Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 113,909 (2012)	1-Jan-2012

Q(β^-)=−4942.6 *6*; S(n)=8474; S(p)=12333.52 *12*; Q(α)=−11127.2 *1* 2012Wa38
Note: Current evaluation has used the following Q record −4942.5 6 *8473*.60 *2* 12333.5612-11127.2 *1* 2011AuZZ,2003Au03.

Other reactions:
^{12}C(^{19}F,pnγ): 1971Mc20.
^{25}Mg(^{6}Li,α): 1974An15, 1975An13.
^{29}Si(n,n): 1970Di10.
^{29}Si(p,p′γ),(p,p),(p,p′): 1989Vo05, 1983Ch50, 1980Fa07, 1978To08, 1970Ma49, 1970De01, 1961Mc08.
Coulomb Excitation: 1977Sc36, 1967Af03.

^{29}Si Levels

Cross Reference (XREF) Flags

A	^{29}Al β^- decay	E	^{27}Al(^{3}He,p),(^{6}Li,α)	I	^{28}Si(d,p),(d,pγ)
B	^{29}P β^+ decay	F	^{29}Si(e,e′)	J	^{30}Si(d,t),(^{3}He,α)
C	^{15}N(^{16}O,pnγ)	G	^{28}Si(n,γ) E=thermal		
D	^{26}Mg(α,nγ)	H	^{28}Si(n,γ) E=31.7,55.9 keV		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0	1/2$^+$	stable	ABCDEFGHIJ	μ=−0.55529 *3* J$^\pi$: From Nuclear Magnetic Resonance (1954Wi08) and Microwave Spectroscopy (1953Wh39) measurements. L=0 ((d,p),(d,pγ)). μ: From 1989Ra17, 2005St24, 2011StZZ.
1273.387 *9*	3/2$^+$	291[@] fs *10*	AB DEFGHIJ	J$^\pi$: L=2 (spectroscopic factor calculation), 1273γ M1+E2 to 1/2$^+$.
2028.16 *4*	5/2$^+$	306[@] fs *10*	AB DEFGHIJ	J$^\pi$: L=2 ((d,p),(d,pγ)), 2028γ to 1/2$^+$.
2425.97 *3*	3/2$^+$	18.1 fs *7*	ABCDEFGHIJ	J$^\pi$: L=2 ((d,p),(d,pγ)), 2425.7γ M1+E2 to 1/2$^+$ state. T$_{1/2}$: From weighted average of mean lifetimes 25.8 fs *13* (1990Ti07) and 26.6 fs *16* (1980Sc25). Other mean lifetimes: 29 fs *13* (1972Ba44), 13 fs *3* (1971Ba73), 24 fs *14* (1970De01), 20 fs *7* (1968Ba24), and 20 fs *7* (1962Bo17).
3067.13 *5*	5/2$^+$	33 fs *1*	A CDE GHIJ	J$^\pi$: L=2 ((d,p),(d,pγ)), 1739.8γ and 1038.9γ M1+E2 to 3/2$^+$ and 5/2$^+$ states, respectively. T$_{1/2}$: From weighted average of mean lifetimes: 47 fs *3* (1990Ti07) and 46 fs *3* (1980Sc25). Other mean lifetimes: 20 fs *+25−10* (1972Ba44), 20 fs *7* (1971Ba73), and 23 fs *11* (1968Ba24).
3623.49 *15*	7/2$^-$	2.63 ps *9*	CDEF IJ	J$^\pi$: L=3 ((d,p),(d,pγ)), 1595γ to 5/2$^+$, γ-ray from 7/2$^-$ state. T$_{1/2}$: From weighted average of mean lifetimes 3.76 ps *19* (1990Ti07) and 3.83 ps *17* (1980Sc25). Other mean lifetimes: 4.2 ps *13* (1972Ba44), 4.0 ps *8* (1971Ba73), 5 ps *+3−2* (1969Wo04), and 4.2 ps *4* (1971Mc20).
4079.9 *3*	7/2$^+$	44[a] fs *12*	CDE J	J$^\pi$: L=(0,2) (^{27}Al(^{3}He,pγ)), 2051.9γ M1+E2 to 5/2$^+$, 2806γ to 3/2$^+$; M1+E2 transition feeding from 9/2$^+$. T$_{1/2}$: From weighted average of mean lifetimes 82 fs *5* (1990Ti07), 40 fs *8* (1972Ba44), 48 fs *8* (1971Ba73), and 70 fs *20* (1969Wo04).
4741.1 *3*	(9/2$^+$)	36[a] fs *7*	CDE	XREF: E(4753). J$^\pi$: 2712.8γ to 5/2$^+$, 660γ to (7/2$^+$). T$_{1/2}$: From weighted average of mean lifetimes 65 fs *3* (1990Ti07), 33 fs *10* (1972Ba44), and 45 fs *10* (1971Ba73).
4840.38 *7*	1/2$^+$	<3.5[&] fs	DE G I	J$^\pi$: L=0 (d,p),(d,pγ).
4895.2 *4*	5/2$^+$	12[a] fs *5*	CDE IJ	J$^\pi$: L=2 (d,p),(d,pγ), 4894γ (E2) to 1/2$^+$. T$_{1/2}$: From weighted average of mean lifetimes 25 fs *4* (1990Ti07), and 10

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Adopted Levels, Gammas (continued)

^{29}Si Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				fs *3* (1971Ba73).
4934.438 *23*	3/2⁻	0.84 fs *12*	DE GHI	Jπ: L=1 (d,p),(d,pγ), 4934γ (E1) to 1/2⁺. $T_{1/2}$: From 1965Sk01.
5254.4 *4*	(9/2⁻)	82 fs *4*	CDE	Jπ: 1631γ (M1+E2) to 7/2⁻, γ-ray feeding the level from 11/2⁻ state. $T_{1/2}$: From weighted average of mean lifetimes 80 fs *4* (1990Ti07), 80 fs *10* (1972Ba44), and 100 fs *20* (1971Ba73).
5284.7 *5*	7/2⁺	6[b] fs *3*	CDE I	XREF: E(5291). Jπ: 3256γ M1+E2 to 5/2⁺, 4012γ to 3/2⁺. '+' from L=0 in (^{3}He,p).
5652.2 *7*	9/2⁺	51[b] fs *3*	CDE I	Jπ: L=4 (d,p),(d,pγ), 1572γ M1+E2 to 7/2⁺. $T_{1/2}$: Other: 40 fs *15* (1971Ba23).
5811.7 *7*	7/2⁺	32[a] fs *12*	CDE	XREF: E(5822). Jπ: 2745.3γ M1+E2 5/2⁺, 3386.6γ (E2) to 3/2⁺; '+' from L=0 in (^{3}He,p). $T_{1/2}$: From mean lifetimes 44 fs *3* (1990Ti07), and 20 fs *8* (1972Ba44).
5947 *3*	3/2⁺	<10[&] fs	DE I	XREF: E(5962). Jπ: L=2 (d,p), 5946γ D+Q to 1/2⁺, 3921γ to 5/2⁺.
6107.1 *5*	5/2	21[b] fs *3*	CDE	XREF: E(6120). Jπ: 4079γ D+Q to 5/2⁺, 3680γ to 3/2⁺, 2482.7γ to 7/2⁻.
6192.8 *7*	7/2⁻	17[b] fs *3*	CDE I	XREF: E(6206). Jπ: L=3 (d,p), 4161.9γ D+Q to 5/2⁺.
6380.610 *25*	1/2⁻	0.36 fs *11*	DE G I	Jπ: L=1 (d,p), 6380γ to 1/2⁺, 5106γ to 3/2⁺. $T_{1/2}$: From 1965Re09.
6423 *1*	(7/2⁺)	<14[&] fs	DE I	XREF: E(6433). Jπ: 4395γ D+Q to 5/2⁺.
6496.23 *21*	1/2⁺ to 5/2⁺	<24[&] fs	DEF I	XREF: E(6505). Jπ: γ-ray transitions to 1/2⁺, 3/2⁺, 5/2⁺ states.
6522 *1*	5/2⁺	<10[&] fs	DEF I	XREF: E(6531). Jπ: L=2 for doublet and assignment 5/2⁺ based on form factor in 1977Br35.
6615 *1*	(9/2⁺)	<14[&] fs	DE I	XREF: E(6628). Jπ: 4588γ to 5/2⁺, 2992γ to 7/2⁻.
6695.93 *14*	1/2⁺		I	Jπ: L=0 (d,p).
6710 *1*	(5/2⁺)	<62[&] fs	E IJ	XREF: E(6723). Jπ: L=2 for doublet (d,p), 3642γγ to 5/2⁺, 5435γ to 3/2⁺.
6712.9[‡] *5*	(3/2)		E G I	Jπ: L=2 for doublet (d,p), 6711γ to 1/2⁺, 4288.6γ to 3/2⁺.
6781.1 *7*	(11/2⁻)	15[b] fs *2*	CDE I	XREF: E(6797). Jπ: 1526.6γ M1+E2 to (9/2⁻), 3157γ to 7/2⁻.
6908.52[‡] *6*	(1/2⁺,3/2)		E G I	XREF: E(6928). Jπ: Populated from neutron capture state J^π=1/2⁺.
6921 *1*	(7/2⁺)	<14[&] fs	D I	Jπ: 4891.4γ D+Q to 5/2⁺.
7014 *1*	(5/2⁻,7/2⁻)	32[&] fs *10*	DEF I	XREF: E(7020). Jπ: Assignment from (e,e′) study in 1977Br35.
7058.00[‡] *9*	1/2⁺	<15[&] fs	D G I	Jπ: L=0 (d,p).
7072 *1*	(3/2⁺,5/2⁺)	<10.4[&] fs	DE I	XREF: E(7085). Jπ: L=(2) (d,p).
7139 *1*	(11/2⁺)	29[&] fs *10*	DE I	XREF: E(7150). Jπ: 1486.9γ (M1+E2) to 9/2⁺, 3059γ to 7/2⁺, and 2398γ to (9/2⁺).

