Adopted Levels, Gammas

History

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

Q(β^-)=−1.850×10^4 *syst*; S(n)=1.897×10^4 *5*; S(p)=4395.5 *7*; Q(α)=−9343.0 *4* 2012Wa38
Note: Current evaluation has used the following Q record −18506 syst 18974 *50* 4399 *3* −9343 *4* 2009AuZZ.
ΔQ(β^-)=196(syst) (2009AuZZ).
Q(β^-)=18510 *200*(syst), S(n)=18970 *50*, S(p)=4399 *3*, S(α)=−9343 *4* (2003Au03).

^{1}H(^{30}S,^{30}S), E=53 MeV/u: 2000Bl25,2001Kh17 and 2001Bl17 (same group): measured recoil proton spectra, deduced σ(E,θ).

^{1}H(^{31}S,^{30}S), E=71 MeV/u: 2008Ga07 and 2007Ga46 (same group): measured Eγ, particle-γ coincidence, reported 1192γ, 2210γ and 3402γ.

^{30}S Levels

Cross Reference (XREF) Flags

- A ^{31}Ar β^+p decay
- B ^{28}Si(^{3}He,nγ),^{28}Si(^{3}He,n)
- C Coulomb excitation
- D ^{32}S(p,t)

E(level)[†]	J$^\pi$	T$_{1/2}$[@]	L	XREF	Comments
0	0$^+$	1.178 s *5*		ABCD	%ε+%β^+=100 J$^\pi$: L=0 in (p,t). T$_{1/2}$: From 1980Wi13. Others: 1.22 s *3* (1971Mo27), 1.18 s *4* (1967Ba36).
2210.6[‡] *5*	2$^+$	156 fs *9*		ABCD	J$^\pi$: L=2 in (p,t). T$_{1/2}$: Weighted average of 158 fs *12* (^{3}He,nγ) and 153 fs *13* (Coul. Ex.).
3402.6[‡] *5*	2$^+$	109 fs *12*		AB D	J$^\pi$: L=2 in (p,t).
3667.5[‡] *10*		>1 ps		AB	
3676[‡] *3*	(1$^+$)	97 fs *55*		AB D	J$^\pi$: Angular distribution consistent with 1$^+$, does not agree with 0$^+$ in (p,t).
4704 *5*	(3$^+$)			D	E(level),J$^\pi$: Energy and angular distribution consistent with 3$^+$ assignment; less likely possibility is 2$^+$ (p,t).
4814 *3*	(2$^+$)			D	J$^\pi$: From comparison of the 2+$_3$ state location with the prediction by isobaric multiple mass equation (IMME) ((p,t) − 2010Se07).
5136[‡] *2*	(3$^+$)	38 fs *14*		AB D	J$^\pi$: From comparison of the 3+$_2$ state location with the prediction by IMME ((p,t) − 2010Se07).
5168 *6*	(4$^+$)		4+0	D	J$^\pi$: L=4+0 for doublet in (p,t).
5217.4[#] *7*	(0$^+$)			A D	XREF: D(5226). E(level): From ^{31}Ar β^+p decay. J$^\pi$: L=4+0 for doublet in (p,t).
5318 *4*	(3$^-$)			B D	XREF: B(5288). J$^\pi$: L=3 (^{3}He,n) and prediction of the 3$^-$ state location (p,t).
5389[#] *2*	(2$^+$)			A D	J$^\pi$: From prediction and L=3,(2) in (p,t).
5843 *5*	(1$^-$)			A D	J$^\pi$: L=(1) in (p,t) and also L=2,3,4 are possible.
5945 *3*				A	
6071 *11*				A D	
6202 *3*				A	
6280.1 *12*				A	
6341 *5*				A D	
6532 *13*				A D	
6643 *3*				A	

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Adopted Levels, Gammas (continued)

^{30}S Levels (continued)

E(level)†	J^π	L	XREF	Comments
6766 *10*	2^+	2	A D	J^π: L=2 in (p,t).
6855 *4*			A	
6927 *4*			A	
7074 *9*			A D	
7123 *10*			AB	
7295 *14*			AB	
7352 *8*			AB	
7485 *4*			AB	
7598 *4*			A	
7693 *4*			A	
7924 *5*			A	

† From ^{32}S(p,t), except otherwise noted or when only one ref dataset.
‡ From ^{28}Si(^{3}He,nγ).
# From ^{31}Ar β^+p decay.
@ From (^{3}He,nγ), except otherwise noted.

$\gamma(^{30}$S)

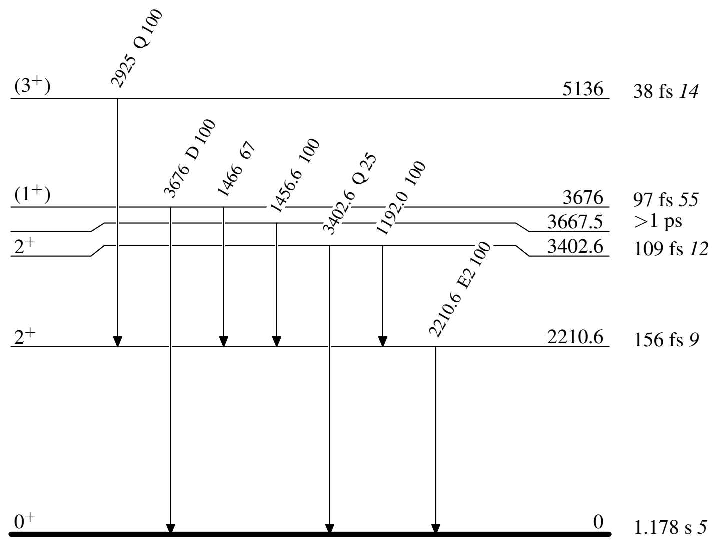
E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.‡
2210.6	2^+	2210.6 *5*	100	0	0^+	E2
3402.6	2^+	1192.0 *5*	100 *4*	2210.6	2^+	
		3402.6 *13*	25 *4*	0	0^+	Q
3667.5		1456.6 *11*	100	2210.6	2^+	
3676	(1^+)	1466 *3*	67 *17*	2210.6	2^+	
		3676 *3*	100 *17*	0	0^+	D
5136	(3^+)	2925 *2*	100	2210.6	2^+	Q

† From (^{3}He,nγ).
‡ From (^{3}He,nγ), based on γ-ray angular correlations.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Christian Ouellet, Balraj Singh	NDS 112,2199 (2011)	24-Aug-2011

Q(β^-)=−12680.9 *6*; S(n)=15044.33 *23*; S(p)=8864; Q(α)=−6948 2012Wa38
Note: Current evaluation has used the following Q record −12680.4 9 *15043*.8 *10* 8863.96 *1*−6947.65 *1* 2011AuZZ.
S(2n)=28096 *3*, S(2p)=16160.51 *2* (2011AuZZ).
Values in 2003Au03: Q(β^-)=−12686 *7*, S(n)=15042.4 *15* S(p)=8863.78 *21*, Q(α)=−6947.82 *14*, S(2n)=28096 *3*, S(2p)=16160.71 *14*.

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Following corrections made by B. Singh (McMaster), Sept 20, 2022: ^{29}Si(α,n) dataset from 1975Ba01 removed as it leads to resonances in ^{33}S from 9699 to 11175 keV, not in ^{32}S. ^{33}S(p,d) dataset from 1974ShZZ (BAPS abstract) added as cited by 1978Ka18 for levels up to 9976. Resulting, mostly minor changes, made in the Adopted Levels (B. Singh, Sept 17, 2022), for example: 1. *7882.9*, J^π=4$^+$, not 4$^-$; added a new level at 7885 *4*, J^π=0$^-$,1$^-$,2$^-$. 2. new level added at 8281 keV with J^π=(0:4)$^+$ from ^{33}S(p,d). 3. Seven levels at 10133, 10182, 10417, 10493, 10678, 10988, 11175 from ^{29}Si(α,n) removed. 4. Widths of the following levels from ^{29}Si(α,n) removed: 9704.8, 9809, 9935, 9997, 10021, 10079, 10310, 10636.4, 10941, 11009.9, 11078. *5*. Missing or unknown γ-branchings in 1997Br07 from the 7921, 7975, 8296, 8407 and 8729 levels from the ^{31}P(p,γ) dataset added.

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^{32}S is one of the most extensively studied nuclei in the sd-shell (1998Ka31).
Four lowest states in ^{32}S appear to be vibrational in character (1971In02), first 2$^+$ is one phonon and 0$^+$,2$^+$,4$^+$ make up a spherical vibrational triplet. Quadrupole moment of first 2$^+$ state is negative and interestingly indicates a large prolate deformation (1998Ka31).
Additional evaluations for ^{32}S include 1997Br07 and specific to lifetimes, 1998Ka31. These are in broad agreement with the current evaluation.
E(p)=811 is a common absolute Resonance Strength by which other relative Resonance Strengths are compared to (1978Pa03).
Mass measurements: 2009Sc29, 2009Kw02.
Mass deduced by IMME analysis: 2010Ka30.
2010Pa18: ^{12}C(^{20}Ne,X),E=145,160 MeV; measured Eγ, Iγ, $\gamma\gamma$-coin. Deduced highest spin and high energy excitations from the shapes of giant dipole resonances (GDR), strength functions and parameters using rotating liquid drop model (RLDM) and thermal shape fluctuation model (TSFM). Calculated liquid drop model free energy surfaces, and equilibrium shapes as a function of quadrupole deformation parameters and spin. Possible connection to molecular structure of ^{16}O+^{16}O in a ^{32}S superdeformed band.
Structure calculations: Intruder levels, spins and parities, shell model: 2009Bo30.

^{32}S Levels

Levels populated in datasets with XREF=Y.
^{32}P β^- decay (14.268 d): 0.
^{33}Ar εp decay (173.0 ms): 0, 2231.
^{36}K $\varepsilon\alpha$ decay (342 ms): 0.
^{16}O(^{20}Ne,α): 11700, 11940, 12760, 13040, 13760, 14000, 14810, 15200.
^{28}Si(^{12}C,^{8}Be): 0, 2230, 5010.
^{28}Si(^{16}O,^{12}C): 0, 2230, 3780, 4280, 4460, 4700, 5010, 5800, 6220, 6850, 7000.
^{32}S(d,d′),(pol d,d′): 0, 2230, 4290, 4470, 5010.
^{32}S(α,α'): 0, 2230, 3777, 4278, 4458.
Coulomb excitation: 0, 2230.
Additional information 1.

Cross Reference (XREF) Flags

A	^{32}Cl ε decay (298 ms)	M	^{31}P(p,α):resonances	Y	^{32}P β^- decay (14.268 d)
B	^{4}He(^{28}Si,α):resonances	N	^{31}P(d,n),^{2}H(^{31}P,N)	Z	^{33}Ar εp decay (173.0 ms)
C	^{28}Si(α,γ)	O	^{31}P(^{3}He,d)	Others:	
D	^{28}Si(α,α):resonances	P	^{32}S(γ,γ'),(pol γ,γ')	AA	^{36}K $\varepsilon\alpha$ decay (342 ms)
E	^{28}Si(^{6}Li,pnγ)	Q	^{32}S(e,e′)	AB	^{16}O(^{20}Ne,α)
F	^{28}Si(^{6}Li,d)	R	^{32}S(π^+,$\pi^{+\prime}$),(π^-,$\pi^{-\prime}$)	AC	^{28}Si(^{12}C,^{8}Be)
G	^{28}Si(^{7}Li,t)	S	^{32}S(n,n′γ),(n,n′)	AD	^{28}Si(^{16}O,^{12}C)

H	^{28}Si(^{18}O,^{14}C)	T	^{32}S(p,p′),(pol p,p′)	AE	^{32}S(d,d′),(pol d,d′)
I	^{29}Si(α,nγ)	U	^{32}S(p,p′γ)	AF	^{32}S(α,α′)
J	^{30}Si(^{16}O,^{14}C)	V	^{33}S(p,d)	AG	Coulomb excitation
K	^{31}P(p,γ)	W	^{33}S(^{3}He,α)		
L	^{31}P(p,p′)	X	^{34}S(p,t)		

E(level)†	J$^{\pi}$	T$_{1/2}$	XREF	Comments
0	0^{+}	stable	A C FGHIJK NOP STUVWXYZ	XREF: Others: AA, AC, AD, AE, AF, AG <r^{2}>$^{1/2}$=3.2611 fm *18* (2008 update of 2004An14 evaluation by I. Angeli: available at http://cdfe.sinp.msu.ru.). J$^{\pi}$: measurements by optical spectroscopy (1936Ol01,1931Na01).
2230.57 *15*	2^{+}	169 fs *11*	A C FGHI K NOPQ STUVWX Z	XREF: Others: AC, AD, AE, AF, AG μ=+0.94 *18* (1979Za01,1989Ra17) Q=−0.154 *20* (1981Sp07,1989Ra17) E(level): from ^{32}S(γ,γ′). J$^{\pi}$: E2 γ to 0^{+}. T$_{1/2}$: weighted average of 175 fs *28* (1998Ka31), 135 fs *49* (1974Ch09), 128 fs *52* (1972Co12), 243 fs *42* (1971In02), 180 fs *55* (1969Th03), 121 fs *21* (1971Re15), 147 fs *24* (2002Ba28), 228 fs *55* (1964Ma01), 250 fs *27* (1964Lo08), 240 fs *40* (1971In02), 164 fs *11* (1971Ga04), 160 fs *40* (1980Ba40). 2001Ra27 evaluation gives 171 fs *8* from a set of 22 quoted measurements from 1956 to 1980 using DSA, Coul. ex., (γ,γ′) and (e,e′). μ: transient-fields (1979Za01). See also 2005St24 compilation. Q: reorientation in Coulomb ex. (recalculated by 1981Sp07). Measurements: −0.160 *22* or −0.133 *22* (1982Ve09), −0.18 *4* or −0.15 *4* (1981Da08), −0.12 *5* (1980Ba40). See also 2005St24 compilation.
3778.4 *10*	0^{+}	0.89 ps *9*	A C EFG I K NO Q STUVWX	XREF: Others: AD, AF J$^{\pi}$: from ^{34}S(p,t) L=0 angular distribution. T$_{1/2}$: from ^{28}Si(^{6}Li,pnγ).
4281.8 *3*	2^{+}	42 fs *4*	A C E HI K NOPq STUVWX	XREF: Others: AD, AE, AF E(level): from ^{32}S(γ,γ′). J$^{\pi}$: from ^{32}S(p,t) L=2, ^{31}P(p,γ) $\gamma\gamma(\theta)$, ^{32}S(p,p′γ) $\gamma\gamma(\theta)$. T$_{1/2}$: from weighted average of all available data. Additional information 2.
4459.1 *8*	4^{+}	124 fs *27*	C FGHI K NO STUVWX	XREF: Others: AD, AE, AF μ=+1.6 *6* (1988Si14,1989Ra17) E(level): from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,γ) $\gamma\gamma(\theta)$, ^{32}S(p,p′) Ay(θ), ^{32}S(p,p′γ), $\gamma\gamma(\theta)$ and L=4 in ^{34}S(p,t). T$_{1/2}$: from ^{32}S(α,α′). μ: transient-fields (1988Si14). See also 2005St24 compilation.
4695.3 *4*	1^{+}	286 fs *74*	A C I K NO TUVWX	XREF: Others: AD E(level): from ^{31}P(p,γ). J$^{\pi}$: from ^{32}S(p,p′γ) $\gamma\gamma(\theta)$; L(p,d)=0+2 from 3/2^{+}. T$_{1/2}$: from ^{29}Si(α,nγ).
5006.2 *3*	3^{-}	0.52 ps *3*	C FGHI K NO Q STUVWX	XREF: Others: AC, AD, AE B(E3)↑=0.0127 *20* (2002Ki06) E(level): from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$ and polarization, ^{28}Si(α,γ) $\gamma\gamma(\theta)$, ^{32}S(p,p′) angular distributions and L=3 in ^{31}P(d,n) from 1/2^{+} and ^{33}S(p,d) from 3/2^{+}. T$_{1/2}$: from weighted average of all available data. Additional information 3.
5412.6 *10*	3^{+}	148 fs *19*	C EF I K NO UVWX	E(level): from ^{31}P(p,γ).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: from ^{31}P(p,γ) γ(θ); L=2 in ^{31}P(^{3}He,d) from 1/2$^+$; and in ^{33}S(p,d) from 3/2$^+$. $T_{1/2}$: from weighted average of all available data.
5548.5 *10*	2$^+$	57 fs *8*	A C I K NO TUVWX	E(level): from ^{29}Si(α,n). Jπ: from ^{32}S(p,p′) Ay(θ), ^{34}S(p,t) angular distribution and L=2 in ^{31}P(^{3}He,d) from 1/2$^+$; L=0+2 in ^{33}S(p,d) from 3/2$^+$. $T_{1/2}$: from ^{31}P(p,γ).
5796.8 *3*	1$^-$	5.6 fs *9*	C FGHI K NOPQ STUVWX	XREF: Others: AD E(level): from ^{32}S(γ,γ′). Jπ: from ^{32}S(p,p′γ) γγ(θ) and L=1 in ^{31}P(^{3}He,d) from 1/2$^+$ and in ^{33}S(p,d) from 3/2$^+$. $T_{1/2}$: from ^{32}S(γ,γ′).
6222.9 *8*	2$^-$	66 fs *12*	F I K NO S U WX	XREF: Others: AD E(level): from ^{31}P(p,γ). Jπ: from ^{31}P(p,γ) γ(θ) and RUL, ^{32}S(p,p′γ) γγ(θ); L=1 in ^{31}P(^{3}He,d) from 1/2$^+$. $T_{1/2}$: from weighted average of all available data.
6411 *2*	4$^+$	24.3 fs *35*	C E I K NO STU WX	E(level): weighted average of ^{31}P(p,γ) and ^{29}Si(α,n). Jπ: from ^{32}S(p,p′),(pol p,p′) Ay(θ). $T_{1/2}$: from ^{28}Si(^{6}Li,pnγ).
6582 *5*	(2$^+$,3$^-$)		O q T V X	XREF: V(?). E(level): from weighted average of ^{31}P(^{3}He,d) and ^{34}S(p,t). Jπ: from ^{32}S(p,p′),(pol p,p′) Ay(θ).
6621.7 *3*	4$^-$	0.36 ps *6*	I K NO q S VW	E(level): from ^{31}P(p,γ). Jπ: from ^{31}P(p,γ) γ(θ) and RUL, and L=3 in ^{31}P(^{3}He,d) from 1/2$^+$ and in ^{33}S(p,d) from 3/2$^+$. $T_{1/2}$: from ^{31}P(p,γ); note that the single ^{29}Si(α,nγ) disagrees significantly.
6666.1 *10*	2$^+$	40 fs *10*	A I K NO UVWX	E(level): from ^{31}P(p,γ). Jπ: from ^{31}P(p,γ) γ(θ), ^{34}S(p,t) angular distributions and L=2 in ^{31}P(^{3}He,d) from 1/2$^+$; L=0+2 in ^{33}S(p,d) from 3/2$^+$. $T_{1/2}$: from ^{31}P(p,γ).
6761.6 *10*	5$^-$	260 fs *35*	GHI K NO ST VWX	E(level): from ^{31}P(p,γ). Jπ: from ^{29}Si(α,nγ) nγ(θ). $T_{1/2}$: from ^{31}P(p,γ).
6851.5 *15*	4$^+$	66 fs *17*	I K NO VWX	XREF: Others: AD E(level): from ^{31}P(p,γ). Jπ: from ^{29}Si(α,nγ) n-γ(θ) correlation. $T_{1/2}$: from ^{31}P(p,γ).
7001.4 *4*	1$^+$	1.5 fs *5*	A K NO Q T VWX	XREF: Others: AD E(level): from ^{31}P(p,γ). Jπ: from ^{31}P(p,γ) γ(θ) and L=2 in ^{31}P(^{3}He,d) from 1/2$^+$; L=0+2 in ^{33}S(p,d) from 3/2$^+$; isobar analog state of g.s. 1$^+$ in ^{32}p and ^{32}Cl. $T_{1/2}$: from ^{31}P(p,γ).
7115.3 *10*	2$^+$	1.73 fs *35*	A C H K NO VWX	E(level): from ^{31}P(p,γ). Jπ: from ^{31}P(p,γ) γ(θ) and decay multipolarity, ^{34}S(p,t) angular distribution; L=2 in ^{31}P(^{3}He,d) from

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J^π	$T_{1/2}$	XREF	Comments
				$1/2^+$; L=0+2 in ^{33}S(p,d) from $3/2^+$. $T_{1/2}$: from ^{31}P(p,γ).
7190.1 *15*	1^+	8.0 fs *21*	A K NO Q T VW	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(p,γ) $\gamma(\theta)$; L=0 in ^{31}P(^{3}He,d) from $1/2^+$; L=0+2 in ^{33}S(p,d) from $3/2^+$. $T_{1/2}$: from ^{31}P(p,γ) and ^{31}P(d,n).
7350.0 *6*	$3^{(+)}$		K NO VWX	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(p,γ) $\gamma(\theta)$; L=2 in ^{33}S(p,d) from $3/2^+$.
7367			K	
7434 *3*	1^-	7.7 fs *10*	FGH K NO w	E(level): from ^{31}P(p,γ). J^π: L=1 in ^{31}P(^{3}He,d) and ^{31}P(d,n). $T_{1/2}$: from weighted average of ^{31}P(p,γ) and ^{31}P(^{3}He,d).
7484.0 *4*	2^+	4.9 fs *12*	C K NOP VW	E(level): from ^{32}S(γ,γ'),^{32}S(pol γ,γ'). J^π: from ^{31}P(p,γ) $\gamma(\theta)$ and RUL, ^{32}S(γ,γ') $\gamma(\theta)$, ^{32}S(pol γ,γ') $\gamma(\theta)$; L=2 in ^{33}S(p,d) from $3/2^+$. $T_{1/2}$: weighted average of all available data.
7535.7 *10*	0^+	2.6 fs *7*	C K NO VWX	E(level): from ^{31}P(p,γ). J^π: L=0 in ^{31}P(^{3}He,d) and ^{31}P(d,n); L=2 in ^{33}S(p,d) from $3/2^+$. $T_{1/2}$: weighted average of ^{31}P(p,γ) and ^{31}P(d,n).
7566.8 *9*	5^+	150 fs *32*	I K	E(level),J^π,$T_{1/2}$: from ^{29}Si(α,nγ) from n-$\gamma(\theta)$ correlation.
7637.0 *10*	1		K T X	E(level),J^π: from ^{32}S(p,p$'$) angular distribution.
7648 *5*			W	
7701.44 *36*	3^-	66 fs *19*	H K NO Q X	E(level),$T_{1/2}$: from ^{31}P(p,γ). J^π: from ^{31}P(p,γ) $\gamma(\theta)$; L=3 in ^{31}P(^{3}He,d) from $1/2^+$.
7882.9 *8*	4^+		K	J^π: from ^{31}P(p,γ) $\gamma(\theta)$.
7885 *4*	0^-,1^-,2^-		NO	J^π: L(^{3}He,d)=L(d,n)=1 from $1/2^+$.
7921.0 *10*	1^+		K T X	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(p,p$'$),(pol p,p$'$) angular distribution.
7950.1 *4*	4^-	146 fs *35*	I K O	E(level),$T_{1/2}$: from ^{31}P(p,γ). J^π: from ^{31}P(p,γ) from $\gamma(\theta)$ and RUL, and L=3 in ^{31}P(^{3}He,d).
7974.9 *7*	4^-	<21 fs	K NO VWX	E(level),$T_{1/2}$: from ^{31}P(p,γ). J^π: from L=3 in ^{31}P(^{3}He,d) and ^{31}P(d,n) in disagreement with ^{31}P(p,γ) and parity in ^{34}S(p,t).
8125.40 *20*	1^+	0.144 fs *21*	K NOPQ T X	E(level): from ^{32}S(γ,γ'),^{32}S(pol γ,γ'). J^π: from ^{32}S(γ,γ'),^{32}S(pol γ,γ') angular distribution and L=0 in ^{31}P(^{3}He,d). $T_{1/2}$: weighted average of ^{32}S(γ,γ'),^{32}S(pol γ,γ').
8191.1 *6*	4		K O	E(level): from ^{31}P(p,γ).
8270.3 *14*	3^-,5^-	<60 fs	I K o X	E(level),J^π,$T_{1/2}$: from ^{29}Si(α,nγ) n-$\gamma(\theta)$ correlation.
8281	(0 to 4)$^+$		o V	E(level),J^π: from ^{33}S(p,d) with L=2 from $3/2^+$.
8296.1 *10*	3^-		K NO	E(level): from ^{31}P(p,γ).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				J^π: from ^{31}P(p,γ) $\gamma(\theta)$ and L=3 in ^{31}P(d,n), ^{31}P(^{3}He,d).
8343 *3*	2^+		X	J^π: L(p,t)=2.
8346.4 *14*	4^+	<28 fs	I K O V	E(level),J^π: 4^+, 6^+ from ^{29}Si(α,nγ) n-$\gamma(\theta)$; L=2 in ^{33}S(p,d) from $3/2^+$. $T_{1/2}$: from ^{31}P(p,γ).
8380 *5*			O V	
8407.0 *14*	2		K O V	E(level),J^π: from ^{31}P(p,γ) $\gamma(\theta)$.
8499.3 *5*	1^-	1.30 fs *24*	BC Fg K NOP V X	XREF: Others: AF XREF: V(8489). E(level),$T_{1/2}$: from ^{31}P(p,γ). J^π: from L=1 in ^{31}P(d,n) and ^{31}P(^{3}He,d).
8671.7			S	
8684.0			S	
8687.6			A C K NO S V	E(level): from ^{32}S(n,n$'\gamma$),(n,n$'$).
8729.3 *6*	3^+		K O V X	E(level),J^π: from ^{31}P(p,γ) $\gamma(\theta)$ and RUL.
8736.7			S	
8741.8			S	
8745.6 *8*	3		K	J^π: from ^{31}P(p,γ) $\gamma(\theta)$.
8751.0			S	
8782.9			S	
8797.5			S	
8809.7			S	
8838.7			S	
8861 *2*	2^+		A C K O V X	E(level): from ^{28}Si(α,γ). J^π: from γ decay in ^{31}P(p,γ).
8895.3			S	
8906.0			S	
8921.8			S	
8941.9			S	
8945.1			S	
8953.6			S	
8977.5			S	
8984.7			S	
9007.3			S	
9009.2			S	
9012.7			S	
9023.8 *21*	4^-	0.27 ps *6*	C I K NO X	E(level): from ^{29}Si(α,nγ). J^π: 4^-,6^- from ^{29}Si(α,nγ); L=3 in ^{31}P(^{3}He,d) from $1/2^+$ target; L=1 in ^{31}P(d,n) is apparently in disagreement but in another (d,n) study L=1 or 3 is also indicated.
9031.1			S	
9042.0			S	
9055.1			S	
9059 *2*	1^-		K NO v	E(level): from ^{31}P(p,γ). J^π: from L=1 in ^{31}P(^{3}He,d).
9065 *2*		<14 fs	C K v	E(level),$T_{1/2}$: from ^{28}Si(α,γ).
9087.9			S	
9090.9			S	
9139.9			S V	
9159.0			S	
9170 *3*	3^+		I K O V	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(^{3}He,d) $\gamma\delta$ coincidence.
9196 *8*	2^+		K X	E(level),J^π: from ^{34}S(p,t).
9200.8			S	

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J^π	$T_{1/2}$	XREF	Comments
9207.55 *71*	1^+	4.2 fs *14*	K MNOP	E(level): from ^{31}P(p,γ) $\gamma\gamma(\theta)$. J^π,$T_{1/2}$: from ^{32}S(γ,γ'),^{32}S(pol γ,γ').
9210.6			S	
9211.2			S	
9235.2 *24*	1^-	<60 fs	A C I K MNO	E(level),$T_{1/2}$: from ^{29}Si(α,nγ). J^π: from ^{31}P(^{3}He,d) L=1 and angular distribution. The γ-rays reported in ^{29}Si(α,nγ) do not match those from ^{28}Si(α,γ) we report here the older values but clearly more investigation is necessary.
9253 *1*	2^+		K O	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(^{3}He,d) dγ coincidences.
9268.0			S	
9271.7			S	
9280	1		T	
9287.9			S	
9289.0 *1*	1^+		K MNO	E(level),J^π: from ^{31}P(p,γ) $\gamma(\theta)$ and $\gamma\gamma(\theta)$.
9297.0			S	
9309.2			S	
9317.1			S	
9344.9			S	
9357.6			S	
9360.5			S	
9388 *1*	2^+		K MNO	E(level): from ^{31}P(p,γ). J^π: from ^{31}P(^{3}He,d) as well as L=1 in ^{31}P(d,n).
9395.0			S	
9397.2			S	
9402.1			S	
9436.0			S	
9450.6			S	
9463.4 *10*	5^-,7^-	<70 fs	I	
9466.0 *15*	2^+	<49 fs	A C K M O X	E(level),J^π: from ^{28}Si(α,γ) n-$\gamma(\theta)$ correlation. $T_{1/2}$: from ^{31}P(p,γ).
9481.5			S	
9485.7 *10*	1^-	8.2 eV *25*	C K MNO S	E(level): from ^{31}P(p,γ). $T_{1/2}$: from ^{31}P(p,α) and ^{31}P(p,γ). J^π: from ^{31}P(p,γ) $\gamma(\theta)$ and L=1 in ^{31}P(^{3}He,d), ^{31}P(d,n).
9500			F S	
9515.9			S	
9524.3			S	
9534.0			S	
9534.9			S	
9560.6			S	
9562 *10*	1^-,2^-		O	J^π: from L=1 in ^{31}P(^{3}He,d).
9597.1			S	
9619.4			S	
9634.6 *18*	4^-,6^+	0.09 ps *6*	I	
9650 *30*	6^-		R	
9650.2 *5*	2^+		A K MNO v X	E(level),J^π: from ^{31}P(p,γ) $\gamma(\theta)$, $\gamma\gamma(\theta)$ and L=2 in ^{34}S(p,t).
9655.2			S v	
9656.7			S v	
9660.1 *11*	1^+	2.4 eV *7*	K M PQ ST v	E(level),J^π,$T_{1/2}$: from ^{32}S(γ,γ'),^{32}S(pol γ,γ') $\gamma(\theta)$.
9665.4			S	

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^{\pi}$	T$_{1/2}$	XREF	Comments
9671.7			S	
9674.6			S	
9693.4			S	
9704 *8*			S X	E(level): from ^{34}S(p,t).
9711.9 *14*	2^{+}	3.6 eV	A C K	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$ and correlation.
9724 *1*	2,3,4		K O	J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$.
9727.9 *5*			K	
9731 *1*	1^{-},2^{-}		K NO	E(level): from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(d,n) L=1 and ^{31}P(^{3}He,d) L=3,1.
9783 *20*	6	0.14 fs *+13−11*	I V	J$^{\pi}$: from ^{29}Si(α,nγ) $\gamma(\theta)$.
9810			R	
9816.8 *10*	3^{-},4^{-}		K NO X	E(level): from ^{31}P(p,γ). J$^{\pi}$: from L=3 in ^{31}P(^{3}He,d).
9827 *3*			K	
9848 *1*	1^{-}	0.100 keV *10*	C K MNO	E(level): from ^{31}P(p,γ). T$_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from ^{31}P(p,α) angular distribution with L=1 in ^{31}P(^{3}He,d).
9883.3 *5*			K v	
9887.3 *6*	2^{+},3^{+}	0.010 keV *5*	A K NO v	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from L=2 in ^{31}P(^{3}He,d).
9919.3 *5*	2^{+}	0.010 keV *5*	K X	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{34}S(p,t) L=2 angular distribution and modeling.
9935 *6*	1		C T	E(level): from ^{28}Si(α,γ). J$^{\pi}$: from ^{32}S(p,p′),^{32}S(pol p,p′) angular distributions.
9946.6 *5*	1^{-}	0.150 keV *15*	A K NO V	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(^{3}He,d) L=1 and RUL.
9977.9 *5*	4		K N v	E(level),J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$.
9978.3 *1*	3		K Q v	E(level): from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$ disagrees with 1^{+} from ^{31}P(e,e′).
9982.7 *6*	2,0^{+}	0.100 keV *10*	A K	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: this is a doublet with J=0^{+} coming from ^{32}Cl decay.
9988 *10*	3^{-},4^{-}	≈4 keV	M O	E(level),T$_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from L=3 ^{31}P(^{3}He,d).
9997 *6*			C	E(level): from ^{28}Si(α,γ).
10021 *10*	3^{-},4^{-}		O	E(level),J$^{\pi}$: from L=3 ^{31}P(^{3}He,d).
10073.4 *6*	2^{-}	1.50 keV *15*	K MNO	E(level),J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,γ), very strong M2 γ to 0^{+} forces this to be 2^{-} despite L=1 from ^{31}P(^{3}He,d) and ^{31}P(d,n).
10079 *2*	(1)	1.7 keV *4*	L	E(level),J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,p′).
10090 *10*	2^{-}		Q	J$^{\pi}$: M2 transition.
10102.3 *10*	4$^{(+)}$		K O	E(level),J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$.
10113 *6*			C	
10218.8 *6*	3^{+}	0.010 keV *5*	C K N	E(level),J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,γ) $\gamma(\theta)$ and E3+M2 decay to 4961.
10221.2 *6*	3^{-}	0.056 keV *10*	KLM O	E(level),J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,γ) with L=3 from

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^{\pi}$	$T_{1/2}$	XREF	Comments
				^{31}P(^{3}He,d), note however that ^{31}P(p,α) found a very different lifetime and possibility of J=2.
10225.0 *16*		0.18 keV *2*	K	
10230.3 *6*	1^{+}	0.025 keV *3*	A K	E(level),J$^{\pi}$: from ^{31}P(p,γ) from $\gamma(\theta)$ and RUL.
10256.1 *7*	4^{-}	0.035 keV *4*	KLMNO	E(level),$T_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$ and L=3 in ^{31}P(^{3}He,d).
10276 *8*	4^{+}		N X	E(level),J$^{\pi}$: from ^{34}S(p,t) L=4 and microscopic model comparison.
10286.3 *7*	3^{-}	0.16 keV *2*	C K MNO	E(level),$T_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,α) angular distribution and L=3 in ^{31}P(^{3}He,d).
10290.2 *6*	2	0.125 keV *13*	A K	E(level),J$^{\pi}$,$T_{1/2}$: from ^{31}P(p,γ) $\gamma(\theta)$.
10292.0 *15*	3	0.07 keV *1*	C K M	E(level),$T_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,α) angular distribution. $T_{1/2}$: ^{31}P(p,α) found a much higher half life than ^{31}P(p,γ).
10310			R	
10331.1 *15*	1^{-}	6.1 keV *7*	K MNO	E(level),J$^{\pi}$,$T_{1/2}$: from L=1 from ^{31}P(^{3}He,d) and ^{31}P(d,n).
10337 *3*		9 keV *2*	C L	E(level),J$^{\pi}$,$T_{1/2}$: from ^{31}P(p,p′) with L=(1).
10369	(0^{+})	5.8 keV	B D TU W	XREF: B(10250). J$^{\pi}$: from ^{28}Si(α,α) R-matrix fits.
10370.6 *6*	2^{+}	0.025 keV *3*	KLM O X	E(level),$T_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{34}S(p,t) angular distribution and L=2 in ^{31}P(^{3}He,d).
10396.7 *6*	4^{-}	0.012 keV *2*	K MNO	E(level),J$^{\pi}$,$T_{1/2}$: from ^{31}P(p,γ) $\gamma(\theta)$ with L=3 in ^{31}P(^{3}He,d).
10405 *3*		11 keV *4*	F L	E(level),$T_{1/2}$: from ^{31}P(p,p′).
10428 *10*	2^{+},3^{+},3^{-},4^{-}		O	J$^{\pi}$: from ^{31}P(^{3}He,d) L=2,3.
10456 *6*	1^{+}	2.9 keV	A C M Q	E(level),$T_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from ^{31}P(e,e′) angular distribution. Additional information 4.
10500	(0^{+})	1.7 keV	B D T	XREF: Others: AE XREF: B(10380).
10507.9 *10*		0.010 keV *5*	K	
10534 *4*	3^{-},4^{-}	1.8 keV	A C LM O X	E(level): from ^{31}P(p,p′). $T_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from L=3 in ^{31}P(^{3}He,d) disagrees with J=2 from ^{31}P(p,α).
10556.1 *10*			KL	E(level): from ^{31}P(p,γ).
10570	(0^{+})	1.2 keV	B D T X	XREF: Others: AF XREF: B(10460).
10574.4 *10*	5^{+}	0.015 keV *2*	K	
10603.8 *10*		0.15 keV *2*	K	
10624 *6*	3^{-},4^{-}	3.1 keV	M O	E(level),$T_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from L=3 in ^{31}P(^{3}He,d).
10636.4 *10*			C K	E(level): from ^{31}P(p,γ).
10658	(1^{-})	2.3 keV	B D T W	XREF: Others: AE XREF: B(10530).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^{\pi}$	T$_{1/2}$	XREF	Comments
10696.1 *10*		0.18 keV *2*	K	
10700.5 *10*	1^{-}	21 keV *4*	K M o	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,α) angular distribution and L=1 in ^{31}P(^{3}He,d).
10705.3 *10*	1^{-},2^{-}	20 keV *3*	C KL No	E(level): from ^{31}P(p,γ). J$^{\pi}$: from L=1 in ^{31}P(d,n).
10745	(0^{+})	8.9 keV	B D R T WX	XREF: B(10650). E(level),T$_{1/2}$: from ^{28}Si(α,α) angular distribution.
10756.7 *10*	3$^{(+)}$	0.05 keV *1*	K N	E(level),J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,γ) $\gamma(\theta)$.
10778.8 *10*	2^{+}	0.62 keV *7*	A K M O X	E(level),T$_{1/2}$: from ^{31}P(p,γ) note however that in ^{31}P(p,α) a much higher half life was found, the spin discrepancy additionally indicates this level may be a doublet. J$^{\pi}$: from L=2 in ^{34}S(p,t), parity disagrees with L=1 in ^{31}P(^{3}He,t).
10783.8 *10*		0.75 keV *8*	K	
10784.5 *10*		0.60 keV *6*	K	
10791.3 *10*	1	0.17 keV *2*	A C KLM	E(level),T$_{1/2}$: from ^{31}P(p,γ). J$^{\pi}$: from ^{31}P(p,α) angular distribution and ^{28}Si(α,γ) $\gamma(\theta)$.
10806	2		C F	E(level),J$^{\pi}$: from ^{28}Si(α,γ).
10816	(3^{-},5^{-})	4.7 keV	B D T	XREF: Others: AG XREF: B(10700).
10825.4 *10*	2^{-}	22 keV *4*	KLMNO Q X	E(level),T$_{1/2}$: from ^{31}P(p,γ) note that ^{31}P(p,α) gives a much lower approximate estimate. J$^{\pi}$: from ^{32}S(e,e′) strength and L=1 in ^{31}P(^{3}He,d) and ^{31}P(d,n), parity disagrees with ^{34}S(p,t) and spin with ^{31}P(p,α).
10827.0 *10*		0.32 keV *3*	K m	E(level),T$_{1/2}$: from ^{31}P(p,γ).
10830 *3*		≈4 keV	M	
10832 *3*	2,(3)	≈2.5 keV	C M	E(level),T$_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$ disagrees with J=2,(3) of ^{31}P(p,α).
10841 *10*	2	≈0.4 keV	C M	E(level),T$_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$.
10851	1		C	
10868	(2^{+})	7.7 keV	B D T	XREF: Others: AG XREF: B(10780).
10880 *40*	6^{-}		R	
10907 *10*	1^{+}	2.1 keV	M Q	E(level),T$_{1/2}$: from ^{31}P(p,α). J$^{\pi}$: from ^{31}P(e,e′) strength and ^{31}P(p,α) angular distribution.
10915 *2*			K	
10933.7 *10*	3		K	
10941	1		C	E(level),J$^{\pi}$: from ^{28}Si(α,γ) $\gamma\gamma(\theta)$.
10956	(0^{+})	2.9 keV	B D T	XREF: B(10880).
10977 *10*	(1^{-},2^{-})		LM O	J$^{\pi}$: from L=(1) in ^{31}P(^{3}He,d).
10980 *40*	6^{-}		QR	E(level),J$^{\pi}$: from ^{32}S(e,e′).
10998	(4)		C	
11009.9 *10*	4^{+}		K O	E(level),J$^{\pi}$: from ^{31}P(p,γ) $\gamma(\theta)$.
11020	(1^{-},2^{-})		N	
11052	(4)		C	
11064	2^{+}		A	

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
11078	2		C	E(level),J$^\pi$: from ^{28}Si(α,γ) $\gamma\gamma(\theta)$.
11092.3 *10*	3$^-$		KLM O	E(level): from ^{31}P(p,γ). J$^\pi$: from ^{31}P(p,γ) $\gamma(\theta)$ and L=3 in ^{31}P(^{3}He,d).
11107	(2$^+$)	67.4 keV	BCD T W	XREF: B(10950). E(level): average of ^{28}Si(α,α) and ^{28}Si(α,γ). J$^\pi$,T$_{1/2}$: from ^{28}Si(α,α), R-Matrix fits.
11114 *2*			K	
11123 *1*			K	
11130	(0$^+$)	1.8 keV	B D T W	XREF: B(11050).
11131 *2*	1		K T	E(level): from ^{31}P(p,γ). J$^\pi$: from ^{31}P(p,p′).
11139.8 *10*	1$^+$		K Q	E(level): from ^{31}P(p,γ). J$^\pi$: from ^{31}P(e,e′).
11170 *50*	6$^-$		Q	
11198 *10*	3$^-$,4$^-$		NO	E(level),J$^\pi$: from L=3 ^{31}P(^{3}He,d) and L=3 ^{31}P(d,n).
11235.5 *10*	3	9 keV	K M O	E(level),J$^\pi$: from ^{31}P(p,γ) $\gamma(\theta)$ note that ^{31}P(p,α) finds J=1. T$_{1/2}$: from ^{31}P(p,α).
11253.9 *10*	(3$^-$)	1.1 keV	B D K O TU W	XREF: B(11250). E(level): from ^{31}P(p,γ). J$^\pi$: from ^{28}Si(α,α):res R-matrix fit.
11332.8 *10*			K	
11366 *10*			O	
11410	(3$^-$)	1.9 keV	B D T	XREF: Others: AE XREF: B(11380).
11425 *10*	1	≈4 keV	M	
11438 *10*			O	
11474.6 *10*	3		K O	E(level),J$^\pi$: from ^{31}P(p,γ) $\gamma(\theta)$.
11485.8 *10*	1$^+$		K O Q	E(level): from ^{31}P(p,γ). J$^\pi$: from ^{32}S(e,e′).
11554 *10*	(0,1)	6.1 keV	M O	E(level): average of ^{31}P(^{3}He,d) and ^{31}P(p,α). T$_{1/2}$,J$^\pi$: from ^{31}P(p,α) angular distribution.
11589.7 *10*	1$^-$	10.7 keV	K MNO	E(level): ^{31}P(p,γ). J$^\pi$,T$_{1/2}$: from ^{31}P(p,α) angular distribution with L=1 in ^{31}P(d,n).
11602.4 *10*			K O	E(level): from ^{31}P(p,γ) $\gamma(\theta)$.
11620 *7*	1$^+$		O Q	E(level),J$^\pi$: from ^{32}S(e,e′).
11629	(1,2$^+$,3$^-$)	5.7 keV	B D T	XREF: Others: AF XREF: B(11410). E(level),T$_{1/2}$: from ^{28}Si(α,α):res. J$^\pi$: ^{32}S(p,p′) J=1; 3$^-$ from ^{28}Si(α,α′); 2$^+$ from ^{4}He(^{28}Si,α). There may be two different levels near this energy.
11637.1 *10*			K	
11648 *10*	1	6.6 keV	K	
11660 *10*			O	
11669.6 *10*	5$^+$		K	
11690 *10*	(3$^-$)	1.2 keV	B D O T W	XREF: Others: AG XREF: B(11570). E(level): from ^{31}P(^{3}He,d). J$^\pi$,T$_{1/2}$: from ^{28}Si(α,α):res R-matrix fit.
11696.7 *10*	5$^+$		K m	XREF: Others: AB E(level),J$^\pi$: from ^{31}P(p,γ).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^{\pi}$	T$_{1/2}$	XREF	Comments
				T$_{1/2}$: 8.0 keV from ^{31}P(p,α) and 55 keV *24* from ^{16}O(^{20}Ne,α) may belong to this level but many levels overlap within uncertainties.
11720 *10*			O	
11750 *10*	1		C O	E(level): from ^{31}P(^{3}He,d). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$.
11758.8 *10*			K	
11783 *10*	1	30 keV	C M O	E(level): from ^{31}P(^{3}He,d). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$ note that ^{31}P(p,α) favors J=2. T$_{1/2}$: from ^{31}P(p,α).
11806 *10*	1,2		C F O	E(level): from ^{31}P(^{3}He,d). J$^{\pi}$: from ^{28}Si(α,γ) $\gamma(\theta)$.
11823 *10*	1^{-},2^{-}		NO	E(level): from ^{31}P(^{3}He,d). J$^{\pi}$: from ^{31}P(d,n) L=1.
11848	(3^{-})	10.4 keV	B D T WX	XREF: B(11650).
11861 *10*			O	
11876 *10*			O	
11883 *10*	1	7.6 keV	M Q T	E(level): average of ^{32}S(e,e′) and ^{31}P(p,α). J$^{\pi}$: from ^{31}P(p,α) angular distribution and ^{32}S(p,p′), J=2^{-} ^{32}S(e,e′) disagrees.
11900 *10*			O	
11936 *10*	3^{-}	7.3 keV	M O	E(level): from ^{31}P(^{3}He,d). J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,α) angular distribution and L=3 from ^{31}P(^{3}He,d).
11940 *20*	6^{-}	86 keV *24*	QR	E(level): from ^{16}O(^{20}Ne,α). J$^{\pi}$: from ^{32}S(e,e′) and ^{32}S(π^{+},π^{+}), disagrees with 5^{-} assignment of ^{16}O(^{20}Ne,α) however large uncertainties mean there may be several levels here.
11940.1 *10*	3		K	
11955 *10*	(2^{+},3^{-})	3.2 keV	B D O T	XREF: B(11800). E(level): from ^{31}P(^{3}He,d). J$^{\pi}$,T$_{1/2}$: from ^{28}Si(α,α):res R-matrix fit.
12002 *10*	2	11.8 keV	M O	E(level): from ^{31}P(^{3}He,t). J$^{\pi}$,T$_{1/2}$: from ^{31}P(p,α) angular distribution.
12030 *10*			C q TU x	XREF: Others: AE, AG XREF: C(12037). E(level),J$^{\pi}$: from ^{32}S(e,e′) likely a doublet or triplet of levels since the spins reported are all in disagreement, uncertainties are also large or absent making it impossible to make clear assignments.
12043.9 *10*			K no q x	E(level),J$^{\pi}$: from ^{31}P(p,γ) which resolved the triplet.
12044.19 *28*	2,3,4		K no q x	E(level),J$^{\pi}$: from ^{31}P(p,γ) which resolved the triplet.
12047.96 *28*	0^{+}		C K no	E(level),J$^{\pi}$: from ^{31}P(p,γ) which resolved the triplet.
12050	(2^{+},3^{-})		B D T	XREF: Others: AF XREF: B(11940).
12124	2	6.9 keV	M	
12160 *10*	(3^{+},2^{+})	22 keV	B M O TU	XREF: Others: AG

