Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Tilley, Weller, Cheves, Chasteler	NP A595,1 (1995)	31-Oct-1994

Q(β^-)=−3239.50 *16*; S(n)=10431.9 *5*; S(p)=7994; Q(α)=−4014 2012Wa38
Note: Current evaluation has used the following Q record $−3238.36 *5710432*.16607994.30 *79* 1993Au05.

^{19}F Levels

Cross Reference (XREF) Flags

A	^{12}C(^{9}Be,d)	R	^{17}O(^{3}He,p)	AH	^{19}F(^{3}He,^{3}He)
B	^{12}C(^{11}B,α), ^{12}C(^{12}C,αp)	S	^{17}O(α,d)	AI	^{19}F(α,α)
C	^{13}C(^{9}Be,t)	T	^{18}O(p,γ)	AJ	^{19}F(^{6}Li,^{6}Li), ^{19}F(^{7}Li,^{7}Li)
D	^{14}N(^{7}Li,d), ^{14}N(^{12}C,^{7}Be)	U	^{18}O(p,n)	AK	^{19}F(^{12}C,^{12}C)
E	^{15}N(α,γ)	V	^{18}O(p,p)	AL	^{19}F(^{14}N,^{14}N), ^{19}F(^{15}N,^{15}N)
F	^{15}N(α,p), ^{15}N(α,α)	W	^{18}O(p,α)	AM	^{19}F(^{16}O,^{16}O), ^{19}F(^{18}O,^{18}O)
G	^{15}N(^{6}Li,d)	X	^{18}O(d,n)	AN	^{19}F(^{23}Na,^{23}Na)
H	^{15}N(^{7}Li,t)	Y	^{18}O(^{3}He,d)	AO	^{19}F(^{24}Mg,^{24}Mg)
I	^{15}N(^{11}B,^{7}Li)	Z	^{18}O(α,t)	AP	^{19}F(^{27}Al,^{27}Al), ^{19}F(^{28}Si,^{28}Si)
J	^{15}N(^{13}C,^{9}Be)	Others:		AQ	^{19}F(^{40}Ca,^{40}Ca)
K	^{16}O(t,X)	AA	^{19}O β^- decay	AR	^{19}Ne β^+ decay
L	^{16}O(α,p)	AB	^{19}F(γ,γ)	AS	^{20}Ne(d,^{3}He)
M	^{16}O(^{6}Li,^{3}He)	AC	^{19}F(e,e′)	AT	^{20}Ne(t,α)
N	^{16}O(^{7}Li,α)	AD	^{19}F(n,X)	AU	^{21}Ne(p,^{3}He)
O	^{16}O(^{11}B,^{8}Be)	AE	^{19}F(p,p′), ^{19}F(p,X)	AV	^{22}Ne(p,α)
P	^{16}O(^{12}C,^{9}B), ^{16}O(^{13}C,^{10}B)	AF	^{19}F(d,d′)		
Q	^{17}O(d,t)	AG	^{19}F(t,t′)		

E(level)	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	1/2$^+$	stable	E GH KLMNOPQRST XYZ	XREF: Others: AA, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV T=1/2
109.894 *5*	1/2$^-$	0.591 ns *7*	E G K MN R T Y	XREF: Others: AA, AB, AC, AD, AF, AI, AR, AT, AV
197.143 *4*	5/2$^+$	89.3 ns *10*	DE H KLMN RST YZ	XREF: Others: AA, AC, AD, AE, AF, AI, AK, AM, AR, AT g=1.441 *3*
1345.67 *13*	5/2$^-$	2.86 ps *4*	E GH LMN R T Y	XREF: Others: AA, AC, AD, AE, AF, AJ g=0.27 *4*
1458.7 *3*	3/2$^-$	62 fs *14*	GH MN R Y	XREF: Others: AB, AC, AD, AE, AF, AI, AM, AT
1554.038 *9*	3/2$^+$	3.5 fs *21*	E LMN RST XYZ	XREF: Others: AA, AC, AD, AE, AF, AI, AK, AM, AR, AT
2779.849 *34*	9/2$^+$	194 fs *21*	ABC E H J LMN P RS XY	XREF: Others: AC, AD, AE, AI, AK, AM, AS, AT
3908.17 *20*	3/2$^+$	6 fs *3*	E MN R T Y	XREF: Others: AA, AB, AC, AE, AI, AT
3998.7 *7*	7/2$^-$	13 fs *5*	K MN R XYZ	XREF: Others: AC, AE, AI, AT
4032.5 *12*	9/2$^-$	46 fs *10*	E H LMN R X	XREF: Others: AC, AE, AI, AT
4377.700 *42*	7/2$^+$	<7.6 fs	B E LMN RST XY	XREF: Others: AA, AC, AE, AI, AT
4549.9 *8*	5/2$^+$	<35 fs	E MN R T	XREF: Others: AC, AE, AI, AT
4556.1 *5*	3/2$^-$	12 fs *6*	E MN T XY	XREF: Others: AC, AE, AI, AT
4648 *1*	13/2$^+$	2.6 ps *3*	B LMN RST	XREF: Others: AC, AI, AT
4682.5 *7*	5/2$^-$	10.7 fs *21*	B E M P R T XY	XREF: Others: AC, AE, AI, AT %α=?
5106.6 *9*	5/2$^+$	<21 fs	B E MN R T XY	XREF: Others: AC, AE, AI, AT %α=?

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Adopted Levels, Gammas (continued)

^{19}F Levels (continued)

E(level)	J^{π}	$T_{1/2}$	XREF	Comments
5337 *2*	$1/2^{(+)}$	≤0.07 fs	E MN R T YZ	XREF: Others: AC, AE, AI, AT %α=?
5418 *1*	$7/2^{-}$	2.6 eV *7*	B E M R T YZ	XREF: Others: AC, AE, AI %α=?
5463.5 *15*	$7/2^{+}$	≤0.18 fs	B E H LMN RST	XREF: Others: AC, AE, AI %α=?
5500.7 *17*	$3/2^{+}$	4 keV *1*	EF N R T Z	XREF: Others: AC, AE, AI %α=?
5535 *2*	$5/2^{+}$		E R T Z	XREF: Others: AC, AE, AI, AT %α=?
5621 *1*	$5/2^{-}$	<0.9 fs	E R T XY	XREF: Others: AC, AE, AI, AS, AT %α=?
5938 *1*	$1/2^{+}$		E T XYZ	XREF: Others: AC, AE, AT %α=?
6070 *1*	$7/2^{+}$	1.2 keV	B E R	XREF: Others: AC, AE %α=?
6088 *1*	$3/2^{-}$	4 keV	E H MN R T	XREF: Others: AC, AE, AT %α=?
6100 *2*	$9/2^{-}$		B TU	
6160.6 *9*	$7/2^{-}$	3.7 eV *10*	B E T Z	XREF: Others: AC, AE, AT %α=?
6255 *1*	$1/2^{+}$	8 keV	F R T XYZ	XREF: Others: AC, AE, AT %α=100
6282 *2*	$5/2^{+}$	2.4 keV	EF L R T X Z	XREF: Others: AC, AE %α=?
6330 *2*	$7/2^{+}$	2.4 keV	B EF H R	XREF: Others: AC, AE %α=?
6429 *8*	$1/2^{-}$	280 keV	F	XREF: Others: AC %α=100
6496.7 *14*	$3/2^{+}$		E N ST YZ	XREF: Others: AC %α=?
6500.0 *9*	$11/2^{+}$	>2.4 eV	B E N R T	XREF: Others: AC %α=?
6527.5 *14*	$3/2^{+}$	4 keV	E L N R T	XREF: Others: AC %α=?
6554 *2*	$7/2^{(+)}$	1.6 keV	E R	XREF: Others: AC %α=?
6592 *2*	$9/2^{+}$	7.6 eV *18*	B E L R T Y	XREF: Others: AC %α=?
6787 *2*	$3/2^{-}$	6.9 eV *11*	EF R T Y	XREF: Others: AC %α=?
6838.4 *9*	$5/2^{+}$	1.2 keV	EF R TU	%α=?
6891 *4*	$3/2^{-}$	28 keV	EF R	XREF: Others: AC %α=?
6926.5 *17*	$7/2^{-}$	2.4 keV	B EF H LM R T YZ	XREF: Others: AC %α=?
6989 *3*	$1/2^{-}$	51 keV	EF R T X	XREF: Others: AC, AN %α=100
7114 *6*	$7/2^{+}$	32 keV	F Y	XREF: Others: AC %α=100
7166.2 *7*	$11/2^{-}$	6.9 eV *11*	B E T	XREF: Others: AC %α=?
7262 *2*	$3/2^{+}$	<6 keV	F LMN T XY	XREF: Others: AC, AK %α=100
7364 *4*	$1/2^{+}$		N T XYZ	XREF: Others: AC %α=100

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Adopted Levels, Gammas (continued)

^{19}F Levels (continued)

E(level)	J^{π}	$T_{1/2}$	XREF	Comments
7539.6 *9*	$5/2^+$	0.16 keV *5*	EF H L T YZ	XREF: Others: AC %α=? T=3/2
7560 *10*	$7/2^+$	<90 keV	F	%α=100
7587	$(5/2^-)$			XREF: Others: AC
7660.6 *9*	$3/2^+$	2.2 eV *7*	EF T YZ	XREF: Others: AB, AC, AU %α=? T=3/2
7702 *5*	$1/2^-$	<30 keV	F L T Y	XREF: Others: AC %α=100
7740 *40*	$(5/2,7/2)^-$	<6 keV		XREF: Others: AC, AK
7900		<200 keV	F	%α=100 Level uncertain.
7929 *3*	$7/2^+$,9/2		E L N	%α=?
7937 *3*	$11/2^+$		E S	%α=?
8014.0 *10*	$5/2^+$		YZ	%p=100
8084 *3*		<3 keV	F W Y	%p=?; %α=?
8137.7 *12*	$1/2^+$	≤0.3 keV	F T WXY	%p=?; %α=?
8160		<50 keV	F	%α=100 Level uncertain.
8199.0 *10*	$(5/2^+)$	<0.8 keV	F T W Y	%p=?; %α=?
8254.3 *26*	$(5/2,7/2)^-$	≤1.5 keV	T Y	XREF: Others: AK %p=?
8288 *2*	$13/2^-$	<1 keV	B EFGHIJ LM	%α=?
8310.0 *12*	$5/2^+$	0.047 keV *19*	E T W Y	%p=?; %α=?
8370 *4*	$7/2,5/2^+$	7.5 keV *15*	E	%α=?
8583.5 *16*	$5/2^+$	≤0.5 keV	E T	%p=?; %α=?
8591.9 *10*	$3/2^-$	2.0 keV *1*	E L T VW Y	%p=?; %α=?
8629 *4*	$7/2^-$	<1 keV	B EF	XREF: Others: AK %α=?
8650	$1/2^+$	≈300 keV	T VW	%p=?; %α=?
8793.2 *15*	$1/2^+$	46 keV *2*	T VW YZ	%p=? T=3/2
8864 *4*	≤7/2	≈1 keV	E	%α=?
8926.7 *28*	$3/2^-$	3.6 keV *2*	LM T VW	%p=?; %α=?
8953 *3*	$11/2^-$	≈1 keV	EFGHIJ	%α=?
9030 *5*	5/2,7/2	4.2 keV *10*	E	%α=?
9099.7 *7*	$7/2^-$	0.57 keV *3*	E T VW	%p=?; %α=?
9101 *4*	$7/2^+$,$9/2^+$	≈1 keV	B E Y	%α=?
9167.0 *14*	$1/2^+$	6.2 keV *5*	E VW Y	%p=?; %α=?
9204 *7*	3/2	10.2 keV *15*	E	%α=?
9267 *4*	$11/2^+$,$9/2^+$	2 keV *1*	E	%α=?
9280 *5*	$(7/2,9/2)^+$	<1.5 keV	E	XREF: Others: AK %α=?
9318 *2*	$3/2^+$	3.4 keV *7*	E L T	%p=?; %α=?
9321.0 *11*	$1/2^+$	5.0 keV *2*	VW	%p=?; %α=?
9329 *4*	≤3/2	≈6 keV	E	%α=?
9509 *4*	$5/2^+$,$7/2^+$	<1 keV	EF	%α=?
9527 *6*	(5/2)	28 keV	VW	%p=?; %α=?
9536.4 *20*	$5/2^+$	6.3 keV *15*	E T	%p=?; %α=?
9566 *3*	$3/2^-$	26 keV *3*	T	%p=?
9575 *4*	$3/2^-$	67 keV *3*	T VW	%p=?; %α=?
9586 *3*	7/2	8.9 keV *12*	E T Y	%p=?; %α=?
9642 *6*	3/2,5/2	≈8 keV	E	%α=?
9654 *6*	3/2,5/2	≈6 keV	E	%α=?
9667.5 *15*	$3/2^+$	3.6 keV *4*	E T VW Y	%p=?; %α=?

