

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst		NDS 134,1 (2016)	1-Feb-2016

$Q(\beta^-) = -4004.43$ 6; $S(n) = 11093.09$ 4; $S(p) = 14145.7$ 12; $Q(\alpha) = -10614.8$ 1 [2012Wa38](#)

Other reactions:

$^{14}\text{C}(^{14}\text{C}, 2n\gamma)$: [2002Ta10](#).

$^{24}\text{Mg}(^{18}\text{O}, ^{16}\text{O})$: [1980Be43](#).

$^{26}\text{Mg}(\pi^+, \pi^+), (\pi^+, \pi^-)$: [1993Cl07](#).

$^{26}\text{Mg}(n, n), (n, n')$: [1983Ta09](#).

$^{26}\text{Mg}(d, d)$: [1987Nu01](#), [1983Vo08](#), [1979To20](#).

$^{26}\text{Mg}(t, t)$: [1987Pe09](#), [1986Pe13](#), [1983Ko18](#), [1982Sc21](#).

$^{26}\text{Mg}(^3\text{He}, ^3\text{He})$: [1989Va09](#), [1982Ve13](#), [1980Tr02](#).

$^{26}\text{Mg}(\text{HI}, \text{HI})$: [1989Ru05](#), [1988Ot08](#), [1987Wi09](#), [1986Ci06](#), [1982Fu09](#), [1982Sp05](#), [1981Fu04](#), [1980St06](#).

$^{27}\text{Al}(^{13}\text{C}, ^{14}\text{N})$: [1988Va08](#), [1987Ad07](#).

$^{28}\text{Si}(^{18}\text{O}, ^{20}\text{Ne})$: [1979Me12](#).

$^{29}\text{Si}(n, \alpha)$: [2011Zh22](#), [2010Zh44](#).

$^{208}\text{Pb}(^{26}\text{Mg}, ^{26}\text{Mg})$, $E = 200$ MeV: [1991He09](#).

Production cross section 0.394 mb 44, from ^{136}Xe spallation by proton – [2007Na31](#).

^{26}Mg from bombarding ^{28}Si with protons, $E = 1$ GeV, and 2p emission – [2004Va22](#).

^{26}Mg from fragmentation reactions at relativistic energies – [2001Ge05](#).

 ^{26}Mg LevelsCross Reference (XREF) Flags

A	$^{26}\text{Na} \beta^-$ decay	H	$^{24}\text{Mg}(t, p)$	O	$^{26}\text{Mg}(e, e')$
B	$^{26}\text{Al} \varepsilon$ decay (7.17×10^5 y)	I	$^{25}\text{Mg}(n, \gamma)$ $E = \text{thermal}$	P	$^{26}\text{Mg}(p, p'), (p, p' \gamma)$
C	$^{26}\text{Al} \varepsilon$ decay (6.3460 s)	J	$^{25}\text{Mg}(n, \gamma), (n, n): \text{res}$	Q	$^{26}\text{Mg}(\alpha, \alpha' \gamma), ^{22}\text{Ne}(\alpha, n)$
D	$^{27}\text{Na} \beta^- n$ decay	K	$^{25}\text{Mg}(d, p)$	R	$^{27}\text{Al}(\mu^-, \nu n \gamma)$
E	$^{18}\text{O}(^{13}\text{C}, \alpha n \gamma)$	L	$^{25}\text{Mg}(\alpha, ^3\text{He})$	S	$^{27}\text{Al}(d, ^3\text{He})$
F	$^{22}\text{Ne}(^6\text{Li}, d)$	M	$^{26}\text{Mg}(\text{pol } \gamma, \gamma'), (\gamma, \gamma')$	T	$^{27}\text{Al}(t, \alpha)$
G	$^{23}\text{Na}(\alpha, p \gamma)$	N	$^{26}\text{Mg}(\gamma, n): \text{res}$	U	$^{28}\text{Si}(\mu^-, \nu p n \gamma)$

$E(\text{level})^\dagger$	J^π	$T_{1/2}^d$	XREF	Comments
0.0	0^+	stable	ABCDEFGHI KLM OPQRSTU	J^π : $L=0$ in (t,p). Optical spectroscopy (1931Mu02 , 2013Ma15). Charge radius=2.99 fm 4 (2014Wa14). Matter radius=3.0340 fm 26 quoted in 2012Yo01 from literature.
1808.74 4	2^+	476 fs 21	AB DE GHI KLM OPQR TU	$\mu = +1.0$ 3; $Q = -0.14$ 3 μ : From 1981Sp04 , 2014StZZ . Q : Also -0.10 3, both from 1982Sp05 , 2014StZZ . J^π : $L=2$ in (t,p) and (p,p'). $T_{1/2}$: From mean lifetime of 687 fs 30: Weighted average of 653 fs 39 (1981Dy01 – $(^{23}\text{Na}, \text{P})$), 700 fs 50 and 730 fs 30 (1977Sc36), 654 fs 34 (1982Sp05), and 683 fs 75 (1983Ko18 – (t,t')). Uncertainty – lowest input value.
2938.33 4	2^+	141 fs 8	AB E GHI KLM OPQR TU	J^π : $L=2$ in (t,p) and (p,p'). $T_{1/2}$: From mean lifetime 204 fs 12 (1981Dy01 – $(^{23}\text{Na}, \text{P})$).
3082.9 20			E	
3420.2 17			E	
3564.9 19			E	
3588.56 9	0^+	6.45 ps 48	E GHI KLM OPQR TU	J^π : $L=0$ in (t,p).

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF	Comments
3941.57 4	3 ⁺	0.83 ps 12	A E GHI KL OP R TU	T _{1/2} : From mean lifetime of 9.3 ps 7: Weighted average of 9.6 ps 12 (1974Be08), 9.5 ps 7 (1974Be43), and 9.29 ps 23 (1984Bh03) – all from (α,p). Uncertainty – lowest input value. J ^π : 3 in (p,p') and 1003.25γ M1+E2 to 2 ⁺ . T _{1/2} : From unweighted mean lifetime values of 1.38 ps 11 (1974Be08 – (α,p)) and 1.02 fs 13 (1981Dy01 – (²³ Na,P)).
4318.89 5	4 ⁺	272 fs 16	A E GHI L oPQR TU	J ^π : 4 in (p,p'),(p,p'γ). Natural parity in (α,α'). T _{1/2} : From mean lifetime of 392 fs 23 (1981Dy01 – (²³ Na,P)).
4332.52 5	2 ⁺	20 fs 3	A E GHI LM OPQR U	J ^π : (2) in (p,p'),(p,p'γ), β ⁻ from 3 ⁺ in ²⁶ Na β ⁻ Decay, natural parity in (α,α').
4350.09 4	3 ⁺	105 fs 28	A E G I L OPQR	T _{1/2} : From mean lifetime of 29 fs 4 (1981Dy01 – (²³ Na,P)). J ^π : 3 in (p,p'),(p,p'γ), M1+E2 γ to 2 ⁺ . T _{1/2} : From mean lifetime of 150 fs 40: Weighted average of 180 fs 55 (1972Du05 – (α,p)), 90 fs 40 (1968Ha18 – (p,p')), 160 fs 55 (1975Wa10 – (α,α')). Uncertainty – lowest input value.
4644.9 13 4835.13 5	2 ⁺	28 fs 6	A E GHI KL P R T	J ^π : L=2 in (t,p). T _{1/2} : From mean lifetime 41 fs 8 (1981Dy01 – (²³ Na,P)). Other value: 37 fs 8 (1986Gl06 – (α,p)).
4901.44 7	4 ⁺	29 fs 6	A E GHI KL OPQR T	J ^π : From 1969Ca18 (α,α'γ) – α-γ angular correlation. L=4 in (p,p'),(p,p'γ). T _{1/2} : From mean lifetime 42 fs 8 (1981Dy01 – (²³ Na,P)). Other value: 34 fs 8 (1986Gl06 – (α,p)).
4972.30 13	0 ⁺	446 fs 70	GHI KLM OPQR T	J ^π : L=0 in (t,p). T _{1/2} : From mean lifetime of 644 fs 100: Weighted average of 760 fs 240 (1972Du05 – (α,p)), 540 fs 250 (1968Ha18 – (p,p')), 640 fs 100 (1975Wa10 – (α,α')). Uncertainty – lowest input value.
5180.5 7 5291.74 6	2 ⁺	<10 fs	A E GHI KLM OPQR T	J ^π : L=2 in (e,e') and (p,p'),(p,p'γ), L=(2) in (t,p), natural parity in (α,α'). T _{1/2} : From 1981Dy01 – (²³ Na,P). Other values: 15.9 fs 76 (1986Gl06 – (α,p)), <35 fs (1968Ha18 – (p,p')), 100 fs 60 (1975Wa10 – (α,α')).
5476.05 7	4 ⁺	21 fs 6	A E GHI KL OPQR T	J ^π : L=4 in (t,p). T _{1/2} : From mean lifetime of 30 fs 8: Weighted average of 35 fs 15 (1974Be08 – (α,p)) and 28 fs 9 (1986Gl06 – (α,p)). Other values: <70 fs (1972Du05 – (α,p)), <50 fs (1975Wa10 – (α,α')).
5691.08 19	(1 ⁺)	<8 fs	E G I L PQR T	J ^π : From 1990Ya07 – (α, ³ He), based on cross section measurement and DWBA calculations. Possible unnatural parity in (α,α'). J ^π : From (1986Gl06 – (α,p)). Other values: <35 fs (1972Du05), 70 fs 50 (1986Gl06) – both from (α,p)).
5711.2 8 5715.91 8	(1 ⁺ ,2 ⁺) 4 ⁺	53 fs 16	A E H K E G I L OPQ	J ^π : L=2 in (d,p), γ to 0 ⁺ . J ^π : β ⁻ from 3 ⁺ in ²⁶ Na β ⁻ Decay, natural parity in (α,α'), γ transitions to 3 ⁺ , 2 ⁺ ; L=4 in (e,e'). T _{1/2} : From mean lifetime of 77 fs 23: weighted average of 125 fs 35 (1974Be08 – (α,p)), 48 fs 23 (1986Gl06 – (α,p)), and 220 fs 100 (1975Wa10 – (α,α')). Other mean lifetime: <50 fs (1972Du05 – (α,p)).
6125.47 5	3 ⁺	14 fs 6	A E GHI KL OPQ ST	J ^π : From angular distribution measurements and analysis in

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF						Comments
6256.2 14	0 ⁺	53 fs 31	E	GH	KL	OP	Q	T	1990Ya07 – (α , ³ He) and from (e,e'). Unnatural parity in (α , α'). E(level): From ((α , $\alpha\gamma$) – 1975Na06), also in ((α ,p γ) – 1986Gl06). J ^π : L=0 in (t,p). T _{1/2} : From mean lifetime of 77 fs 45: Weighted average of 60 fs 50 (1968Ha18 – (p,p')), 90 fs 45 (1975Wa10 – (α , α')). Uncertainty – lowest input value.
6483.2 15			E						
6622.94 14	(4 ⁺)	19 fs 5	A	E	G	L	PQ	ST	E(level): Weighted average of 6621 3 (1976Mo27 – (p,p')), 6623 1 (1986Gl06 – (α , $\pi\gamma$)), and 6621 2 (1975Na06 – (α , $\alpha\gamma$)). J ^π : From (α , $\pi\gamma$), based on particle- γ -ray angular correlation. T _{1/2} : Other: <70 fs (1975Wa10 – (α , α')).
6634.2 3		≤7 fs	E	G	I				
6745.13 15	2 ⁺	16 fs 8	A	GH	KL		PQ	ST	J ^π : L=2 in (p,p'),(p,p' γ). T _{1/2} : From mean lifetime of 23 fs 11 (1986Gl06 – (α ,p)). Other mean lifetime values: 80 fs 40 (1968Ha18 – (p,p')), <50 fs (1975Wa10 – (α , α')).
6876.42 5	3 ⁻	83 fs 35		GH	KL		OP	Q	ST
6951.7 16			E						
6971.8 20	(4 ⁺)		E						J ^π : 3030 γ D+Q to 3 ⁺ ; Parity from shell model calculations.
6978.3 [‡] 8	(5 ⁺)	14 fs 5	E	G			PQ	ST	J ^π : From γ -decay and γ -feeding (Table 26.12a in 1990En08).
7061.90 20	1 ⁻	≤7 fs		HI	L		oPQ	ST	J ^π : L=1 in (t,p).
7099.68 13	2 ⁺	≤14 fs	A	E	HI	LM	oPQ	ST	J ^π : L=2 in (t,p).
7200 20	(0,1) ⁺						P		J ^π : From 1989Cr02 (p,p'), based on measured cross section and calculation.
7246.49 [‡] 17	3 ⁺ ^b	≤7 fs	A				OP	ST	
7261.40 4		≤7 fs		E	HI	K	P	T	XREF: T(7252).
7282.82 6	(4 ⁻)	24 fs 8		E	HI	KL	P	S	J ^π : From (α ,p γ) and γ -feeding.
7348.86 6	3 ⁻				GH	KL	PQ	ST	J ^π : L=3 in (t,p). Natural parity (α , ³ He).
7371.36 17	2 ⁺ ^b		A		G	I		OPQ	ST
7396.0 [‡] 10	(5 ⁺)	≤14 fs		E	GH		PQ	ST	J ^π : 1680 γ (M1+E2) to 4 ⁺ . D+Q γ from 5 at 9064.
7428 [#] 3	(0,1) ⁺				H		P	S	J ^π : From 1989Cr02 (p,p'), based on measured cross section and calculation.
7541.71 6	(2 ⁻)	≤7 fs		E	HI	K	P	T	J ^π : From R(θ) with gate on $\Delta J=2$ transition and pol values (2014Bh03 – (¹³ C, $\alpha n\gamma$)).
7677 [‡] 1	(4 ⁺)	≤11 fs		GH	L	P	ST		J ^π : γ -transition to 4 ⁺ ,3 ⁺ ; Natural parity (α , ³ He).
7696.8 8	1 ⁽⁻⁾			HI	LM	OP	S		J ^π : From 1993Ve03 (d, ³ He); 1 ⁺ in 1990Ya07 – (α , ³ He).
7725.8 4	3 ⁺ ^b		A	G	I	K	OP	ST	XREF: T(7716).
7773.7 [‡] 6	(4 ⁺)	≤7 fs	A	E		KL	P	ST	XREF: T(7762). J ^π : From R(θ) with gate on $\Delta J=2$ transition and pol values (2014Bh03 – (¹³ C, $\alpha n\gamma$)).
7817.8 [@] 7	(2,3) ⁺		A		H	K	oPQ	T	J ^π : L=0+2 in (d,p).
7824 [@] 3	3 ⁻ ^b				G	L	oP	RS	J ^π : Natural parity (α , ³ He).
7840 [‡] 2	2 ⁺				G		o		J ^π : γ transitions to 0 ⁺ , 2 ⁺ , and 4 ⁺ .
7851 3							P		
7950.0 [‡] 20	5 ⁻	14 fs 6	E	H	KL		P	ST	J ^π : From 1989Se01 (pol p,p'), based on angular distributions and analyzing power.