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Adopted Levels, Gammas (continued)

^{29}Si Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
7181.8 *2*	(3/2)		e I	Jπ: L=2 for doublet (d,p). γ-ray transitions to $5/2^+$, $1/2^+$, $3/2^+$ states.
7197 *1*	(3/2,5/2)		e I	Jπ: L=2 for doublet (d,p).
7523.19[‡] *13*	(1/2,3/2)	<14[&] fs	DE G I	XREF: E(7536). Jπ: γ-ray transitions to $1/2^+$ and $3/2^+$ states.
7622.1 *8*	$(5/2^-,7/2^-)$	<10.4[&] fs	D F I	Jπ: L=(3) (d,p).
7692.0 *4*	$(1/2^+,3/2^+)$		I	Jπ: L=0,2 (d,p), γ-ray transitions to $1/2^+$, $3/2^-$.
7767 *1*	(3/2,5/2)	<14[&] fs	D I	Jπ: 6493γ to $3/2^+$.
7787 *1*	$(7/2^+)$	15[&] fs *8*	DE I	XREF: E(7794). Jπ: γ-ray transitions to $5/2^+$, $7/2^+$, $(9/2^+)$ states.
7892 *1*			E I	XREF: E(7907).
7987 *1*	(9/2)	<14[&] fs	D F I	Jπ: γ-ray transitions to $7/2^+$, $9/2^+$ states.
7996.8[‡] *9*	$(3/2^-)$		EFG I	XREF: E(8010). Jπ: L=1 for doublet (d,p). γ-ray transitions to $1/2^+$, $3/2^+$, $5/2^+$ states.
8138 *1*			EF I	XREF: E(8153).
8161 *1*		<14[&] fs	D I	
8173 *1*	$(11/2^+)$	<14[&] fs	D I	Jπ: 4092.4γ to $7/2^+$, 3431.6γ D+Q to $(9/2^+)$.
8209 *1*	$(3/2^+)$	<14[&] fs	DE I	XREF: E(8220). Jπ: γ-ray transitions to $1/2^+$, $3/2^+$ states.
8270 *1*	$(5/2^-,7/2^-)$		F I	Jπ: L=3 (d,p).
8290 *5*	$5/2^+$		E I	T=3/2 XREF: E(8310). Jπ: L=0 ^{27}Al(^{3}He,pγ).
8331.0 *6*		<10.4[&] fs	D IJ	
8349 *1*			E I	XREF: E(8362).
8371 *1*			E I	XREF: E(8400).
8418 *1*	(3/2)		I	Jπ: 8415.4γ D+Q to $1/2^+$, 5990.7γ to $3/2^+$.
8476 *1*		<10.4[&] fs	I	
8507.5[#] *17*	$(3/2^+,5/2^+)$		E HI	XREF: E(8520). Jπ: L=2 (d,p).
8529.2[#] *17*			H	
8541.3[#] *10*			E HI	XREF: E(8560).
8557.8 *2*			I	
8603 *2*			I	
8609 *2*		<15 fs	De I	
8610 *2*		<15 fs	De I	
8622 *2*		<15 fs	D I	
8641 *2*		<14 fs	D I	
8655		60 keV *7*	H	
8670 *2*		<15 fs	DE I	XREF: E(8685).
8762 *2*		19[b] fs *4*	CDE I	XREF: E(8778).
8854 *2*			I	
8865 *2*		29[&] fs *10*	DE I	XREF: E(8873).
8909 *2*			I	
8959 *2*			I	
9019.0 *5*			H	
9151 *2*			I	
9157 *2*			I	
9219 *1*			I	
9252 *2*			I	
9298 *2*			I	

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Adopted Levels, Gammas (continued)

^{29}Si Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF		Comments
9326 *2*		<14[&] fs	D	I	
9392 *2*				I	
9413 *2*				I	
9518 *2*				I	
9630 *7*	$1/2^+$		E	J	T=3/2 Jπ: L=0 (^{3}He,α).
9667 *2*				I	
9683 *2*				I	
9765 *2*				I	
9779 *2*				I	
9850 *2*				I	
9943 *2*				I	
9952 *2*				I	
9987 *2*				I	
10006 *2*				I	
10083 *2*				I	
10131 *2*				I	
10170 *2*				I	
10213 *12*				I	
10236 *2*				I	
10252 *2*				I	
11087 *7*	$(3/2^+,5/2^+)$			J	T=3/2 Jπ: L=2 (^{3}He,α).
11305 *9*	$(3/2^+,5/2^+)$			J	T=3/2 Jπ: L=2 (^{3}He,α).
11665 *10*	$1/2^+$			J	T=3/2 Jπ: L=0 (^{3}He,α).

[†] Up to 6380 keV, deduced from a least-squares fit to the measured γ-ray energies. Above 6380 keV, level energies are from (d,p),(d,pγ), except otherwise noted.
[‡] From (n,γ) E=thermal.
[#] From (n,γ) E=31.7,55.9 keV.
[@] From 1980Sc25 – (d,p),(d,pγ).
[&] From (α,nγ).
[a] Using the Limitation of Relative Statistical Weight (LWM) averaging method (data listed in comment section).
[b] From 1990Ti07 – (^{16}O,pnγ).

Adopted Levels, Gammas (continued)

γ(^{29}Si)

E_i(level)	J_i^π	E_γ[†]	I_γ[a]	E_f	J_f^π	Mult.[d]	δ[g]	Comments
1273.387	3/2$^+$	1273.361[‡] *9*	100	0	1/2$^+$	M1+E2[f]	+0.197 *9*	B(M1)(W.u.)=0.0353 *13*; B(E2)(W.u.)=4.1 *4*
2028.16	5/2$^+$	754.84[‡] *7*	6.4 *6*	1273.387	3/2$^+$			
		2028.09[‡] *7*	100.0 *6*	0	1/2$^+$			
2425.97	3/2$^+$	397.85[‡] *5*	0.59 *20*	2028.16	5/2$^+$			
		1152.57[‡] *3*	17.6 *8*	1273.387	3/2$^+$			
		2425.73[‡] *20*	100.0 *8*	0	1/2$^+$	M1+E2[f]	−0.32 *7*	B(M1)(W.u.)=0.065 *4*; B(E2)(W.u.)=5.5 *22*
3067.13	5/2$^+$	641.3	2.6 *13*	2425.97	3/2$^+$			
		1038.89[&] *10*	21[&] *3*	2028.16	5/2$^+$	M1+E2[f]	+0.04 *2*	B(M1)(W.u.)=0.099 *16*; B(E2)(W.u.)=0.7 *+8−7*
		1793.83[‡] *8*	100 *4*	1273.387	3/2$^+$	M1+E2[f]	+0.26 *2*	B(M1)(W.u.)=0.086 *6*; B(E2)(W.u.)=8.8 *14*
		3067	<3.8[b]	0	1/2$^+$			
3623.49	7/2$^-$	556.2[#] *2*	10.1[b] *12*	3067.13	5/2$^+$			
		1198	12.6 *23*	2425.97	3/2$^+$			
		1595.5[#] *2*	100 *3*	2028.16	5/2$^+$			
		2350.6	2.3 *11*	1273.387	3/2$^+$			
		3624	0.38[b] *7*	0	1/2$^+$			
4079.9	7/2$^+$	456	<7.1[b]	3623.49	7/2$^-$			
		1654	<8.9[b]	2425.97	3/2$^+$			
		2051.9[#] *5*	79[b] *6*	2028.16	5/2$^+$	M1+E2[f]	+0.08 *2*	B(M1)(W.u.)=0.024 *7*; B(E2)(W.u.)=0.18 *11*
		2806.3[#] *3*	100[b] *6*	1273.387	3/2$^+$	(E2)		B(E2)(W.u.)=7.5 *22*
4741.1	(9/2$^+$)	660.2[#] *22*	6.4[b] *11*	4079.9	7/2$^+$			
		1116.8	<1[b]	3623.49	7/2$^-$			
		2712.8[#] *3*	100.0[b] *11*	2028.16	5/2$^+$	(E2)		B(E2)(W.u.)=19 *4*
4840.38	1/2$^+$	3566.5[&] *5*	15[&] *5*	1273.387	3/2$^+$			
		4839.6[&] *4*	100[&] *13*	0	1/2$^+$	(M1)		B(M1)(W.u.)>0.048
4895.2	5/2$^+$	1828	5.5[b] *9*	3067.13	5/2$^+$			
		2469	9.1[b] *9*	2425.97	3/2$^+$			
		2867.0[#] *7*	35[b] *4*	2028.16	5/2$^+$	D+Q		
		3621.6[#] *4*	100[b] *7*	1273.387	3/2$^+$	(M1)		B(M1)(W.u.)=0.021 *9*
		4893.8[#] *12*	33[b] *4*	0	1/2$^+$	(E2)		B(E2)(W.u.)=0.6 *3*
4934.438	3/2$^-$	1867.29[&] *5*	1.17[&] *5*	3067.13	5/2$^+$			
		2508.24[&] *13*	0.38[&] *5*	2425.97	3/2$^+$			
		2906.2[&] *5*	0.06[&] *2*	2028.16	5/2$^+$			
		3660.80[&] *6*	6.2[&] *3*	1273.387	3/2$^+$			