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Adopted Levels, Gammas (continued)

^{19}F Levels (continued)

E(level)	J^{π}	$T_{1/2}$	XREF	Comments
9710 *4*	$9/2^{+},11/2^{-}$	<1 keV	C EF L	%α=?
9820.0 *10*	$5/2^{-}$	0.30 keV *5*	E T VW	%p=?; %α=?
9834 *3*	11/2,13/2,15/2	<1 keV	C EF	%α=?
9874.0 *18*	$11/2^{-}$	2.6 eV *6*	C EF LM T	%p=?; %α=?
9887 *3*	$1/2^{+}$	25 keV *2*	T VW	%p=?; %α=?
9895 *5*			B	
9926 *3*	$9/2^{+}$	≈1 keV	B EF	%α=? T=3/2
10088 *5*	$5/2^{-},7/2^{-}$	<1.5 keV	EF H	%α=?
10137 *8*	$3/2^{-}$	4.3 keV *6*	E T W	%α=?; %p=?
10162 *3*	$1/2^{+}$	31 keV	VW	%p=?; %α=?
10232 *3*	$1/2^{+}$	<1 keV	F VW	%p=?; %α=?
10254 *3*	$1/2^{+}$	22 keV	VW	%p=?; %α=?
10308 *4*	$3/2^{+}$	9.2 keV	F N VW	%p=?; %α=?
10365 *4*	7/2,9/2,11/2	3.0 keV *15*	B E Y	%α=?
10411 *3*	$13/2^{+}$	<1.5 keV	B EF H LMN T	XREF: Others: AS %α=?
10469 *4*		11.0 keV *12*	F	%p=?; %α=?
10488 *4*		4.8 keV *8*	F	%p=?; %α=?
10496.3 *13*	$3/2^{+}$	5.7 keV *6*	F UVW	%p=?; %α=?; %n=?
10521 *4*		14 keV *2*	F Y	%p=?; %α=?
10542.3 *11*		2.5 keV *2*	F U	%p=?; %α=?; %n=?
10555 *3*	$3/2^{+}$	4.0 keV *12*	F VW	%p=?; %α=? T=(3/2)
10564.7 *20*		4.6 keV *7*	F U	%p=?; %α=?; %n=?
10581 *4*	$(5/2^{+})$	22 keV *3*	VW	%p=?; %α=?
10614.3 *16*	$5/2^{+}$	4.7 keV *5*	UVW	%p=?; %α=?; %n=? T=3/2
10763.3 *25*	$1/2^{-}$	6 keV *3*	L UVW	%p=?; %α=?; %n=?
10859.7 *19*	$5/2^{+}$	240.0 keV *15*	UVW	%p=?; %α=?; %n=?
10927 *8*			B	
10975.0 *25*	$(3/2,5/2)^{+}$	14 keV *2*	UVW	%p=?; %α=?; %n=?
10989.0 *25*		7 keV *2*	U	%p=?; %n=?
11072.0 *27*	$1/2^{+}$	35 keV *4*	UVW	%p=?; %α=?; %n=?
11188 *4*	$(1/2^{-})$	17 keV *4*	UVW	%p=?; %α=?; %n=?
11273 *3*		7 keV *2*	U	%p=?; %n=?
11286 *7*	$5/2^{+}$	22 keV *5*	UVW	%p=?; %α=?; %n=?
11350 *25*	$1/2^{+}$	272 keV *31*	V	%p=100
11450.0 *35*	$1/2^{-}$	38 keV *7*	L UVW	%p=?; %α=?; %n=?
11478 *5*		7 keV *3*	U	%p=?; %n=?
11502 *5*	$(3/2^{-})$	4 keV *2*	UVW	%p=?; %α=?; %n=?
11540 *7*	$5/2^{+}$	22 keV *5*	UVW	%p=?; %α=?; %n=?
11569 *7*		15 keV *10*	U	%p=?; %n=? T=(3/2)
11603 *12*	$3/2^{-}$	63 keV *7*	UV	%p=?; %n=?
11653 *4*	$3/2^{+}$	33 keV *6*	H L UVW	%p=?; %α=?; %n=? T=(3/2)
11840 *10*		<50 keV	U	%p=?; %n=?
11930 *10*		90 keV	U	%p=?; %n=?
12040 *20*	$1/2^{-}$	71 keV *24*	H VW	%p=?; %α=?
12136 *8*	$3/2^{-}$	105 keV *14*	UVW	%p=?; %α=?; %n=? T=3/2
12222 *12*	$3/2^{+}$	74 keV *1*	UVW	%p=?; %α=?; %n=?
12522 *7*	$1/2^{-}$	15 keV *4*	V	%p=100
12577 *10*	$5/2^{+}$	48 keV *10*	VW	%p=?; %α=?
12580 *25*	$1/2^{-}$	285 keV *48*	V	%p=100

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Adopted Levels, Gammas (continued)

^{19}F Levels (continued)

E(level)	J^{π}	$T_{1/2}$	XREF	Comments
				T=3/2
12780 *10*	$5/2^{+}$	95 keV *38*	L UVW	%p=?; %α=?; %n=?
				T=3/2
12860 *30*	$3/2^{+}$	276 keV *38*	V	%p=100
				T=3/2
12940 *25*	$5/2^{+}$	71 keV *24*	VW	%p=?; %α=?
12980 *50*	$1/2^{-}$	124 keV *38*	V	%p=100
13068 *4*	$1/2^{+}$	≤10 keV	K U	%n=?; %p=?
				%T=?
13090 *75*	$3/2^{-}$	285 keV *71*	V	%p=100
13170 *15*		70 keV	U	%p=?; %n=?
13245 *10*	$1/2^{-}$	7 keV	K	%T=100.
13270 *10*	$1/2^{+}$	4.5 keV	K	%T=100.
13317 *8*	$7/2^{-}$	28 keV *6*	UVW Z	%p=?; %α=?; %n=?
				T=(3/2)
13360 *25*	$3/2^{-}$	38 keV *19*	V	%p=100
13532 *10*	$1/2^{+}$	22 keV	K	%T=100.
13732 *11*	$7/2^{-}$	52 keV *10*	M UVW Z	%p=?; %α=?; %n=?
				T=3/2
13878 *15*	$1/2^{+}$	101 keV	K	%T=100.
14040 *20*	$5/2^{+}$	141 keV *28*	V	%p=100
14100 *21*	$3/2^{-}$	84 keV *28*	H M V	%p=100
14147 *20*	$1/2^{+}$	21 keV	K	%T=100.
14240 *15*		350 keV	U	%p=?; %n=?
14255 *15*	$3/2^{+}$	51 keV	K	%T=?
14330 *20*	$3/2^{-}$	76 keV *28*	V	%p=100
14352 *10*	$1/2^{+}$	154 keV	K	%T=100.
14460 *25*	$3/2^{+}$	179 keV	K	%T=100.
14460 *25*	$5/2^{+}$	46 keV	K	%T=100.
14700 *20*	$3/2^{-}$	124 keV *38*	V	%p=100
14720 *70*	$1/2^{-}$	257 keV *67*	W	%α=100
14740 *50*	$1/2^{+}$	361 keV *67*	VW	%p=?; %α=?
14780 *20*	$5/2^{+}$		UV	%p=?; %n=?
14920 *30*	$7/2^{-}$		H M V	%p=100
15000 *20*			U	%p=?; %n=?
15360 *20*	$1/2^{-}$		V	%p=100
15400 *30*	$5/2^{+}$		V	%p=100
15560 *30*			M	
15770 *21*	$3/2^{-}$	150 keV	U	%p=?; %n=?
16090 *50*			H	
16200 *40*	$3/2^{+}$		V	%p=100
16230 *30*	$7/2^{-}$		V	%p=100
16280 *20*	$3/2^{-}$	200 keV	UV	%p=?; %n=?
16450 *50*			H	
16800 *30*			U	%p=?; %n=?
17050 *40*	$3/2^{-}$	331 keV *67*	V	%p=100
17160 *40*	$7/2^{-}$	323 keV *67*	V	%p=100
17450 *30*	$3/2^{-}$	32 keV *19*	H V	%p=100
17650 *60*	$7/2^{-}$	95 keV *57*	V	%p=100
17930 *40*	$3/2^{-}$	255 keV *57*	V	%p=100
18030 *60*	$7/2^{-}$	365 keV *57*	H V	%p=100
18920 *30*			H	
19070 *60*	$3/2^{-}$	56×10^{1} keV *14*	V	%p=100
1983×10^{1} *15*	$5/2^{-}$	369 keV *57*	V	%p=100
19890 *30*	$3/2^{-}$	473 keV *57*	H V	%p=100
20810 *50*	$1/2^{-}$	412 keV *57*	V	%p=100

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Adopted Levels, Gammas (continued)

^{19}F Levels (continued)

E(level)	J^π	$T_{1/2}$	XREF	Comments
20930 *50*	$3/2^-$	317 keV *48*	V	%p=100
21050 *40*	$7/2^-$	448 keV *29*	V	%p=100