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF				Comments
8034@ 2			G	P	ST		L=6 in (p,p'),(p,p'γ) probably erroneous.
8052.4 7	2(+)		GHI	P	RS		J ^π : L=2 in (t,p). L=1 in (d, ³ He).
8184.93 15	3- ^b		G I L	OPQ	ST		
8201.1 7	(6 ⁺)	≤14 fs	E G	PQ	S		E(level): Weighted average of 8201 2 (1975Na06 – (α,α'γ) and 8202 1 (1986GI0 – (α,pγ)). J ^π : 1223γ d to (5 ⁺), γ to 4 ⁺ .
8227.31 24	1- ^b	1.0 ^e fs 2	GHI	M OP	ST		XREF: H(8240). J ^π : L=1 in (t,p).
8250.58 16	(3 ⁺) ^b		G I L	OP	S		J ^π : Natural parity in (α, ³ He) does not agree.
8399 3				P	T		XREF: T(8384).
8458.9 4	3 ⁺ ^b		G I	OP	ST		J ^π : L=2 in (d, ³ He).
8464 2			G				
8472.3 [‡] 16	(6 ⁺)	≤14 fs	E G	PQ	S		J ^π : 1494γ D+Q to (5 ⁺), γ transitions to 4 ⁺ .
8503.7 3	1 ⁻		G I	M P	ST		XREF: T(8488). J ^π : In (pol γ,γ), based on angular correlation and polarization measurements (2009Lo06).
8532.1 4	(2 ⁺) ^b		G I	OP	ST		XREF: T(8518).
8576 [#] 3				P	ST		XREF: T(8566).
8625 [‡] 1	5 ⁻	29 fs 6	GH	L	PQ ST		XREF: T(8611). J ^π : From 1989Se01 (pol p,p'), based on angular distributions and analyzing power. Also in (α,pγ). Natural parity (α, ³ He).
8670 [‡] 1	(3,5)	≤7 fs	G	P	ST		XREF: T(8660). J ^π : 3193γ and 4350.7γ D+Q to 4 ⁺ .
8705.6 3	(2 to 4) ⁺		G I L	PQRST			J ^π : L=2 in (d, ³ He) and from γ decay.
8863.8 4	2 ⁺		GHI	P	ST		J ^π : L=2 in (t,p).
8903.52 9	(2 ⁺) ^b		E G I L	OP	ST		XREF: L(8914)T(8889).
8930 [‡] 2			GH	P	ST		XREF: T(8917).
8959.4 5	1 ⁻		I	M P	S		J ^π : In (pol γ,γ), based on angular correlation and polarization measurements (2009Lo06).
9020 [‡] 2			G		T		
9043.4 9	3(+) ^b		G I L	OP RS			J ^π : Natural parity (α, ³ He) does not agree. Also L=1 in (d, ³ He).
9064@ 2	5 ⁺	≤7 fs	G	PQ	S		J ^π : From 1986GI06 – (α,pγ), 1668γ D+Q to (5 ⁺), γ transition to 4 ⁺ .
9111.2 [‡] 5	6 ⁺	≤11 fs	G	PQ	ST		J ^π : From 1986GI06 – (α,pγ), γ transitions to 4 ⁺ , (5 ⁺).
9139.5 13	1			M			J ^π : From (γ,γ').
9169 [‡] 3	(6 ⁻) ^{&}	26 fs 8	E G	L P	ST		
9206 [‡] 2			G		T		
9238.9 8	1(+)	314 ^e as 40	I	LM OP	ST		XREF: L(9256). J ^π : From (γ,γ') based on angular correlation and polarization measurements. Also in 1989Cr02 – (p,p'). Uncertain parity by evaluators for L=1 in (d, ³ He).
9261 [‡] 2	(4 ⁺)		GH	P			J ^π : L=4 in (t,p); γ to 3 ⁺ .
9281 [#] 3	(2 ⁺) ^b			oP			
9291 [‡] 2			G	o	T		
9304 2			G	oP			
9316@ 2			G	P			
9325.57 20	(2 ⁺ to 4 ⁺)		G I L	P			J ^π : γ to 2 ⁺ , 3 ⁺ , and 4 ⁺ .

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF			Comments
9371 [‡] 2	4 ⁺		GH	p	T	J ^π : L=4 in (t,p).
9383 [‡] 1	6 ⁺	≤7 fs	fG	p	S	J ^π : (4 ⁺ ,6 ⁺) in 1986G106 (α,pγ); 2404.6γ d to (5 ⁺) and 2759.9γ and 3666.8γ Q to 4 ⁺ .
9427.8 4	3 ⁺ ^b		fG I	OP	ST	
9471 [‡] 2	(1 to 5) ⁺		G	P	ST	J ^π : L=2 in (d, ³ He), γ to 3 ⁺ .
9540.3 [@] 15	5 ⁺	≤14 fs	E G	P	ST	J ^π : From 1986G106 (α,pγ). 2562γ d to (5 ⁺), 5221γ D+Q to 4 ⁺ .
9563.5 8	1 ⁺	563 ^e as 99	LM	P	T	E(level),J ^π : From 2009Lo06 – (γ,γ′). Spin and parity based on angular correlation and polarization measurements.
9574.06 11	(2 ⁻ to 4)		G I	P	S	J ^π : From γ decay.
9579 [#] 3	4 ⁺		H	P		J ^π : L=4 in (t,p).
9590 2			G			
9617.0 9	(1 to 3) ⁻		I	P	ST	J ^π : L=1 in (d, ³ He); γ to 2 ⁺ .
9681 [‡] 2	(0 to 5) ⁺		G	P	ST	J ^π : L=2 in (d, ³ He).
9714 [#] 3			L	OP	T	
9770.8 9	1 ⁽⁻⁾		M			J ^π : From (γ,γ′).
9771 [‡] 2			G	P	T	
9779 [#] 3	1 ⁺		L	P		J ^π : From 1989Cr02 – (p,p′) – angular distribution measurements.
9814 [‡] 2			G	Op	T	
9829.5 [‡] 14	(5,7) ⁺	37 fs 10	E G	p	T	J ^π : From 1986G106 – (α,pγ) – angular distribution measurements.
9856.8 [#] 4	2 ⁺		HI	OP		J ^π : L=2 in (t,p).
9883 [#] 3				P	T	
9900.3 [@] 10	3 ⁺ ^b		G	OP		
9927 [‡] 2			G		T	
9939 [‡] 2			G	P		
9967 [@] 2	2 ⁺		GH	P	T	J ^π : L=2 in (t,p).
9982 [‡] 2			fG	p		
9989 [‡] 1	(6 ⁺)	≤7 fs	fG	p		J ^π : (M1+E2) γ to (5 ⁺) and (6 ⁺).
10040 [@] 2	5 ⁻		GH	P	T	J ^π : L=5 in (t,p).
10069 [‡] 2			G		T	
10102.5 4	1 ⁻		I	M	P	J ^π : From (γ,γ′).
10126.7 6	4 ⁺		GHI	P	T	XREF: G(10122)H(10108). J ^π : L=4 in (t,p).
10136 3				P		
10147.1 1	1 ⁺	112 ^e as 15	LM	P		E(level),J ^π : From (γ,γ′).
10159 [#] 3	0 ⁺		H	P		J ^π : L=0 in (t,p).
10184 [‡] 2			G	o		
10219.9 9			I	oP	T	
10234 2			G			
10271 [#] 3	2 ⁺		H	P	T	J ^π : L=2 in (t,p).
10319.5 7	1 ⁺	345 ^e as 83	M	P	T	E(level),J ^π : From (γ,γ′).
10328 3				P		
10341 [#] 3			L	P		J ^π : 1 ⁺ in (α, ³ He).
10349.4 9	(0 ⁺ to 4 ⁺)		G I	P		J ^π : γ to 2 ⁺ .
10362.26 21	(2 ⁺ to 4 ⁺)		G I	P	T	J ^π : γ to 2 ⁺ , 3 ⁺ , 4 ⁺ .
10377 2			G			

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF			Comments
10400 15					T	
10414 [#] 3	4 ⁺		H	P	T	J ^π : L=4 in (t,p).
10487 [#] 3				oP	T	
10493 [#] 3	2 ⁺			oP		J ^π : From (e,e'). Note for doublet.
10516 [#] 3	(2 ⁺)		H	oP	T	J ^π : L=(2) in (t,p).
10529 [@] 2			G	P		
10567 3			f	P		
10573.3 8	1 ⁻	0.20 eV 5		M		J ^π : From (γ,γ').
10576 2			fG			
10600.1 4	(1 ⁺ to 4 ⁺)		G I	P		XREF: G(10590). J ^π : From γ decay.
10647.3 8	1 ⁺	97 ^e as 5		LM	P	E(level),J ^π : From (γ,γ').
10650 1	(4 ⁻ to 7 ⁻)	21 fs 6	G			J ^π : From γ decay.
10681.9 3				P		
10693 3			G L	P		
10707 [@] 3			G	P		
10718.75 9				P		
10726 3				P		
10745.98 12				P		
10767 [@] 2			G	P		
10805.9 4	(0 ⁺ to 4 ⁺)		f I	M	P	J ^π : γ to 2 ⁺ .
10824 [#] 3	(2 ⁺)		f	OP		J ^π : From (e,e').
10881 3				P		
10893 3				P		
10915 3				P		
10927 [#] 3	+			L	P	J ^π : Natural parity from (α, ³ He).
10945 [@] 3			G J	P		
10949.1 8	1 ⁻	1.87 eV 30		M		E(level),J ^π : From (γ,γ').
10978 [#] 3				oP		
10998 [#] 3				oP		
11012 [@] 3			G	oP		
11048 3				P		
11084 3				P		
11114 3	(2 ⁺)		J	P		J ^π : Assignment in 2012Ma14 ((n,γ),(n,n):res, based on R-matrix analysis.
11142 6					Q	
11153.5 10	1 ⁺ ^a		J	MN	P	E(level),J ^π : From (γ,γ').
11162.93 7	2 ⁺ ^c	5.08 keV 8	J			
11169.30 7	(3 ⁺) ^c	1.56 keV 8	J			
11171 [#] 3			J L	P		
11183.06 6	(1 ⁻) ^c	0.6 eV 2	J			
11189.24 6	3 ⁺ ^c	5.24 keV 4	J			
11191 2			G J			
11196.51 6		2 eV 1	J			
11243.36 6	(2 ⁻) ^c	5.520 keV 20	J			
11274.13 5	(2 ⁺) ^c	0.590 keV 20	J			
11280.03 5	4 ⁽⁻⁾ ^c	1.730 keV 20	J			
11285.52 7	1 ⁻ ^c	1.41 keV 6	J			
11286.24 5	(2 ⁺) ^c	0.7 eV 7	J			
11289.06 4	(2 ⁻) ^c	2 eV 1	J			
11293.28 5		0.230 eV 20	J			

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Adopted Levels, Gammas (continued) ^{26}Mg Levels (continued)