$^{29}_{14}Si_{15}$-5

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[a]	E_f	J_f^π	Mult.[d]	δ[g]	Comments
4934.438	3/2⁻	4933.98[&] *3*	100[&] *3*	0	1/2⁺	(E1)		B(E1)(W.u.)=0.0066 *10*
5254.4	(9/2⁻)	1631.0[#] *3*	100.0[b]	3623.49	7/2⁻	(M1+E2)	+0.43 *2*	B(M1)(W.u.)=0.051 *3*; B(E2)(W.u.)=17.4 *17*
		2187.2	<3[b]	3067.13	5/2⁺			
5284.7	7/2⁺	2218	20.3 *3*	3067.13	5/2⁺			
		2859.3	17.2 *16*	2425.97	3/2⁺			
		3256.3[#] *5*	100 *5*	2028.16	5/2⁺	M1+E2	−0.19 *2*	B(M1)(W.u.)=0.07 *4*; B(E2)(W.u.)=1.1 *6*
		4012	17.2 *16*	1273.387	3/2⁺			
5652.2	9/2⁺	911.3	20.8 *21*	4741.1	(9/2⁺)			
		1572.2[#] *6*	100 *6*	4079.9	7/2⁺	M1+E2	+0.32[h] *4*	B(M1)(W.u.)=0.049 *5*; B(E2)(W.u.)=9.9 *25*
		2585.3[#] *20*	85 *6*	3067.13	5/2⁺			
5811.7	7/2⁺	2745.3[#] *11*	100[b] *6*	3067.13	5/2⁺	M1+E2	+0.06 *3*	B(M1)(W.u.)=0.017 *7*; B(E2)(W.u.)=0.04 *+5−4*
		3386.6	52[b] *6*	2425.97	3/2⁺			
		3782.8[#] *8*	48[b] *4*	2028.16	5/2⁺	D+Q		
5947	3/2⁺	2882	100 *12*	3067.13	5/2⁺			
		3523	74 *8*	2425.97	3/2⁺			
		3921	59 *8*	2028.16	5/2⁺			
		4675	93 *12*	1273.387	3/2⁺			
		5946[#] *3*	44 *8*	0	1/2⁺	D+Q		
6107.1	5/2	2482.7	11.1[b] *16*	3623.49	7/2⁻			
		3680.0[#] *10*	48[b] *4*	2425.97	3/2⁺			
		4078.8[#] *5*	100[b] *4*	2028.16	5/2⁺	D+Q	−0.36[i] *20*	
6192.8	7/2⁻	939.5	2.1 *4*	5254.4	(9/2⁻)			
		2569.8	4.3 *4*	3623.49	7/2⁻			
		4161.9[#] *12*	100.0 *11*	2028.16	5/2⁺	D+Q	+0.04[j] *1*	
6380.610	1/2⁻	1446.14[&] *4*	7.05[&] *25*	4934.438	3/2⁻			
		1540.18[&] *6*	3.11[&] *25*	4840.38	1/2⁺			
		3954.44[&] *5*	23.2[&] *16*	2425.97	3/2⁺			
		5106.74[&] *6*	32.6[&] *16*	1273.387	3/2⁺			
		6379.80[&] *4*	100[&] *5*	0	1/2⁺	D		
6423	(7/2⁺)	3356	67 *7*	3067.13	5/2⁺			
		4395	100 *7*	2028.16	5/2⁺	D+Q[e]	−0.3[i] *2*	
6496.23	1/2⁺ to 5/2⁺	4070	100 *8*	2425.97	3/2⁺			
		4468	70 *8*	2028.16	5/2⁺			
		6496	80 *8*	0	1/2⁺			
6522	5/2⁺	4096	76 *6*	2425.97	3/2⁺			
		4493	32 *6*	2028.16	5/2⁺			

$^{29}_{14}Si_{15}$-6

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[a]	E_f	J_f^π	Mult.[d]	δ[g]	Comments
6522	5/2+	5248	100 *8*	1273.387	3/2+			
		6521	55 *8*	0	1/2+			
6615	(9/2+)	2992	41 *3*	3623.49	7/2−			
		4588	100 *3*	2028.16	5/2+			
6695.93	1/2+	1761.3	12.5 *25*	4934.438	3/2−			
		5422	12.5 *25*	1273.387	3/2+			
		6695	100 *5*	0	1/2+			
6710	(5/2+)	1814.9	19 *3*	4895.2	5/2+			
		3085.5	22 *3*	3623.49	7/2−			
		3642.6	100 *9*	3067.13	5/2+			
		4680.5	35 *9*	2028.16	5/2+			
		5435.6	95 *9*	1273.387	3/2+			
6712.9	(3/2)	4288.6	20.5[b] *12*	2425.97	3/2+			
		6711.4 *9*	100.0[b] *12*	0	1/2+			
6781.1	(11/2−)	1526.6	96 *4*	5254.4	(9/2−)	(M1+E2)[f]	+0.30[j] *6*	B(M1)(W.u.)=0.19 *3*; B(E2)(W.u.)=35 *14*
		3156.9	100 *4*	3623.49	7/2−			
6908.52	(1/2+,3/2)	1973.9	8 *3*	4934.438	3/2−			
		3841.4[&] *6*	25[&] *3*	3067.13	5/2+			
		4482.1[&] *4*	50[&] *6*	2425.97	3/2+			
		4880.2[&] *5*	100[&] *11*	2028.16	5/2+			
		5634.4[&] *4*	67[&] *8*	1273.387	3/2+			
		6907.6[&] *7*	28[&] *3*	0	1/2+			
6921	(7/2+)	4891.4	100	2028.16	5/2+	D+Q[e]	−0.16[j] *5*	
7014	(5/2−,7/2−)	3389.4	14.0 *20*	3623.49	7/2−			
		3946.5	16.0 *20*	3067.13	5/2+			
		4587.2	60 *6*	2425.97	3/2+			
		4985	10.0 *20*	2028.16	5/2+			
		5740	100 *6*	1273.387	3/2+			
7058.00	1/2+	2123.8[&] *6*	7.5[&] *13*	4934.438	3/2−			
		4632.3[&] *7*	11.3[&] *13*	2425.97	3/2+			
		5784.7[&] *7*	6.3[&] *13*	1273.387	3/2+			
		7056.9[&] *4*	100.0[&] *25*	0	1/2+			
7072	(3/2+,5/2+)	5041[#] *2*	100	2028.16	5/2+	D+Q[e]	−0.19[j] *1*	
		5797.9	<5[b]	1273.387	3/2+			
		7071.0	<5[b]	0	1/2+			
7139	(11/2+)	1486.9	36 *4*	5652.2	9/2+	(M1+E2)[e]	−0.29[i] *5*	B(M1)(W.u.)=0.042 *16*; B(E2)(W.u.)=8 *4*
		2398	45 *4*	4741.1	(9/2+)			

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[a]	E_f	J_f^π	Mult.[d]	δ[g]	Comments
7139	(11/2$^+$)	3059	100 *6*	4079.9	7/2$^+$			
7181.8	(3/2)	4755	12 *3*	2425.97	3/2$^+$			
		5153	100 *6*	2028.16	5/2$^+$			
		7181	23 *3*	0	1/2$^+$			
7197	(3/2,5/2)	4129.5	91 *12*	3067.13	5/2$^+$			
		4770.2	36 *5*	2425.97	3/2$^+$			
		5168.3	100 *12*	2028.16	5/2$^+$			
7523.19	(1/2,3/2)	5096.4[&] *7*	100[&] *9*	2425.97	3/2$^+$			
		6247	31 *5*	1273.387	3/2$^+$			
		7521.8[&] *9*	29[&] *5*	0	1/2$^+$			
7622.1	(5/2$^-$,7/2$^-$)	3998[#] *1*	100 *3*	3623.49	7/2$^-$			
		4554.4	5.3 *14*	3067.13	5/2$^+$			
		5593.2	26 *3*	2028.16	5/2$^+$			
7692.0	(1/2$^+$,3/2$^+$)	2757.1	8.7 *11*	4934.438	3/2$^-$			
		7691	100.0 *11*	0	1/2$^+$			
7767	(3/2,5/2)	6493	100	1273.387	3/2$^+$			
7787	(7/2$^+$)	1171	4.2 *21*	6615	(9/2$^+$)			
		1974	8.3 *21*	5811.7	7/2$^+$			
		2501	33.3 *21*	5284.7	7/2$^+$			
		3046	44 *5*	4741.1	(9/2$^+$)			
		3707	16.7 *21*	4079.9	7/2$^+$			
		5758	100 *7*	2028.16	5/2$^+$			
7892		5465.4	59 *6*	2425.97	3/2$^+$			
		5863.1	37 *4*	2028.16	5/2$^+$			
		6617.7	100 *4*	1273.387	3/2$^+$			
7987	(9/2)	2334.4	52 *5*	5652.2	9/2$^+$			
		3906.5	100 *5*	4079.9	7/2$^+$			
7996.8	(3/2$^-$)	3060	28 *4*	4934.438	3/2$^-$			
		3155	28 *4*	4840.38	1/2$^+$			
		4927	100 *12*	3067.13	5/2$^+$			
		5568	20 *4*	2425.97	3/2$^+$			
		5966	100 *8*	2028.16	5/2$^+$			
		6721	44 *4*	1273.387	3/2$^+$			
		7993.9 *9*	80[c] *8*	0	1/2$^+$			E_γ: From ^{28}Si(n,γ) E=thermal.
8138		3203	14.9 *23*	4934.438	3/2$^-$			
		6864	100.0 *23*	1273.387	3/2$^+$			
8161		5093.2	100 *6*	3067.13	5/2$^+$			
		6130.9	49 *6*	2028.16	5/2$^+$			
8173	(11/2$^+$)	3431.6	35 *3*	4741.1	(9/2$^+$)	D+Q	+0.67[i] *19*	
		4092.4	100 *3*	4079.9	7/2$^+$			
8209	(3/2$^+$)	6933.9	61 *7*	1273.387	3/2$^+$			

