Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 111,2331 (2010)	30-Jun-2010

Q(β^-)=−4232.4 *4*; S(n)=10609.20 *2*; S(p)=13517.3 *10*; Q(α)=−10643.3 *1* 2012Wa38
Note: Current evaluation has used the following Q record −4232.4 3 *10609*.20 *2* 13506.612 2009AuZZ.
Q(α)=−10643.29 *4* (2009AuZZ).
Q(β^-)=−4232.4 *3*, S(n)=10609.20 *2*, S(p)=13506.6 *12* S(α)=−10643.26 *4* (2003Au03).

There are 26 neutron resonances for the ^{29}Si+n reaction in the 15 keV to 1389 keV energy range (2006MuZX). Other: 2003Gu05.

2007No13: Production cross section ~80 mb and ~70 mb, measured in ^{40}Ar fragmentation reactions of ^{9}Be(^{40}Ar,X), E=90α MeV, and ^{181}Ta(^{40}Ar,X), E=94α MeV, reactions, respectively.

2001Pa52: ^{29}Si(n,γ) − mass measurement.

^{30}Si Levels

Cross Reference (XREF) Flags

A	^{30}Al β^- decay	D	^{27}Al(α,p),(α,pγ)
B	^{30}P β^+ decay	E	^{28}Si(t,p)
C	^{14}C(^{18}O,2nγ)	F	^{29}Si(n,γ) E=thermal

E(level)†	J$^\pi$#	T$_{1/2}$b	XREF	Comments
0	0$^+$	stable	AB DEF	J$^\pi$: L=0 in (t,p).
2235.322 *18*	2$^+$	215 fs *28*	ABCDEF	μ=+0.76 *18* Q=−0.05 *6* J$^\pi$: L=2 in (t,p). μ: From 1978Za13 − Perturbed angular correlation after ion implantation, re-evaluated data (Same in 1989Ra17 and 2005St24). Q: or +0.01 *6*, both from 1979Fe08 − depending on constructive or destructive interference from the 2nd excited state − Method: Coulomb Excitation Reorientation. In a compilation, 1981Sp07 reported only −0.05 *6*. 1989Ra17 and 2005St24 reported both values.
3498.49 *3*	2$^+$	58 fs *17*	ABCDEF	J$^\pi$: L=2 in (t,p).
3769.48 *4*	1$^+$	36 fs *9*	AB DEF	J$^\pi$: From angular correlation fit ((α,p),(α,pγ)−1971Sy01).
3787.72 *4*	0$^+$	8.3 ps *5*	B DEF	J$^\pi$: From isotropic distribution characteristics of 1552γ ((α,p),(α,pγ)−1971Sy01).
4810.31 *11*	2$^+$&	104 fs *15*	A DEF	
4830.85 *4*	3$^+$&	83 fs *24*	A CDEF	
5231.38 *7*	3$^+$&	43 fs *21*	A CDEF	
5279.37 *14*	4$^+$	83 fs *22*	CDE	J$^\pi$: L=4 in (t,p).
5372.2 *6*	0$^+$	59 fs *21*	DEF	J$^\pi$: 3136.6γ to 2$^+$ and, 1602γ to (1$^+$), absence of g.s. branching.
5487.50‡ *5*	3$^-$	43 fs *12*	CDEF	J$^\pi$: L=3 in (t,p).
5614.04 *13*	2$^+$	<21 fs	A DEF	J$^\pi$: L=2 in (t,p).
5950.73 *15*	4$^+$	15 fs *8*	A CDE	J$^\pi$: Assigned by 1971Sy01 based on (α,α') population at 180° γ-ray angular distribution.
6503.41‡ *8*	4$^-$	139 fs *35*	CDE	J$^\pi$: Assigned by 1971Sy01 based on 540γ angular correlation measurements; feeding of this level from the 7044 keV level (J^π=5$^-$).
6537.5 *16*	2$^+$	<17 fs	DE	XREF: E(6541). J$^\pi$: L=2 in (t,p).
6641.21 *7*	2$^-$	21 fs *9*	F	J$^\pi$: 1810.4γ to 3$^+$, 1153.6γ to 3$^-$. For the second member of the doublet, 1973Ba50 (t,p) suggested J^π=0$^-$,1$^-$ or 2$^-$, 1980Bi14 excluded 0$^-$ and 1$^-$

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Adopted Levels, Gammas (continued)

^{30}Si Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[b]	XREF	Comments
				assignments from 18010γ intensity and feeding the 3^+ state.
6642 *3*	0^+		DE	Jπ: L=0 in (t,p).
6744.06 *4*	1^-	<14 fs	DEF	Jπ: L=1 in (t,p).
6865.2 *12*	3^+	23 fs *16*	DE	Jπ: Assigned by 1980Bi14 based on γ-ray feeding to 4^+, 3^+, 2^+ states. $J^\pi=4^+$ is rejected from E2 strength calculation (1971Sy01).
6914.79 *24*	(2^+)	<24 fs	DEF	Jπ: L=(2) in (t,p).
6998.90 *15*	5^+	104 fs *35*	CDE	XREF: E(6990). Jπ: Assigned by 1980Bi14 based on lifetime, unnatural parity, population from 8196 keV ($J^\pi=5^-$) level.
7043.21 *14*	5^-	0.83 ps *20*	CDE	Jπ: L=5 in (t,p).
7079.4 *14*	$(1^+,2^-,3^+)$	<14 fs	DE	XREF: E(7070). Jπ: Assigned by 1971Sy01 based on population or absence of population in the (α,p), (α,α′), (α,α γ) reactions.
7223.2 *4*	4^+[@]	<14 fs	CDE	
7255.8 *16*	2^+	<35 fs	DE	Jπ: L=2 in (t,p).
7441 *4*	0^+		DE	XREF: E(7446). Jπ: L=0 in (t,p).
7507.84 *5*	(2^-)	<24 fs	DEF	
7612.4 *13*	(4^-)	13 fs *6*	DE	
7623.9 *23*	(2^+)	<17 fs	D	
7634 *3*			D	
7667.4 *6*	$(1^+,2^+)$	<14 fs	DEF	XREF: E(7660). Jπ: 5431γ to 2^+ (1980Bi14).
7809.7 *13*	4^+	12 fs *8*	DE	XREF: E(7800). Jπ: L=4 in (t,p).
7911.8 *20*	2^+	21 fs *15*	DE	XREF: E(7894). Jπ: L=2 in (t,p).
8104.8 *3*	$(2^+,3^-)$	<24 fs	DEF	Jπ: 3295γ to 2^+, 5869γ to 2^+, 2628γ from $(3^-,4^+)$ (α,p),(α,pγ) – 1980Bi14. L=(0) in (t,p) is inconsistent with this assignment.
8156.1 *7*	$(1^-$ to $4^+)$		D F	
8163.22 *7*	1^-		DEF	Jπ: L=1 in (t,p).
8190.6 *24*	(2^+)	<24 fs	D	
8194.0[‡] *4*	5^-	35 fs *12*	CDE	XREF: E(8204). Jπ: L=5 in (t,p).
8289.5 *23*	(1 to 3)		D	
8332.7 *13*			D	
8441.2 *23*	3^-		DE	XREF: E(8453). Jπ: L=3 in (t,p).
8536.4 *16*	$(3^+,4^+)$	31 fs *16*	D	Jπ: 1535 to 5^+, 6300γ to 2^+.
8554 *3*	3^-	<14 fs	DE	XREF: E(8564). Jπ: L=3 in (t,p).
8595.9 *17*	(4^-)	<24 fs	D	Jπ: γ-decays to 3^+,3^-,4^+ states.
8639.4 *21*	$(1^+$ to $4^+)$	<24 fs	D	
8672.2 *18*	$(1^-,2^+)$		D	
8683.7 *15*	2^+	<24 fs	DE	Jπ: L=2 in (t,p).
8734 *3*	$(0^+$ to $3^+)$		D	
8799 *3*	$(1,2^+)$		D	
8887 *4*	$(0^+$ to $4^+)$		DE	XREF: E(8893). Jπ: L=(2,3) in (t,p).
8898.10 *11*	(1^-)		D F	
8939 *3*	(2^+)		DEF	Jπ: 6700γ to 2^+, 5165γ to 1^+, L=(2,3) in (t,p).
8953.4 *5*	$(1,2^+)$		D F	
8959.4 *7*	(5^-)	17 fs *10*	CDE	Jπ: L=(5) in (t,p).
8979 *3*	$(1,2^+)$		D	
9034.8 *23*	$(0^+$ to $3^+)$		D	

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Adopted Levels, Gammas (continued)

^{30}Si Levels (continued)

E(level)†	Jπ#	$T_{1/2}$b	XREF	Comments
9044.8 *18*	(3,4)	<24 fs	D	
9103.73 *6*	(1⁻,2⁻)	<24 fs	D F	Jπ: 2359.6γ to 1⁻ and 998.9γ to (2⁺,3⁻).
9106.76 *17*	6⁻@	24 fs *6*	CD	
9129.8 *20*	(4⁺,5⁺)	<17 fs	D	
9166.4 *16*	(1⁺ to 3⁺)	<24 fs	DE	Jπ: Other: L=3 in (t,p).
9255.2 *20*	(2⁺,3⁺)		D	
9308.11 *22*	(1 to 3⁺)	<24 fs	D F	
9349.3 *17*	(4⁻)	<24 fs	D	
9362 *4*	(1,2⁺)		D	
9367.2 *4*	6⁺@	<17 fs	CD	
9405.7 *20*	(1⁺ to 4⁺)	<24 fs	DE	Jπ: Other: L=4 in (t,p).
9439 *3*	(1⁻)		D	
9474.1 *24*	(2⁺ to 4⁺)		D	
9505.2 *17*	(5⁻)	<17 fs	D	
9575 *3*	(1⁺ to 3)		D	
9597.3 *3*	(0⁺ to 4⁺)		D F	
9604.5 *20*	(2 to 4⁺)		D	
9619.74 *13*	(1⁻)		D F	
9647.3 *20*	(3⁻,4)	<35 fs	D	
9688 *4*	(0 to 3⁻)		D	
9725 *3*	(0⁺ to 4⁺)		D	
9760.5 *20*	(2⁺ to 4⁺)	<35 fs	D	
9768 *3*	(1,2⁺)		D	
9773.7‡ *5*	6⁻@	<24 fs	CD	
9792.3 *3*	(1⁻)		D F	
9816 *4*	(0⁺ to 4⁺)		D	
9881.8 *20*	(3,4)		DE	Jπ: L=4 in (t,p).
9896.6 *20*	(0⁺ to 4⁺)		D	
9953.9 *16*	(4,5)	<14 fs	D	
9958 *3*	(1,2⁺)		D	
10026.6 *23*	(2 to 4⁺)		D	
10056.4 *20*	4⁺		DE	Jπ: L=4 in (t,p).
10078.7 *24*	(1⁺ to 4⁺)		D	
10115.8 *24*	(1⁻ to 4⁺)		D	
10183.8 *23*	(0⁺ to 3⁺)		D	
10186.7 *17*	(5⁻)	19 fs *14*	D	
10202.3 *5*	(1⁻)		D F	
10219 *4*	(0⁺ to 4⁺)		D	
10275.5 *7*	(0⁺ to 4⁺)		D F	
10286.7 *24*	(4⁺,5⁺)	<28 fs	D	
10304.4 *18*	(3⁻)		D	
10347.8 *20*	(3⁺,4)	<24 fs	D	
10354.9 *23*	(0⁺ to 4⁺)		D	
10396 *3*	(3,5⁺)	<24 fs	D	
10420 *4*	(2⁺ to 6⁺)		D	
10449 *3*	(0 to 3⁺)		D	
10464.1 *20*	(3⁺,4)	<35 fs	D	
10472 *3*	(1,2⁺)		D	
10507.9 *23*	(0⁺ to 3⁺)		D	
10554.6 *3*	(6⁻)	<35 fs	CD	
10581 *4*	(0 to 3⁺)		D	
10622 *4*	(0 to 4⁺)		D	
10668.2 *21*	(3⁻,4⁻,5)	<17 fs	D	
10675.4 *12*	(6⁺)	12 fs *8*	CDE	Jπ: L=6 in (t,p).

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Adopted Levels, Gammas (continued)

^{30}Si Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[b]	XREF	Comments
10719.33 *19*	(7⁻)[@]	17 fs *9*	CDe	Jπ: 1613γ to 5⁻, 3681 to 6⁻.
10731.4 *18*	(3⁻,4⁻,5⁻)	<28 fs	De	Jπ: 2628γ to (2⁺,3⁻), L=5 in (t,p) for doublet.
10794.5 *24*	(2 to 4)		D	
10805 *4*	(0⁺ to 4⁺)		D	
10821.6 *18*	(4,5⁺,6⁺)	<24 fs	D	
10835 *4*	(1⁺ to 5⁺)		D	
10865.1 *18*	(3⁻ to 5)	<35 fs	D	
10909 *10*			E	Additional information 1.
10975 *4*	(0⁺ to 4⁺)		D	
10990.0 *17*	(3 to 5)		DE	
11015 *3*	(2⁺ to 4⁺)		D	
11037.5 *24*	(3⁻ to 6⁺)	<52 fs	D	
11073 *4*	(3 to 5)	<35 fs	D	
11082.7 *16*	(4⁻ to 6⁻)	24 fs *9*	CD	Jπ: 2010StZZ (^{18}O,2nγ) proposes J^π to be 6⁻ or 7⁻ based on γ-ray feeding. 4040γ to 5⁻.
11090 *4*	(3 to 5)	<35 fs	D	
11205 *3*	(0⁺ to 4⁺)		D	
11209.5 *21*	(4,5⁺)		D	
11248.2 *13*		<24 fs	D	
11268 *3*	(2⁺ to 5⁺)		D	
11321.8 *24*	(2⁺ to 5⁺)		D	
11348 *4*	(2⁺ to 6⁺)		D	
11382 *4*	(0⁺ to 4⁺)		D	
11416.3 *20*	(6⁺,4⁺)	<35 fs	D	
11473.6 *18*	(6⁻,5⁻)		D	
11492.0 *24*	(3⁺ to 6⁺)		D	
11510 *3*	(4 to 5⁺)		D	
11539.4[‡] *8*	7⁻[@]		CD	
11563 *3*	(5,3⁺)	<24 fs	D	
11659.4 *24*	(4 to 6)		D	
11739.5 *20*	(3 to 5)		D	
11783.7 *24*	(4,5⁺)	<35 fs	D	
11842 *4*	(0⁺ to 4⁺)		D	
11879 *4*	(3⁻ to 7⁻)		D	
12014.1 *24*	(4 to 6⁺)		D	
12393.8 *24*			C	
12510 *3*			C	
12714.9 *15*			C	
12832.02 *24*	(8⁻)[a]		C	
13202.8 *5*	(8⁻)[a]		C	
15191.4 *5*	(9⁻)[a]		C	
15528.8 *14*	(9⁻)[a]		C	

[†] From a least-squares fit to the γ-ray energies. ΔE=4 keV assumed by the evaluator when no uncertainty is given (in 1980Bi14, ((α,p),(α,pγ)), 4 keV uncertainty is quoted for the reported excitation energies). During the least squares fit uncertainties of the γ-rays 3043.2(1), 2168.9(3), 1556.3(1) and 3676.7(2) depopulating the states 5279, 6998, 7043 and 10719 keV, respectively, increased to 0.3, 0.4, 0.3, and 0.4 keV, respectively, to yield less than 3σ deviation.