E(level) [†]	J ^π	T _{1/2} ^d	XREF		Comments
11296.04 9	(2 ⁻)	12.40 keV 10	J		J ^π : Spin assignment based on χ^2 in 2012Ma14 ((n, γ),(n,n):res).
11310.57 4	(1 ⁻) ^c	0.4 eV 2	J	q	
11326.15 6	(1 ⁻)	0.3 eV 2	J	q	
11328.20 7	(1 ⁻) ^c	50 eV 20	J		
11329.11 4			FG J		E(level): From (n, γ),(n,n):res.
11336.88 5	(1 ⁻) ^c	0.1 eV 1	J		
11344.77 7	4 ⁽⁻⁾ ^c	3.49 keV 6	J		
11361.84 23	(2 ⁺) ^c	3.29 keV 5	J		
11392.57 5	(5 ⁺) ^c	240 eV 10	J		
11441.08 6	4 ⁺ ^c	2.020 keV 40	J	Q	
11457 2			FG		
11465.62 8	(5 ⁻) ^c	8.91 keV 8	J	Q	XREF: Q(11461).
11500.09 5	(1 ⁻) ^c	25 eV 10	J	Q	
11526.82 10	(3 ⁻) ^c	3.00 keV 10	J	Q	
11570 2			G		
11587.99 7	(2 ⁻) ^c	1.80 keV 10	J		
11608.29 6	(4 ⁻) ^c	0.84 keV 4	J		
11611 5			f	Q	
11630 2				Q	
11646 5		<3 keV	f	Q	
11749 10				Q	
11795 10		<3 keV		Q	
11827 2		<3 keV	F	Q	
11890 2		<3 keV		Q	
11909 2		6 keV 1		Q	
11945 10	(6 ⁻) ^{&}		L	P	E(level): From (α , ³ He).
12049 2		6 keV 2		Q	
12088 2			G		
12110 2		25 keV 2		Q	
12141 2		15 keV 2		Q	
12196 2			G		
12345 2	0	40 keV 5		Q	
12479 [‡] 2	(6 ⁻) ^{&}		G	L P	XREF: L(12512).
12865 10	(6 ⁻) ^{&}			L P	E(level): From (α , ³ He).
12958 10				L	
13958 10				L	
14542 10	(6 ⁻) ^{&}		L	P	E(level): From (α , ³ He).
16580 10	(6 ⁻) ^{&}		L	P	E(level): From (α , ³ He).
18050 50	(6 ⁻) ^{&}			P	T=2

[†] From a least-squares fit to γ -ray energies, except otherwise noted. γ rays without uncertainty were calculated after the fit. Source of excited level energies for particle data sets are noted. During least-squares fit, the uncertainty for 1384.70 γ from 5716 keV level 958.81 γ from 4901 keV level were doubled to obtain the χ^2 value below normalized $\chi^2=1.33$. Yet 892.85 γ from 4835, 569.67 γ from 4901, 2776.82 γ from 5716, and 1223.35 γ from 6125 yield poor fit including aforementioned γ rays.

[‡] From [1986Gl06](#) (α ,p γ).

[#] From [1976Mo27](#) – (p,p'),(p,p' γ).

@ Weighted average of data from ([1976Mo27](#) – (p,p')) and ([1986Gl06](#) – (α ,p γ)).

& From [1989Se01](#) (pol p,p'), based on measured angular distributions and analyzing power.

^a Assignment in [2012Ma14](#) (n, γ),(n,n):res, based on R-matrix analysis.

^b From (e,e'), based on form factors, γ decay and shell model calculations.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

 ^{26}Mg Levels (continued)

^c Assignment in [2012Ma14](#) (n, γ),(n,n):res, based on R-matrix analysis.

^d From [1986Gl06](#) (α ,p γ), except otherwise noted.

^e Deduced by evaluators from Γ_0 in [1984Be26](#) – (γ , γ').

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments
1808.74	2 ⁺	1808.68 4	100	0.0	0 ⁺	E2		B(E2)(W.u.)=13.4 6
2938.33	2 ⁺	1129.61 4	100.0 6	1808.74	2 ⁺	M1+E2	-0.12 2	B(M1)(W.u.)=0.096 6; B(E2)(W.u.)=6.1 21
								δ : From 1963Br15 – (p,p'γ). Other values: -0.16 4 (1975Wa10 – (α,α'γ)), -0.11 6 (1977Ki02 – (p,p'γ)), -0.09 5 (1969Ca18 – (α,α')).
		2938.15 5	10.7 6	0.0	0 ⁺	E2		B(E2)(W.u.)=0.39 4
3082.9		1274.1 [#] 20	100	1808.74	2 ⁺			
3420.2		1611.4 [#] 17	100	1808.74	2 ⁺	D+Q [#]		
3564.9		1756.1 [#] 19	100	1808.74	2 ⁺			
3588.56	0 ⁺	1779.74 8	100	1808.74	2 ⁺	E2		B(E2)(W.u.)=1.07 8
3941.57	3 ⁺	1003.25 4	100.0 16	2938.33	2 ⁺	M1+E2	-0.05 4	B(M1)(W.u.)=0.0162 24; B(E2)(W.u.)=0.23 +37-22
								δ : Weighted average of -0.06 6 (1968FeZY), -0.04 5 (1974Na22), and -0.05 10 (1975Wa06).
		2132.71 4	61.3 16	1808.74	2 ⁺	M1		B(M1)(W.u.)=0.00104 16
4318.89	4 ⁺	1380.88 18	1.85 11	2938.33	2 ⁺			E_γ, I_γ : From ²⁶ Na β ⁻ decay (2005Gr07).
		2510.01 5	100 2	1808.74	2 ⁺	[E2]		B(E2)(W.u.)=4.5 3
4332.52	2 ⁺	1394.28 7	19.3 10	2938.33	2 ⁺			
		2523.69 6	100.0 13	1808.74	2 ⁺			
		4332.2 3	7.6 8	0.0	0 ⁺	[E2]		B(E2)(W.u.)=0.24 5
4350.09	3 ⁺	409.4 ^f 5	0.041 ^f 25	3941.57	3 ⁺			E_γ, I_γ : More precise 409.22γ 20 in ²⁶ Na β ⁻ decay (2005Gr07) yield poor fit.
								Branching from ²⁶ Na β ⁻ decay (2005Gr07).
		1411.72 4	93 4	2938.33	2 ⁺	M1+E2	-0.31 6	B(M1)(W.u.)=0.033 9; B(E2)(W.u.)=9 4
								δ : From 1974Na22. Other value: -0.31 16 (1975Wa10).
		2541.18 6	100 4	1808.74	2 ⁺	M1+E2	-0.10 4	B(M1)(W.u.)=0.0066 18; B(E2)(W.u.)=0.06 5
								δ : Weighted average of -0.11 6 (1968FeZY), -0.09 6 (1974Na22).
4644.9		2836.0 [#] 13	100	1808.74	2 ⁺	D+Q [#]		
4835.13	2 ⁺	485.05 [@] 9	2.77 [@] 5	4350.09	3 ⁺			
		502.73 [@] 9	2.65 [@] 4	4332.52	2 ⁺			I_γ : 2.1 4 in (n,γ).
		892.85 [@] 19	0.26 [@] 4	3941.57	3 ⁺			
		1896.72 5	100.0 [@] 4	2938.33	2 ⁺	M1		B(M1)(W.u.)=0.096 21
		3026.6 [@] 5	4.19 [@] 15	1808.74	2 ⁺			I_γ : 4.8 5 in (n,γ).
		4834.61 18	10.8 [@] 9	0.0	0 ⁺	E2		B(E2)(W.u.)=0.15 4
								I_γ : 13.1 12 in (n,γ).
4901.44	4 ⁺	551.28 [@] 13	1.61 [@] 14	4350.09	3 ⁺			
		569.67 [@] 25	0.67 [@] 11	4332.52	2 ⁺			
		582.46 [@] 21	0.88 [@] 18	4318.89	4 ⁺			
		958.81 [@] 12	3.9 [@] 5	3941.57	3 ⁺			
		1962.99 [@] 24	1.89 [@] 14	2938.33	2 ⁺	[E2]		B(E2)(W.u.)=2.5 6

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments	
4901.44	4 ⁺	3092.31 11	100 1	1808.74	2 ⁺	[E2]		B(E2)(W.u.)=14 3	
4972.30	0 ⁺	2033.88 12	100 4	2938.33	2 ⁺	E2		B(E2)(W.u.)=7.4 13	
		3163.35	8 ^b 4	1808.74	2 ⁺	E2		B(E2)(W.u.)=0.06 4	
5180.5		1238.9 [#] 7	100	3941.57	3 ⁺				
5291.74	2 ⁺	456.0 [@] 4	1.9 [@] 7	4835.13	2 ⁺				
		1350.20 16	3.4 7	3941.57	3 ⁺	[M1]		B(M1)(W.u.)>0.026	
		2353.27 5	100.0 14	2938.33	2 ⁺				
		3482.2 5	6.6 9	1808.74	2 ⁺			E _γ : Weighted average of data from (n,γ) and ²⁶ Na β ⁻ decay (2005Gr07).	
		5291.1 5	3.9 7	0.0	0 ⁺	E2		B(E2)(W.u.)>0.10	
5476.05	4 ⁺	640.5 [@] 3	19 [@] 6	4835.13	2 ⁺				
		1157.23 6	100 4	4318.89	4 ⁺	M1+E2	+0.09 7	B(M1)(W.u.)=0.34 10; B(E2)(W.u.)=12 +19-11	
								δ: From 1975Wa10. Other: +0.05 19 (1974Na22).	
		1534.49 15	51 4	3941.57	3 ⁺	M1+E2	-0.27 4	B(M1)(W.u.)=0.071 22; B(E2)(W.u.)=12 5	
								δ: From 1974Na22. Other: -0.27 15 (1975Wa10).	
		3667.4 5	25 2	1808.74	2 ⁺	[E2]		B(E2)(W.u.)=1.1 4	
								E _γ : Weighted average of data from (n,γ) and ²⁶ Na β ⁻ decay (2005Gr07).	
5691.08	(1 ⁺)	1358.4 9	6 2	4332.52	2 ⁺				
		2752.56 25	46 3	2938.33	2 ⁺				
		3882.0 3	100 5	1808.74	2 ⁺				
		5691.1 9	11 3	0.0	0 ⁺	D			
5711.2	(1 ⁺ ,2 ⁺)	2122.5 [#] 8	100	3588.56	0 ⁺				
5715.91	4 ⁺	240.12 [@] 11	2.16 [@] 17	5476.05	4 ⁺				
		424.3 [@] 3	0.38 [@] 9	5291.74	2 ⁺				
		1365.54 20	95.1 [@] 4	4350.09	3 ⁺	M1+E2	-0.17 3	B(M1)(W.u.)=0.036 10; B(E2)(W.u.)=3.1 14	
								δ: Weighted average of -0.18 3 (1974Na22), -0.05 12 (1975Wa10).	
		1384.70 [@] 16	4.41 [@] 17	4332.52	2 ⁺				
		1774.0 9	100 5	3941.57	3 ⁺	M1+E2	-0.12 4	B(M1)(W.u.)=0.017 5; B(E2)(W.u.)=0.4 2	
								δ: From 1974Na22.	
		2776.82 20	51.4 [@] 14	2938.33	2 ⁺	[E2]		B(E2)(W.u.)=1.7 5	
		3906.8 [@] 7	3.35 [@] 22	1808.74	2 ⁺				
6125.47	3 ⁺	409.4 ^f 5	0.10 ^f 5	5715.91	4 ⁺			E _γ , I _γ : More precise 409.22γ 20 in ²⁶ Na β ⁻ decay (2005Gr07) yield poor fit. Branching from ²⁶ Na β ⁻ decay (2005Gr07).	
								E _γ : Unweighted average of data from (n,γ) and ²⁶ Na β ⁻ decay (2005Gr07).	
		833.47 21	3.4 4	5291.74	2 ⁺				
		1223.35 [@] 15	1.3 3	4901.44	4 ⁺				
		1290.40 7	5.2 4	4835.13	2 ⁺				
		1775.31 5	100.0 14	4350.09	3 ⁺	[M1]		B(M1)(W.u.)=0.20 9	
		1792.87 12	6.5 6	4332.52	2 ⁺				
		2183.83 6	13.7 7	3941.57	3 ⁺				