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J^π	$T_{1/2}$	XREF	Comments
				XREF: B(12170). E(level): from ^{31}P(^{3}He,t). J^π,$T_{1/2}$: from ^{31}P(p,α) angular distribution with L=(2) from ^{31}P(^{3}He,t).
12196 *10*	1^-		NO QR	E(level): from ^{32}S(e,e′). J^π: From ^{32}S(e,e′) but with parity from L=1 in ^{31}P(d,n).
12198	(3^-)	6.4 keV	B D TU	XREF: B(12000).
12235 *10*	$(2^+,3^+)$		O	
12260	$[3^-]$		B	
12270	0	21 keV	M	
12308 *10*			O	
12340 *10*			O	
12362 *10*	3,(2)	4.8 keV	M O	E(level),J^π,$T_{1/2}$: from ^{31}P(p,α) angular distribution.
12393 *10*	3	7.7 keV	MNO	E(level): from ^{31}P(^{3}He,d). $T_{1/2}$,J^π: from ^{31}P(p,α) angular distribution.
12426 *10*	3,2	13.9 keV	B M O TU	XREF: Others: AF XREF: B(12440). E(level),J^π: from ^{31}P(^{3}He,d). $T_{1/2}$: from ^{31}P(p,α) angular distribution.
12465 *10*	2	7.8 keV	M O	E(level): from ^{31}P(^{3}He,d). J^π,$T_{1/2}$: from ^{31}P(p,α) angular distribution.
12491 *10*	(2,1)	18.6 keV	M O	E(level): from ^{31}P(^{3}He,d). J^π,$T_{1/2}$: from ^{31}P(p,α) angular distribution.
12510	$[3^-]$		B	
12553	2	8.4 keV	M	
12560	1		T	
12568	2	3.0 keV	M	
12600	3,2	7.9 keV	M	
12630 *30*	6^-		N R	E(level),J^π: from ^{32}S(π^+,π^+) note that L=1 in ^{31}P(d,n) probably means there are several levels in this vicinity.
12650 *10*	1^+	<0.10 MeV	B Q TU WX	XREF: B(12650).
12710	$(5^-,3^-)$‡	5 keV	B D TU	XREF: Others: AE, AG XREF: B(12730).
12740 *40*	6^-		QR	
12760 *20*	6^+	84 keV *24*		XREF: Others: AB
12770	(2^+)‡	10 keV	D	
12830	(3^-)‡	1 keV	D	
12860	(3^-)‡	38 keV	D	
12910	(3^-)‡	8 keV	B D TU	XREF: B(12880).
12930	(3^-)‡	29 keV *5*	B D TU	XREF: Others: AE XREF: B(12930).
12980 *10*	1^+		QR	E(level),J^π: from ^{32}S(e,e′).
13040 *20*	(4^+)	<47 keV	B T W	XREF: Others: AB, AE XREF: B(13050).
13086	(3^-)‡	26 keV *7*	B D T	XREF: Others: AE XREF: B(13110).
13220	$[3^-]$	<0.06 MeV	B	
13230	1		T	
13260 *50*	6^-		QR	E(level),J^π: from ^{32}S(e,e′).
13268	(3^-)‡	49 keV *3*	B D TU	XREF: Others: AE, AG

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J$^{\pi}$	T$_{1/2}$	XREF	Comments
				XREF: B(13270).
13339	(3$^-$)	28.8 keV *13*	B D M T X	XREF: Others: AE, AG XREF: B(13360)D(13370). E(level): average of ^{31}P(p,α) and ^{28}Si(α,α). J$^{\pi}$: from ^{31}P(p,α) angular distribution and L=(3) in ^{28}Si(α,α):res. T$_{1/2}$: from ^{28}Si(α,α):res.
13410 *10*	1$^+$,(2$^-$)		Q	
13430	3$^-$,4$^-$		N	
13490	(3$^-$)‡	54 keV *5*	B D T W	XREF: Others: AE XREF: B(13500).
13540 *50*	5$^-$		QR	
13588	(3$^-$)‡	18 keV *4*	B D T WX	XREF: Others: AE XREF: B(13560).
13655	(3$^-$)‡	74 keV *2*	D	
13696	(4$^+$,3$^-$)‡	23.6 keV *9*	B D TU X	XREF: Others: AE XREF: B(13620).
13760 *20*	6$^+$	50 keV *24*		XREF: Others: AB
13780 *10*	1$^+$		Q T	E(level),J$^{\pi}$: from ^{32}S(e,e′).
13807	(3$^-$)‡	47.4 keV *8*	B D T X	XREF: Others: AE, AG XREF: B(13670).
13870	(5$^-$,3$^-$)‡	22.0 keV *11*	B D T	XREF: Others: AE, AG XREF: B(13790).
13896	(4$^+$)‡	22.4 keV *1*	B D T	XREF: Others: AE XREF: B(13830).
13900	1		T	
13970 *10*	1$^+$,(2$^-$)		Q	
14000 *20*	(7$^-$)	50 keV *24*		XREF: Others: AB
14070	(3$^-$)‡	29.6 keV *7*	B D T	XREF: Others: AE, AF XREF: B(14030).
14131	(5$^-$)‡	15.2 keV *6*	B D T	XREF: Others: AF XREF: B(14110).
14177	(4$^+$)‡	42.0 keV *11*	B D T X	XREF: Others: AF XREF: B(14160).
14234	(3$^-$)‡	89 keV *2*	B D TU	XREF: Others: AF XREF: B(14220).
14290 *50*	6$^-$		QR	
14429	(3$^-$)‡	40 keV *2*	B D T	XREF: Others: AE, AF, AG XREF: B(14370).
14450 *10*	1$^+$		Q	
14542	(4$^+$,5$^-$)‡	84.5 keV *11*	B D T W	XREF: Others: AF XREF: B(14550).
14633	(5$^-$)‡	7.0 keV *9*	D	
14730	[4$^+$]		B	
14770 *10*	2$^-$	<0.08 MeV	Q	
14810 *20*	(8$^+$)	91 keV *24*		XREF: Others: AB
14832	(4$^+$)‡	37.5 keV *5*	B D T	XREF: Others: AF XREF: B(14810).
14878	(4$^+$)‡	25.5 keV *7*	D	
14880	1		T	
15025	(4$^+$)‡	30.5 keV *11*	B D T	XREF: Others: AF

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J^π	$T_{1/2}$	XREF	Comments
				XREF: B(14980).
15040	1		T	
15116	(5^-)‡	36 keV 2	B D T W	XREF: Others: AF XREF: B(15140).
15.2×10^3 1	6^+	119 keV 24		XREF: Others: AB
15230	$(4^+,5^-)$‡	18 keV 2	B D TU W	XREF: Others: AE XREF: B(15230).
15344	(5^-)‡	45.9 keV 1	B D T W	XREF: Others: AE XREF: B(15330).
15385	(5^-)‡	24.5 keV 6	B D T W	XREF: Others: AE XREF: B(15380).
15441	(5^-)‡	34.3 keV 3	B D T W	XREF: Others: AF XREF: B(15440).
15527	(5^-)‡	46.8 keV 3	B D T W	XREF: Others: AE XREF: B(15530).
15580	1		T	
15600			F	
15631	(5^-)‡	29.9 keV 3	B D T WX	XREF: B(15610).
15686	$(5^-,6^+)$‡	35.9 keV 1	B D TU W	XREF: Others: AG XREF: B(15720).
15700	1		T	
15758	$(6^+,5^-)$‡	41.0 keV 9	B D T WX	XREF: Others: AG XREF: B(15760).
15840	1		T	
15847	$(4^+,5^-)$‡	47 keV 2	B D TU W	XREF: B(15820).
15894	$(5^-,4^+)$‡	28.0 keV 8	B D T W	XREF: B(15890).
15955	(6^+)‡	21.6 keV 5	B D T WX	XREF: B(15960).
16052	(5^-)‡	54 keV 2	B D T X	XREF: B(16060).
16243	(6^+)‡	41.3 keV 8	B D T X	XREF: B(16160).
16250	$[5^-]$		B	
16310 70	6^-		R	
16341	(5^-)‡	86 keV 2	B D T X	XREF: Others: AE XREF: B(16330).
16370	$[5^-]$		B	
16430 70	6^-		Q	
16495	(5^-)‡	64 keV 3	B D T X	XREF: Others: AF XREF: B(16480).
16615	(6^+)‡	60 keV 2	B D T WX	XREF: B(16650).
16650 70	6^-		R	
16691	$(5^-,6^+)$‡	23 keV 2	B D T X	XREF: B(16690).
16747	(6^+)‡	45 keV 2	B D T X	XREF: Others: AG XREF: B(16780).
16795	(6^+)‡	76 keV 6	D	
16866	(6^+)‡	38.1 keV 6	B D T X	XREF: Others: AG XREF: B(16870).
16920	(6^+)‡	35.0 keV 8	D	
16978	(6^+)‡	47 keV 3	B D T X	XREF: Others: AG XREF: B(16970).
17080	(6^+)‡	58.0 keV 14	B D T X	XREF: Others: AG XREF: B(17060).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
17120 *70*	6^-		R	
17180 *80*	6^-		Q	
17250	(5^-)‡	92 keV *14*	B D TU X	XREF: Others: AG XREF: B(17260).
17393	(7^-)‡	35 keV *6*	B D T W	XREF: Others: AE, AG XREF: B(17350).
17420	$[7^-]$		B	
17570	$[7^-]$		B	
17656	(7^-)‡	36 keV *2*	B D T X	XREF: Others: AG XREF: B(17690).
17688	(7^-)‡	26 keV *2*	D	
17868	$(6^+,7^-)$‡	82 keV *7*	B D T	XREF: Others: AG XREF: B(17800).
17880	$[7^-]$		B	
17934	(7^-)‡	48 keV *4*	B D T	XREF: Others: AF, AG XREF: B(17940).
18042	(7^-)‡	44 keV *2*	B D T X	XREF: B(18060).
18213	(7^-)‡	76 keV *7*	B D TU	XREF: B(18220).
18400	$[9^-]$		B	
18458	(7^-)‡	66 keV *5*	B D T	XREF: Others: AF, AG XREF: B(18470).
18554	(7^-)‡	73.6 keV *14*	B D T WX	XREF: B(18560).
18660	(7^-)‡	74 keV *5*	B D T X	XREF: B(18660).
18736	(7^-)‡	75 keV *6*	B D T W	XREF: Others: AG XREF: B(18750).
18803	$(8^+,7^-)$‡	46 keV *3*	B D T	XREF: B(18890).
18810	$[7^-]$		B	
18986	$(8^+,7^-)$‡	34 keV *2*	B D T	XREF: B(18980).
19119	$(8^+,7^-)$‡	84 keV *7*	B D TU	XREF: B(19120).
19190	$[7^-]$		B	
19248	(8^+)‡	54 keV *10*	B D TU	XREF: Others: AE XREF: B(19320).
19250	$[7^-]$		B	
19442	$(7^-,8^+)$‡	72 keV *2*	B D T W	XREF: B(19500).
19450	$[7^-]$		B	
19551	(8^+)‡	75 keV *18*	B D T X	XREF: B(19610).
19653	(8^+)‡	54 keV *2*	B D T X	XREF: B(19690).
19747	$(8^+,7^-)$‡	79 keV *9*	B D T	XREF: B(19800).
20200	$[8^+]$		B	
20270	$[8^+]$		B	
20275	$(7^-,8^+)$‡	44 keV *4*	B D U	XREF: Others: AE XREF: B(20320).
20381	(8^+)‡	72 keV *17*	B D TU	XREF: Others: AF XREF: B(20410).
20485	(8^+)‡	84 keV *4*	B D U W	XREF: Others: AE XREF: B(20530).
20610	$[8^+]$		B	
20680	$[8^+]$		B	
20703	(8^+)‡	37 keV *4*	B D U W	XREF: Others: AG XREF: B(20750).

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
20800	[8+]		B	
20835	(8+)‡	59 keV *2*	B D U X	XREF: B(20860).
20950	[8+]		B	
21050	[9−]		B	
21212	(9−)‡	69 keV *3*	B D TU	XREF: B(21280).
21395	(9−)‡	70 keV *5*	B D TU	XREF: Others: AE, AF XREF: B(21430).
21457	(9−)‡	45 keV *4*	B D TU	XREF: Others: AF XREF: B(21490).
21532	(9−)‡	39 keV *10*	B D TU W	XREF: B(21590).
21720	[9−]		B	
21783	(8+,9−)‡	53 keV *2*	B D TU	XREF: B(21810).
22000	[9−]		B	
22135	(9−)‡	74 keV *4*	B D TU	XREF: Others: AG XREF: B(22170).
22205	(9−)‡	54 keV *9*	B D U	XREF: Others: AF XREF: B(22240).
22308	(9−)‡	47 keV *14*	B D TU	XREF: Others: AE XREF: B(22310).
22355	(8+)‡	24 keV *5*	B D U	XREF: Others: AE XREF: B(22390).
22590	[9−]		B	
22710	[9−]		B	
22846	(9−)‡	51 keV *5*	B D TU	XREF: B(22810).
22964	(10+,9−)‡	58 keV *3*	B D U	XREF: Others: AE XREF: B(23030).
23226	(9−)‡	74 keV *16*	B D TU X	XREF: Others: AE XREF: B(23160).
23296	(9−)‡	52 keV *7*	B D U X	XREF: Others: AE XREF: B(23260).
23430	[9−]		B	
23493	(10+)‡	93 keV *12*	B D U W	XREF: Others: AE, AG XREF: B(23750?).
23.86×10^3	7−‡	≈0.1 MeV	D	
24.93×10^3	8+‡	≈0.1 MeV	D	
26.90×10^3	11−‡	≈0.2 MeV	D	
27.25×10^3	9−‡	0.08 MeV	D	
27.44×10^3	8+‡	0.04 MeV	D	
27.69×10^3	9−‡	0.15 MeV	D	
27.82×10^3	9−‡	0.11 MeV	D	
28.04×10^3	10+‡	0.04 MeV	D	
28.17×10^3	10+‡	0.07 MeV	D	
28.30×10^3	8+‡	0.08 MeV	D	
28.48×10^3	10+‡	0.17 MeV	D	
28.67×10^3	10+‡	0.22 MeV	D	
28.97×10^3	10+‡	0.19 MeV	D	
29.25×10^3	9−‡	0.13 MeV	D	
29.66×10^3	10+‡	0.16 MeV	D	

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Adopted Levels, Gammas (continued)

^{32}S Levels (continued)

E(level)†	J^{π}	$T_{1/2}$	XREF
29.88×10^3	10^+‡	0.20 MeV	D
29.91×10^3	10^+‡	0.16 MeV	D
30.26×10^3	9^-‡	0.17 MeV	D
30.37×10^3	10^+‡	0.13 MeV	D
30.61×10^3	11^-‡	0.25 MeV	D
30.89×10^3	12^+‡	0.14 MeV	D
31.19×10^3	12^+‡	0.20 MeV	D
31.71×10^3	9^-‡	0.22 MeV	D
31.98×10^3	12^+‡	0.22 MeV	D
32.7×10^3		≈0.3 MeV	D
33.5×10^3		≈0.2 MeV	D

† From least-squares fit to Eγ data for levels populated in γ-ray studies. For others, weighted averages are taken when possible.
‡ From L(α,α) for resonances (2003Ka07,2010Lo12); R-matrix analysis in 2010Lo12.

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	$I_{(\gamma+ce)}$	Comments
2230.57	2^+	2230.49 *15*	100	0	0^+	E2			E_γ: from $^{32}S(\gamma,\gamma')$.
3778.4	0^+	1548.8 *15*	100	2230.57	2^+	[E2]			B(E2)(W.u.)=11.8 *12*
		3778		0	0^+	[E0]		0.035 *6*	q^2_K(E0/E2)=0.044 *8*, X(E0/E2)=0.047 *9*, ρ^2=0.019 *5* (2005Ki02 evaluation). $I_{(\gamma+ce)}$: from $^{31}P(^3He,d)$ (1975Ad02). γ intensity <10.
4281.8	2^+	503.7	<0.4	3778.4	0^+				
		2052.6 *15*	14.9 *6*	2230.57	2^+	E2+M1	−26 *16*		B(M1)(W.u.)=1.2×10^{-5} *+15−12*; B(E2)(W.u.)=7.9 *9* Mult.,δ: from $^{31}P(p,p'\gamma)$.
		4281.5 *3*	100.0 *6*	0	0^+				E_γ: from $^{32}S(\gamma,\gamma')$.
4459.1	4^+	681.4	<0.3	3778.4	0^+				
		2229.4 *12*	100.0	2230.57	2^+	E2			B(E2)(W.u.)=14 *3*
		4458.4	<1.0	0	0^+				
4695.3	1^+	414.1	<0.98	4281.8	2^+				
		917.8	<0.65	3778.4	0^+				
		2466.0 *15*	100.0 *17*	2230.57	2^+	M1(+E2)	−0.08 *10*		B(M1)(W.u.)=(0.0031 *8*); B(E2)(W.u.)=(0.014 *+35−14*) Mult.,δ: note $^{31}P(p,p'\gamma)$ makes a case for a stronger E2 component.
		4694.0 *25*	63.9 *17*	0	0^+	[M1]			B(M1)(W.u.)=0.00029 *8*
5006.2	3^-	724.8	<0.1	4281.8	2^+				
		1228.4	<0.4	3778.4	0^+				
		2776.2 *12*	100.0 *5*	2230.57	2^+	E1(+M2)	0.00 *5*		B(E1)(W.u.)=(5.8×10^{-5} *4*)
		5005.4	3.5 *5*	0	0^+	E3			B(E3)(W.u.)=16 *3*
5412.6	3^+	406.2	<2	5006.2	3^-				
		716.9	<1	4695.3	1^+				
		953.3	<1	4459.1	4^+				
		1131.0	<6	4281.8	2^+				
		1634.6	<20	3778.4	0^+				
		3181.8	100	2230.57	2^+	E2+M1	+7.6 *19*		B(M1)(W.u.)=7.E−5 *4*; B(E2)(W.u.)=1.6 *3*
		5411.4	<5	0	0^+				
5548.5	2^+	541.2	<0.7	5006.2	3^-				
		851.9	<1.6	4695.3	1^+				
		1088.3	<3.3	4459.1	4^+				
		1265.9	<1.6	4281.8	2^+				
		1769.6	<1.6	3778.4	0^+				
		3318.5	100.0 *25*	2230.57	2^+	E2+M1	−5.2 *21*		B(M1)(W.u.)=0.00022 *18*; B(E2)(W.u.)=2.3 *3*
		5546.4	66.7 *25*	0	0^+				
5796.8	1^-	791.3	<1	5006.2	3^-				
		1102.0	<1	4695.3	1^+				
		1338.3	<1.5	4459.1	4^+				
		1516.0	<1	4281.8	2^+				
		2019.7	<1.5	3778.4	0^+				
		3566.8	<5	2230.57	2^+				

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†	Comments
5796.8	1^-	5796.3 *3*	100.0	0	0^+			E_γ: from $^{32}S(\gamma,\gamma')$.
6222.9	2^-	811.3	<0.2	5412.6	3^+			
		1217.5	3 *2*	5006.2	3^-			
		1528.1	<0.5	4695.3	1^+			
		1764.5	<0.6	4459.1	4^+			
		1942.2	<1.5	4281.8	2^+			
		2445.8	<0.8	3778.4	0^+			
		3993.0 *20*	100.0 *21*	2230.57	2^+	E1+M2	−0.07 *3*	B(E1)(W.u.)=0.00015 *3*; B(M2)(W.u.)=0.21 *19*
		6222.4	<1.5	0	0^+			
6411	4^+	4179	100.0	2230.57	2^+			
6621.7	4^-	1209.1	<1.2	5412.6	3^+	E1		B(E1)(W.u.)=5.E−6 *5*
		1615.2	100.0 *14*	5006.2	3^-	E2+M1	2.9 *8*	B(M1)(W.u.)=0.0011 *6*; B(E2)(W.u.)=15 *3*
		1925.9	<0.4	4695.3	1^+			
		2162.2	32.9 *10*	4459.1	4^+	E1(+M2)	−0.06 *2*	B(E1)(W.u.)=(4.4×10^{-5} *8*); B(M2)(W.u.)=(0.15 *11*)
		2339.9	<0.27	4281.8	2^+			
		2843.5	<0.82	3778.4	0^+			
		4390.6	4.1 *5*	2230.57	2^+	M2+E3	−0.41 *8*	B(M2)(W.u.)=0.13 *3*; B(E3)(W.u.)=8 *3*
		6620.0	<0.41	0	0^+			
6666.1	2^+	1253.3	<2	5412.6	3^+			
		1659.5	<8	5006.2	3^-			
		1970.2	29 *4*	4695.3	1^+			
		2206.5	<6	4459.1	4^+			
		2384.2	<14	4281.8	2^+			
		2887.9 *20*	100 *11*	3778.4	0^+			
		4434.8	76 *9*	2230.57	2^+			
		6664.3	<6	0	0^+			
6761.6	5^-	1349.1	<4	5412.6	3^+			
		1755.3	100 *4*	5006.2	3^-	[E2]		B(E2)(W.u.)=14 *3* Additional information 5.
		2066.0	<11	4695.3	1^+			
		2302.3	32 *14*	4459.1	4^+	E1+M2	−0.6	B(E1)(W.u.)=3.3×10^{-5} *16*; B(M2)(W.u.)=10 *5* Additional information 6.
		2480.0	<4	4281.8	2^+			
		2983.6	<5	3778.4	0^+			
		4530.6	<9	2230.57	2^+			
		6760.1	2.7 *14*	0	0^+			
6851.5	4^+	1439.9	13 *7*	5412.6	3^+			
		1846.1	<16.2	5006.2	3^-			
		2156.7	<6	4695.3	1^+			
		2393.1	13 *7*	4459.1	4^+	E2		Additional information 7. Mult.: from $^{29}Si(\alpha,n\gamma)$.
		2570.8	100 *13*	4281.8	2^+	E2		B(E2)(W.u.)=8 *3*

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
								Additional information 8. δ: 0.93 *5*.
6851.5	4^+	3074.4	<10	3778.4	0^+			
		4621.4	<8.7	2230.57	2^+			
		6850.8	<10	0	0^+			
7001.4	1^+	1589.0	<1	5412.6	3^+			
		1995.1	<2	5006.2	3^-			
		2305.8	<1	4695.3	1^+			
		2542.1	<2	4459.1	4^+			
		2719.8	<2	4281.8	2^+			
		3223.4	10 *5*	3778.4	0^+			
		4770.5 *3*	100.0	2230.57	2^+			
		6999.8	<2	0	0^+			
7115.3	2^+	1702.8	<0.6	5412.6	3^+			
		2109.0	<1	5006.2	3^-			
		2419.6	10.5 *12*	4695.3	1^+			
		2656.0	<1	4459.1	4^+			
		2833.6	3.5 *12*	4281.8	2^+			
		3337.2	3.5 *24*	3778.4	0^+			
		4884.2	100.0 *24*	2230.57	2^+	M1+E2	−0.38 *3*	B(M1)(W.u.)=0.079 *17*; B(E2)(W.u.)=2.0 *5*
		7113.6	2.3 *6*	0	0^+			
7190.1	1^+	2183.7	<47	5006.2	3^-			
		2494.4	<42	4695.3	1^+			
		2730.7	<92	4459.1	4^+			
		2908.4	<59	4281.8	2^+			
		3412.0	<93	3778.4	0^+			
		4959.0	100 *21*	2230.57	2^+			
		7188.4	69 *21*	0	0^+			
7350.0	$3^{(+)}$	2654.2	100.0	4695.3	1^+			
7434	1^-	3150	33 *17*	4281.8	2^+			
		5203	33 *17*	2230.57	2^+			
		7432	100 *25*	0	0^+			
7484.0	2^+	2071.4	<10	5412.6	3^+			
		2477.5	<9	5006.2	3^-			
		2788.1	<6	4695.3	1^+			
		3024.5	<14	4459.1	4^+			
		3202.2	<13	4281.8	2^+			
		3705.7	<15	3778.4	0^+			
		5252.8 *6*	<7	2230.57	2^+			E_γ: from $^{32}S(\gamma,\gamma')$.
		7483.2 *5*	100.0	0	0^+	E2		B(E2)(W.u.)=0.49 *11* E_γ: from $^{32}S(\gamma,\gamma')$.

$^{32}_{16}S_{16}$-20

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
7535.7	0^+	2123.1	<10	5412.6	3^+			
		2529.3	<5	5006.2	3^-			
		2839.9	100.0	4695.3	1^+			
		3076.3	<6	4459.1	4^+			
		3253.9	<8	4281.8	2^+			
		3757.5	<11	3778.4	0^+			
		5304.5	<14	2230.57	2^+			
		7533.8	<7	0	0^+			
7566.8	5^+	2154	43 *14*	5412.6	3^+			E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$.
		3108.4 *12*	100 *14*	4459.1	4^+	E2+M1	−9.7 *15*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 9. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
7637.0	1	3355.2	100	4281.8	2^+			
7701.44	3^-	2288.9	<50	5412.6	3^+			
		2695.0	<50	5006.2	3^-			
		3005.6	<50	4695.3	1^+			
		3242.0	<50	4459.1	4^+			
		3419.6	<70	4281.8	2^+			
		3923.2	<45	3778.4	0^+			
		5470.1	100.0	2230.57	2^+			
		7699.5	<60	0	0^+			
7882.9	4^+	2335.3	15 *7*	5548.5	2^+			
		2876.4	19 *7*	5006.2	3^-			
		5651.5	100 *7*	2230.57	2^+			
7921.0	1^+	x	11 *11*					Additional information 10.
		5689.6	100 *11*	2230.57	2^+			
7950.1	4^-	2537.5	67 *17*	5412.6	3^+			
		2943.6	100 *12*	5006.2	3^-			
		3254.2	<5	4695.3	1^+			
		3490.6	<13	4459.1	4^+			
		3668.2	<16	4281.8	2^+			
		4171.8	<3	3778.4	0^+			
		5718.7	<7	2230.57	2^+			
		7948.0	<0.8	0	0^+			
7974.9	4^-	x	62					Additional information 11.
		2968.4	38 *10*	5006.2	3^-			
		5743.4	100 *10*	2230.57	2^+			
8125.40	1^+	2712.7	<5	5412.6	3^+			
		3118.8	<2	5006.2	3^-			
		3429.4	<5	4695.3	1^+			
		3665.8	<5	4459.1	4^+			

$^{32}_{16}S_{16}$-21

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.†	δ†	Comments
8125.40	1^+	3843.4	<4	4281.8	2^+			
		4347.0	<12	3778.4	0^+			
		5894.32 *28*	18 *6*	2230.57	2^+			E_γ: from $^{32}S(\gamma,\gamma')$.
		8124.12 *24*	100 *6*	0	0^+			E_γ: from $^{32}S(\gamma,\gamma')$.
8191.1	4	2643.4	100 *20*	5548.5	2^+			
		2778.4	80 *17*	5412.6	3^+			
		3731.5	93 *20*	4459.1	4^+			
		3909.1	60 *10*	4281.8	2^+			
8270.3	$3^-,5^-$	3264	100	5006.2	3^-	M1+E2	−1.5 *14*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 12. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
8296.1	3^-	x	35					Additional information 13.
		4014.1	50 *17*	4281.8	2^+			
		6064.5	100 *17*	2230.57	2^+			
8346.4	4^+	3886.1 *15*	100	4459.1	4^+	M1+E2	−1.3 *4*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 14. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$ for J=4.
8407.0	2	x	59					Additional information 15.
		3711.0	20 *4*	4695.3	1^+			
		4125.0	18 *4*	4281.8	2^+			
		4628.1	100 *10*	3778.4	0^+			
8499.3	1^-	4212‡	<13	4281.8	2^+			
		4716‡	<5	3778.4	0^+			
		6267.9‡ *5*	66 *6*	2230.57	2^+			E_γ: from $^{32}S(\gamma,\gamma')$.
		8494.4‡ *8*	100 *6*	0	0^+			E_γ: from $^{32}S(\gamma,\gamma')$.
8687.6		4909‡	21 *7*	3778.4	0^+			
		6459‡	100 *9*	2230.57	2^+			
		8687‡	57 *7*	0	0^+			
8729.3	3^+	x	311					Additional information 16.
		1876.7	56 *12*	6851.5	4^+			
		2107.6	89 *17*	6621.7	4^-			
		3316.5	100 *17*	5412.6	3^+			
8745.6	3	1893.0	30 *13*	6851.5	4^+			
		2123.9	85 *13*	6621.7	4^-			
		2335.4	100 *13*	6411	4^+			
		3197.8	20 *10*	5548.5	2^+			
		3332.8	18 *8*	5412.6	3^+			
8861	2^+	5080‡	27 *8*	3778.4	0^+			
		6630‡	65 *8*	2230.57	2^+			

$^{32}_{16}S_{16}$-22

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
8861	2^+	8858‡	100 *10*	0	0^+			
9023.8	4^-	2262	100 *9*	6761.6	5^-	M1+E2	−1.5 *10*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 17. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
		2402	43 *9*	6621.7	4^-	M1+E2	+4.3 *10*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 18. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
		4008‡	31 *3*	5006.2	3^-			
		4742‡	33 *3*	4281.8	2^+			
		6791‡	100 *3*	2230.57	2^+			
9065		3654‡	100 *5*	5412.6	3^+			
		4604‡	95 *5*	4459.1	4^+			
		4784‡	40 *7*	4281.8	2^+			
9170	3^+	4711	100	4459.1	4^+			E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$.
9207.55	1^+	911.4	<3	8296.1	3^-			
		1324.6	<3	7882.9	4^+			
		2017.31	8.1 *21*	7190.1	1^+			
		2983.6	26.4 *24*	6222.9	2^-			
		3409.7	18 *4*	5796.8	1^-			
		3659.7	21 *4*	5548.5	2^+			
		4747.6	8.7 *18*	4459.1	4^+			
		4925.5	6.1 *18*	4281.8	2^+			
		5428.9	11.9 *18*	3778.4	0^+			
		6975.0 *5*	99 *6*	2230.57	2^+			E_γ: from $^{32}S(\gamma,\gamma')$.
		9206.1 *7*	100 *6*	0	0^+	M1		B(M1)(W.u.)=0.0022 *8* δ(E2/M1)=−0.14 *4*.
9235.2	1^-	4538.8	36 *17*	4695.3	1^+			
		5456.3	100 *3*	3778.4	0^+			
		7003.1	77 *20*	2230.57	2^+			
		9234‡	2.2 *15*	0	0^+			
9253	2^+	2587.0	28 *5*	6666.1	2^+			
		3029.0	19 *4*	6222.9	2^-			
		3705.1	13 *4*	5548.5	2^+			
		3840.1	16 *5*	5412.6	3^+			
		4246.3	44 *7*	5006.2	3^-			
		4556.8	77 *8*	4695.3	1^+			
		4971.0	18 *4*	4281.8	2^+			
		7021.0	100 *10*	2230.57	2^+			
9289.0	1^+	789	10 *3*	8499.3	1^-			

$^{32}_{16}S_{16}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
9289.0	1^+	1163.6	<2	8125.40	1^+			
		1753.2	14.0 *13*	7535.7	0^+			
		2173.5	39.1 *23*	7115.3	2^+			
		2287.4	2.5 *5*	7001.4	1^+			
		2623.0	<1	6666.1	2^+			
		2667.3	<1	6621.7	4^-			
		3065.0	6.3 *8*	6222.9	2^-			
		3491.1	2.8 *5*	5796.8	1^-			
		3741.1	<4	5548.5	2^+			
		3876.1	<2	5412.6	3^+			
		4282.2	<3	5006.2	3^-			
		4592.8	39.1 *23*	4695.3	1^+			
		4829.1	<2	4459.1	4^+			Additional information 19.
		5006.8	<3	4281.8	2^+			
		5510.3	<2	3778.4	0^+			
		7057.0	46.9 *23*	2230.57	2^+	M1(+E2)	0.01 *1*	
		9286.1	100 *5*	0	0^+			
9388	2^+	1262.6	2.08 *16*	8125.40	1^+			
		2626.2	<0.6	6761.6	5^-			
		2722.0	<0.6	6666.1	2^+			
		2766.2	2.1 *5*	6621.7	4^-			
		3164.0	25.4 *12*	6222.9	2^-			
		3590.1	3.0 *5*	5796.8	1^-			
		3840.1	2.7 *5*	5548.5	2^+			
		3975.1	1.44 *16*	5412.6	3^+			
		4381.2	12.5 *7*	5006.2	3^-			
		4691.8	3.2 *4*	4695.3	1^+			
		4928.1	<0.9	4459.1	4^+			
		5105.7	3.0 *4*	4281.8	2^+			
		5609.2	<0.8	3778.4	0^+			
		7156.0	100 *4*	2230.57	2^+			
		9385.0	4.0 *16*	0	0^+			
9463.4	$5^-,7^-$	2701	100	6761.6	5^-	M1+E2	−0.82 *25*	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 20. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
9466.0	2^+	2347.8	13 *4*	7115.3	2^+			
		3675‡	12 *4*	5796.8	1^-			
		4455‡	12 *4*	5006.2	3^-			
		4767.0	50 *8*	4695.3	1^+			
		5005‡	12 *4*	4459.1	4^+			
		5684.5	11 *3*	3778.4	0^+			

$^{32}_{16}S_{16}$-24

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
9466.0	2^+	7233.7	62 *8*	2230.57	2^+			
		9462.3	100 *8*	0	0^+			
9485.7	1^-	1360	3.5	8125.40	1^+			
		2370.2	<9.7	7115.3	2^+			
		2860	8.2	6621.7	4^-			
		3261.6	<2.8	6222.9	2^-			
		3687.7	4.2 *10*	5796.8	1^-			
		3937.8	<2.3	5548.5	2^+			
		4072.7	<1.6	5412.6	3^+			
		4478.8	3.6 *9*	5006.2	3^-			
		4789.4	<3.5	4695.3	1^+			
		5025.8	<0.9	4459.1	4^+			
		5203.4	9.4 *12*	4281.8	2^+			
		5706.9	<2.1	3778.4	0^+			
		7253.6	<2.7	2230.57	2^+			
		9482.7	100 *9*	0	0^+			
9634.6	$4^-,6^+$	3015.3	100	6621.7	4^-	M1+E2	−1.1 *3*	E_γ,I_γ: from ^{29}Si(α,nγ). Additional information 21. Mult.,δ: from ^{29}Si(α,nγ).
9650.2	2^+	2220	1.7	7434	1^-			
		3426.1	<1	6222.9	2^-			
		3852.2	<1.4	5796.8	1^-			
		4102.2	<0.9	5548.5	2^+			
		4237.2	2.9 *7*	5412.6	3^+			
		4643.3	<1	5006.2	3^-			
		4953.9	69 *6*	4695.3	1^+			
		5190.2	<2	4459.1	4^+			
		5367.8	<0.7	4281.8	2^+			
		5871.3	<0.7	3778.4	0^+			
		7418.1	100 *9*	2230.57	2^+			
9660.1	1^+	2174.9	0.37 *13*	7484.0	2^+			
		2468.7	2.6 *12*	7190.1	1^+			
		3434.9	<0.4	6222.9	2^-			
		3861.0	<0.9	5796.8	1^-			
		4111.0	2.7 *4*	5548.5	2^+			
		4246.0	<0.2	5412.6	3^+			
		4652.1	<0.4	5006.2	3^-			
		4962.7	2.8 *13*	4695.3	1^+			
		5199.0	<0.5	4459.1	4^+			
		5376.6	<0.2	4281.8	2^+			
		5880.1	2.2 *4*	3778.4	0^+			

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f
9660.1	1^+	7426.8	12.3 *13*	2230.57	2^+
		9655.9	100 *10*	0	0^+
9711.9	2^+	1586.5	6.7 *17*	8125.40	1^+
		2596.4	7.2 *12*	7115.3	2^+
		2710.2	7.2 *12*	7001.4	1^+
		3487.8	<4	6222.9	2^-
		3913.9	8.4 *21*	5796.8	1^-
		4163.9	<4	5548.5	2^+
		4298.9	<3	5412.6	3^+
		4705.0	4.88 *24*	5006.2	3^-
		5015.6	60 *5*	4695.3	1^+
		5251.9	2.8 *12*	4459.1	4^+
		5429.5	6.5 *19*	4281.8	2^+
		5933.0	14.9 *5*	3778.4	0^+
		7479.7	100 *17*	2230.57	2^+
		9708.7	15.3 *17*	0	0^+
9724	2,3,4	1773.8	<2	7950.1	4^-
		2022.9	2.4 *13*	7701.44	3^-
		2188.1	<1	7535.7	0^+
		2608.5	<1	7115.3	2^+
		2962.1	12.4 *5*	6761.6	5^-
		3102.2	100 *8*	6621.7	4^-
		3499.9	32 *4*	6222.9	2^-
		3926.0	<1	5796.8	1^-
		4176.0	<2	5548.5	2^+
		4311.0	<2	5412.6	3^+
		4717.1	95 *8*	5006.2	3^-
		5027.7	<2	4695.3	1^+
		5264.0	<2	4459.1	4^+
		5441.6	<2	4281.8	2^+
		5945.1	<3	3778.4	0^+
		7491.8	2.0 *5*	2230.57	2^+
		9720.8	<1	0	0^+
9731	$1^-,2^-$	1605.6	19 *3*	8125.40	1^+
		1780.8	5.5 *14*	7950.1	4^-
		2029.9	<3	7701.44	3^-
		2615.5	9	7115.3	2^+
		3109.2	<1	6621.7	4^-
		3506.9	91 *9*	6222.9	2^-
		3933.0	91 *9*	5796.8	1^-
		4183.0	4.5 *23*	5548.5	2^+
		4318.0	<6	5412.6	3^+

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Comments
9731	$1^-,2^-$	4724.1	14 *7*	5006.2	3^-	
		5034.6	24 *4*	4695.3	1^+	
		5271.0	<2	4459.1	4^+	
		5448.6	100 *9*	4281.8	2^+	
		5952.1	<4	3778.4	0^+	
		7498.8	86 *9*	2230.57	2^+	
		9727.8	18.2 *23*	0	0^+	
9783	6	5324	100	4459.1	4^+	E_γ,I_γ: from $^{29}Si(\alpha,n\gamma)$. Additional information 22. Mult.,δ: from $^{29}Si(\alpha,n\gamma)$.
9816.8	$3^-,4^-$	2701.3	17.2 *12*	7115.3	2^+	
		3195.0	<1.2	6621.7	4^-	
		3592.7	11.2 *14*	6222.9	2^-	
		4018.8	5.4 *6*	5796.8	1^-	
		4268.8	<1.4	5548.5	2^+	
		4403.7	<3	5412.6	3^+	
		4809.8	100 *6*	5006.2	3^-	
		5120.4	<1.8	4695.3	1^+	
		5356.7	3.4 *8*	4459.1	4^+	
		5534.4	20 *4*	4281.8	2^+	
		6037.9	<1.6	3778.4	0^+	
		7584.6	40 *4*	2230.57	2^+	
		9813.6	1.4 *4*	0	0^+	
9848	1^-	2732.4	53 *4*	7115.3	2^+	
		3181.9	<2.7	6666.1	2^+	
		3226.2	<1	6621.7	4^-	
		3623.9	<4.3	6222.9	2^-	
		4049.9	11.18 *20*	5796.8	1^-	
		4300.0	<1.8	5548.5	2^+	
		4434.9	<3.3	5412.6	3^+	
		4841.0	<2	5006.2	3^-	
		5151.6	4.7 *10*	4695.3	1^+	
		5387.9	<2.5	4459.1	4^+	
		5565.6	3.5 *12*	4281.8	2^+	
		6069.1	<1	3778.4	0^+	
		7615.8	100 *8*	2230.57	2^+	
		9844.7	19.6 *20*	0	0^+	
9887.3	$2^+,3^+$	2771.7	100 *14*	7115.3	2^+	
		2885.6	53 *7*	7001.4	1^+	
		3221.2	8.0 *9*	6666.1	2^+	
		3663.1	<1.1	6222.9	2^-	

$^{32}_{16}S_{16}$-27

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f
9887.3	2+,3+	4089.2	<0.7	5796.8	1−
		4339.3	24.4 *23*	5548.5	2+
		4474.2	<2.6	5412.6	3+
		4880.3	<15.5	5006.2	3−
		5190.9	11.11 *23*	4695.3	1+
		5427.2	0.44 *23*	4459.1	4+
		5604.8	8.4 *12*	4281.8	2+
		6108.3	<1.3	3778.4	0+
		7655.0	22.2 *23*	2230.57	2+
		9884.0	3.8 *5*	0	0+
9919.3	2+	2383.4	2.0 *10*	7535.7	0+
		2435.2	7.1 *8*	7484.0	2+
		2803.7	22.0 *25*	7115.3	2+
		3066.6	18.05 *25*	6851.5	4+
		3253.1	<12.2	6666.1	2+
		3297.4	<2.7	6621.7	4−
		3695.1	<5.6	6222.9	2−
		4121.2	<3.2	5796.8	1−
		4371.3	85 *8*	5548.5	2+
		4506.2	6.59 *25*	5412.6	3+
		4912.3	<2.7	5006.2	3−
		5222.9	<26.8	4695.3	1+
		5459.2	<3.4	4459.1	4+
		5636.8	2.9 *17*	4281.8	2+
		6140.3	<3.2	3778.4	0+
		7687.0	100 *10*	2230.57	2+
		9916.0	<2.7	0	0+
9946.6	1−	1821.2	10.3 *8*	8125.40	1+
		2831.0	2.0 *3*	7115.3	2+
		2944.9	0.53 *14*	7001.4	1+
		3324.7	<0.7	6621.7	4−
		3722.4	<0.5	6222.9	2−
		4148.5	<0.4	5796.8	1−
		4398.6	<1	5548.5	2+
		4533.5	<0.4	5412.6	3+
		4939.6	<0.4	5006.2	3−
		5250.2	2.0 *4*	4695.3	1+
		5486.5	<1.3	4459.1	4+
		5664.1	2.9 *4*	4281.8	2+
		6167.6	3.7 *8*	3778.4	0+
		7714.3	10.7 *12*	2230.57	2+
		9943.3	100 *10*	0	0+
9977.9	4	3356.4	51 *7*	6621.7	4−
		3754.1	53 *7*	6222.9	2−
		4971.3	100 *9*	5006.2	3−
9978.3	3	1634.2	2.2 *6*	8346.4	4+
		2276.9#		7701.44	3−
		2494.2	10.8 *11*	7484.0	2+
		2628.3	8.1	7350.0	3(+)
		2862.7	13.2 *14*	7115.3	2+
		2976.2	3.5 *6*	7001.4	1+
		3125.6	19.5 *19*	6851.5	4+
		3312.1	<1.6	6666.1	2+
		3356.4	9.5 *9*	6621.7	4−
		4180.2	3.0 *9*	5796.8	1−
		4430.2	84 *9*	5548.5	2+
		4565.2	17.8 *17*	5412.6	3+
		5281.9	<1.1	4695.3	1+
		5518.2	20.8 *22*	4459.1	4+
		5695.8	<2.7	4281.8	2+
		6199.3	<2.4	3778.4	0+
		7746.0	100 *9*	2230.57	2+
		9975.0	0.8	0	0+
9982.7	2,0+	2867.1	1.3 *5*	7115.3	2+
		2981.0	2.9 *8*	7001.4	1+
		3130.0	1.3 *4*	6851.5	4+
		3360.8	1.9 *7*	6621.7	4−
		3758.5	<1.8	6222.9	2−
		4184.6	<1.4	5796.8	1−
		4434.6	15.2 *15*	5548.5	2+
		4569.6	<1.6	5412.6	3+
		4975.7	<1.6	5006.2	3−
		5286.3	34 *4*	4695.3	1+
		5522.6	<1.4	4459.1	4+
		5700.2	2.6 *8*	4281.8	2+
		6203.7	<0.9	3778.4	0+
		7750.4	100 *10*	2230.57	2+
		9979.4	1.13 *17*	0	0+
10073.4	2−	1574.0	0.41 *21*	8499.3	1−
		1777.2	0.8 *4*	8296.1	3−
		1948.0	0.61 *21*	8125.40	1+
		2372.2	0.61 *21*	7701.44	3−
		2957.8	1.4 *7*	7115.3	2+
		3407.2	<1.4	6666.1	2+