[‡] K^π=3⁻ band; with an absolute value of intrinsic quadrupole moment Q_o=350 *+250−70* mb.

[#] Assignments are based on L values in (t,p) reaction, the γ-ray linear polarization calculation, measured angular correlation coefficients and recommended upper limits of the calculated transition rates from lifetime and mixing ratio ((α,p),(α,pγ)) – 1980Bi14).

[@] Consistent with γ-ray polarization data (1980Si14).

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Adopted Levels, Gammas (continued)

^{30}Si Levels (continued)

[&] Assigned by 1971Sy01 based on γ-rays angular correlation and branching ratio measurements.
[a] Assigned by 2010StZZ (^{18}O,2nγ), based on γ-feeding sequence to the lower levels.
[b] From (α,p),(α,pγ), except otherwise noted.

Adopted Levels, Gammas (continued)

$\gamma(^{30}Si)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	α[c]	Comments
2235.322	2^+	2235.23[‡] *2*	100[‡]	0	0^+	E2		0.000436 *6*	B(E2)(W.u.)=8.5 *11* α(K)=5.65×10^{-6} *8*; α(L)=4.03×10^{-7} *6*; α(M)=2.66×10^{-8} *4*; α(N+..)=0.000429 *6* α(IPF)=0.000429 *6*
3498.49	2^+	1263.13[#] *3*	100 *3*	2235.322	2^+	M1+E2	+0.18 *5*	2.90×10^{-5} *5*	B(M1)(W.u.)=0.09 *3*; B(E2)(W.u.)=9 *6* α(K)=1.359×10^{-5} *21*; α(L)=9.70×10^{-7} *15*; α(M)=6.39×10^{-8} *10*; α(N+..)=1.438×10^{-5} *24* α(IPF)=1.438×10^{-5} *24* δ: From 1971Sh11 (α,p),(α,pγ).
		3498.33[‡] *5*	98[‡] *3*	0	0^+	E2		0.000994 *14*	B(E2)(W.u.)=1.7 *5* α(K)=2.75×10^{-6} *4*; α(L)=1.96×10^{-7} *3*; α(M)=1.292×10^{-8} *18*; α(N+..)=0.000991 *14* α(IPF)=0.000991 *14*
3769.48	1^+	1534.12[‡] *4*	100[‡] *3*	2235.322	2^+	M1+E2	−0.09 *3*	8.40×10^{-5} *12*	B(M1)(W.u.)=0.091 *23*; B(E2)(W.u.)=1.5 *11* α(K)=9.60×10^{-6} *14*; α(L)=6.85×10^{-7} *10*; α(M)=4.52×10^{-8} *7*; α(N+..)=7.37×10^{-5} *11* α(IPF)=7.37×10^{-5} *11*
		3769.22[‡] *5*	85[‡] *3*	0	0^+	M1		0.000949 *14*	B(M1)(W.u.)=0.0052 *14* α(K)=2.37×10^{-6} *4*; α(L)=1.691×10^{-7} *24*; α(M)=1.115×10^{-8} *16*; α(N+..)=0.000947 α(IPF)=0.000947 *14*
3787.72	0^+	1552.36[‡] *4*	≈100[‡]	2235.322	2^+	E2		0.0001212 *17*	B(E2)(W.u.)≈1.4 α(K)=1.121×10^{-5} *16*; α(L)=8.00×10^{-7} *12*; α(M)=5.27×10^{-8} *8*; α(N+..)=0.0001091 α(IPF)=0.0001091 *16*
4810.31	2^+	1040	10 *3*	3769.48	1^+				
		1311.80[‡] *14*	89[‡] *7*	3498.49	2^+	M1+E2	−0.17 *6*	3.58×10^{-5} *6*	B(M1)(W.u.)=0.036 *7*; B(E2)(W.u.)=2.8 *20* α(K)=1.268×10^{-5} *20*; α(L)=9.06×10^{-7} *14*; α(M)=5.97×10^{-8} *9*; α(N+..)=2.22×10^{-5} *4* α(IPF)=2.22×10^{-5} *4*
		2574.8[‡] *5*	28[‡] *7*	2235.322	2^+	M1+E2	−0.52 *11*	0.000513 *11*	B(M1)(W.u.)=0.0012 *4*; B(E2)(W.u.)=0.23 *11* α(K)=4.21×10^{-6} *7*; α(L)=3.00×10^{-7} *5*; α(M)=1.98×10^{-8} *3*; α(N+..)=0.000509 *11* α(IPF)=0.000509 *11*
		4810.0[‡] *3*	100[‡] *7*	0	0^+	E2		0.001434 *20*	B(E2)(W.u.)=0.17 *3* α(K)=1.741×10^{-6} *25*; α(L)=1.242×10^{-7} *18*; α(M)=8.18×10^{-9} *12*; α(N+..)=0.001432 α(IPF)=0.001432 *20*

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	α[c]	Comments
4830.85	3+	1332.48[‡] *16*	10.1[‡] *12*	3498.49	2+	D+Q	+0.7 *5*		
		2595.39[‡] *4*	100[‡] *3*	2235.322	2+	M1+E2	+0.73 *9*	0.000537 *10*	B(M1)(W.u.)=0.0014 *5*; B(E2)(W.u.)=0.51 *17* α(K)=4.20×10^{-6} *7*; α(L)=2.99×10^{-7} *5*; α(M)=1.97×10^{-8} *3*; α(N+..)=0.000532 *10* α(IPF)=0.000532 *10*
5231.38	3+	400.2[&] *2*	4.5 *15*	4830.85	3+				
		421.0[‡] *5*	5.3[‡] *15*	4810.31	2+				
		1732.7[&] *1*	100 *5*	3498.49	2+	M1+E2	+0.12 *6*	0.0001497 *23*	B(M1)(W.u.)=0.08 *4*; B(E2)(W.u.)=1.8 *+20−18* α(K)=7.82×10^{-6} *12*; α(L)=5.58×10^{-7} *8*; α(M)=3.68×10^{-8} *6*; α(N+..)=0.0001413 *2* α(IPF)=0.0001413 *22*
		2995.0[&] *5*	10.6 *23*	2235.322	2+				
5279.37	4+	1782	1.0 *3*	3498.49	2+				
		3043.2[@] *1*	100.0 *3*	2235.322	2+	(E2)		0.000808 *12*	B(E2)(W.u.)=4.7 *13* α(K)=3.40×10^{-6} *5*; α(L)=2.42×10^{-7} *4*; α(M)=1.597×10^{-8} *23*; α(N+..)=0.000804 *12* α(IPF)=0.000804 *12*
5372.2	0+	1602.8[‡] *9*	66[‡] *20*	3769.48	1+	M1		0.0001049 *15*	B(M1)(W.u.)=0.036 *19* α(K)=8.89×10^{-6} *13*; α(L)=6.35×10^{-7} *9*; α(M)=4.18×10^{-8} *6*; α(N+..)=9.54×10^{-5} *14* α(IPF)=9.54×10^{-5} *14*
		3136.6[‡] *7*	100[‡] *27*	2235.322	2+	E2		0.000847 *12*	B(E2)(W.u.)=3.4 *17* α(K)=3.24×10^{-6} *5*; α(L)=2.31×10^{-7} *4*; α(M)=1.525×10^{-8} *22*; α(N+..)=0.000843 *12* α(IPF)=0.000843 *12*
5487.50	3−	1989.02[‡] *7*	96[‡] *5*	3498.49	2+	(E1+M2)	−0.02 *7*	0.000640 *10*	B(E1)(W.u.)=(0.0010 *3*); B(M2)(W.u.)=(0.5 *+33−5*) α(K)=4.21×10^{-6} *8*; α(L)=3.01×10^{-7} *6*; α(M)=1.98×10^{-8} *4*; α(N+..)=0.000635 *10* α(IPF)=0.000635 *10*
		3252.00[‡] *9*	100[‡] *5*	2235.322	2+	(E1+M2)	−0.04 *5*	0.001366 *20*	B(E1)(W.u.)=(0.00024 *7*); B(M2)(W.u.)=(0.17 *+42−17*) α(K)=2.18×10^{-6} *4*; α(L)=1.557×10^{-7} *24*; α(M)=1.026×10^{-8} *16*; α(N+..)=0.001363 α(IPF)=0.001363 *20*
5614.04	2+	783	6 *2*	4830.85	3+	M1+E2	+0.20 *11*	3.65×10^{-5} *14*	B(M1)(W.u.)>0.066 α(K)=3.39×10^{-5} *13*; α(L)=2.43×10^{-6} *10*; α(M)=1.60×10^{-7} *7*
		805	2 *1*	4810.31	2+				

$^{30}_{14}Si_{16}$-7

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.[b]	δ[b]	α[c]	Comments
5614.04	2+	1844.40‡ *16*	100‡ *8*	3769.48	1+	M1+E2	+0.11 *5*	0.000191 *3*	B(M1)(W.u.)>0.090; B(E2)(W.u.)>0.15 α(K)=7.04×10^{-6} *10*; α(L)=5.03×10^{-7} *7*; α(M)=3.31×10^{-8} *5*; α(N+..)=0.000183 *3* α(IPF)=0.000183 *3*
		3378.68‡ *25*	73‡	2235.322	2+				
5950.73	4+	671	0.5 *2*	5279.37	4+				
		720	0.3 *1*	5231.38	3+				
		1120	1.7 *4*	4830.85	3+				
		2452.6@ *13*	5 *3*	3498.49	2+	(E2)		0.000540 *8*	B(E2)(W.u.)=4 *3* α(K)=4.82×10^{-6} *7*; α(L)=3.44×10^{-7} *5*; α(M)=2.27×10^{-8} *4*; α(N+..)=0.000535 *8* α(IPF)=0.000535 *8*
		3714.9@ *2*	100 *3*	2235.322	2+	(E2)		0.001074 *15*	B(E2)(W.u.)=9 *5* α(K)=2.51×10^{-6} *4*; α(L)=1.79×10^{-7} *3*; α(M)=1.181×10^{-8} *17*; α(N+..)=0.001071 *15* α(IPF)=0.001071 *15*
6503.41	4−	551.9[a] *11*	1.11[a] *18*	5950.73	4+				
		1016.0[a] *1*	12.9[a] *9*	5487.50	3−	D+Q	−0.23 *2*		
		1271.9[a] *2*	100[a] *4*	5231.38	3+	(E1)		0.0001159 *17*	B(E1)(W.u.)=0.0013 *5* α(K)=8.50×10^{-6} *12*; α(L)=6.07×10^{-7} *9*; α(M)=4.00×10^{-8} *6*; α(N+..)=0.0001068 *1* α(IPF)=0.0001068 *15*
		1672.4[a] *1*	61.1[a] *18*	4830.85	3+	(E1)		0.000409 *6*	B(E1)(W.u.)=0.00048 *18* α(K)=5.45×10^{-6} *8*; α(L)=3.89×10^{-7} *6*; α(M)=2.56×10^{-8} *4*; α(N+..)=0.000403 *6* α(IPF)=0.000403 *6*
6537.5	2+	923	13 *4*	5614.04	2+				
		1306	16 *7*	5231.38	3+				
		2768	35 *9*	3769.48	1+				
		3039	100 *7*	3498.49	2+				
		4302	27 *7*	2235.322	2+				
		6537	100	0	0+	E2			B(E2)(W.u.)>0.17 α(N+..)=0.00186 *3* α(IPF)=0.00186 *3*
6641.21	2−	1153.61‡ *13*	15.6‡ *12*	5487.50	3−				
		1810.42‡ *22*	15.6‡ *12*	4830.85	3+				
		1830.6‡ *4*	7.8‡ *12*	4810.31	2+				
		2871.6‡ *3*	11.6‡ *14*	3769.48	1+				
		4405.56‡ *8*	100‡ *3*	2235.322	2+				

$^{30}_{14}Si_{16}$-8

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	α[c]	Comments
6641.21	2⁻	6640.7[‡] *9*	4.9[‡] *14*	0	0⁺				
6642	0⁺	4406	100	2235.322	2⁺				
6744.06	1⁻	1933.9[‡] *5*	0.60[‡] *11*	4810.31	2⁺				
		2956.25[‡] *12*	3.55[‡] *19*	3787.72	0⁺				
		4508.64[‡] *17*	2.16[‡] *13*	2235.322	2⁺	(E1)		0.00186 *3*	B(E1)(W.u.)>1.1×10^{-5} α(K)=1.468×10^{-6} *21*; α(L)=1.047×10^{-7} *15*; α(M)=6.90×10^{-9} *10*; α(N+..)=0.00186 *3* α(IPF)=0.00186 *3*
		6743.22[‡] *4*	100[‡] *3*	0	0⁺	E1			B(E1)(W.u.)>0.00015 α(N+..)=0.00246 *4* α(IPF)=0.00246 *4*
6865.2	3⁺	914	6 *2*	5950.73	4⁺	D+Q	−0.03 *10*		
		1251	4 *2*	5614.04	2⁺				
		1585	4 *2*	5279.37	4⁺				
		1634	4 *2*	5231.38	3⁺				
		2034	73 *12*	4830.85	3⁺	D+Q	+1.2 *5*		
		2056	12 *4*	4810.31	2⁺				
		4630	100 *16*	2235.322	2⁺	D+Q	−0.15 *12*		
6914.79	(2⁺)	1301	4.2 *22*	5614.04	2⁺				
		3146	20 *7*	3769.48	1⁺				
		3415.7[‡] *7*	31[‡] *8*	3498.49	2⁺				
		4679.2[‡] *3*	100[‡] *8*	2235.322	2⁺	M1+E2	−0.63 *14*	0.001286 *23*	B(M1)(W.u.)>0.0024; B(E2)(W.u.)>0.16 α(K)=1.77×10^{-6} *3*; α(L)=1.266×10^{-7} *18*; α(M)=8.34×10^{-9} *12*; α(N+..)=0.001284 *2* α(IPF)=0.001284 *23*
		6913.7[‡] *5*	78[‡] *12*	0	0⁺	E2			B(E2)(W.u.)>0.090 α(N+..)=0.00194 *3* α(IPF)=0.00194 *3*
6998.90	5⁺	1048.2[@] *2*	18 *3*	5950.73	4⁺	D+Q	+0.12 *2*		
		1719.4[@] *1*	100 *7*	5279.37	4⁺	D+Q	+0.25 *5*		
		1767.7[a] *10*	7.5[a] *15*	5231.38	3⁺				
		2168.9[@] *3*	35 *5*	4830.85	3⁺	Q			
7043.21	5⁻	539.5[@] *3*	96 *9*	6503.41	4⁻	M1+E2	+0.04 *3*	7.56×10^{-5} *12*	B(M1)(W.u.)=0.056 *15*; B(E2)(W.u.)=1.4 *+22−14* α(K)=7.03×10^{-5} *11*; α(L)=5.03×10^{-6} *8*; α(M)=3.31×10^{-7} *5*
		1092.1[@] *2*	100 *8*	5950.73	4⁺	D+Q	−0.02 *1*		
		1556.3[@] *1*	32 *4*	5487.50	3⁻	Q			