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments
6125.47	3 ⁺	3187.14 28 4316.39 24	5.8 6 4.8 6	2938.33 2 ⁺ 1808.74 2 ⁺				
6256.2	0 ⁺	565.1 [#] 13 4447.1	8 4 100 4	5691.08 (1 ⁺) 1808.74 2 ⁺		D E2		B(E2)(W.u.)=1.2 8
6483.2		1302.7 [#] 13		5180.5				
6622.94	(4 ⁺)	1146.9 [‡] 1721.39 [@] 20 2272.7 [@] 3 2290.2 [@] 3 2304.2 [@] 3 4813.7 [@] 10	19 ^b 2 100 [@] 4 43.8 [@] 18 26.2 [@] 14 37.6 [@] 18 3.8 [@] 5	5476.05 4 ⁺ 4901.44 4 ⁺ 4350.09 3 ⁺ 4332.52 2 ⁺ 4318.89 4 ⁺ 1808.74 2 ⁺		[M1] M1(+E2) [E2]		B(M1)(W.u.)=0.063 18 B(M1)(W.u.)=0.09 4; B(E2)(W.u.)=12 +52-8 B(E2)(W.u.)=12 4 I _γ : Other: 23 4 (α, pγ).
6634.2		3695.63 25 4825.0 [‡]	100 1 6 ^b 1	2938.33 2 ⁺ 1808.74 2 ⁺				
6745.13	2 ⁺	1453.16 [@] 17 3807.0 5	24 [@] 4 100 [@] 6	5291.74 2 ⁺ 2938.33 2 ⁺				E _γ : Weighted average of data from (n, γ) and ²⁶ Na β ⁻ decay (2005Gr07). I _γ : Other: 59 6 (n, γ).
6876.42	3 ⁻	4936.3 3 6743.9 [@] 21 2041.44 16 2543.7 4 2557.2 3 2934.8 6 3937.80 11 5067.13 4	99 [@] 8 1.9 [@] 5 4.7 6 6.1 9 4.4 4 4.2 9 26.2 12 100.0 19	1808.74 2 ⁺ 0.0 0 ⁺ 4835.13 2 ⁺ 4332.52 2 ⁺ 4318.89 4 ⁺ 3941.57 3 ⁺ 2938.33 2 ⁺ 1808.74 2 ⁺		[E1]		B(E1)(W.u.)=1.1×10 ⁻⁵ 5
6951.7		1771.1 [#] 14	100	5180.5				
6971.8	(4 ⁺)	3030.0 [#] 20	100	3941.57 3 ⁺		D+Q [#]		
6978.3	(5 ⁺)	1263.7 [#] 21 1501.8 [#] 10 2076.8 2628.1	8 2 100 8 22 4 9 2	5715.91 4 ⁺ 5476.05 4 ⁺ 4901.44 4 ⁺ 4350.09 3 ⁺		M1+E2 M1+E2 [E2]	-0.21 ^e 5 -1.0 ^e 6	B(M1)(W.u.)=0.22 9; B(E2)(W.u.)=24 15 B(M1)(W.u.)=0.010 7; B(E2)(W.u.)=13 9 B(E2)(W.u.)=3.2 14
		2660.0 [#] 20 3036.5	34 4 28 4	4318.89 4 ⁺ 3941.57 3 ⁺		M1+E2 E2	-0.4 ^e 2	B(M1)(W.u.)=0.012 5; B(E2)(W.u.)=1.5 12 B(E2)(W.u.)=4.8 19
7061.90	1 ⁻	3472.9 3 4122.9 6 5252.9 3 7060.6 7	94 8 28 6 56 8 100 14	3588.56 0 ⁺ 2938.33 2 ⁺ 1808.74 2 ⁺ 0.0 0 ⁺		[E1] [E1]		B(E1)(W.u.)>0.00089 B(E1)(W.u.)>0.00015

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments
7099.68	2 ⁺	2264.25 21	40 6	4835.13	2 ⁺			
		3158.4 6	18 4	3941.57	3 ⁺			
		4160.96 20	100 10	2938.33	2 ⁺			
		5290.3 5	32 4	1808.74	2 ⁺			
		7098.9 5	10 4	0.0	0 ⁺			I_γ : Other: 26 4 – ^{26}Na β^- decay (2005Gr07).
7246.49	3 ⁺	1953.6 @ 7	11 @ 5	5291.74	2 ⁺			
		2411.5 @ 3	100 @ 4	4835.13	2 ⁺			I_γ : Other: 40 8 ($\alpha, p\gamma$).
		2896.4 @ 4	97 @ 5	4350.09	3 ⁺			
		2913.7 @ 4	59 @ 4	4332.52	2 ⁺			I_γ : Other: 100 16 ($\alpha, p\gamma$).
		2927.2 @ 5	22 @ 3	4318.89	4 ⁺			I_γ : Other: 76 16 ($\alpha, p\gamma$).
		3304.6 @ 5	51 @ 3	3941.57	3 ⁺			I_γ : Other: 96 16 ($\alpha, p\gamma$).
		4308.1 @ 8	42 @ 3	2938.33	2 ⁺			
		5436.1 @ 13	3.6 @ 7	1808.74	2 ⁺			
7261.40		2426.09 6	25.1 8	4835.13	2 ⁺			
		2911.12 19	8.0 6	4350.09	3 ⁺			
		2928.56 17	9.4 6	4332.52	2 ⁺			
		3319.66 5	47.4 18	3941.57	3 ⁺			
		4322.68 8	15.2 8	2938.33	2 ⁺			
		5452.03 4	100.0 25	1808.74	2 ⁺			
7282.82	(4 ⁻)	1567.06 11	9.2 8	5715.91	4 ⁺			
		2381.28 15	10.2 10	4901.44	4 ⁺			
		2932.5 4	18.2 20	4350.09	3 ⁺			
		2963.61 9	62 4	4318.89	4 ⁺	(E1+M2)	+0.5 4	B(E1)(W.u.)=0.00031 15; B(M2)(W.u.)=4.E+1 +6-3
		3341.01 7	100 4	3941.57	3 ⁺	[E1]		B(E1)(W.u.)=0.00043 15
7348.86	3 ⁻	1873.1 5	1.5 4	5476.05	4 ⁺			
		2513.52 8	42 3	4835.13	2 ⁺			
		3016.18 23	11.9 12	4332.52	2 ⁺			
		3029.6 8	3.2 4	4318.89	4 ⁺			
		4410.15 5	100 4	2938.33	2 ⁺			
		5539.53 15	31.5 19	1808.74	2 ⁺			
7371.36	2 ⁺	1245.68 @ 24	38 @ 5	6125.47	3 ⁺			
		2080.0 @ 6	5.1 @ 16	5291.74	2 ⁺			
		3021.9 4	27 4	4350.09	3 ⁺			E_γ : Weighted average of data from (n, γ) and ^{26}Na β^- decay (2005Gr07).
		3039.1 @ 5	6.3 @ 10	4332.52	2 ⁺			
		3428.7 4	100 15	3941.57	3 ⁺			E_γ : Other: 3430.2 5 (2005Gr07) – ^{26}Na β^- decay.
		5562.9 9	27 4	1808.74	2 ⁺			
		7369.8 7	54 15	0.0	0 ⁺			
7396.0	(5 ⁺)	1680.0 # 10	100 6	5715.91	4 ⁺	(M1+E2)	-0.14 2	B(M1)(W.u.)>0.16; B(E2)(W.u.)>4.6

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments	
7396.0	(5 ⁺)	2494.4	36 4	4901.44	4 ⁺				
		3045.7	26 2	4350.09	3 ⁺				
		3076.9	14 4	4318.89	4 ⁺				
		3454.2	24 2	3941.57	3 ⁺				
7541.71	(2 ⁻)	3191.2 6	8.7 11	4350.09	3 ⁺				
		3208.98 8	100 4	4332.52	2 ⁺				
		3599.86 14	38 3	3941.57	3 ⁺				
		4602.93 7	84 4	2938.33	2 ⁺				
		5732.37 15	39 3	1808.74	2 ⁺				
7677	(4 ⁺)	1551.5	35 4	6125.47	3 ⁺				
		1961.0	100 8	5715.91	4 ⁺				
		2775.4	44 6	4901.44	4 ⁺				
		3357.9	29 4	4318.89	4 ⁺				
7696.8	1 ⁽⁻⁾	4757.6 &	37 & 13	2938.33	2 ⁺				
		5887.9 &	17 & 5	1808.74	2 ⁺				
		7695.6 8	100 & 31	0.0	0 ⁺				
7725.8	3 ⁺	3406.9 @ 5	100 4	4318.89	4 ⁺				
		3783.7 @ 7	19 4	3941.57	3 ⁺				
		5915.5 @ 16	20 @ 4	1808.74	2 ⁺				
7773.7	(4 ⁺)	2297.5	30 8	5476.05	4 ⁺				
		2938.4	30 8	4835.13	2 ⁺				
		3454.7 @ 9	20 6	4318.89	4 ⁺				
		3831.7 @ 7	100 14	3941.57	3 ⁺				
		4834.9	20 6	2938.33	2 ⁺				
7817.8	(2,3) ⁺	3485.0 @ 7	100 @ 15	4332.52	2 ⁺				
		6008.7 @ 16	67 @ 9	1808.74	2 ⁺				
7824	3 ⁻	3882	100 13	3941.57	3 ⁺				
		4885	100 13	2938.33	2 ⁺				
		6015	50 10	1808.74	2 ⁺				
7840	2 ⁺	3521	47 10	4318.89	4 ⁺				
		4251	100 12	3588.56	0 ⁺	E2			
		4901	63 12	2938.33	2 ⁺				
		6030.5	23 7	1808.74	2 ⁺				
7950.0	5 ⁻	2234.0 # 20	47 5	5715.91	4 ⁺	E1+M2	-0.19 15	B(E1)(W.u.)=0.0015 7; B(M2)(W.u.)=5.E+1 +8-4	
		3633.8 # 10	100 5	4318.89	4 ⁺	E1+M2	+0.13 11	B(E1)(W.u.)=0.0008 4; B(M2)(W.u.)=5 +8-4	
8034		5095	100	2938.33	2 ⁺				
8052.4	2 ⁽⁺⁾	6242.9 7	100	1808.74	2 ⁺				
8184.93	3 ⁻	5245.9 3	28 4	2938.33	2 ⁺				

I_γ : Other: 50 7 - (2005Gr07) - ^{26}Na β^- decay.

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^{\dagger}$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments
8184.93	3 ⁻	6375.38 16	100 4	1808.74	2 ⁺			
8201.1	(6 ⁺)	1223.0 14	44 4	6978.3	(5 ⁺)	D ^e		
		3299.5 10	78 7	4901.44	4 ⁺			
		3881.8 10	100 9	4318.89	4 ⁺			
8227.31	1 ⁻	6417.9 3	85 6	1808.74	2 ⁺			
		8225.6 4	100 6	0.0	0 ⁺			
8250.58	(3 ⁺)	5311.66 16	100 6	2938.33	2 ⁺			
		6441.1 8	3.9 8	1808.74	2 ⁺			
8458.9	3 ⁺	4139.7 5	55 8	4318.89	4 ⁺			
		6649.1 7	100 6	1808.74	2 ⁺			
8464		4144.8	100	4318.89	4 ⁺			
8472.3	(6 ⁺)	1494.0 [#] 14	38 5	6978.3	(5 ⁺)	D+Q ^e	-0.32 ^e 10	
		3570.6	100 6	4901.44	4 ⁺			
		4153.1	21 3	4318.89	4 ⁺			
8503.7	1 ⁻	6694.0 7	39 6	1808.74	2 ⁺			
		8502.2 3	100 6	0.0	0 ⁺			
8532.1	(2 ⁺)	4181.9 7	66 11	4350.09	3 ⁺			
		5593.2 4	100 13	2938.33	2 ⁺			
		6722.1 7	47 9	1808.74	2 ⁺			
8625	5 ⁻	2002	100 4	6622.94	(4 ⁺)	E1+M2	+0.03 ^e 1	B(E1)(W.u.)=0.0028 6; B(M2)(W.u.)=2.9 21
		4305.7	18 4	4318.89	4 ⁺	E1 ^d		B(E1)(W.u.)=5.1×10 ⁻⁵ 16
8670	(3,5)	3193.7	54 8	5476.05	4 ⁺	D+Q	<+0.5	δ : also, >-0.5. Measured values: +0.35 15 (for J=3); -0.13 +7-26 (for J=5).
		4350.7	100 8	4318.89	4 ⁺	D+Q	<+0.13	δ : also, >-0.13. Measured values: +0.03 +3-9 (for J=3); +0.09 +4-9 (for J=5).
8705.6	(2 to 4) ⁺	3229.3	29 ^b 7	5476.05	4 ⁺			
		4355.3 6	12 3	4350.09	3 ⁺			
		4386.3	100 ^b 11	4318.89	4 ⁺			
		4763.6	64 ^b 9	3941.57	3 ⁺			
		5766.6 3	29 ^b 7	2938.33	2 ⁺			
8863.8	2 ⁺	5924.8 4	69 8	2938.33	2 ⁺			
		7054.0 6	100 8	1808.74	2 ⁺			
8903.52	(2 ⁺)	1554.8 4	7.9 14	7348.86	3 ⁻			
		1620.8 3	21 2	7282.82	(4 ⁻)			
		1642.09 25	22 2	7261.40				
		3611.5 4	30 3	5291.74	2 ⁺			
		4001.8 3	30 3	4901.44	4 ⁺			
		4553.02 13	100 7	4350.09	3 ⁺			
		4961.42 22	97 7	3941.57	3 ⁺			

E_γ, I_γ : γ -ray energy from (n, γ). Branching normalized to I_γ of 5766 γ in 1992Wa06 and (α ,p γ).