From ENSDF

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†
10073.4	2^-	3451.5	<1.4	6621.7	4^-		
		3849.2	100 *4*	6222.9	2^-		
		4275.3	<3.0	5796.8	1^-		
		4525.3	<1.4	5548.5	2^+		
		4660.3	8.8 *7*	5412.6	3^+		
		5066.3	28.2 *15*	5006.2	3^-		
		5376.9	1.43 *21*	4695.3	1^+		
		5613.2	<1	4459.1	4^+		
		5790.9	3.06 *21*	4281.8	2^+		
		6294.4	<0.8	3778.4	0^+		
		7841.0	60 *3*	2230.57	2^+		
		10070.0	3.47 *21*	0	0^+	M2	
10102.3	$4^{(+)}$	4689.3	16.5 *15*	5412.6	3^+		
		5095.4	49.8 *15*	5006.2	3^-		
		5642.2	46.7 *15*	4459.1	4^+		
		5820.1	22.9 *12*	4281.8	2^+		
		7870.0	100.0 *22*	2230.57	2^+		
10218.8	3^+	2734.6	2.7 *5*	7484.0	2^+		
		3028.4	1.22 *25*	7190.1	1^+		
		3103.2	100 *8*	7115.3	2^+		
		3552.6	1.7 *5*	6666.1	2^+		
		3596.9	<1.5	6621.7	4^-		
		3994.6	<1.7	6222.9	2^-		
		4420.6	<1.5	5796.8	1^-		
		4670.7	16.6 *17*	5548.5	2^+		
		4805.6	7.1 *8*	5412.6	3^+		
		5211.7	12.0 *17*	5006.2	3^-		
		5522.3	46 *5*	4695.3	1^+		
		5758.6	12.9 *13*	4459.1	4^+		
		5936.2	16.6 *15*	4281.8	2^+		
		6439.7	<1.7	3778.4	0^+		
		7986.4	29.3 *25*	2230.57	2^+		
		10215.3	3.9 *5*	0	0^+		
10221.2	3^-	2737.0	<0.65	7484.0	2^+		
		3105.6	3.2 *25*	7115.3	2^+	E1+M2	+0.233 *17*
		3555.0	1.1 *4*	6666.1	2^+		
		3599.3	<0.96	6621.7	4^-		
		3997.0	<0.96	6222.9	2^-		
		4423.0	<1.3	5796.8	1^-		
		4673.1	<1.6	5548.5	2^+		
		4808.0	0.6 *4*	5412.6	3^+		

$^{32}_{16}S_{16}$-29

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
10221.2	3⁻	5214.1	100 *8*	5006.2	3⁻	D(+Q)	−0.06 *6*	δ: from ^{28}Si(α,γ).
		5524.7	<1.6	4695.3	1⁺	M2+E3	−0.22 *7*	
		5761.0	34 *4*	4459.1	4⁺	D+Q	−0.09 *2*	δ: from ^{28}Si(α,γ).
		5938.6	<1.6	4281.8	2⁺			
		6442.1	<0.32	3778.4	0⁺			
		7988.8	22.6 *17*	2230.57	2⁺	E1+M2	−0.70 *5*	δ: other: +0.11 *5* from ^{28}Si(α,γ).
		10217.7	0.5 *4*	0	0⁺			
10230.3	1⁺	2694.4	11.5 *15*	7535.7	0⁺			
		3039.9	1.9 *5*	7190.1	1⁺			
		3114.7	6.8 *22*	7115.3	2⁺			
		3228.5	100 *7*	7001.4	1⁺			
		3377.5	<2	6851.5	4⁺			
		3468.3	<2.3	6761.6	5⁻			
		3564.1	<2	6666.1	2⁺			
		3608.4	<1.9	6621.7	4⁻			
		4006.1	8.9 *20*	6222.9	2⁻			
		4432.1	<2	5796.8	1⁻			
		4682.2	5.3 *11*	5548.5	2⁺			
		4817.1	6.8 *7*	5412.6	3⁺			
		5223.2	<3	5006.2	3⁻			
		5533.8	9.1 *13*	4695.3	1⁺			
		5770.1	<2.1	4459.1	4⁺			
		5947.7	23.4 *22*	4281.8	2⁺			
		6451.2	6.0 *13*	3778.4	0⁺			
		7997.9	19.1 *20*	2230.57	2⁺			
		10226.8	16.2 *17*	0	0⁺			
10256.1	4⁻	2305.8	7.4 *8*	7950.1	4⁻			
		2554.9	<0.4	7701.44	3⁻			
		2906.1		7350.0	3⁽⁺⁾			
		3406.1		6851.5	4⁺			
		3494.1	3.4 *8*	6761.6	5⁻			
		3634.2	100 *7*	6621.7	4⁻	M1+E2	−0.9 *3*	
		3845.6	0.7 *3*	6411	4⁺			
		4708.0	<0.4	5548.5	2⁺			
		4842.9	<0.3	5412.6	3⁺			
		5249.0	6.2 *7*	5006.2	3⁻	M1+E2	+0.2 *1*	
		5559.6	<0.13	4695.3	1⁺			
		5795.9	12.8 *10*	4459.1	4⁺	E1+M2	−0.9 *3*	
		5973.5	<0.3	4281.8	2⁺			
		6477.0	<0.1	3778.4	0⁺			
		8023.6	1.18 *14*	2230.57	2⁺			

$^{32}_{16}S_{16}$-30

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult. †	δ †
10256.1	4^-	10252.6	<0.4	0	0^+		
10286.3	3^-	5279.2	100.0	5006.2	3^-		
		5826.1	20.2	4459.1	4^+		
		8053.8	14.8	2230.57	2^+		
		10282.8	9.6	0	0^+		
10290.2	2	2164.7	10 *3*	8125.40	1^+		
		2806.0	<6.6	7484.0	2^+		
		3288.4	4.3	7001.4	1^+		
		3624.0	5 *3*	6666.1	2^+		
		3668.2	<4	6621.7	4^-		
		4065.9	83 *6*	6222.9	2^-		
		4492.0	6.9 *23*	5796.8	1^-		
		4742.0	<4.9	5548.5	2^+		
		4877.0	6.3 *23*	5412.6	3^+		
		5283.1	69 *3*	5006.2	3^-		
		5593.7	<2.9	4695.3	1^+		
		5830.0	<8.6	4459.1	4^+		
		6007.6	8.0 *12*	4281.8	2^+		
		6511.1	<4.3	3778.4	0^+		
		8057.7	100 *12*	2230.57	2^+		
		10286.6	11.4 *12*	0	0^+		
10331.1	1^-	2205.6	7.4 *15*	8125.40	1^+		
		3329.3	<3	7001.4	1^+		
		3569.1	<4.2	6761.6	5^-		
		3664.8	<3.2	6666.1	2^+		
		3709.1	<3.8	6621.7	4^-		
		4106.8	<3.7	6222.9	2^-		
		4532.9	<5	5796.8	1^-		
		4782.9	<16.2	5548.5	2^+		
		4917.9	<3.8	5412.6	3^+		
		5323.9	<1.9	5006.2	3^-		
		5634.5	17.6 *15*	4695.3	1^+		
		5870.8	<1.9	4459.1	4^+		
		6048.5	<1.2	4281.8	2^+		
		6552.0	<3.4	3778.4	0^+		
		8098.6	100 *9*	2230.57	2^+		
		10327.5	22 *3*	0	0^+		
10370.6	2^+	2886.4	6.5 *23*	7484.0	2^+		
		3020.3#	0.75	7350.0	$3^{(+)}$		
		3180.2	3.0 *23*	7190.1	1^+		
		3368.8	0.50 *18*	7001.4	1^+		
10370.6	2^+	3517.8	<1.5	6851.5	4^+		
		3704.3	35.0 *25*	6666.1	2^+		
		3748.6	<1.5	6621.7	4^-		
		4146.3	5.0 *8*	6222.9	2^-		
		4572.4	<1.5	5796.8	1^-		
		4822.4	6.8 *8*	5548.5	2^+		
		4957.4	30.0 *25*	5412.6	3^+		
		5363.4	5.8 *5*	5006.2	3^-		
		5674.0	23.0 *18*	4695.3	1^+		
		5910.3	<0.75	4459.1	4^+		
		6088.0	100 *8*	4281.8	2^+		
		6591.4	1.5 *5*	3778.4	0^+		
		8138.1	30.0 *25*	2230.57	2^+		
		10367.0	2.5 *5*	0	0^+		
10396.7	4^-	2271.2	1.0 *6*	8125.40	1^+		
		2421.6	<0.5	7974.9	4^-		
		2446.4	4.8 *5*	7950.1	4^-		
		2695.5	<0.3	7701.44	3^-		
		2829.4	0.4 *8*	7566.8	5^+		
		3029.3	0.85 *14*	7367			
		3394.9	0.37 *9*	7001.4	1^+		
		3543.9	1.6 *6*	6851.5	4^+		
		3634.7	2.7 *21*	6761.6	5^-		
		3774.7	100 *6*	6621.7	4^-	M1+E2	+0.9 *3*
		3986.2	0.61 *25*	6411	4^+		
		4172.4	<2.4	6222.9	2^-		
		4598.5	0.37 *8*	5796.8	1^-		
		4848.5	<0.6	5548.5	2^+		
		4983.5	0.12 *4*	5412.6	3^+		
		5389.5	7.8 *6*	5006.2	3^-	M1+E2	+0.2 *1*
		5700.1	<0.4	4695.3	1^+		
		5936.4	1.7 *5*	4459.1	4^+		
		6114.0	2.2 *6*	4281.8	2^+		
		6617.5	0.37 *24*	3778.4	0^+		
		8164.2	1.0 *4*	2230.57	2^+		
		10393.1	<1.1	0	0^+		
10507.9		3317.4	7.7 *8*	7190.1	1^+		
		3392.2	100.0 *19*	7115.3	2^+		
		3506.0	<8	7001.4	1^+		
		3655.1	<3	6851.5	4^+		
		3745.8	<3	6761.6	5^-		

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f
10507.9		3841.6	3.0 6	6666.1	2^+
		3885.9	<3	6621.7	4^-
		4283.6	<14.8	6222.9	2^-
		4709.7	4.0 4	5796.8	1^-
		4959.7	5.5 11	5548.5	2^+
		5094.6	14.0 6	5412.6	3^+
		5500.8	2.2 4	5006.2	3^-
		5811.3	1.6 4	4695.3	1^+
		6047.6	<2.8	4459.1	4^+
		6225.2	13.6 8	4281.8	2^+
		6728.7	<5	3778.4	0^+
		8275.3	41.7 11	2230.57	2^+
		10504.2	10.7 17	0	0^+
10556.1		8323.5	100	2230.57	2^+
		10552.4	67	0	0^+
10574.4	5^+	2304.2	3.8 4	8270.3	$3^-,5^-$
		3224.1	6.8 6	7350.0	$3^{(+)}$
		3812.3	6.0 6	6761.6	5^-
		3952.4	4.4 6	6621.7	4^-
		4163.8	2.7 8	6411	4^+
		5161.1	52.5 10	5412.6	3^+
		6114.0	100.0 17	4459.1	4^+
		8341.8	80	2230.57	2^+
		10570.7	12.8	0	0^+
10603.8		2478.3	7.7	8125.40	1^+
		3488.1	25.6	7115.3	2^+
		4805.5	12.8	5796.8	1^-
		5055.5	100	5548.5	2^+
		5190.5	25.6	5412.6	3^+
		5596.6	20.5	5006.2	3^-
		8371.1	15.4	2230.57	2^+
		10600.0	48.7	0	0^+
10636.4		2686.1	22.7 12	7950.1	4^-
		2934.7	5.5 9	7701.44	3^-
		3874.3	13.3 13	6761.6	5^-
		4014.4	100.0 22	6621.7	4^-
10696.1		2994.4	0.7	7701.44	3^-
		3160.1	0.7	7535.7	0^+
		4897.8	4.3	5796.8	1^-
		5147.8	2.9	5548.5	2^+
		5688.9	4.3	5006.2	3^-
		5999.4	2.9	4695.3	1^+
10696.1		6235.7	1.4	4459.1	4^+
		6413.5	14.3	4281.8	2^+
		6916.8	4.3	3778.4	0^+
		8463.4	7.1	2230.57	2^+
		10692.3	100.0	0	0^+
10700.5	1^-	4902.2	4.8	5796.8	1^-
		6003.8	3.6	4695.3	1^+
		6921.2	4.8	3778.4	0^+
		8467.8	6.0	2230.57	2^+
		10696.7	100	0	0^+
10705.3	$1^-,2^-$	3003.6	16.7 18	7701.44	3^-
		3943.2	60 3	6761.6	5^-
		4083.2	100 4	6621.7	4^-
		6244.9	16 4	4459.1	4^+
10756.7	$3^{(+)}$	1691.6	1.2 4	9065	
		2027.3	1.8 6	8729.3	3^+
		3054.9	3.5 4	7701.44	3^-
		3406.3	6.2 4	7350.0	$3^{(+)}$
		3641.0	2.6 4	7115.3	2^+
		3903.8	5.5 4	6851.5	4^+
		4092.4	3.5	6666.1	2^+
		4134.6	2.3 6	6621.7	4^-
		5208.4	31.7 11	5548.5	2^+
		5343.3	13.4 7	5412.6	3^+
		6296.3	100.0 16	4459.1	4^+
		6474.1	6.2 4	4281.8	2^+
		8524.0	1.9 4	2230.57	2^+
10778.8	2^+	1755.7	2.80 24	9023.8	4^-
		2803.6	4.9 5	7974.9	4^-
		3294.5	1.86 24	7484.0	2^+
		3428.4	0.70 24	7350.0	$3^{(+)}$
		3776.9	30.1 7	7001.4	1^+
		4112.4	3.7 5	6666.1	2^+
		4980.5	1.40 24	5796.8	1^-
		5230.5	1.40 24	5548.5	2^+
		5365.4	16.6 5	5412.6	3^+
		6082.1	10.5 5	4695.3	1^+
		6496.2	38.9 7	4281.8	2^+
		8546.0	100.0 21	2230.57	2^+
		10774.9	19.3 5	0	0^+
10783.8		2862.5	2.51 20	7921.0	1^+
		3146.5	1.35 20	7637.0	1

$^{32}_{16}S_{16}$-32

$\gamma(^{32}S)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[†]	δ[†]	Comments
10783.8		3781.9	3.09 *20*	7001.4	1^+			
		4117.4	3.68 *20*	6666.1	2^+			
		4373.2	2.901	6411	4^+			
		5235.5	23.0 *6*	5548.5	2^+			
		5777.8	1	5006.2	3^-			
		6087.1	20.1 *8*	4695.3	1^+			
		6323.4	1.934	4459.1	4^+			
		6501.2	7.2 *4*	4281.8	2^+			
		7004.5	3.3 *4*	3778.4	0^+			
		8551.0	28.4 *8*	2230.57	2^+			
		10779.9	100.0 *12*	0	0^+			
10784.5		6087.8	100	4695.3	1^+			
10791.3	1	3260[‡]	<30	7535.7	0^+			
		3600.8	4.12 *22*	7190.1	1^+			
		3675.5	8.68 *22*	7115.3	2^+			
		3789.4	9.98 *22*	7001.4	1^+			
		4993.0	1.30 *22*	5796.8	1^-			
		5243.0	3.9 *5*	5548.5	2^+			
		5377.9	9.1 *5*	5412.6	3^+			
		5784.1	20.0 *7*	5006.2	3^-			
		6094.6	7.2 *7*	4695.3	1^+			
		6508.7	15.4 *9*	4281.8	2^+			
		8558.5	100.0 *11*	2230.57	2^+			Additional information 23. Mult.,δ: −0.3 *2* or 1.4 *12* $^{28}Si(\alpha,\gamma)$.
		10787.4	37.3 *9*	0	0^+			Additional information 24.
10806	2	5395[‡]	9	5412.6	3^+			
		5795[‡]	22	5006.2	3^-			
		6105[‡]	4	4695.3	1^+			
		6525[‡]	20	4281.8	2^+			
		8574[‡]	100	2230.57	2^+	D+Q	−0.19 *6*	Additional information 25. Mult.,δ: from $^{28}Si(\alpha,\gamma)$.
		10802[‡]	63	0	0^+			Additional information 26. Mult.,δ: from $^{28}Si(\alpha,\gamma)$.
10825.4	2^-	3823.5	13.4 *10*	7001.4	1^+			
		5027.1[#]	18.7	5796.8	1^-			
		5277.1	17 *4*	5548.5	2^+			
		5412.0	15 *4*	5412.6	3^+			
		5818.2	29 *6*	5006.2	3^-			
		6542.8	79 *7*	4281.8	2^+			

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.†	δ†	Comments
10825.4	2⁻	8592.6	100 *9*	2230.57	2⁺			
		10821.5	58 *9*	0	0⁺			
10827.0		3711.2	2.7	7115.3	2⁺			
		4161	5.4	6666.1	2⁺			
		4202	4.0	6621.7	4⁻			
		5028.7	8.1	5796.8	1⁻			
		5281	5.4	5548.5	2⁺			
		5413.6	8.1	5412.6	3⁺			
		5819.8	16.2	5006.2	3⁻			
		6130.2	5.4	4695.3	1⁺			
		6544.4	59.5	4281.8	2⁺			
		7047.6	5.4	3778.4	0⁺			
		8594.2	100	2230.57	2⁺			
		10823.1	64.9	0	0⁺			
10832	2,(3)	5421‡	<12	5412.6	3⁺			
		5821‡	18	5006.2	3⁻			
		8600‡	<12	2230.57	2⁺			
		10828‡	100	0	0⁺			Additional information 27.
10841	2	5430‡	25	5412.6	3⁺			
		5830‡	25	5006.2	3⁻			
		6560‡	75	4281.8	2⁺	D+Q	+0.54 *15*	Additional information 28. Mult.,δ: from ^{28}Si(α,γ).
		8609	100	2230.57	2⁺	D+Q	+0.60 *12*	Additional information 29. Mult.,δ: from ^{28}Si(α,γ).
		10837	25	0	0⁺			Additional information 30. Mult.,δ: from ^{28}Si(α,γ).
10851	1	6570‡	<27	4281.8	2⁺			
		8618‡	<55	2230.57	2⁺			
		10847‡	>100	0	0⁺			Additional information 31.
10915		8685	45	2230.57	2⁺			
		10911	100	0	0⁺			
10933.7	3	1221.7	7.4 *4*	9711.9	2⁺			
		3449.4	7.7 *7*	7484.0	2⁺			
		3583.3	30.4 *7*	7350.0	3⁽⁺⁾			
		3817.9	6.1 *7*	7115.3	2⁺			
		4080.7	67.0 *10*	6851.5	4⁺			
		4523.0	22.8 *7*	6411	4⁺			
		5385.3	15.1 *7*	5548.5	2⁺			
		5520.3	13.5 *7*	5412.6	3⁺			

$^{32}_{16}S_{16}$-34

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Comments
10933.7	3	6473.2	23.4 *10*	4459.1	4^+	
		6651.0	100.0 *10*	4281.8	2^+	
		8700.9	7.7 *13*	2230.57	2^+	
		10929.7	<3	0	0^+	
10941	1	8708[‡]	39	2230.57	2^+	Additional information 32. δ: 0.00 *18* or 3.0 *15* ^{28}Si(α,γ).
		10937[‡]	100	0	0^+	Additional information 33.
10998	(4)	4577[‡]	9	6411	4^+	
		5987[‡]	5	5006.2	3^-	
		6537[‡]	100	4459.1	4^+	Additional information 34.
11009.9	4^+	2739.6	1.46 *21*	8270.3	$3^-,5^-$	
		3059.5	0.63 *21*	7950.1	4^-	
		3126.7	4.38 *21*	7882.9	4^+	
		3308.1	2.29 *21*	7701.44	3^-	
		3525.6	0.83 *21*	7484.0	2^+	
		3575.3[#]	25	7434	1^-	
		3659.5	2.50 *21*	7350.0	$3^{(+)}$	
		3894.1	1.04 *21*	7115.3	2^+	
		4247.7	1.04 *21*	6761.6	5^-	
		4343.5	2.92 *21*	6666.1	2^+	
		4387.8	0.63 *21*	6621.7	4^-	
		4599.2	16.46 *21*	6411	4^+	
		5596.4	3.13 *21*	5412.6	3^+	
		6002.6	37.9 *7*	5006.2	3^-	
		6549.4	100.0 *11*	4459.1	4^+	
		6727.2	23.5 *5*	4281.8	2^+	
		8777.0	8.96 *21*	2230.57	2^+	
11052	(4)	4611[‡]	<5	6411	4^+	
		6041[‡]	<5	5006.2	3^-	
		6590[‡]	100	4459.1	4^+	A_2=+0.14 *7*, A_4=+0.15 *8* ^{28}Si(α,γ).
11078	2	11074[‡]	100	0	0^+	Additional information 35.
11092.3	3^-	2795.9	23.1 *9*	8296.1	3^-	
		2900.9	3.0 *9*	8191.1	4	
		3117.1	13.2 *5*	7974.9	4^-	
		3141.9	18.4 *9*	7950.1	4^-	
		3390.5	51.7 *13*	7701.44	3^-	
		4330.1	3.0 *17*	6761.6	5^-	
		4470.1	100.0 *17*	6621.7	4^-	
		4867.8	55.1 *17*	6222.9	2^-	

$^{32}_{16}S_{16}$-35

Adopted Levels, Gammas (continued)

γ(^{32}S) (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π
11092.3	3^-	6085.0	85 *3*	5006.2	3^-
		6631.7	63 *3*	4459.1	4^+
		6809.5	10.3 *17*	4281.8	2^+
		8859.4#		2230.57	2^+
		11088.2#		0	0^+
11107	(2^+)	6099‡	<67	5006.2	3^-
		8877‡	>100	2230.57	2^+
11114		4490 *1*		6621.7	4^-
		6109 *3*		5006.2	3^-
		8881 *10*		2230.57	2^+
		11113 *86*		0	0^+
11123		2432.8#	11.4	8687.6	
		4121.0	9.1 *3*	7001.4	1^+
		6426.1	6.7 *3*	4695.3	1^+
		7343.5	9.6 *3*	3778.4	0^+
		8890.0	14.4 *5*	2230.57	2^+
		11118.9	100.0 *8*	0	0^+
11139.8	1^+	3603.7	0.47 *12*	7535.7	0^+
		3946.4	1.2	7190.1	1^+
		4137.8	0.71 *12*	7001.4	1^+
		4915.3	0.47 *12*	6222.9	2^-
		5589.9	<0.6	5548.5	2^+
		6442.9	2.71 *24*	4695.3	1^+
		7360.3	2.12 *24*	3778.4	0^+
		8906.8	10.8 *7*	2230.57	2^+
		11135.6	100.0 *9*	0	0^+
11235.5	3	2545.3	2.95 *21*	8687.6	
		3044.1	6.53 *21*	8191.1	4
		3533.6	3.16 *21*	7701.44	3^-
		4824.7	4.2 *5*	6411	4^+
		5687.0	2.7 *5*	5548.5	2^+
		5822.0	7.2 *5*	5412.6	3^+
		6774.9	6.5 *5*	4459.1	4^+
		6952.7	77.5 *13*	4281.8	2^+
		9002.5	100.0 *13*	2230.57	2^+
11253.9	(3^-)	2392.7	1.37 *16*	8861	2^+
		2524.4	1.22 *16*	8729.3	3^+
		2563.7	3.65 *16*	8687.6	
		2846.6	4.11 *16*	8407.0	2
		2957.5	0.61 *16*	8296.1	3^-
11253.9	(3^-)	3062.5	7.31 *16*	8191.1	4
		3303.4	2.74 *16*	7950.1	4^-
		3552.0	1.22 *16*	7701.44	3^-
		4400.9	1.83 *16*	6851.5	4^+
		4587.4	2.89 *16*	6666.1	2^+
		4843.1	2.44 *16*	6411	4^+
		5705.4	1.67 *16*	5548.5	2^+
		5840.4	1.83 *16*	5412.6	3^+
		6246.5	7.2 *3*	5006.2	3^-
		6557.0	1.67 *16*	4695.3	1^+
		6971.1	8.5 *3*	4281.8	2^+
		9020.9	100.0 *8*	2230.57	2^+
11332.8		1673.7	30 *3*	9660.1	1^+
		3207.1	46.9 *23*	8125.40	1^+
		4216.9	21 *3*	7115.3	2^+
		4330.7	6 *3*	7001.4	1^+
		4922.0	26 *3*	6411	4^+
		6325.4	19 *3*	5006.2	3^-
		6635.8	16 *3*	4695.3	1^+
		7049.9	57 *4*	4281.8	2^+
		11328.5	100.0 *7*	0	0^+
11474.6	3	2728.8	4.99 *14*	8745.6	3
		2745.0	4.99 *14*	8729.3	3^+
		4621.5	1.62 *14*	6851.5	4^+
		4808.0	2.56 *14*	6666.1	2^+
		4852.3	2.29 *14*	6621.7	4^-
		5063.7	0.54 *14*	6411	4^+
		5250.0	0.94 *14*	6222.9	2^-
		5926.0	1.35 *14*	5548.5	2^+
		6061.0	9.03 *14*	5412.6	3^+
		7013.8	6.33 *14*	4459.1	4^+
		7191.7	100.0 *6*	4281.8	2^+
11485.8	1^+	3360.1	55 *10*	8125.40	1^+
		6478.3	81 *15*	5006.2	3^-
		7706.1	100 *12*	3778.4	0^+
11589.7	1^-	3182.4	4.5 *3*	8407.0	2
		4473.7	25.8 *8*	7115.3	2^+
		4923.1	1.1 *6*	6666.1	2^+
		5178.8	0.8 *6*	6411	4^+
		6582.1	7.6 *8*	5006.2	3^-

From ENSDF

$^{32}_{16}S_{16}$-37

γ(^{32}S) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Comments
11589.7	1^-	6892.6	1.8 *6*	4695.3	1^+	
		7128.9	18.2 *11*	4459.1	4^+	
		7306.7	56.6 *11*	4281.8	2^+	
		7810.0	8.4 *8*	3778.4	0^+	
		9356.5	38.2 *14*	2230.57	2^+	
		11585.2	100.0 *19*	0	0^+	
11602.4		4066.1	12.0 *16*	7535.7	0^+	
		4411.6	31.8 *16*	7190.1	1^+	
		6053.8	37.8 *20*	5548.5	2^+	
		6594.8	45.1 *23*	5006.2	3^-	
		6905.3	100 *4*	4695.3	1^+	
11637.1		3290.4	0.80 *12*			
		3715.6	0.57 *12*	7921.0	1^+	
		4152.6	0.46 *12*	7484.0	2^+	
		4202.5	0.23 *12*	7434	1^-	
		4446.3	0.46 *12*	7190.1	1^+	
		4634.9	0.80 *12*	7001.4	1^+	
		4970.5	0.69 *12*	6666.1	2^+	
		5412.4	0.57 *12*	6222.9	2^-	
		5838.5	0.69 *12*	5796.8	1^-	
		6088.5	3.55 *12*	5548.5	2^+	
		6940.0	2.17 *12*	4695.3	1^+	
		7857.3	1.26 *12*	3778.4	0^+	
		9403.8	2.75 *23*	2230.57	2^+	
		11632.6	100.0 *6*	0	0^+	
11669.6	5^+	2940.0	0.63 *16*	8729.3	3^+	
		3322.9	6.2 *4*			
		3478.1	15.2 *4*	8191.1	4	
		4102.0	21.4 *4*	7566.8	5^+	
		4907.2	0.63 *16*	6761.6	5^-	
		5258.7	100.0 *7*	6411	4^+	
		7208.8	14.4 *4*	4459.1	4^+	
11696.7	5^+	3350.0	6.66 *17*			
		3505.2	10.15 *17*	8191.1	4	
		4129.1	14.6 *4*	7566.8	5^+	
		4346.1	1.66 *17*	7350.0	$3^{(+)}$	
		5074.3	1.5 *4*	6621.7	4^-	
		5285.8	100.0 *7*	6411	4^+	
		7235.8	31.9 *4*	4459.1	4^+	
11750	1	7464‡	100	4281.8	2^+	Additional information 36. δ: −0.21 *2* or 1.8 *1* ^{28}Si(α,γ).

From ENSDF

$^{32}_{16}S_{16}$-37

Adopted Levels, Gammas (continued)

$\gamma(^{32}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Comments
11750	1	11741‡	2	0	0^+	Additional information 37.
11758.8		3462.3	14.0 *4*	8296.1	3^-	
		3808.2	14.2 *11*	7950.1	4^-	
		4996.4	100.0 *11*	6761.6	5^-	
		5136.4	49.5 *9*	6621.7	4^-	
		6751.2	4.4 *8*	5006.2	3^-	
11783	1	11780‡	100	0	0^+	Additional information 38.
11806	1,2	4682‡	<5	7115.3	2^+	I_γ: intensity seen in only one part of the doublet.
		11798‡	100	0	0^+	Additional information 39.
11940.1	3	3532.7	1.4 *3*	8407.0	2	
		3989.5	6.5 *3*	7950.1	4^-	
		5086.8	2.2 *3*	6851.5	4^+	
		5317.7	15.7 *6*	6621.7	4^-	
		5715.3	6.2 *3*	6222.9	2^-	
		6391.3	21.6 *9*	5548.5	2^+	
		6526.3	27.8 *6*	5412.6	3^+	
		7479.1	100.0 *12*	4459.1	4^+	
		7656.9	50.0 *6*	4281.8	2^+	
		9706.6	49.4 *9*	2230.57	2^+	
12030		4520‡	10	7535.7	0^+	
		4900‡	14	7115.3	2^+	
		9788‡	14	2230.57	2^+	
		12016‡	100	0	0^+	Additional information 40.
12043.9		4093.2	3.2 *5*	7950.1	4^-	
		5281.4	19.0 *11*	6761.6	5^-	
		5421.4	2.7 *5*	6621.7	4^-	
		7036.1	100.0 *13*	5006.2	3^-	
		7582.9	2.5 *4*	4459.1	4^+	
12044.19	2,3,4	7036.33	100	5006.2	3^-	
		9811.8	1	2230.57	2^+	
12047.96	0^+	2840.32 *14*	11.2 *8*	9207.55	1^+	
		3922.37 *15*	100.0 *11*	8125.40	1^+	
		5046.1 *4*	7.5 *8*	7001.4	1^+	
		9816#	≤0.30	2230.57	2^+	

† From $^{31}P(p,\gamma)$, unless otherwise noted.

‡ From $^{28}Si(\alpha,\gamma)$.

Placement of transition in the level scheme is uncertain.

From ENSDF

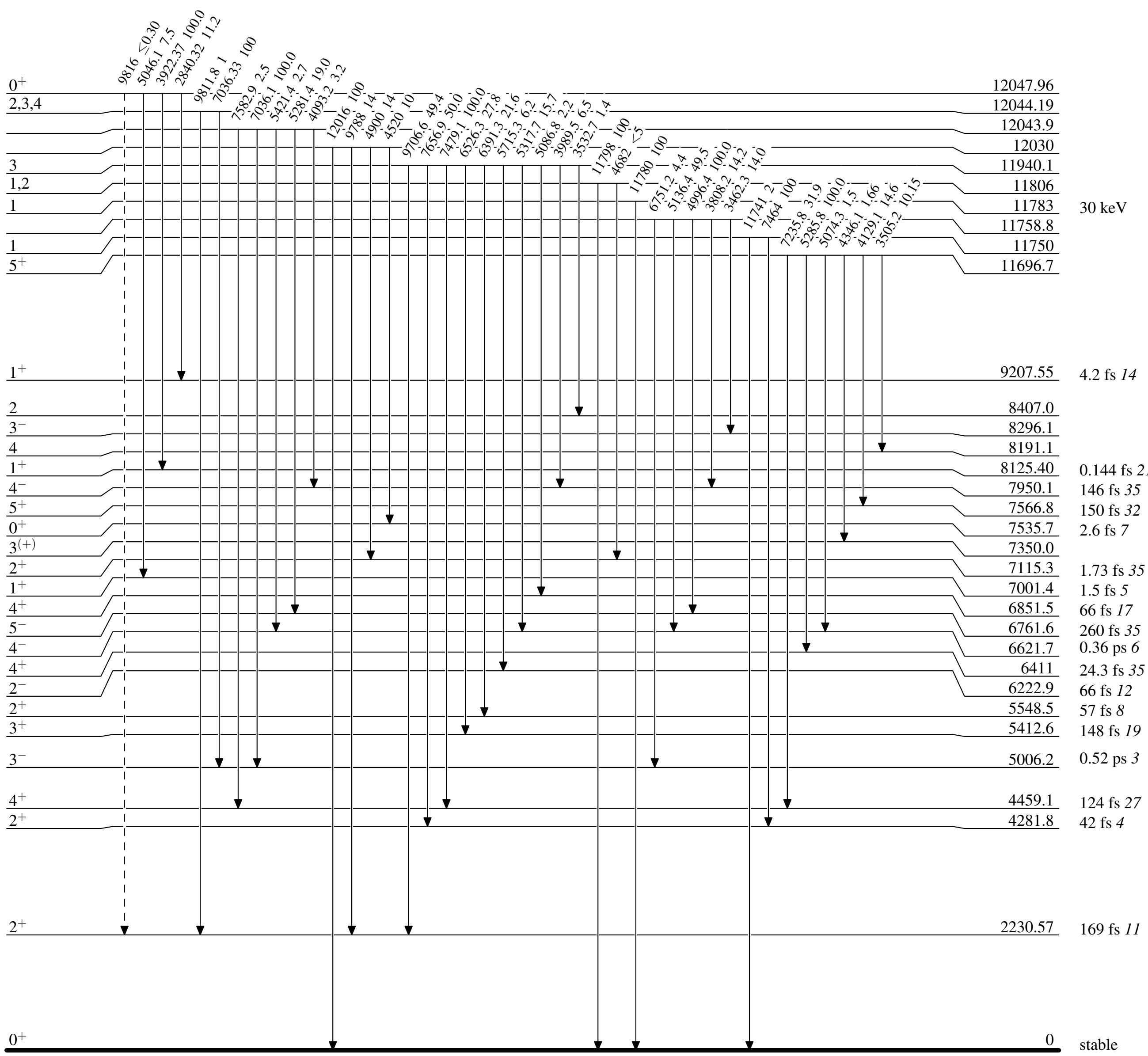
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

Legend

γ Decay (Uncertain)

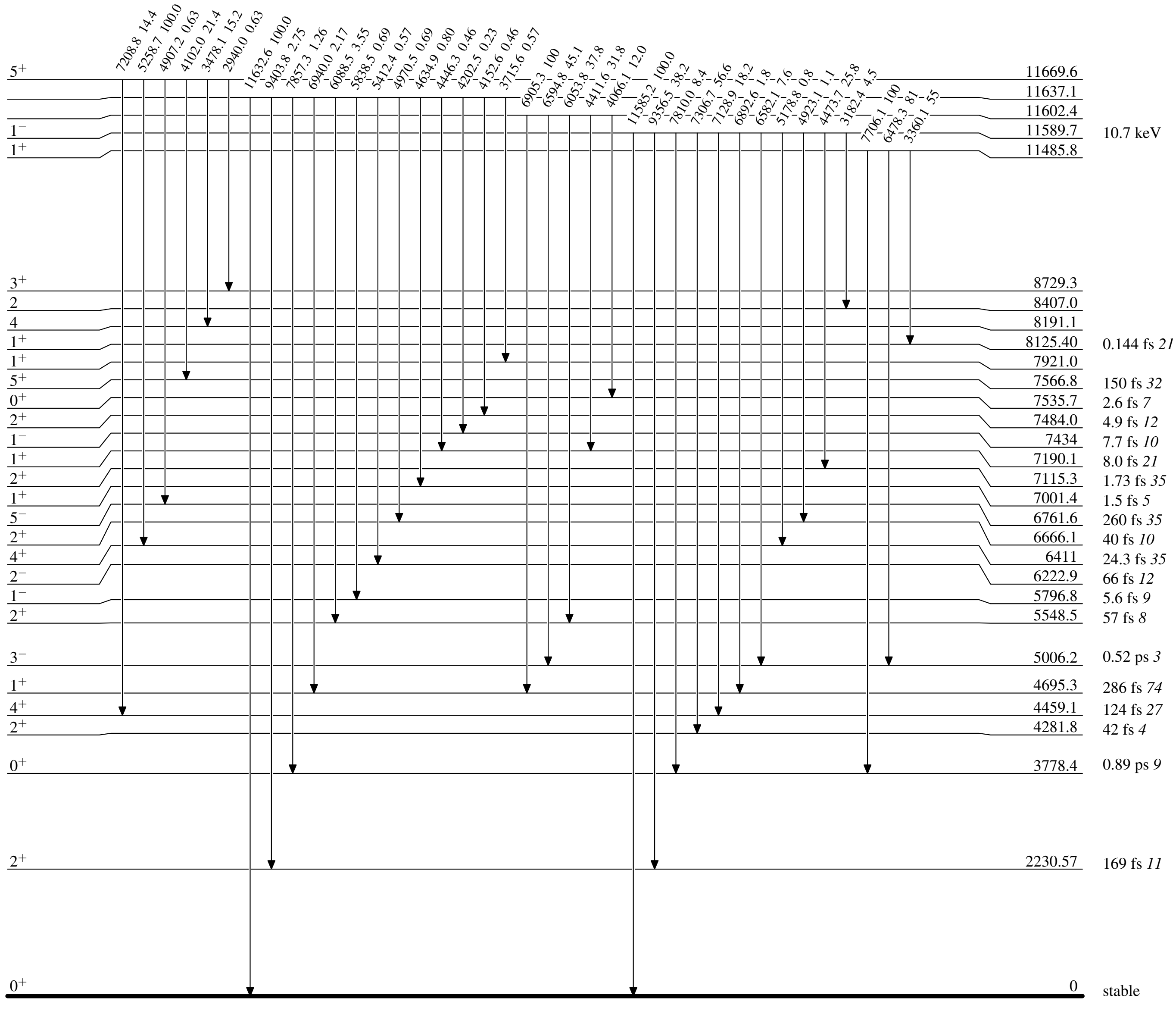


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

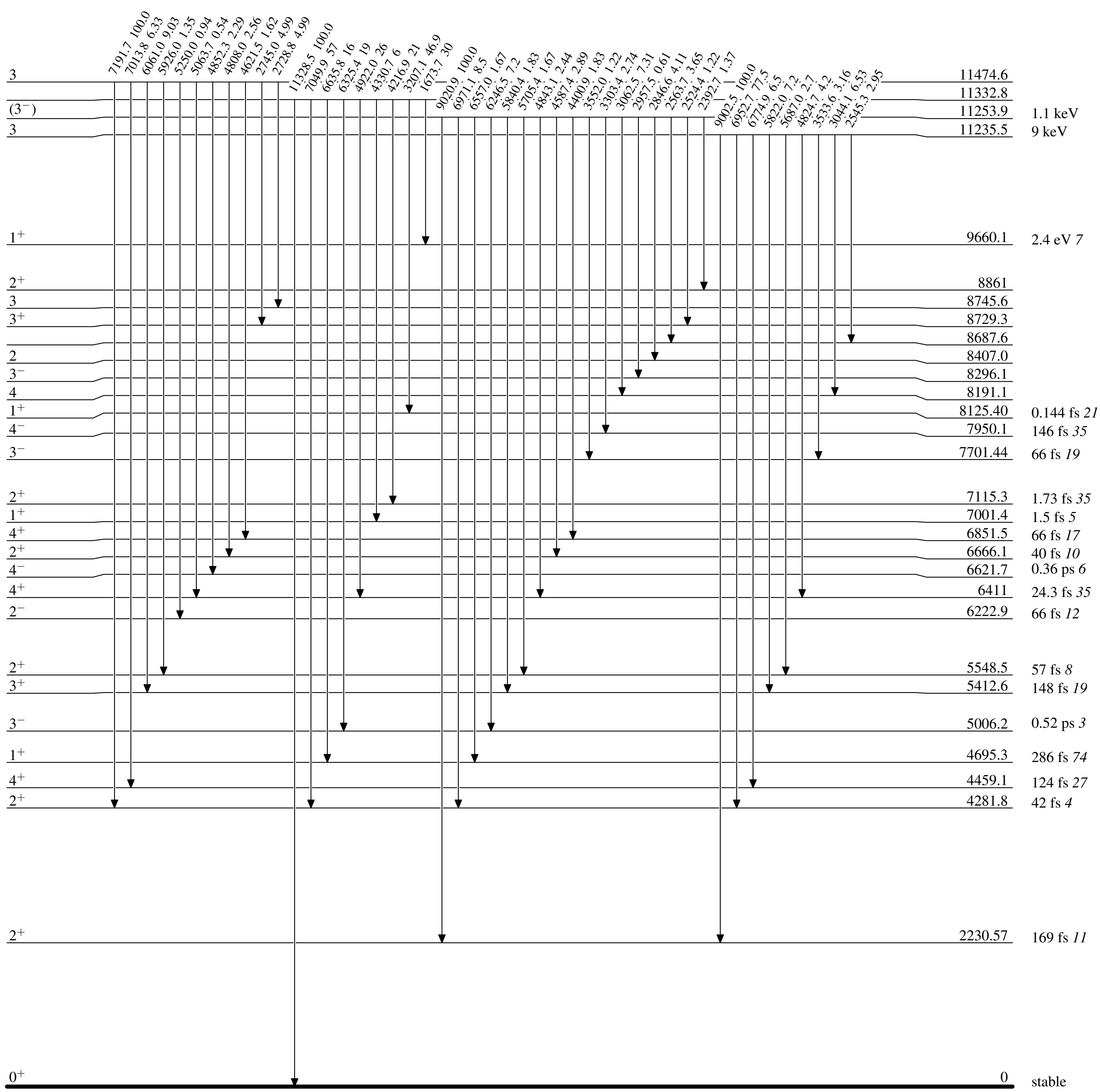


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{32}_{16}S_{16}$

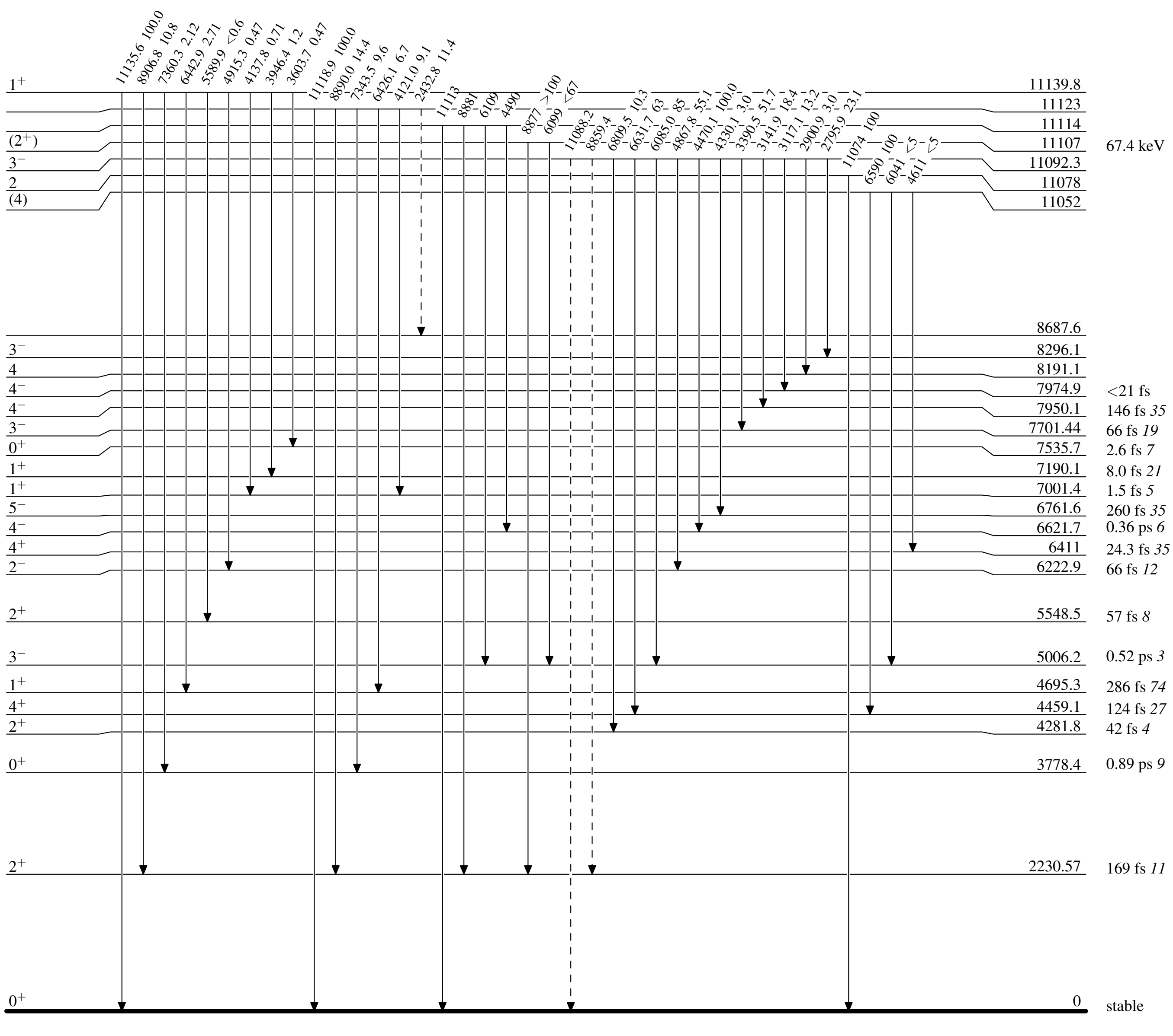
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{32}_{16}S_{16}$