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[a]	E_f	J_f^π	Mult.[d]	δ[g]
8209	(3/2$^+$)	8206.5	100 *7*	0	1/2$^+$		
8270	(5/2$^-$,7/2$^-$)	4645.1	100 *7*	3623.49	7/2$^-$		
		6239.9	61 *7*	2028.16	5/2$^+$		
8290	5/2$^+$	3395	59 *7*	4895.2	5/2$^+$		
		5863	88 *10*	2425.97	3/2$^+$		
		6260	100 *10*	2028.16	5/2$^+$		
		7015	66 *7*	1273.387	3/2$^+$		
8331.0		3044.7	24 *4*	5284.7	7/2$^+$		
		4706.8[#] *5*	100 *4*	3623.49	7/2$^-$		
8349		5281.1	100 *9*	3067.13	5/2$^+$		
		6318.8	64 *9*	2028.16	5/2$^+$		
8371		4290.3	100	4079.9	7/2$^+$		
8418	(3/2)	5990.7	64 *10*	2425.97	3/2$^+$		
		8415.4	100 *10*	0	1/2$^+$	D+Q[e]	+0.44[i] *5*
8476		2823.9[#] *5*	85 *8*	5652.2	9/2$^+$		
		3734.5	65 *5*	4741.1	(9/2$^+$)		
		4395.3	100 *8*	4079.9	7/2$^+$		
8507.5	(3/2$^+$,5/2$^+$)	3571.0[@] *20*	100[@] *4*	4934.438	3/2$^-$		
		5437	13 *1*	3067.13	5/2$^+$		
		7232.0[@] *10*	40[@] *2*	1273.387	3/2$^+$		
8529.2		3591[@] *3*	33[@] *2*	4934.438	3/2$^-$		
		7254.0[@] *10*	100[@] *3*	1273.387	3/2$^+$		
8541.3		3604[@] *5*	2.1[@] *14*	4934.438	3/2$^-$		
		5476[@] *3*	6.1[@] *14*	3067.13	5/2$^+$		
		6114.0[@] *20*	29[@] *3*	2425.97	3/2$^+$		
		6511.0[@] *10*	37[@] *3*	2028.16	5/2$^+$		
		7266.0[@] *10*	100[@] *3*	1273.387	3/2$^+$		
		8540.0[@] *10*	76[@] *3*	0	1/2$^+$		
8557.8		2363	21[b] *2*	6192.8	7/2$^-$		
		4476	43 *4*	4079.9	7/2$^+$		
		6527	100 *4*	2028.16	5/2$^+$		
8603		4522	100	4079.9	7/2$^+$		
8609		3867.5	100	4741.1	(9/2$^+$)		
8610		2502	19.0[b] *24*	6107.1	5/2		
		3324	100 *15*	5284.7	7/2$^+$		
		4529	52 *12*	4079.9	7/2$^+$		
		4985	67 *5*	3623.49	7/2$^-$		
8622		4541	100 *6*	4079.9	7/2$^+$		

$^{29}_{14}Si_{15}$-9

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ †	I_γ [a]	E_f	J_f^π	Mult. [d]	δ [g]
8622		4997	19.6 *18*	3623.49	7/2$^-$		
		6592	59 *6*	2028.16	5/2$^+$		
8641		1502	6.4 *11*	7139	(11/2$^+$)	D+Q [e]	+1.0 [i] *+7−4*
		3899.0# *9*	100.0 *11*	4741.1	(9/2$^+$)		
8655		3720@	66@ *10*	4934.438	3/2$^-$		
		7381@	78@ *20*	1273.387	3/2$^+$		
		8654@	100@ *20*	0	1/2$^+$		
8670		3928	100	4741.1	(9/2$^+$)		
8762		1979.2# *5*	49 *3*	6781.1	(11/2$^-$)		
		3505.5# *8*	100 *3*	5254.4	(9/2$^-$)		
8854		3958	35 *5*	4895.2	5/2$^+$		
		6824	100 *9*	2028.16	5/2$^+$		
		7579	19 [b] *5*	1273.387	3/2$^+$		
		8851	54 *9*	0	1/2$^+$		
8865		4123	100	4741.1	(9/2$^+$)		
8909		3623	17 *3*	5284.7	7/2$^+$		
		3654	35 *5*	5254.4	(9/2$^-$)		
		5284	100 *6*	3623.49	7/2$^-$		
8959		3704	90 *10*	5254.4	(9/2$^-$)		
		4063	52 *7*	4895.2	5/2$^+$		
		4218	81 *10*	4741.1	(9/2$^+$)		
		4878	100 *10*	4079.9	7/2$^+$		
9019.0		5952@	13@ *4*	3067.13	5/2$^+$		
		6593@	18@ *4*	2425.97	3/2$^+$		
		6991@	22@ *13*	2028.16	5/2$^+$		
		7745@	29.1@ *19*	1273.387	3/2$^+$		
		9018@	100@ *13*	0	1/2$^+$		
9151		6083	100	3067.13	5/2$^+$		
9157		2542	64 *7*	6615	(9/2$^+$)		
		3342	100 *7*	5811.7	7/2$^+$		
9219		3567	35 *4*	5652.2	9/2$^+$		
		7188	100 *4*	2028.16	5/2$^+$		
9252		7221	100	2028.16	5/2$^+$		
9298		4042	100.0 *25*	5254.4	(9/2$^-$)		
		5673	25.0 *25*	3623.49	7/2$^-$		
9326		3674	33 *7*	5652.2	9/2$^+$		
		4584	100 *7*	4741.1	(9/2$^+$)		
9392		4650	100	4741.1	(9/2$^+$)		

$^{29}_{14}Si_{15}$-10

Adopted Levels, Gammas (continued)

γ(^{29}Si) (continued)

E_i(level)	J_i^π	E_γ †	I_γ [a]	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ [a]	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ [a]	E_f	J_f^π
9413		9410	100	0	$1/2^+$	9779		6154 *3*	100	3623.49	$7/2^-$	10083		5341	100 *9*	4741.1	$(9/2^+)$
9518		3705	74 *15*	5811.7	$7/2^+$	9850		2711	47 *8*	7139	$(11/2^+)$			8053	45 *9*	2028.16	$5/2^+$
		4776	100 *15*	4741.1	$(9/2^+)$			5108	100 *8*	4741.1	$(9/2^+)$	10131		4478	100 *10*	5652.2	$9/2^+$
		5437	49 *12*	4079.9	$7/2^+$	9943		3162	35 *10*	6781.1	$(11/2^-)$			5389	56 *10*	4741.1	$(9/2^+)$
		7487	66 *15*	2028.16	$5/2^+$			5201	100 *10*	4741.1	$(9/2^+)$	10170		4914	100	5254.4	$(9/2^-)$
9667		4411	100	5254.4	$(9/2^-)$			5862	59 *10*	4079.9	$7/2^+$	10213		6133.8	100	4079.9	$7/2^+$
9683		4941	100	4741.1	$(9/2^+)$	9952		3335	100	6615	$(9/2^+)$	10236		4583	100	5652.2	$9/2^+$
9765		3150	16 *4*	6615	$(9/2^+)$	9987		3205	100 *9*	6781.1	$(11/2^-)$	10252		7183	100	3067.13	$5/2^+$
		4478	60 *9*	5284.7	$7/2^+$			4731	69 *9*	5254.4	$(9/2^-)$						
		5023	100 *9*	4741.1	$(9/2^+)$	10006		7975	100	2028.16	$5/2^+$						