$\gamma(^{19}F)$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
109.894	$1/2^-$	109.9	100	0.0	$1/2^+$	E1		B(E1)(W.u.)=0.0012 *1*
197.143	$5/2^+$	87.3	<0.06	109.894	$1/2^-$			
		197.1	100	0.0	$1/2^+$	E2		B(E2)(W.u.)=6.95 *8*
1345.67	$5/2^-$	1148.5	3.2 *10*	197.143	$5/2^+$	E1		B(E1)(W.u.)=0.0000069 *23*
		1235.8	96.8 *10*	109.894	$1/2^-$	E2+(M3)	0.0 *7*	B(E2)(W.u.)=21.6 *4*
1458.7	$3/2^-$	113.0	<0.2	1345.67	$5/2^-$			
		1261.6	10.7 *5*	197.143	$5/2^+$	E1		B(E1)(W.u.)=0.00081 *19*
		1348.8	68.8 *9*	109.894	$1/2^-$	M1+E2	0.248 *20*	
		1458.7	20.5 *7*	0.0	$1/2^+$	E1+(M2)	0.01 *3*	B(E1)(W.u.)=0.0010 *2*
1554.038	$3/2^+$	95.3	<0.14	1458.7	$3/2^-$			
		208.4	<0.011	1345.67	$5/2^-$			
		1356.9	92.6 *2*	197.143	$5/2^+$	M1		B(M1)(W.u.)=2.3 *14*
		1444.2	4.85 *12*	109.894	$1/2^-$	E1		B(E1)(W.u.)=0.0044 *26*
		1554.0	2.55 *10*	0.0	$1/2^+$	M1		B(M1)(W.u.)=0.043 *25*
2779.849	$9/2^+$	2582.7	100	197.143	$5/2^+$	E2		B(E2)(W.u.)=8.2 *9*
3908.17	$3/2^+$	2354.1	21 *3*	1554.038	$3/2^+$	M1		B(M1)(W.u.)=0.056 *33*
		3711.0	14 *2*	197.143	$5/2^+$	M1		B(M1)(W.u.)=0.0096 *53*
		3798.3	17 *2*	109.894	$1/2^-$	E1		B(E1)(W.u.)=0.00047 *26*
		3908.2	48 *2*	0.0	$1/2^+$	M1		B(M1)(W.u.)=0.12 *7*
3998.7	$7/2^-$	2540.0	12 *6*	1458.7	$3/2^-$	M1		B(M1)(W.u.)=0.012 *8*
		2653.0	70 *4*	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.062 *24*
		3801.6	18 *4*	197.143	$5/2^+$	E1		B(E1)(W.u.)=0.00023 *10*
4032.5	$9/2^-$	2686.8	100	1345.67	$5/2^-$	E2		B(E2)(W.u.)=28 *6*
4377.700	$7/2^+$	1597.9	19.5 *10*	2779.849	$9/2^+$	M1+E2	−0.16 *7*	
		4180.6	80.5 *20*	197.143	$5/2^+$	M1+E2	0.155 *22*	
		4267.8	<2	109.894	$1/2^-$			
		4377.7	<5	0.0	$1/2^+$			
4549.9	$5/2^+$	2995.9	18 *4*	1554.038	$3/2^+$			
		3091.2	8 *3*	1458.7	$3/2^-$			
		3204.2	5 *3*	1345.67	$5/2^-$			
		4352.8	69 *7*	197.143	$5/2^+$			
4556.1	$3/2^-$	3002.1	6 *3*	1554.038	$3/2^+$			
		3097.4	<4	1458.7	$3/2^-$			
		3210.4	4 *3*	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.0022 *20*
		4359.0	9 *3*	197.143	$5/2^+$	E1		B(E1)(W.u.)=0.000087 *50*
		4446.2	45 *5*	109.894	$1/2^-$	M1		B(M1)(W.u.)=0.0094 *49*
		4556.1	36 *4*	0.0	$1/2^+$	E1		B(E1)(W.u.)=0.00031 *26*
4648	$13/2^+$	1868	100	2779.849	$9/2^+$	E2		B(E2)(W.u.)=3.2 *4*
4682.5	$5/2^-$	3223.8	31.3 *22*	1458.7	$3/2^-$	M1		B(M1)(W.u.)=0.00085 *17*
		3336.8	63.1 *38*	1345.67	$5/2^-$	M1+(E2)	−0.22 *19*	B(M1)(W.u.)=0.0017 *4*
		4485.4	5.6 *9*	197.143	$5/2^+$			
5106.6	$5/2^+$	728.9	2.0 *5*	4377.700	$7/2^+$			
		1198.4	5.4 *9*	3908.17	$3/2^+$			
		2326.8	0.7 *6*	2779.849	$9/2^+$			
		3552.6	1.8 *18*	1554.038	$3/2^+$			
		3647.9	10.4 *27*	1458.7	$3/2^-$	E1		B(E1)(W.u.)=0.00004
		3760.9	<1.6	1345.67	$5/2^-$			
		5106	79.7 *37*	0.0	$1/2^+$			Branching ratio to the 0.0, 109.9 and 197.1 keV states.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

γ(^{19}F) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
5337	$1/2^{(+)}$	3878	20 *2*	1458.7	$3/2^-$			B(E1)(W.u.)=0.012 *2*; B(M1)(W.u.)=0.27 *4*
		5227	42 *4*	109.894	$1/2^-$			B(E1)(W.u.)=0.010 *2*; B(M1)(W.u.)=0.23 *4*
		5337	37 *4*	0.0	$1/2^+$			B(E1)(W.u.)=0.0083 *12*; B(M1)(W.u.)=0.19 *3*
5418	$7/2^-$	1386	6	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.12
		1419	10	3998.7	$7/2^-$	M1		B(M1)(W.u.)=0.18
		3959	13	1458.7	$3/2^-$	E2		B(E2)(W.u.)=5.8
		4072	70	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.055
5463.5	$7/2^+$	2683.7	59	2779.849	$9/2^+$			
		3909.5	5	1554.038	$3/2^+$			
		4117.8	32	1345.67	$5/2^-$			
		5266.4	4	197.143	$5/2^+$			
5500.7	$3/2^+$	3946.7	11	1554.038	$3/2^+$	M1		B(M1)(W.u.)=0.18
		4155.0	16	1345.67	$5/2^-$	E1		B(E1)(W.u.)=0.0098
		5303.6	49	197.143	$5/2^+$	M1		B(M1)(W.u.)=0.33
		5390.8	25	109.894	$1/2^-$	E1		B(E1)(W.u.)=0.0070
5535	$5/2^+$	4076	45	1458.7	$3/2^-$			
		5338	47	197.143	$5/2^+$			
		5535	7	0.0	$1/2^+$			
5621	$5/2^-$	4275	61 *4*	1345.67	$5/2^-$			
		5424	39 *4*	197.143	$5/2^+$			
5938	$1/2^+$	2030.	8 *3*	3908.17	$3/2^+$	M1+E2	0.28 *9*	
		4384	<2	1554.038	$3/2^+$			
		4479	63 *6*	1458.7	$3/2^-$	E1+M2	0.25 *2*	
		5741	2 *1*	197.143	$5/2^+$			
		5828	20 *6*	109.894	$1/2^-$			
		5938	7 *4*	0.0	$1/2^+$			
6070	$7/2^+$	1692	4 *1*	4377.700	$7/2^+$	M1		B(M1)(W.u.)=0.25 *10*
		3290	23 *3*	2779.849	$9/2^+$	M1+(E2)	0.06 *8*	B(M1)(W.u.)=0.19 *7*
		4516	1 *1*	1554.038	$3/2^+$	E2+(M3)	0.035 *23*	B(E2)(W.u.)=1.5 *13*
		4724	19 *2*	1345.67	$5/2^-$	E1		B(E1)(W.u.)=0.0022 *6*
		5873	54 *5*	197.143	$5/2^+$	M1+E2	−0.26 *2*	
6088	$3/2^-$	5891	14 *3*	197.143	$5/2^+$	E1+(M2)	0.014 *43*	B(E1)(W.u.)=0.0032 *10*
		5978	61 *5*	109.894	$1/2^-$	M1+(E2)	0.045 *21*	B(M1)(W.u.)=0.31 *7*
		6088	25 *4*	0.0	$1/2^+$	E1+(M2)	−0.021 *14*	B(E1)(W.u.)=0.0051 *14*
6160.6	$7/2^-$	2128.1	2.3 *3*	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.089 *30*
		2161.9	1.6 *6*	3998.7	$7/2^-$	M1		B(M1)(W.u.)=0.057 *33*
		4701.9	1.3 *6*	1458.7	$3/2^-$	E2		B(E2)(W.u.)=1.8 *11*
		4814.9	65 *4*	1345.67	$5/2^-$	M1+(E2)	0.077 *7*	B(M1)(W.u.)=0.021 *7*
		5963.5	31 *3*	197.143	$5/2^+$	E1+(M2)	−0.045 *25*	B(E1)(W.u.)=0.0023 *8*
6282	$5/2^+$	4728	20 *2*	1554.038	$3/2^+$	M1+(E2)	0.11 *6*	B(M1)(W.u.)=0.022 *5*
		4823	26 *2*	1458.7	$3/2^-$	E1+(M2)	−0.02 *4*	B(E1)(W.u.)=0.0012 *4*
		4936	36 *2*	1345.67	$5/2^-$	E1+(M2)	−0.01 *9*	B(E1)(W.u.)=0.0021 *5*
		6085	4.2 *10*	197.143	$5/2^+$	M1		B(M1)(W.u.)=0.0030 *11*
		6282	14 *2*	0.0	$1/2^+$	E2+(M3)	−0.05 *7*	B(E2)(W.u.)=1.9 *7*
6330	$7/2^+$	1952	18 *2*	4377.700	$7/2^+$	M1+(E2)	0.04 *20*	B(M1)(W.u.)=0.22 *6*
		4776	8.5 *15*	1554.038	$3/2^+$	E2+(M3)	0.00 *14*	B(E2)(W.u.)=2.6 *8*
		4984	17 *2*	1345.67	$5/2^-$	E1+(M2)	−0.02 *4*	B(E1)(W.u.)=0.00053 *13*
		6133	56 *3*	197.143	$5/2^+$	M1+(E2)	−0.01 *9*	B(M1)(W.u.)=0.022 *5*
6496.7	$3/2^+$	5038.0	25 *2*	1458.7	$3/2^-$	E1+(M2)	0.00 *7*	
		5151.0	14 *2*	1345.67	$5/2^-$	E1+(M2)	−0.11 *9*	
		6299.6	9 *2*	197.143	$5/2^+$	M1+(E2)	1.0 *7*	
		6386.8	14 *2*	109.894	$1/2^-$	E1+(M2)	0.00 *3*	
		6496.7	38 *2*	0.0	$1/2^+$	M1		
6500.0	$11/2^+$	1852	45	4648	$13/2^+$	M1		B(M1)(W.u.)=1.3
		3720.2	55	2779.849	$9/2^+$	M1		B(M1)(W.u.)=0.19