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ ^a	E_f	J_f^π	Mult. ^c	δ	Comments
8903.52	(2 ⁺)	5964.31	20	36 3	2938.33	2 ⁺		
8930		2307		50 11	6622.94	(4 ⁺)		
		3214		100 14	5715.91	4 ⁺		
		3453.7		75 14	5476.05	4 ⁺		
		4987.9		53 11	3941.57	3 ⁺		
8959.4	1 ⁻	7149.4 &		64 & 7	1808.74	2 ⁺		
		8957.7	5	100 & 12	0.0	0 ⁺		
9020		4701		100	4318.89	4 ⁺		
9043.4	3 ⁽⁺⁾	6104.3	9	100	2938.33	2 ⁺		
9064	5 ⁺	1668		26 5	7396.0	(5 ⁺)	D+Q ^e	+0.6 ^e 4
		4162		26 5	4901.44	4 ⁺		
		4744.7		100 8	4318.89	4 ⁺	D ^e	
9111.2	6 ⁺	1715		16 ^b 4	7396.0	(5 ⁺)	[M1]	B(M1)(W.u.)>0.032
		2488		16 ^b 4	6622.94	(4 ⁺)	[E2]	B(E2)(W.u.)>9.4
		3635		100 ^b 12	5476.05	4 ⁺	[E2]	B(E2)(W.u.)>8.8
		4209.4		32 ^b 6	4901.44	4 ⁺	[E2]	B(E2)(W.u.)>1.4
		4792		36 ^b 6	4318.89	4 ⁺	[E2]	B(E2)(W.u.)>0.80
9139.5	1	9137.8		100	0.0	0 ⁺		
9169	(6 ⁻)	1218.7 [#]	23	100 ^b 7	7950.0	5 ⁻	M1+E2 ^d	B(M1)(W.u.)=0.25 8; B(E2)(W.u.)=18 17
		1773		39 ^b 6	7396.0	(5 ⁺)	E1+M2 ^d	B(E1)(W.u.)=0.0011 4; B(M2)(W.u.)=8 +12-7
		1886		24 ^b 4	7282.82	(4 ⁻)	[E2]	B(E2)(W.u.)=26 10
		2190.6		22 ^b 4	6978.3	(5 ⁺)	[E1]	B(E1)(W.u.)=0.00034 13
9206		4887		100	4318.89	4 ⁺		
9238.9	1 ⁽⁺⁾	5649.5 &		23 & 5	3588.56	0 ⁺		
		9237.1	8	100 & 20	0.0	0 ⁺	M1	B(M1)(W.u.)=0.072 9
9261	(4 ⁺)	5319		100	3941.57	3 ⁺		
9291		7481		100	1808.74	2 ⁺		
9304		4985		100	4318.89	4 ⁺		
9316		4983		100	4332.52	2 ⁺		
9325.57	(2 ⁺ to 4 ⁺)	4424.2	8	27 4	4901.44	4 ⁺		
		4489.4	9	27 4	4835.13	2 ⁺		
		4975.3	9	32 5	4350.09	3 ⁺		
		4992.4	8	48 5	4332.52	2 ⁺		
		5383.8	7	16 3	3941.57	3 ⁺		
		6386.34	23	100 8	2938.33	2 ⁺		
9371	4 ⁺	5429		100	3941.57	3 ⁺		
9383	6 ⁺	1182		15 ^b 3	8201.1	(6 ⁺)		
		2404.6		74 ^b 10	6978.3	(5 ⁺)	D+Q ^e	-0.14 ^e 6

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	Mult. ^c	δ	Comments
9383	6 ⁺	2759.9	38 ^b 5	6622.94	(4 ⁺)	Q ^e		
		3666.8	100 ^b 13	5715.91	4 ⁺	Q ^e		
		5063.6	28 ^b 5	4318.89	4 ⁺			
9427.8	3 ⁺	5077.4 9	23 6	4350.09	3 ⁺			
		6488.6 4	100 8	2938.33	2 ⁺			
		7617.8 7	33 5	1808.74	2 ⁺			
9471	(1 to 5) ⁺	5529	100	3941.57	3 ⁺			
9540.3	5 ⁺	2562	5.3 ^b 16	6978.3	(5 ⁺)	D ^e		
		3824.0 [#] 20	23 ^b 3	5715.91	4 ⁺			
		4638.4	34 ^b 7	4901.44	4 ⁺			
		5221.0 [#] 20	100 ^b 10	4318.89	4 ⁺	D+Q ^e	+0.06 ^e 5	
9563.5	1 ⁺	7753.1 ^{&}	49 ^{&} 11	1808.74	2 ⁺			
		9561.6 ^{&}	100 ^{&} 21	0.0	0 ⁺	M1		
9574.06	(2 ⁻ to 4)	2290.8 4	14.0 24	7282.82	(4 ⁻)			
		2697.7 3	24.4 24	6876.42	3 ⁻			
		3448.8 7	20.7 24	6125.47	3 ⁺			
		5223.37 12	100 9	4350.09	3 ⁺			
		5632.3 6	14.6 18	3941.57	3 ⁺			
9590		6651	100 ^b 13	2938.33	2 ⁺			
		7780	67 ^b 13	1808.74	2 ⁺			
9617.0	(1 to 3) ⁻	7807.0 9	100	1808.74	2 ⁺			
9681	(0 to 5) ⁺	7871	100	1808.74	2 ⁺			
9770.8	1 ⁽⁻⁾	7961.1 ^{&}	69 ^{&} 14	1808.74	2 ⁺			
		9768.8 ^{&}	100 ^{&} 19	0.0	0 ⁺			
9771		4869	100 ^b 16	4901.44	4 ⁺			
		5452	100 ^b 16	4318.89	4 ⁺			
9814		5495	100	4318.89	4 ⁺			
9829.5	(5,7) ⁺	1357.2	6.7 ^b 11	8472.3	(6 ⁺)			
		1628.3 [#] 12	100.0 ^b 22	8201.1	(6 ⁺)	M1(+E2)	<+0.24	B(M1)(W.u.)>0.084; B(E2)(W.u.)<18 δ : also, >-0.24. Measured values: +0.19 +5-11 (for $J^\pi=5^+$); -0.03 +1-4 (for $J^\pi=7^+$).
		2433.4	5.6 ^b 11	7396.0	(5 ⁺)			
9856.8	2 ⁺	5020.7 8	62 10	4835.13	2 ⁺			
		5523.6 7	100 12	4332.52	2 ⁺			
		5915.8 9	31 10	3941.57	3 ⁺			
		9854.5 7	43 10	0.0	0 ⁺			
9900.3	3 ⁺	6961	100	2938.33	2 ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{26}\text{Mg})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ ^a	E_f	J_f^π	Mult. ^c	δ	Comments
9927		5025	100	4901.44	4 ⁺			
9939		5619	100	4318.89	4 ⁺			
9967	2 ⁺	5065	100 ^b 9	4901.44	4 ⁺			
		7028	67 ^b 9	2938.33	2 ⁺			
9982		6040	100	3941.57	3 ⁺			
9989	(6 ⁺)	1517	25 ^b 4	8472.3	(6 ⁺)	(M1+E2) ^e	-0.17 ^e 10	B(M1)(W.u.)>0.15
		3011	100 ^b 7	6978.3	(5 ⁺)	(M1+E2) ^e	-0.09 ^e 5	B(M1)(W.u.)>0.078
		5669.5	20 ^b 4	4318.89	4 ⁺	[E2]		B(E2)(W.u.)>0.42
10040	5 ⁻	4323.7	100 ^b 13	5715.91	4 ⁺			
		5138.0	51 ^b 9	4901.44	4 ⁺			
		5720.4	71 ^b 9	4318.89	4 ⁺			
10069		5167	100	4901.44	4 ⁺			
10102.5	1 ⁻	7162.4 9	35 9	2938.33	2 ⁺			
		10100.5 4	100 13	0.0	0 ⁺			
10126.7	4 ⁺	7187.4 8	52 9	2938.33	2 ⁺			
		8316.4 8	100 13	1808.74	2 ⁺			
10147.1	1 ⁺	8337.9 &	43 & 3	1808.74	2 ⁺			
		10145.0 &	100 & 9	0.0	0 ⁺	M1		
10184		5282	100	4901.44	4 ⁺			
10219.9		8409.7 9	100	1808.74	2 ⁺			
10234		5332	100	4901.44	4 ⁺			
10319.5	1 ⁺	7378.4 &	67 & 19	2938.33	2 ⁺			
		10317.3 &	100 & 22	0.0	0 ⁺	M1		
10349.4	(0 ⁺ to 4 ⁺)	8539.2 9	100	1808.74	2 ⁺			
10362.26	(2 ⁺ to 4 ⁺)	3261.8 4	62 5	7099.68	2 ⁺			
		4886.3 5	46 8	5476.05	4 ⁺			
		6011.2 5	49 8	4350.09	3 ⁺			
		8552.2 3	100 10	1808.74	2 ⁺			
10377		4661	100	5715.91	4 ⁺			
10529		4813	100 ^b 17	5715.91	4 ⁺			
		6196	67 ^b 17	4332.52	2 ⁺			
10573.3	1 ⁻	5600.4	100 & 17	4972.30	0 ⁺			
		10571.0	89 & 19	0.0	0 ⁺			
10576		2044	85 ^b 8	8532.1	(2 ⁺)			
		3597	100 ^b 8	6978.3	(5 ⁺)			
10600.1	(1 ⁺ to 4 ⁺)	3500.6 9	0.06 2	7099.68	2 ⁺			
		6249.7 9	31 8	4350.09	3 ⁺			

Adopted Levels, Gammas (continued)

<u>$\gamma(^{26}\text{Mg})$ (continued)</u>						
<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>$E_\gamma^\dagger$</u>	<u>I_γ^a</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.^c</u>
10600.1	(1 ⁺ to 4 ⁺)	6267.0 6	100 17	4332.52	2 ⁺	
		6657.3 5	86 17	3941.57	3 ⁺	
		7660.4 9	39 6	2938.33	2 ⁺	
10647.3	1 ⁺	3547.4	1.41 & 14	7099.68	2 ⁺	
		5355.0	1.84 & 15	5291.74	2 ⁺	
		5674.4	1.84 & 15	4972.30	0 ⁺	
		7707.7	7.3 & 4	2938.33	2 ⁺	
		8837.0	1.76 & 21	1808.74	2 ⁺	
		10645.0	100 & 4	0.0	0 ⁺	M1
10650	(4 ⁻ to 7 ⁻)	1481	56 ^b 8	9169	(6 ⁻)	
		3254	100 ^b 8	7396.0	(5 ⁺)	
10693		3297	100	7396.0	(5 ⁺)	
10707		4991	100	5715.91	4 ⁺	
10767		6416	100 ^b 9	4350.09	3 ⁺	
		7827	45 ^b 9	2938.33	2 ⁺	
10805.9	(0 ⁺ to 4 ⁺)	8995.5 4	100 & 12	1808.74	2 ⁺	
		10803.3	28 & 8	0.0	0 ⁺	
10945		1562	16 ^b 4	9383	6 ⁺	
		1776	100 ^b 9	9169	(6 ⁻)	
		2320	48 ^b 7	8625	5 ⁻	
10949.1	1 ⁻	6615.6	18.9 & 18	4332.52	2 ⁺	
		7359.4	8.2 & 13	3588.56	0 ⁺	
		8009.4	23.7 & 23	2938.33	2 ⁺	
		9138.7	100 & 6	1808.74	2 ⁺	
		10946.6	24 & 4	0.0	0 ⁺	
11012		6110	61 ^b 12	4901.44	4 ⁺	
		6692	100 ^b 12	4318.89	4 ⁺	
11153.5	1 ⁺	6180.4	14 & 4	4972.30	0 ⁺	
		6820.0	11.2 & 16	4332.52	2 ⁺	
		7563.8	16 & 4	3588.56	0 ⁺	
		9343.0	4.2 & 6	1808.74	2 ⁺	
		11150.9	100 & 12	0.0	0 ⁺	
11191		3241	72 ^b 14	7950.0	5 ⁻	

Adopted Levels, Gammas (continued) $\gamma(^{26}\text{Mg})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π	$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ^a	E_f	J_f^π
11191		5474	100 ^b 14	5715.91	4 ⁺	12088		4692	79 ^b 15	7396.0	(5 ⁺)
11329,11		3933	100 ^b 8	7396.0	(5 ⁺)			5109	100 ^b 15	6978.3	(5 ⁺)
		4350	56 ^b 8	6978.3	(5 ⁺)	12196		3723	45 ^b 8	8472.3	(6 ⁺)
11457		6555	100	4901.44	4 ⁺			3995	100 ^b 8	8201.1	(6 ⁺)
11570		3098	100 ^b 15	8472.3	(6 ⁺)	12479	(6 ⁻)	2649	100 ^b 10	9829.5	(5,7) ⁺
		4174	82 ^b 15	7396.0	(5 ⁺)			4278	64 ^b 10	8201.1	(6 ⁺)

[†] From (n, γ), except otherwise noted.

[‡] From level energy differences. Recoil energy subtracted.

From ($^{13}\text{C},\alpha n\gamma$).

@ From ^{26}Na β^- decay (2005Gr07).