$^{30}_{14}Si_{16}$-9

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult. [b]	δ [b]	α [c]	Comments
7043.21	5⁻	1763.8@ *1*	62 *6*	5279.37	4⁺	D+Q	+0.06 *3*		
7079.4	(1⁺,2⁻,3⁺)	1848	<8	5231.38	3⁺				
		2270	45 *8*	4810.31	2⁺	D+Q	+0.15 *1*		
		3581	22 *5*	3498.49	2⁺				
		4844	100 *17*	2235.322	2⁺	D+Q	−0.00 *6*		
7223.2	4⁺	720	<2	6503.41	4⁻				
		1274	24 *7*	5950.73	4⁺				
		1738	<9	5487.50	3⁻				
		1943.0@ *11*	100 *7*	5279.37	4⁺	M1+E2	+0.3 *4*	0.000235 *17*	B(M1)(W.u.)>0.074 α(K)=6.51×10^{-6} *22*; α(L)=4.65×10^{-7} *16*; α(M)=3.06×10^{-8} *11*; α(N+..)=0.000228 *1* α(IPF)=0.000228 *17*
		1991.5@ *4*	30 *7*	5231.38	3⁺	M1+E2	+0.6 *2*	0.000268 *10*	B(M1)(W.u.)>0.017; B(E2)(W.u.)>4.5 α(K)=6.39×10^{-6} *13*; α(L)=4.56×10^{-7} *10*; α(M)=3.00×10^{-8} *6*; α(N+..)=0.000261 *10* α(IPF)=0.000261 *10* I_γ: 63 *15* in (^{18}O,2nγ).
		2394	23 *4*	4830.85	3⁺	D+Q	+0.10 *3*		
		3725.5@ *10*	25 *5*	3498.49	2⁺				I_γ: 69 *22* in (^{18}O,2nγ).
7255.8	2⁺	1768	31 *7*	5487.50	3⁻				
		2024	24 *7*	5231.38	3⁺				
		2424	17 *7*	4830.85	3⁺				
		2446		4810.31	2⁺	D+Q	−1.5 *14*		
		3757	66 *14*	3498.49	2⁺	D+Q	−0.17 *15*		
		5020	100 *10*	2235.322	2⁺	M1+E2	+3.7 *15*	0.00148 *3*	B(M1)(W.u.)>2.7×10^{-5}; B(E2)(W.u.)>0.27 α(K)=1.639×10^{-6} *24*; α(L)=1.169×10^{-7} *17*; α(M)=7.71×10^{-9} *11*; α(N+..)=0.00148 *3* α(IPF)=0.00148 *3*
		7256	64 *9*	0	0⁺	E2			B(E2)(W.u.)>0.031 α(N+..)=0.00200 *3* α(IPF)=0.00200 *3*
7441	0⁺	3671	100	3769.48	1⁺				
7507.84	(2⁻)	1893.6‡ *5*	1.01‡ *21*	5614.04	2⁺				
		2020.33‡ *23*	8.0‡ *3*	5487.50	3⁻				
		2276.22‡ *8*	7.9‡ *4*	5231.38	3⁺				
		2676.87‡ *6*	13.8‡ *6*	4830.85	3⁺				
		3738.20‡ *18*	10.8‡ *5*	3769.48	1⁺				
		4009.09‡ *21*	5.9‡ *3*	3498.49	2⁺				

$^{30}_{14}Si_{16}$-10

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	Comments
7507.84	(2$^-$)	5272.09[‡] *7*	100[‡] *3*	2235.322	2$^+$			
		7507.4[‡] *8*	0.9[‡] *2*	0	0$^+$			
7612.4	(4$^-$)	1108	7 *2*	6503.41	4$^-$			
		2126	98 *12*	5487.50	3$^-$	D+Q	+0.25 *3*	
		2333	17 *5*	5279.37	4$^+$			
		2382	17 *5*	5231.38	3$^+$			
		2782	100 *10*	4830.85	3$^+$	D+Q	−0.00 *5*	
7623.9	(2$^+$)	4125	100 *16*	3498.49	2$^+$			
		5388	61 *11*	2235.322	2$^+$	D+Q	+0.38 *6*	
		7623	14 *5*	0	0$^+$	(E2)		B(E2)(W.u.)>0.019 α(N+..)=0.00206 *3* α(IPF)=0.00206 *3*
7634		3846	43 *14*	3787.72	0$^+$			
		3865	100 *14*	3769.48	1$^+$			
7667.4	(1$^+$,2$^+$)	4170	23 *5*	3498.49	2$^+$			
		5431.5[‡] *6*	100[‡] *10*	2235.322	2$^+$			
		7668	12 *4*	0	0$^+$			
7809.7	4$^+$	731	4 *2*	7079.4	(1$^+$,2$^-$,3$^+$)			
		945	12 *4*	6865.2	3$^+$			
		1859	46 *8*	5950.73	4$^+$			
		2530	100 *10*	5279.37	4$^+$			
		2579	18 *4*	5231.38	3$^+$			
		2979	20 *4*	4830.85	3$^+$			
7911.8	2$^+$	2424	11 *4*	5487.50	3$^-$			
		4142	40 *9*	3769.48	1$^+$			
		4413	25 *7*	3498.49	2$^+$			
		5676	100	2235.322	2$^+$	D+Q	+0.7 *3*	
8104.8	(2$^+$,3$^-$)	1188	3 *2*	6914.79	(2$^+$)			
		2489	5 *3*	5614.04	2$^+$			
		2616	9 *3*	5487.50	3$^-$			
		2872	14 *5*	5231.38	3$^+$			
		3294.9[‡] *9*	29[‡] *9*	4810.31	2$^+$			
		4334	6 *3*	3769.48	1$^+$			
		5868.8 *7*	100 *19*	2235.322	2$^+$			
8156.1	(1$^-$ to 4$^+$)	2668	29 *10*	5487.50	3$^-$			
		4657	43 *14*	3498.49	2$^+$			
		5920.2[‡] *7*	100[‡] *14*	2235.322	2$^+$			
8163.22	1$^-$	4375.18[‡] *15*	41.5[‡] *17*	3787.72	0$^+$			
		4393.43[‡] *23*	24.1[‡] *14*	3769.48	1$^+$			

$^{30}_{14}Si_{16}$-11

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	Comments
8163.22	1⁻	4664.36[‡] *12*	38.7[‡] *14*	3498.49	2⁺			
		5927.24[‡] *15*	45.8[‡] *22*	2235.322	2⁺			
		8162.01[‡] *11*	100[‡] *3*	0	0⁺			
8190.6	(2⁺)	2576	18 *6*	5614.04	2⁺			
		4692 *3*	100 *6*	3498.49	2⁺			
8194.0	5⁻	970.3[@] *7*	34 *3*	7223.2	4⁺	D+Q	−0.00 *3*	
		1151	6 *1*	7043.21	5⁻	D+Q	−0.15 *3*	
		1195	6 *1*	6998.90	5⁺			
		1690.2[@] *5*	100 *6*	6503.41	4⁻			
		2242.7[@] *18*	77 *6*	5950.73	4⁺			
		2707.5[@] *16*	43 *9*	5487.50	3⁻			I_γ: 90 *19* in (^{18}O,2nγ).
		2916	20 *3*	5279.37	4⁺	D+Q	+0.06 *3*	
8289.5	(1 to 3)	2802	9 *4*	5487.50	3⁻			
		4790	16 *5*	3498.49	2⁺			
		6054	100 *7*	2235.322	2⁺			
8332.7		1109	13 *4*	7223.2	4⁺			
		1254	30 *7*	7079.4	(1⁺,2⁻,3⁺)			
		1332	7 *4*	6998.90	5⁺			
		2720	27 *7*	5614.04	2⁺			
		2845	20 *4*	5487.50	3⁻			
		3053	37 *10*	5279.37	4⁺			
		3502	100 *17*	4830.85	3⁺			
		3523	13 *7*	4810.31	2⁺			
		6097	87 *14*	2235.322	2⁺			
8441.2	3⁻	2954	16 *4*	5487.50	3⁻			
		4942	100 *11*	3498.49	2⁺			
		6205	63 *11*	2235.322	2⁺			
8536.4	(3⁺,4⁺)	1535	39 *7*	6998.90	5⁺			
		3306	23 *5*	5231.38	3⁺			
		3727	100 *14*	4810.31	2⁺			
		5037	16 *5*	3498.49	2⁺			
		6300	50 *9*	2235.322	2⁺			
8554	3⁻	1911	6.3 *25*	6642	0⁺			
		3066	100 *7*	5487.50	3⁻			
		3744	19 *7*	4810.31	2⁺			
8595.9	(4⁻)	1372	16 *5*	7223.2	4⁺	D+Q	−0.13 *13*	
		2645	24 *5*	5950.73	4⁺			
		3108	82 *12*	5487.50	3⁻	D+Q	+0.08 *3*	
		3365	100 *12*	5231.38	3⁺	D+Q	−0.01 *4*	
8639.4	(1⁺ to 4⁺)	1774	25 *13*	6865.2	3⁺			

$^{30}_{14}Si_{16}$-12

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]
8639.4	(1$^+$ to 4$^+$)	3026	25 *13*	5614.04	2$^+$		
		5140	100 *25*	3498.49	2$^+$		
		6403	100 *25*	2235.322	2$^+$		
8672.2	(1$^-$,2$^+$)	3185	100 *20*	5487.50	3$^-$		
		4902	53 *14*	3769.48	1$^+$		
		5173	87 *17*	3498.49	2$^+$		
		6436	77 *17*	2235.322	2$^+$		
		8671	20 *10*	0	0$^+$		
8683.7	2$^+$	1460	11 *4*	7223.2	4$^+$		
		1604	21 *8*	7079.4	(1$^+$,2$^-$,3$^+$)		
		2733	54 *15*	5950.73	4$^+$		
		3070	21 *8*	5614.04	2$^+$		
		3403	100 *18*	5279.37	4$^+$		
		3453	50 *11*	5231.38	3$^+$		
		3852	43 *11*	4830.85	3$^+$		
		3874	57 *15*	4810.31	2$^+$		
8734	(0$^+$ to 3$^+$)	5235	100 *12*	3498.49	2$^+$		
		6498	47 *12*	2235.322	2$^+$		
8799	(1,2$^+$)	5029	100 *30*	3769.48	1$^+$		
		8797	100 *30*	0	0$^+$		
8887	(0$^+$ to 4$^+$)	6651	100	2235.322	2$^+$		
8898.10	(1$^-$)	1390.3[‡] *5*	3.7[‡] *11*	7507.84	(2$^-$)		
		2154.3[‡] *6*	7.1[‡] *14*	6744.06	1$^-$		
		2256.7[‡] *4*	12.8[‡] *20*	6641.21	2$^-$		
		3283.8[‡] *3*	22[‡] *3*	5614.04	2$^+$		
		4087.6[‡] *5*	20.5[‡] *20*	4810.31	2$^+$		
		5128.18[‡] *17*	100[‡] *4*	3769.48	1$^+$		
		5398.8[‡] *4*	25[‡] *3*	3498.49	2$^+$		
		6662.00[‡] *25*	64[‡] *3*	2235.322	2$^+$		
		8896.7[‡] *3*	31[‡] *3*	0	0$^+$		
8939	(2$^+$)	5169	100 *40*	3769.48	1$^+$		
		6703	100 *40*	2235.322	2$^+$		
8953.4	(1,2$^+$)	6717.3[‡] *8*	92[‡] *6*	2235.322	2$^+$		
		8951.9[‡] *5*	100[‡] *6*	0	0$^+$		
8959.4	(5$^-$)	766	11 *4*	8194.0	5$^-$	D+Q	−0.04 *3*
		1152	5.6 *19*	7809.7	4$^+$		
		1349	30 *4*	7612.4	(4$^-$)	D+Q	+0.22 *5*
		1915.6[@] *7*	93 *12*	7043.21	5$^-$	D+Q	−0.03 *13*

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]
8959.4	(5⁻)	1961	19 *4*	6998.90	5⁺		
		2459	52 *8*	6503.41	4⁻	D+Q	−0.13 *3*
		3012	15 *4*	5950.73	4⁺		
		3475	48 *8*	5487.50	3⁻		
		3682	100 *12*	5279.37	4⁺	D+Q	−0.02 *3*
8979	(1,2⁺)	6743	100 *40*	2235.322	2⁺		
		8978	100 *40*	0	0⁺		
9034.8	(0⁺ to 3⁺)	5265	100 *20*	3769.48	1⁺		
		5536	60 *16*	3498.49	2⁺		
		9033	40 *12*	0	0⁺		
9044.8	(3,4)	2541	48 *17*	6503.41	4⁻		
		3094	65 *13*	5950.73	4⁺		
		3557	100 *17*	5487.50	3⁻		
		3814	29 *10*	5231.38	3⁺		
		4213	81 *17*	4830.85	3⁺		
9103.73	(1⁻,2⁻)	998.9 *3*	7.2 *8*	8104.8	(2⁺,3⁻)		
		2359.57 *4*	100.0 *8*	6744.06	1⁻		
9106.76	6⁻	914.0[@] *13*	2.6 *6*	8194.0	5⁻		
		2063.4[@] *1*	100.0 *6*	7043.21	5⁻	D+Q	+0.35 *4*
9129.8	(4⁺,5⁺)	1907	43 *9*	7223.2	4⁺		
		2129	100 *11*	6998.90	5⁺		
		3180	62 *11*	5950.73	4⁺		
		4299	65 *9*	4830.85	3⁺		
9166.4	(1⁺ to 3⁺)	2301	40 *12*	6865.2	3⁺		
		2629	40 *12*	6537.5	2⁺		
		4335	100 *20*	4830.85	3⁺		
		4357	40 *20*	4810.31	2⁺		
		5396	80 *20*	3769.48	1⁺		
		5667	20 *12*	3498.49	2⁺		
		6930	80 *24*	2235.322	2⁺		
9255.2	(2⁺,3⁺)	3641	24 *6*	5614.04	2⁺		
		4024	48 *6*	5231.38	3⁺		
		4445	13 *4*	4810.31	2⁺		
		7018	100 *10*	2235.322	2⁺		
9308.11	(1 to 3⁺)	2667.0[‡] *6*	16[‡] *4*	6641.21	2⁻		
		5538.05[‡] *24*	100[‡] *7*	3769.48	1⁺		
		7071.8[‡] *7*	19[‡] *4*	2235.322	2⁺		
9349.3	(4⁻)	753	13 *5*	8595.9	(4⁻)		
		1736	63 *25*	7612.4	(4⁻)		
		2270	10 *5*	7079.4	(1⁺,2⁻,3⁺)		