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{19}F)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
6527.5	$3/2^+$	1977.6	12 *2*	4549.9	$5/2^+$	M1+(E2)	−0.23 *13*	
		6417.6	59 *3*	109.894	$1/2^-$	E1+(M2)	0.00 *2*	
		6527.5	29 *2*	0.0	$1/2^+$	M1		
6554	$7/2^{(+)}$	3774	26 *3*	2779.849	$9/2^+$	M1+(E2)	0.05 *7*	
		5208	55 *4*	1345.67	$5/2^-$	E1+(M2)	0.01 *3*	
		6357	19 *2*	197.143	$5/2^+$	M1+(E2)	0.03 *5*	
6592	$9/2^+$	2214	24 *2*	4377.700	$7/2^+$	M1+(E2)	0.02 *7*	B(M1)(W.u.)=0.35 *7*
		3812	63 *3*	2779.849	$9/2^+$	M1+(E2)	−0.20 *20*	B(M1)(W.u.)=0.35 *7*
		6395	13 *2*	197.143	$5/2^+$	E2+(M3)	−0.13 *13*	B(E2)(W.u.)=1.6 *4*
6787	$3/2^-$	2879	2.6 *10*	3908.17	$3/2^+$	E1		B(E1)(W.u.)=0.012 *5*
		5328	25 *2*	1458.7	$3/2^-$	M1+(E2)	−0.13 *8*	B(M1)(W.u.)=0.44 *9*
		5441	5.3 *8*	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.086 *21*
		6590	13 *2*	197.143	$5/2^+$	E1+(M2)	0.05 *6*	B(E1)(W.u.)=0.0051 *13*
		6677	39 *2*	109.894	$1/2^-$	M1+E2	0.11 *2*	
		6787	15 *2*	0.0	$1/2^+$	E1+M2	−0.08 *3*	B(E1)(W.u.)=0.0054 *15*; B(M2)(W.u.)=3.7 *18*
6838.4	$5/2^+$	5379.7	45 *8*	1458.7	$3/2^-$	E1+(M2)	−0.02 *11*	
		5492.7	10 *7*	1345.67	$5/2^-$			
		6641.3	27 *6*	197.143	$5/2^+$	M1+E2	−0.5 *5*	
		6728.5	9 *5*	109.894	$1/2^-$			
		6838.4	9 *5*	0.0	$1/2^+$			
6891	$3/2^-$	5432	30 *5*	1458.7	$3/2^-$	M1+(E2)	0.15 *12*	B(M1)(W.u.)=0.27 *9*
		5545	61 *5*	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.53 *14*
		6891	9 *2*	0.0	$1/2^+$	E1		B(E1)(W.u.)=0.0017 *6*
6926.5	$7/2^-$	2894.0	1.3 *5*	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.063 *26*
		2927.8	1.3 *5*	3998.7	$7/2^-$	M1		B(M1)(W.u.)=0.061 *25*
		4146.7	2.4 *5*	2779.849	$9/2^+$	E1+(M2)	0.00 *16*	B(E1)(W.u.)=0.0017 *5*
		5580.8	22 *2*	1345.67	$5/2^-$	M1+(E2)	0.01 *2*	B(M1)(W.u.)=0.15 *3*
		6729.4	73 *3*	197.143	$5/2^+$	E1+(M2)	−0.01 *3*	B(E1)(W.u.)=0.012 *2*
7166.2	$11/2^-$	2518	3.5 *5*	4648	$13/2^+$	E1		B(E1)(W.u.)=0.00078 *22*
		3134	90.9 *8*	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.23 *6*
		3167.5	5.6 *7*	3998.7	$7/2^-$	E2		B(E2)(W.u.)=12 *4*
7539.6	$5/2^+$	2433.0	1.7 *4*	5106.6	$5/2^+$	E1		B(E1)(W.u.)=0.014 *5*
		3161.9	27 *3*	4377.700	$7/2^+$	M1+(E2)	0.042 *30*	B(M1)(W.u.)=2.3 *5*
		5985.6	41 *3*	1554.038	$3/2^+$	M1+(E2)	0.017 *15*	B(M1)(W.u.)=0.52 *11*
		6193.9	1.2 *4*	1345.67	$5/2^-$	E1		B(E1)(W.u.)=0.00059 *20*
		7342.5	29 *3*	197.143	$5/2^+$	M1+E2	0.09 *4*	
7660.6	$3/2^+$	2554.0	5.9 *5*	5106.6	$5/2^+$	E1+(M2)	−0.04 *16*	B(E1)(W.u.)=0.014 *4*
		3110.7	5.1 *3*	4549.9	$5/2^+$	M1+(E2)	−0.11 *13*	B(M1)(W.u.)=0.15 *5*
		3752.4	3.0 *25*	3908.17	$3/2^+$			
		6106.6	36 *2*	1554.038	$3/2^+$	M1+(E2)	0.06 *4*	B(M1)(W.u.)=0.14 *2*
		7463.5	13 *2*	197.143	$5/2^+$	M1		B(M1)(W.u.)=0.028 *9*
		7660.6	38 *4*	0.0	$1/2^+$	M1+(E2)	0.06 *2*	B(M1)(W.u.)=0.074 *22*
7929	$7/2^+$,9/2	5149	96	2779.849	$9/2^+$			
		7732	4	197.143	$5/2^+$			
7937	$11/2^+$	3289	90	4648	$13/2^+$			
		5157	10	2779.849	$9/2^+$			
8137.7	$1/2^+$	1883	3 *1*	6255	$1/2^+$	M1		B(M1)(W.u.)=0.28
		2200	10.0 *5*	5938	$1/2^+$	M1		B(M1)(W.u.)=0.58
		4229.5	54 *2*	3908.17	$3/2^+$	M1		B(M1)(W.u.)=0.44
		6583.7	2 *1*	1554.038	$3/2^+$	M1		B(M1)(W.u.)=0.0042
		7940.6	8 *1*	197.143	$5/2^+$	E2		B(E2)(W.u.)=1.3
		8027.8	24 *2*	109.894	$1/2^-$	E1		B(E1)(W.u.)=0.0013
		8137.7	8 *1*	0.0	$1/2^+$	M1		B(M1)(W.u.)=0.0088
8254.3	$(5/2,7/2)^-$	4346	25 *8*	3908.17	$3/2^+$			

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Adopted Levels, Gammas (continued)

γ(^{19}F) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
8254.3	$(5/2,7/2)^-$	6795	24 *8*	1458.7	$3/2^-$			
		6908	33 *10*	1345.67	$5/2^-$			
		8057	18 *7*	197.143	$5/2^+$			
8288	$13/2^-$	3640	7 *4*	4648	$13/2^+$	E1		B(E1)(W.u.)=0.00021 *13*
		4255	93 *4*	4032.5	$9/2^-$	E2		B(E2)(W.u.)=19 *2*
8310.0	$5/2^+$	3932	40 *2*	4377.700	$7/2^+$	M1+(E2)	−0.14 *7*	B(M1)(W.u.)=0.22 *5*
		6756	48 *2*	1554.038	$3/2^+$	M1		B(M1)(W.u.)=0.053 *12*
		8310	12 *1*	0.0	$1/2^+$	E2		B(E2)(W.u.)=0.87 *22*
8370	$7/2,5/2^+$	4371	18 *3*	3998.7	$7/2^-$			
		5590	30 *3*	2779.849	$9/2^+$			
		7024	39 *3*	1345.67	$5/2^-$			
		8173	13 *2*	197.143	$5/2^+$			
8583.5	$5/2^+$	1657.0	0.5 *3*	6926.5	$7/2^-$			
		2422.9	2.5 *5*	6160.6	$7/2^-$			
		2646	1.8 *5*	5938	$1/2^+$			
		2963	2.2 *5*	5621	$5/2^-$			
		3120.0	2.0 *5*	5463.5	$7/2^+$			
		3166	4 *1*	5418	$7/2^-$			
		4033.6	2.0 *7*	4549.9	$5/2^+$			
		4584.8	4 *1*	3998.7	$7/2^-$			
		7029.5	20 *3*	1554.038	$3/2^+$			
		7237.8	23 *3*	1345.67	$5/2^-$			
		8386.4	38 *5*	197.143	$5/2^+$			
		8583.5	4 *1*	0.0	$1/2^+$			
8591.9	$3/2^-$	1805	0.3 *1*	6787	$3/2^-$	M1		B(M1)(W.u.)=0.021 *8*
		2310	0.6 *2*	6282	$5/2^+$	E1		B(E1)(W.u.)=0.00086 *32*
		3091.2	1.5 *5*	5500.7	$3/2^+$	E1		B(E1)(W.u.)=0.00090 *34*
		3485.3	1.0 *5*	5106.6	$5/2^+$	E1		B(E1)(W.u.)=0.00042 *22*
		4042.0	3.6 *6*	4549.9	$5/2^+$	E1		B(E1)(W.u.)=0.00096 *27*
		4683.7	8 *1*	3908.17	$3/2^+$	E1		B(E1)(W.u.)=0.0014 *3*
		7037.9	28 *3*	1554.038	$3/2^+$	E1		B(E1)(W.u.)=0.0014 *3*
		7246.2	7 *1*	1345.67	$5/2^-$	M1		B(M1)(W.u.)=0.0075 *19*
		8394.8	42 *2*	197.143	$5/2^+$	E1		B(E1)(W.u.)=0.0013 *3*
		8482.0	3 *1*	109.894	$1/2^-$	M1		B(M1)(W.u.)=0.0020 *8*
		8591.9	5 *2*	0.0	$1/2^+$	E1		B(E1)(W.u.)=0.00014 *6*
8629	$7/2^-$	4596	3 *1*	4032.5	$9/2^-$			
		4630	13 *1*	3998.7	$7/2^-$			
		5849	38 *2*	2779.849	$9/2^+$			
		7170	6 *1*	1458.7	$3/2^-$			
		7283	6 *1*	1345.67	$5/2^-$			
		8432	34 *2*	197.143	$5/2^+$			
8650	$1/2^+$	4741	24 *6*	3908.17	$3/2^+$			
		7191	23 *6*	1458.7	$3/2^-$			
		8540	53 *6*	109.894	$1/2^-$			
8793.2	$1/2^+$	1132.6	0.2 *1*	7660.6	$3/2^+$			
		1429	0.6 *1*	7364	$1/2^+$			
		1531	1.7 *2*	7262	$3/2^+$			
		1804	0.5 *1*	6989	$1/2^-$			
		2006	1.2 *3*	6787	$3/2^-$			
		2265.7	2.1 *2*	6527.5	$3/2^+$			
		2296.5	6 *1*	6496.7	$3/2^+$			
		2538	0.2 *1*	6255	$1/2^+$			
		2705	1.7 *2*	6088	$3/2^-$			
		2855	1.8 *2*	5938	$1/2^+$			
		3456	0.5 *1*	5337	$1/2^{(+)}$			

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Adopted Levels, Gammas (continued)

$\gamma(^{19}F)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
8793.2	$1/2^+$	4885.0	22 *1*	3908.17	$3/2^+$			
		7239.2	8 *1*	1554.038	$3/2^+$			
		7334.5	22 *1*	1458.7	$3/2^-$			
		8596.1	0.3 *2*	197.143	$5/2^+$			
		8683.3	30 *1*	109.894	$1/2^-$			
		8793.2	1.2 *4*	0.0	$1/2^+$			
8864	≤7/2	7518	100	1345.67	$5/2^-$			
8926.7	$3/2^-$	5018.5	13 *7*	3908.17	$3/2^+$			
		7372.7	23 *7*	1554.038	$3/2^+$	E1+(M2)	0.30 *6*	
		7468.0	25 *7*	1458.7	$3/2^-$	M1+E2	3.0 *25*	
		8729.6	24 *7*	197.143	$5/2^+$	E1+(M2)	1.0 *8*	
		8816.8	10 *2*	109.894	$1/2^-$			
		8926.7	5 *2*	0.0	$1/2^+$			
8953	$11/2^-$	3535	5 *1*	5418	$7/2^-$	E2		B(E2)(W.u.)=8.4 *20*
		4305	10 *2*	4648	$13/2^+$	E1		B(E1)(W.u.)=0.00060 *14*
		4920	9 *1*	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.0083 *14*
		4954	26 *2*	3998.7	$7/2^-$	E2		B(E2)(W.u.)=8.1 *12*
		6173	50 *2*	2779.849	$9/2^+$	E1		B(E1)(W.u.)=0.00101 *14*
9030	5/2,7/2	2960	26 *4*	6070	$7/2^+$			
		4652	30 *5*	4377.700	$7/2^+$			
		8833	44 *5*	197.143	$5/2^+$			
9099.7	$7/2^-$	3000	12 *1*	6100	$9/2^-$	E1+(M2)	0.0 *3*	
		3479	3.3 *3*	5621	$5/2^-$	M1+E2	0.17 *10*	
		3565	1.3 *7*	5535	$5/2^+$	E1+(M2)	0.1 *3*	
		3682	19 *2*	5418	$7/2^-$			
		3993.1	1.2 *2*	5106.6	$5/2^+$			
		4417.2	2.0 *3*	4682.5	$5/2^-$			
		5067.2	7.0 *5*	4032.5	$9/2^-$			
		5101.0	2.5 *3*	3998.7	$7/2^-$			
		6319.9	47 *2*	2779.849	$9/2^+$	E1+(M2)	−0.09 *10*	
		7754.0	2.7 *3*	1345.67	$5/2^-$			
		8902.6	2.0 *3*	197.143	$5/2^+$			
9101	$7/2^+$,$9/2^+$	2771	10 *2*	6330	$7/2^+$			
		3031	15 *2*	6070	$7/2^+$			
		4723	24 *2*	4377.700	$7/2^+$			
		5102	24 *2*	3998.7	$7/2^-$			
		6321	11 *2*	2779.849	$9/2^+$			
9167.0	$1/2^+$	4611	19 *2*	4556.1	$3/2^-$			
		7613	30 *2*	1554.038	$3/2^+$			
		8970	51 *2*	197.143	$5/2^+$			
9204	3/2	7858	26 *3*	1345.67	$5/2^-$			
		9007	10 *4*	197.143	$5/2^+$			
		9094	46 *3*	109.894	$1/2^-$			
		9204	18 *2*	0.0	$1/2^+$			
9267	$11/2^+$,$9/2^+$	4619	55 *3*	4648	$13/2^+$			
		4889	18 *2*	4377.700	$7/2^+$			
		6487	27 *2*	2779.849	$9/2^+$			
9280	$(7/2,9/2)^+$	5247	42 *3*	4032.5	$9/2^-$			
		5281	58 *3*	3998.7	$7/2^-$			
9321.0	$1/2^+$	4638	6.8 *5*	4682.5	$5/2^-$	M2+(E3)	0.1 *2*	
		4765	3.2 *3*	4556.1	$3/2^-$	E1+(M2)	0.2 *3*	
		5413	3.0 *3*	3908.17	$3/2^+$			
		7767	17 *1*	1554.038	$3/2^+$			
		7862	28 *1*	1458.7	$3/2^-$	E1+(M2)	0.1 *2*	
		9124	12 *1*	197.143	$5/2^+$			