& From (pol γ,γ'),(γ,γ').

^a Relative photon branching from each level.

^b γ -ray branching from ($\alpha,p\gamma$) 1986Gl06.

^c Based on reported mixing ratio and RUL. Details are noted as comments.

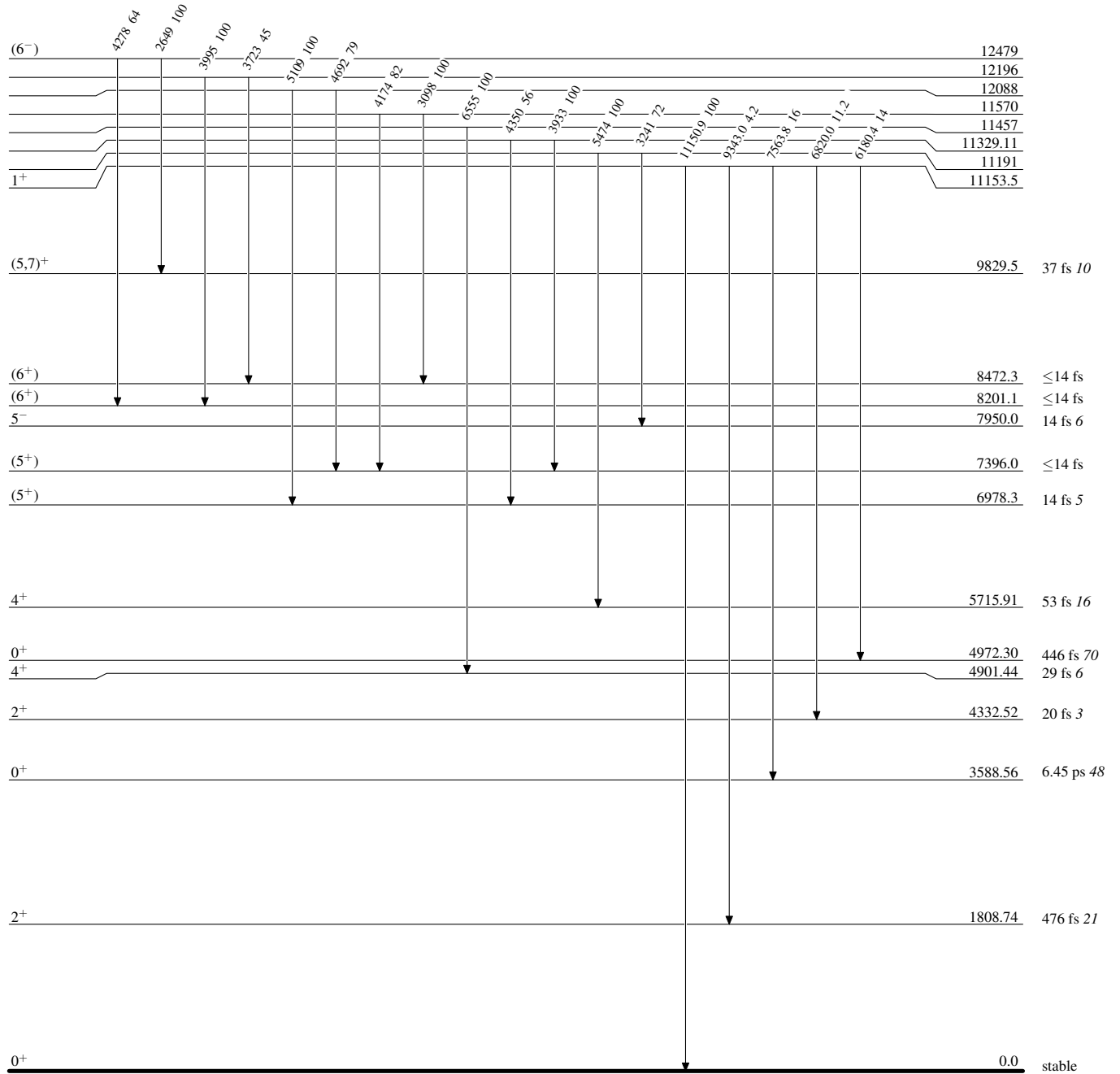
^d From ($\alpha,p\gamma$) and recommended upper limits for γ -ray transition strengths.

^e From ($\alpha,p\gamma$) – 1986Gl06.

^f Multiply placed with intensity suitably divided.

Adopted Levels, Gammas**Level Scheme**

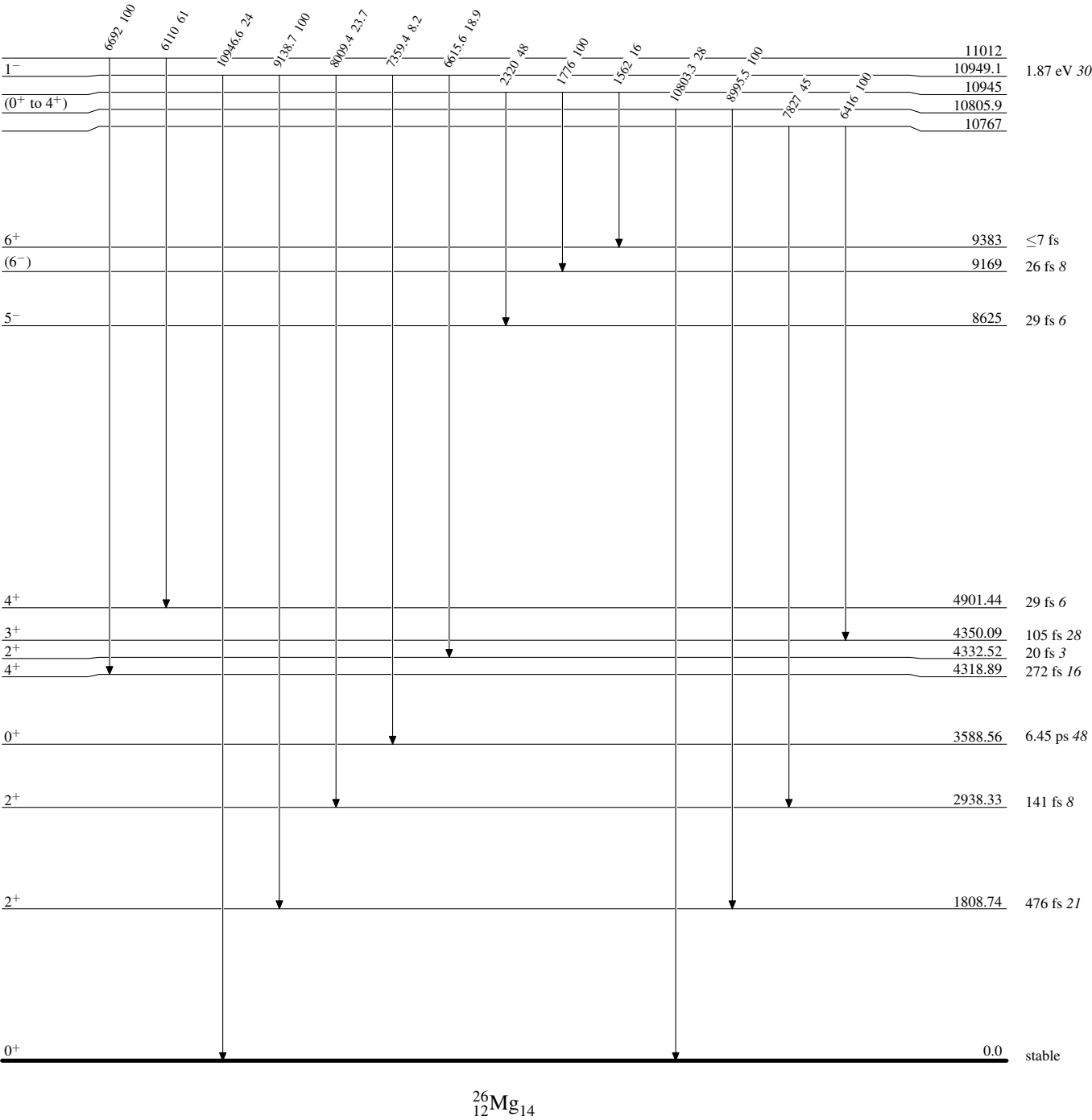
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

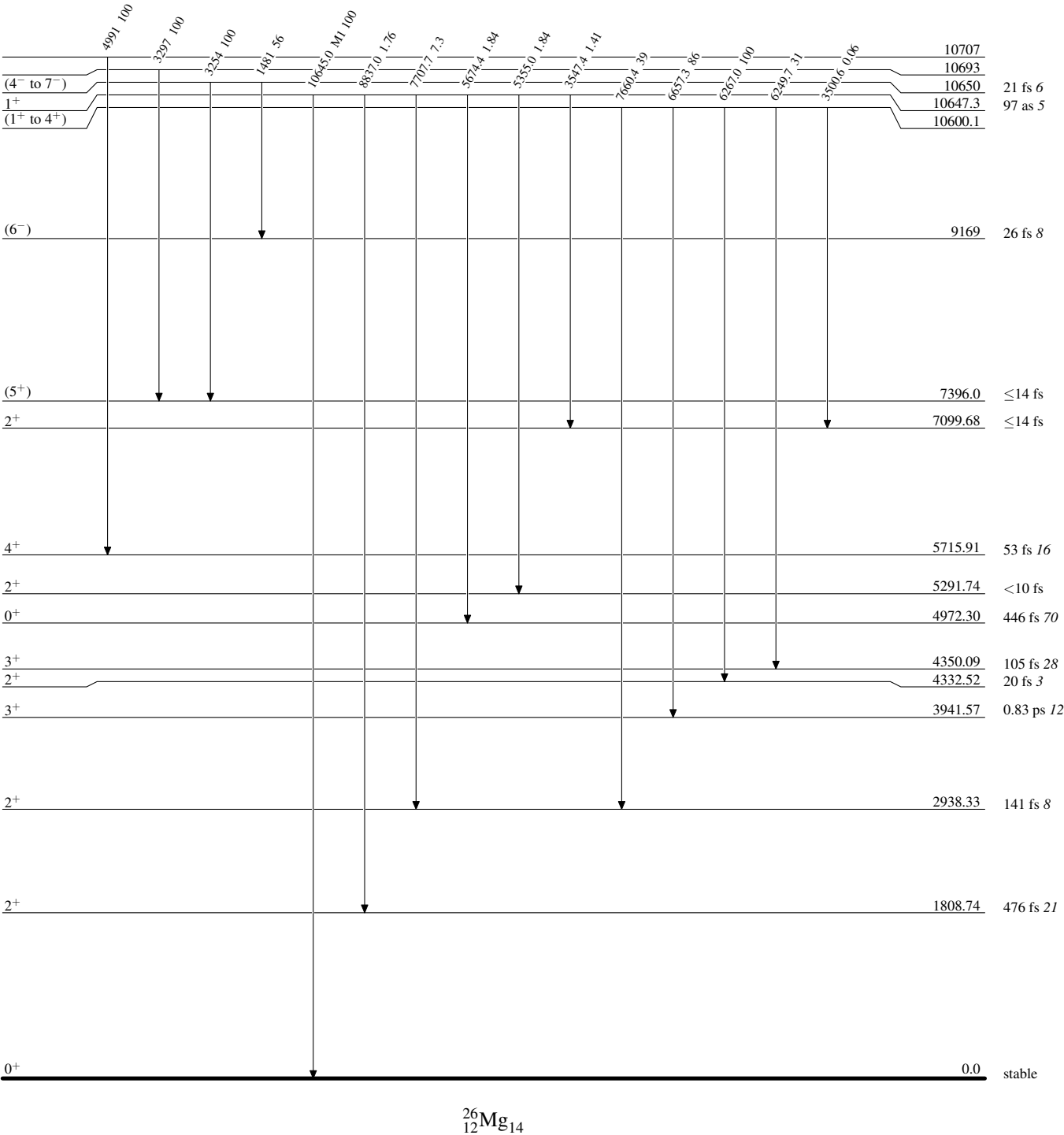
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