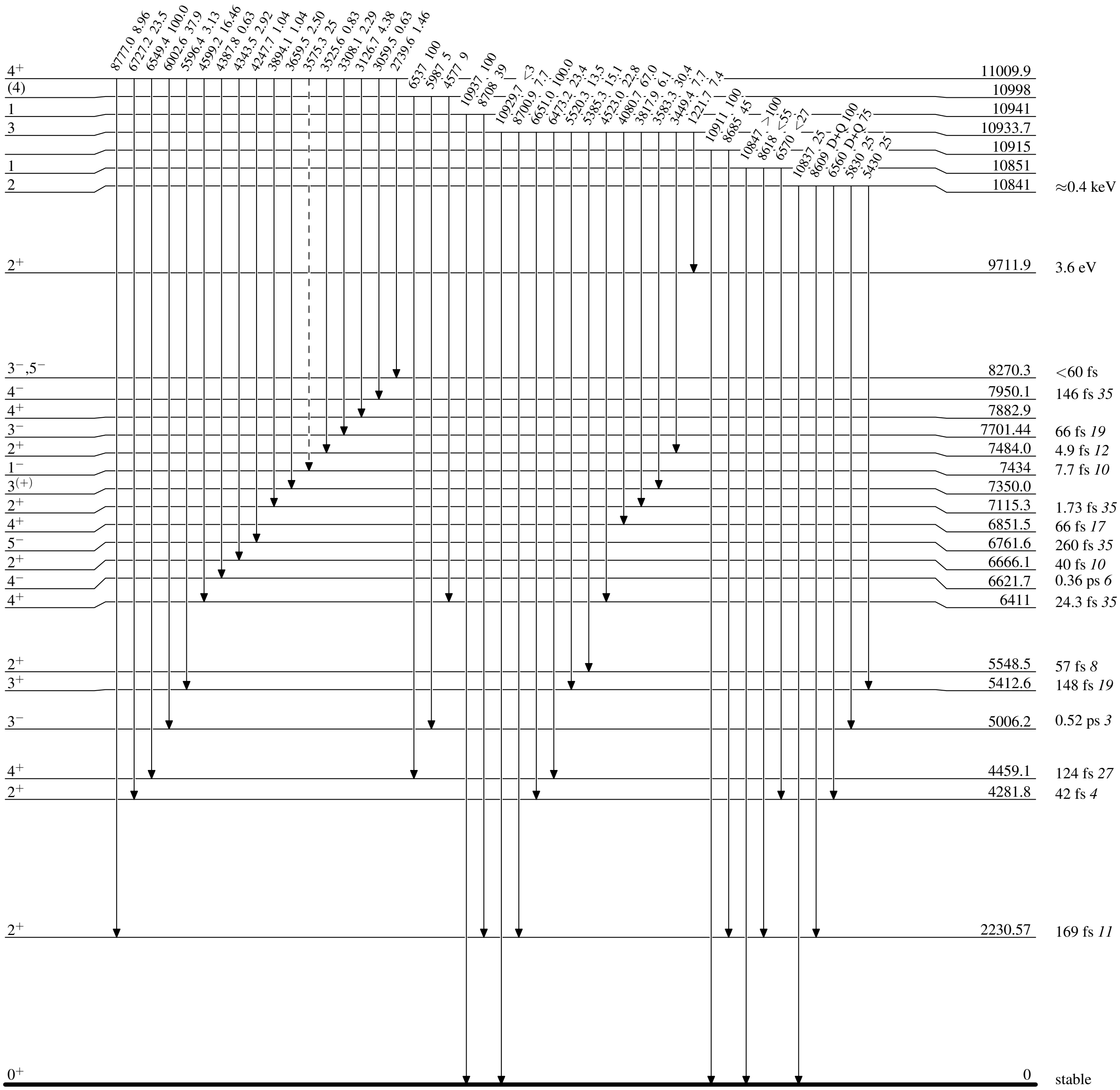
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ▸ γ Decay (Uncertain)



$^{32}_{16}$S$_{16}$

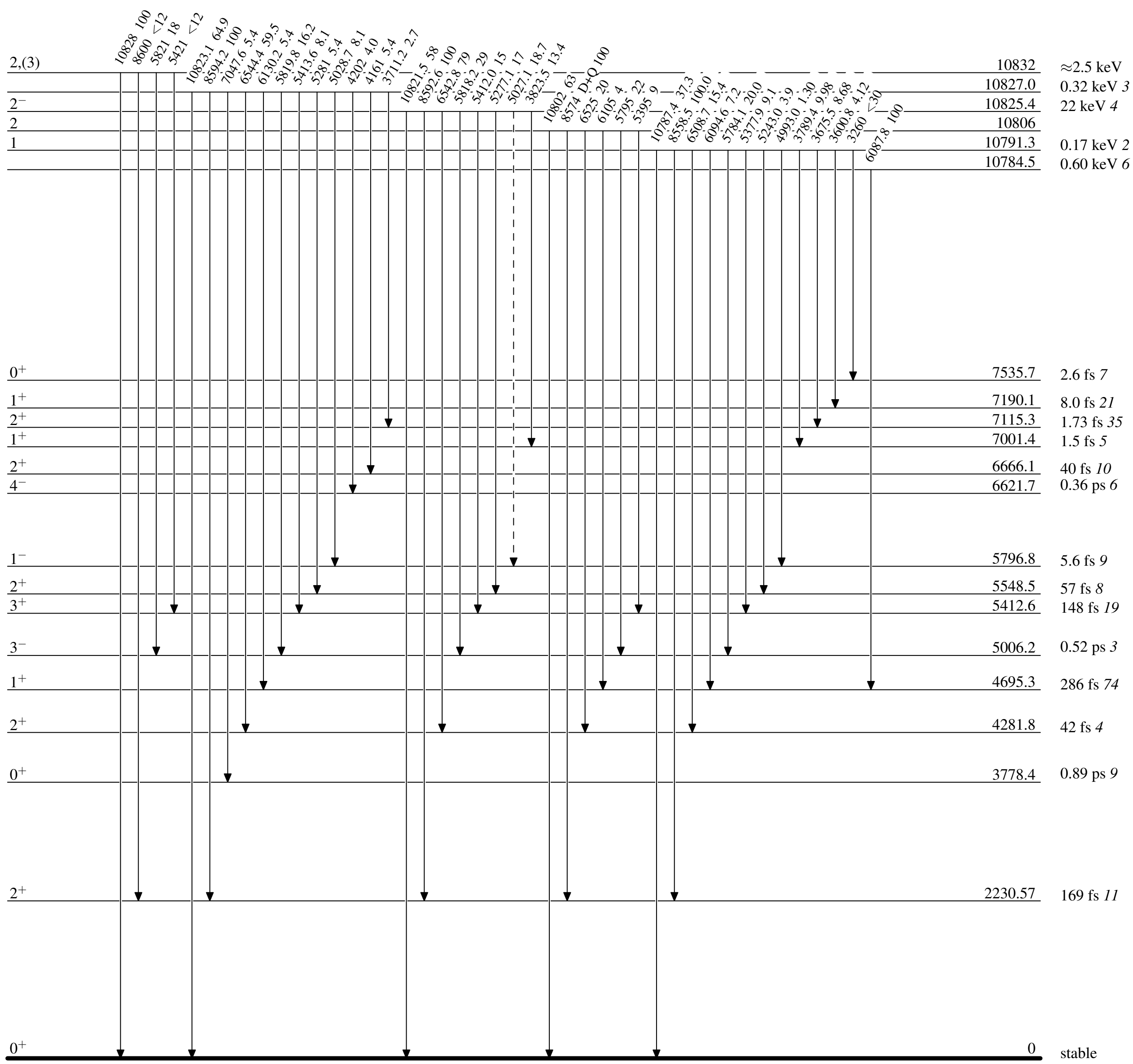
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

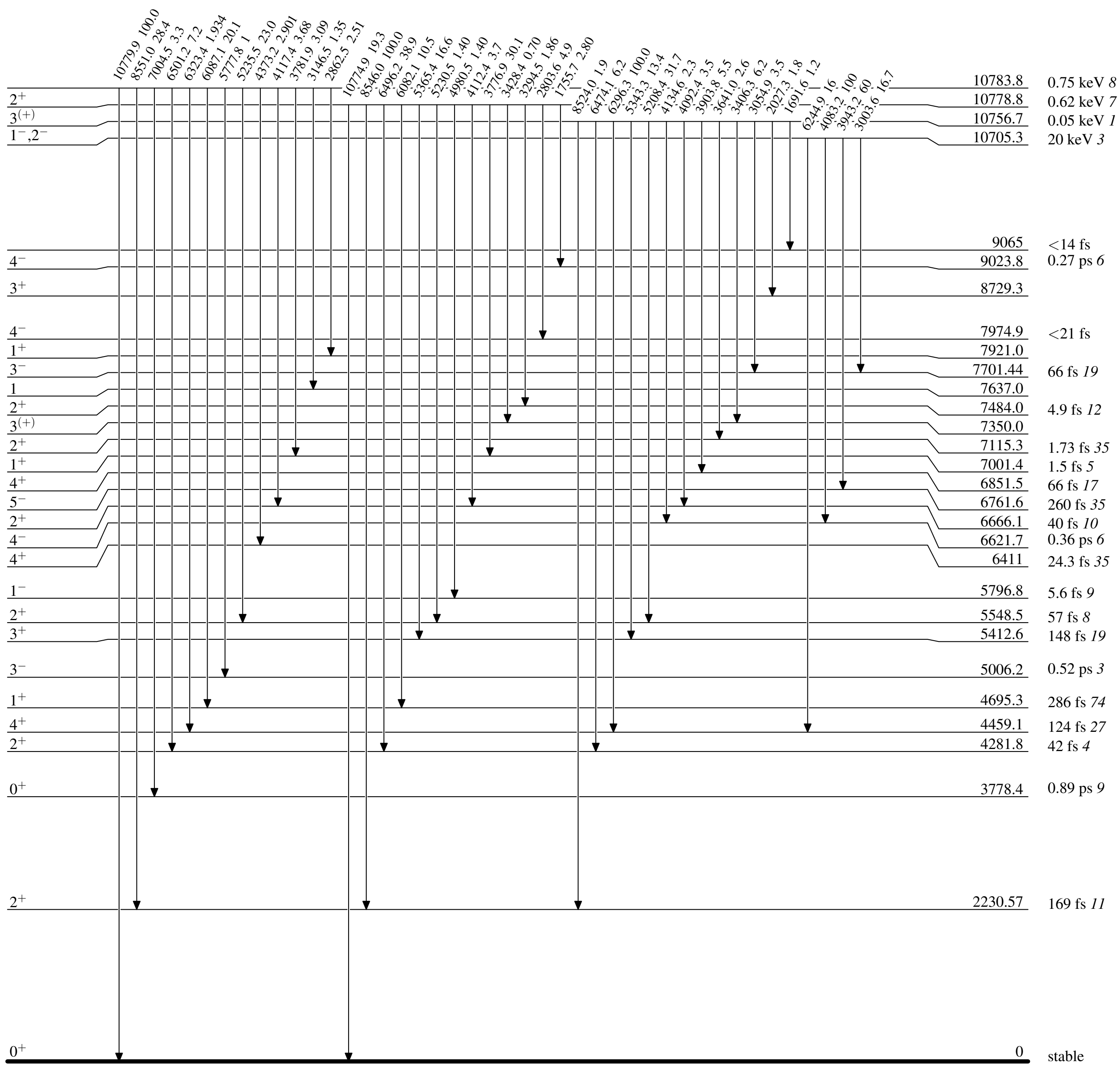


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

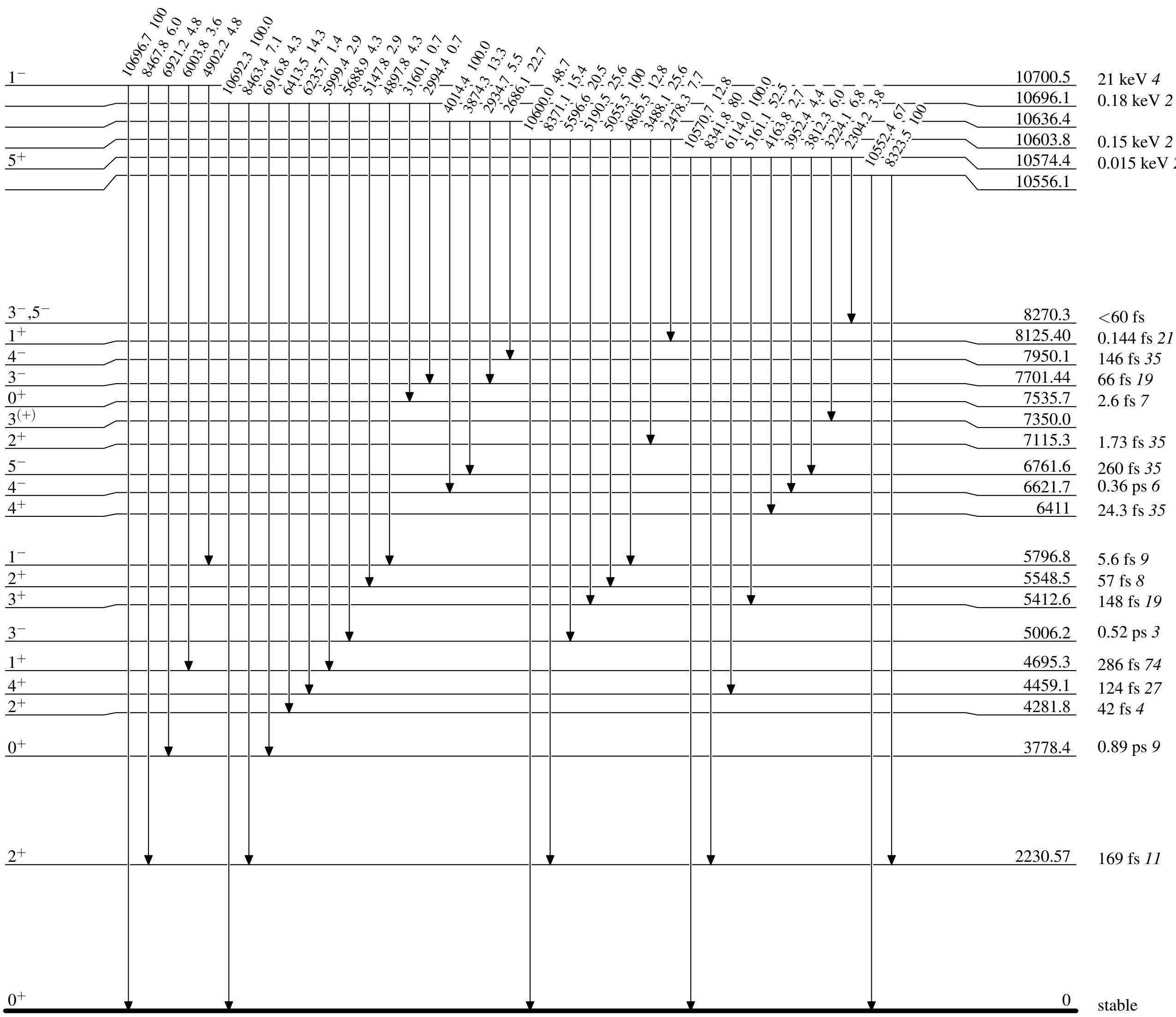


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

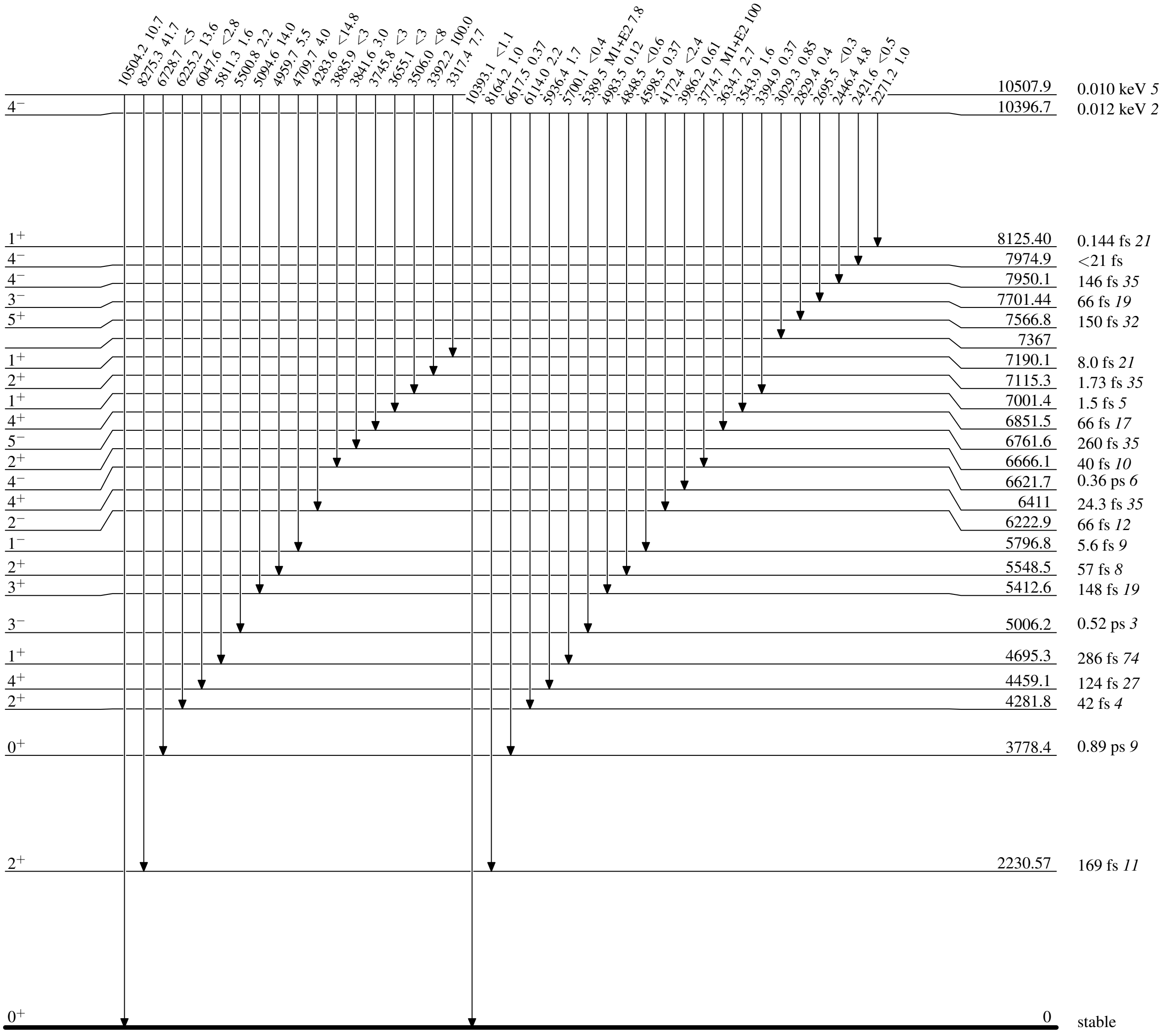


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{32}_{16}S_{16}$

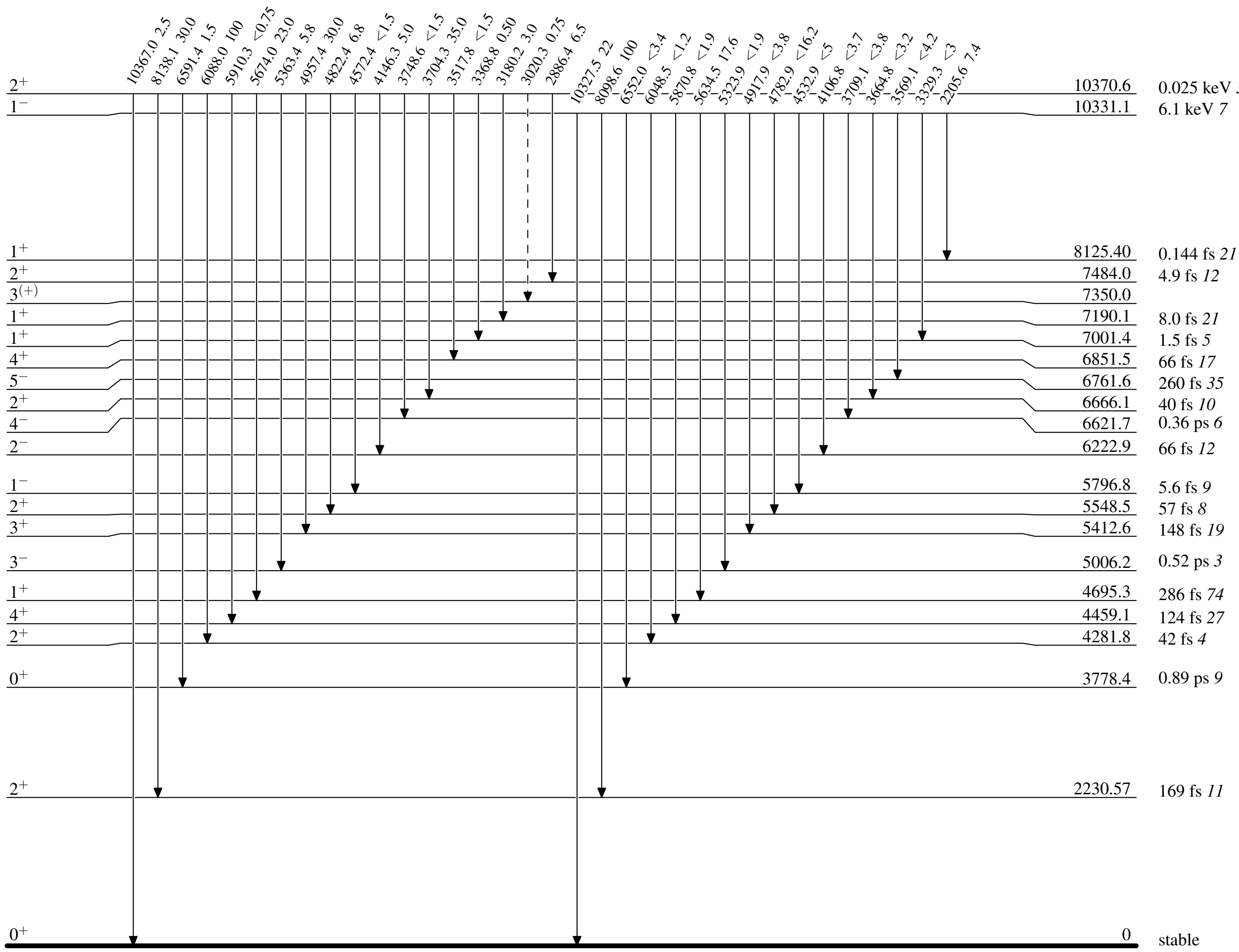
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

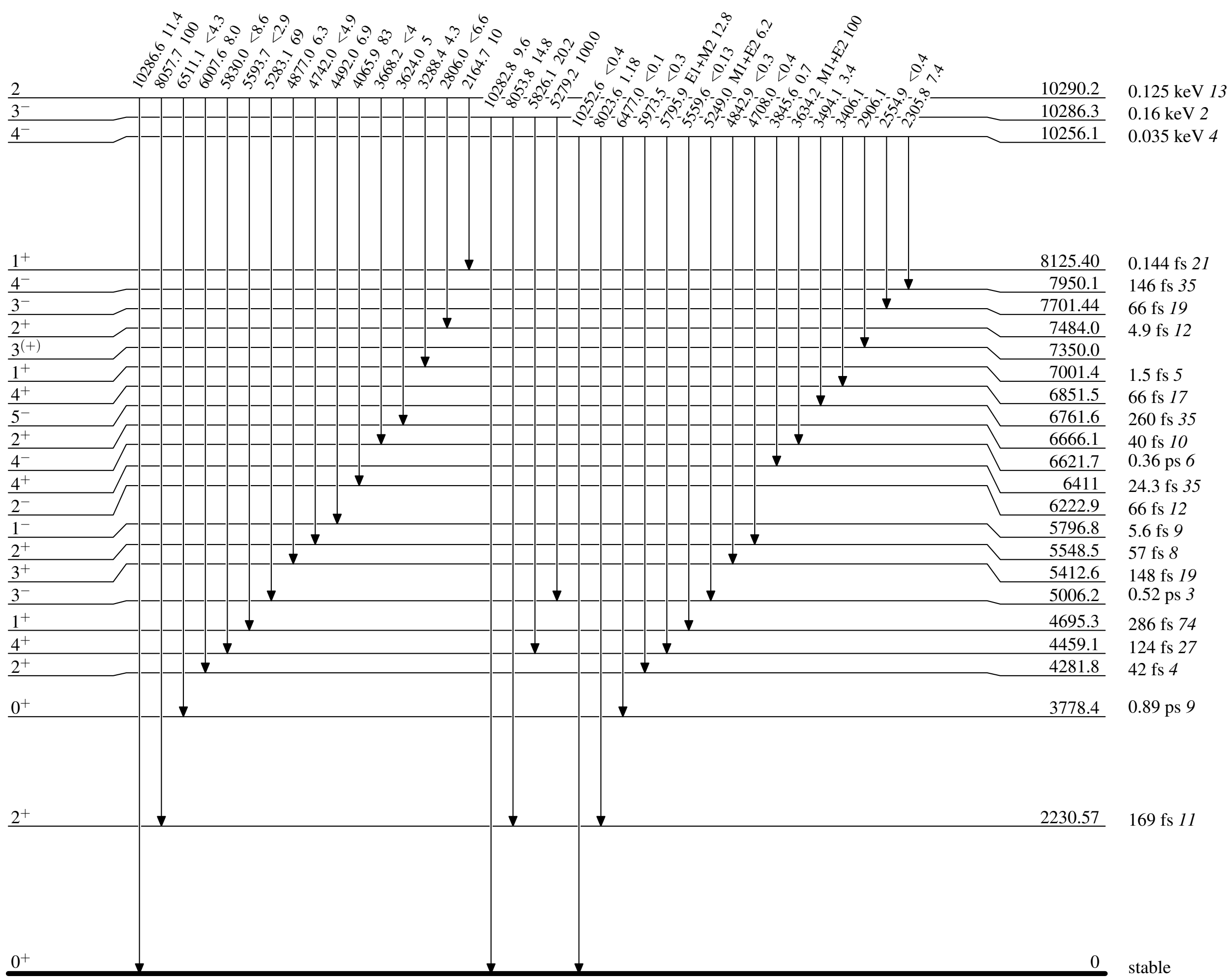


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

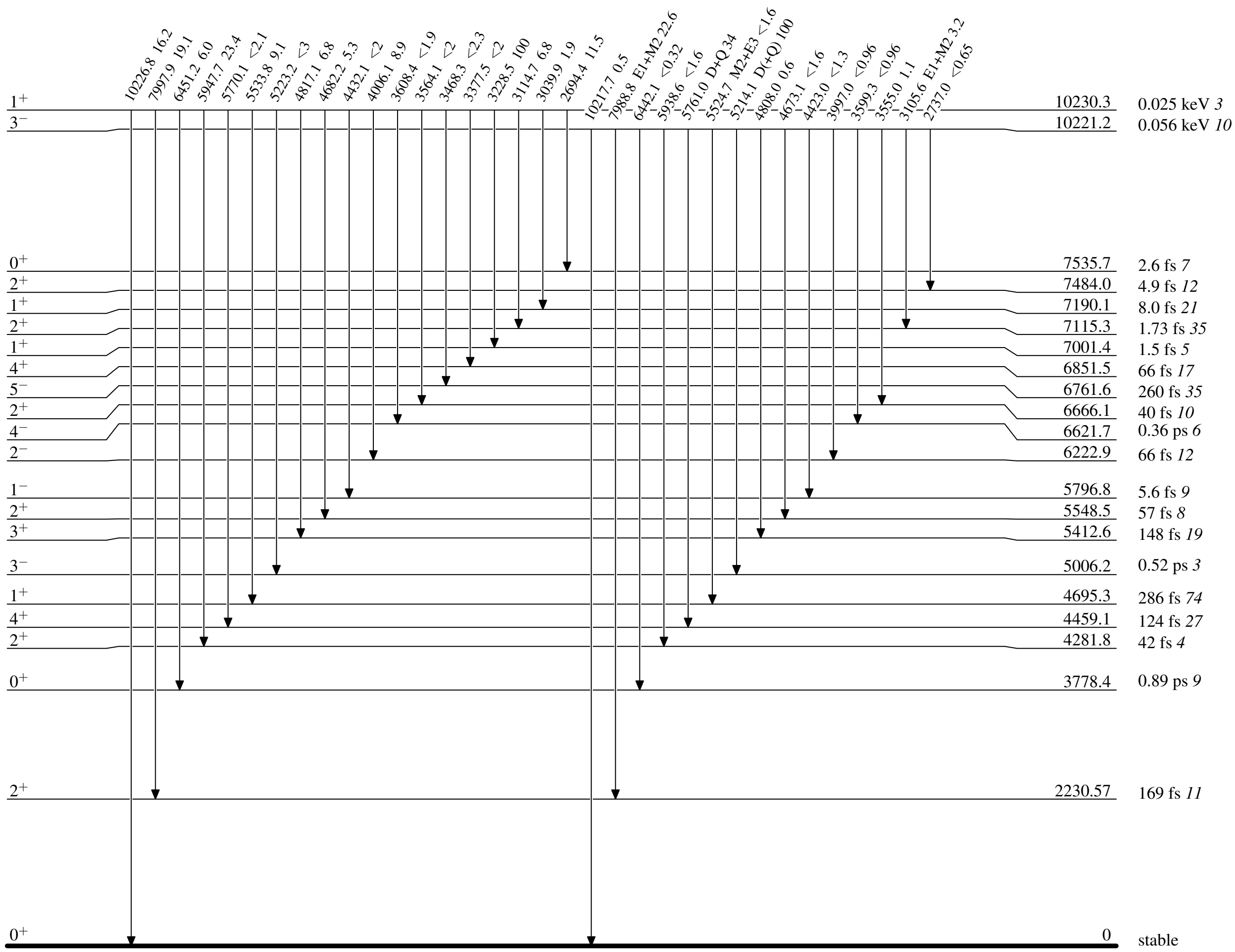


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

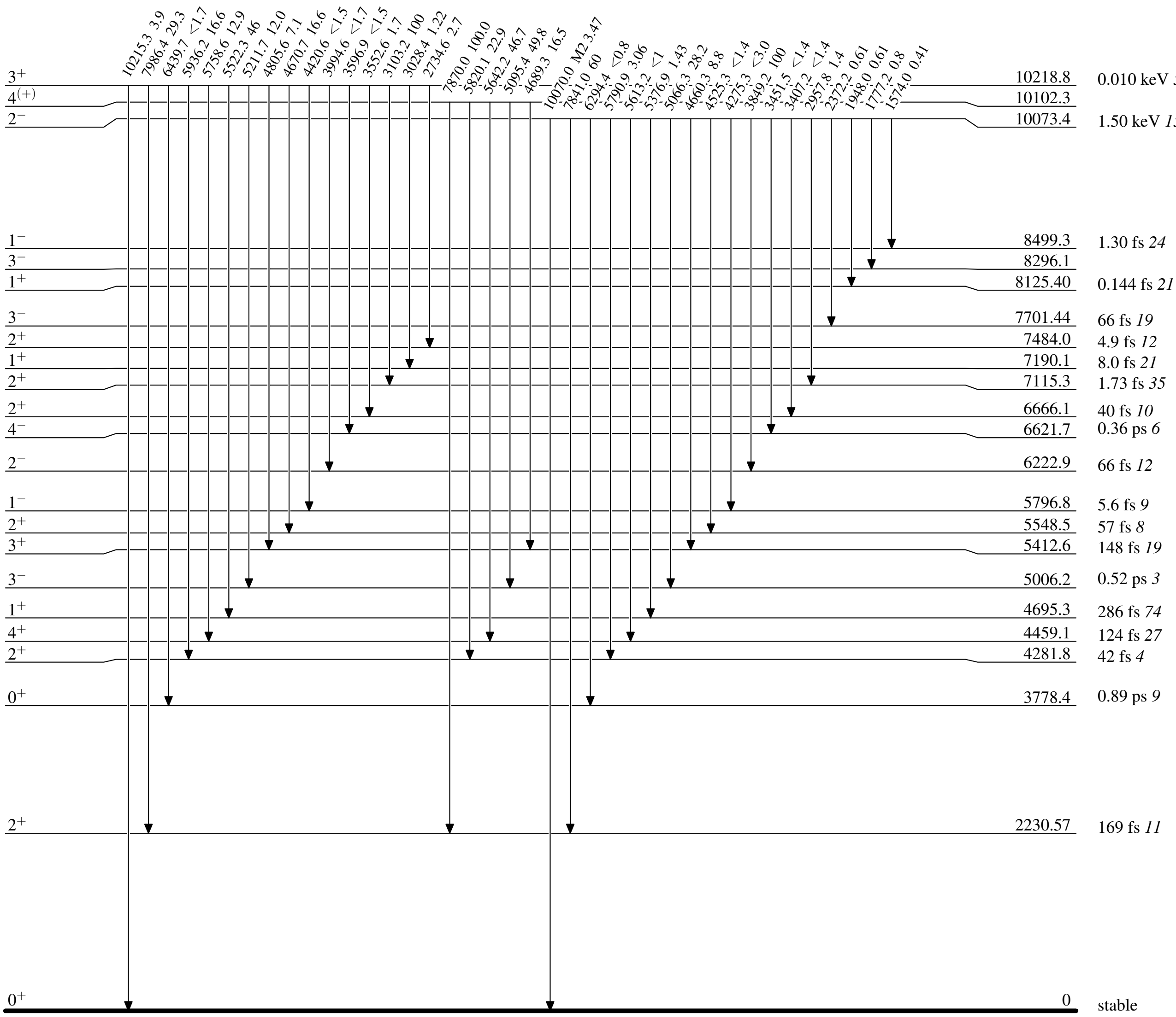


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{32}_{16}S_{16}$

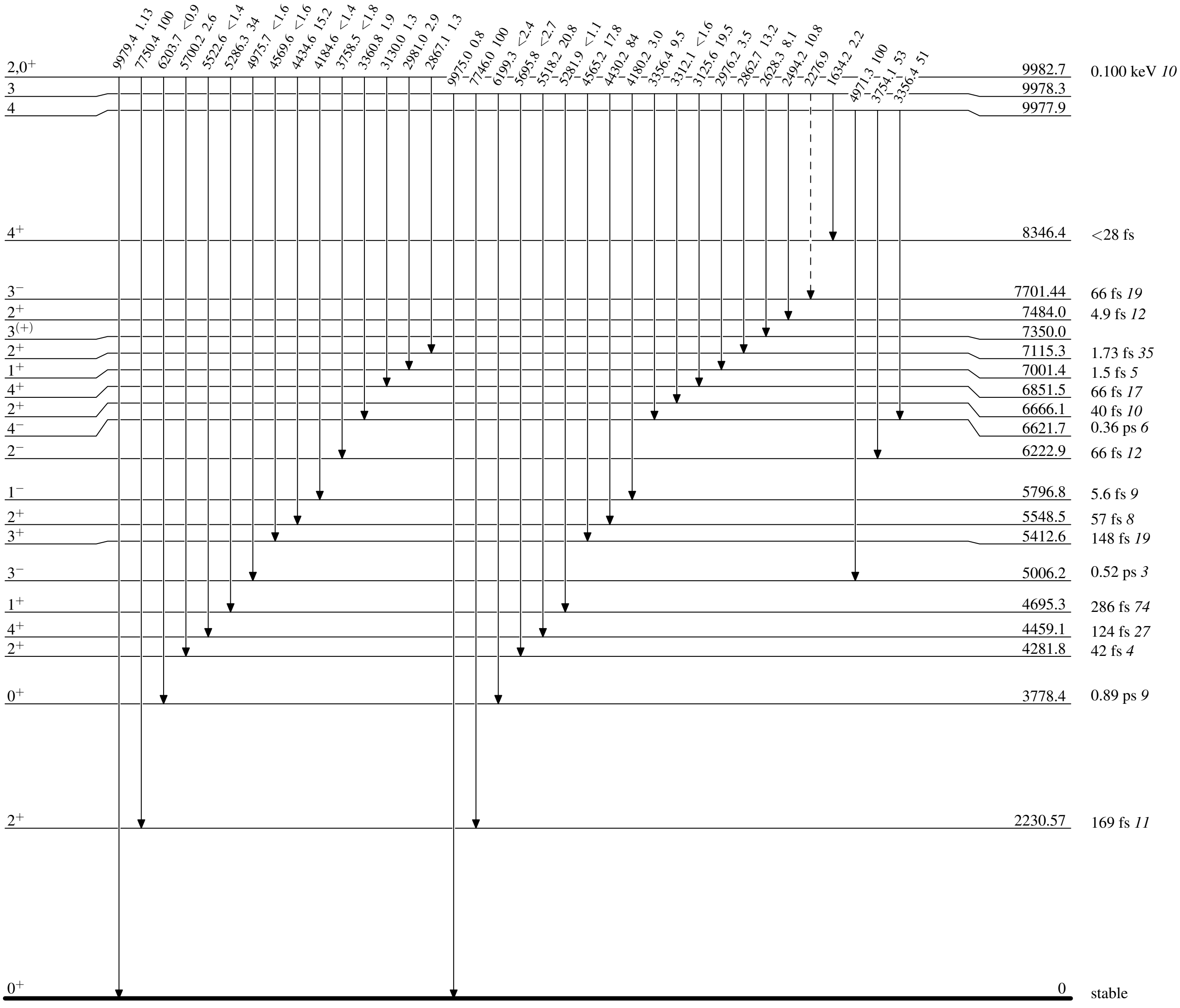
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

Legend

γ Decay (Uncertain)

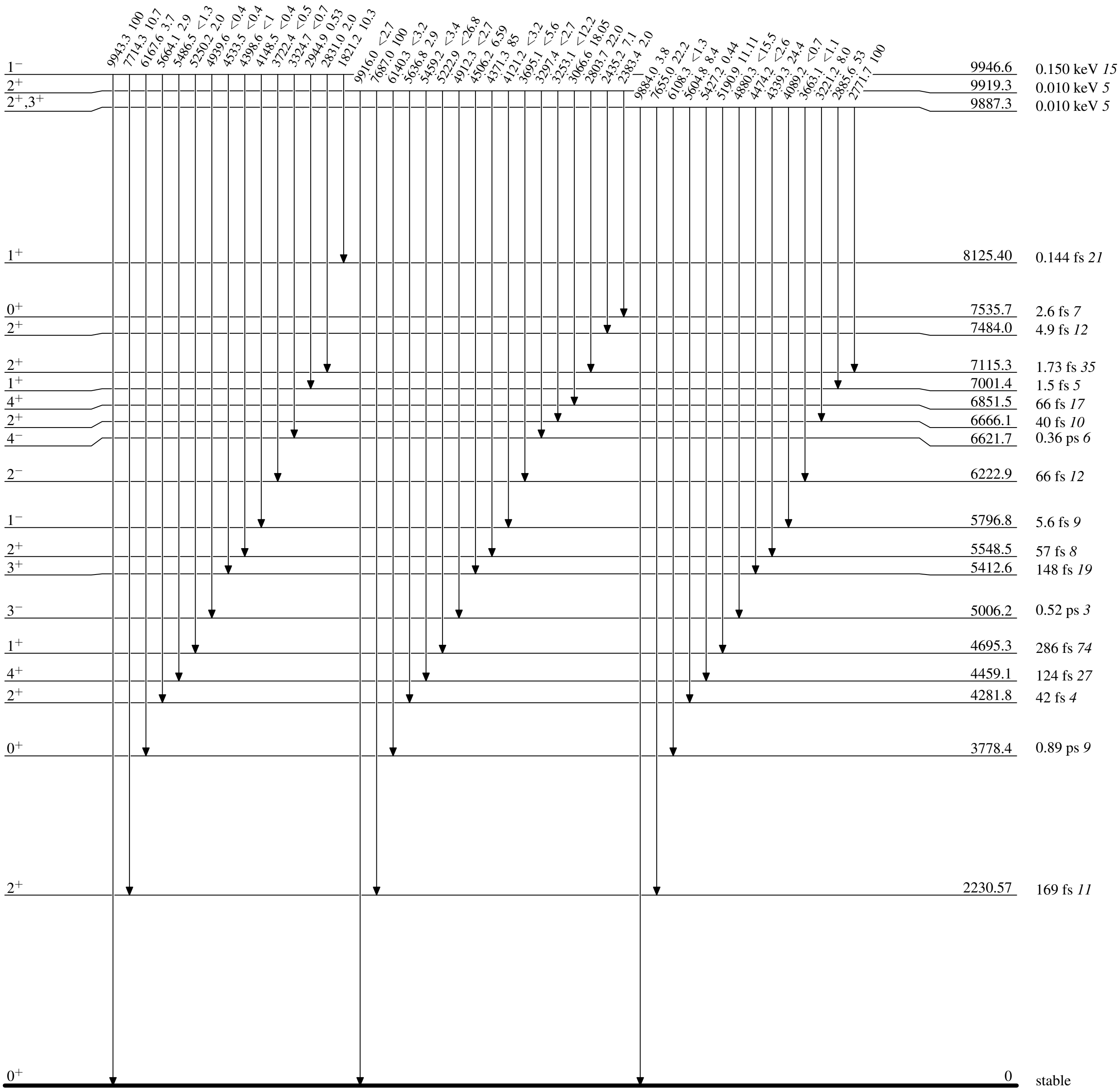


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

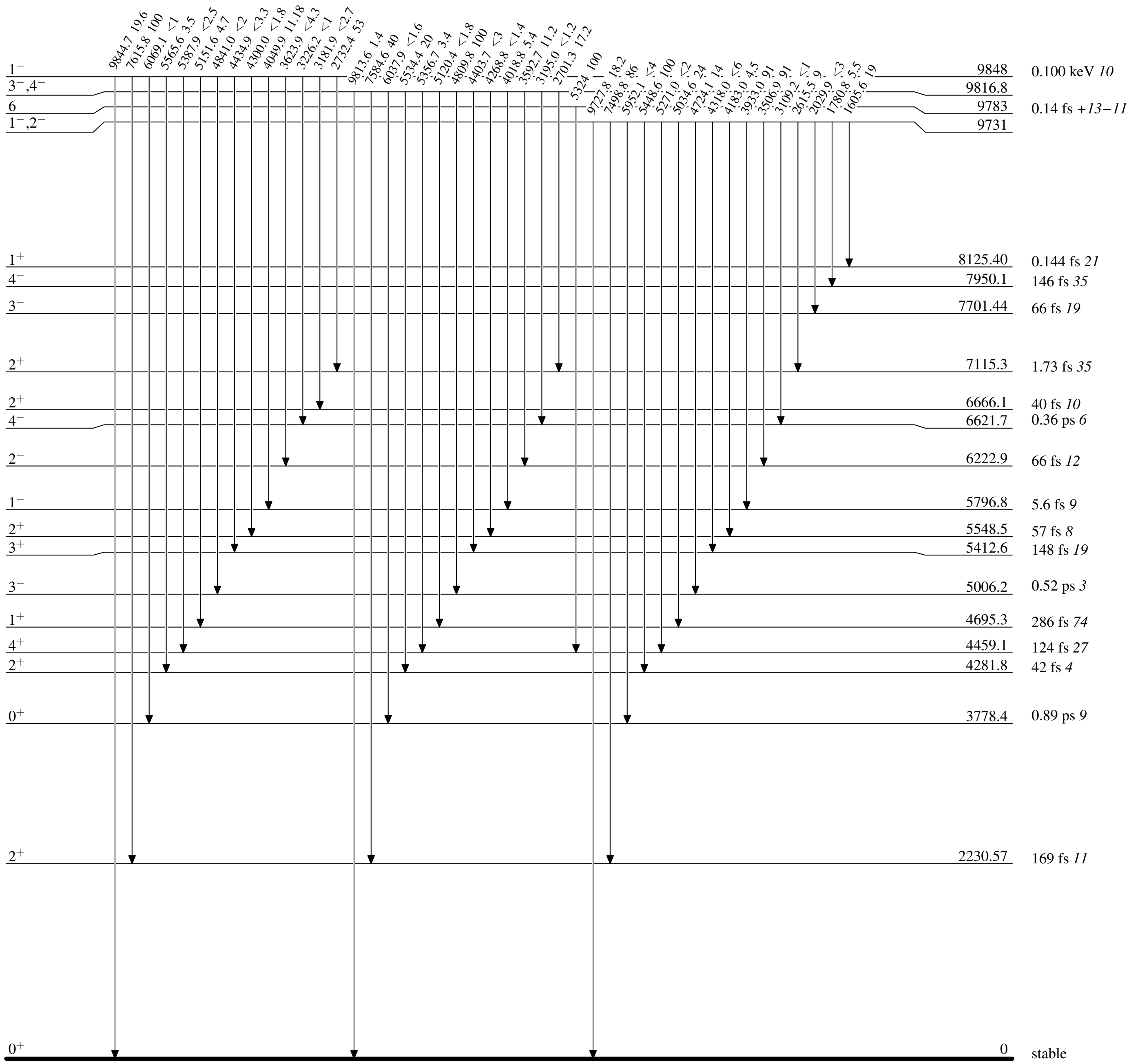


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

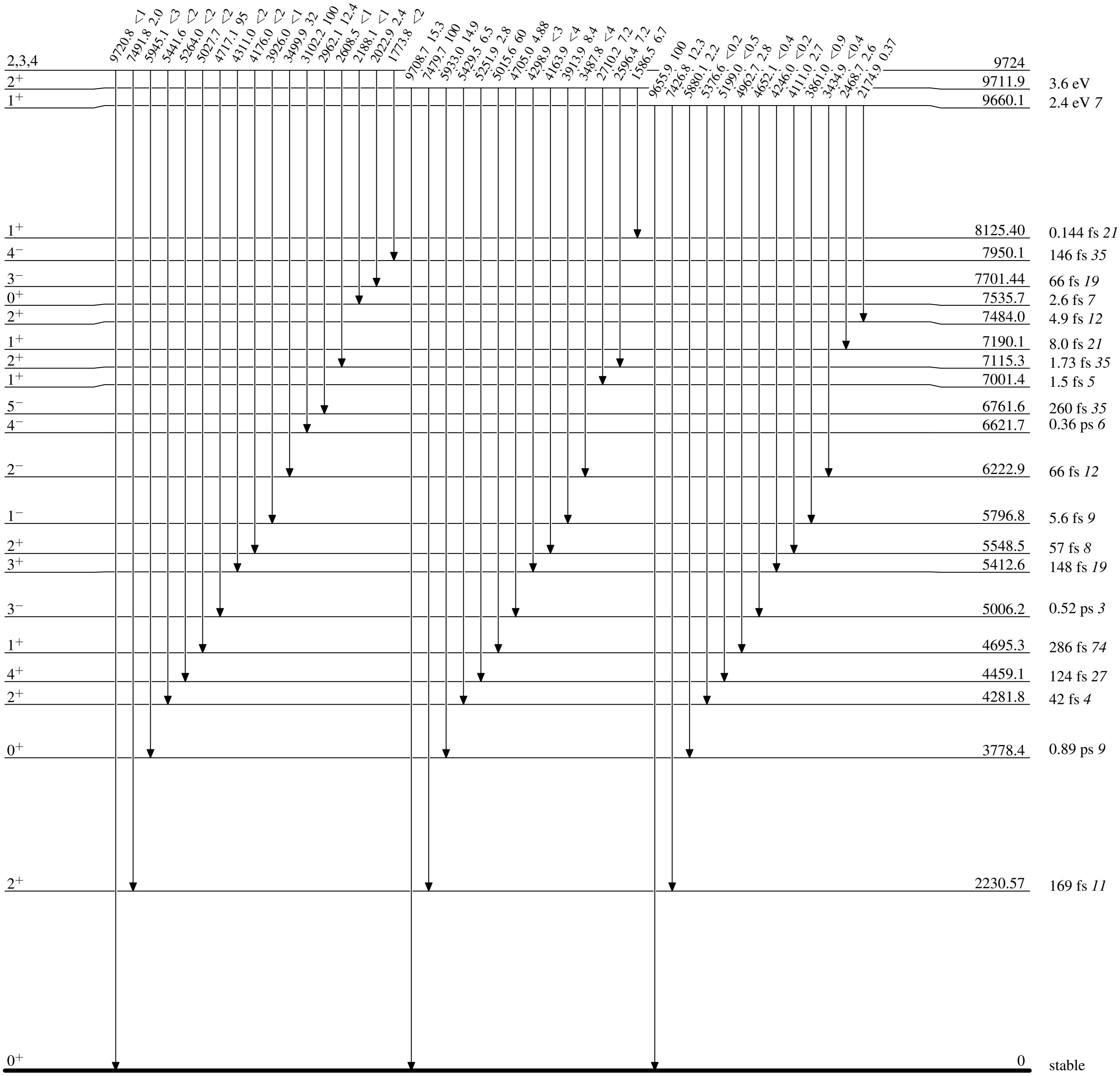


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

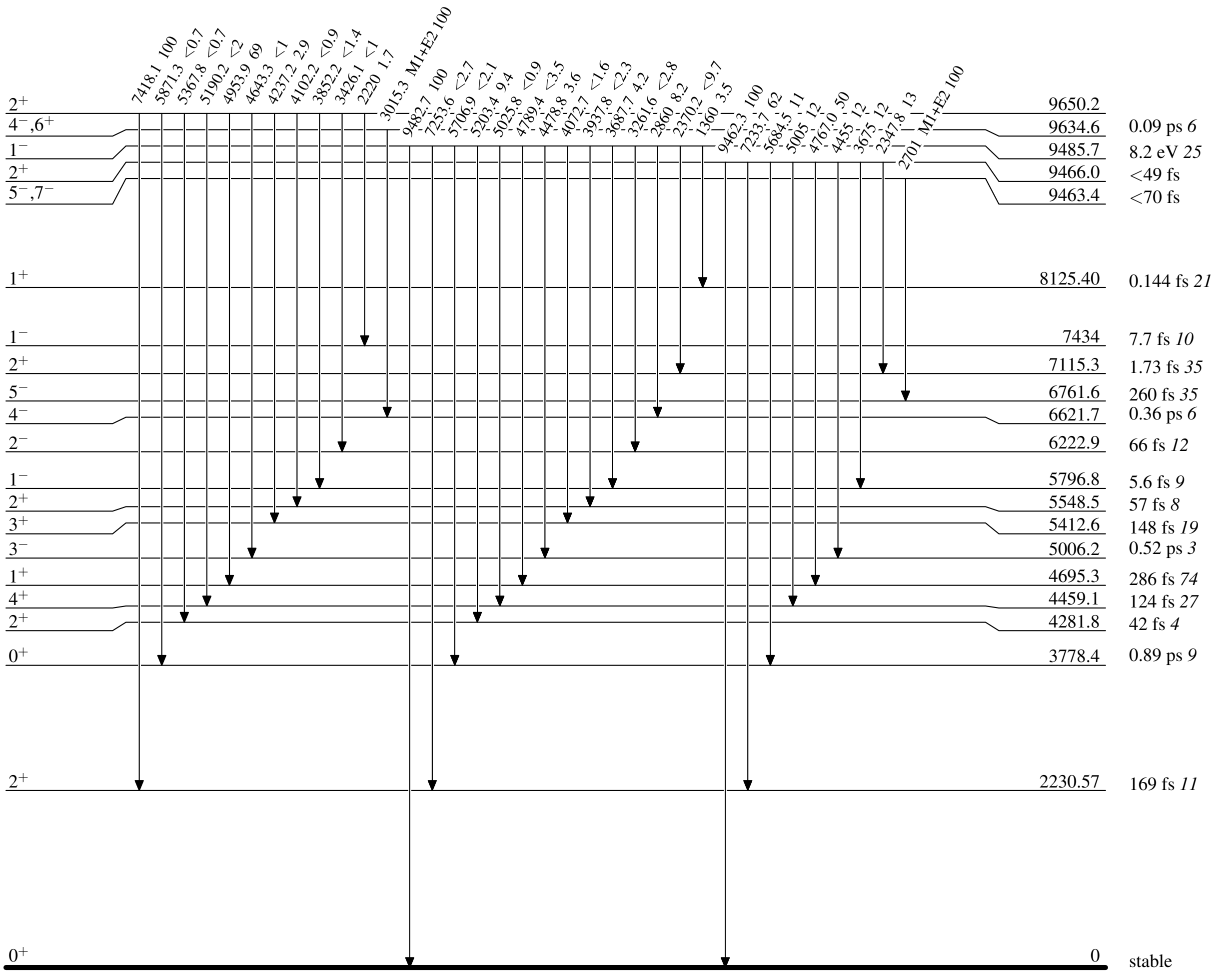


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intentities: Relative photon branching from each level