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Adopted Levels, Gammas (continued)

$\gamma(^{19}F)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ
9321.0	$1/2^+$	9321	30 *1*	0.0	$1/2^+$		
9329	$\leq 3/2$	7775	100	1554.038	$3/2^+$		
9509	$5/2^+,7/2^+$	6729	72 *3*	2779.849	$9/2^+$		
		7955	14 *2*	1554.038	$3/2^+$		
		8163	14 *2*	1345.67	$5/2^-$		
9536.4	$5/2^+$	1522.4	2 *1*	8014.0	$5/2^+$		
		1875.8	6 *1*	7660.6	$3/2^+$		
		1996.8	10 *1*	7539.6	$5/2^+$	M1+(E2)	0.7 *3*
		4429.8	29 *2*	5106.6	$5/2^+$	M1+(E2)	0.3 *2*
		4853.9	12 *1*	4682.5	$5/2^-$	M1+(E2)	0.3 *3*
		4980.3	15 *1*	4556.1	$3/2^-$	E1+(M2)	0.7 *4*
		8190.7	26 *2*	1345.67	$5/2^-$	M1+E2	0.3 *11*
9566	$3/2^-$	3311	23 *6*	6255	$1/2^+$		
		9369	77 *10*	197.143	$5/2^+$		
9575	$3/2^-$	1914	4 *1*	7660.6	$3/2^+$	E2+(M1)	−0.1 *13*
		2035	11 *2*	7539.6	$5/2^+$	M1+(E2)	−0.3 *8*
		3487	38 *2*	6088	$3/2^-$	M1+(E2)	1.8 *10*
		5025	17 *2*	4549.9	$5/2^+$		
		5667	4 *1*	3908.17	$3/2^+$	E1+(M2)	−6 *7*
		8116	26 *2*	1458.7	$3/2^-$	M1+(E2)	−0.1 *2*
9586	7/2	5036	21 *2*	4549.9	$5/2^+$		
		5587	17 *2*	3998.7	$7/2^-$		
		6806	30 *2*	2779.849	$9/2^+$		
		8240	32 *4*	1345.67	$5/2^-$		
9642	3/2,5/2	5092	26 *6*	4549.9	$5/2^+$		
		8296	61 *7*	1345.67	$5/2^-$		
		9445	13 *3*	197.143	$5/2^+$		
9654	3/2,5/2	8100	59 *9*	1554.038	$3/2^+$		
		8308	41 *9*	1345.67	$5/2^-$		
9667.5	$3/2^+$	2006.9	3.5 *3*	7660.6	$3/2^+$	M1+(E2)	0.14 *4*
		2127.9	4.0 *3*	7539.6	$5/2^+$	M1+(E2)	0.02 *3*
		2829.1	1.0 *3*	6838.4	$5/2^+$		
		4331	1.0 *2*	5337	$1/2^{(+)}$		
		4560.9	1.5 *3*	5106.6	$5/2^+$	M1+(E2)	0.00 *5*
		5117.6	8 *1*	4549.9	$5/2^+$		
		5289.8	0.5 *2*	4377.700	$7/2^+$		
		5759.3	5.5 *5*	3908.17	$3/2^+$		
		8113.5	10 *1*	1554.038	$3/2^+$		
		8208.8	5 *1*	1458.7	$3/2^-$	E1+(M2)	0.00 *7*
		8321.8	9 *1*	1345.67	$5/2^-$	E1+(M2)	0.00 *3*
		9470.4	9 *1*	197.143	$5/2^+$		
		9557.6	20 *2*	109.894	$1/2^-$	E1+(M2)	0.00 *5*
		9667.5	22 *2*	0.0	$1/2^+$		
9710	$9/2^+,11/2^-$	5062	1 *1*	4648	$13/2^+$		
		5677	80 *4*	4032.5	$9/2^-$		
		6930	19 *3*	2779.849	$9/2^+$		
9820.0	$5/2^-$	4199	0.7 *2*	5621	$5/2^-$		
		4285	0.6 *2*	5535	$5/2^+$	E1+(M2)	0.0 *2*
		4402	10 *1*	5418	$7/2^-$		
		4713	0.3 *2*	5106.6	$5/2^+$		
		5137	4.8 *3*	4682.5	$5/2^-$		
		5270	0.5 *1*	4549.9	$5/2^+$	E1+(M2)	0.30 *15*
		5821	1.0 *2*	3998.7	$7/2^-$		
		8266	30 *2*	1554.038	$3/2^+$	E1+(M2)	0.01 *4*
		8361	8 *1*	1458.7	$3/2^-$		

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

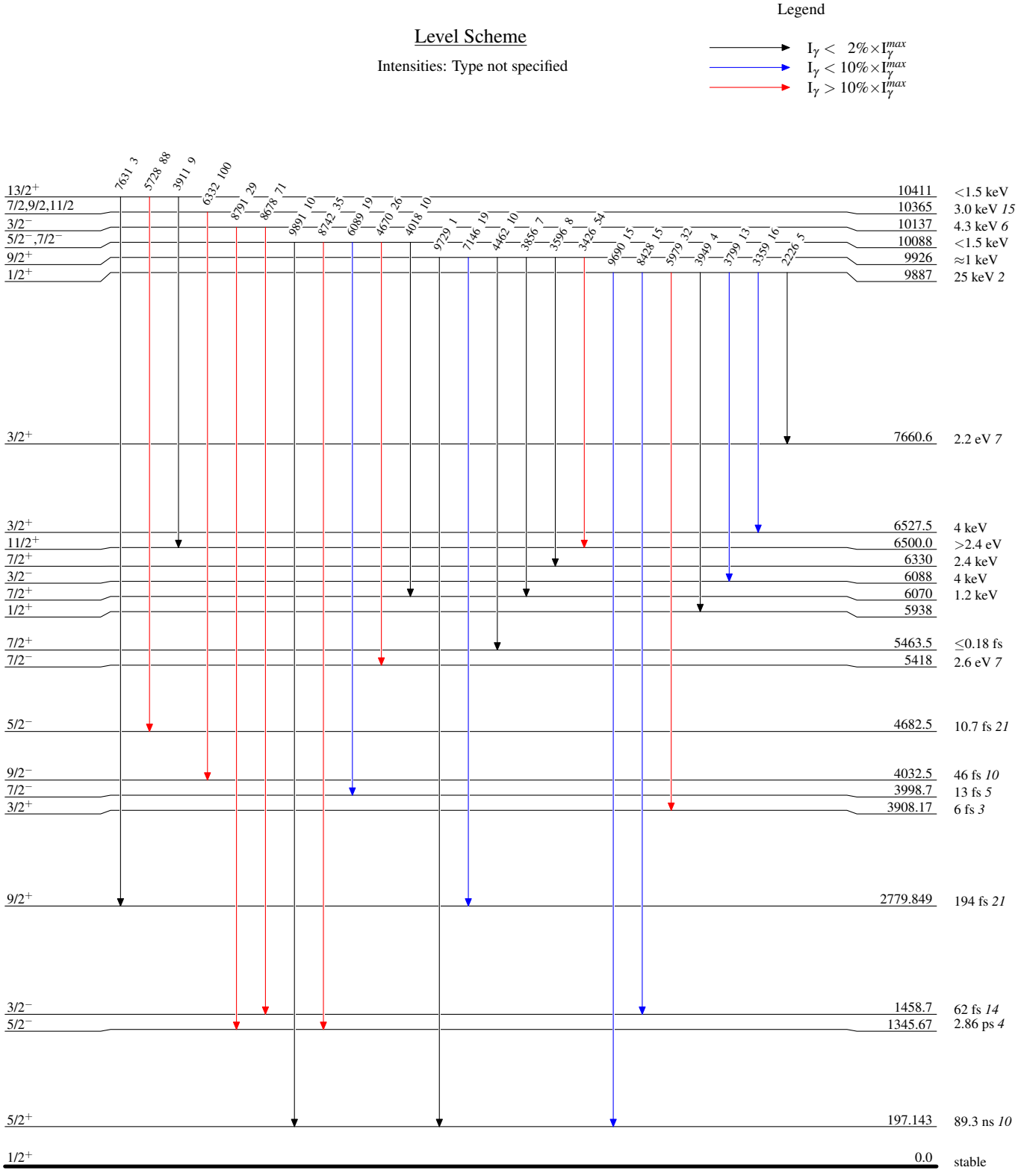
$\gamma(^{19}F)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
9820.0	$5/2^-$	8474	2.4 *5*	1345.67	$5/2^-$	M1+(E2)	−0.6 *2*	
		9623	41 *2*	197.143	$5/2^+$	E1+(M2)	0.00 *5*	
		9710	0.7 *2*	109.894	$1/2^-$			
9834	11/2,13/2,15/2	5186	100	4648	$13/2^+$			
9874.0	$11/2^-$	1586	1.0 *3*	8288	$13/2^-$	M1		B(M1)(W.u.)=0.13 *6*
		3374	1.9 *7*	6500.0	$11/2^+$	E1+(M2)	−0.4 *7*	B(E1)(W.u.)=0.0011 *5*
		3774	3.8 *8*	6100	$9/2^-$	M1		B(M1)(W.u.)=0.037 *14*
		5226	2.1 *8*	4648	$13/2^+$	E1		B(E1)(W.u.)=0.00033 *16*
		5841	24 *2*	4032.5	$9/2^-$	M1		B(M1)(W.u.)=0.062 *20*
		5875	4.2 *10*	3998.7	$7/2^-$	E2		B(E2)(W.u.)=2.7 *10*
		7094	63 *3*	2779.849	$9/2^+$	E1+(M2)	0.0 *2*	B(E1)(W.u.)=0.0039 *12*
9887	$1/2^+$	2226	5 *1*	7660.6	$3/2^+$			
		3359	16 *2*	6527.5	$3/2^+$			
		3799	13 *3*	6088	$3/2^-$			
		3949	4 *1*	5938	$1/2^+$			
		5979	32 *2*	3908.17	$3/2^+$			
		8428	15 *5*	1458.7	$3/2^-$			
		9690	15 *8*	197.143	$5/2^+$			
9926	$9/2^+$	3426	54 *2*	6500.0	$11/2^+$			
		3596	8 *1*	6330	$7/2^+$			
		3856	7 *1*	6070	$7/2^+$			
		4462	10 *1*	5463.5	$7/2^+$			
		7146	19 *1*	2779.849	$9/2^+$			
		9729	1 *1*	197.143	$5/2^+$			
10088	$5/2^-$,$7/2^-$	4018	10 *1*	6070	$7/2^+$			
		4670	26 *2*	5418	$7/2^-$			
		6089	19 *2*	3998.7	$7/2^-$			
		8742	35 *2*	1345.67	$5/2^-$			
		9891	10 *1*	197.143	$5/2^+$			
10137	$3/2^-$	8678	71 *4*	1458.7	$3/2^-$			
		8791	29 *4*	1345.67	$5/2^-$			
10365	7/2,9/2,11/2	6332	100	4032.5	$9/2^-$			
10411	$13/2^+$	3911	9 *1*	6500.0	$11/2^+$			
		5728	88 *1*	4682.5	$5/2^-$			
		7631	3 *1*	2779.849	$9/2^+$			