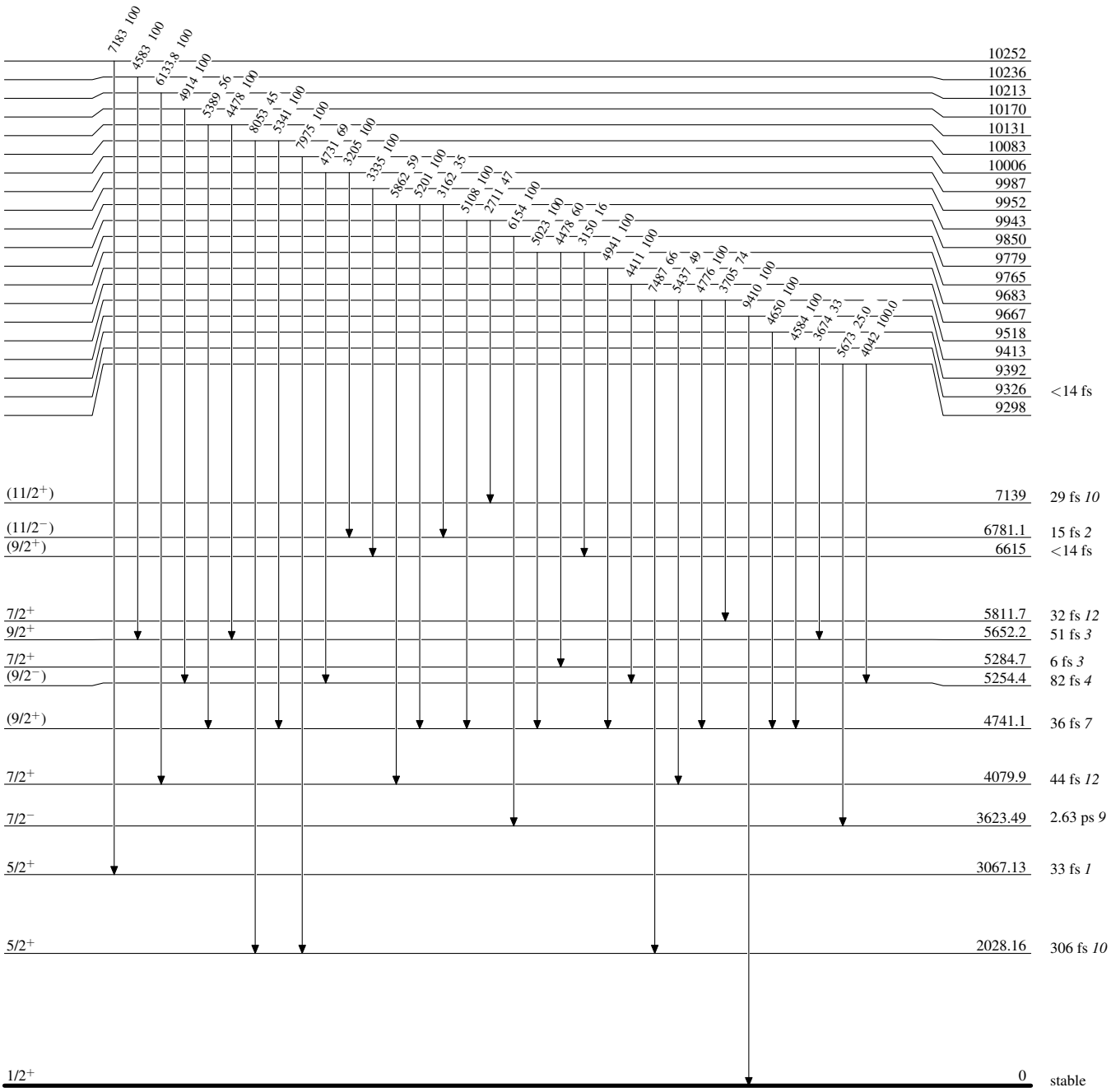
† Calculated by the evaluator from level energy differences, E_i-E_f and recoil energy subtracted, except otherwise noted.
‡ From ^{29}Al β^- decay.
# From (α,nγ).
@ From (n,γ) E=31.7,55.9 keV.
& From ^{28}Si(n,γ) E=thermal.
[a] From ^{28}Si(d,p),(d,pγ), except otherwise noted.
[b] Mainly from 1982Be52. In some cases, from 1969Ha51, 1976Ke04, 1967Be29.
[c] From ^{28}Si(d,p),(d,pγ).
[d] From ^{26}Mg(α,nγ) dataset, except otherwise noted. In some cases, parity of multipole radiation is assigned by the evaluator based on the RUL. In a few cases the calculated value of B(M1)(W.u) are slightly larger by 2 or 3 sigma compared to the RUL.
[e] From ^{28}Si(d,p),(d,pγ) dataset.
[f] Assigned by the evaluator based on the reported mixing ratio and or from J^π assignments of the initial and final levels and the RUL. In a few cases the calculated value of B(M1)(W.u) are slightly larger by 2 or 3 sigma to the RUL.
[g] Weighted average of data from 1970Ma49, 1960Li12, 1971Sp02, 1971Ba73, 1973Vi05, and 1974Vi01, except otherwise noted.
[h] From 1960Li12.
[i] From 1982Be52.
[j] From 1974Vi01.

