level dispersion theory (^{36}Ar(p,p)).

From $\sigma(\theta)$ and analyzing power (^{36}Ar(p,p)).

$\gamma(^{37}K)$

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[#]	δ[#]	α[@]	Comments
1370.85	1/2+	1370.9 *2*	100	0.0	3/2+				E_γ: from ^{37}Ca ε decay.
1380.25	7/2−	1380.2	100	0.0	3/2+	Q+O	+0.127 *17*		
2170.18	3/2−	789.9	<4	1380.25	7/2−				
		799.3	<4	1370.85	1/2+				
		2170.1	100	0.0	3/2+	D(+Q)	−0.02 *9*		
2285.24	(5/2+,7/2+)	905.0	<4	1380.25	7/2−				
		914.4	<4	1370.85	1/2+				
		2285.2	100	0.0	3/2+	(Q+O)	+0.10 *5*		
2750.22	5/2+	465.0	<0.07	2285.24	(5/2+,7/2+)				
		580.0	0.31 *10*	2170.18	3/2−	D(+Q)	+0.02 *5*		
		1369.9	1.53 *10*	1380.25	7/2−	D(+Q)	−0.01 *2*		
		1379.3	<0.7	1370.85	1/2+				
		2750.1	100.00 *10*	0.0	3/2+	M1+E2	−0.09 *1*	0.000576 *8*	α(K)=9.16×10^{-6} *13*; α(L)=7.66×10^{-7} *11*; α(M)=8.31×10^{-8} *12*; α(N+..)=0.000566 *8* α(N)=3.07×10^{-9} *5*; α(IPF)=0.000566 *8* B(M1)(W.u.)=0.73 *16*; B(E2)(W.u.)=2.8 *9*
3081.99	5/2−	796.7	<0.6	2285.24	(5/2+,7/2+)				
		911.8	24.1 *7*	2170.18	3/2−	D+Q	+0.13 *4*		Mult.,δ: ΔJ=1 (M1+E2) γ from measured anisotropy (0° / 90°) in ^{36}Ar(p,p).
		1701.7	100	1380.25	7/2−	(M1+E2)	+0.20 *2*	0.0001549 *22*	α(K)=2.02×10^{-5} *3*; α(L)=1.687×10^{-6} *24*; α(M)=1.83×10^{-7} *3*; α(N+..)=0.0001328 α(N)=6.76×10^{-9} *10*; α(IPF)=0.0001328 *19* B(M1)(W.u.)=(0.44 *19*); B(E2)(W.u.)=(21 *10*) Mult.,δ: ΔJ=0,1 (M1+E2) γ from measured anisotropy (0° / 90°) in ^{36}Ar(p,p).
		1711.1	<1.2	1370.85	1/2+				
		3081.9	13.5 *7*	0.0	3/2+	D(+Q)	0.00 *5*		
3239.5	5/2+	1069.3	<10	2170.18	3/2−				
		1859.2	<9	1380.25	7/2−				
		1868.6	<9	1370.85	1/2+				
		3239.3	100	0.0	3/2+				
3315.0	3/2−	564.8	<1.1	2750.22	5/2+				
		1029.7	<1.0	2285.24	(5/2+,7/2+)				
		1144.8	9.8 *5*	2170.18	3/2−	D+Q	−0.09 *4*		
		1934.7	<0.7	1380.25	7/2−				
		1944.1	100.0 *8*	1370.85	1/2+	D(+Q)	−0.01 *1*		Mult.: ΔJ=1 d(+Q) γ (^{36}Ar(p,p)).
		3314.8	3.9 *7*	0.0	3/2+	D(+Q)	+0.05 *11*		
4413.2	7/2+	1662.9	<1.6	2750.22	5/2+				
		2127.9	<1.2	2285.24	(5/2+,7/2+)				
		2242.9	<0.9	2170.18	3/2−				

$^{37}_{19}$K$_{18}$-6

Adopted Levels, Gammas (continued)