$^{30}_{14}Si_{16}$-14

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]
9349.3	(4⁻)	2846	40 *15*	6503.41	4⁻		
		3862	25 *8*	5487.50	3⁻		
		4118	100 *25*	5231.38	3⁺		
9362	(1,2⁺)	9360	100	0	0⁺		
9367.2	6⁺	2368.0[@] *4*	83 *10*	6998.90	5⁺	D+Q	+0.24 *3*
		3418.8[@] *14*	55 *8*	5950.73	4⁺	Q	
		4088.7[@] *20*	100 *12*	5279.37	4⁺	Q	
9405.7	(1⁺ to 4⁺)	4174	66 *11*	5231.38	3⁺		
		4574	100 *15*	4830.85	3⁺		
		4596	21 *9*	4810.31	2⁺		
		5906	26 *7*	3498.49	2⁺		
9439	(1⁻)	5669	100 *40*	3769.48	1⁺		
		9438	100 *40*	0	0⁺		
9474.1	(2⁺ to 4⁺)	2395	50 *20*	7079.4	(1⁺,2⁻,3⁺)		
		4194	100 *20*	5279.37	4⁺		
		7238	50 *10*	2235.322	2⁺		
9505.2	(5⁻)	2463	6 *3*	7043.21	5⁻		
		2505	17 *3*	6998.90	5⁺	D+Q	−0.00 *3*
		3003	6 *3*	6503.41	4⁻		
		4019	14 *5*	5487.50	3⁻		
		4226	100 *8*	5279.37	4⁺	D+Q	−0.00 *7*
9575	(1⁺ to 3)	4744	54 *16*	4830.85	3⁺		
		6076	100 *16*	3498.49	2⁺		
9597.3	(0⁺ to 4⁺)	4766.7[‡] *7*	19[‡] *5*	4830.85	3⁺		
		4786.5[‡] *8*	16[‡] *5*	4810.31	2⁺		
		6098.0[‡] *3*	100[‡] *8*	3498.49	2⁺		
		7360	43 *11*	2235.322	2⁺		
9604.5	(2 to 4⁺)	4117	43 *12*	5487.50	3⁻		
		4373	100 *18*	5231.38	3⁺		
		6105	71 *15*	3498.49	2⁺		
		7368	71 *15*	2235.322	2⁺		
9619.74	(1⁻)	9618.08 *13*	100	0	0⁺		
9647.3	(3⁻,4)	2604	38 *8*	7043.21	5⁻		
		4160	29 *6*	5487.50	3⁻		
		4367	25 *8*	5279.37	4⁺		
		4816	100 *12*	4830.85	3⁺		
9688	(0 to 3⁻)	2944	100	6744.06	1⁻		
9725	(0⁺ to 4⁺)	6226	100 *13*	3498.49	2⁺		
		7489	54 *13*	2235.322	2⁺		
9760.5	(2⁺ to 4⁺)	3810	100 *14*	5950.73	4⁺		

$^{30}_{14}Si_{16}$-15

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]	Comments
9760.5	(2$^+$ to 4$^+$)	4929	78 *12*	4830.85	3$^+$			
		6261	22 *7*	3498.49	2$^+$			
		7524	22 *7*	2235.322	2$^+$			
9768	(1,2$^+$)	7532	67 *17*	2235.322	2$^+$			
		9766	100 *17*	0	0$^+$			
9773.7	6$^-$	1578.7[@] *6*	79 *6*	8194.0	5$^-$	D+Q	+0.26 *5*	
		2730.5[@] *8*	100 *9*	7043.21	5$^-$	D+Q	+0.10 *3*	
		2776.1[@] *16*	30 *6*	6998.90	5$^+$	D+Q	−0.00 *5*	
		3271.6[@] *10*	94 *9*	6503.41	4$^-$	Q		I_γ: Strongest in (^{18}O,2nγ).
9792.3	(1$^-$)	6004.4[‡] *9*	7[‡] *3*	3787.72	0$^+$			
		9790.5[‡] *3*	100[‡] *5*	0	0$^+$			
9816	(0$^+$ to 4$^+$)	6317	100	3498.49	2$^+$			
9881.8	(3,4)	3378	51 *9*	6503.41	4$^-$			
		3931	89 *11*	5950.73	4$^+$			
		4394	30 *6*	5487.50	3$^-$			
		4650	100 *11*	5231.38	3$^+$			
9896.6	(0$^+$ to 4$^+$)	2981	83 *24*	6914.79	(2$^+$)			
		5087	67 *17*	4810.31	2$^+$			
		6397	100 *20*	3498.49	2$^+$			
		7660	83 *17*	2235.322	2$^+$			
9953.9	(4,5)	1417	13 *4*	8536.4	(3$^+$,4$^+$)			
		2144	100 *8*	7809.7	4$^+$			
		2953	25 *4*	6998.90	5$^+$			
		3089	21 *4*	6865.2	3$^+$			
		4004	11.5 *20*	5950.73	4$^+$			
		4674	13 *4*	5279.37	4$^+$			
		4723	7.7 *20*	5231.38	3$^+$			
9958	(1,2$^+$)	7721	100 *11*	2235.322	2$^+$			
		9956	54 *11*	0	0$^+$			
10026.6	(2 to 4$^+$)	4539	30 *6*	5487.50	3$^-$			
		4795	70 *12*	5231.38	3$^+$			
		6527	100 *14*	3498.49	2$^+$			
10056.4	4$^+$	3553	50 *10*	6503.41	4$^-$			
		4106	100 *20*	5950.73	4$^+$			
		4776	100 *20*	5279.37	4$^+$			
		5225	83 *17*	4830.85	3$^+$			
10078.7	(1$^+$ to 4$^+$)	3163	60 *10*	6914.79	(2$^+$)			
		5247	40 *8*	4830.85	3$^+$			
		5269	100 *12*	4810.31	2$^+$			
10115.8	(1$^-$ to 4$^+$)	4165	75 *13*	5950.73	4$^+$			

$^{30}_{14}Si_{16}$-16

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[b]	δ[b]
10115.8	(1⁻ to 4⁺)	4628	100 *15*	5487.50	3⁻		
		7879	75 *13*	2235.322	2⁺		
10183.8	(0⁺ to 3⁺)	5374	56 *12*	4810.31	2⁺		
		6413	100 *18*	3769.48	1⁺		
		7947	67 *14*	2235.322	2⁺		
10186.7	(5⁻)	1991	15 *8*	8194.0	5⁻		
		2377	50 *10*	7809.7	4⁺	D+Q	−0.02 *8*
		3144	100 *15*	7043.21	5⁻	D+Q	−0.26 *6*
		3186	23 *5*	6998.90	5⁺		
		3684	63 *10*	6503.41	4⁻	D+Q	−0.10 *5*
10202.3	(1⁻)	6431.7 *9*	60 *14*	3769.48	1⁺		
		7965.8 *9*	25 *8*	2235.322	2⁺		
		10200.6 *6*	100 *8*	0	0⁺		
10219	(0⁺ to 4⁺)	5408	100	4810.31	2⁺		
10275.5	(0⁺ to 4⁺)	5465	20 *4*	4810.31	2⁺		
		6487.0[‡] *7*	[‡]	3787.72	0⁺		
		6776	13 *4*	3498.49	2⁺		
		8040	100 *5*	2235.322	2⁺		
10286.7	(4⁺,5⁺)	3286	100 *8*	6998.90	5⁺		
		4337	30 *4*	5950.73	4⁺		
		5007	70 *8*	5279.37	4⁺		
10304.4	(3⁻)	2691	100 *18*	7612.4	(4⁻)		
		3801	83 *14*	6503.41	4⁻		
		4691	52 *11*	5614.04	2⁺		
		5024	59 *11*	5279.37	4⁺		
		6805	52 *11*	3498.49	2⁺		
10347.8	(3⁺,4)	3347	100 *14*	6998.90	5⁺		
		4861	30 *6*	5487.50	3⁻		
		5068	40 *10*	5279.37	4⁺		
		5517	30 *6*	4830.85	3⁺		
10354.9	(0⁺ to 4⁺)	5545	100 *20*	4810.31	2⁺		
		6855	75 *15*	3498.49	2⁺		
		8118	75 *15*	2235.322	2⁺		
10396	(3,5⁺)	5116	100 *8*	5279.37	4⁺		
		5165	25 *8*	5231.38	3⁺		
10420	(2⁺ to 6⁺)	4469	100	5950.73	4⁺		
10449	(0 to 3⁺)	6679	67 *17*	3769.48	1⁺		
		8213	100 *17*	2235.322	2⁺		
10464.1	(3⁺,4)	3463	29 *15*	6998.90	5⁺		
		4514	100 *15*	5950.73	4⁺		
		5233	71 *15*	5231.38	3⁺		

$^{30}_{14}Si_{16}$-17

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.[b]	δ[b]	α[c]	Comments
10464.1	(3$^+$,4)	5633	86 *18*	4830.85	3$^+$				
10472	(1,2$^+$)	6972	100 *30*	3498.49	2$^+$				
		10470	100 *30*	0	0$^+$				
10507.9	(0$^+$ to 3$^+$)	5698	36 *9*	4810.31	2$^+$				
		6737	45 *11*	3769.48	1$^+$				
		8271	100 *15*	2235.322	2$^+$				
10554.6	(6$^-$)	1053	30.2 *24*	9505.2	(5$^-$)				
		1447.9[@] *5*	44 *5*	9106.76	6$^-$	D+Q	−0.10 *5*		
		1597	7.0 *24*	8959.4	(5$^-$)				
		3511.0[@] *3*	100 *10*	7043.21	5$^-$	D+Q	+0.27 *2*		
		3559	42 *5*	6998.90	5$^+$	D+Q	−0.04 *8*		
		4057	9.3 *24*	6503.41	4$^-$				
10581	(0 to 3$^+$)	6811	100	3769.48	1$^+$				
10622	(0 to 4$^+$)	7123	100	3498.49	2$^+$				
10668.2	(3$^-$,4$^-$,5)	2858	7 *3*	7809.7	4$^+$				
		3625	14 *5*	7043.21	5$^-$				
		4165	100 *8*	6503.41	4$^-$				
		5388	21 *5*	5279.37	4$^+$				
10675.4	(6$^+$)	3631.4[@] *12*	100 *4*	7043.21	5$^-$	(E1)		0.001538 *22*	B(E1)(W.u.)=0.0010 *7* α(K)=1.90×10^{-6} *3*; α(L)=1.355×10^{-7} *19*; α(M)=8.93×10^{-9} *13*; α(N+..)=0.001536 *2* α(IPF)=0.001536 *22*
		4175	12.5 *25*	6503.41	4$^-$				
		5398	12.5 *25*	5279.37	4$^+$				
10719.33	(7$^-$)	1353.2[a] *13*	7.2[a] *7*	9367.2	6$^+$				
		1612.5[@] *1*	100 *6*	9106.76	6$^-$	D+Q	+0.27 *3*		
		3676.7[@] *2*	92 *6*	7043.21	5$^-$				I_γ: Strongest in (^{18}O,2nγ).
10731.4	(3$^-$,4$^-$,5$^-$)	2535	20 *10*	8194.0	5$^-$				
		2628	20 *6*	8104.8	(2$^+$,3$^-$)				
		4228	100 *10*	6503.41	4$^-$				
		4781	30 *6*	5950.73	4$^+$				
		5451	30 *6*	5279.37	4$^+$				
10794.5	(2 to 4)	3929	100 *25*	6865.2	3$^+$				
		5306	50 *13*	5487.50	3$^-$				
		5563	100 *25*	5231.38	3$^+$				
10805	(0$^+$ to 4$^+$)	8568	100	2235.322	2$^+$				
10821.6	(4,5$^+$,6$^+$)	2626	22 *7*	8194.0	5$^-$				
		3599	11 *5*	7223.2	4$^+$				
		3821	11 *5*	6998.90	5$^+$				
		4872	78 *18*	5950.73	4$^+$				

$^{30}_{14}Si_{16}$-18

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π
10821.6	(4,5$^+$,6$^+$)	5542	100 *20*	5279.37	4$^+$
10835	(1$^+$ to 5$^+$)	5603	100	5231.38	3$^+$
10865.1	(3$^-$ to 5)	2669	18 *6*	8194.0	5$^-$
		3822	18 *4*	7043.21	5$^-$
		4362	27 *6*	6503.41	4$^-$
		4915	18 *4*	5950.73	4$^+$
		5585	100 *9*	5279.37	4$^+$
10975	(0$^+$ to 4$^+$)	8738	100	2235.322	2$^+$
10990.0	(3 to 5)	2453	100 *25*	8536.4	(3$^+$,4$^+$)
		3989	100 *50*	6998.90	5$^+$
		4487	75 *15*	6503.41	4$^-$
		5040	100 *25*	5950.73	4$^+$
		5710	75 *15*	5279.37	4$^+$
		6159	50 *10*	4830.85	3$^+$
11015	(2$^+$ to 4$^+$)	5064	100 *34*	5950.73	4$^+$
		5401	67 *34*	5614.04	2$^+$
11037.5	(3$^-$ to 6$^+$)	3994	100 *35*	7043.21	5$^-$
		5087	75 *25*	5950.73	4$^+$
		5757	75 *25*	5279.37	4$^+$
11073	(3 to 5)	5122	100	5950.73	4$^+$
11082.7	(4$^-$ to 6$^-$)	1972	17 *5*	9106.76	6$^-$
		2487	25 *5*	8595.9	(4$^-$)
		3470	17 *9*	7612.4	(4$^-$)
		4040.0[@] *22*	100 *10*	7043.21	5$^-$
		4580	8 *4*	6503.41	4$^-$
11090	(3 to 5)	5810	100	5279.37	4$^+$
11205	(0$^+$ to 4$^+$)	7705	54 *16*	3498.49	2$^+$
		8968	100 *16*	2235.322	2$^+$
11209.5	(4,5$^+$)	1021	43 *15*	10186.7	(5$^-$)
		3400	43 *15*	7809.7	4$^+$
		5259	100 *29*	5950.73	4$^+$
		5978	100 *29*	5231.38	3$^+$
11248.2		1472	17 *7*	9773.7	6$^-$
		2139	10 *7*	9106.76	6$^-$
		2286	23 *7*	8959.4	(5$^-$)
		2917	13 *7*	8332.7	
		3053	10 *7*	8194.0	5$^-$
		3637	67 *7*	7612.4	(4$^-$)
		4206	17 *7*	7043.21	5$^-$
		4249	100 *17*	6998.90	5$^+$
		4746	17 *7*	6503.41	4$^-$

$^{30}_{14}Si_{16}$-19

Adopted Levels, Gammas (continued)