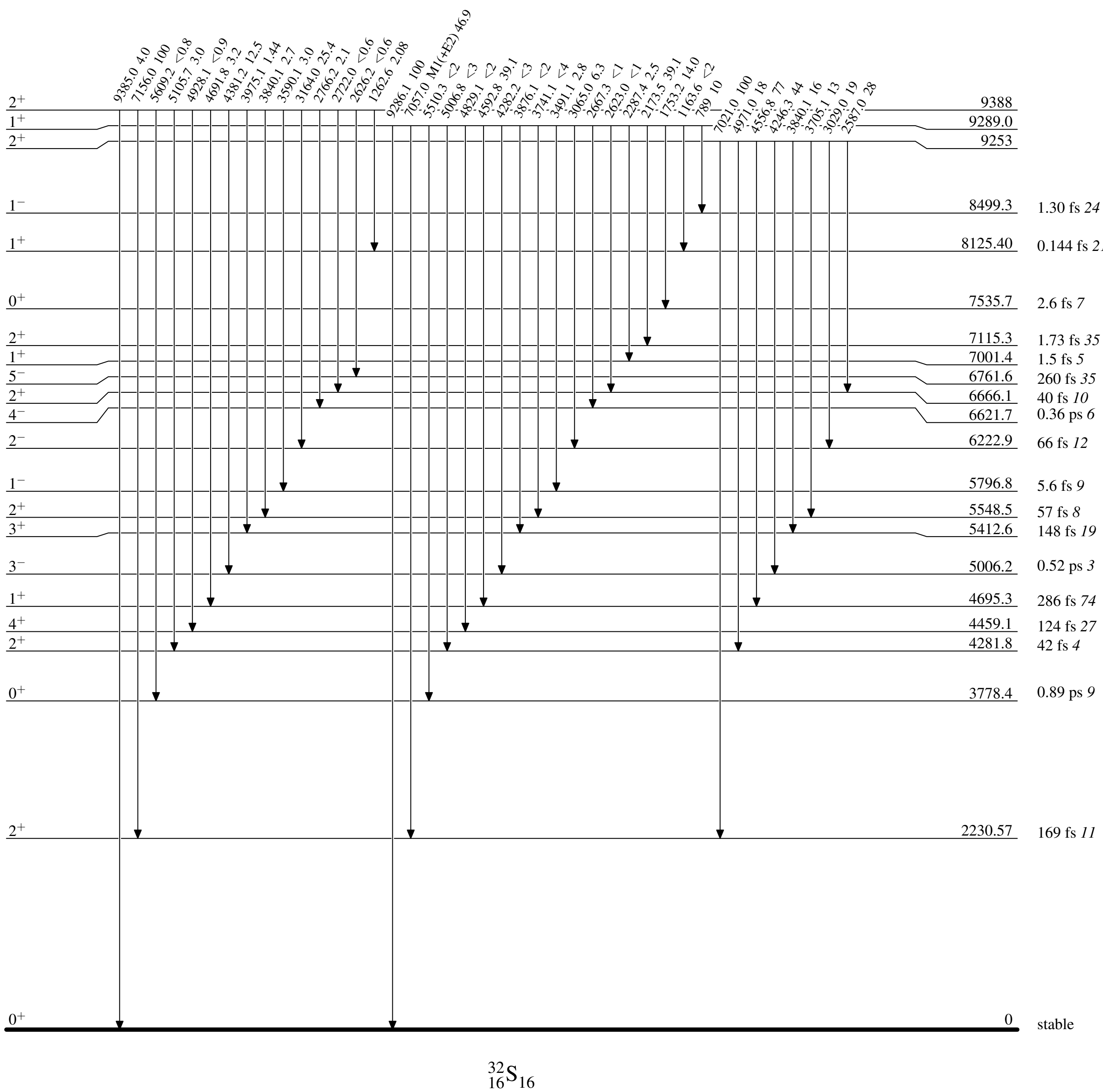


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

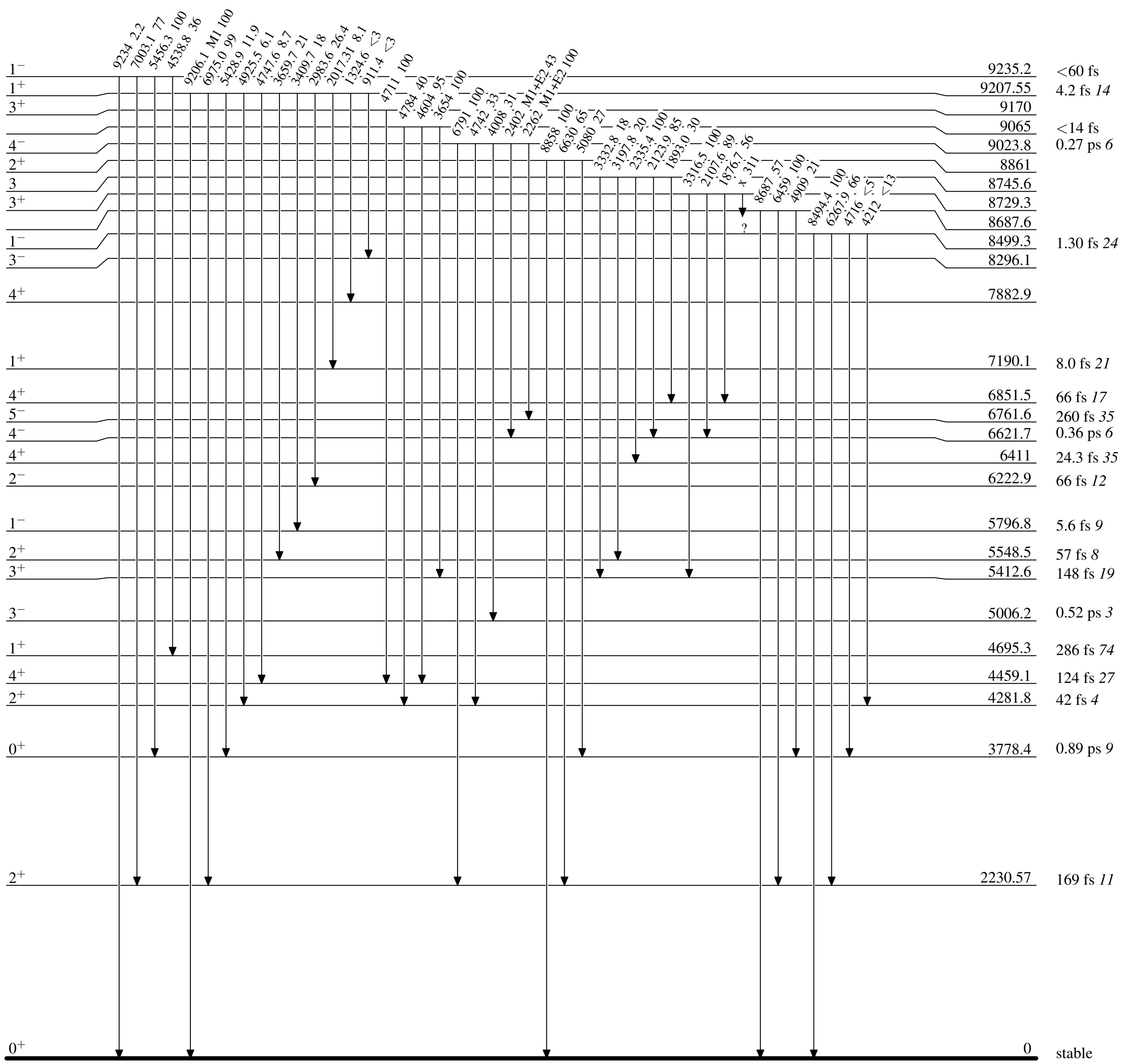
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

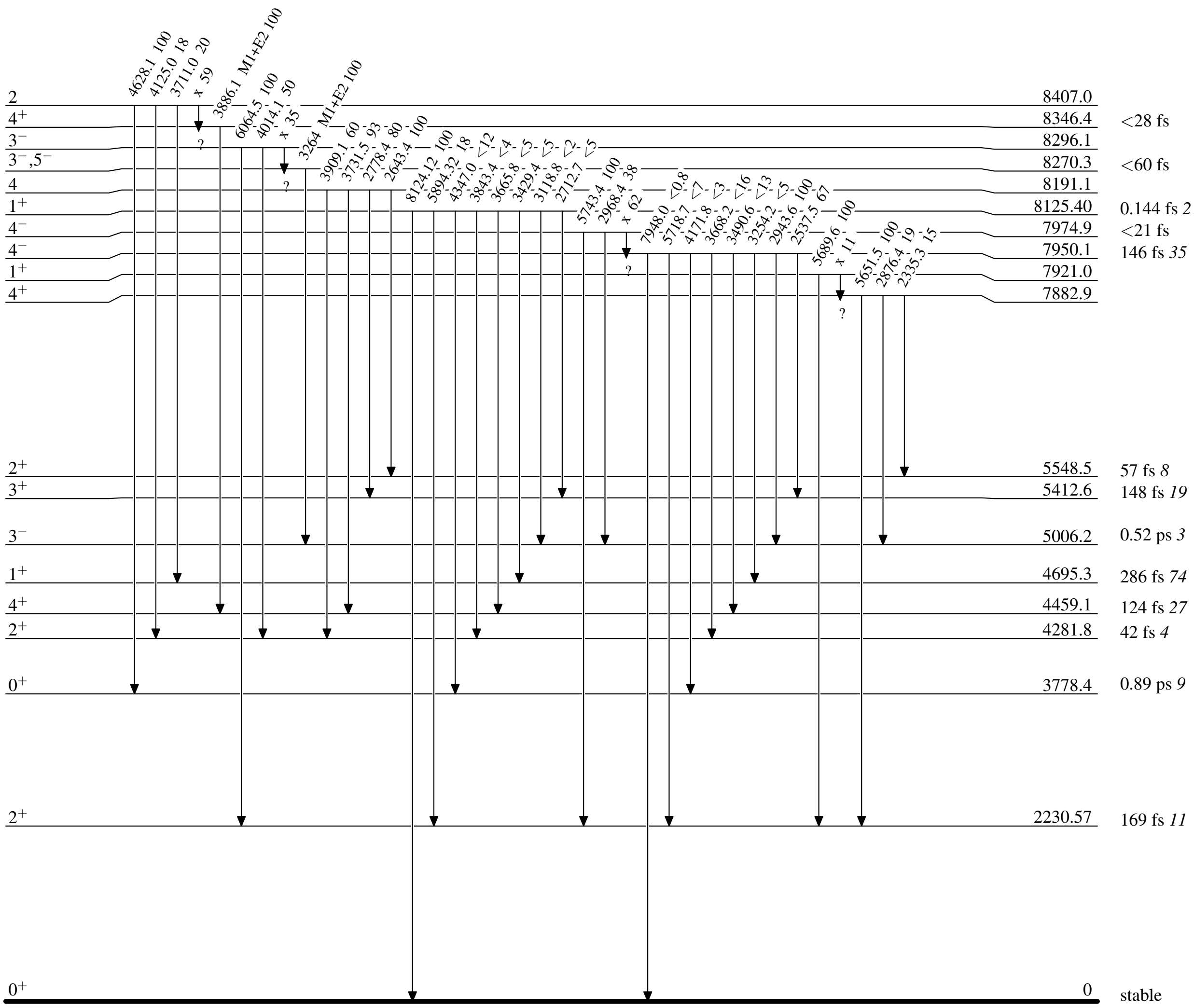


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

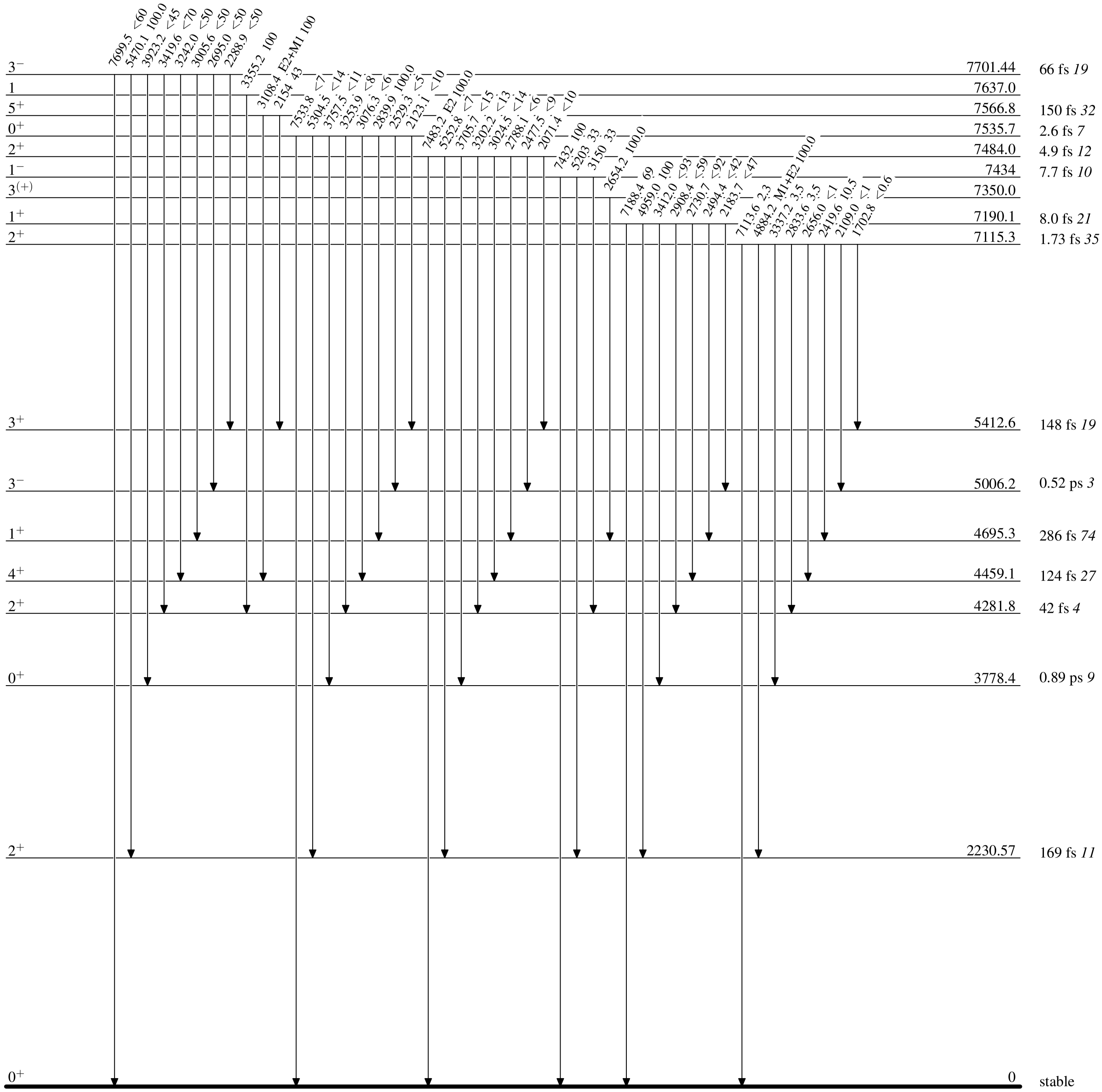


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

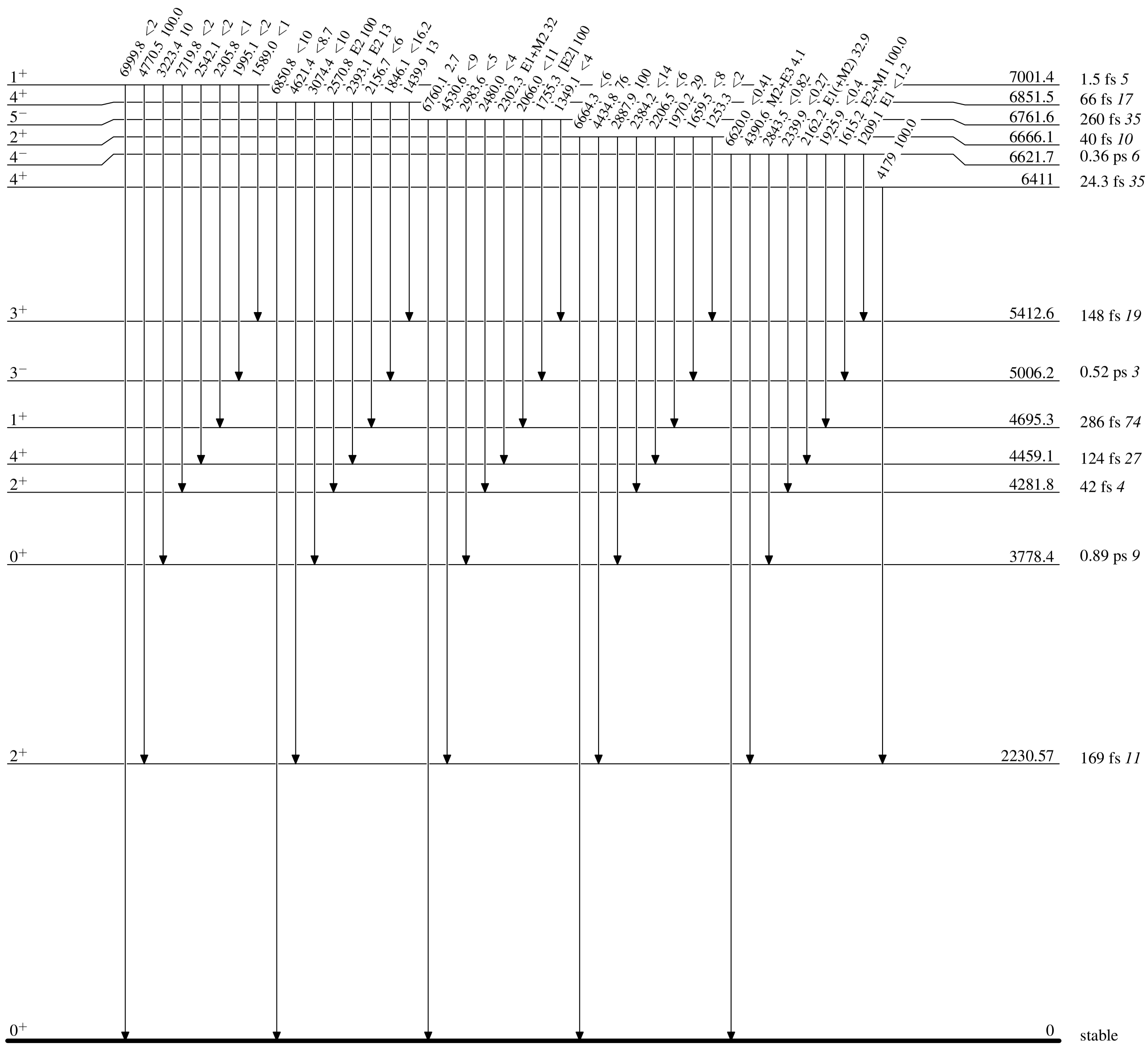


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

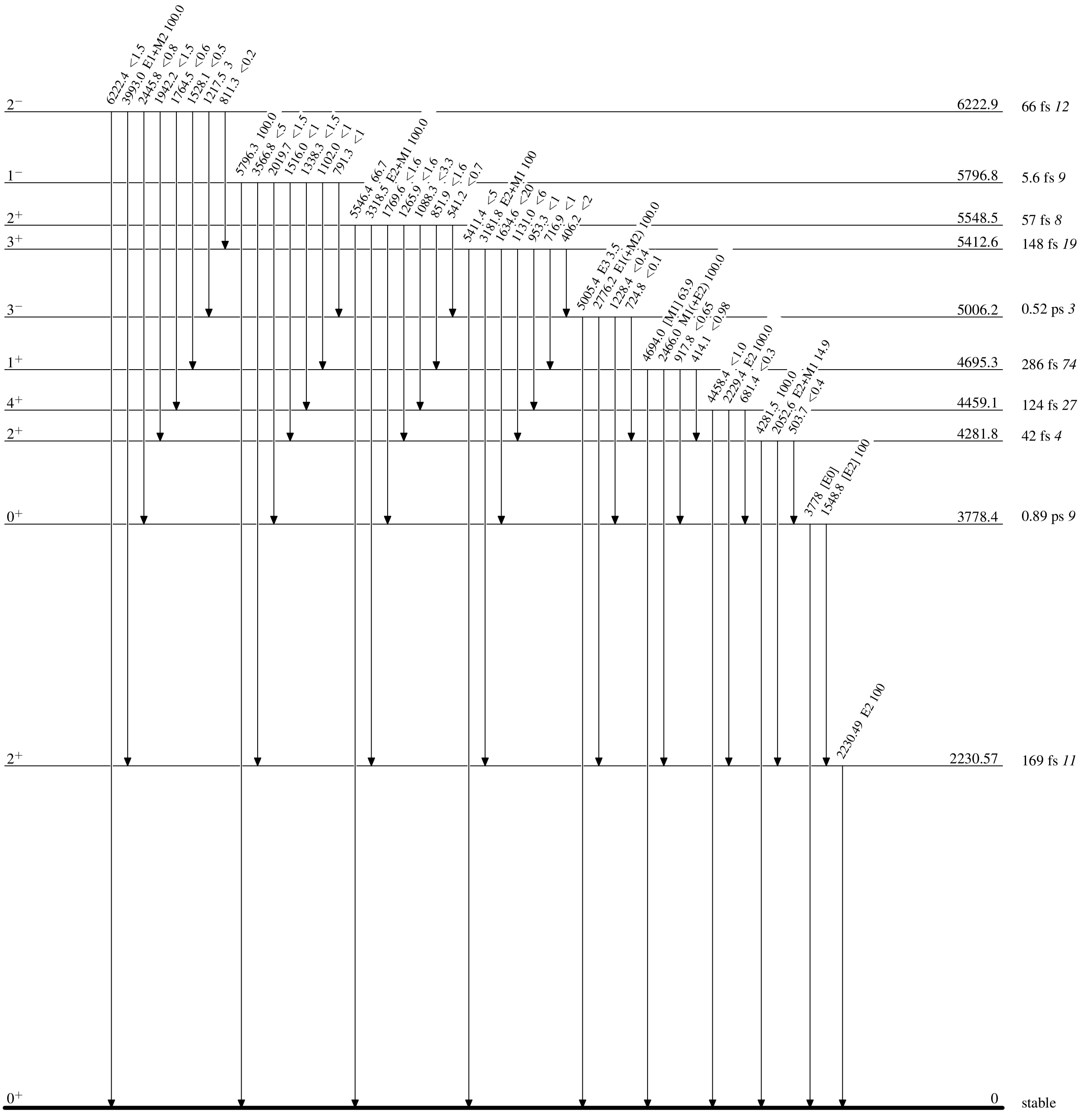


$^{32}_{16}S_{16}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{32}_{16}S_{16}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, Balraj Singh	NDS 113,1563 (2012)	28-May-2012

Q(β^-)=−5491.60 *4*; S(n)=11417.16 *4*; S(p)=10883.3 *11*; Q(α)=−7923.65 *5* 2012Wa38
Note: Current evaluation has used the following Q record −5491.634 *43*11417.12 *3*10883.3 *11*−7923.62 *6* 2011AuZZ.
S(2n)=20058.76 *3*, S(2p)=20431.9 *3* (2011AuZZ).
Values in 2003Au03: Q(β^-)=−5492.01 *15*, S(n)=11417.11 *9*, S(p)=10883.3 *11*, Q(α)=−7923.78 *11*, S(2n)=20058.73 *9*, S(2p)=20428.82 *12*.
XREF table: levels populated in reactions labelled with XREF=Y: ^{28}Si(^{34}S,^{34}S′), ^{34}S(p,p′γ), ^{206}Pb(^{34}S,^{34}S′γ): 0, 2128.
The following abbreviations are used in the table: ^{33}S(n,γ) for ^{33}S(n,γ) E=thermal; ^{33}S(n,γ),(n,n) for ^{33}S(n,γ),(n,n):resonances; ^{30}Si(α,γ),(α,n) for ^{30}Si(α,γ),(α,n):resonances.
Evidence of rotational behavior in alpha-clusters is shown in 2011No06: ^{4}He(^{28}Si,X) E=150 MeV, by measuring Eα, Iα, $\sigma(\theta)$ and resonance energies.
^{34}S stable isotope identified in mass spectrographic studies by F.W. Aston, Nature 117 (1926) 893.
Additional information 1.

^{34}S Levels

Table: the Γ_γ values are from ^{30}Si(α,γ),(α,n), and the $\Gamma_{\gamma 0}$ values are from ^{34}S(γ,γ′),(pol γ,γ′), unless noted otherwise.

Cross Reference (XREF) Flags

A	^{34}P β^- decay (12.43 s)	K	^{33}S(n,γ) E=thermal	U	^{35}Cl(γ,p)
B	^{34}Cl ε decay (1.5266 s)	L	^{33}S(n,γ),(n,n):resonances	V	^{35}Cl(n,d)
C	^{34}Cl ε decay (31.99 min)	M	^{33}S(d,p)	W	^{35}Cl(d,^{3}He)
D	^{24}Mg(^{16}O,α2pγ)	N	^{34}S(γ,γ′),(pol γ,γ′)	X	^{35}Cl(t,$\alpha\gamma$)
E	^{30}Si(α,γ),(α,n):resonances	O	^{34}S(e,e′)	Y	^{28}Si(^{34}S,^{34}S′)
F	^{31}P(α,p)	P	^{34}S(π^+,$\pi^{+\prime}$),(π^-,$\pi^{-\prime}$),	Z	^{34}S(p,p′γ)
G	^{31}P(α,pγ)	Q	^{34}S(n,n),(n,n′)	Others:	
H	^{32}S(t,p)	R	^{34}S(p,p′),(pol p,p′)	AA	^{206}Pb(^{34}S,^{34}S′γ)
I	^{32}S(t,pγ)	S	^{34}S(pol d,d),(pol d,d′)		
J	^{32}S(α,^{2}He)	T	^{34}S(α,α),(α,α′),(α,α′γ)		

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0.0[#]	0$^+$	stable	ABCDEFGHIJK M OPQRSTUVWXYZ	XREF: Others: AA <r^2>$^{1/2}$=3.2847 fm *21* (2004An14 evaluation and its 2008 update on webpage: http://cdfe.sinp.msu.ru). J$^\pi$: microwave spectroscopy measurement (1948To10) shows no hyperfine structure.
2127.564[#] *13*	2$^+$	318 fs *8*	A CDEFGHI K M OPQRSTUVWXYZ	XREF: Others: AA μ=+1.00 *16* (1979Za01,1989Ra17,2011StZZ) Q=+0.04 *3* (1980Ba40,1981Sp07,2011StZZ) B(E2)↑=0.0204 *5* β_2(p,p′)=0.28 *1* (1985Al03); 0.24 *2* (1999Ma63 by reanalysing 1985Al03 data with Becchetti-Greenless optical potential). μ: from 1979Za01 by perturbed angular correlation after ion implantation method. Q: +0.06 *4* in 1980Ba40 by Coulomb excitation reorientation method recalculated by 1981Sp07 as 0.04 *3*. See also 1989Ra17 evaluation. J$^\pi$: E2 ΔJ=2 γ to 0$^+$, g.s. (^{31}P(α,pγ), ^{24}Mg(^{16}O,α2pγ)).

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 440 *50* (1970Gr11), 400 *32* (1970Ra17), 400 *40* (1974Gr06), 460 *95* (1970Br18), 467 *90* (1970Cu02); from ^{32}S(t,pγ): 490 *30* (1977He12); from ^{34}S(e,e′): 486 *17* (1985Wo06); from ^{34}S(α,α′): 442 *25* (1980Ba40); from ^{28}Si(^{34}S,^{34}S′): 462 *26* (1977Sc36). Weighted average (external uncertainty) τ: 459 fs *11*. Others $T_{1/2}$: 350 fs *60* (1969Gr03, from ^{31}P(α,pγ)); 380 fs *60* (1974Ol02, from ^{206}Pb(^{34}S,^{34}S′γ)); 307 fs *17* (2001Ra27 evaluation, total of 14 measurements are listed in this evaluation).
3304.212 *13*	2^+	136 fs *7*	CDE GHI K M OPQRSTUVWX	B(E2)↑=0.00246 *13* J^{π}: E2 ΔJ=2 γ to 0^+, g.s. (^{24}Mg(^{16}O,α2pγ)). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 218 *30* (1970Gr11); 175 *25* (1970Ra17); 190 *40* (1970Br18). From ^{31}P(α,pγ): 192 *13* (1977He12). From ^{34}S(e,e′): 216 *25* (1985Wo06). Weighted average: 196 *10*. Others (from ^{31}P(α,pγ)): 145 *20* (1974Gr06); 144 *28* (1970Cu02); 120 *30* (1969Gr03).
3916.408 *21*	0^+	1.12 ps *9*	A FGH K M RSTU	J^{π}: L=0 in ^{32}S(t,p). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 1600 *130* (1970Gr11); 1890 *500*. Weighted average: 1618 *126*.
4074.667 *14*	1^+	<17 fs	A GH K M Rs U W	XREF: s(4094). J^{π}: D ΔJ=1 γ to 0^+, g.s. (1970Mo09, 1971Mu03); π=+ from L=0 in ^{35}Cl(d,^{3}He). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): <33 (1970Gr11); <24 (1970Ra17); ≤50 (1974Gr06).
4114.813 *23*	2^+	73 fs *6*	A C GH K M QRsTU	XREF: s(4094). J^{π}: E2 ΔJ=2 γ to 0^+, g.s. (^{31}P(α,pγ)), or L=2 in ^{32}S(t,p). $T_{1/2}$: mean lifetime τ in fs (^{31}P(α,pγ)): 89 *20* (1970Gr11); 110 *10* (1970Ra17); 100 *15* (1974Gr06). Weighted average: 105 *9*.
4624.404[@] *16*	3^-	84 fs *5*	D GH JK M QRs U X	XREF: s(4655). J^{π}: L=3 in ^{32}S(t,p), and also from ^{34}S(p,p′),(pol p,p′). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 125 *20* (1970Gr11); 135 *17* (1970Ra17); 145 *50* (1971So01); 115 *10* (1974Gr06). Weighted average: 121 *8*. Adopted B(E3)=0.008 *2* (2002Ki06 evaluation).
4688.98[#] *5*	4^+	88 fs *4*	CD GH K M QRsTU WX	XREF: s(4655). J^{π}: E2 ΔJ=2 γ to 2^+, 2127 and test of spin hyphotheses (^{31}P(α,pγ)); also J=4 in ^{34}S(n,n),(n,n′). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 132 *15* (1970Gr11); 131 *13* (1970Ra17); 110 *20* (1971So01); 125 *10* (1974Gr06); 130 *20* (1977GrZH). Weighted average: 127 *6*.
4876.839 *24*	3^+	40 fs *15*	CD G K M u w	XREF: u(4880)w(4900). J^{π}: M1+E2 ΔJ=1 γ to 2^+, 3303 and test of spin hyphotheses (1971Mu03). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 57 *22* (1970Ra17). Others: <85 (1970Gr11), ≤70 (1974Gr06).
4882 *14*	4^+		R u w	XREF: u(4880)w(4900).

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
				J^{π}: from ^{34}S(p,p′),(pol p,p′).
4889.756 *22*	2^+	29 fs *10*	GH K M R TU w	XREF: w(4900). J^{π}: E2 ΔJ=2 γ to 0^+ g.s. ^{31}P(α,pγ). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): <40 (1970Gr11); 52 *14* (1970Ra17). Weighted average (external uncertainty): 42 *15*.
5228.175 *23*	0^+		GH K M R T	J^{π}: L=0 in ^{32}S(t,p).
5322.51 *3*	$2^{(-)}$	17 fs *6*	GH K M R T W	J^{π}: D+Q ΔJ=0 γ to 2^+, 2127; π=(−) based on statement in ^{34}S(α,α'). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 24 *10* (1970Gr11). Other: ≤40 (1974Gr06).
5380.99 *4*	1^+	<49 fs	GH K M R U	E(level): 5380 (1971Mu03); 5382 *4* (1974Gr06). J^{π}: D ΔJ=1 γ to 0^+, g.s. and M1+E2 ΔJ=1 γ to 2^+, 2127 (^{31}P(α,pγ)). $T_{1/2}$: mean lifetime τ in fs from ^{31}P(α,pγ): ≤70 (1974Gr06).
5679.927[&] *17*	3^-		D G K M R	J^{π}: D ΔJ=1 γ from 4^-, 6251 (^{24}Mg(^{16}O,α2pγ)); π=− from L=1 in ^{33}S(d,p).
5690.7[@] *6*	5^-	36.9 ps *15*	D GH J M R T X	E(level): from ^{24}Mg(^{16}O,α2pγ). J^{π}: E2 ΔJ=2 γ to 3^-, 4625 and E1 ΔJ=1 γ to 4^+, 4689 (^{24}Mg(^{16}O,α2pγ)). $T_{1/2}$: mean lifetime τ in ps, from ^{31}P(α,pγ): 54 *5* (1972Gr15); from ^{35}Cl(t,$\alpha\gamma$): 55 *7* (1976Co11); from ^{24}Mg(^{16}O,α2pγ): 52.9 *24* (1976Me03). Weighted average: 53.3 *21*.
5755.875 *21*	1^-		GH K M R U	J^{π}: L=1 in ^{32}S(t,p), also from ^{34}S(p,p′),(pol p,p′).
5847.53 *3*	0^+		GH K M R	J^{π}: L=0 in ^{32}S(t,p).
5998.10 *8*	2^+		GH K M R T	J^{π}: L=2 in ^{32}S(t,p).
6121.49 *12*	2^+		GH K M R T	J^{π}: L=2 in ^{32}S(t,p).
6168.86 *3*	3^-		GH K M R w	XREF: w(6220). J^{π}: from ^{34}S(p,p′),(pol p,p′); J=3 from D+Q ΔJ=1 gammas to 2^+, 3303 and 4^+, 4688 (^{31}P(α,pγ)); π=− from L=1+3 in ^{33}S(d,p).
6251.22 *19*	4^+	0.42 ps *+49−21*	d G K r UVW	XREF: d(6251.5)r(6248). J^{π}: M1+E2 ΔJ=1 γ to 3^+, 4875 and test of spin hypotheses (^{31}P(α,pγ)). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 600 *+700−300*.
6251.68[&] *9*	4^-		d H K M r V	XREF: d(6251.5)r(6248). J^{π}: E2 ΔJ=2 γ from 6, 7791 (^{24}Mg(^{16}O,α2pγ)); π=− from L=3 in ^{33}S(d,p).
6342.50 *10*	1^-		GH K M R	J^{π}: L=1 in ^{32}S(t,p).
6421.42 *12*	4^-		GH K M R	J^{π}: D ΔJ=0 γ to 4^+, 4689 (^{31}P(α,pγ)); π=− from L=3 in ^{33}S(d,p).
6428.12 *8*	(2^+)		K	J^{π}: (2^+,3^+) from gammas to 1^+, 4075 and 4^+, 4689; (3^+) less likely from γ from $(1)^-$, 7781.
6478.770 *22*	1^-		GH K M R	J^{π}: D+Q ΔJ=1 γ to 2^+, 2128 and test of spin hypotheses (^{31}P(α,pγ)); π=− from L=1 in ^{33}S(d,p).
6535 *15*			H M	
6639 *1*	$4^{(-)}$	42 fs *10*	GH M R T	E(level): from ^{31}P(α,pγ). J^{π}: D ΔJ=1 γ to 3^-, 5680 (^{31}P(α,pγ); J=2

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
				excluded by 1977GrZH); π=(−) from L=(3) in ^{33}S(d,p) sustained by argument in ^{34}S(α,α′). $T_{1/2}$: mean lifetime τ in fs from ^{31}P(α,pγ): 60 *15*.
6685.33 *3*	(0 to 3)$^-$		H K M R	Jπ: from γ to 1$^-$, 5756; π=− from L=1 in ^{33}S(d,p).
6731	2$^{(+)}$,4$^{(+)}$		GH R	E(level): from ^{31}P(α,pγ). Jπ: D+Q ΔJ=0 γ, or Q ΔJ=2 γ, to 2$^+$, 2128; π=(+) from gammas to 2$^+$, 3304 and 4$^+$ 4689.
6828.85 *19*	2$^+$		GH K M R W	Jπ: L=2 in ^{32}S(t,p).
6847.90 *7*	(1,2$^+$)		K	Jπ: from gammas to 0$^+$, g.s. and 2$^-$, 5323.
6864 *1*	5$^-$	27 fs *7*	GH R	Jπ: from ^{34}S(p,p′),(pol p,p′). $T_{1/2}$: mean lifetime τ in fs from ^{31}P(α,pγ): 39 *10* (1977GrZH).
6890 *1*	(3,4)$^+$	<14 fs	GH R W	E(level): ^{31}P(α,pγ). Jπ: from ^{31}P(α,pγ); π=+ from ^{35}Cl(d,^{3}He). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): <20 (1977GrZH).
6954.22 *3*	(2)$^-$		GH K M R	Jπ: test of spin hypotheses of secondary 4892γ with primary 2058γ treated as unobserved (^{31}P(α,pγ)); π=− from L=1 in ^{33}S(d,p).
7110.45 *4*	3$^-$		H K M R	Jπ: L=3 in ^{32}S(t,p).
7112	2$^+$		G W	E(level): from ^{31}P(α,pγ). Jπ: Q, ΔJ=2 γ to 0$^+$, g.s. and test of spin hypotheses (^{31}P(α,pγ)); π=+ from L=0 in (d,^{3}He).
7164.47 *18*	(0 to 3)$^+$		K W	Jπ: γ to 1$^+$, 4075 and γ to 2$^+$, 2128 (^{33}S(n,γ)); π=+ from L=2 in ^{35}Cl(d,^{3}He).
7219.28 *7*	(2$^+$)		G K N	$\Gamma_{\gamma 0}$=0.92 eV *28* $\Gamma_{\gamma 0}$: for Jπ=2$^+$ (^{34}S(γ,γ′),(pol γ,γ′)). Jπ: (1,2$^+$) from ^{34}S(γ,γ′),(pol γ,γ′); γ to 4$^+$.
7248 *2*	(4)	14 fs *7*	G j r	XREF: j(7240)r(7248). Jπ: (2,4) from 1977GrZH in ^{31}P(α,pγ); (4) from D ΔJ=1 γ to 5$^-$, 5688. $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 20 *10* (1977GrZH).
7248.05 *11*	(2$^+$,3$^-$)		H jK r	XREF: j(7240)r(7248). Jπ: L=(2,3) in ^{32}S(t,p).
7264? *18*			R	
7367.42 *10*	(1$^+$,2$^+$)		K	Jπ: gammas to 0$^+$, 3916 and 3$^+$, 4877 (^{33}S(n,γ)).
7388 *15*	3$^-$		H	Jπ: L=3 in ^{32}S(t,p).
7392 *1*	5,(4)	159 fs *35*	G M R	E(level): from ^{31}P(α,pγ). Jπ: 5,(4) from ^{31}P(α,pγ). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 230 *50* (1977GrZH).
7467.72 *10*	(0$^+$,1,2)		H K R	Jπ: γ to 1$^-$, 6479, γ to 2$^+$, 5998, and γ to 1$^+$, 4075.
7552.69 *8*	(1,2,3$^-$)		H K M R	Jπ: γ to 1$^-$, 6343, γ to 2$^-$, 5323, and γ to 2$^+$, 3304.
7629.907 *21*	3$^-$	14 fs *7*	GH K M R	Jπ: L=3 in ^{32}S(t,p). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 20 *10* (1977GrZH).
7655 *9*	($^-$)		M R	E(level): weighted average of 7649 *14* (^{34}S(p,p′),(pol p,p′)) and 7659 *11* (^{33}S(d,p)). Jπ: L=(3) in ^{33}S(d,p).
7730.79 *15*	(1$^-$,2$^-$,3$^-$)		H K M R	Jπ: π=(−) from L=(1+3) in ^{33}S(d,p); γ to 2$^+$, 2128.
7750 *8*	2$^+$		H M	Jπ: L=2 in ^{32}S(t,p); ^{33}S(d,p) gives π=− from L=1

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)†	J^{π}‡	$T_{1/2}$	XREF	Comments
				(not adopted). E(level): weighted average of 7739 *16* (^{32}S(t,p)) and 7753 *9* (^{33}S(d,p)).
7781.22 *6*	(1)$^-$		K MN R W	$\Gamma_{\gamma0}$=57 eV *9* J^{π}: (1) from ^{34}S(γ,γ'),(pol γ,γ'); π=− from L=1 in ^{33}S(d,p).
7790.7& *7*	6$^-$	97 fs *20*	D G	E(level): from ^{24}Mg(^{16}O,α2pγ). J^{π}: M1+E2 ΔJ=1 γ to 5$^-$, 5691 and E2 ΔJ=2 γ to 4$^-$, 6252 (^{24}Mg(^{16}O,α2pγ). $T_{1/2}$: weighted average of values (in fs), from ^{24}Mg(^{16}O,α2pγ): 132 *35* (2005Ma03), and from ^{31}P(α,pγ): 80 *24* (from mean lifetime τ 115 *35* (1977GrZH)).
7805 *5*	2$^+$		H R	E(level): weighted average of 7801 *16* (^{32}S(t,p)) and 7805 *5* (^{34}S(p,p$'$),(pol p,p$'$)). J^{π}: L=2 in ^{32}S(t,p).
7974.72 *16*	(1,2$^+$)		H K R	J^{π}: γ to 0$^+$.
8025 *16*	0$^+$		H	J^{π}: L=0 in ^{32}S(t,p).
8036.30 *14*	(1$^-$,2$^+$)		K R	J^{π}: gammas to 0$^+$, g.s. and 3$^-$, 7110.
8083 *1*	5	44 fs *7*	G	E(level): from ^{31}P(α,pγ). J^{π}: from ^{31}P(α,pγ). $T_{1/2}$: mean lifetime τ in fs, from ^{31}P(α,pγ): 64 *10* (1977GrZH).
8138.10 *8*	(1)$^-$		K M	J^{π}: (1,2$^+$) from gammas to 0$^+$, g.s., 1$^-$, 6343, and 2$^+$, 2128; π=− from L=1 in ^{33}S(d,p).
8175.1 *5*	(1,2$^+$)		K	J^{π}: γ to 0$^+$.
8185.46 *13*	(1)$^+$		K N	$\Gamma_{\gamma0}$=0.78 eV *20* J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
8205.40 *8*	(1$^-$ to 4$^+$)		K	J^{π}: gammas to 2$^+$, 2128 and to 3$^-$, 4624.
8255 *16*	2$^+$		H	J^{π}: L=2 in ^{32}S(t,p).
8293 *2*	4	<28 fs	Gh m r	XREF: h(8293)m(8299)r(8296). E(level),J^{π}: from ^{31}P(α,pγ). $T_{1/2}$: mean lifetime τ in fs from ^{31}P(α,pγ): <40 (1977GrZH).
8294.39 *9*	(0$^+$ to 3$^-$)		h K m r	XREF: h(8293)m(8299)r(8296). J^{π}: gammas to 2$^+$, 2128 and to 1$^-$, 6343.
8371.1@ *7*	7$^-$	83 fs *13*	D G	E(level): from ^{24}Mg(^{16}O,α2pγ). J^{π}: E2 ΔJ=2 γ to 5$^-$, 5691 and D ΔJ=1 γ to 6$^-$, 7791; 7$^-$ in 2005Ma03. $T_{1/2}$: weighted average of values (in fs) from ^{24}Mg(^{16}O,α2pγ): 85 *28* (2005Ma03) and from ^{31}P(α,pγ): 83 *14* (from mean lifetime τ in fs: 120 *20* (1977GrZH)).
8385.40 *6*	1$^-$		H K N R	$\Gamma_{\gamma0}$=0.49 eV *15* J^{π}: L=1 in ^{32}S(t,p).
8423 *5*	4$^+$		H R	E(level): from ^{34}S(p,p$'$),(pol p,p$'$). J^{π}: L=4 in ^{32}S(t,p).
8503.8# *7*	6$^+$	28 fs *7*	D G J	XREF: J(8450). E(level): from ^{24}Mg(^{16}O,α2pγ). J^{π}: D ΔJ=1 γ to 5, 5691; π=+ from band structure. $T_{1/2}$: mean lifetime τ in fs from ^{31}P(α,pγ): 40 *10* (1977GrZH).