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

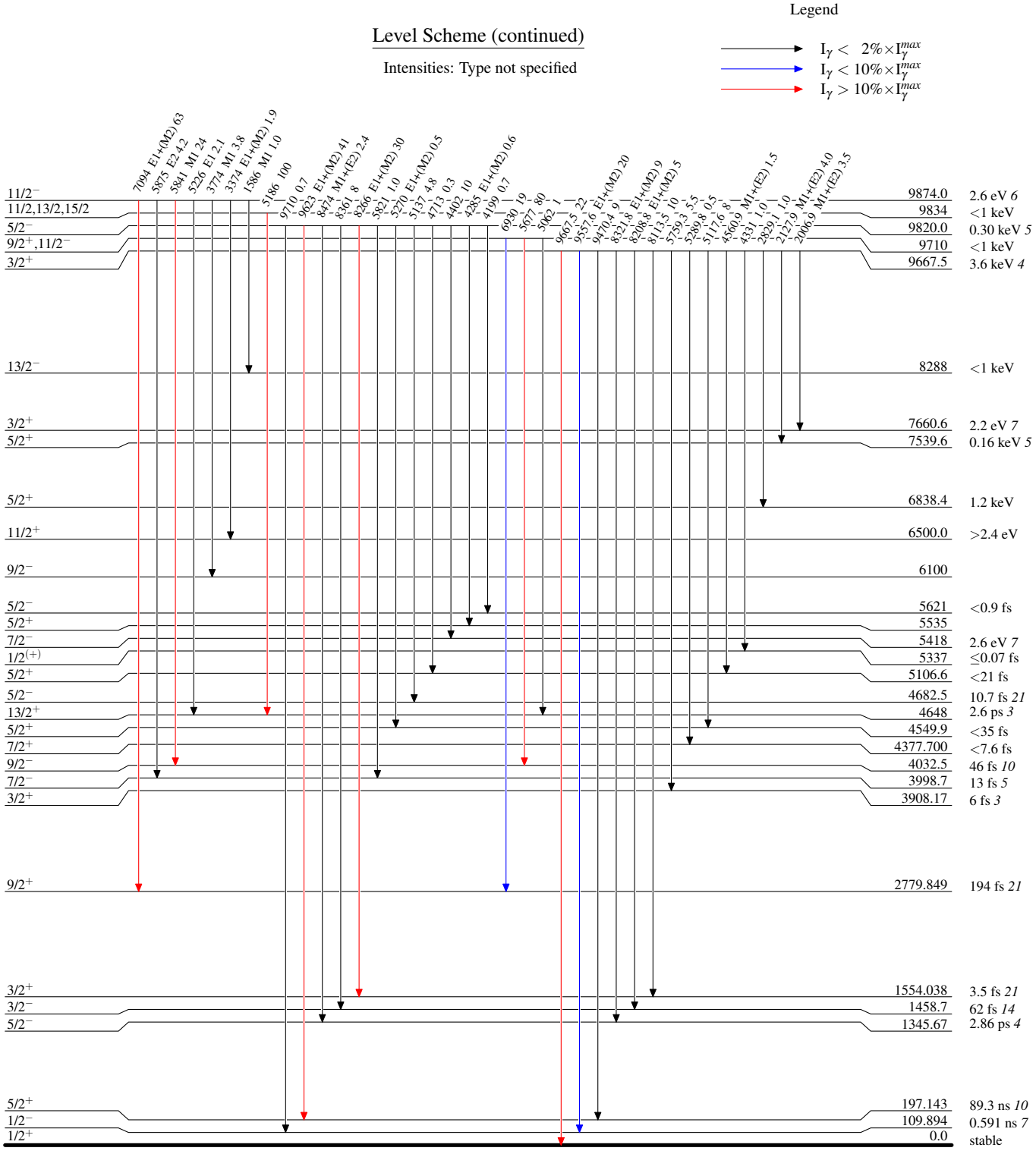


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

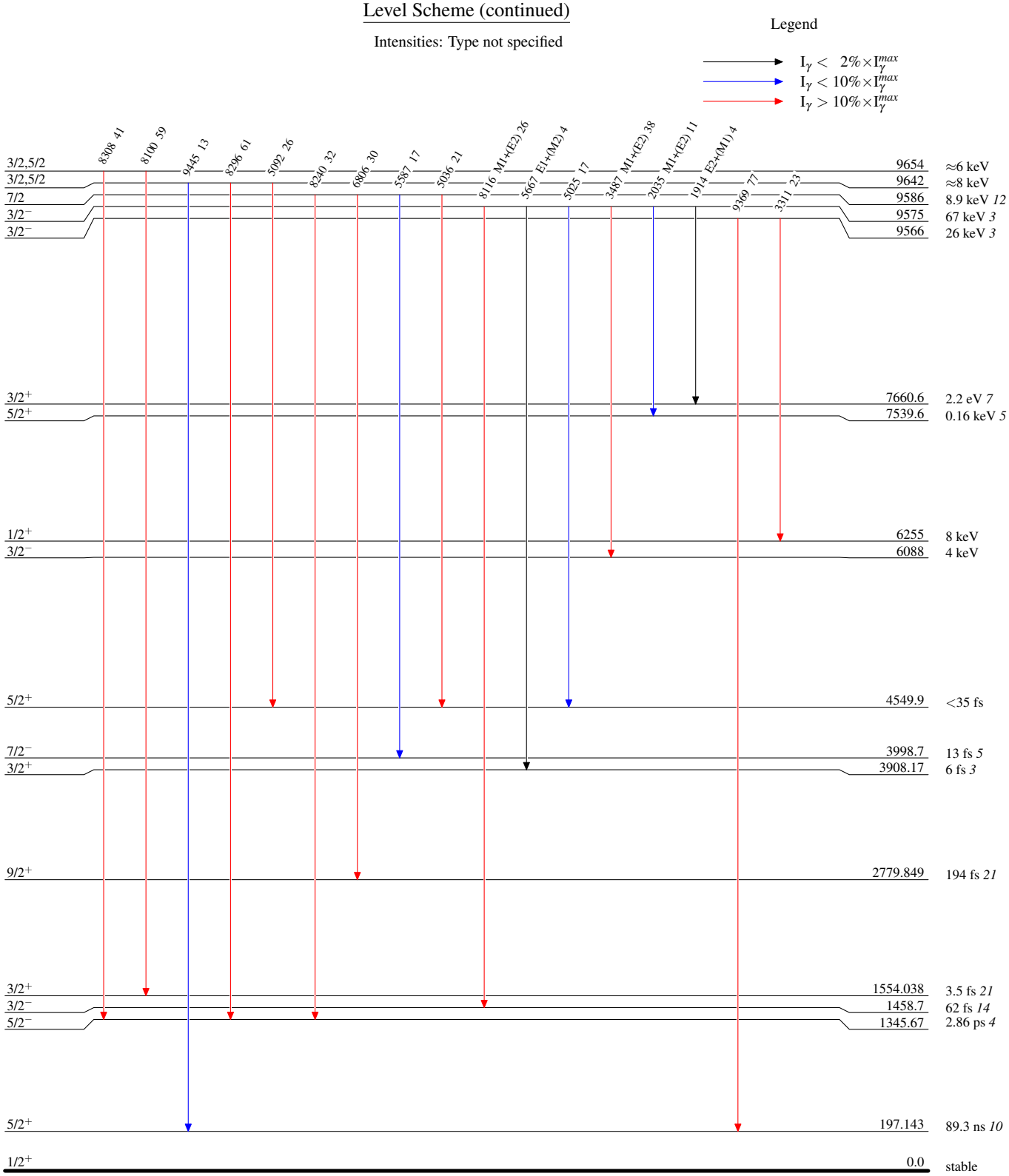


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

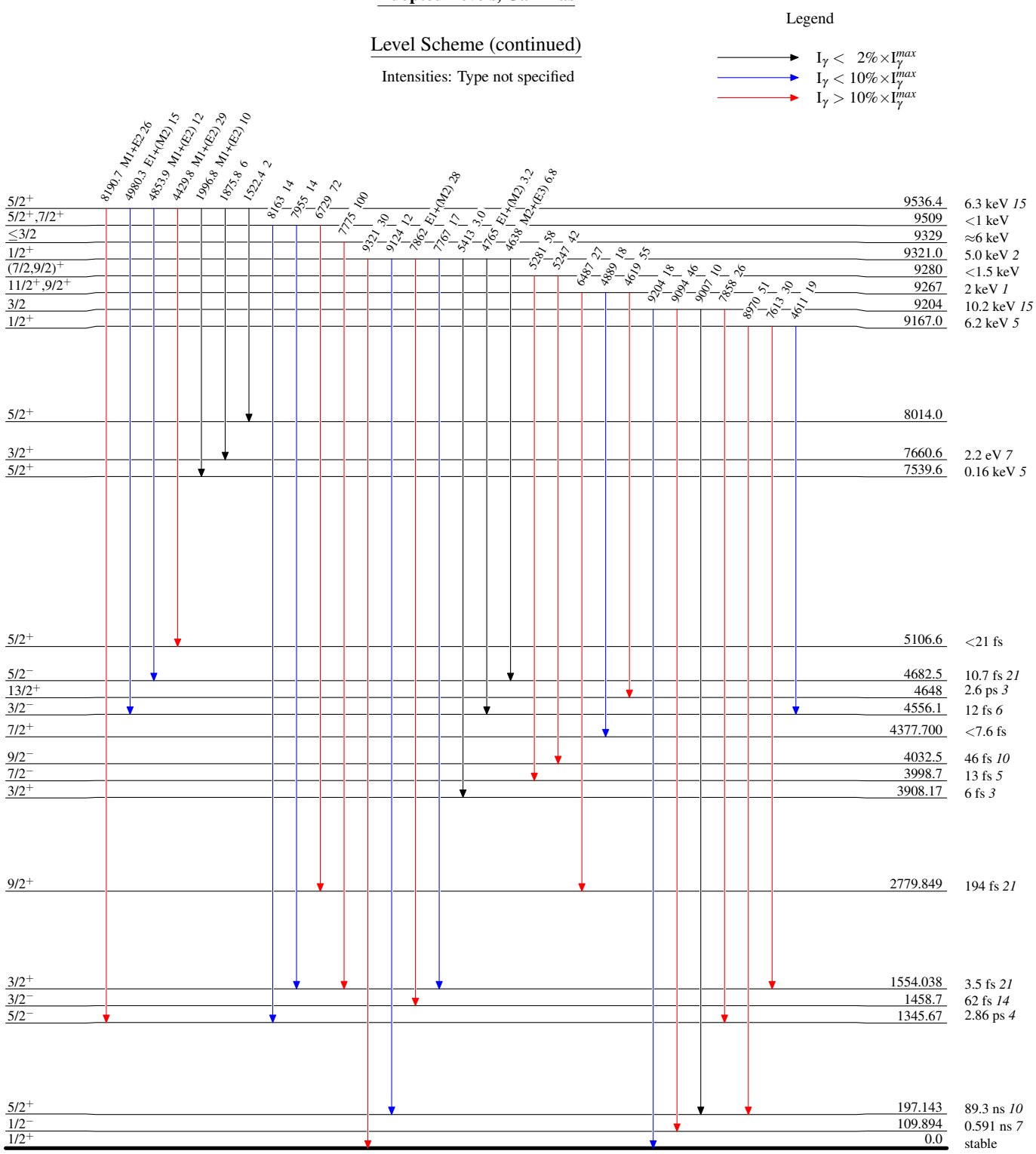


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