γ(^{30}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Comments
11248.2		5762	33 *10*	5487.50	3^-	
		5969	27 *7*	5279.37	4^+	
11268	(2^+ to 5^+)	5988	54 *12*	5279.37	4^+	
		6437	100 *12*	4830.85	3^+	
11321.8	(2^+ to 5^+)	3512	88 *15*	7809.7	4^+	
		4097	100 *20*	7223.2	4^+	
		6091	63 *10*	5231.38	3^+	
11348	(2^+ to 6^+)	6068	100	5279.37	4^+	
11382	(0^+ to 4^+)	9145	100	2235.322	2^+	
11416.3	(6^+,4^+)	4192	21 *4*	7223.2	4^+	
		4416	28 *4*	6998.90	5^+	
		5466	100 *9*	5950.73	4^+	
		6137	26 *4*	5279.37	4^+	
11473.6	(6^-,5^-)	916	36 *6*	10554.6	(6^-)	
		1700	39 *9*	9773.7	6^-	
		2366	67 *15*	9106.76	6^-	
		4432	100 *12*	7043.21	5^-	
		4476	61 *9*	6998.90	5^+	
11492.0	(3^+ to 6^+)	4268	78 *11*	7223.2	4^+	
		4492	100 *22*	6998.90	5^+	
		6213	44 *9*	5279.37	4^+	
11510	(4 to 5^+)	2401	100 *17*	9106.76	6^-	
		6232	67 *17*	5279.37	4^+	
11539.4	7^-	1767	42 *6*	9773.7	6^-	
		2173	42 *6*	9367.2	6^+	
		2431.8[@] *11*	86 *6*	9106.76	6^-	I_γ: 35 *6* in (^{18}O,2nγ).
		3345.7[@] *13*	100 *8*	8194.0	5^-	
		4499	8 *3*	7043.21	5^-	
11563	($5,3^+$)	4339	100 *3*	7223.2	4^+	
		6284	11 *3*	5279.37	4^+	
11659.4	(4 to 6)	3465	100 *6*	8194.0	5^-	
		4616	13 *4*	7043.21	5^-	
		4660	13 *4*	6998.90	5^+	
11739.5	(3 to 5)	4695	100 *20*	7043.21	5^-	
		5235	100 *20*	6503.41	4^-	
		5789	100 *20*	5950.73	4^+	
		6460	100 *20*	5279.37	4^+	
11783.7	($4,5^+$)	4787	100 *7*	6998.90	5^+	
		6502	20 *4*	5279.37	4^+	
		6951	13 *4*	4830.85	3^+	
11842	(0^+ to 4^+)	9605	100	2235.322	2^+	

$^{30}_{14}Si_{16}$-20

Adopted Levels, Gammas (continued)

$\gamma(^{30}Si)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π
11879	(3^- to 7^-)	4835	100	7043.21	5^-	12832.02	(8^-)	2112.7[@] *2*	100 *4*	10719.33	(7^-)
12014.1	(4 to 6^+)	4970	67 *11*	7043.21	5^-			3724.7[@] *3*	37 *7*	9106.76	6^-
		5014	100 *18*	6998.90	5^+	13202.8	(8^-)	2483.4[@] *4*	100	10719.33	(7^-)
		6064	56 *11*	5950.73	4^+	15191.4	(9^-)	2358.9[@] *6*	67 *7*	12832.02	(8^-)
12393.8		3286.8[@] *24*	100	9106.76	6^-			4472.1[@] *6*	100 *7*	10719.33	(7^-)
12510		3403[@] *3*	100	9106.76	6^-	15528.8	(9^-)	2696.7[@] *13*	100	12832.02	(8^-)
12714.9		3607.9[@] *15*	100	9106.76	6^-						

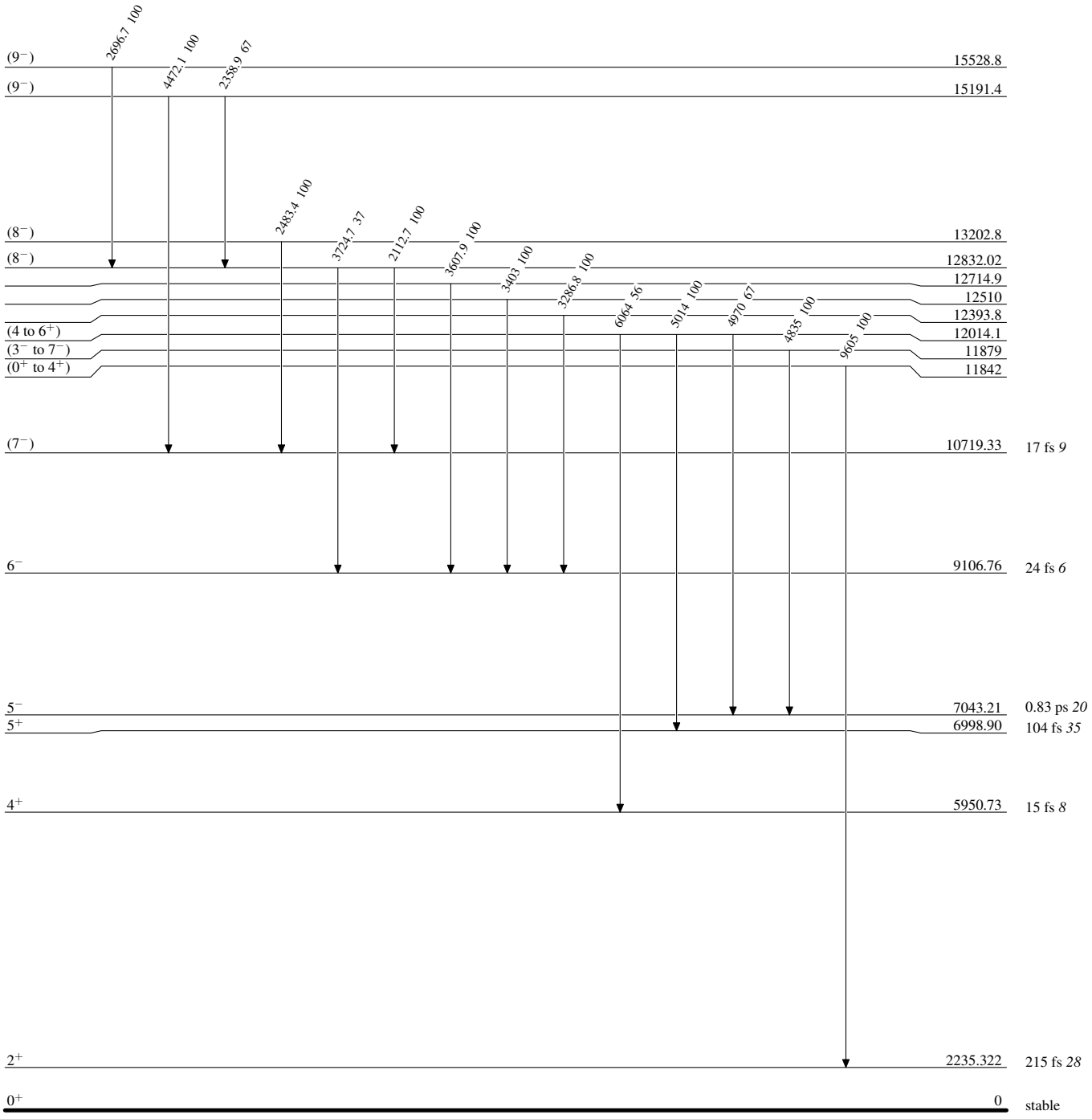
† From (α,p),(α,pγ), except otherwise noted.
‡ From (n,γ), except otherwise noted.
# From ^{30}Al β^- decay.
@ From (^{18}O,2nγ).
& Weighted average of (^{18}O,2nγ) and (n,γ).
[a] From (^{18}O,2nγ).
[b] From (α,p),(α,pγ), multipolarities are based on γ-ray linear polarization and correlation measurements.
[c] 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.