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)†	J^{π}‡	$T_{1/2}$	XREF	Comments
8506.77 *4*	1^-		H K N R	$\Gamma_{\gamma 0}$=0.52 eV *9* J^{π}: L=1 in ^{32}S(t,p).
8580 *5*			R	E(level): from ^{34}S(p,p′),(pol p,p′).
8615.74 *4*	$(2^-,3^+)$		K M R	J^{π}: gammas to 1^+, 4075 and to 4^- 6252.
8656 *4*	$(1)^+$		N R	$\Gamma_{\gamma 0}$=0.41 eV *19* E(level): weighted average of 8656 *5* (^{34}S(p,p′),(pol p,p′)) and 8657 *7* (^{34}S(γ,γ'),(pol γ,γ')). J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
8671 *5*			R	
8702.35 *13*	$(1^-,2)$		K	J^{π}: $(1^-,2,3^-)$ from γ to 3^-, 5680 and γ to 1^-, 5756; (3^-) less likely from γ to $(1)^+$, 8186.
8718 *5*			R	
8727.63 *8*	$(1^-,2^+)$		K	J^{π}: γ to 0^+, g.s. and γ to 3^-, 7110.
8734.9 *8*	$6^{(-)}$		D R	J^{π}: D+Q ΔJ=1 γ to 5^-, 5691.
8792 *5*			R	
8805.66 *25*	$(1,2^+)$		K R	J^{π}: γ to 0^+.
8874.02 *8*	$(1^-,2,3^+)$		K	J^{π}: γ to 1^+, 4075 and 3^-, 7630.
8953 *5*			R	
8970.7 *7*	$6^{(-)}$		D	J^{π}: D ΔJ=1 γ from 7, 9913.
8987 *5*			R	
9026.31 *6*	$(1,2^+)$		K	J^{π}: γ to 0^+.
9120 *5*			R	
9158.71 *3*	$(1,2^+)$		K	J^{π}: γ to 0^+.
9171 *5*			K	
9208.04 *6*	$(1,2^+)$		K R	J^{π}: γ to 0^+.
9226 *6*			K	
9347 *10*			K	
9413.9 *7*	$6^{(-)}$		D	J^{π}: D+Q ΔJ=1 γ to 5, 5691.
9429 *5*			R	
9445 *5*			R	
9479 *3*	$(1)^+$		NO R	$\Gamma_{\gamma 0}$=1.1 eV *3* E(level): weighted average of 9478 *4* (^{34}S(γ,γ'),(pol γ,γ')) and 9481 *5* (^{34}S(p,p′),(pol p,p′)).
9546.09 *7*	$(1,2^+)$		K	J^{π}: gamma to 0^+.
9566 *10*			R	
9598.41 *8*			K R	
9640 *4*	$(1,2^+)$		N	$\Gamma_{\gamma 0}$=3.6 eV *7* J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
9665.74 *4*			K	
9706 *4*	$(1,2^+)$		N R	$\Gamma_{\gamma 0}$=0.50 eV *14* E(level): weighted average of 9700 *6* (^{34}S(p,p′),(pol p,p′)) and 9711 *5* (^{34}S(γ,γ'),(pol γ,γ')). J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
9801.89 *10*	$(1,2^+)$		K	J^{π}: γ to 0^+.
9836.70 *6*			K	
9868 *4*	$(1)^+$		NO R	$\Gamma_{\gamma 0}$=0.60 eV *12* E(level): weighted average of 9860 *7* (^{34}S(γ,γ'),(pol γ,γ')) and 9872 *5* (^{34}S(p,p′),(pol p,p′)). J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
9912.8 *7*	$7^{(+)}$	184 fs *38*	D	J^{π}: D ΔJ=1 γ to 6^+, 8504. $T_{1/2}$: from ^{24}Mg(^{16}O,α2pγ).
9933.35 *13*	1^-		E K R	J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
9981 *4*	1^-		E R	E(level): from ^{30}Si(α,γ),(α,n). J^{π}: E1 ΔJ=1, E1 γ to 0^+.

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)[†]	J^{π}[‡]	$T_{1/2}$	XREF	Comments
10000 *10*	1^+		O	
10092.23 *16*			E K	
10097 *4*			E	
10140 *4*			E	
10169 *4*	1^-		E	J^{π}: E1 ΔJ=1, E1 γ to 0^+.
10170 *5*	$(1)^+$		N	$\Gamma_{\gamma0}$=1.06 eV *20* J^{π}: from ^{34}S(γ,γ'),(pol γ,γ').
10179.59 *6*	(1,2,3)		K	
10180 *10*	1^+		O	
10201 *4*			E	
10212.15 *5*			K	
10236 *4*			E	
10248 *4*	1^-		E	Additional information 2.
10311.53 *3*	2^+		E K	J^{π}: E2 ΔJ=2 γ to 0^+.
10385 *4*			E	
10399.8[&] *7*	$8^{(-)}$		D	J^{π}: Q ΔJ=2 γ to 6^-, 7791.
10407 *4*	2^+		E	J^{π}: E2 ΔJ=2 γ to 0^+, g.s.
10430 *10*	1^+		O	
10447 *4*			E	
10493 *4*	1^-		E	Γ_{γ}=0.84 eV J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
10528 *4*			E	
10586 *4*	1^-		E	Γ_{γ}>1.3 eV J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
10616 *4*			E	
10625 *4*	1^-		E	Γ_{γ}>0.7 eV J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
10650.11 *20*			K	
10651.6[#] *8*	8^+	35 fs *17*	D	J^{π}: E2 ΔJ=2 γ to 6^+, 8504.
10660 *10*	$1^+,(2^-)$		O	
10662 *4*			E	
10670 *4*	1^-		E	Γ_{γ}=0.73 eV J^{π}: E1 ΔJ=1 γ to 2^+, 3304 (angular correlation excludes 3^-).
10700	(6^+)		J	J^{π}: based on angular distribution (^{32}S(α,^{2}He)).
10704 *4*			E	
10767 *4*	2^+		E	J^{π}: M1+E2 ΔJ=0 γ to 2^+, 3304.
10791 *4*	1^-		E N	Γ_{γ}=3 eV $\Gamma_{\gamma0}$=0.75 eV *14* J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
10800 *10*	1^+		O	Can be same level as 10803.
10803 *6*	$(1,2^+)$		N	$\Gamma_{\gamma0}$=0.60 eV *11* Can be same level as 10800.
10840.64 *15*	3^-		E K	J^{π}: E1+M2 ΔJ=1 γ to 2^+, 2128.
10868 *4*			E	
10895 *4*			E	
10916 *4*			E	
10930 *4*	1^-		E	J^{π}: E1+M2 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 3^-).
10994 *4*	2^+		E	J^{π}: M1+E2 ΔJ=0 γ to 2^+, 2128.
11014 *4*	2^+		E	J^{π}: M1+E2 ΔJ=0 γ to 2^+, 2128.
11020 *10*	1^+		O	
11024.94 *11*	1^-		E K	$\Gamma_{\gamma0}$=1.7 eV J^{π}: E1 ΔJ=1 γ to 0^+.
11047 *4*			E	

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
11087 *4*	2^+		E	Γ_γ=0.2 eV Jπ: E2 ΔJ=2 γ to 0^+, g.s.
11107 *4*	3^-		E	Jπ: E1+M2 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 1^-).
11141 *4*	1^-		E	Γ_γ=2.6 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11165 *4*	1^-		E	Γ_γ=1.7 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11179 *4*			E	
11193 *4*			E	
11220 *4*	(2^+)		E	Γ_γ=0.2 eV Jπ: (E2) ΔJ=2 γ to 0^+, g.s.
11233 *4*	1^-		E	Γ_γ=2.8 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11272 *4*	2^+		E	Jπ: M1+E2 ΔJ=0 γ to 2^+, 2128.
11288 *4*			E	
11314 *4*	2^+		E	Γ_γ=0.08 eV Jπ: E2 ΔJ=2 γ to 0^+, g.s.
11323 *4*	1^-		E	Γ_γ=2.2 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11350 *10*	1^+		O	
11357 *4*	1^-		E	Γ_γ=1.4 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11371 *4*	3^-		E	Γ_γ=1.5 eV Jπ: E1+M2 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 1^-).
11374.2 *8*	$8^{(+)}$		D	Jπ: D ΔJ=1 γ to 7^-, 8371.
11380 *4*	2^+		E	Γ_γ=0.1 eV Jπ: E2 ΔJ=2 γ to 0^+, g.s.
11398 *4*			E	
11405 *4*			E	
11411.31	2^+		L	Γ_γ=1.5 eV Γ_γ: from ^{33}S(n,γ),(n,n). E(level): Fictitious level with a negative E(n) value.
(11417.223 *16*)	$1^+,2^+$		K	E(level): from least-squares fit to Eγ data in ^{33}S(n,γ) dataset. This value is higher by ≈0.10 keV than S(n)=11417.12 *6* (2011AuZZ). Other: S(n)=11417.11 *9* (2003Au03), 11417.22 *5* and 11417.12 *10* (1983Ra04) using 'mass-doublet standard' and 'gold standard', respectively. Jπ: s-wave capture in ^{33}S g.s., Jπ=$3/2^+$. Observed deexcitation intensity is 83% *2*, other 17% intensity of the primary γ rays is unaccounted.
11419 *4*	1^-		E	Γ_γ=4.4 eV Jπ: E1 ΔJ=1 γ to 0^+, g.s.
11430.17	2^+	0.116 keV *20*	L	Γ_n=75.0 eV *8*; Γ_γ=0.21 eV *5*; Γα=41 eV *5*
11434.23	2^-	0.049 keV *10*	E L	Γ_n=39.1 eV *8*; Γ_γ=0.90 eV *5* All data are from ^{33}S(n,γ),(n,n).
11440.36	3^-	0.0198 keV *10*	E L	Γ_n=16.0 eV *9*; Γ_γ=1.44 eV *10*; Γα=2.5 eV *3* All data are from ^{33}S(n,γ),(n,n).
11447.97		<0.015 keV	L	
11457 *4*	3^-		E	Jπ: E1+M2 ΔJ=1 to 2^+, 2128 (angular correlation excludes 1^-).

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)†	J^{π}‡	$T_{1/2}$	XREF	Comments
11467.68	2^+	0.368 keV *8*	L	
11469.11	3^-	0.152 keV *15*	L	
11473 *4*	1^-		E	J^{π}: E1+M2 ΔJ=1 to 2^+, 2128 (angular correlation excludes 3^-).
11474.51	2^-	0.45 keV *6*	L	Γ_n=275 eV *5*; Γ_γ=1.08 eV *7*; $\Gamma\alpha$=0.17 keV *5*
11485.90 *4*	1^-		E L	Γ_n=65 eV *10*; Γ_γ=0.6 eV; $\Gamma\alpha$=0.11 keV *6*
				Γ_n and $\Gamma\alpha$ from ^{33}S(n,γ),(n,n); Γ_γ from ^{30}Si(α,γ),(α,n).
				J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
11492.64	2^-	0.51 keV *10*	L	Γ_n=507 eV *13*; Γ_γ=2.11 eV *14*
11496.06	2^+	0.71 keV *3*	L	Γ_n=705 eV *19*; Γ_γ=0.94 eV *6*; $\Gamma\alpha$=4 eV *2*
11499.48	1^-		L	Γ_n=1.33 keV *8*; $\Gamma\alpha$=4.0 keV *6*
11500 *10*	1^+		O	
11502.15	1^-	0.292 keV *25*	L	Γ_n=280 eV *20*; Γ_γ=2.11 eV *14*; $\Gamma\alpha$=10 eV *5*
11502.82	(1^-)	0.26 keV *5*	E L	All data are from ^{33}S(n,γ),(n,n).
				J^{π}: E1+M2 ΔJ=(1) γ to 2^+, 2128 (angular correlation excludes 3^-).
11515.21	2^-	1.262 keV *25*	L	Γ_n=1.260 keV *25*; Γ_γ=1.48 eV *13*
11541.09	1^-	0.63 keV *7*	L	Γ_n=0.36 keV *4*; Γ_γ=1.4 eV *4*; $\Gamma\alpha$=0.27 keV *6*
11543.84	1^-	0.20 keV *4*	E L	Γ_γ=1.0 eV
				J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
				E(level): from ^{33}S(n,γ),(n,n).
				Γ from ^{33}S(n,γ),(n,n) and Γ_γ from ^{30}Si(α,γ),(α,n).
11546.27		0.23 keV *4*	L	
11551.22		0.15 keV *3*	L	
11564.19	$\geq$1		L	
11574.64	(0^-)		L	
11580.67	2^-	3.42 keV *8*	L	Γ_n=3.42 keV *8*; Γ_γ=2.6 eV *3*
11590.12	2^-	0.76 keV *4*	L	Γ_n=0.76 keV *4*; Γ_γ=0.87 eV *11*
11607.88	3^-	0.62 keV *3*	L	Γ_n=0.61 keV *3*; Γ_γ=1.33 eV *12*
11610.31		0.70 keV *14*	L	
11614.26	3^-	2.1 keV *8*	E L	Γ_n=2.09 keV *8*; Γ_γ=2.17 eV *20*; $\Gamma\alpha$=14 eV *5*
				All data are from ^{33}S(n,γ),(n,n).
11621.66		0.31 keV *6*	L	
11626.32		<0.12 keV	L	
11631.75	2^+	0.75 keV *7*	L	Γ_n=0.69 keV *7*; Γ_γ=1.2 eV *4*; $\Gamma\alpha$=55 eV *20*
11633.67	0^+	5.3 keV *10*	E L	Γ_n=4.4 keV *9*; $\Gamma\alpha$=0.9 keV *3*
				All data are from ^{33}S(n,γ),(n,n).
11638.93	3^-	0.96 keV *6*	L	Γ_n=0.76 keV *5*; Γ_γ=0.81 eV *13*; $\Gamma\alpha$=0.20 keV *3*
11642 *4*	1^-		E	Γ_γ=2.3 eV
				J^{π}: E1 ΔJ=1 γ to 0^+, g.s.
11648.64	3^-	0.61 keV *12*	L	Γ_n=0.46 keV *3*; Γ_γ=1.82 eV *20*
11668.93	2^-	0.40 keV *8*	E L	Γ_n=0.67 keV *6*; Γ_γ=2.4 eV *2*
				All data are from ^{33}S(n,γ),(n,n).
11670.29	1^+	0.55 keV *11*	L	Γ_n=0.23 keV *7*; Γ_γ=2.1 eV *3*
11703.75		0.61 keV *12*	L	
11706.47	1^-	0.79 keV *16*	E L	E(level),Γ: from ^{33}S(n,γ),(n,n).
				J^{π}: E1+M2 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 3^-).
11716.66		0.67 keV *14*	L	
11743.05		0.28 keV *6*	L	
11751 *4*			E	
11773.61		0.40 keV *8*	L	
11783.80		1.40 keV *25*	L	
11789 *4*			E	

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Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
11796.80		1.30 keV *25*	L	
11807.4 *8*	$8^{(+)}$		D	Jπ: D ΔJ=1 γ to 7^-, 8371.
11829.80		1.7 keV *3*	L	
11849 *4*			E	
11858 *4*			E	
11868.71		3.3 keV *5*	E L	E(level),Γ: from ^{33}S(n,γ),(n,n).
11878 *4*			E	
11908 *4*			E	
11921 *4*	(3^-)		E	Jπ: (E1) ΔJ=(1) γ to 2^+, 2128 (angular correlation excludes 1^-).
11931 *4*	1^-		E	Jπ: E1 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 3^-).
11949.24		2.3 keV *4*	L	Γ: from ^{33}S(n,γ),(n,n).
11956 *4*	3^-		E	Jπ: E1+M2 ΔJ=1 γ to 2^+, 2128 (angular correlation excludes 1^-).
11978 *4*			E	
12033 *4*	1^-		E	Jπ: E1 ΔJ=1 γ to 0^+, g.s.
12062 *4*			E	
12076 *4*			E	
12099 *4*	1^-		E	Jπ: E1 ΔJ=1 γ to 0^+, g.s.
12120 *10*	1^+		O	
12136 *4*			E	
12141.3 *7*	$9^{(+)}$	173 fs *35*	D	Jπ: E2 ΔJ=2 γ to $7^{(+)}$, 9912. $T_{1/2}$: from ^{24}Mg(^{16}O,α2pγ).
12150 *4*			E	
12164 *4*			E	
12172 *4*			E	
12180 *10*	2^-		O	
12193 *4*	1^-		E	Jπ: E1 ΔJ=1 γ to 0^+, g.s.
12223 *4*			E	
12242 *4*			E	
12255 *4*			E	
12270 *4*			E	
12280 *4*			E	
12460 *10*	$1^+,(2^-)$		O	
12660 *10*	1^+		O	
12930 *10*	$2^-,(1^+)$		O	
12985.5 *8*	(9^+)		D	Jπ: gamma to 8^+; M1+E2 γ from $10^{(+)}$, 13342.
13320.2[@] *11*	(9^-)		D	Jπ: γ to 7^-; ΔJ=2 band structure.
13341.6 *8*	$10^{(+)}$	180 fs *28*	D	Jπ: E2 ΔJ=2 γ to $8^{(+)}$, 11374.
13590 *10*	2^-		O	
13790 *10*	2^-		O	
13960.5[#] *11*	(10^+)		D	Jπ: γ to 8^+; ΔJ=2 band structure.
13990 *10*	1^+		O	
14200 *10*	$1^+,(2^-)$		O	
14320 *10*	$2^-,(1^+)$		O	
14430 *10*	$1^+,(2^-)$		O	
14576.4 *12*	(10^+)		D	Jπ: γ to $8^{(+)}$.
14800 *10*	2^-		O	
15244.4 *10*	$(10,11,12^+)$		D	Jπ: γ to $10^{(+)}$.
15281.0[&] *18*	(10)		D	Jπ: γ to $8^{(-)}$; ΔJ=2 band structure.
16649.1[#] *14*	$(10,11,12^+)$		D	Jπ: γ to (10^+).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{34}S Levels (continued)

† From ^{33}S(n,γ), unless noted otherwise.
‡ The states populated by ^{32}S(t,p) and ^{30}Si(α,γ),(α,n) reactions are only of natural parity.
# Band(A): g.s. band.
@ Band(B): γ cascade based on 3^-, 4624.
& Band(C): γ cascade based on 3^-, 5680.

$\gamma(^{34}S)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
2127.564	2^+	2127.499 *20*	100	0.0	0^+	E2		B(E2)(W.u.)=6.24 *16* Mult.: from $^{31}P(\alpha,p\gamma)$, $^{24}Mg(^{16}O,\alpha2p\gamma)$.
3304.212	2^+	1176.650 *20*	100.0 *9*	2127.564	2^+	M1+E2	−0.16 *2*	B(M1)(W.u.)=0.052 *3*; B(E2)(W.u.)=3.8 *10* Mult.,δ: D+Q $\Delta J=0$ γ ($^{31}P(\alpha,p\gamma)$).
		3304.031 *20*	87.2 *9*	0.0	0^+	E2		B(E2)(W.u.)=0.75 *4* Mult.: Q $\Delta J=2$ γ ($^{31}P(\alpha,p\gamma)$).
3916.408	0^+	612.16 *5*	0.33 *4*	3304.212	2^+			
		1788.794 *20*	100 *10*	2127.564	2^+	E2		B(E2)(W.u.)=4.2 *7* Mult.: D,Q $\Delta J=0,1,2$ γ, D,E2 based on RUL ($^{31}P(\alpha,p\gamma)$); D excluded based on level scheme.
		3916.2@	<2	0.0	0^+	[E0]		X(E0/E2)=0.093 *15*, ρ^2(E0)=0.011 *3*, q^2_K(E0/E2)=0.055 *9* (2005Ki02 evaluation). E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
4074.667	1^+	158.3@	<0.2	3916.408	0^+			
		770.428 *20*	8.9 *8*	3304.212	2^+	D		Mult.: D γ based on RUL.
		1947.060 *20*	94 *10*	2127.564	2^+	M1+E2	+1.3 *+9−32*	B(M1)(W.u.)>0.0039; B(E2)(W.u.)>26 Mult.: D+Q $\Delta J=1$ γ, M1+E2 based on RUL ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		4074.418 *20*	100 *10*	0.0	0^+	D		Mult.: D $\Delta J=1$ γ ($^{31}P(\alpha,p\gamma)$).
4114.813	2^+	198.4@	<0.35	3916.408	0^+			
		810.6@	<0.70	3304.212	2^+			
		1987.19 *3*	76 *8*	2127.564	2^+	M1+E2	−0.40 *5*	B(M1)(W.u.)=0.0143 *23*; B(E2)(W.u.)=2.3 *6* Mult.: D+Q $\Delta J=0$ γ, M1+E2 based on RUL ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		4114.52 *4*	100 *10*	0.0	0^+	E2		B(E2)(W.u.)=0.57 *9* Mult.: Q $\Delta J=2$ γ, E2 based on RUL ($^{31}P(\alpha,p\gamma)$).
4624.404	3^-	509.6@ *12*	<4	4114.813	2^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
		549.7@	<0.13	4074.667	1^+			
		708.0@	<0.29	3916.408	0^+			
		1320.169 *20*	100 *11*	3304.212	2^+	D		Mult.: from $^{31}P(\alpha,p\gamma)$ and $^{24}Mg(^{16}O,\alpha2p\gamma)$. δ: −0.03 *5* ($^{31}P(\alpha,p\gamma)$).
		2496.726 *20*	41 *4*	2127.564	2^+	D		Mult.: from $^{31}P(\alpha,p\gamma)$ and $^{24}Mg(^{16}O,\alpha2p\gamma)$. δ: +0.02 *4* ($^{31}P(\alpha,p\gamma)$).
		4624.2@ *5*	0.55 *13*	0.0	0^+	[E3]		B(E3)(W.u.)=18 *5*
4688.98	4^+	573.4@ *11*	<3	4114.813	2^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.

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$\gamma(^{34}S)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.	δ	Comments
4688.98	4^+	615.7@ *12*	<4	4074.667	1^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
		774.5@ *12*	<7	3916.408	0^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
		1384.4@ *8*	<2	3304.212	2^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
		2561.36 *5*	100 *11*	2127.564	2^+	E2		B(E2)(W.u.)=8.2 *14* Mult.: Q $\Delta J=2$ γ, E2 based on RUL ($^{31}P(\alpha,p\gamma)$).
		4687.3@ *7*	<1	0.0	0^+			E_γ: from ΔE_{levels}. I_γ: from $^{31}P(\alpha,p\gamma)$.
4876.839	3^+	187.9@	<0.4	4688.98	4^+			
		252.4@	<0.4	4624.404	3^-			
		762.0@	<1.6	4114.813	2^+			
		802.2@	<9.1	4074.667	1^+			
		960.4@	<1.1	3916.408	0^+			
		1572.57 *5*	80 *9*	3304.212	2^+	M1+E2	−0.09 *4*	B(M1)(W.u.)=0.060 *24*; B(E2)(W.u.)=0.8 *8* Mult.: D+Q $\Delta J=1$ γ, M1+E2 based on RUL ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		2749.24 *5*	100 *10*	2127.564	2^+	M1+E2	−0.11 *3*	B(M1)(W.u.)=0.014 *6*; B(E2)(W.u.)=0.09 *6* Mult.: D+Q $\Delta J=1$ γ, M1+E2 based on RUL ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		4876.8@	<3.6	0.0	0^+			
4889.756	2^+	200.8@	<0.7	4688.98	4^+			
		265.4@	<0.7	4624.404	3^-			
		774.9@	<3	4114.813	2^+			
		815.1@	<2	4074.667	1^+			
		973.3@	<1.7	3916.408	0^+			
		1585.510 *20*	84 *8*	3304.212	2^+			
		2762.10 *8*	100 *10*	2127.564	2^+			
		4889.30 *8*	90 *10*	0.0	0^+	E2		B(E2)(W.u.)=0.35 *13* Mult.: Q $\Delta J=2$ γ, E2 based on RUL ($^{31}P(\alpha,p\gamma)$).
5228.175	0^+	338.4@	<0.3	4889.756	2^+			
		351.3@	<1	4876.839	3^+			
		539.2@	<0.4	4688.98	4^+			
		603.8@	<0.4	4624.404	3^-			

Adopted Levels, Gammas (continued)

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
5228.175	0^+	1113.27 *9*	4.1 *6*	4114.813	2^+			
		1153.492 *20*	100 *9*	4074.667	1^+	D		Mult.: D $\Delta J=1$ γ ($^{31}P(\alpha,p\gamma)$).
		1924.0@	<2	3304.212	2^+			
		3100.6@	<2	2127.564	2^+			
5322.51	$2^{(-)}$	432.8@	<0.8	4889.756	2^+			
		445.7@	<0.8	4876.839	3^+			
		633.5@	<1.51	4688.98	4^+			
		698.18 *13*	1.4 *14*	4624.404	3^-			
		1207.7@	<2.2	4114.813	2^+			
		1247.92 *6*	8.0 *7*	4074.667	1^+			
		1406.1@	<1.4	3916.408	0^+			
		2018.3@	<1.5	3304.212	2^+			
		3194.74 *5*	100 *11*	2127.564	2^+	D+Q	−0.17 *6*	Mult.: D+Q $\Delta J=0$ γ ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		5322.5@	<3.2	0.0	0^+			
5380.99	1^+	151.8@	<0.5	5228.175	0^+			
		491.2@	<1.6	4889.756	2^+			
		504.2@	<1.6	4876.839	3^+			
		692.0@	<1.6	4688.98	4^+			
		756.6@	<1.6	4624.404	3^-			
		1266.11 *5*	17.4 *18*	4114.813	2^+			
		1306.3@	<2.6	4074.667	1^+			
		1464.6@	<2.6	3916.408	0^+			
		2076.89 *8*	39 *4*	3304.212	2^+			
		3253.21 *6*	100 *11*	2127.564	2^+	M1+E2	−1.1 *10*	B(M1)(W.u.)>1.2×10^{-5}; B(E2)(W.u.)>0.22 Mult.: D+Q $\Delta J=1$ γ, M1+E2 based on RUL ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		5380.59 *9*	52 *5*	0.0	0^+	D		Mult.: D $\Delta J=1$ γ ($^{31}P(\alpha,p\gamma)$).
5679.927	3^-	357.4@	<0.2	5322.51	$2^{(-)}$			
		451.8@	<0.2	5228.175	0^+			
		789.1 *6*	1.5 *7*	4889.756	2^+			
		803.103 *27*	4.4 *11*	4876.839	3^+			
		990.9@	<0.4	4688.98	4^+			
		1055.491 *20*	27 *3*	4624.404	3^-			
		1564.8 *5*	3.5 *20*	4114.813	2^+			

From ENSDF

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
5679.927	3^-	1605.3@	<0.4	4074.667	1^+			
		1763.5@	<0.4	3916.408	0^+			
		2375.657 *20*	100 *9*	3304.212	2^+	D+Q	<−0.4	Mult.: D+Q γ ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$: <−0.4 or >+2.4.
		3552.08 *4*	66.7 *7*	2127.564	2^+	D+Q	−0.47 *+7−11*	Mult.: D+Q γ ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		5679.9@	<2.0	0.0	0^+			
5690.7	5^-	1001.6 *5*	100 *10*	4688.98	4^+	E1		B(E1)(W.u.)=9.4×10^{-6} *13* E_γ,I_γ: from $^{24}Mg(^{16}O,\alpha2p\gamma)$. Mult.: D(+Q) $\Delta J=1$ γ, E1 from polarization measurement ($^{31}P(\alpha,p\gamma)$).
		1066.2 *5*	83 *10*	4624.404	3^-	E2		B(E2)(W.u.)=0.76 *12* E_γ,I_γ: from $^{24}Mg(^{16}O,\alpha2p\gamma)$. Mult.: Q $\Delta J=2$ γ, E2 from polarization measurement ($^{31}P(\alpha,p\gamma)$).
		3562.7 *6*	2.9 *12*	2127.564	2^+	[E3]		B(E3)(W.u.)=1.0 *5* E_γ,I_γ: from $^{24}Mg(^{16}O,\alpha2p\gamma)$.
5755.875	1^-	433.4@	<0.3	5322.51	$2^{(-)}$			
		527.7@	<0.3	5228.175	0^+			
		866.1@	<0.4	4889.756	2^+			
		879.0@	<0.4	4876.839	3^+			
		1066.9@	<0.5	4688.98	4^+			
		1131.5@	<0.5	4624.404	3^-			
		1640.7 *10*	1.0 *10*	4114.813	2^+			
		1681.2@	<0.5	4074.667	1^+			
		1839.5@	<4.0	3916.408	0^+			
		2451.557 *20*	30 *3*	3304.212	2^+			
		3628.10 *4*	100 *9*	2127.564	2^+			
		5755.5 *5*	2.9 *5*	0.0	0^+			
5847.53	0^+	525.0@	<0.9	5322.51	$2^{(-)}$			
		619.4@	<0.9	5228.175	0^+			
		957.8@	<1.5	4889.756	2^+			
		970.7@	<1.5	4876.839	3^+			
		1158.6@	<2.7	4688.98	4^+			
		1223.1@	<2.1	4624.404	3^-			
		1732.7@	<7.85	4114.813	2^+			
		1772.82 *4*	14.6 *15*	4074.667	1^+			

$^{34}_{16}S_{18}$-15

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	Comments
5847.53	0^+	2543.13[#] *10*	100[#] *9*	3304.212	2^+			
		3719.68 *16*	19.9 *21*	2127.564	2^+			
5998.10	2^+	1121.33 *9*	57 *8*	4876.839	3^+			
		1922.92 *22*	100 *18*	4074.667	1^+			
		3870.51 *31*	92 *13*	2127.564	2^+			
		5997.30 *31*	56 *10*	0.0	0^+	Q		Mult.: Q ΔJ=2 γ (^{31}P(α,pγ)).
6121.49	2^+	2817.76[#] *25*	100[#] *15*	3304.212	2^+	Q		Mult.: Q ΔJ=0 γ (^{31}P(α,pγ)). δ: −0.09 *4* (^{31}P(α,pγ)).
		3994.8 *8*	30 *8*	2127.564	2^+			
6168.86	3^-	846.1 *13*	2.6 *17*	5322.51	$2^{(-)}$			
		940.7[@]	<2.7	5228.175	0^+			
		1279.1[@]	<1.0	4889.756	2^+			
		1292.0[@]	<0.8	4876.839	3^+			
		1479.73 *15*	2.4 *3*	4688.98	4^+	D(+Q)	+0.04 *+6−3*	Mult.: D(+Q) ΔJ=1 γ (^{31}P(α,pγ)). δ: from ^{31}P(α,pγ).
		1544.41[#] *10*	23.7[#] *22*	4624.404	3^-			
		2053.94 *14*	5.4 *8*	4114.813	2^+			
		2094.2[@]	<1.0	4074.667	1^+			
		2252.5[@]	<1.0	3916.408	0^+			
		2864.56 *4*	100 *10*	3304.212	2^+	D+Q	−0.23 *7*	Mult.: D+Q ΔJ=1 γ (^{31}P(α,pγ)). δ: from ^{31}P(α,pγ).
		4040.63 *29*	5.0 *7*	2127.564	2^+	D+Q	−0.43 *16*	Mult.: D+Q ΔJ=1 γ (^{31}P(α,pγ)). δ: −0.43 *16* or −1.0 *3* (^{31}P(α,pγ)).
6251.22	4^+	1374.34 *20*	46 *10*	4876.839	3^+	M1+E2	−3.7 *+7−26*	B(M1)(W.u.)=0.0004 *+3−4*; B(E2)(W.u.)=12 *+8−12* Mult.: D+Q ΔJ=1 γ, M1+E2 based on RUL (^{31}P(α,pγ)). δ: from ^{31}P(α,pγ).
		1562.3 *5*	100 *25*	4688.98	4^+			
6251.68	4^-	571.7 *6*	42 *16*	5679.927	3^-	D		Mult.: D, ΔJ=1 γ from ^{24}Mg(^{16}O,α2pγ) (angular distribution and R(ADO)).
		1627.2 *10*	100 *37*	4624.404	3^-			
6342.50	1^-	3038.2 *3*	100 *13*	3304.212	2^+	D+Q	−0.55 *65*	Mult.: D+Q ΔJ=1 γ (^{31}P(α,pγ)). δ: from ^{31}P(α,pγ).
		6341.6 *3*	35 *6*	0.0	0^+	D		Mult.: D ΔJ=1 γ (^{31}P(α,pγ)).
6421.42	4^-	1544.41[#] *10*	100[#] *9*	4876.839	3^+	D		Mult.: D ΔJ=1 γ (^{31}P(α,pγ)). δ: 0.00 *6* (^{31}P(α,pγ)).
		1732.39 *11*	17.1 *23*	4688.98	4^+	D		Mult.: D ΔJ=0 γ (^{31}P(α,pγ)). δ: 0.00 *+32−14* (^{31}P(α,pγ)).

$^{34}_{16}S_{18}$-16

$\gamma(^{34}S)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.	δ	Comments
6428.12	(2^+)	306.63 *16*	19 *4*	6121.49	2^+			
		1739.32 *9*	100 *13*	4688.98	4^+			
		2353.06 *21*	48 *8*	4074.667	1^+			
6478.770	1^-	631.13 *6*	2.7 *3*	5847.53	0^+			
		722.95 *14*	1.5 *2*	5755.875	1^-			
		798.92 *10*	2.8 *4*	5679.927	3^-			
		1156.39 *7*	15.0 *17*	5322.51	$2^{(-)}$			
		1250.6@	<2.1	5228.175	0^+			
		1589.0@	<1.1	4889.756	2^+			
		1602.06 *15*	4.1 *7*	4876.839	3^+			
		1854.28 *4*	12.2 *12*	4624.404	3^-			
		2404.04 *6*	10.2 *11*	4074.667	1^+			
		3174.37 *5*	100 *10*	3304.212	2^+			
		4350.85 *9*	59 *7*	2127.564	2^+	D+Q	−1.1 *9*	Mult.: D+Q ΔJ=1 γ ($^{31}P(\alpha,p\gamma)$). δ: from $^{31}P(\alpha,p\gamma)$.
		6478.8@	<0.2	0.0	0^+			
6639	$4^{(-)}$	959.9 *14*	28 *13*	5679.927	3^-	D		E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$. Mult.: D ΔJ=1 γ ($^{31}P(\alpha,p\gamma)$ and RUL).
		2016.8 *12*	100 *13*	4624.404	3^-			E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
6685.33	(0 to 3)$^-$	929.436 *21*	100	5755.875	1^-			
6731	$2^{(+)},4^{(+)}$	1857	9 *9*	4876.839	3^+			E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
		2043	36 *13*	4688.98	4^+			E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
		3428	36 *13*	3304.212	2^+			E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
		4604	100 *9*	2127.564	2^+	D+Q,Q	+1.8 *3*	E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$. Mult.: D+Q ΔJ=0 γ, or Q ΔJ=2 γ. δ: +1.8 *3* (for J=2); 0.00 *3* (for J=4) (1972Jo10).
6828.85	2^+	2207		4624.404	3^-			E_γ: from $^{31}P(\alpha,p\gamma)$.
		2714		4114.813	2^+			E_γ: from $^{31}P(\alpha,p\gamma)$.
		2753.3@ *13*		4074.667	1^+			
		6830		0.0	0^+	Q		E_γ: from $^{31}P(\alpha,p\gamma)$. Mult.: Q ΔJ=2 γ ($^{31}P(\alpha,p\gamma)$).
6847.90	$(1,2^+)$	1525.39 *6*	100 *10*	5322.51	$2^{(-)}$			
		6846.4 *3*	50 *6*	0.0	0^+			
6864	5^-	2176.3 *11*		4688.98	4^+			E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
		2241.6 *12*		4624.404	3^-	Q		E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$. Mult.: Q ΔJ=2 ($^{31}P(\alpha,p\gamma)$).
		4737.2 *11*		2127.564	2^+	[E3]		E_γ,I_γ: from $^{31}P(\alpha,p\gamma)$.
6954.22	$(2)^-$	1274.30 *4*	38 *4*	5679.927	3^-			

Adopted Levels, Gammas (continued)

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
6954.22	(2)$^-$	1631.641 *25*	94 *10*	5322.51	2$^{(-)}$			
		2839.3 *4*	32 *5*	4114.813	2$^+$			
		3649.88 *12*	100 *10*	3304.212	2$^+$			
		4826.0 *5*	3.6 *16*	2127.564	2$^+$			
7110.45	3$^-$	281.34 *24*	0.46 *16*	6828.85	2$^+$			
		941.59 *6*	8.2 *10*	6168.86	3$^-$			
		989.1# *3*	1.6# *5*	6121.49	2$^+$			
		2233.49 *4*	100 *10*	4876.839	3$^+$			
		2995.8 *6*	7.4 *20*	4114.813	2$^+$			
		4982.44 *20*	26 *3*	2127.564	2$^+$			
7112	2$^+$	3809	40 *11*	3304.212	2$^+$			E_γ,I_γ: from ^{31}P(α,pγ).
		4985	100 *11*	2127.564	2$^+$	[D+Q]	+0.27 *+19−15*	E_γ,I_γ: from ^{31}P(α,pγ). δ: +0.27 *+19−15* or +1.2 *+7−4* (^{31}P(α,pγ)).
		7112	12 *9*	0.0	0$^+$	Q		E_γ,I_γ: from ^{31}P(α,pγ). Mult.: Q, ΔJ=2 γ (^{31}P(α,pγ)).
7164.47	(0 to 3)$^+$	3089.5 *3*	100 *20*	4074.667	1$^+$			
		5036.4 *7*	45 *11*	2127.564	2$^+$			
7219.28	(2$^+$)	2328.8 *5*	5.2 *15*	4889.756	2$^+$			
		2530.25 *10*	19 *3*	4688.98	4$^+$			
		5091.3		2127.564	2$^+$			E_γ: from ^{31}P(α,pγ) (ΔE_{levels}).
		7218.48 *13*	100 *11*	0.0	0$^+$	Q		Mult.: Q, ΔJ=2 γ (^{31}P(α,pγ)).
7248	(4)	1560 *4*	100	5690.7	5$^-$	(D)		E_γ: from ^{31}P(α,pγ). Mult.: (D) ΔJ=1 γ based on RUL.
7248.05	(2$^+$,3$^-$)	2558.82 *13*	100	4688.98	4$^+$			
7367.42	(1$^+$,2$^+$)	2490.6 *13*	95 *25*	4876.839	3$^+$			
		3451.5 *9*	54 *15*	3916.408	0$^+$			
		5239.8 *4*	100 *14*	2127.564	2$^+$			
7467.72	(0$^+$,1,2)	989.1# *3*	5.0# *15*	6478.770	1$^-$			
		1469.67 *24*	15 *3*	5998.10	2$^+$			
		3392.86 *24*	100 *12*	4074.667	1$^+$			
7552.69	(1,2,3$^-$)	1210.04 *13*	10.2 *14*	6342.50	1$^-$			
		2230.14 *14*	50 *6*	5322.51	2$^{(-)}$			
		4248.28 *21*	100 *11*	3304.212	2$^+$			
7629.907	3$^-$	2307.4@	<1.0	5322.51	2$^{(-)}$			
		2401.7@	<1.0	5228.175	0$^+$			
		2740.2@	<1.4	4889.756	2$^+$			
		2940.4 *3*	8.3 *12*	4688.98	4$^+$			
		3005.39 *5*	79 *8*	4624.404	3$^-$			
		3515.07 *11*	11.3 *13*	4114.813	2$^+$			

$^{34}_{16}S_{18}$-18

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	δ	Comments
7629.907	3^-	3713.5@	<1.4	3916.408	0^+			
		4325.40 *3*	100 *9*	3304.212	2^+			
		7629.9@	<2.6	0.0	0^+			
7730.79	$(1^-,2^-,3^-)$	5602.78 *15*	100	2127.564	2^+			
7781.22	$(1)^-$	1353.46 *16*	10.0 *13*	6428.12	(2^+)			
		7780.22 *10*	100 *13*	0.0	0^+			
7790.7	6^-	1539.6 *5*	19 *4*	6251.68	4^-	E2		B(E2)(W.u.)=16 *6* E_γ,I_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		2099.6 *8*	100 *11*	5690.7	5^-	M1+E2	−1.8 *1*	B(M1)(W.u.)=0.0049 *13*; B(E2)(W.u.)=14 *4* E_γ,I_γ,Mult.,δ: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
7974.72	$(1,2^+)$	4670.1 *6*	26 *14*	3304.212	2^+			
		5847.4 *5*	60 *14*	2127.564	2^+			
		7973.45 *25*	100 *14*	0.0	0^+			
8036.30	$(1^-,2^+)$	925.79 *14*	95 *12*	7110.45	3^-			
		8036.6 *7*	100 *22*	0.0	0^+			
8138.10	$(1)^-$	1795.3# *3*	14# *4*	6342.50	1^-			
		2290.26 *15*	19 *4*	5847.53	0^+			
		6010.3 *3*	36 *6*	2127.564	2^+			
		8136.98 *17*	100 *11*	0.0	0^+			
8175.1	$(1,2^+)$	2945.8# *10*	100# *30*	5228.175	0^+			
		8173.8 *9*	53 *10*	0.0	0^+			
8185.46	$(1)^+$	8184.70 *24*	100	0.0	0^+			
8205.40	$(1^-$ to $4^+)$	3581.2 *4*	31 *6*	4624.404	3^-			
		6077.27 *12*	100 *11*	2127.564	2^+			
8294.39	$(0^+$ to $3^-)$	1951.77 *19*	34 *19*	6342.50	1^-			
		6166.24 *13*	100 *11*	2127.564	2^+			
8371.1	7^-	580.3 *6*	2 *1*	7790.7	6^-	D		E_γ,I_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		2680.5 *6*	100 *10*	5690.7	5^-	E2		B(E2)(W.u.)=7.4 *16* E_γ,I_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
8385.40	1^-	8384.28 *9*	100	0.0	0^+			
8503.8	6^+	2812.7 *9*	100 *18*	5690.7	5^-	D		E_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		3813.6 *7*	51 *10*	4688.98	4^+			E_γ: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
8506.77	1^-	3183.9 *7*	2.6 *17*	5322.51	$2^{(-)}$			
		4391.8 *3*	9.4 *19*	4114.813	2^+			
		5202.06 *6*	64 *6*	3304.212	2^+			
		8505.68 *10*	100 *11*	0.0	0^+			
8615.74	$(2^-,3^+)$	2363.97 *8*	58 *31*	6251.68	4^-			
		3738.69 *17*	33 *57*	4876.839	3^+			
		3990.7 *7*	8.1 *19*	4624.404	3^-			
		4540.68 *15*	47 *6*	4074.667	1^+			

$^{34}_{16}S_{18}$-19

$\gamma(^{34}S)$ (continued)

E_i(level)	J_i^{π}	E_{γ}†	I_{γ}†	E_f	J_f^{π}	Mult.	Comments
8615.74	$(2^-,3^+)$	5311.10 *15*	22 *3*	3304.212	2^+		
		6487.48 *6*	100 *11*	2127.564	2^+		
8656	$(1)^+$	8655 *4*		0.0	0^+		E_{γ}: from ΔE_{levels}.
8702.35	$(1^-,2)$	516.86 *12*	29 *5*	8185.46	$(1)^+$		
		2945.8# *10*	28# *8*	5755.875	1^-		
		3022.0 *10*	15 *8*	5679.927	3^-		
		3812.0 *5*	23 *6*	4889.756	2^+		
		6573.6 *4*	100 *17*	2127.564	2^+		
8727.63	$(1^-,2^+)$	1617.00 *12*	100 *13*	7110.45	3^-		
		3500.3 *5*	25 *6*	5228.175	0^+		
		6600.1 *7*	12 *3*	2127.564	2^+		
		8726.78 *24*	23 *3*	0.0	0^+		
8734.9	$6^{(-)}$	3044.1 *6*	100	5690.7	5^-	D+Q	E_{γ},Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
8805.66	$(1,2^+)$	2326.2# *10*	11# *9*	6478.770	1^-		
		5501.4 *5*	100 *20*	3304.212	2^+		
		8804.4 *4*	52 *9*	0.0	0^+		
8874.02	$(1^-,2,3^+)$	1244.32 *21*	4.4 *11*	7629.907	3^-		
		4758.8 *3*	17 *3*	4114.813	2^+		
		4799.1 *3*	19 *3*	4074.667	1^+		
		6745.64 *16*	100 *11*	2127.564	2^+		
8970.7	$6^{(-)}$	1180 *1*	6 *3*	7790.7	6^-		E_{γ}: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		3280.0 *6*	100 *20*	5690.7	5^-		E_{γ}: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
9026.31	$(1,2^+)$	3644.8 *8*	60 *13*	5380.99	1^+		
		9024.95 *17*	100 *11*	0.0	0^+		
9158.71	$(1,2^+)$	3311.6 *5*	39 *7*	5847.53	0^+		
		5043.3 *4*	100 *19*	4114.813	2^+		
		5084.2 *5*	9 *3*	4074.667	1^+		
9208.04	$(1,2^+)$	334.21 *15*	4.8 *11*	8874.02	$(1^-,2,3^+)$		
		1840.52 *12*	64 *10*	7367.42	$(1^+,2^+)$		
		1959.67 *17*	100 *13*	7248.05	$(2^+,3^-)$		
		9206.7 *3*	40 *6*	0.0	0^+		
9413.9	$6^{(-)}$	1043.8 *7*	21 *12*	8371.1	7^-		
		3722.6 *6*	100 *21*	5690.7	5^-	D+Q	
9479	$(1)^+$	9478 *4*	100	0.0	0^+		E_{γ}: from ΔE_{levels} (measured by $^{34}S(\gamma,\gamma')$,(pol γ,γ')).
9546.09	$(1,2^+)$	672.00 *10*	34 *4*	8874.02	$(1^-,2,3^+)$		
		2326.2# *10*	11# *9*	7219.28	(2^+)		
		6241.0 *5*	100 *16*	3304.212	2^+		
		9544.8 *3*	84 *11*	0.0	0^+		
9598.41		982.68 *9*	27 *4*	8615.74	$(2^-,3^+)$		
		3476.95 *18*	100 *14*	6121.49	2^+		

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	Comments
9640	(1,2$^+$)	9639 *4*		0.0	0$^+$		
9665.74		2817.76# *25*	100# *15*	6847.90	(1,2$^+$)		
		7536.2 *7*	52 *12*	2127.564	2$^+$		
9706	(1,2$^+$)	9705 *5*		0.0	0$^+$		E_γ: from ΔE_{levels} (measured by $^{34}S(\gamma,\gamma')$,(pol γ,γ')).
9801.89	(1,2$^+$)	5884.6 *6*	48 *11*	3916.408	0$^+$		
		6496.62 *23*	100 *13*	3304.212	2$^+$		
		7675.0 *8*	29 *7*	2127.564	2$^+$		
9836.70		2989.9 *7*	41 *11*	6847.90	(1,2$^+$)		
		7708.3 *3*	100 *16*	2127.564	2$^+$		
9868	(1)$^+$	9866 *4*		0.0	0$^+$		E_γ: from ΔE_{levels} (measured by $^{34}S(\gamma,\gamma')$,(pol γ,γ')).
9912.8	7$^{(+)}$	942.3 *5*	28 *9*	8970.7	6$^{(-)}$	D	E_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		1178 *1*	14 *7*	8734.9	6$^{(-)}$		E_γ: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		1408.6 *9*	30 *9*	8503.8	6$^+$	D	E_γ,Mult.: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		1541.5 *5*	13 *7*	8371.1	7$^-$		E_γ: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
		2122.9 *6*	100 *14*	7790.7	6$^-$		E_γ: from $^{24}Mg(^{16}O,\alpha 2p\gamma)$.
9933.35	1$^-$	725.25 *22*	61 *10*	9208.04	(1,2$^+$)		
		1795.3# *3*	100# *26*	8138.10	(1)$^-$		
		2152.41 *23*	89 *26*	7781.22	(1)$^-$		
		7804.8	13 *3*	2127.564	2$^+$		E_γ,I_γ: from ΔE_{levels} (γ observed in $^{30}Si(\alpha,\gamma)$,$(\alpha$,n)).
		9932.1 *6*	43 *10*	0.0	0$^+$	E1‡	
9981	1$^-$	7852‡	100‡	2127.564	2$^+$		
		9979‡	40‡	0.0	0$^+$	E1‡	
10092.23		1364.4 *4*	69 *19*	8727.63	(1$^-$,2$^+$)		
		3664.8 *4*	100 *21*	6428.12	(2$^+$)		
10097		7968‡	100‡	2127.564	2$^+$		
		10095‡@	<10‡	0.0	0$^+$		
10169	1$^-$	8040‡	100‡	2127.564	2$^+$		
		10167‡	30‡	0.0	0$^+$	E1‡	
10170	(1)$^+$	10168 *5*		0.0	0$^+$		
10179.59	(1,2,3)	4499.7 *10*	88 *27*	5679.927	3$^-$		
		8051.1 *6*	100 *19*	2127.564	2$^+$		
10212.15		4532.6 *7*	49 *15*	5679.927	3$^-$		
		8083.5 *3*	100 *15*	2127.564	2$^+$		
10248	1$^-$	8119‡	100‡	2127.564	2$^+$		
		10246‡	20‡	0.0	0$^+$	E1‡	
10311.53	2$^+$	1925.94 *17*	44 *13*	8385.40	1$^-$		1925.9, 2173.5, 2843.7, 4988.6 and 6236.3 γ transitions are from (n,γ), whereas 8182.9 and 10309.9 are from (α,γ),$(\alpha$,n). Relative branches are given here from (n,γ).