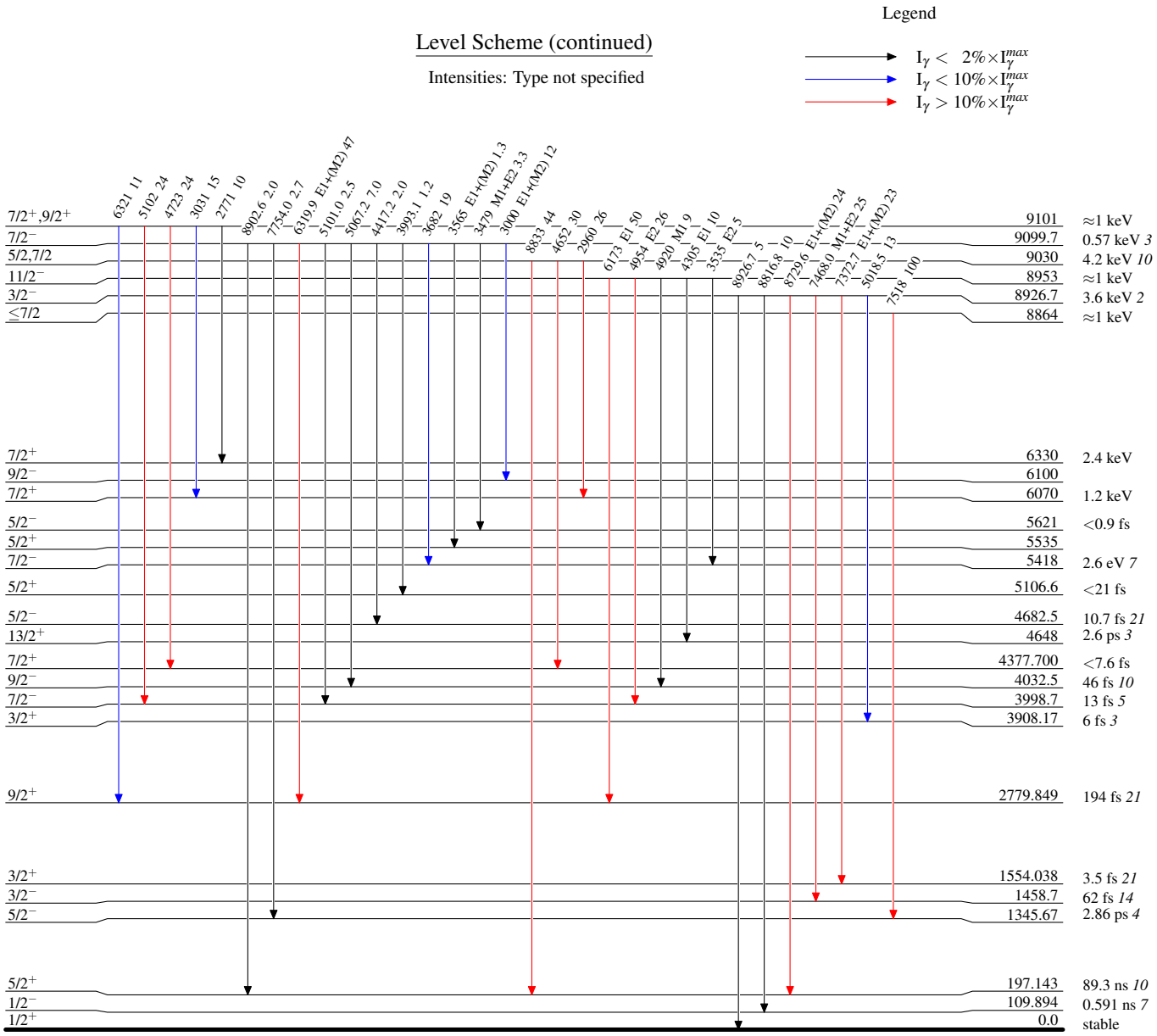


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

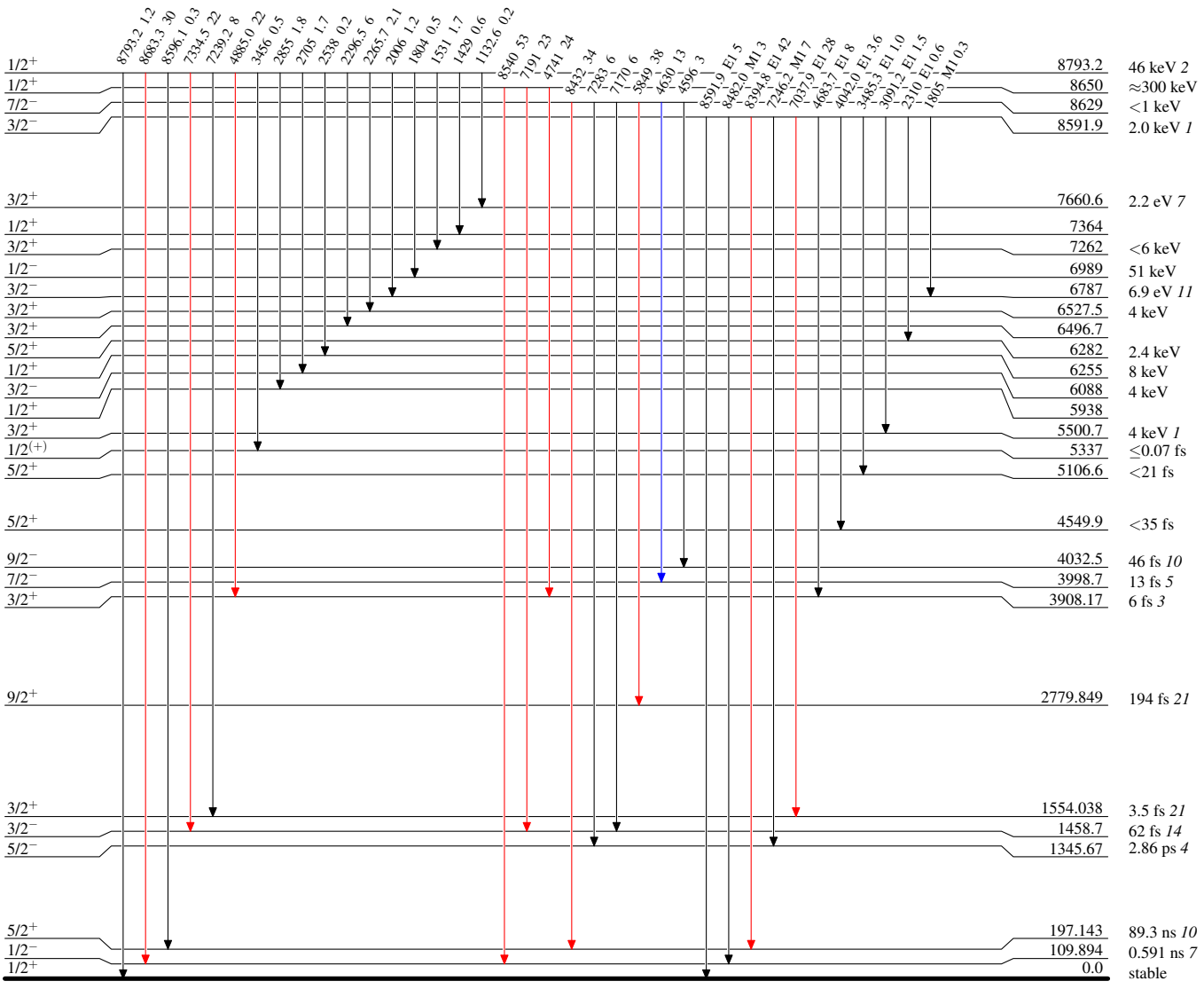


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

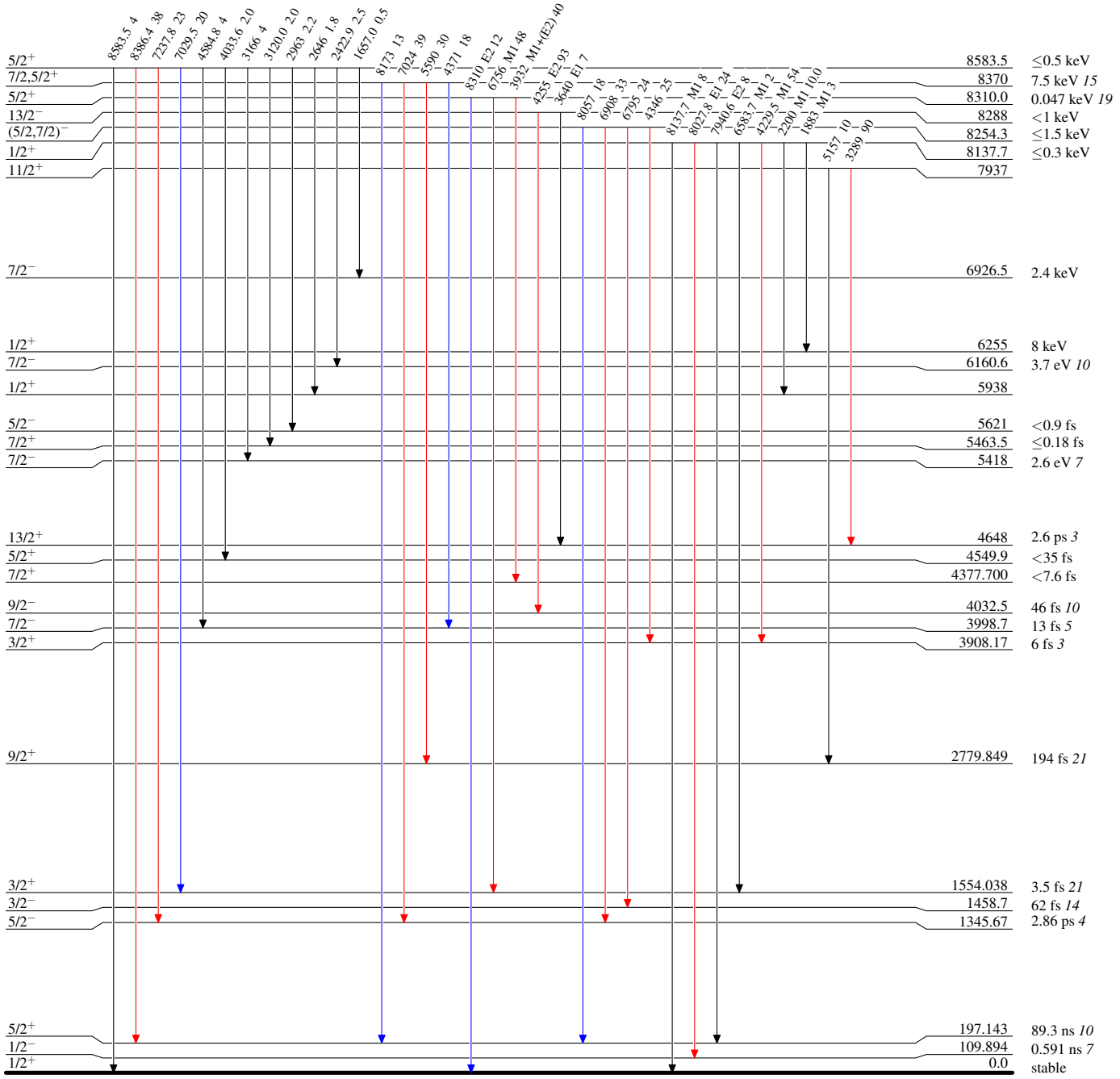


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

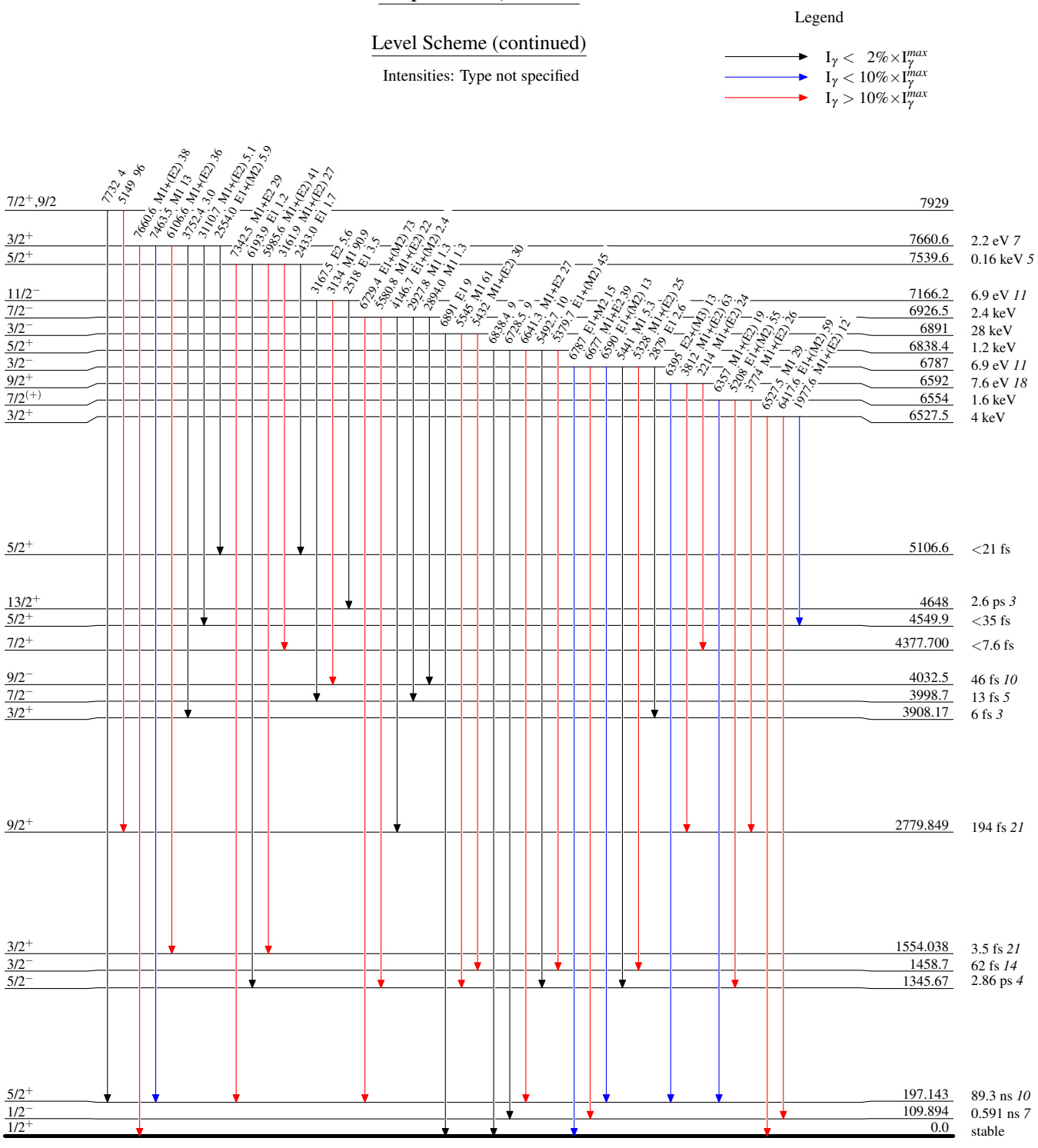