$^{30}_{14}Si_{16}$-21

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

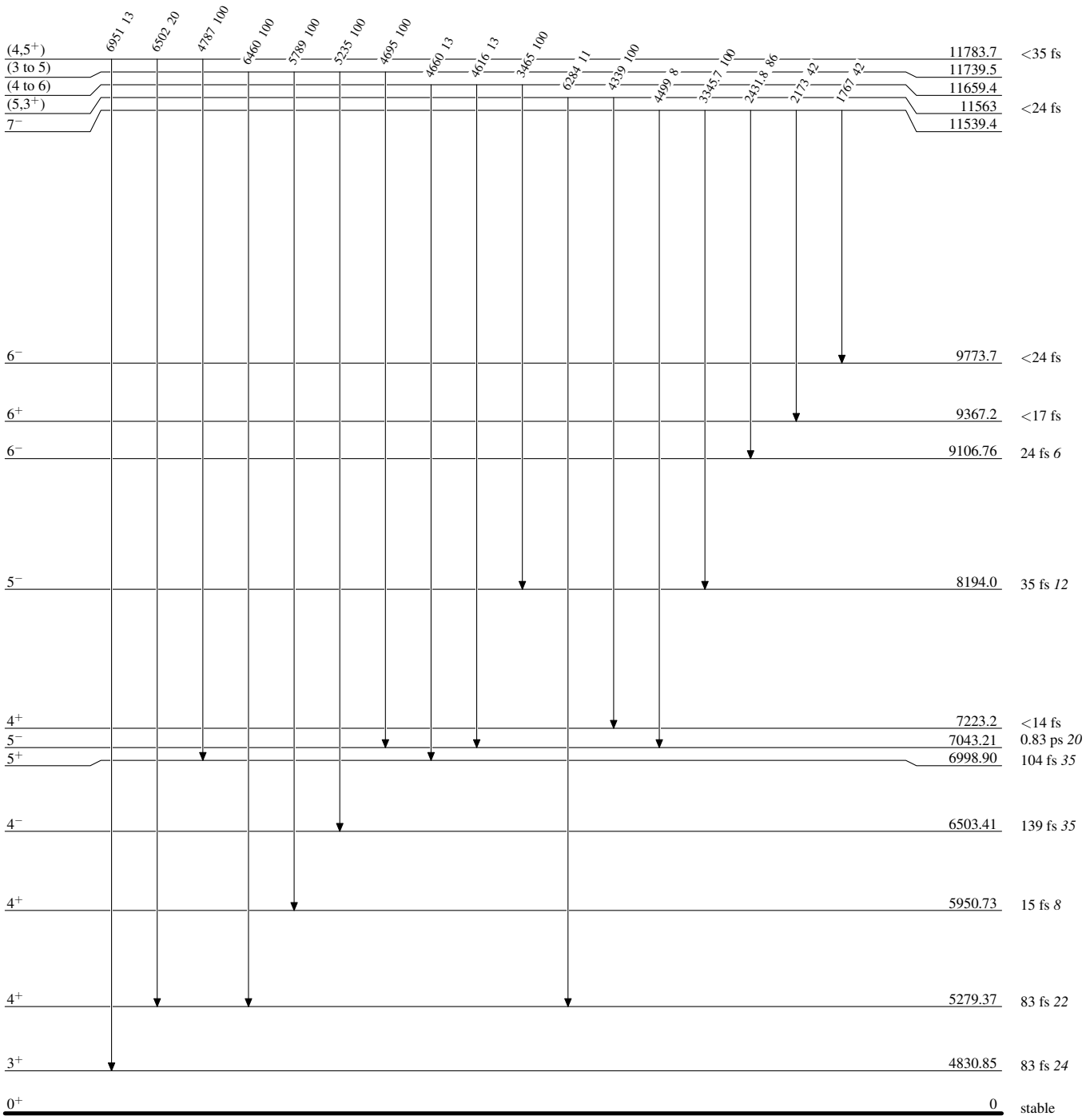


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

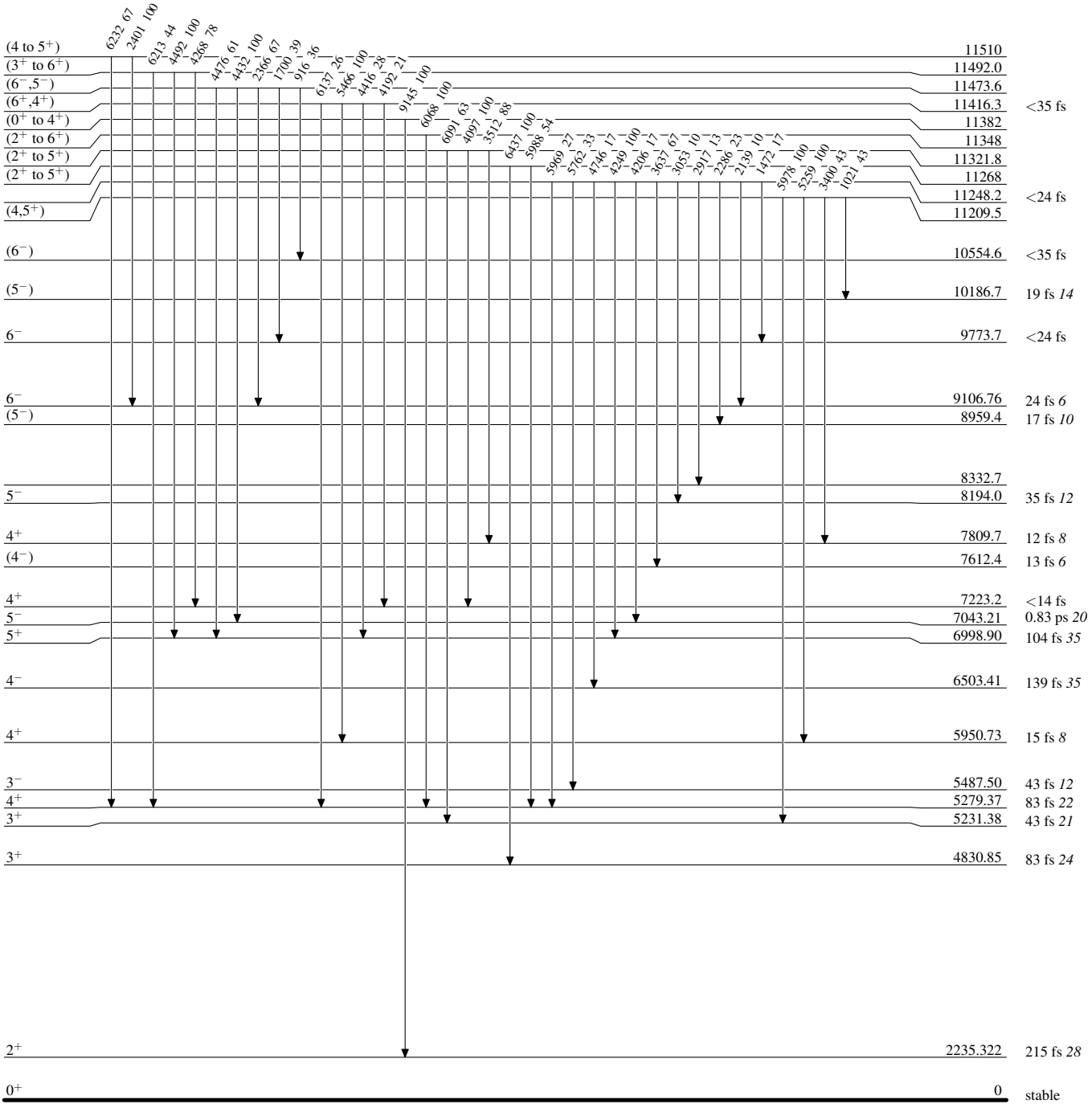


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

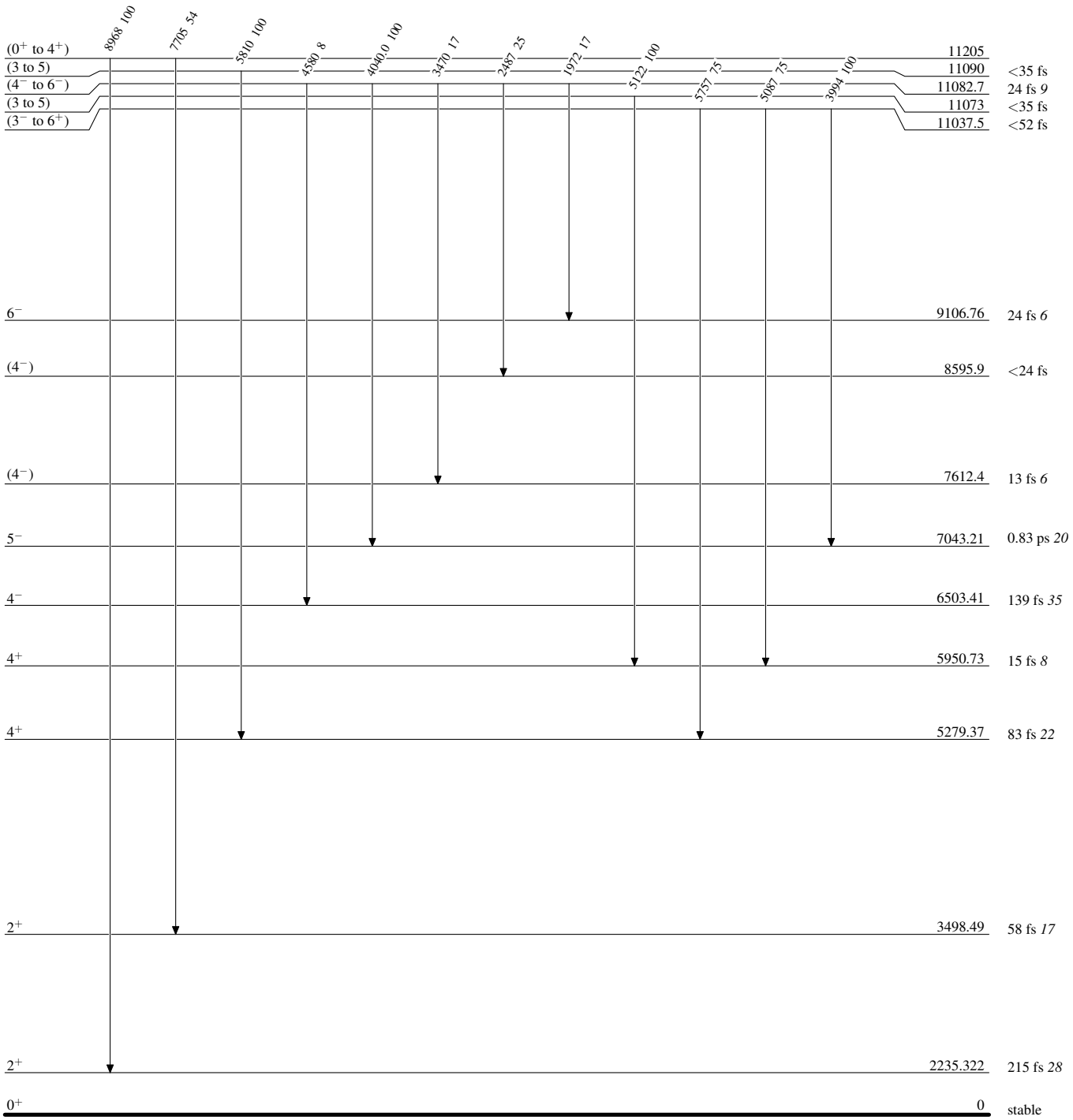


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

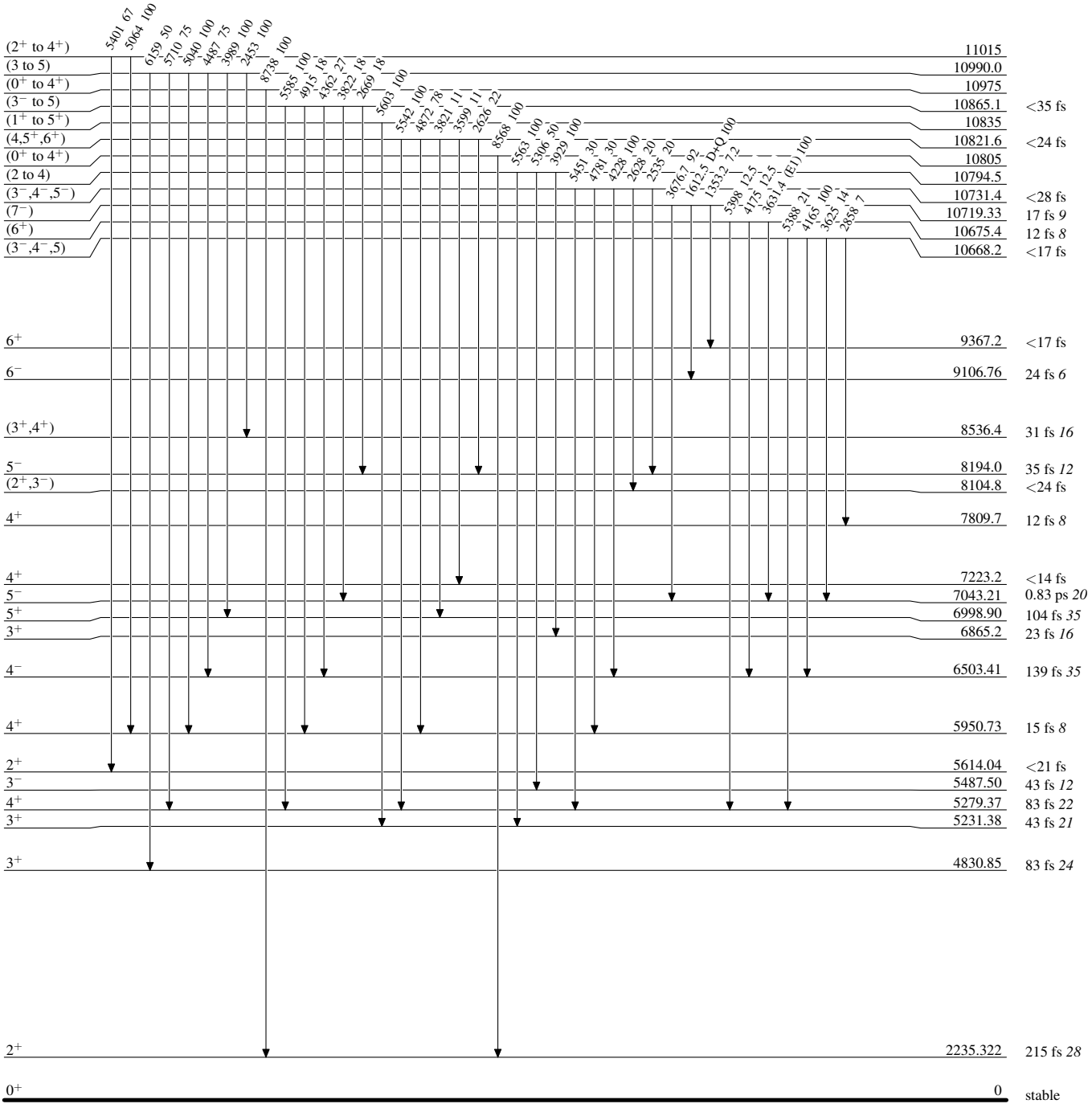


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

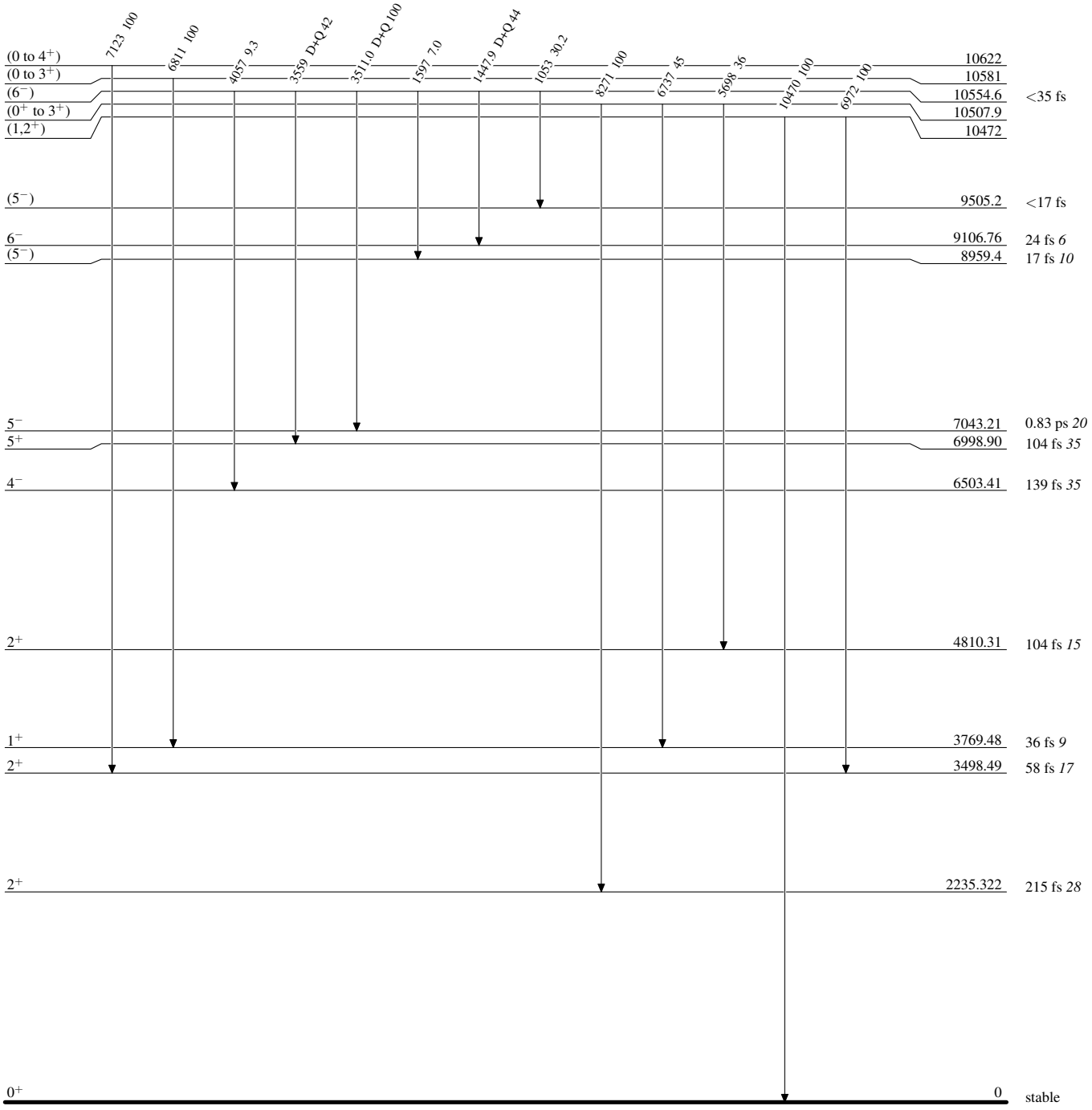