From ENSDF

$^{34}_{16}S_{18}$-21

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	δ	Comments
10311.53	2^+	2173.55 *21*	25 *8*	8138.10	$(1)^-$			
		2843.7 *6*	94 *21*	7467.72	$(0^+,1,2)$			
		4988.6 *4*	100 *14*	5322.51	$2^{(-)}$			
		6236.3 *11*	30 *8*	4074.667	1^+			
		8182.9		2127.564	2^+			In (α,γ),$(\alpha$,n) relative intensities are: 100 for 8182.9γ, and 40 for 10309.9γ. These cannot be matched with intensities from (n,γ).
		10309.9		0.0	0^+	E2		
10399.8	$8^{(-)}$	986.8 *9*	11 *6*	9413.9	$6^{(-)}$			E_γ,I_γ: from ^{24}Mg(^{16}O,α2pγ).
		2028.8 *6*	46 *10*	8371.1	7^-			E_γ,I_γ: from ^{24}Mg(^{16}O,α2pγ).
		2608.6 *6*	100 *14*	7790.7	6^-	Q		E_γ,I_γ: from ^{24}Mg(^{16}O,α2pγ).
10407	2^+	8278‡	100‡	2127.564	2^+			
		10405‡	100‡	0.0	0^+	E2‡		
10493	1^-	8364‡@	<10‡	2127.564	2^+			
		10491‡	100‡	0.0	0^+	E1‡		
10586	1^-	7281‡	100‡	3304.212	2^+	E1‡		α(N+..)=0.00258 *4* α(IPF)=0.00258 *4*
		8457‡	60‡	2127.564	2^+			
10625	1^-	8496‡	100‡	2127.564	2^+			
		10623‡	100‡	0.0	0^+	E1‡		
10650.11		2919.7 *5*	100 *26*	7730.79	$(1^-,2^-,3^-)$			
		5268.9# *6*	63# *16*	5380.99	1^+			
10651.6	8^+	2147.2 *6*	100 *21*	8503.8	6^+	E2		B(E2)(W.u.)=27 *15* E_γ,I_γ,Mult.: from ^{24}Mg(^{16}O,α2pγ).
		2280.4 *10*	100 *21*	8371.1	7^-	D		E_γ,I_γ,Mult.: from ^{24}Mg(^{16}O,α2pγ).
10670	1^-	7365‡	100‡	3304.212	2^+	E1‡		
		8541‡	30‡	2127.564	2^+			
		10668‡@	<10‡	0.0	0^+			
10767	2^+	8638‡	100‡	2127.564	2^+	M1+E2‡	+0.3‡	
		10765‡@	<10‡	0.0	0^+			
10791	1^-	7486‡	5‡	3304.212	2^+			
		8662‡	20‡	2127.564	2^+			
		10789‡	100‡	0.0	0^+	E1‡		
10803	$(1,2^+)$	10801 *6*		0.0	0^+			
10840.64	3^-	748.43 *14*	71 *9*	10092.23				
		6152.1 *5*	100 *28*	4688.98	4^+			
		8711.9		2127.564	2^+	E1+M2	−0.024 *17*	E_γ,I_γ,Mult.,δ: from ^{30}Si(α,γ),(α,n) only ($I\gamma$ scale differs from that of γ rays from ^{33}S(n,γ)).

From ENSDF

$^{34}_{16}S_{18}$-22

$\gamma(^{34}S)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.	δ	Comments
10930	1^-	8801‡	100‡	2127.564	2^+	E1+M2‡	+0.154‡ *17*	
10994	2^+	8865‡	100‡	2127.564	2^+	M1+E2‡	+0.078‡ *32*	
11014	2^+	8885‡	100‡	2127.564	2^+	M1+E2‡	−0.52‡ *22*	
11024.94	1^-	1998.3 *4*	50 *18*	9026.31	$(1,2^+)$			1998.3, 4903.4 and 5268.9 γ transitions are from (n,γ), whereas 7719.8, 8896.1 and 11023.0 are from (α,γ),(α,n). Relative branches are given here from (n,γ).
		4903.4 *5*	100 *29*	6121.49	2^+			
		5268.9 *6*	96 *25*	5755.875	1^-			
		7719.8		3304.212	2^+			In (α,γ),(α,n) relative intensities are: 17 for 7719.8γ, 14 for 8896.1γ and 100 for 11023.0γ. These cannot be matched with intensities from (n,γ).
		8896.1		2127.564	2^+			
		11023.0		0.0	0^+	E1		
11087	2^+	7782‡	47‡	3304.212	2^+			
		8958‡	44‡	2127.564	2^+			
		11085‡	100‡	0.0	0^+	E2‡		
11107	3^-	8978‡	100‡	2127.564	2^+	E1+M2‡	+0.062‡ *1*	
11141	1^-	7836‡	9‡	3304.212	2^+			
		9012‡	18‡	2127.564	2^+			
		11139‡	100‡	0.0	0^+	E1‡		
11165	1^-	7860‡	100‡	3304.212	2^+			
		9036‡	13‡	2127.564	2^+			
		11163‡	77‡	0.0	0^+	E1‡		
11220	(2^+)	x	100‡					Additional information 3.
		7915‡	8‡	3304.212	2^+			
		9091‡	10‡	2127.564	2^+			
		11218‡	12‡	0.0	0^+	(E2)‡		
11233	1^-	7928‡	100‡	3304.212	2^+			
		9104‡	24‡	2127.564	2^+			
		11231‡	4‡	0.0	0^+	E1‡		
11272	2^+	9143‡	100‡	2127.564	2^+	M1+E2‡	+0.18‡ *15*	
11314	2^+	8009‡	67‡	3304.212	2^+			
		9185‡	38‡	2127.564	2^+			
		11312‡	100‡	0.0	0^+	E2‡		
11323	1^-	8018‡	48‡	3304.212	2^+			

$^{34}_{16}S_{18}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
11323	1^-	9194‡	65‡	2127.564	2^+			
		11321‡	100‡	0.0	0^+	E1‡		
11357	1^-	8052‡	280‡	3304.212	2^+			
		9228‡	49‡	2127.564	2^+			
		11355‡	100‡	0.0	0^+	E1‡		
11371	3^-	8066‡	44‡	3304.212	2^+			
		9242‡	100‡	2127.564	2^+	E1+M2‡	+0.022 *6*	
		11369‡	6‡	0.0	0^+	[E3]		
11374.2	$8^{(+)}$	1461.7 *9*	90 *20*	9912.8	$7^{(+)}$	D(+Q)		
		3002.8 *6*	100 *20*	8371.1	7^-	D		
11380	2^+	x	79‡					Additional information 4.
		8075‡	11‡	3304.212	2^+			
		9251‡	30‡	2127.564	2^+			
		11378‡	100‡	0.0	0^+	E2‡		
(11417.223)	$1^+,2^+$	392.28 *11*	0.2 *3*	11024.94	1^-			Additional information 5.
		576.80 *19*	0.24 *3*	10840.64	3^-			
		767.20 *21*	0.16 *3*	10650.11				
		1105.673 *21*	2.40 *24*	10311.53	2^+			
		1205.05 *4*	0.98 *10*	10212.15				
		1237.61 *5*	0.84 *10*	10179.59	(1,2,3)			
		1325.2 *3*	0.53 *11*	10092.23				
		1484.06 *19*	0.53 *11*	9933.35	1^-			
		1580.50 *6*	1.06 *11*	9836.70				
		1615.24 *10*	3.7 *5*	9801.89	$(1,2^+)$			
		1751.43 *3*	2.32 *23*	9665.74				
		1818.96 *14*	0.61 *10*	9598.41				
		1871.04 *8*	3.3 *4*	9546.09	$(1,2^+)$			
		2209.10 *6*	1.39 *15*	9208.04	$(1,2^+)$			
		2258.430 *23*	6.0 *7*	9158.71	$(1,2^+)$			
		2390.82 *6*	2.15 *23*	9026.31	$(1,2^+)$			
		2543.13# *10*	15.5# *15*	8874.02	$(1^-,2,3^+)$			
		2611.7 *4*	1.9 *5*	8805.66	$(1,2^+)$			
		2689.50 *10*	3.5 *4*	8727.63	$(1^-,2^+)$			
		2714.50 *19*	4.5 *8*	8702.35	$(1^-,2)$			
		2801.33 *5*	16.3 *16*	8615.74	$(2^-,3^+)$			
		2910.28 *5*	16.1 *16*	8506.77	1^-			
		3031.69 *8*	7.4 *10*	8385.40	1^-			
		3122.65 *15*	4.4 *7*	8294.39	$(0^+$ to $3^-)$			

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	Comments
(11417.223)	$1^+,2^+$	3211.69 *9*	3.8 *4*	8205.40	$(1^-$ to $4^+)$		
		3231.89 *20*	1.35 *18*	8185.46	$(1)^+$		
		3241.9 *5*	0.58 *11*	8175.1	$(1,2^+)$		
		3278.79 *11*	5.2 *7*	8138.10	$(1)^-$		
		3442.24 *25*	1.7 *3*	7974.72	$(1,2^+)$		
		3635.83 *8*	8.4 *10*	7781.22	$(1)^-$		
		3787.096 *20*	43 *4*	7629.907	3^-		Additional information 6.
		3864.25 *11*	2.7 *3*	7552.69	$(1,2,3^-)$		
		3949.27 *12*	2.5 *3*	7467.72	$(0^+,1,2)$		
		4049.68 *15*	1.89 *21*	7367.42	$(1^+,2^+)$		
		4197.69 *9*	4.8 *7*	7219.28	(2^+)		
		4252.38 *22*	1.98 *24*	7164.47	$(0$ to $3)^+$		
		4306.44 *6*	13.4 *13*	7110.45	3^-		
		4462.44 *20*	12.7 *13*	6954.22	$(2)^-$		
		4568.9 *4*	0.48 *10*	6847.90	$(1,2^+)$		
		4588.4 *3*	0.95 *16*	6828.85	2^+		
		4731.37 *10*	2.6 *3*	6685.33	$(0$ to $3)^-$		
		4938.06 *3*	36 *3*	6478.770	1^-		
		5074.79 *25*	0.68 *13*	6342.50	1^-		
		5247.94 *4*	19.0 *18*	6168.86	3^-		
		5294.94 *24*	0.68 *13*	6121.49	2^+		
		5569.30 *5*	9.0 *10*	5847.53	0^+		
		5660.78 *6*	30 *3*	5755.875	1^-		Additional information 7.
		5736.76 *4*	70 *6*	5679.927	3^-		Additional information 8.
		6035.68 *7*	7.1 *8*	5380.99	1^+		
		6094.4 *4*	0.34 *8*	5322.51	$2^{(-)}$		
		6188.45 *6*	14.0 *15*	5228.175	0^+		
		6526.84 *6*	8.9 *10*	4889.756	2^+		
		6539.66 *16*	1.60 *19*	4876.839	3^+		
		6727.5 *9*	0.11 *6*	4688.98	4^+		
		6792.10 *3*	39 *4*	4624.404	3^-		Additional information 9.
		7302.2 *8*	0.45 *8*	4114.813	2^+		
		7341.67 *6*	59.9 *23*	4074.667	1^+		Additional information 10.
		7499.90 *5*	100 *10*	3916.408	0^+		
		8111.99 *9*	9.8 *11*	3304.212	2^+		
		9288.28 *16*	1.77 *19*	2127.564	2^+		
		11415.17 *11*	11.5 *11*	0.0	0^+		
11419	1^-	8114‡	5‡	3304.212	2^+		
		9290‡	19‡	2127.564	2^+		
		11417‡	100‡	0.0	0^+	E1‡	

From ENSDF

$^{34}_{16}S_{18}$-25

Adopted Levels, Gammas (continued)

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	Comments
11457	3^-	9328[‡]	100	2127.564	2^+	E1+M2[‡]	+0.037[‡] *2*	
11473	1^-	9344[‡]	100	2127.564	2^+	E1+M2[‡]	−0.13[‡] *7*	
11485.90	1^-	x	100[‡]					Additional information 11.
		8180.7[‡]	7.7[‡]	3304.212	2^+			
		9357.0[‡]	4.3[‡]	2127.564	2^+			
		11483.9[‡]	3.5[‡]	0.0	0^+	E1[‡]		
11502.82	(1^-)	9373.9		2127.564	2^+	E1+M2[‡]	−0.058[‡] *16*	
11543.84	1^-	x	100[‡]					Additional information 12.
		8238.6	3.9[‡]	3304.212	2^+			
		9414.9	6.2[‡]	2127.564	2^+			
		11541.8	3.7[‡]	0.0	0^+	E1[‡]		
11642	1^-	x	100[‡]					Additional information 13.
		8337[‡]	13[‡]	3304.212	2^+			
		9513[‡]	2.7[‡]	2127.564	2^+			
		11640[‡]	3.3[‡]	0.0	0^+	E1[‡]		
11706.47	1^-	9577.5[‡]		2127.564	2^+	E1+M2[‡]	−0.080[‡] *80*	
11807.4	$8^{(+)}$	1894.6 *6*	100 *20*	9912.8	$7^{(+)}$			
		3436.1 *6*	100 *40*	8371.1	7^-	D		
11921	(3^-)	9792[‡]	100	2127.564	2^+	(E1)[‡]		
11931	1^-	11929[‡]	100	0.0	0^+	E1[‡]		
11956	3^-	9827[‡]	100	2127.564	2^+	E1+M2[‡]	+0.031[‡] *4*	
12033	1^-	12031[‡]	100	0.0	0^+	E1[‡]		
12099	1^-	12097[‡]	100	0.0	0^+	E1[‡]		
12141.3	$9^{(+)}$	1489.2 *6*	7 *4*	10651.6	8^+			
		1741.6 *5*	13 *3*	10399.8	$8^{(-)}$			
		2228.8 *6*	100 *12*	9912.8	$7^{(+)}$	E2		B(E2)(W.u.)=7.6 *20*
12193	1^-	12191[‡]	100	0.0	0^+	E1[‡]		
12985.5	(9^+)	1178 *1*	42 *25*	11807.4	$8^{(+)}$			
		1611.5 *7*	50 *25*	11374.2	$8^{(+)}$			
		2333.8 *7*	100 *42*	10651.6	8^+			
13320.2	(9^-)	2920.1 *10*	26 *16*	10399.8	$8^{(-)}$			
		4949.3 *18*	100 *21*	8371.1	7^-			
13341.6	$10^{(+)}$	356.3 *6*	6 *3*	12985.5	(9^+)	D		
		1200.4 *7*	100 *22*	12141.3	$9^{(+)}$	M1+E2		
		1966.8 *9*	81 *19*	11374.2	$8^{(+)}$	E2		B(E2)(W.u.)=7.1 *23*

$^{34}_{16}S_{18}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{34}S)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f
13960.5	(10^+)	3308.8 *8*	100	10651.6	8^+
14576.4	(10^+)	2768.9 *9*	100	11807.4	$8^{(+)}$
15244.4	$(10,11,12^+)$	1902.7 *6*	100	13341.6	$10^{(+)}$
15281.0	(10)	4880.8 *16*	100	10399.8	$8^{(-)}$
16649.1	$(10,11,12^+)$	2688.4 *8*	100	13960.5	(10^+)

† From $^{33}S(n,\gamma)$, unless noted otherwise.

‡ From $^{30}Si(\alpha,\gamma),(\alpha,n)$.

Multiply placed with undivided intensity.

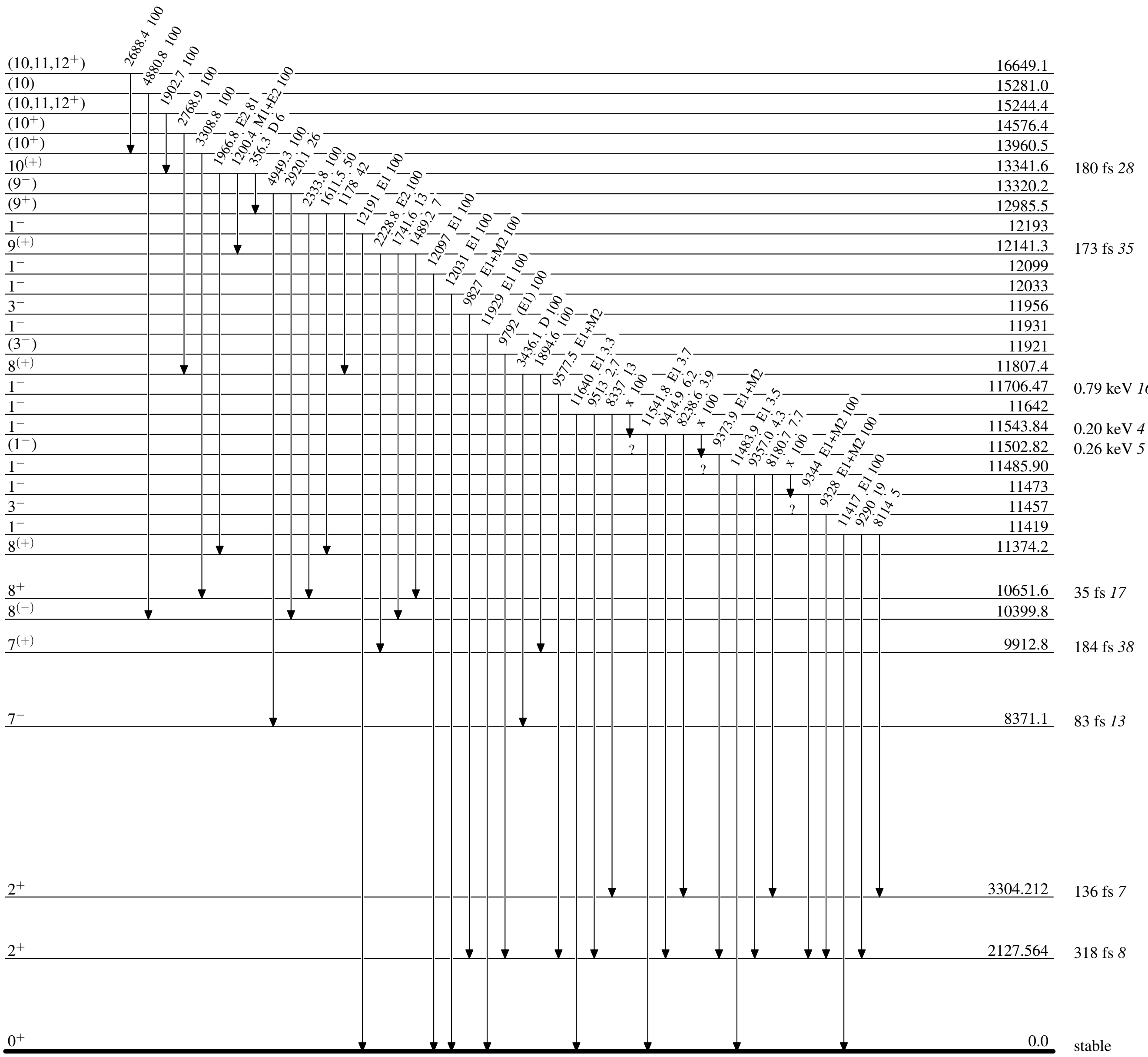
@ Placement of transition in the level scheme is uncertain.

$^{34}_{16}S_{18}$-27

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

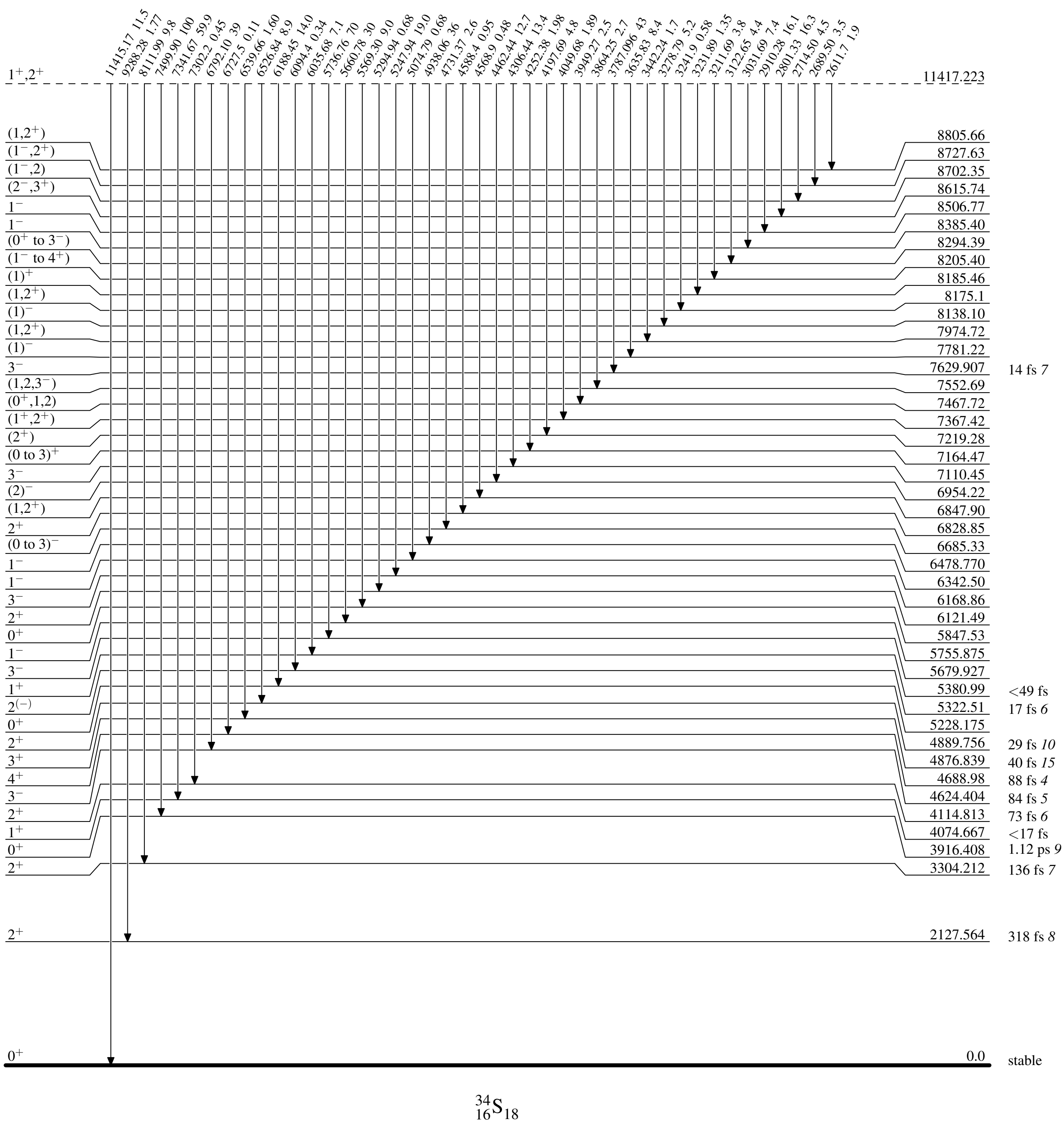


$^{34}_{16}S_{18}$

Adopted Levels, Gammas

Level Scheme (continued)

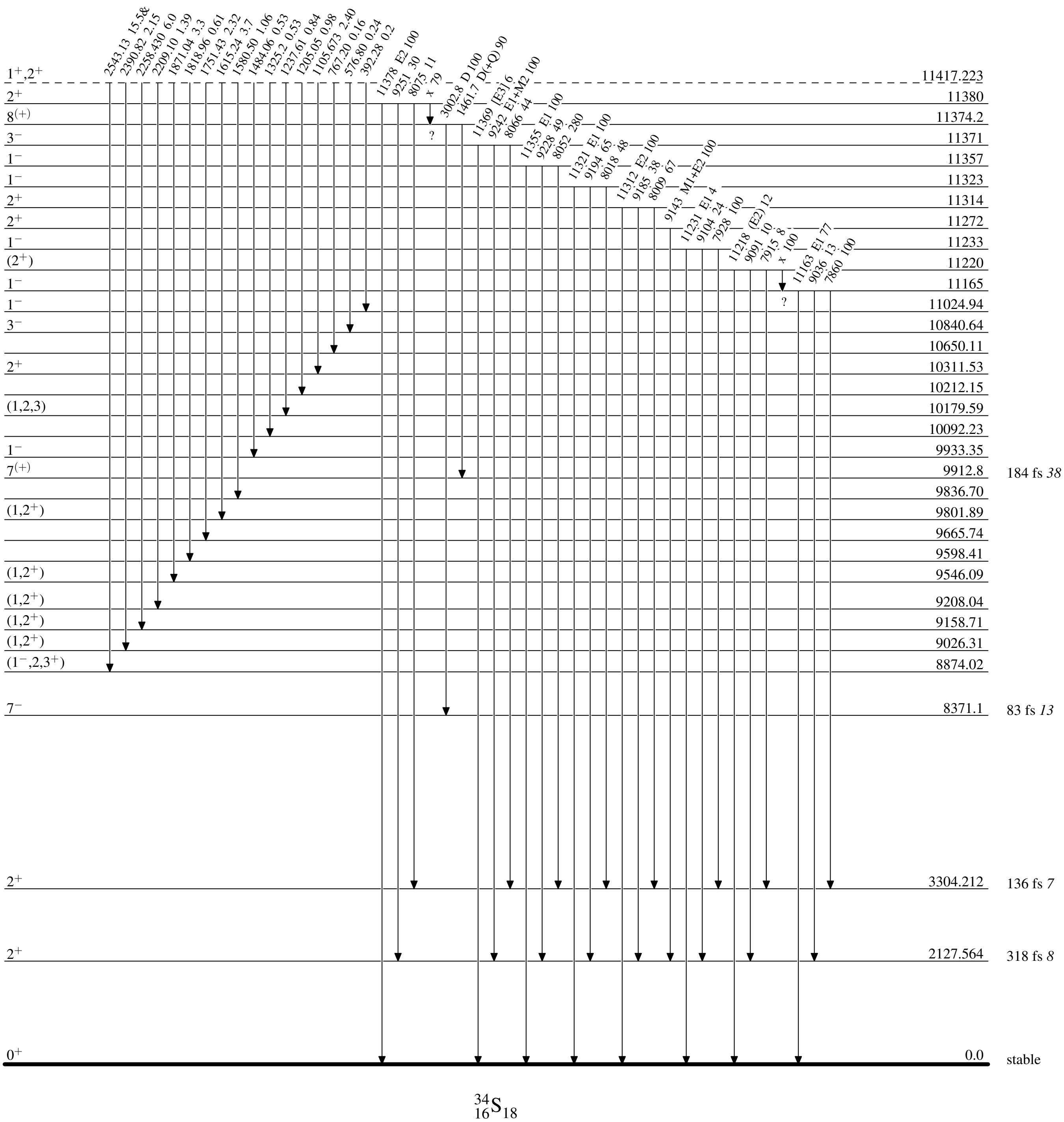
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

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



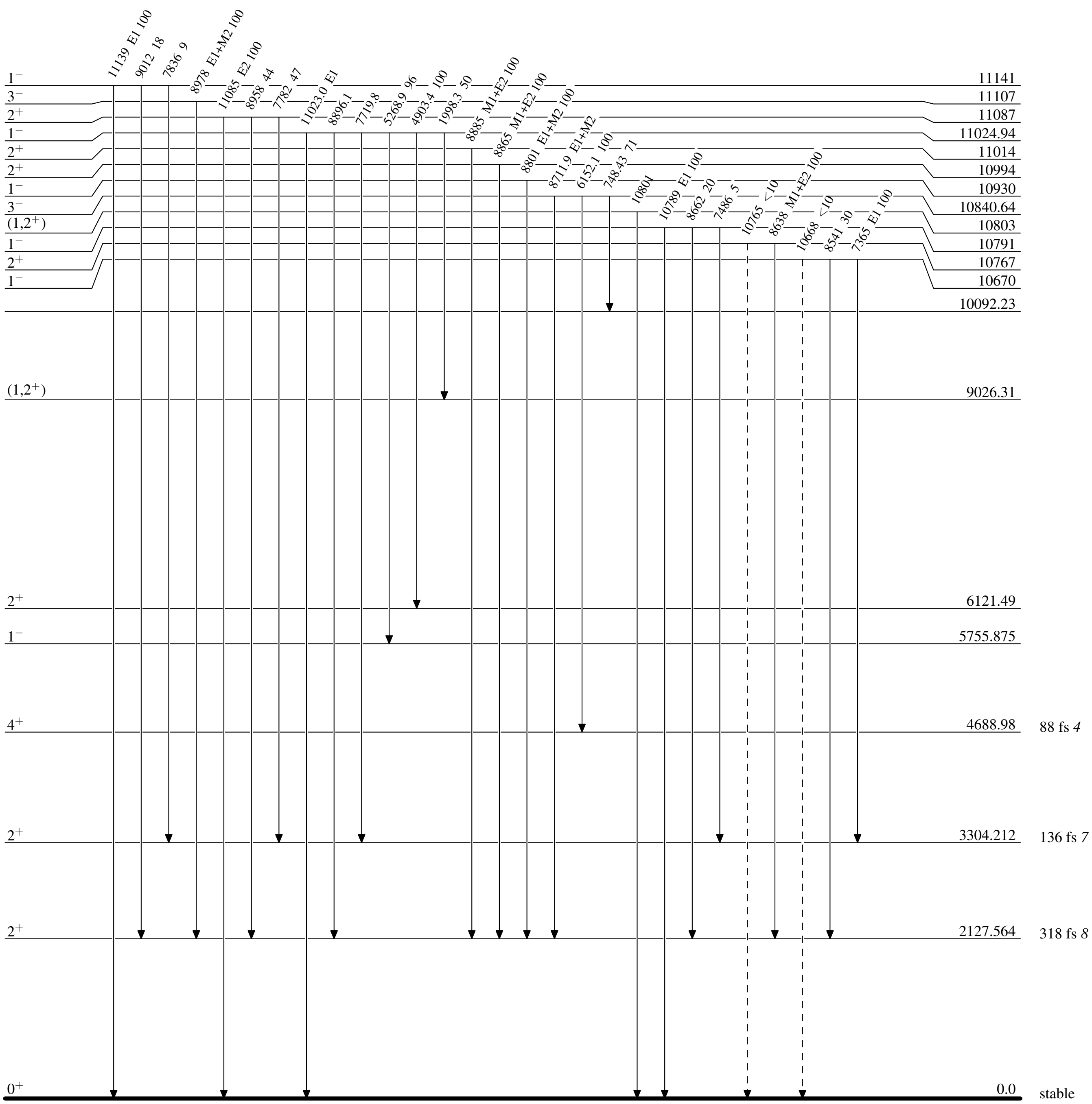
Adopted Levels, Gammas

Level Scheme (continued)

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

Legend

γ Decay (Uncertain)



$^{34}_{16}S_{18}$

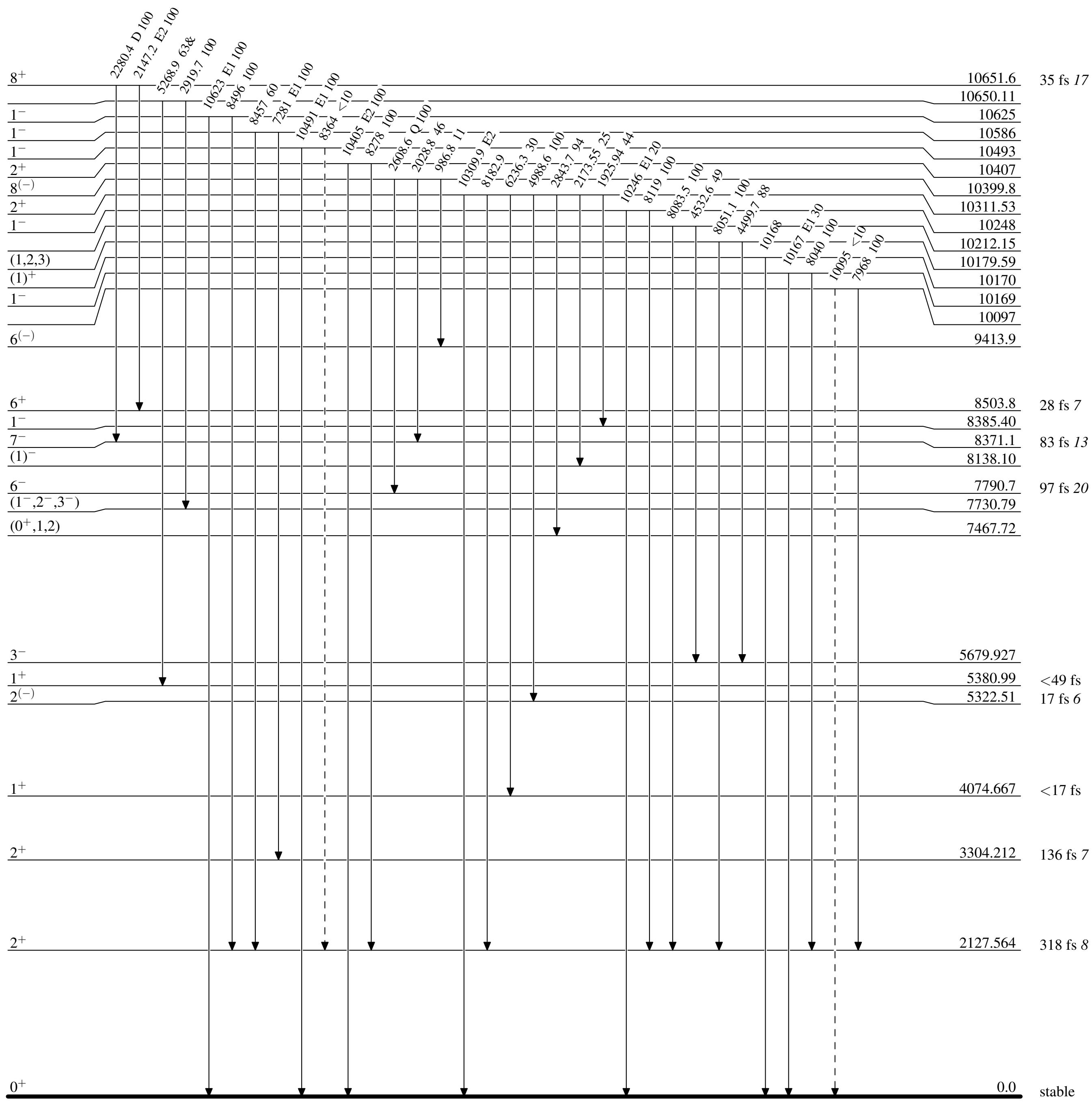
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - -► γ Decay (Uncertain)

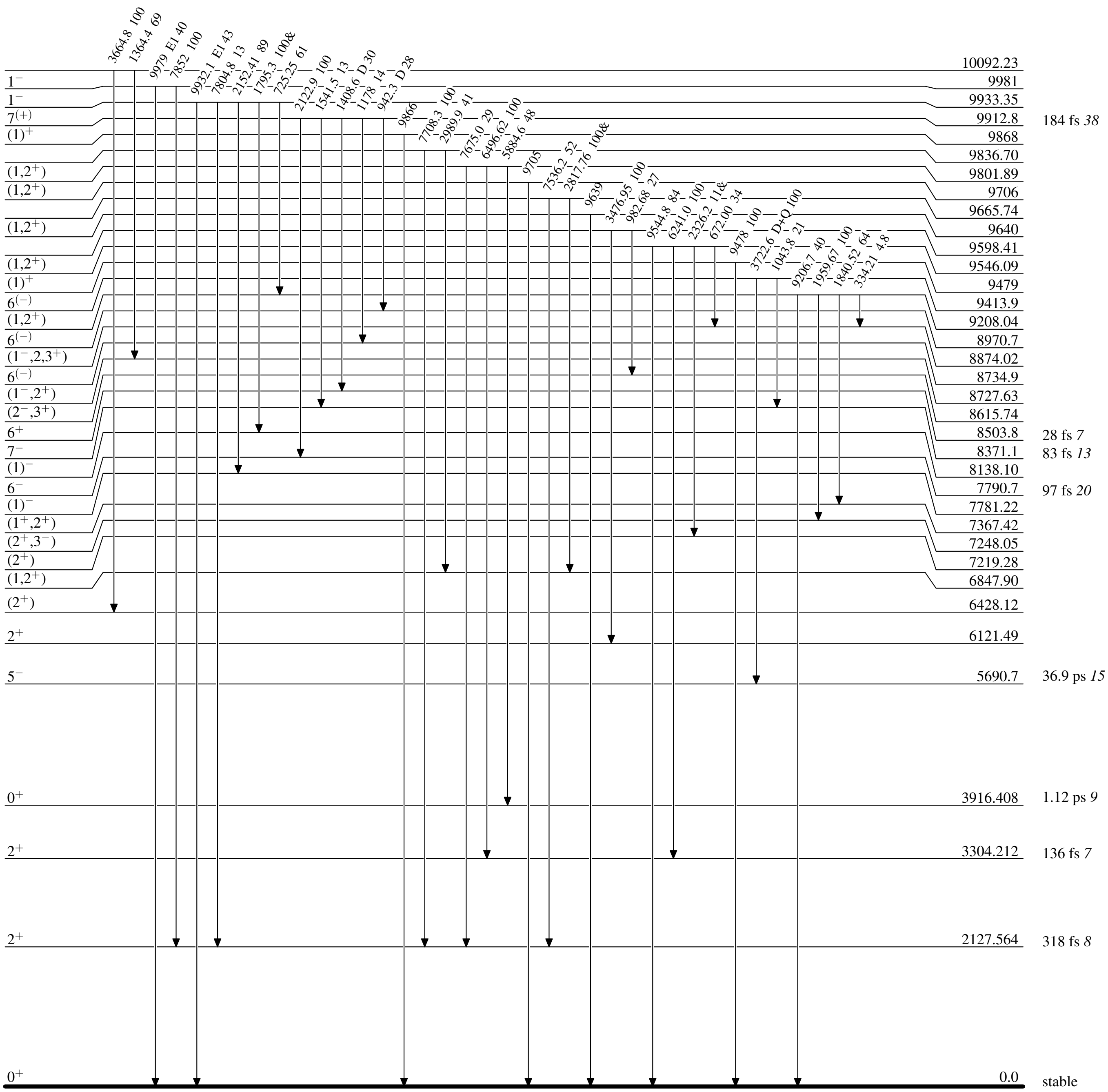


$^{34}_{16}S_{18}$

Adopted Levels, Gammas

Level Scheme (continued)

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

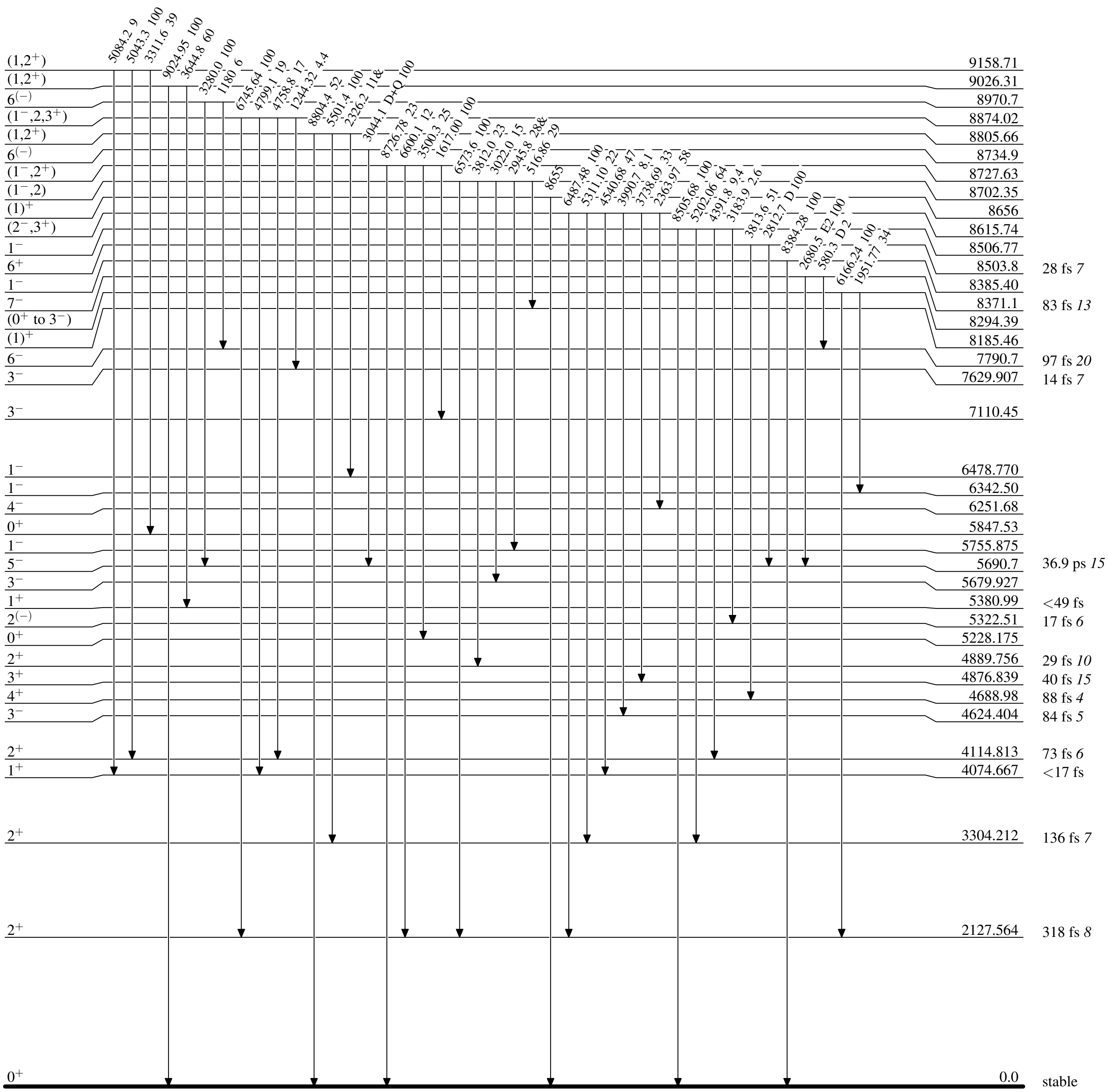


$^{34}_{16}S_{18}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{34}_{16}S_{18}$