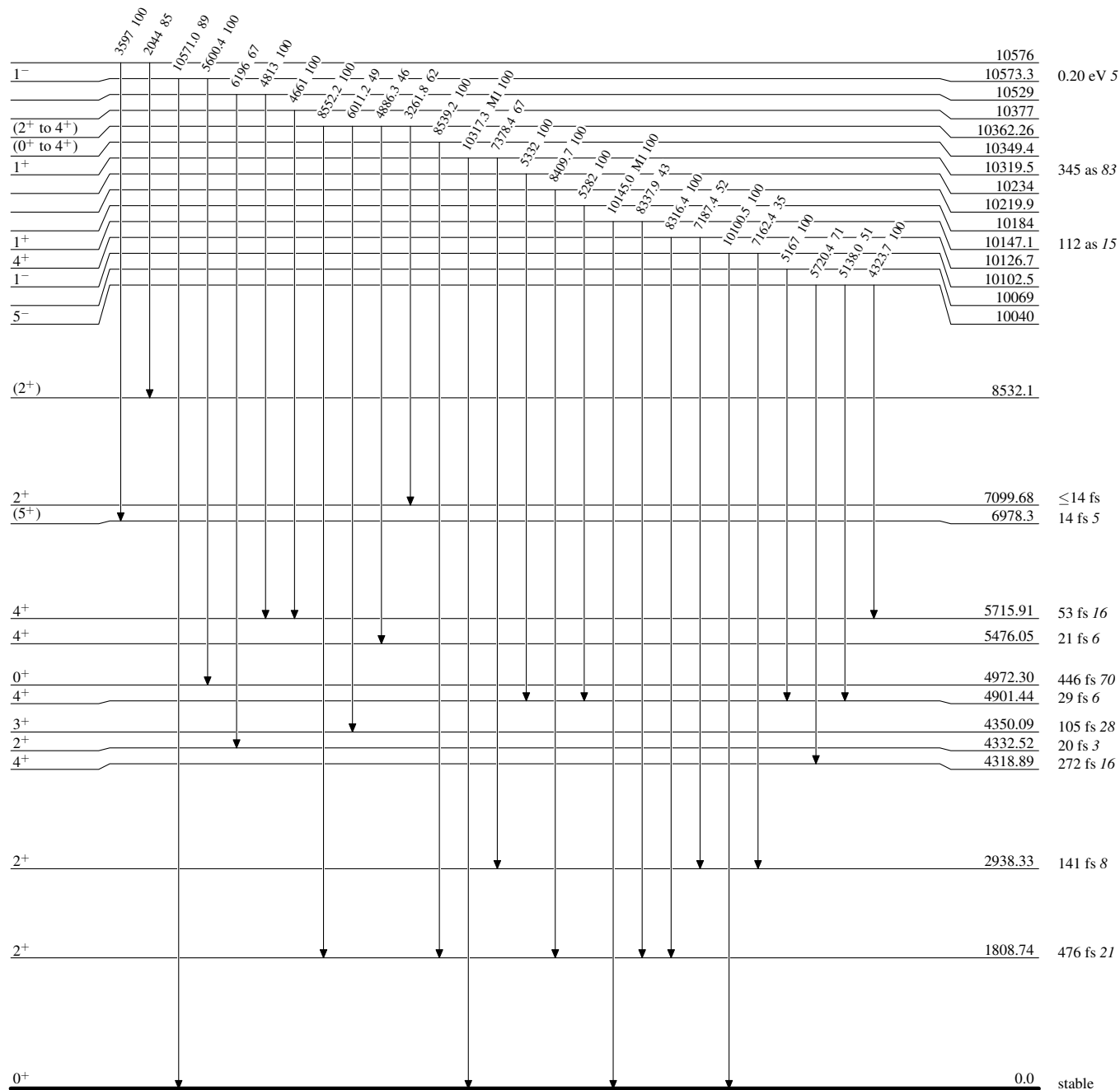
Level Scheme (continued)

Intensities: Relative photon branching from each level



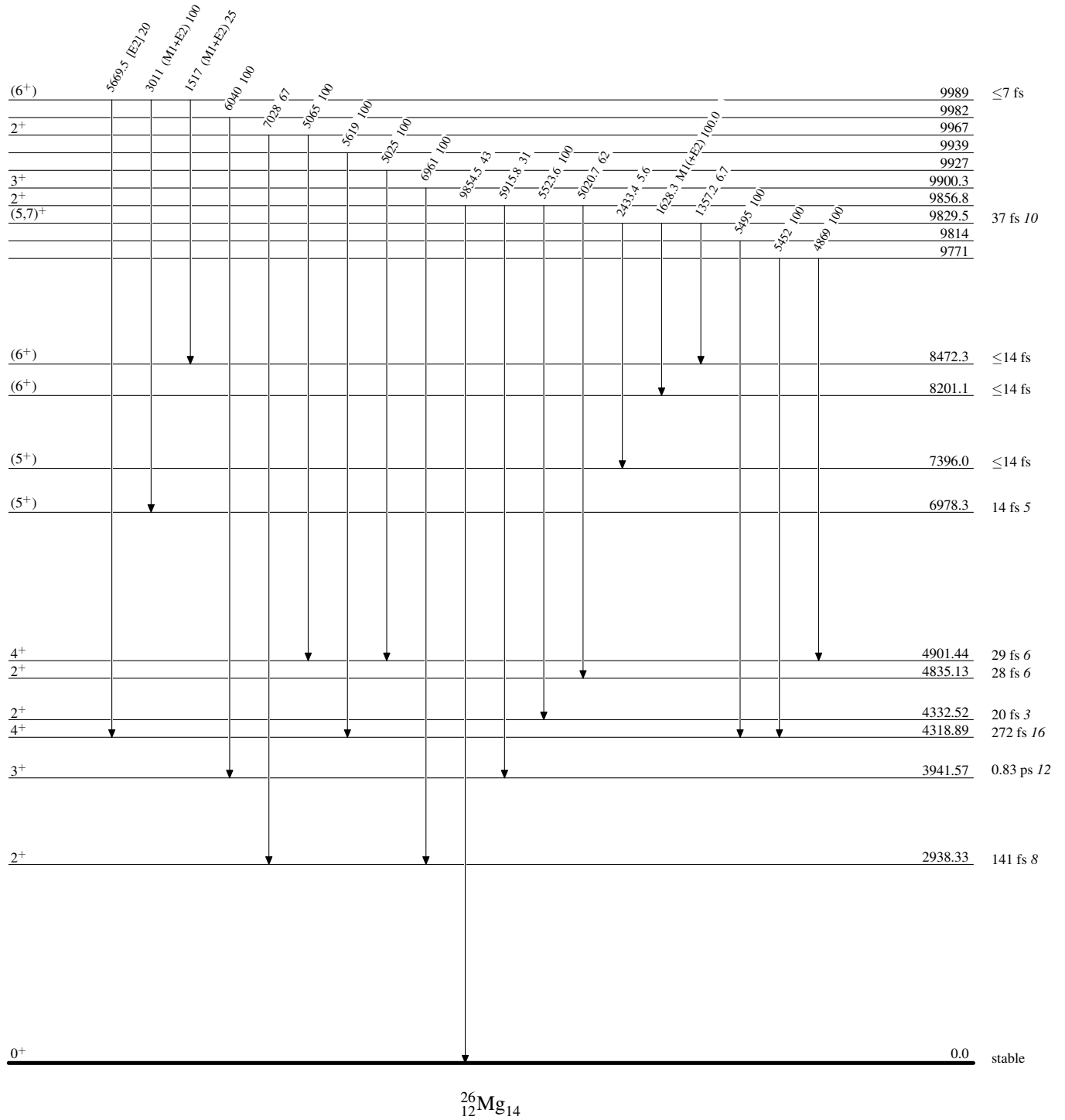
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{26}_{12}\text{Mg}_{14}$

Adopted Levels, GammasLevel Scheme (continued)

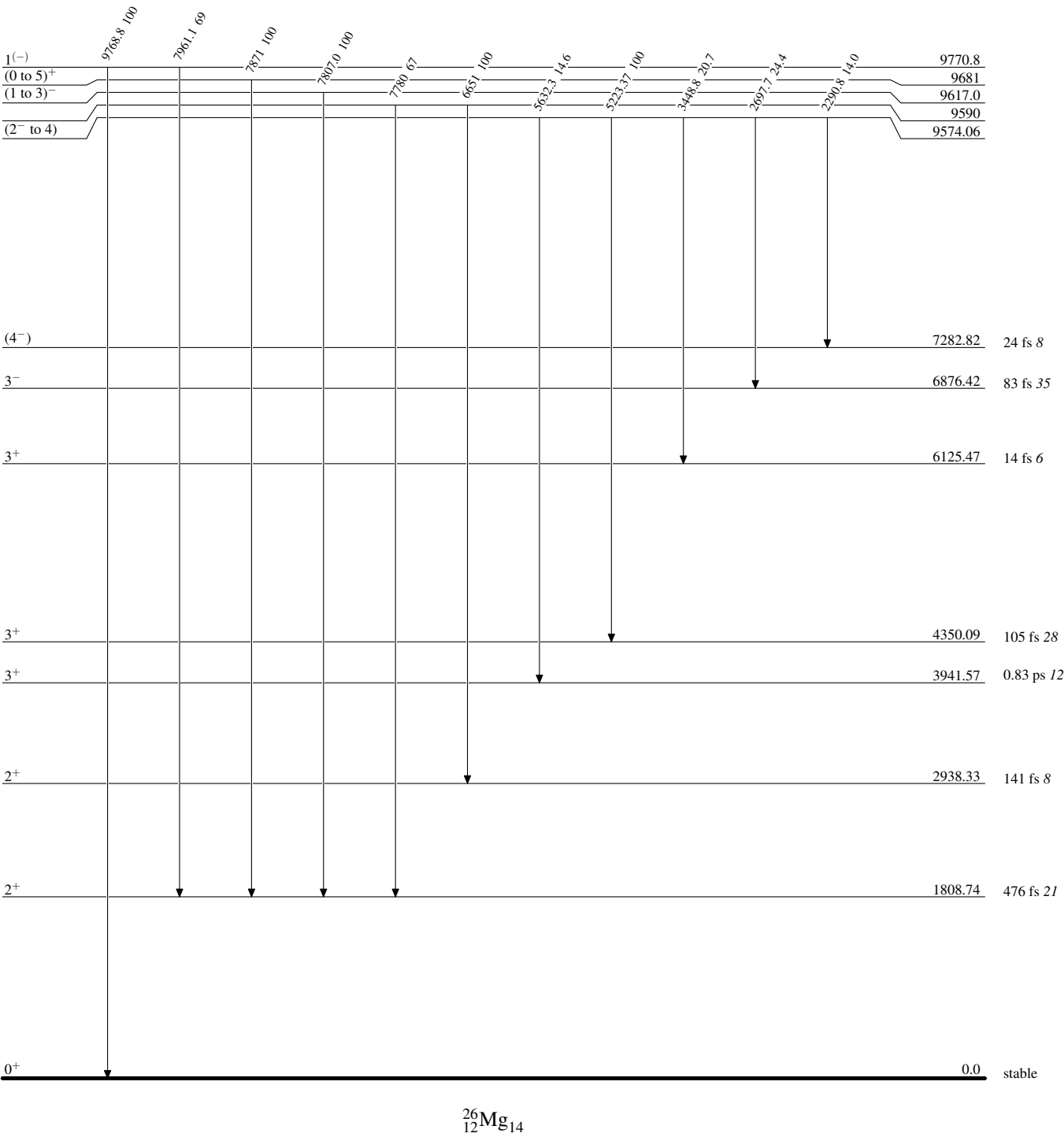
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

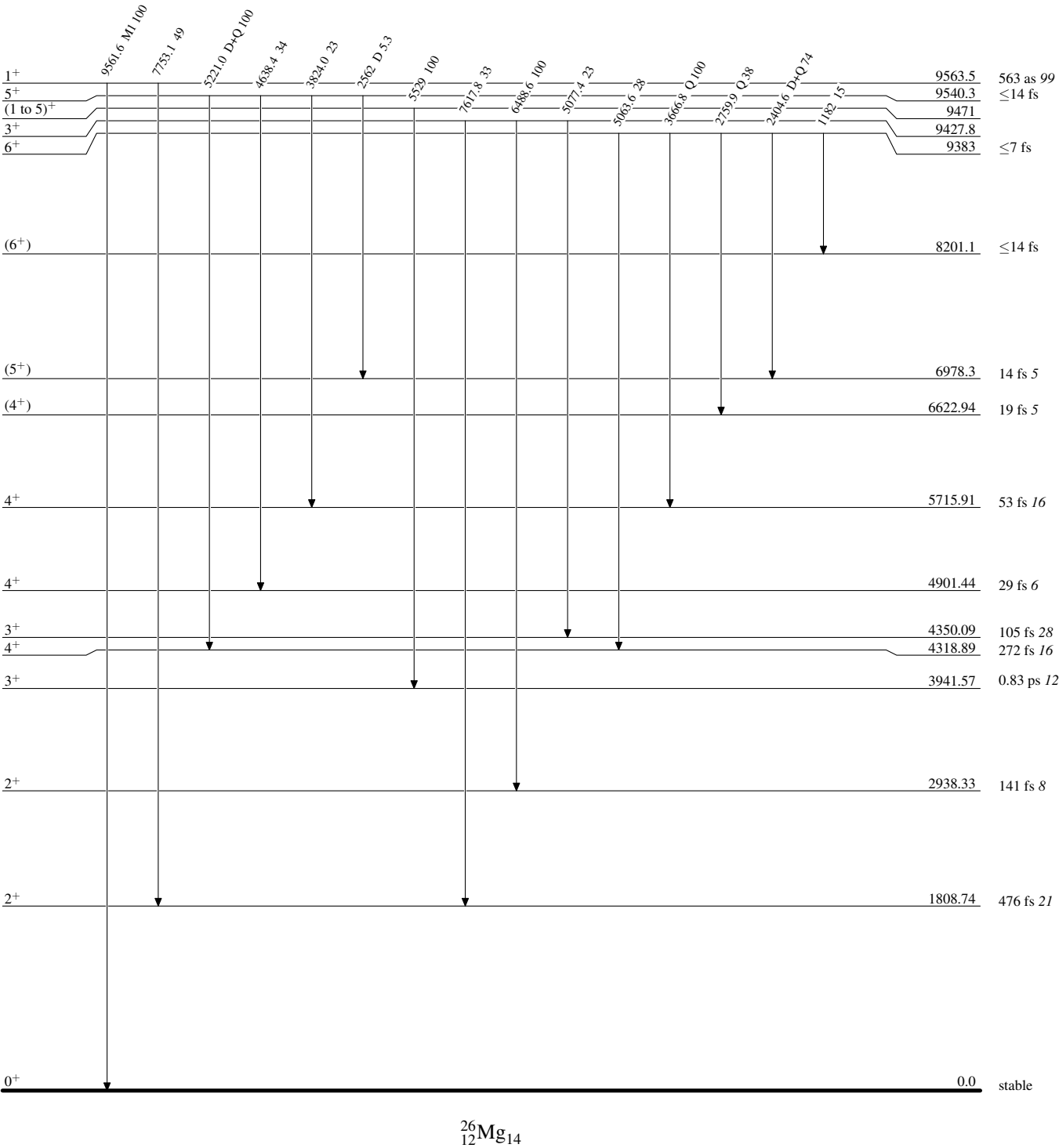
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