$^{29}_{14}Si_{15}$-11

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

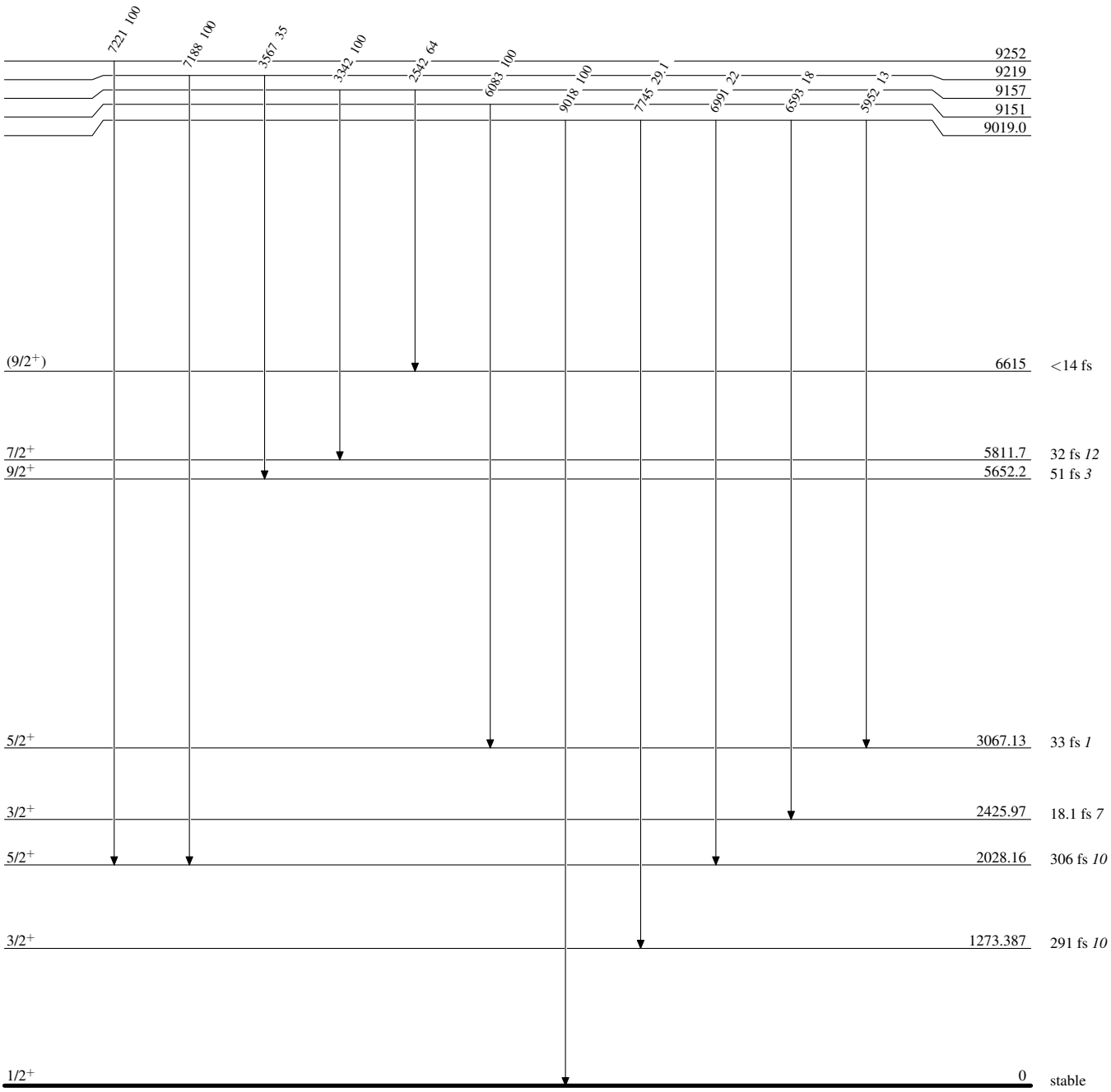


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

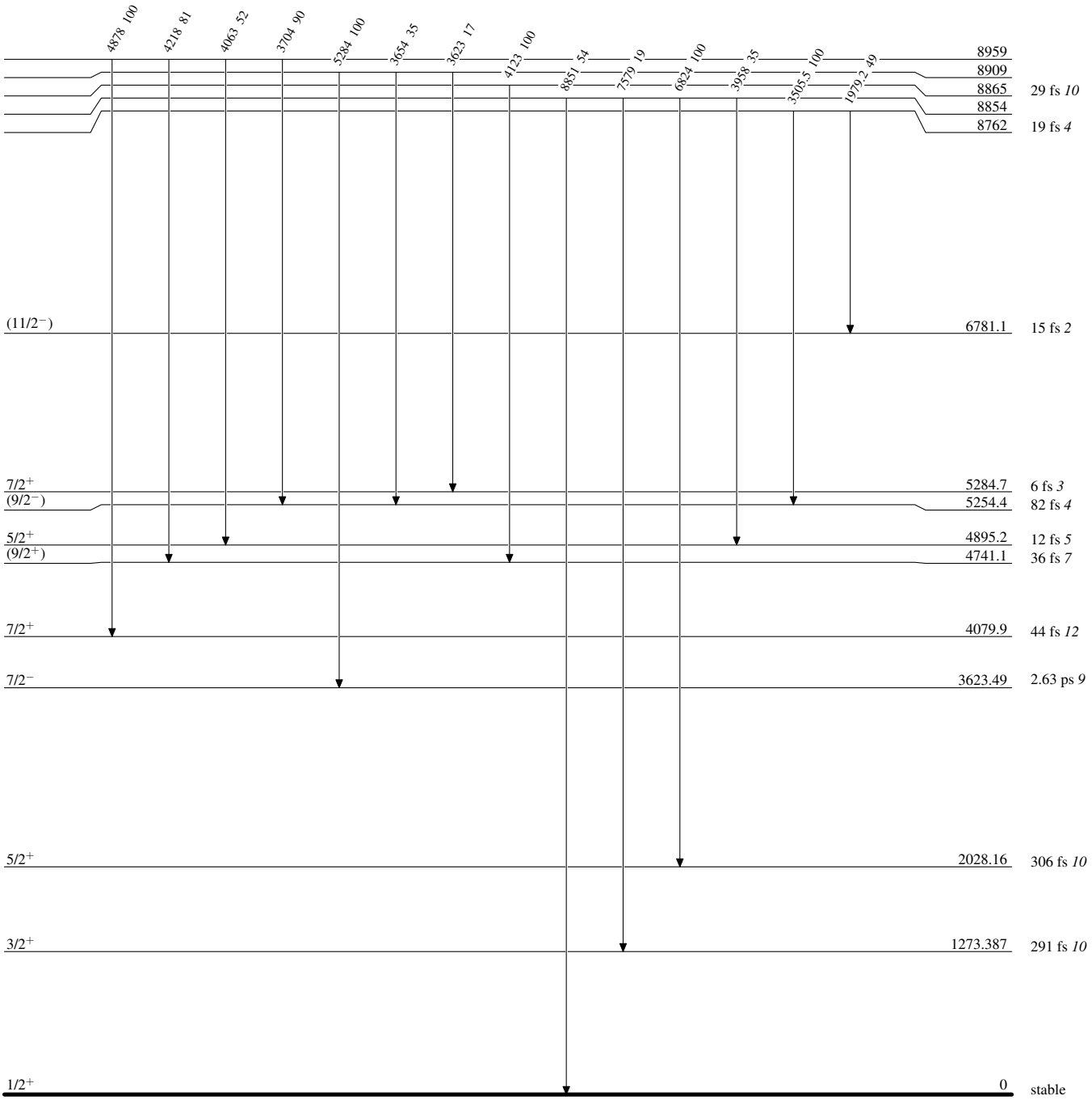


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

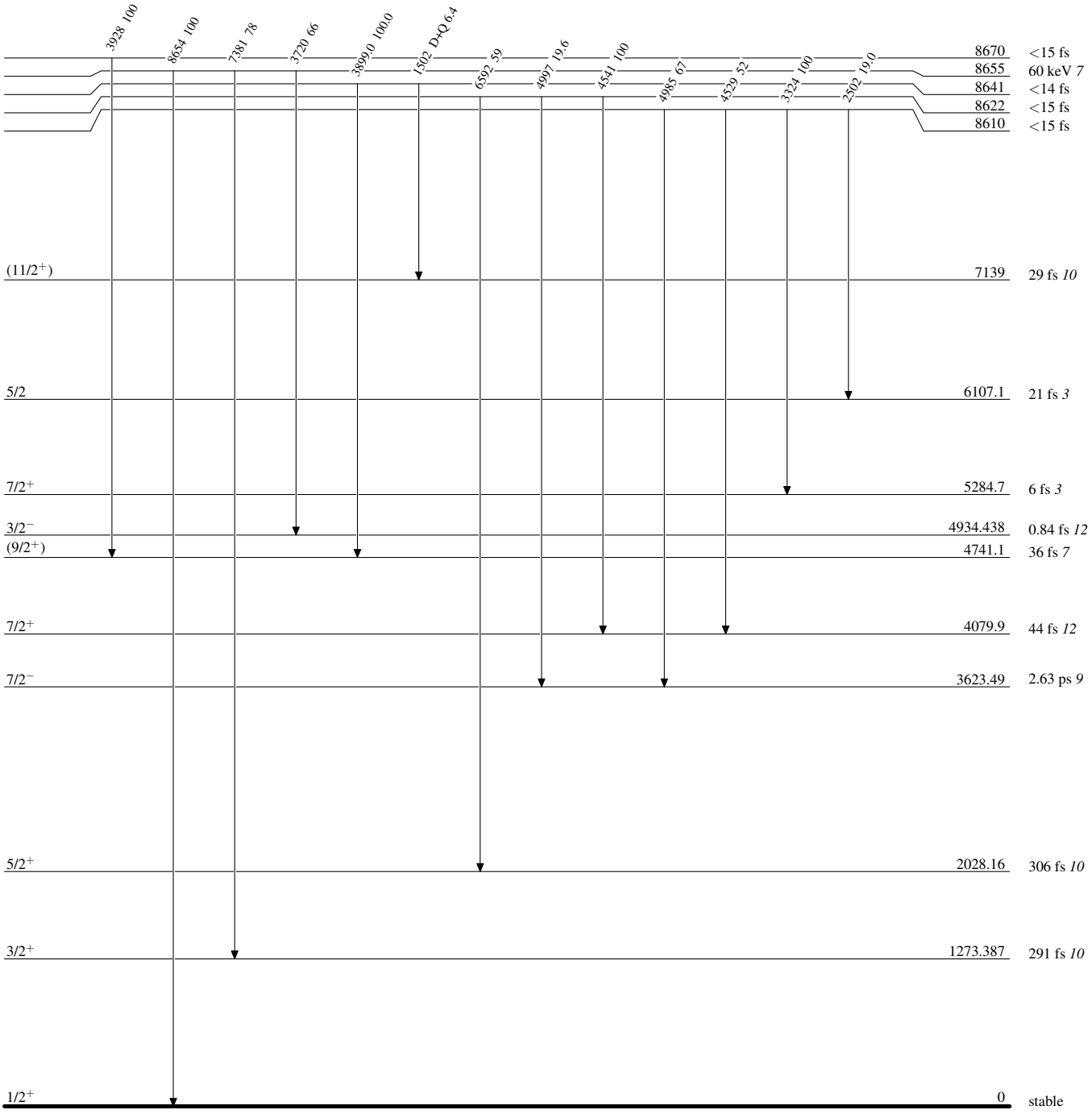