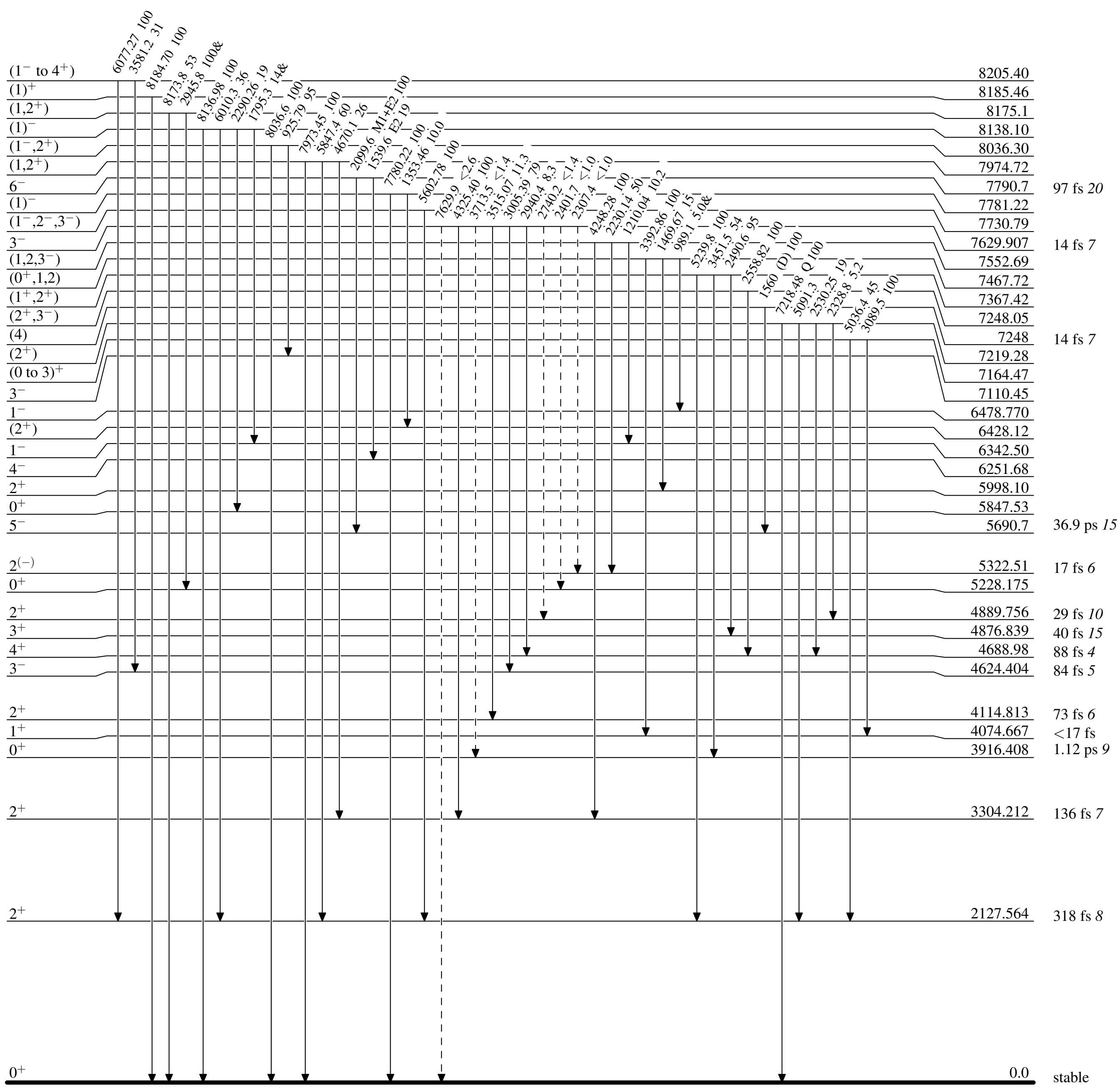
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



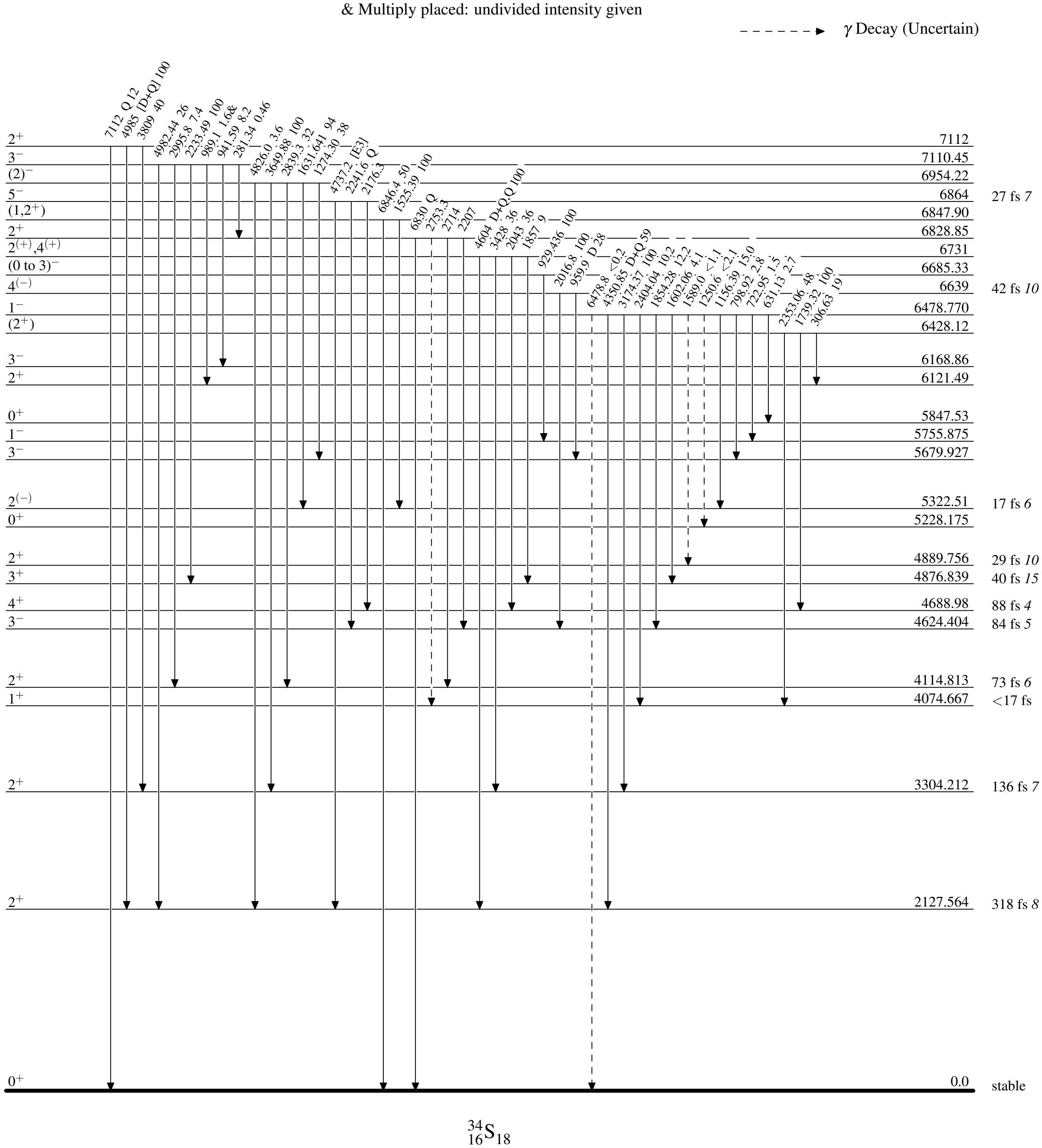
$^{34}_{16}S_{18}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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



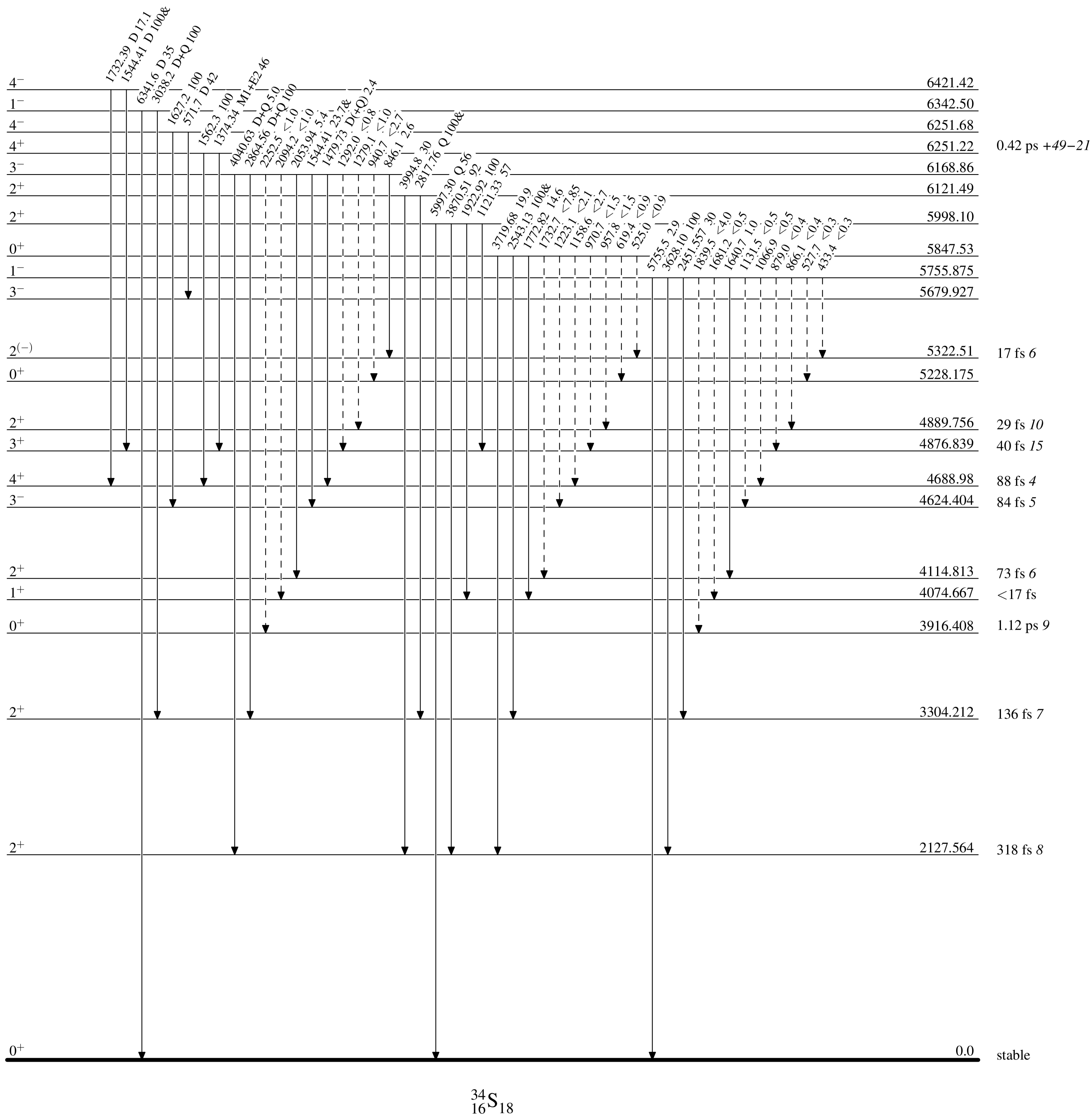
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - -► γ Decay (Uncertain)



$^{34}_{16}S_{18}$

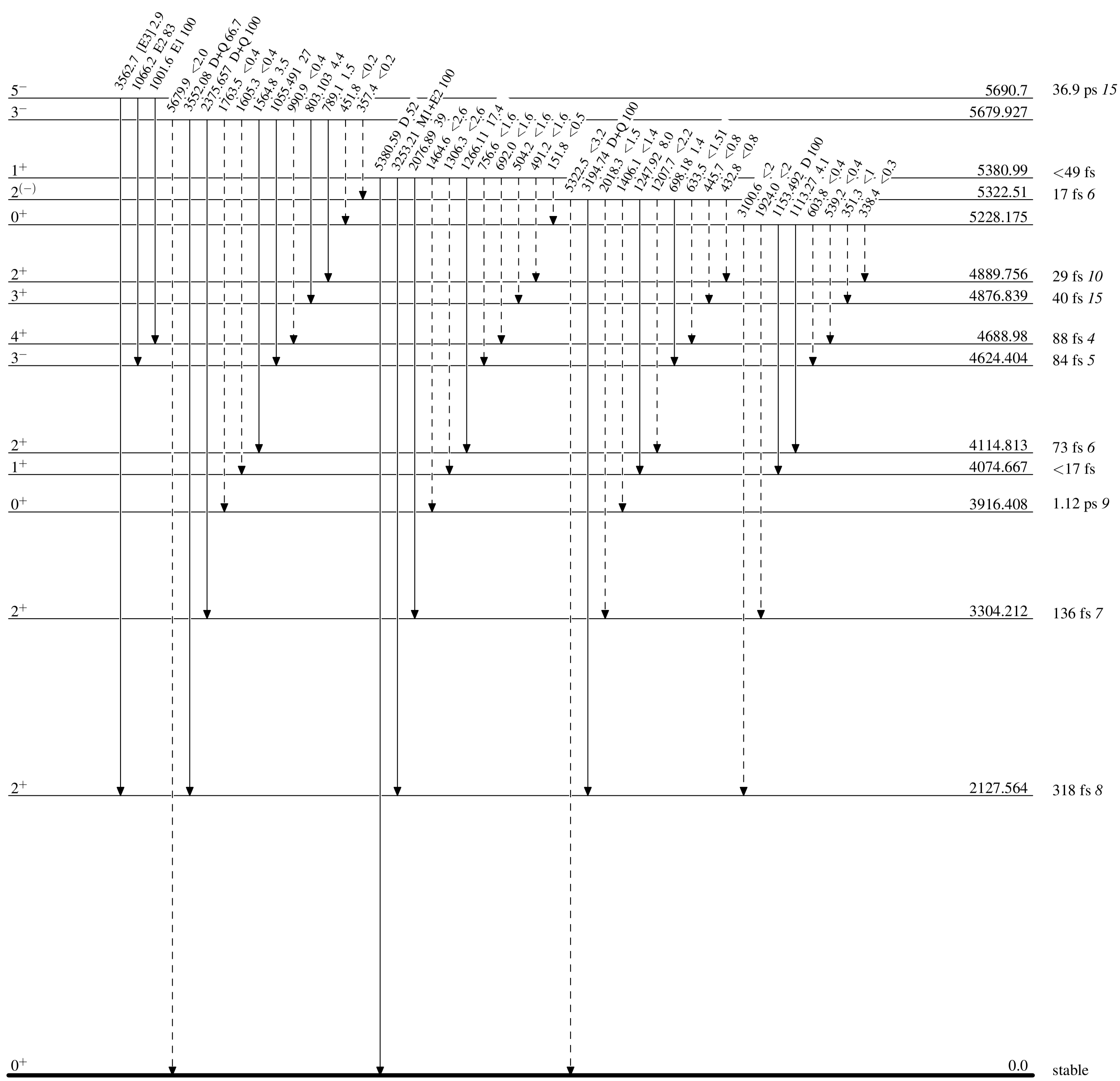
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - ▸ γ Decay (Uncertain)

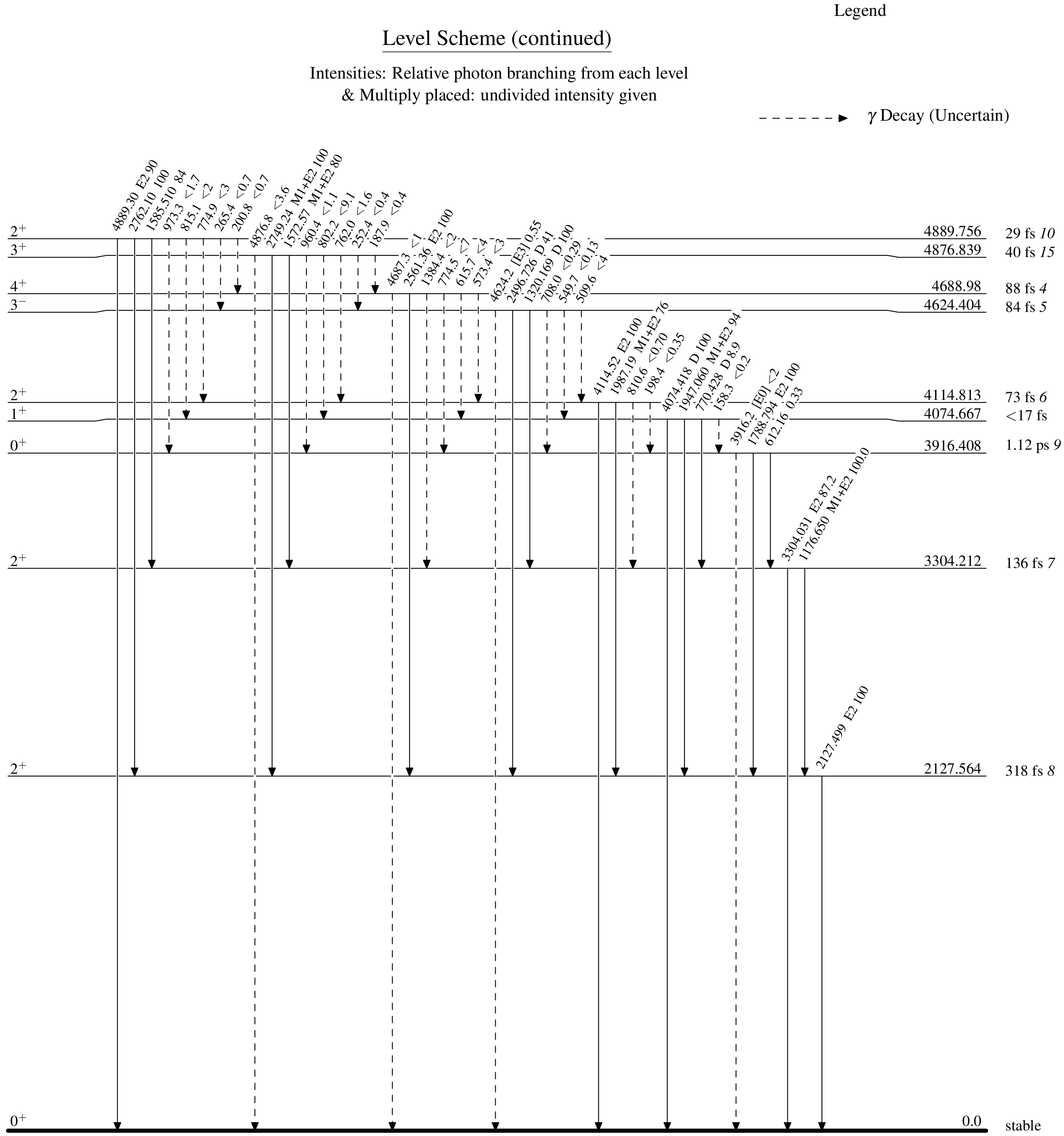


$^{34}_{16}S_{18}$

Adopted Levels, Gammas

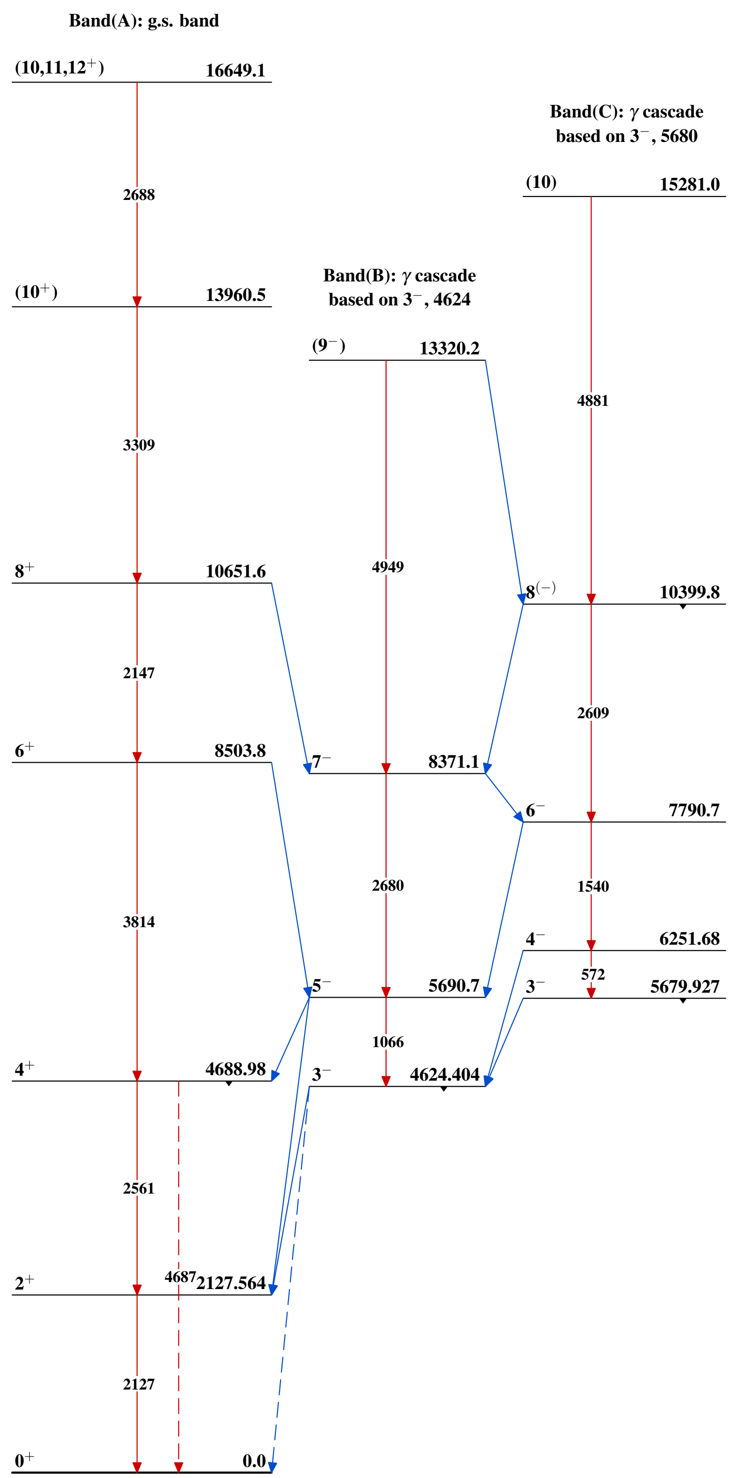
Level Scheme (continued)

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



$^{34}_{16}S_{18}$

Adopted Levels, Gammas



$^{34}_{16}S_{18}$

Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, John Cameron and Balraj Singh	NDS 113,1 (2012)	31-Dec-2011

Q(β^-)=−1142.11 *19*; S(n)=9889.22 *19*; S(p)=13095.3 *19*; Q(α)=−9011.3 *4* 2012Wa38
Note: Current evaluation has used the following Q record −1142.14 19 *9889.2719* *13095*.319-9011.3635 2011AuZZ.
S(2n)=16875.10 *19*, S(2p)=25285 *14* (2011AuZZ).
Values in 2003Au03: Q(β^-)=−1142.22 *19*, S(n)=9889.04 *21*, Q(α)=−9008.08 *22*, S(2n)=16874.92 *22*. S(p) and S(2p) are the same as in 2011AuZZ.
Identification of ^{36}S in mass spectrometer studies by A.O. Nier: Phys. Rev. 53, 282 (1938); measured ratio of ^{36}S to ^{32}S.
1971Ar32: production of ^{36}S in ^{232}Th(^{40}Ar,X) at 290 MeV fragmentation reaction.
1983Ry04: ^{36}S(e,e) E=120, 240, 320 MeV. Measured $\sigma(\theta)$, deduced charge radius.
1985Gy02, 1985GyZZ: ^{36}S(π-,π-) E=48.4 MeV, measured $\sigma(\theta)$.
1985Ko43: ^{20}Ne(^{16}O,^{16}O′) E(c.m.)=24.5-35.5 MeV, deduced resonances.
1985Sc05: measured muonic atom x rays, deduced rms charge radii. Observed muonic x-ray energies: 515.985 *14* (2p -> 1s), 616.28 *8* (3p -> 1s), 651.30 *10* (4p -> 1s), 667.63 *12* (5p -> 1s).
1997Is02: ^{37}Cl(γ,p) E≤32 MeV, measured Eγ, Iγ. GDR features deduced.
1999Ai02: Si(^{36}S,X) E=46.17 MeV/nucleon, measured energy integrated cross sections, deduced radius.
Additional information 1.

^{36}S Levels

Cross Reference (XREF) Flags

A	^{36}P β^- decay (5.6 s)	G	Coulomb excitation	M	^{115}In(^{34}S,Xγ)
B	^{36}Cl ε decay (3.01×10^5 y)	H	^{37}Cl(n,d)	N	^{160}Gd(^{36}S,^{36}S′γ),(^{34}S,^{36}S′γ)
C	^{34}S(t,p)	I	^{37}Cl(d,^{3}He)	O	^{160}Gd(^{37}Cl,Xγ)
D	^{34}S(t,pγ)	J	^{37}Cl(^{36}S,^{36}S′)	P	^{176}Yb(^{36}S,X):tentative
E	^{36}S(p,p′),(α,α′)	K	^{40}Ar(γ,α)		
F	^{36}S(pol d,d′)	L	^{40}Ar(^{3}He,^{7}Be)		

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0	0$^+$	stable	ABCDEFGHIJKLMNOP	J$^\pi$: spin measurement by microwave spectroscopy (1949Lo21). Nuclear rms charge radius=3.2982 fm *21* (2004An14 evaluation); 3.2985 fm *24* from 2008 update of 2004An14. Mean radius r_0^2=1.26 fm^2 *10* from measured integrated σ_R=2.44 b *19* at 46.17 MeV/nucleon in Si(^{36}S,X) reaction (1999Ai02).
3290.9 *3*	2$^+$	83 fs *7*	A CDEFG IJk MNOP	μ=+2.6 *10* (2008Sp01) T$_{1/2}$: from DSA in Coul. Ex. (2008Sp01). Other: 76 fs *21* (1972Sa09), also given in 2001Ra27 evaluation. J$^\pi$: E2 γ to 0$^+$. μ: transient field technique in Coulomb excitation in inverse kinematic reaction, g factor=+1.3 *5* (2008Sp01).
3346 *4*	0$^+$	8.8 ns *2*	CDE G I k	J$^\pi$: E0 transition to 0$^+$.
4192.7 *5*	3$^-$	0.62 ps *7*	A CDEFG J MNOP	μ=+2.4 *15* (2008Sp01) B(E3)=0.008 *3* (2002Ki06 evaluation), from β_3 in (p,p′) (1990Ho19). T$_{1/2}$: from DSA in Coul. Ex. (2008Sp01). Other: 0.8 ps *+4−3* (DSA in (t,pγ) (1972Sa09). μ: transient field technique in Coulomb excitation in inverse kinematic reaction, g factor=+0.8 *5* (2008Sp01).
4523.0 *6*	1$^+$	0.017 ps *8*	CDE G I k	
4575.2 *7*	2$^+$	55 fs *10*	A CDE G I k	
5021.5 *3*	4$^-$		A E MNOP	XREF: P(?).
5206.1 *3*	5$^-$		A E M OP	XREF: P(?).
5251.2 *10*	3$^-$	70 fs *30*	A CDE N	J$^\pi$: log *ft*=5.57 from 4$^-$; γ to 2$^+$.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{36}S Levels (continued)

E(level)†	J^π‡	$T_{1/2}$#	XREF	Comments
5338 *3*			E	
5391.4 *9*	2^+	>0.2 ps	CDE	XREF: E(5379). $T_{1/2}$: additional limit: <30 ns.
5462 *3*	3^+		E	
5509.1 *5*	(2,4)	0.19 ps *4*	CDE	XREF: E(5514). J^π: 4^- proposed in (p,p′),(α,α′).
5573.1 *7*	1^-	<0.14 ps	CDE	
5781.1 *10*			M	
5830.9 *7*	3^-		A E	XREF: E(5837). J^π: log *ft*=4.66 from 4^-; γ to 2^+.
6186.9 *8*	3^-	55 fs *20*	CDE	XREF: E(6180).
6225.2 *10*	2^+	<20 fs	DE	XREF: E(6220).
6350 *3*			E	
6472 *3*	1^-		E	
6514.4 *4*	4^+	<0.2 ps	A CDE I	XREF: E(6510).
6553 *3*			E	
6690	(6^+)		N	
7120 *14*	$(1,2)^+$	<0.2 ps	CD I	
7271.9 *3*	$(3^-,4^-,5^-)$		A	J^π: log *ft*=4.62 from 4^-.
7710 *25*			I	

† From least-squares fit to Eγ data, assuming 0.3 keV uncertainty for each Eγ.
‡ Mainly from γγ(θ) and lin pol data in (t,pγ) and from comparison of σ(θ) data in (p,p′),(α,α′) to DWBA calculations.
# From DSA in (t,pγ), unless otherwise stated.

$\gamma(^{36}S)$

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	Comments
3290.9	2^+	3290.8 *6*	100	0	0^+	E2		B(E2)(W.u.)=2.83 *24*
3346	0^+	3346		0	0^+	E0		Decay takes place by pair formation.
4192.7	3^-	901.5 *4*	100	3290.9	2^+	E1(+M2)	+0.03 *3*	B(E1)(W.u.)=0.00135 *15*
4523.0	1^+	1232.1 *4*	33 *13*	3290.9	2^+			
		4522.2 *15*	100 *13*	0	0^+	M1		B(M1)(W.u.)=0.010 *5*
4575.2	2^+	1284.2	100	3290.9	2^+	M1(+E2)	+0.06 *6*	B(M1)(W.u.)=0.19 *4*
5021.5	4^-	828.8	100 *2*	4192.7	3^-	M1		
		1730.6	3 *2*	3290.9	2^+			
5206.1	5^-	184.6	100.0 *23*	5021.5	4^-	D		
		1013.4	26.8 *18*	4192.7	3^-	Q		
5251.2	3^-	680		4575.2	2^+			
		1059.6 *4*	43 *11*	4192.7	3^-			
		1961.0 *4*	100 *11*	3290.9	2^+	D+Q		
5391.4	2^+	816.2 *4*	18 *9*	4575.2	2^+			
		5391.0	100 *9*	0	0^+			
5509.1	(2,4)	1316.8 *4*	52 *12*	4192.7	3^-			
		2217.7 *3*	100 *12*	3290.9	2^+	D+Q		
5573.1	1^-	2282.1 *3*	100	3290.9	2^+			
5781.1		760.4	100	5021.5	4^-			
5830.9	3^-	579.7	1.1 *4*	5251.2	3^-			
		809.4	15.2 *9*	5021.5	4^-			
		1255.7	12.7 *9*	4575.2	2^+			
		1638.2	100 *3*	4192.7	3^-			
		2539.9	49.3 *23*	3290.9	2^+			
6186.9	3^-	1994.8 *4*	33 *11*	4192.7	3^-			

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{36}S)$ (continued)

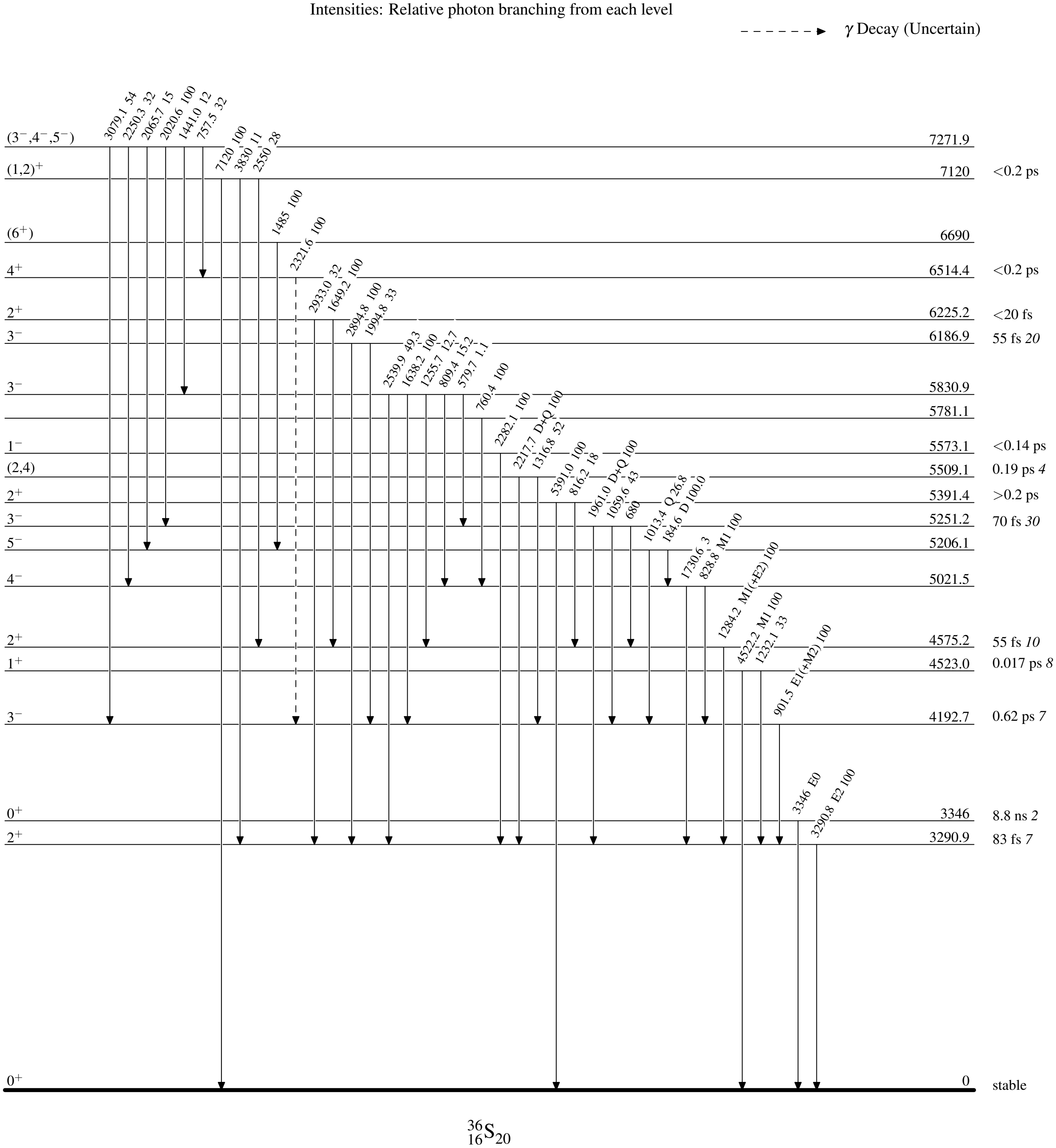
E_i(level)	J^π_i	E_γ	I_γ	E_f	J^π_f	Comments
6186.9	3^-	2894.8 *5*	100 *11*	3290.9	2^+	
6225.2	2^+	1649.2 *5*	100 *13*	4575.2	2^+	
		2933.0 *10*	32 *13*	3290.9	2^+	
6514.4	4^+	2321.6†	100	4192.7	3^-	E_γ,I_γ: from ^{36}P β^- decay (1986Du07); in (t,pγ), 1971Ol02 assign 3290.9 level as final state for single transition from 6514.4 level. For this γ ray, $E\gamma$=3223.3 and δ=−0.03 *3*.
6690	(6^+)	1485	100	5206.1	5^-	
7120	$(1,2)^+$	2550	28 *7*	4575.2	2^+	
		3830	11 *7*	3290.9	2^+	
		7120	100 *7*	0	0^+	
7271.9	$(3^-,4^-,5^-)$	757.5	32 *5*	6514.4	4^+	
		1441.0	12 *5*	5830.9	3^-	
		2020.6	100 *7*	5251.2	3^-	
		2065.7	15 *5*	5206.1	5^-	
		2250.3	32 *5*	5021.5	4^-	
		3079.1	54 *12*	4192.7	3^-	

† Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

Q(β^-)=2937 *7*; S(n)=8036 *7*; S(p)=15150 *40*; Q(α)=−9329 *16* 2017Wa10
S(2n)=12340 *7*, S(2p)=29000 *70* (2017Wa10).
First identification of ^{38}S nuclide is by 1958Ne10, according to the 2012Th10 compilation of isotope discovery.
Other reactions:
1994De17: ^{40}Ar(e,e′2p) E=14.5 GeV; measured secondary protons.
1999Ai02: strong absorption radius deduced from measured cross section.
2005Ol04: ^{208}Pb(^{38}S,Xγ): γ rays at 1292 and 1513 reported using CLARA Ge detector array and PRISMA magnetic spectrometer. (Preliminary results).
Structure calculations: 2015St17, 2015Wu07, 2014Eb02, 2013Xu01, 2012Ut02, 2011Ka03, 2011Si09, 2004In01, 2002Ro03, 1986Wo02. Consult NSR database for 16 other theory references.
Comparison of experimental and theoretical g factors: 2007Be42.
Additional information 1.

^{38}S Levels

Cross Reference (XREF) Flags

A	^{38}P β^- decay (0.64 s)	F	^{36}S(t,pγ)	K	^{160}Gd(^{36}S,^{38}Sγ)
B	^{39}P β^-n decay (0.28 s)	G	^{36}S(^{14}C,^{12}C)	L	^{208}Pb(^{36}S,^{38}Sγ)
C	^{1}H(^{38}S,^{38}S′)	H	^{36}S(^{18}O,^{16}O),(^{18}O,^{16}Oγ)	M	Coulomb excitation
D	^{12}C(^{48}Ca,Xγ)	I	^{40}Ar(^{11}B,^{13}N)		
E	^{36}S(t,p)	J	^{40}Ar(^{13}C,^{15}O)		

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0	0$^+$	170.3 min *7*	ABCDEFGHIJKLM	%β^-=100 T$_{1/2}$: weighted average of 172 min *1* (1958Ne10), 169.6 min *7* (1971En01), and 170.0 min *8* (1972Vi11).
1292.02 *20*	2$^+$	3.3 ps *+5−4*	A CDEFGHIJKLM	μ=+0.26 *10* (2006St21,2006Da08) B(E2)↑=0.0235 *30* (1996Sc31) J$^\pi$: L(t,p)=2 from 0$^+$. T$_{1/2}$: from B(E2)↑=0.0235 *30* in Coulomb excitation (1996Sc31). Other: >0.31 ps from DSAM in (t,pγ). μ: from g=+0.13 *5* (2006St21,2006Da08: high-velocity transient-field technique in Coulomb excitation). Compilation: 2014StZZ.
2805.1 *20*	(2$^+$)	0.08 ps *+9−5*	D F KL	J$^\pi$: 1513γ to 2$^+$; 0 and 4 less likely from RUL; shell-model predicts 2$^+$ (1994Fo04) in ^{160}Gd(^{36}S,^{38}Sγ). T$_{1/2}$: from DSAM in (t,pγ).
2825.3 *11*	4$^+$	>0.14 ps	DEFGH KL	J$^\pi$: L(t,p)=4 from 0$^+$. T$_{1/2}$: from DSAM in (t,pγ).
3375 *17*	(2$^+$)		E I	J$^\pi$: L(t,p)=2,(1) from 0$^+$ with L=2 preferred. J$^\pi$=1$^-$ not completely excluded.
3516.3 *7*	(1,2$^+$)		A	J$^\pi$: 3526.0γ to 0$^+$; 3$^-$ is less likely but not completely ruled out.
3658 *6*	(6$^+$)		DE KL	XREF: E(3690)K(3674)L(3674). J$^\pi$: L(t,p)=5,6; γ to 4$^+$; shell-model predicts 6$^+$ (1994Fo04) in ^{160}Gd(^{36}S,^{38}Sγ).
3725.3 *15*			GH	
4336 *20*	(4$^+$)		E	J$^\pi$: L(t,p)=4,(3) with L=4 preferred. J$^\pi$=3$^-$ not completely excluded.
4461 *22*	(3$^-$,4$^+$)		E GH	E(level): weighted average of 4430 *20* from (^{14}C,^{12}C) and 4478 *22* from (t,p). J$^\pi$: L(t,p)=3,4.
4990.2 *11*	(2$^+$)		A E	XREF: E(4955).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{38}S Levels (continued)

E(level)†	J^π	XREF	Comments
5064 *27*	(3^-)	E	J^π: L(t,p)=2,(1,3) with L=2 preferred. $J^\pi=1^-,3^-$ not completely excluded.
5278 *28*	(2^+)	E	J^π: L(t,p)=3,(2) with L=3 preferred. $J^\pi=2^+$ not completely excluded.
6005.6 *11*	(3^-)	A E GH	J^π: L(t,p)=2,(1,3) with L=2 preferred. $J^\pi=1^-,3^-$ not completely excluded.
6605 *60*		E	J^π: L(t,p)=3,(4) with L=3 preferred. $J^\pi=4^+$ not completely excluded.

† From a least-squares fit to γ-ray energies where available and the rest from (t,p), unless otherwise noted.

$\gamma(^{38}S)$

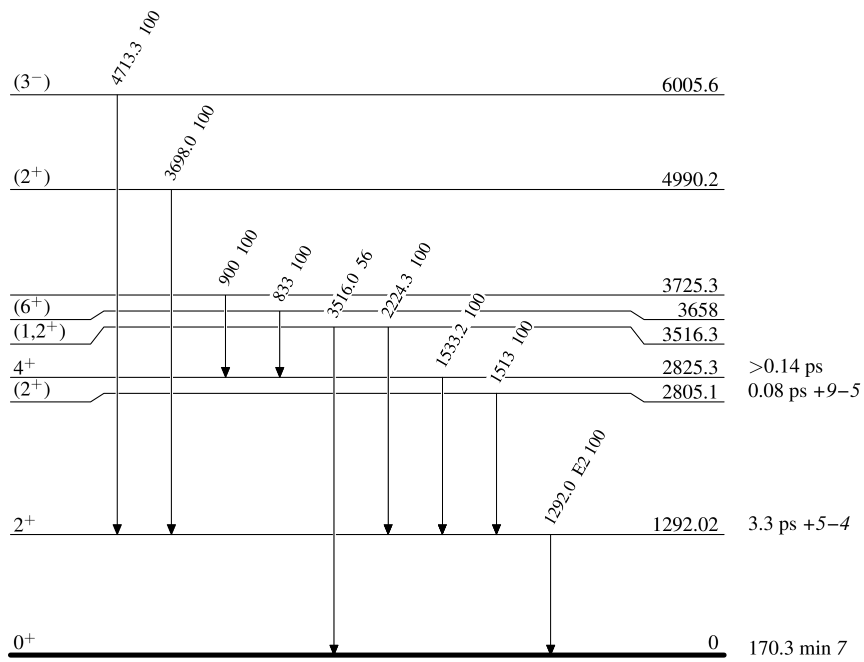
E_i(level)	J_i^π	E_γ†	I_γ	E_f	J_f^π	Mult.	Comments
1292.02	2^+	1292.0 *2*	100	0	0^+	E2	B(E2)(W.u.)=6.3 *9* E_γ: weighted average of 1292.3 *4* from ^{38}P β^- decay (0.64 s) and 1291.9 *2* from (t,pγ). Others: 1296.2 *4* from (^{18}O,^{16}Oγ), 1292 *4* from (^{48}Ca,Xγ), 1286 *19* from Coulomb excitation.
2805.1	(2^+)	1513 *2*	100	1292.02	2^+		E_γ: from (t,pγ). Other: 1515 *6* from (^{48}Ca,Xγ).
2825.3	4^+	1533.2 *10*	100	1292.02	2^+		E_γ: from (t,pγ). Other: 1538.2 *5* from (^{18}O,^{16}Oγ), 1534 *5* from (^{48}Ca,Xγ).
3516.3	$(1,2^+)$	2224.3 *8*	100 *18*	1292.02	2^+		E_γ,I_γ: from ^{38}P β^- decay.
		3516.0 *10*	56 *18*	0	0^+		E_γ,I_γ: from ^{38}P β^- decay.
3658	(6^+)	833 *5*	100	2825.3	4^+		E_γ: from (^{48}Ca,Xγ). Other: 849 from (^{36}S,^{38}Sγ).
3725.3		900 *1*	100	2825.3	4^+		E_γ: from (^{18}O,^{16}Oγ) with value adjusted by 3 keV lower than the original value=903 *1* since all values in that dataset are systematically lower than values in other studies.
4990.2	(2^+)	3698.0 *10*	100	1292.02	2^+		E_γ: from ^{38}P β^- decay.
6005.6	(3^-)	4713.3 *10*	100	1292.02	2^+		

† Values from (^{18}O,^{16}Oγ) seem systematically higher as compared to those in β^- decay, (t,pγ) and ^{160}Gd(^{36}S,^{38}Sγ): 4 keV for 1296γ, 5 keV for 1538γ.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{38}_{16}S_{22}$