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

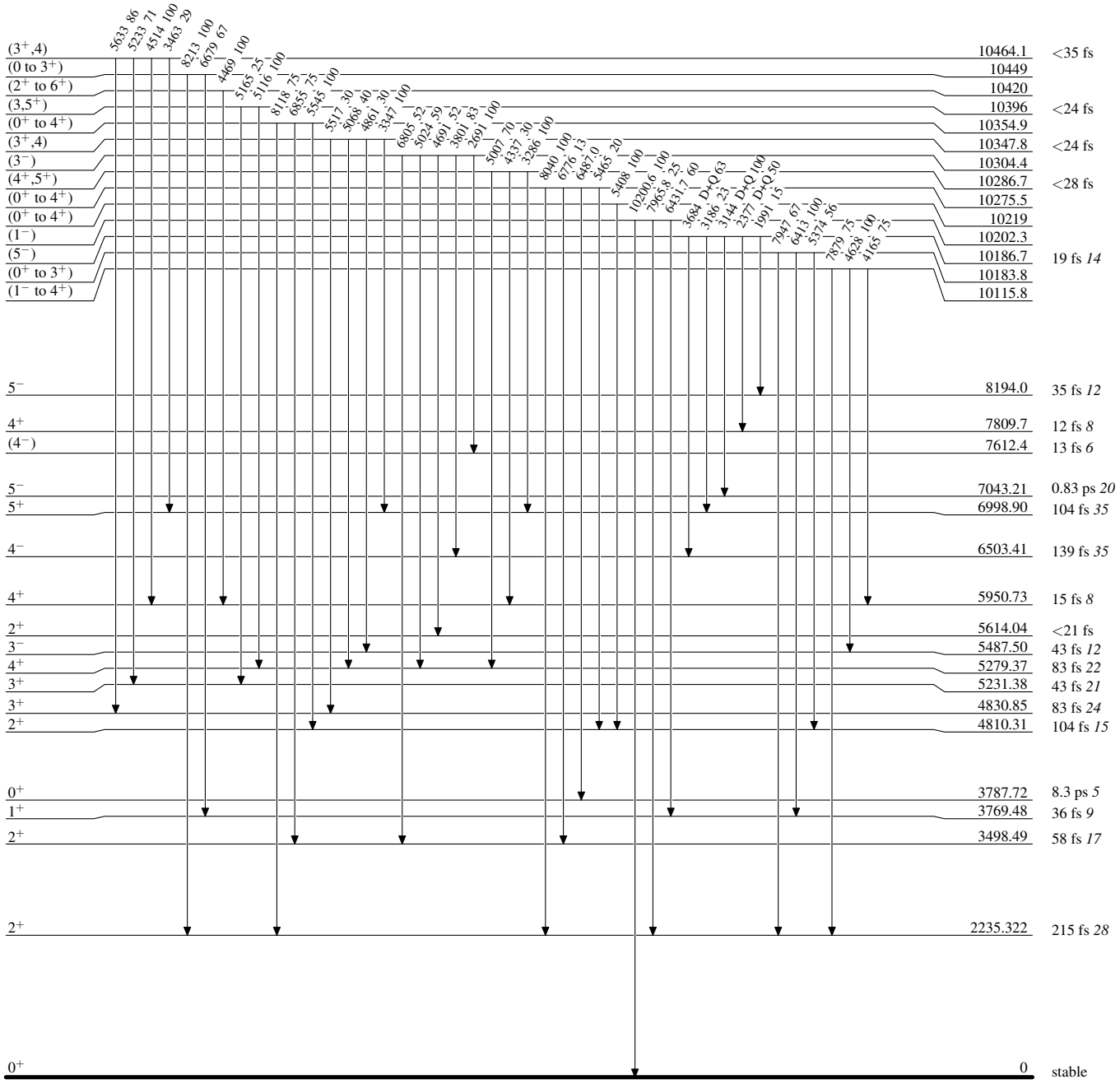


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

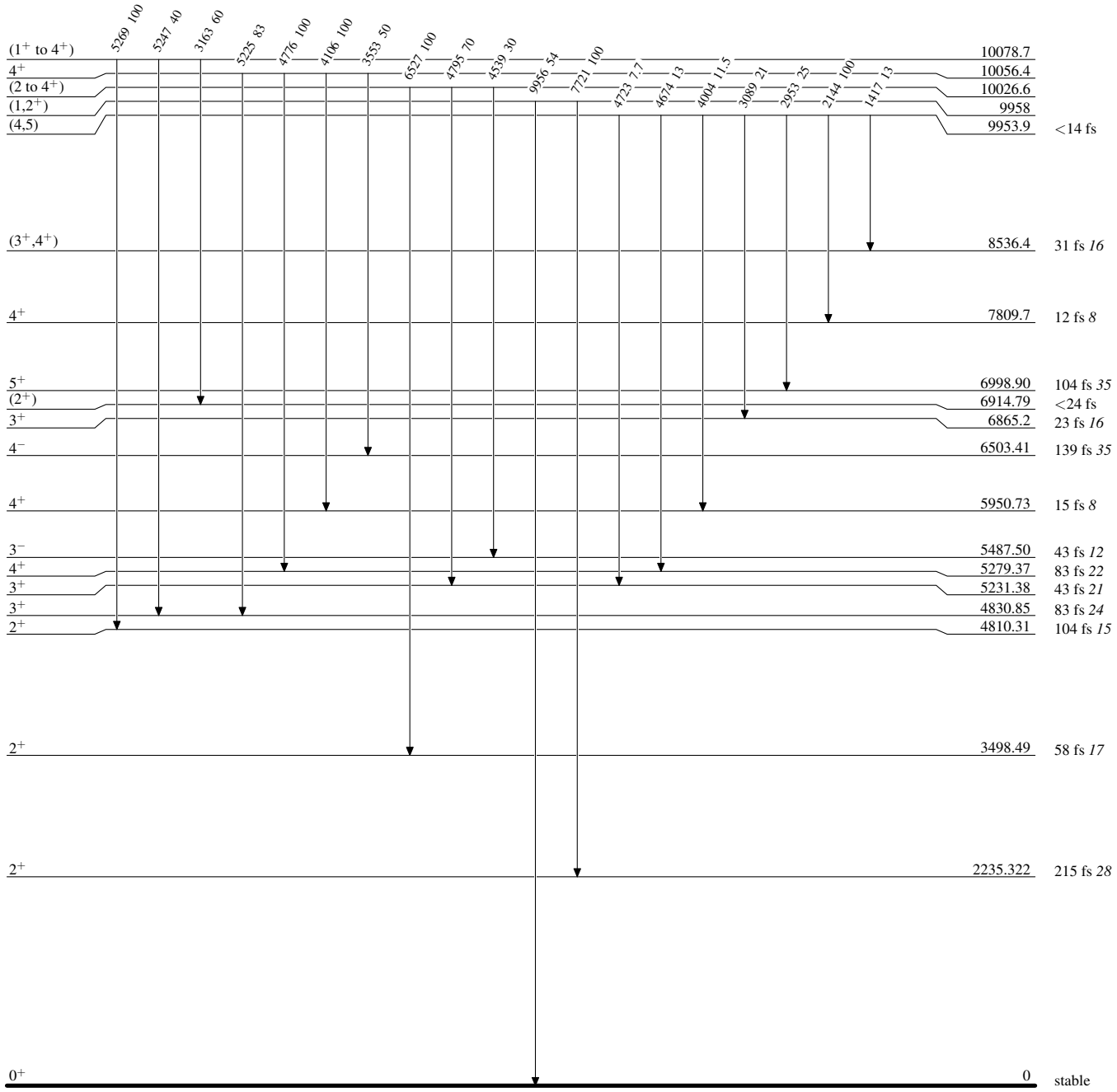


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

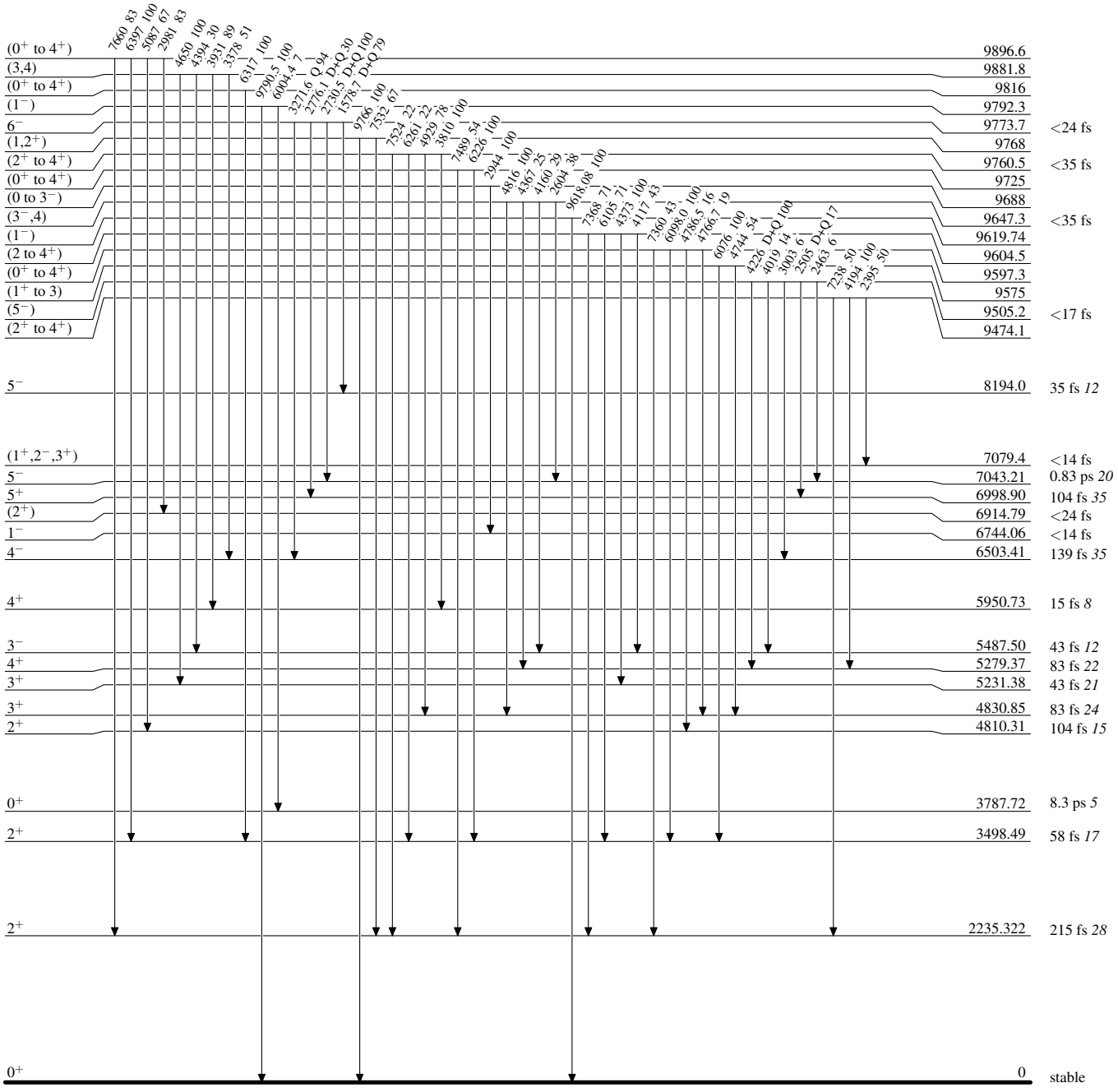


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

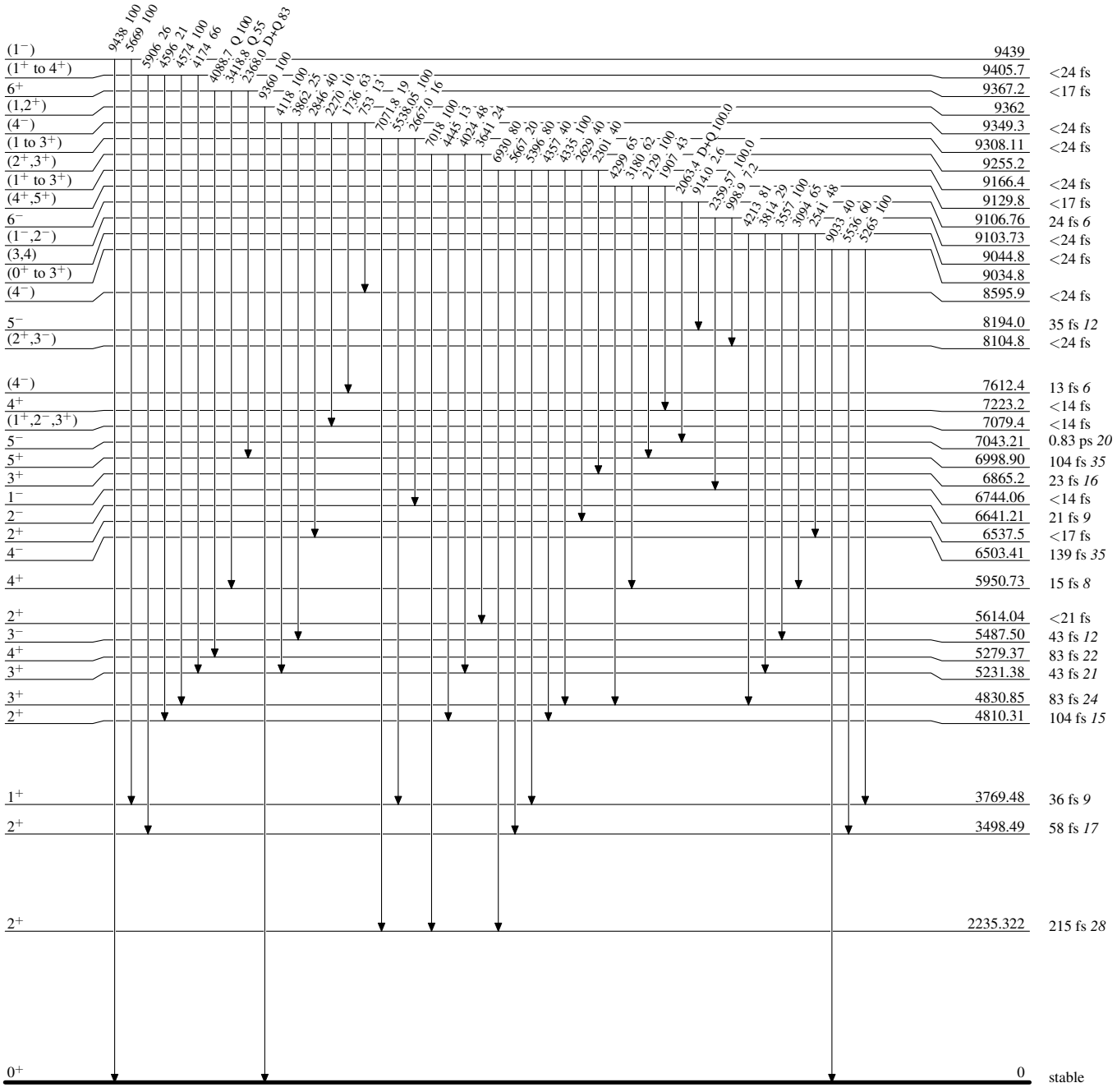


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

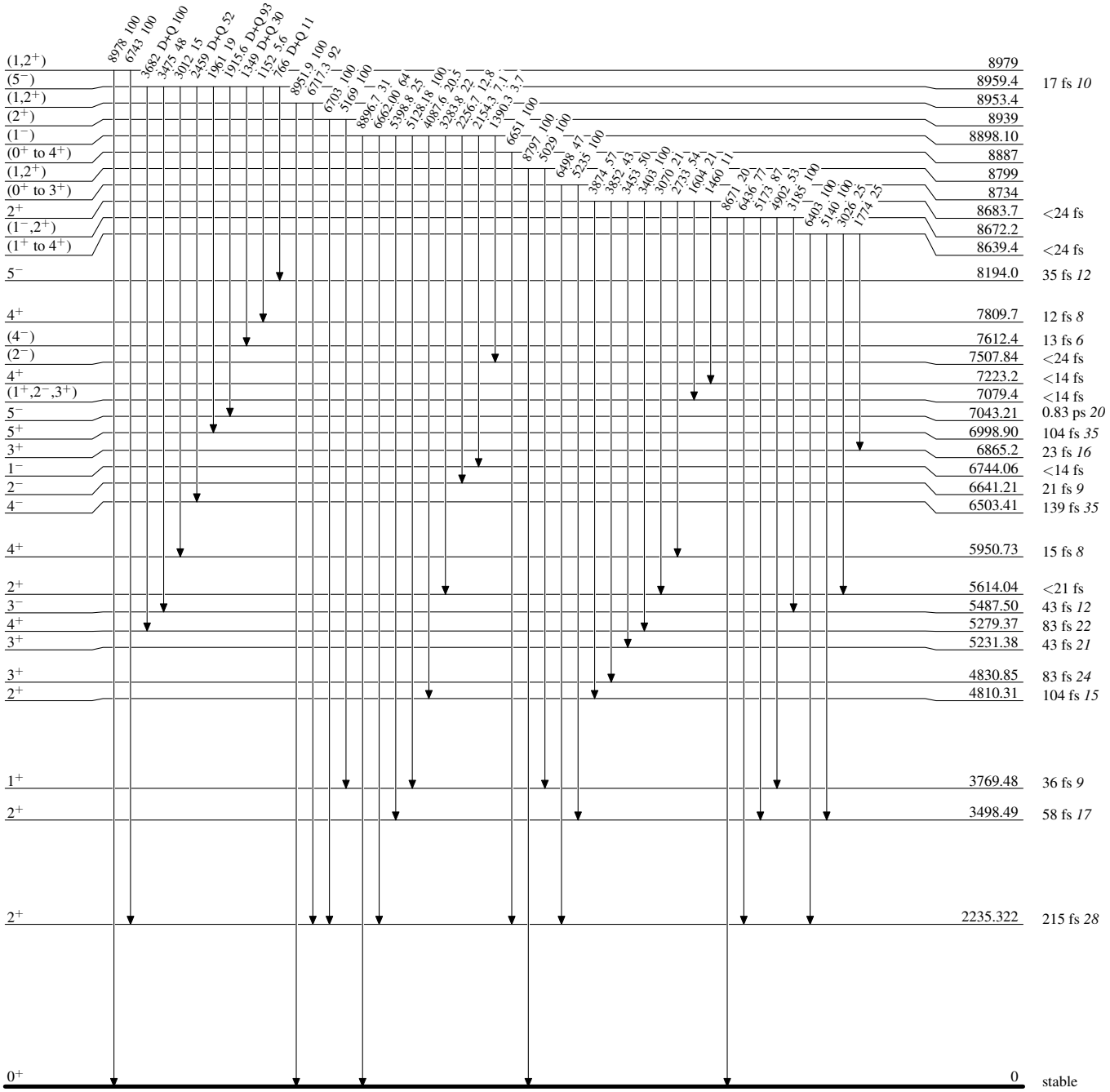