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

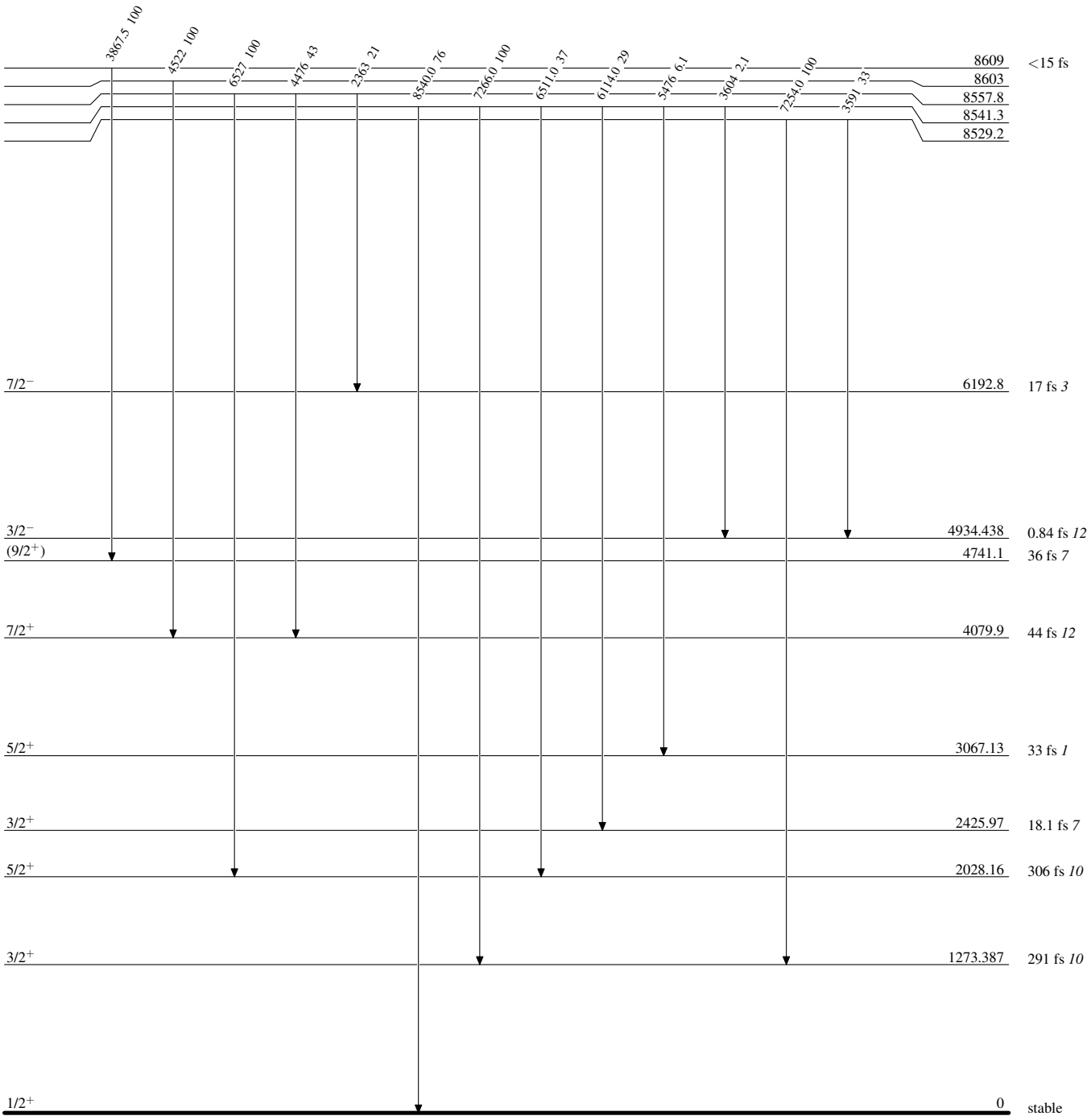


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

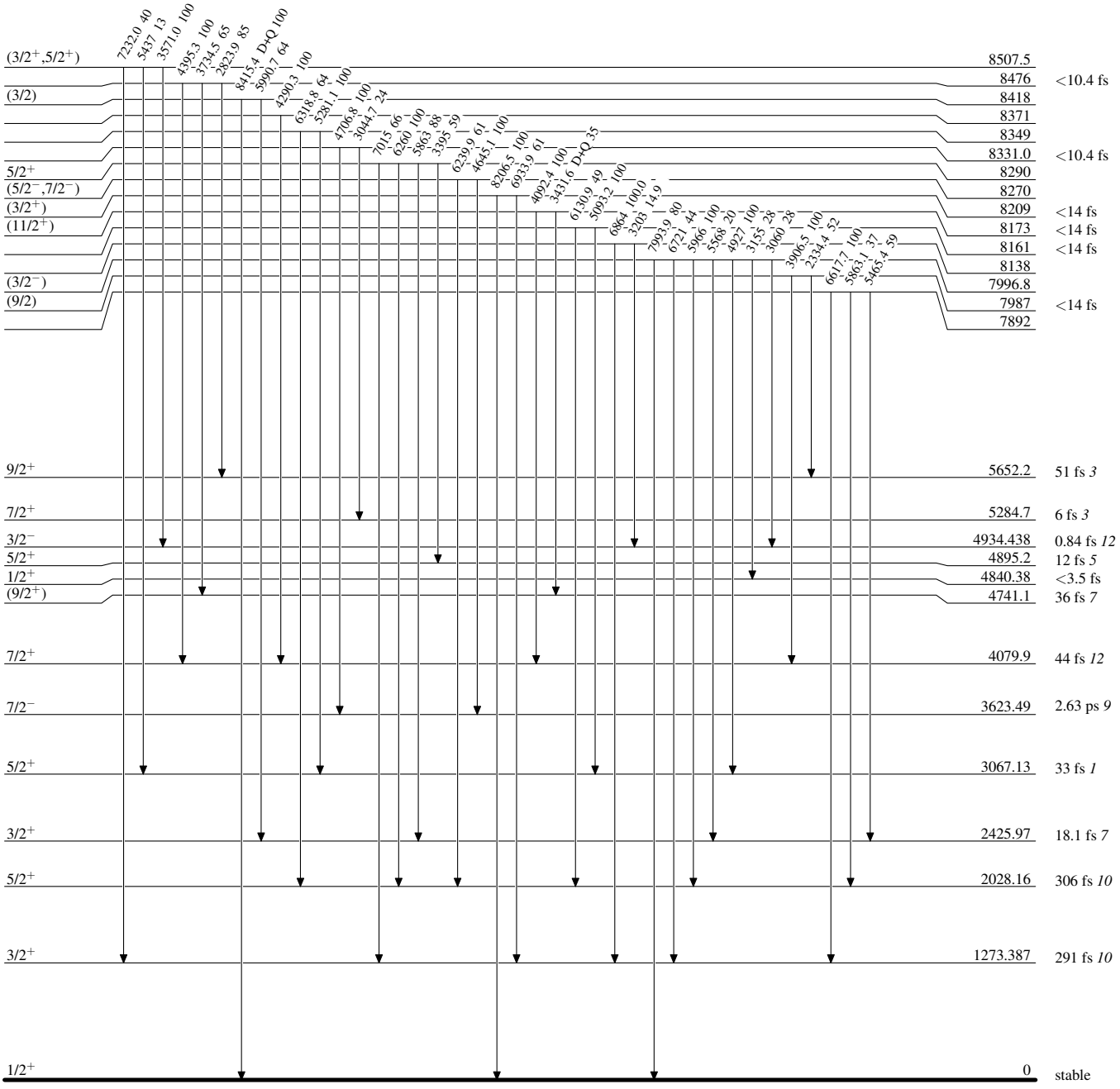


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

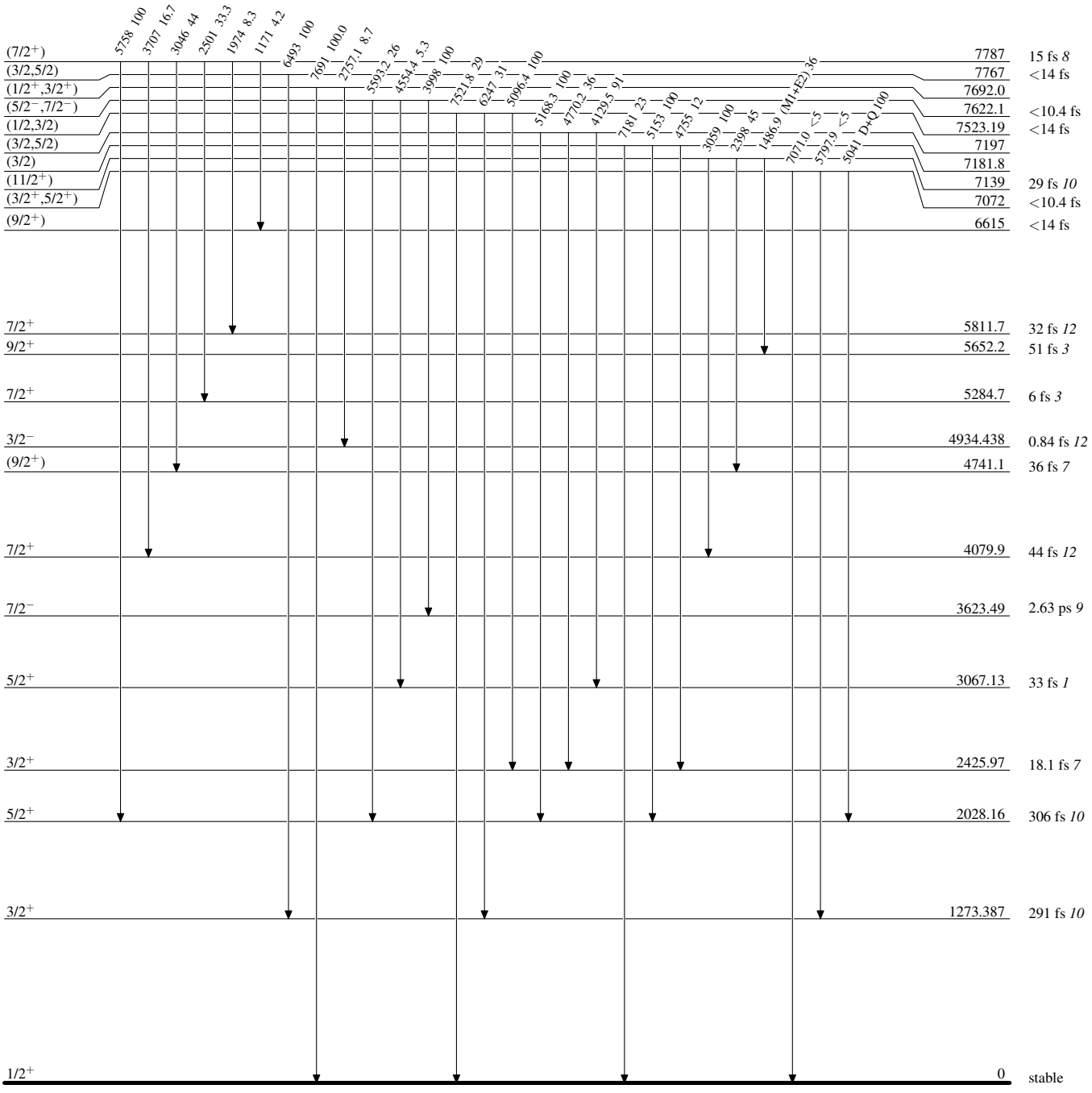


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