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

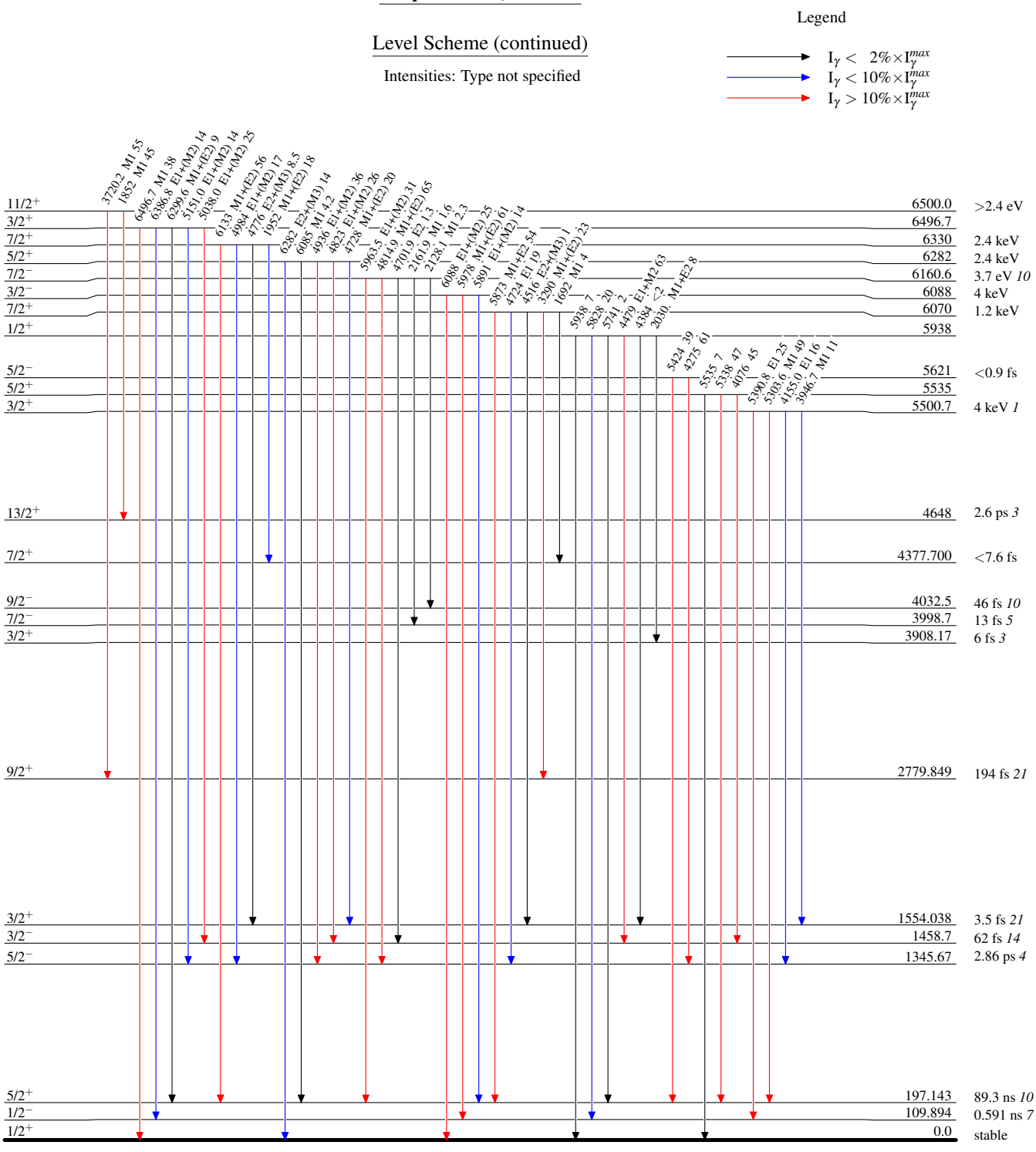


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

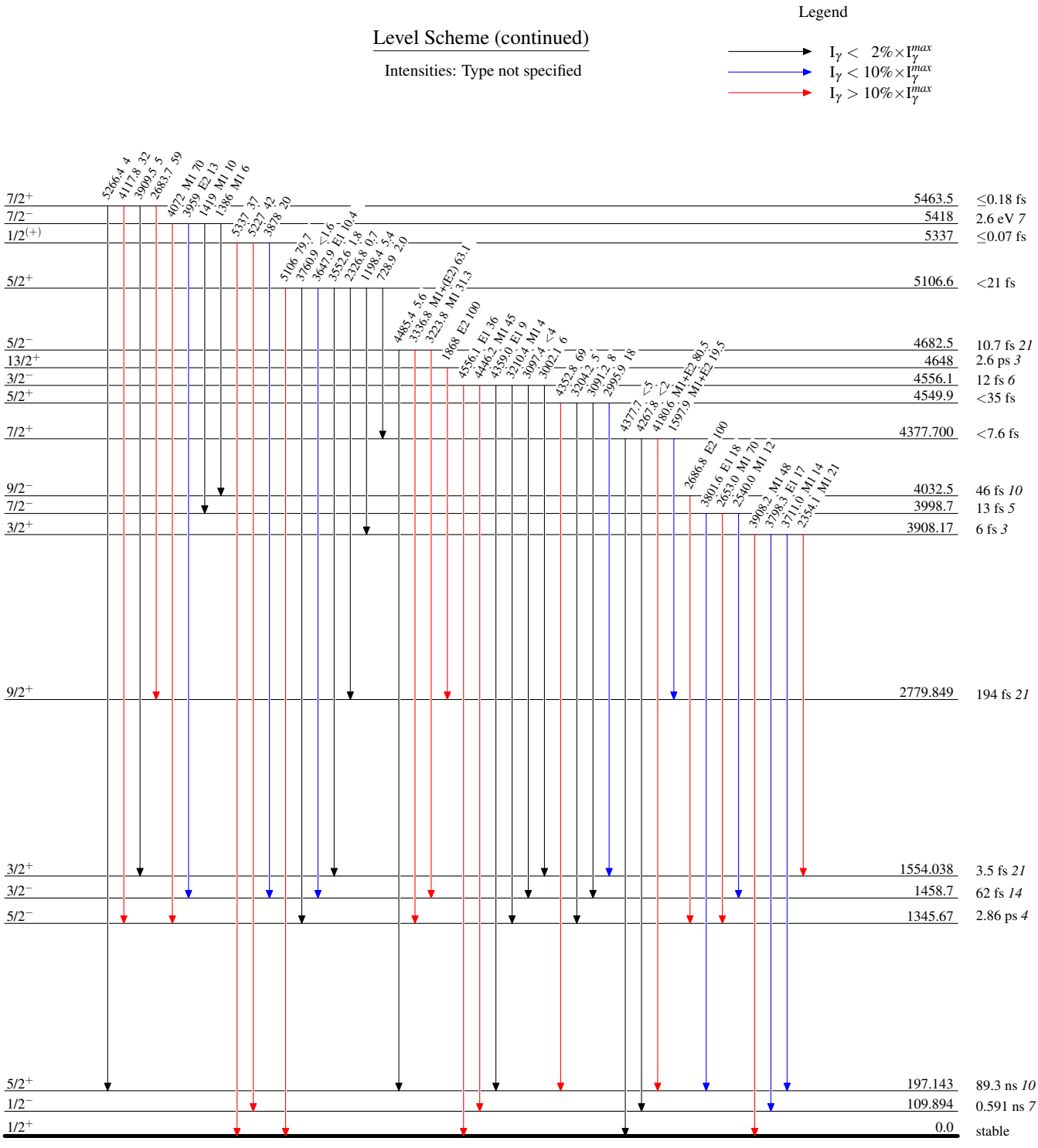


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

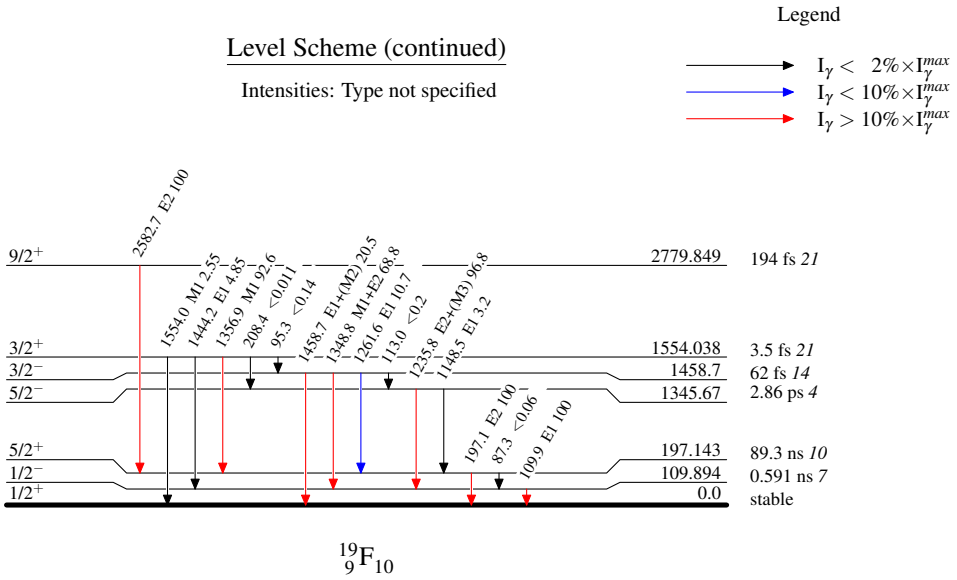


$^{19}_{9}F_{10}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{19}_{9}F_{10}$