$\gamma(^{37}K)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[#]	δ[#]	Comments
4413.2	7/2+	3032.8	100.0 *4*	1380.25	7/2−			
		3042.2	<0.9	1370.85	1/2+			
		4412.9	9.1 *4*	0.0	3/2+	Q		Mult.,δ: ΔJ=2 Q(+O) γ, δ=−0.02 *4* from γ(θ) (^{36}Ar(p,p)).
4432.6	3/2	1682.3	<4.4	2750.22	5/2+			
		2147.3	<2.9	2285.24	(5/2+,7/2+)			
		2262.3	<2.9	2170.18	3/2−			
		3052.2	<2.9	1380.25	7/2−			
		3061.6	45.6 *18*	1370.85	1/2+	D+Q	+0.06 *4*	
		4432.3	100.0 *18*	0.0	3/2+	D(+Q)	−0.04 *7*	Mult.,δ: ΔJ=1 d(+Q) γ, δ=−0.04 *7* or +4.7 *5* from γ(θ) (^{36}Ar(p,p)).
4669.6		1919.3	<4	2750.22	5/2+			
		2384.3	<2	2285.24	(5/2+,7/2+)			
		2499.3	<3	2170.18	3/2−			
		3289.2	100	1380.25	7/2−			
		3298.6	<3	1370.85	1/2+			
		4669.3	<4	0.0	3/2+			
4732.2	7/2+	1981.9	<3.7	2750.22	5/2+			
		2446.9	100.0 *18*	2285.24	(5/2+,7/2+)	D(+Q)	−0.03 *6*	δ: for J(2285)=7/2 (^{36}Ar(p,p)).
		2561.9	<3.7	2170.18	3/2−			
		3351.8	35.7 *22*	1380.25	7/2−	D(+Q)	+0.08 *12*	Mult.,δ: ΔJ=0,1 d(+Q) from γ(θ) (^{36}Ar(p,p)).
		3361.2	<3.7	1370.85	1/2+			
		4731.9	48.2 *22*	0.0	3/2+	Q(+O)	−0.02 *4*	Mult.,δ: ΔJ=2 Q(+O) γ from γ(θ) (^{36}Ar(p,p)).
4842.6	3/2+,5/2+	2092.3	<11	2750.22	5/2+			
		2557.3	<8	2285.24	(5/2+,7/2+)			
		2672.3	<8	2170.18	3/2−			
		3462.2	100	1380.25	7/2−			
		3471.6	<10	1370.85	1/2+			
		4842.3	<16	0.0	3/2+			
5049.8	3/2+	3669.4	100	1380.25	7/2−			

† Deduced by evaluators from differences of initial and final levels, except for few gammas noted in the table whose Eγ′s were measured precisely. Most of the γ rays originate in the ^{36}Ar(p,p) dataset.

‡ From ^{36}Ar(p,p), unless noted otherwise.

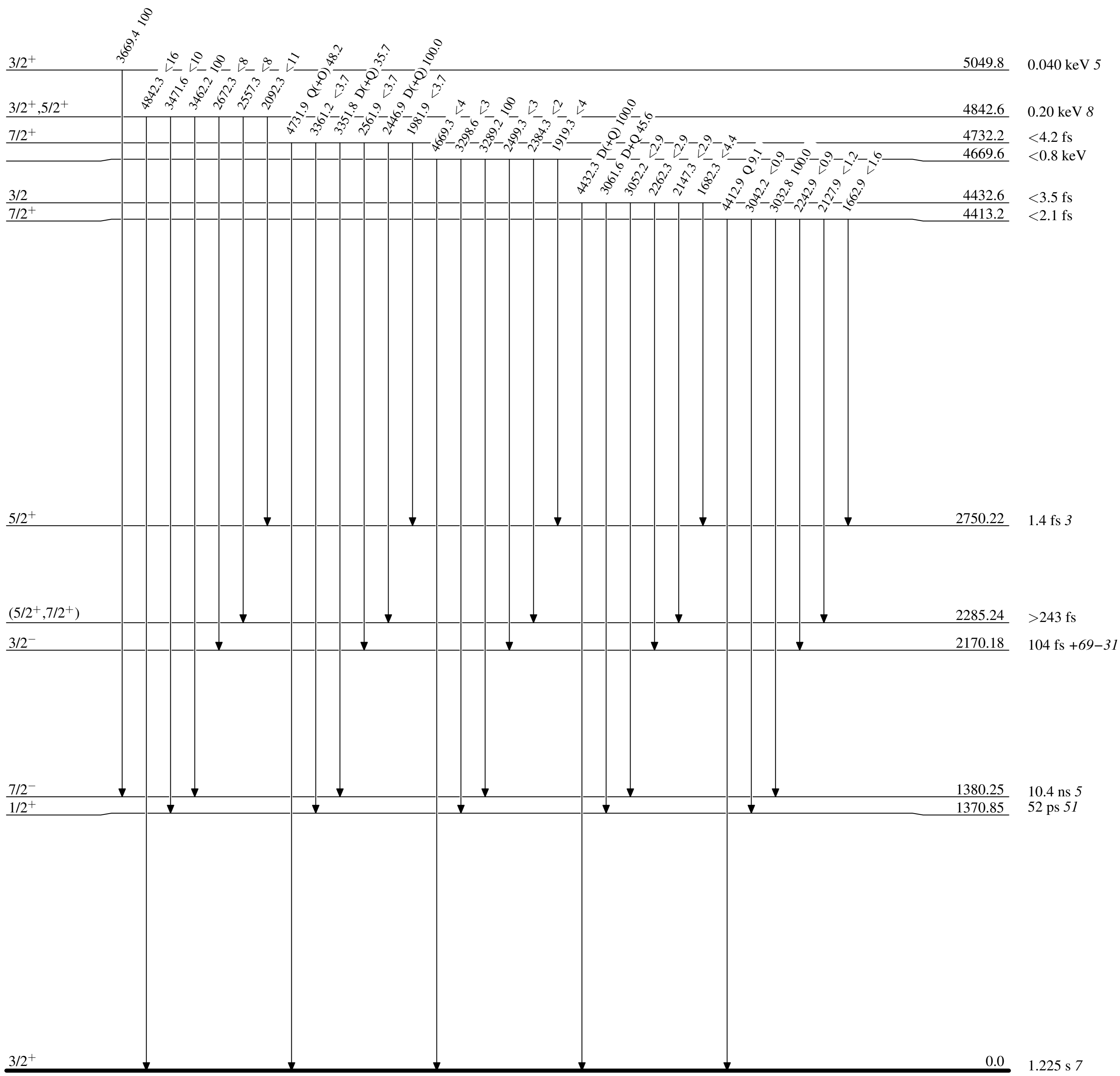
From γ(θ) in ^{36}Ar(p,p), unless noted otherwise.

@ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

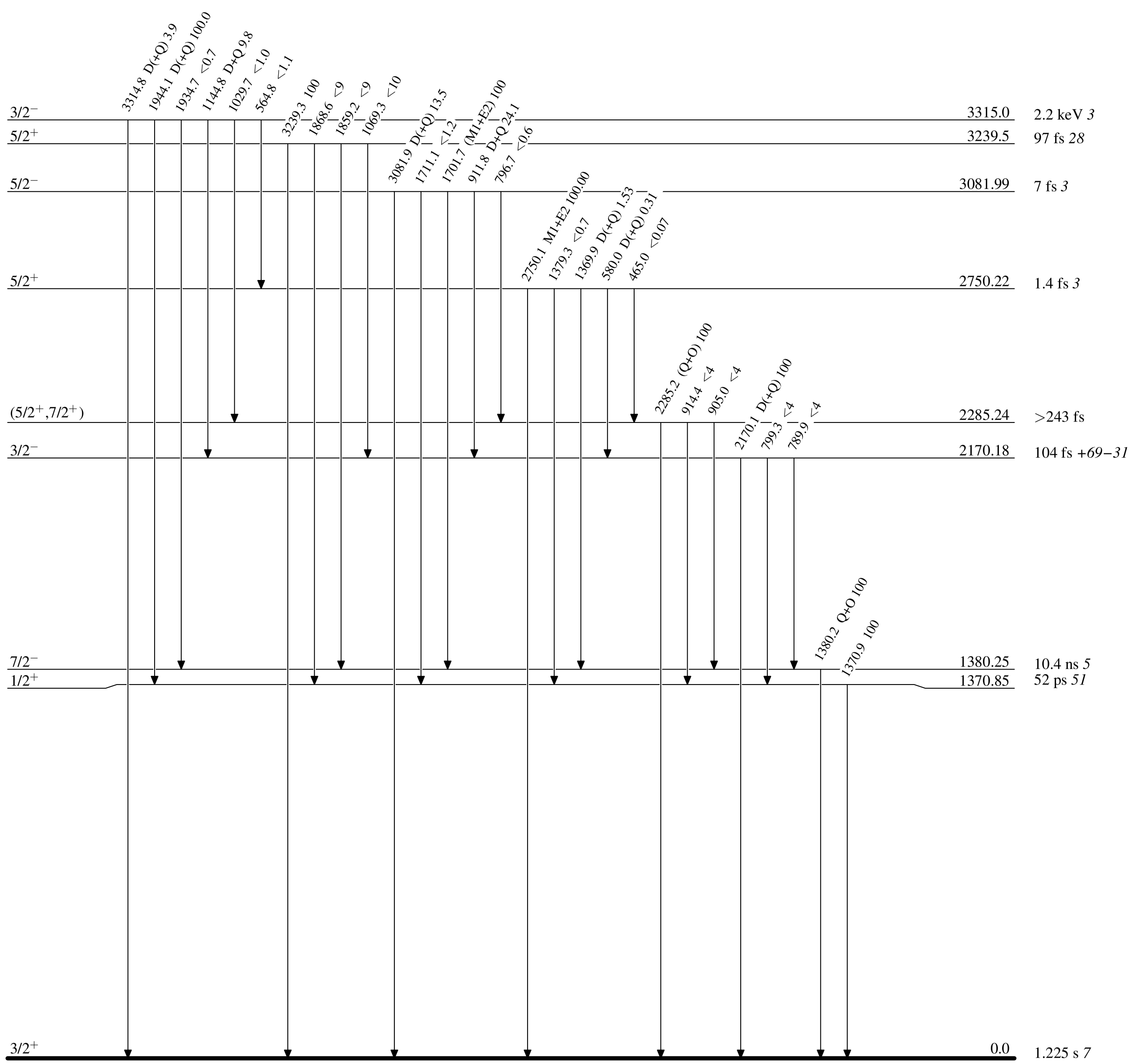


$^{37}_{19}K_{18}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{37}_{19}K_{18}$