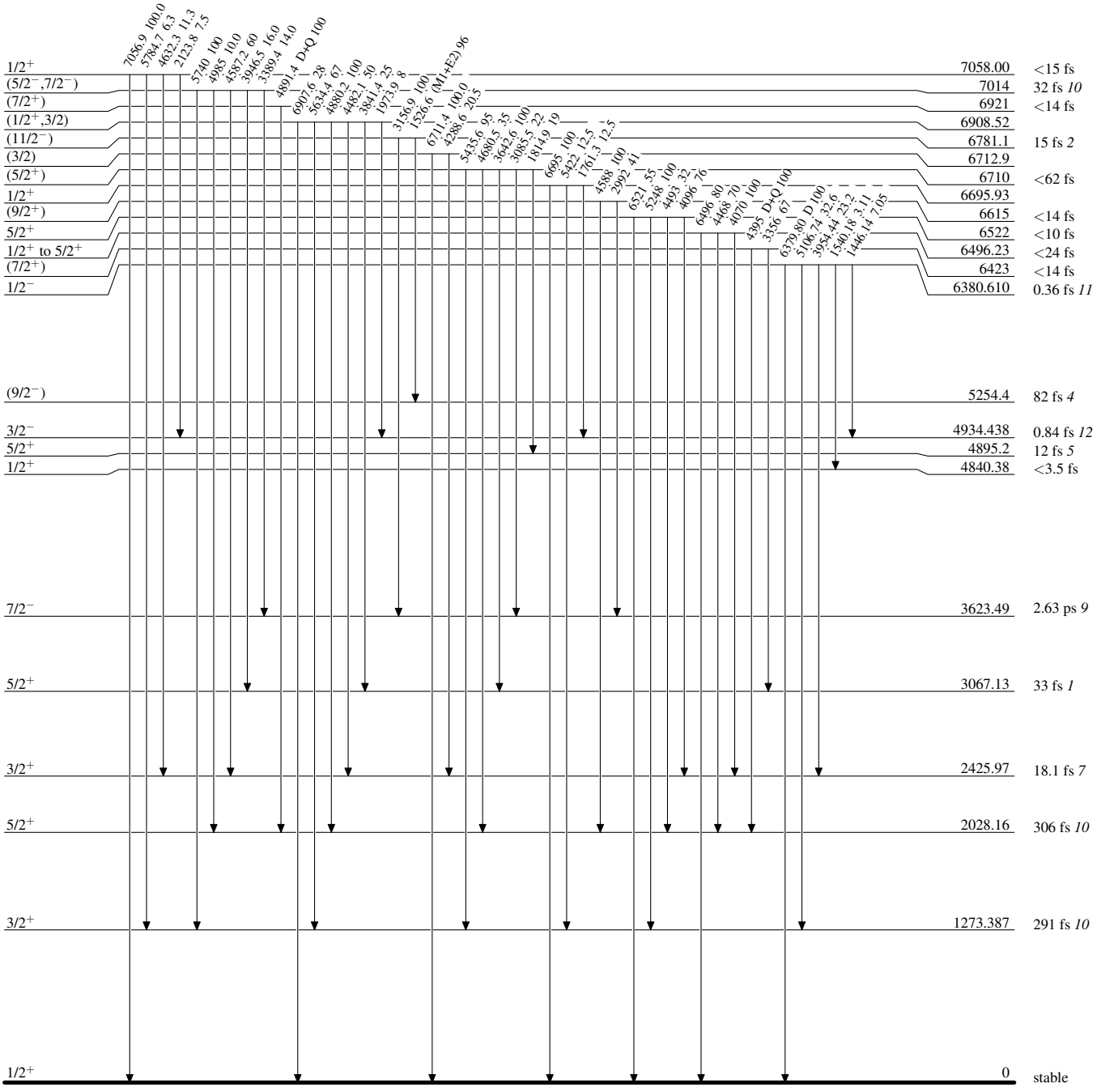


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

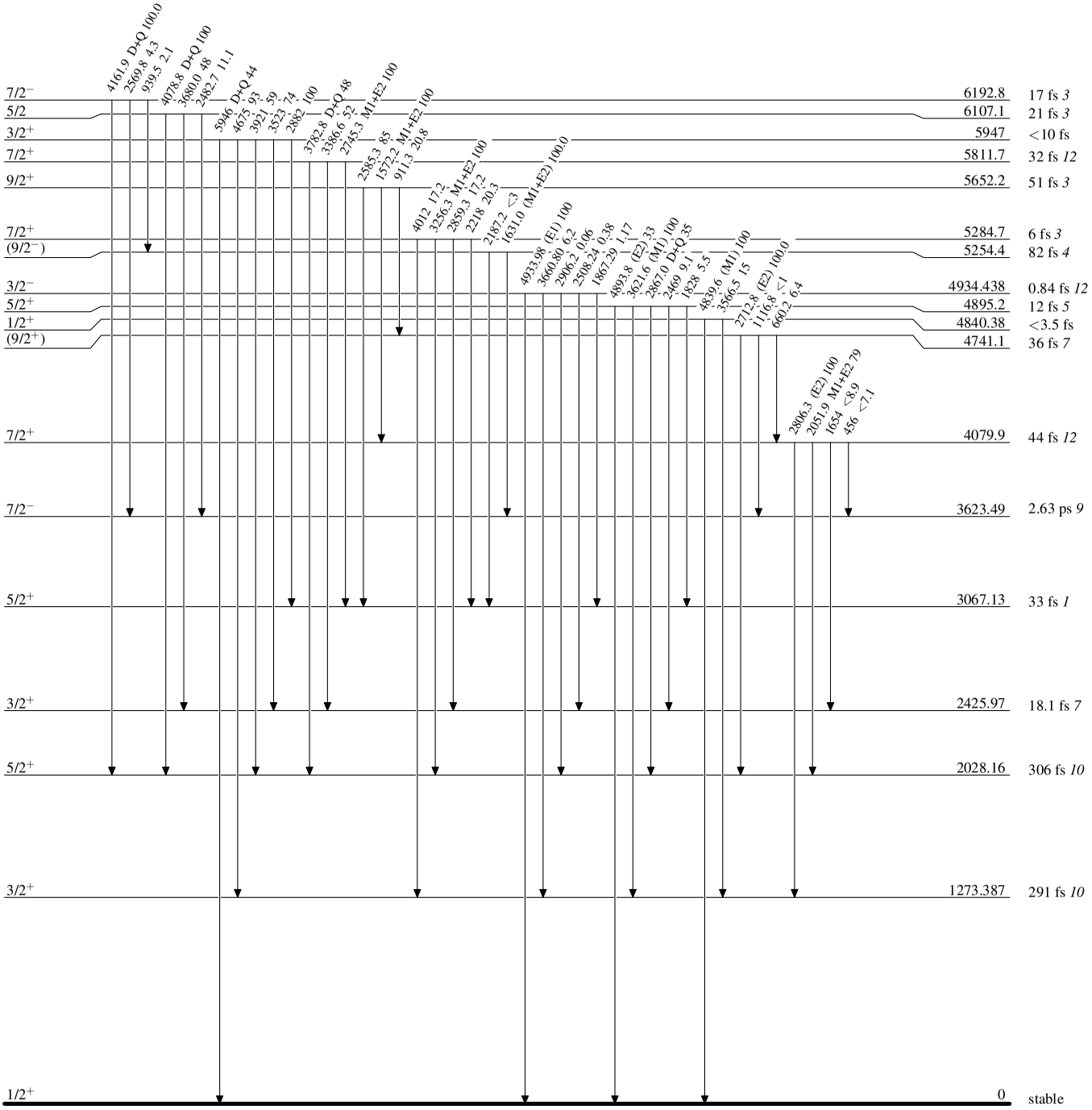


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

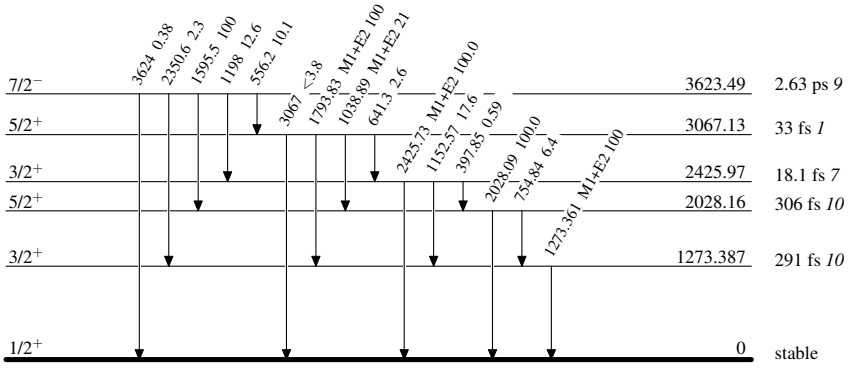


$^{29}_{14}Si_{15}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{29}_{14}Si_{15}$