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

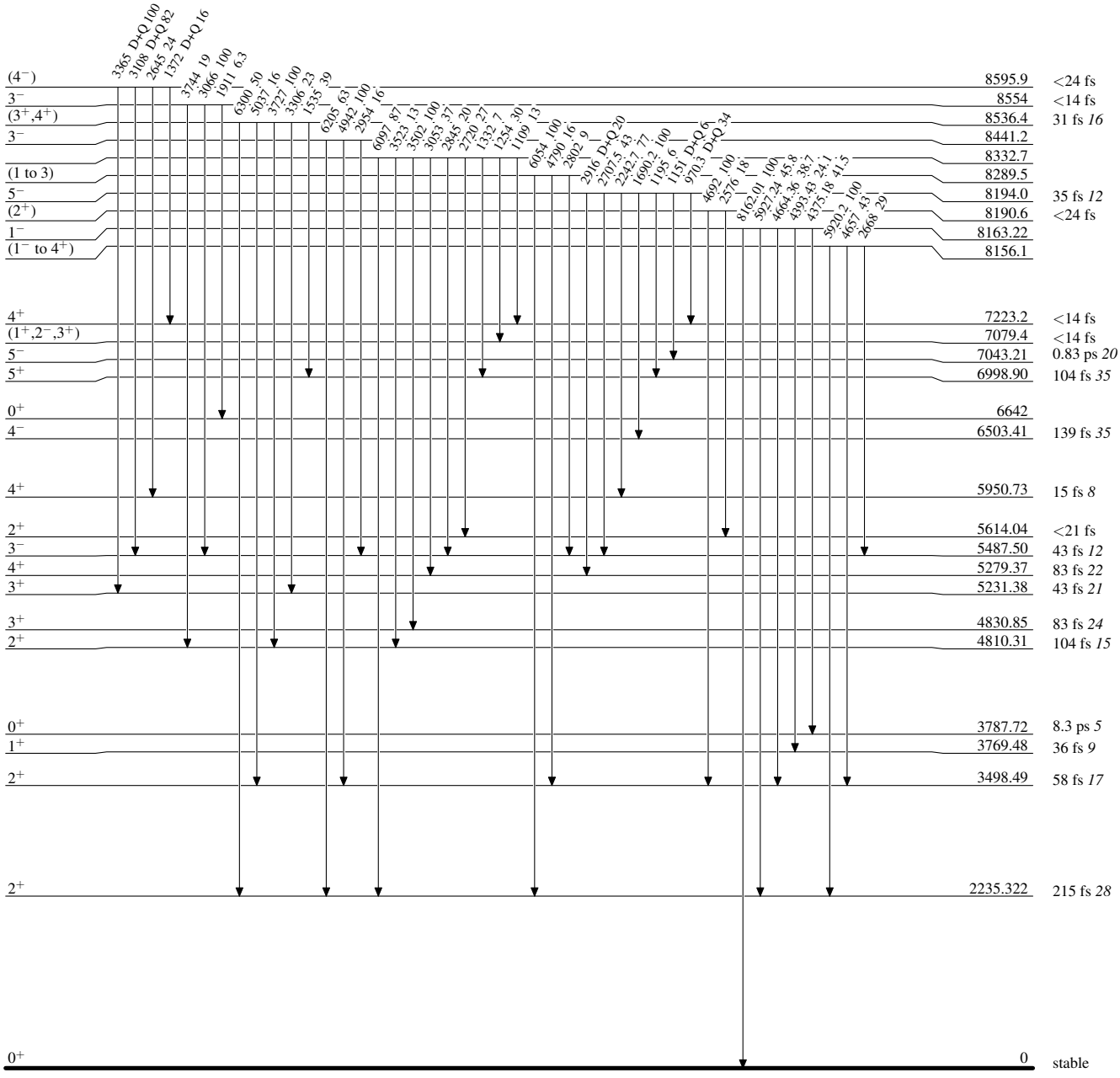


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

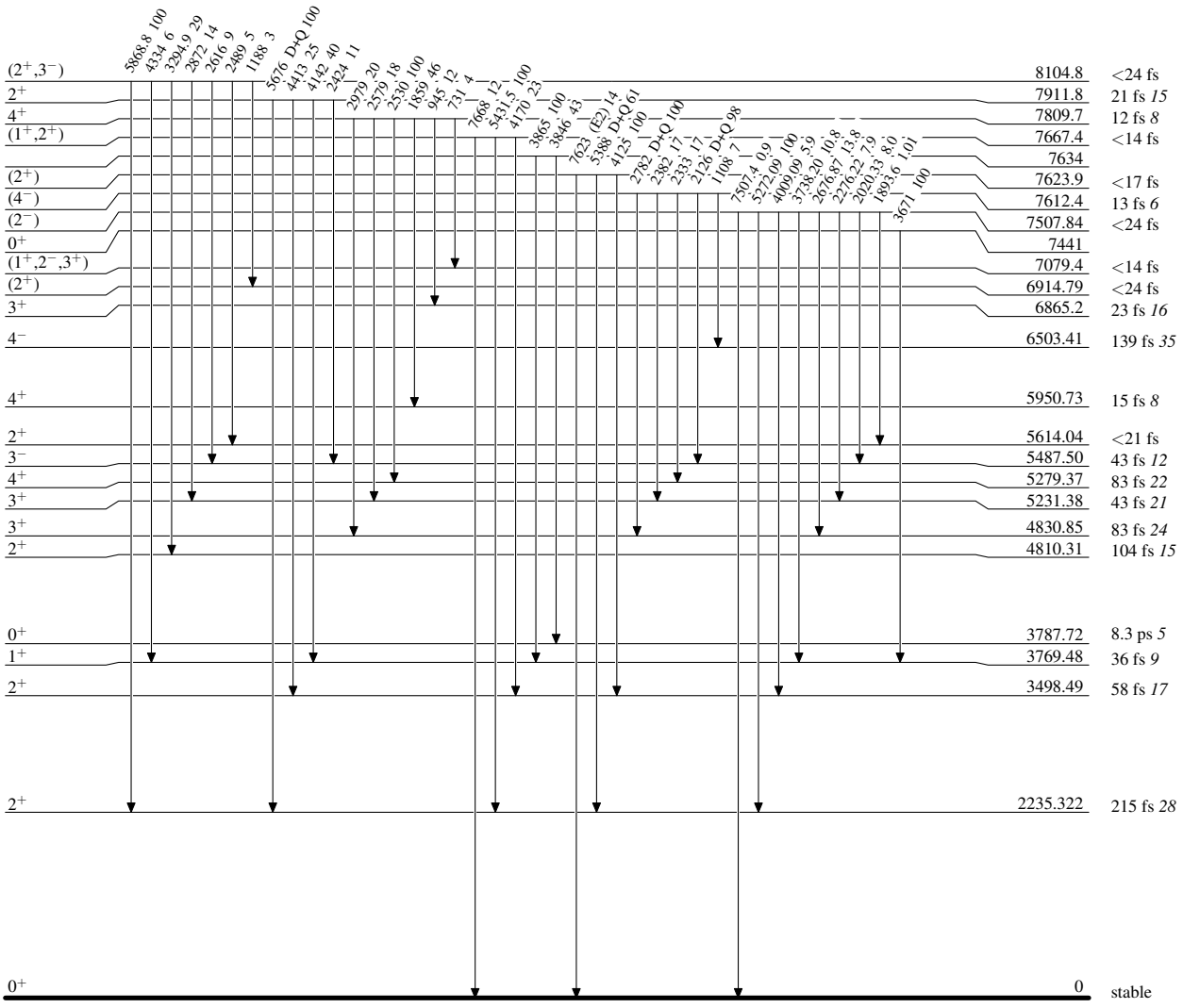


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

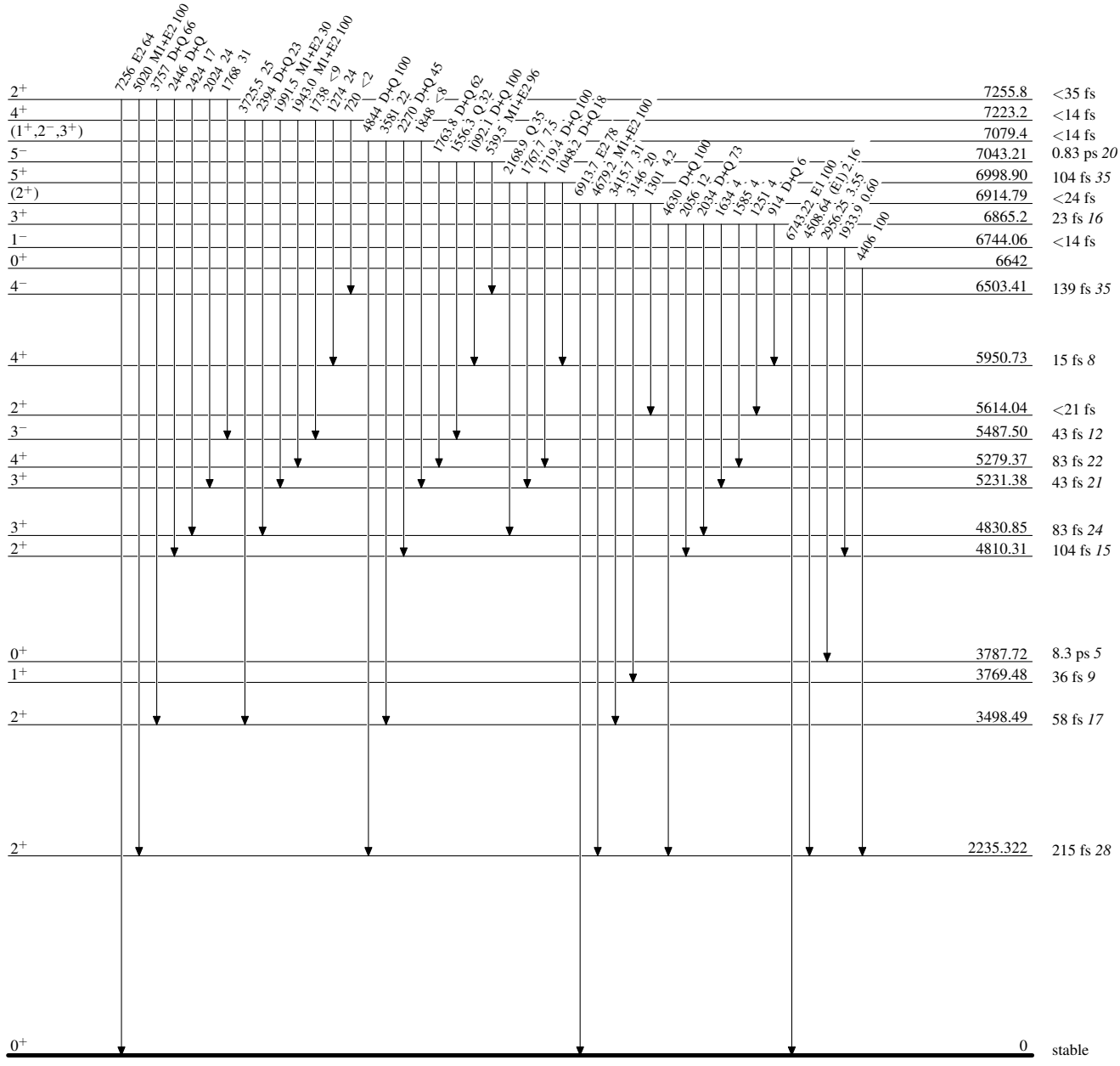


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

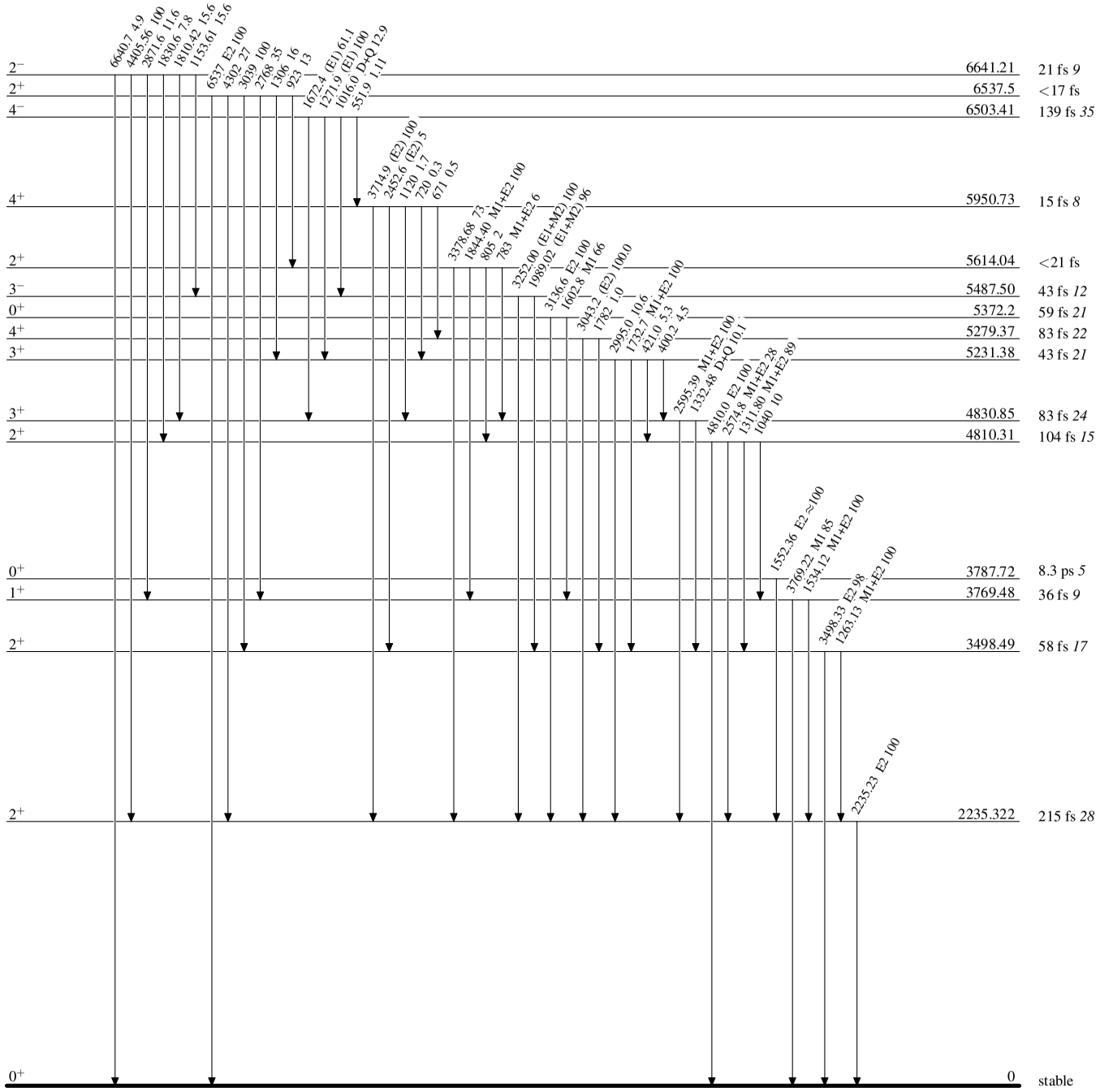


$^{30}_{14}Si_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{30}_{14}Si_{16}$