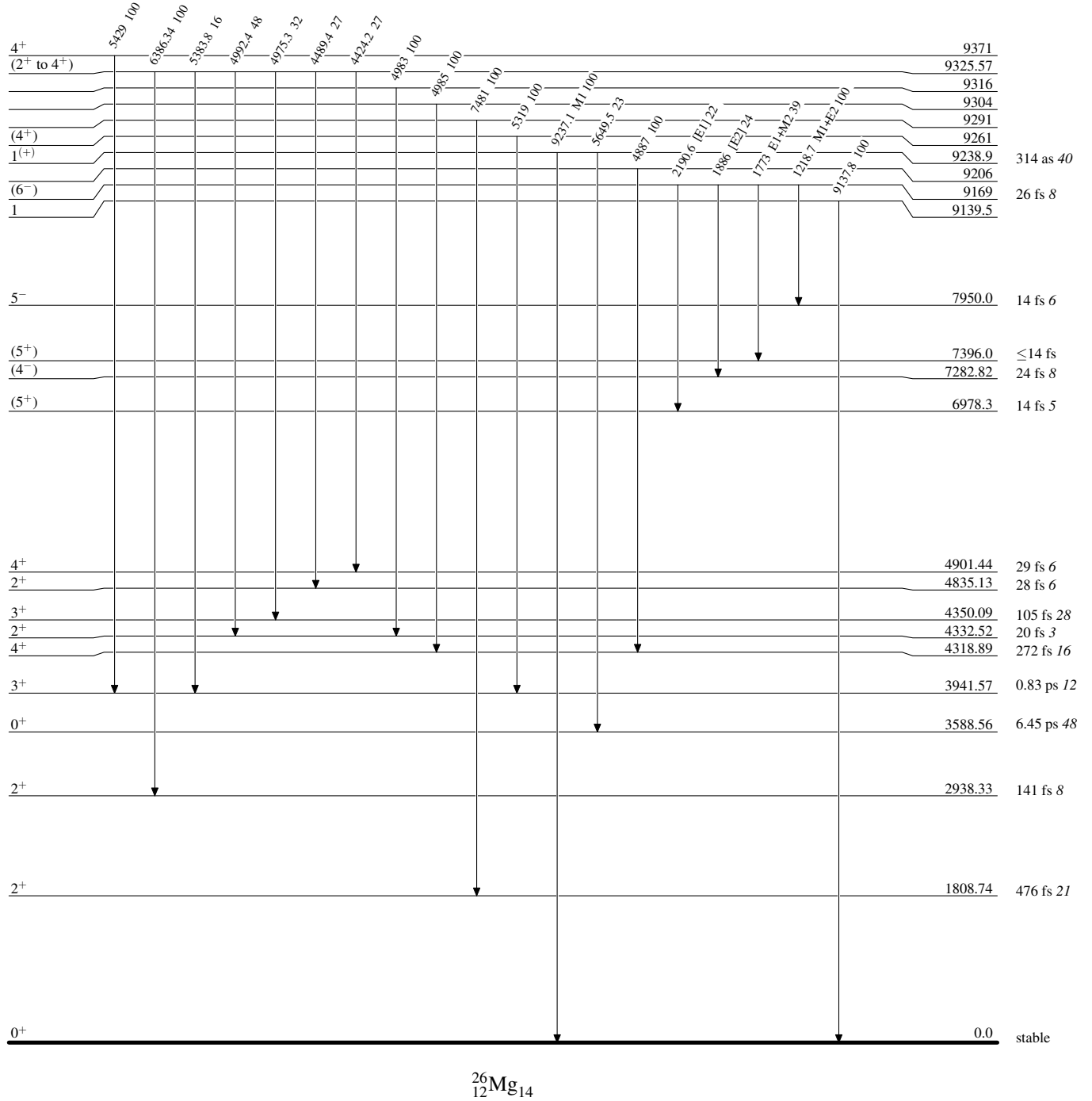
Level Scheme (continued)

Intensities: Relative photon branching from each level



Adopted Levels, GammasLevel Scheme (continued)

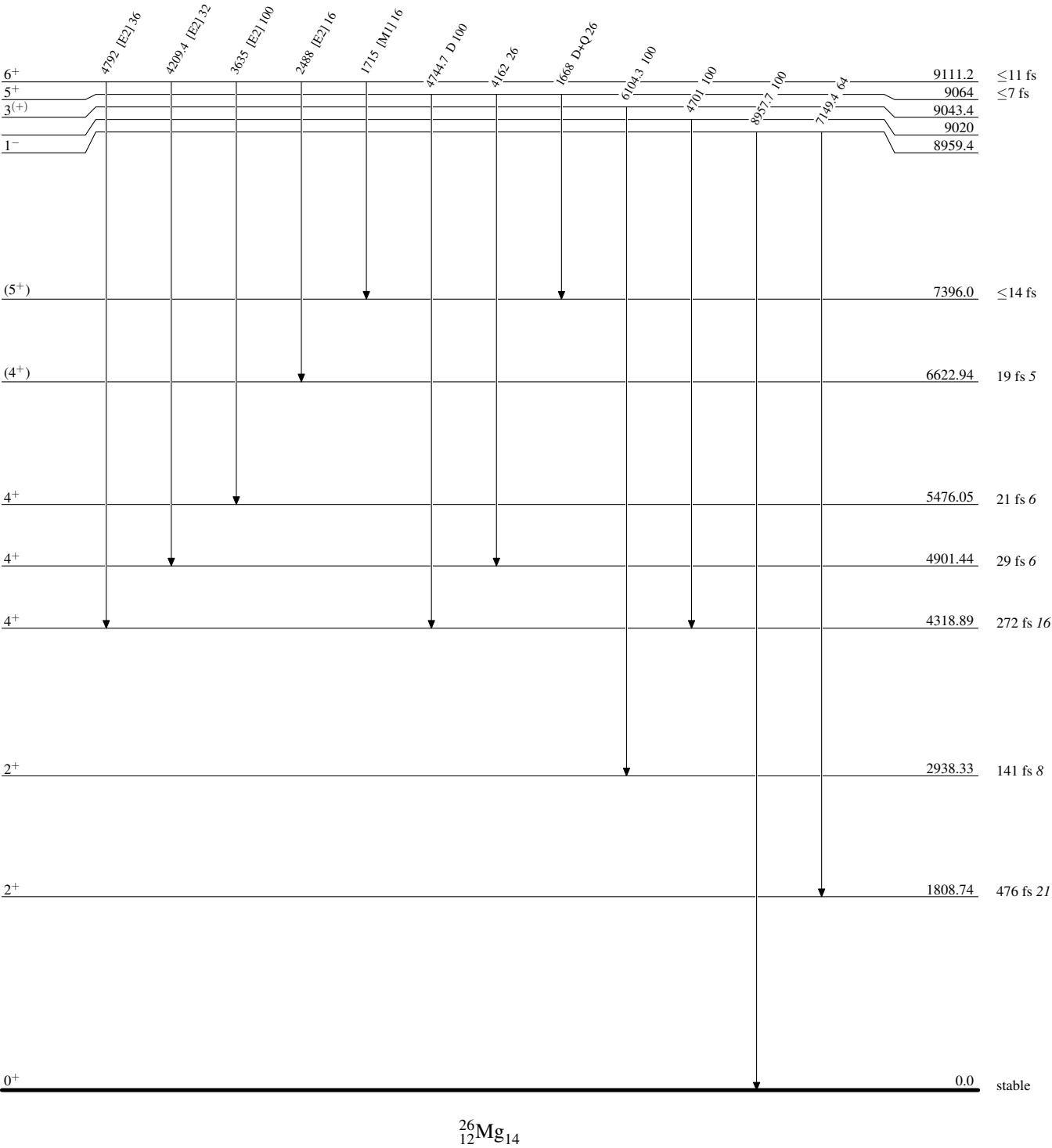
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

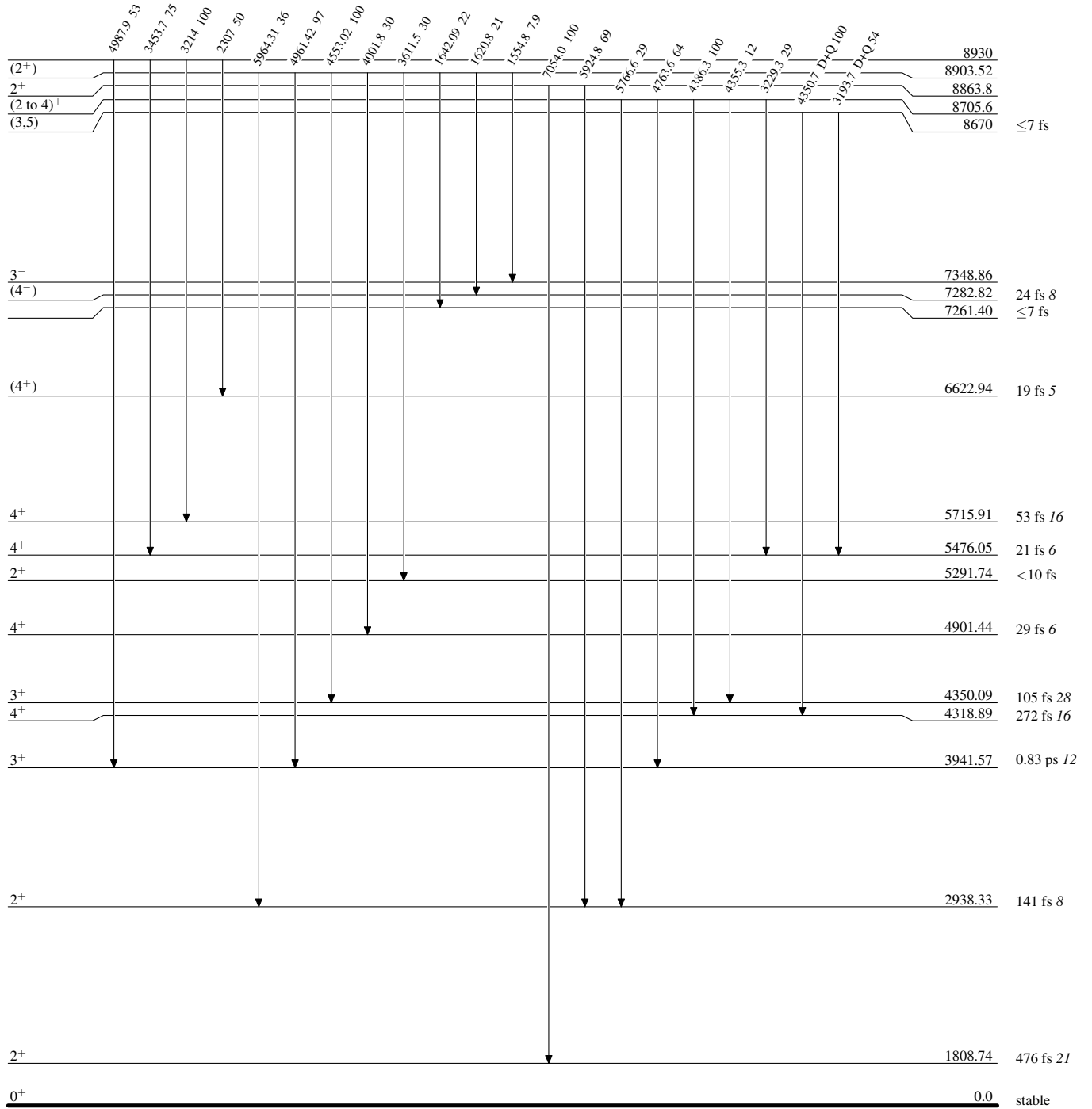
Level Scheme (continued)

Intensities: Relative photon branching from each level



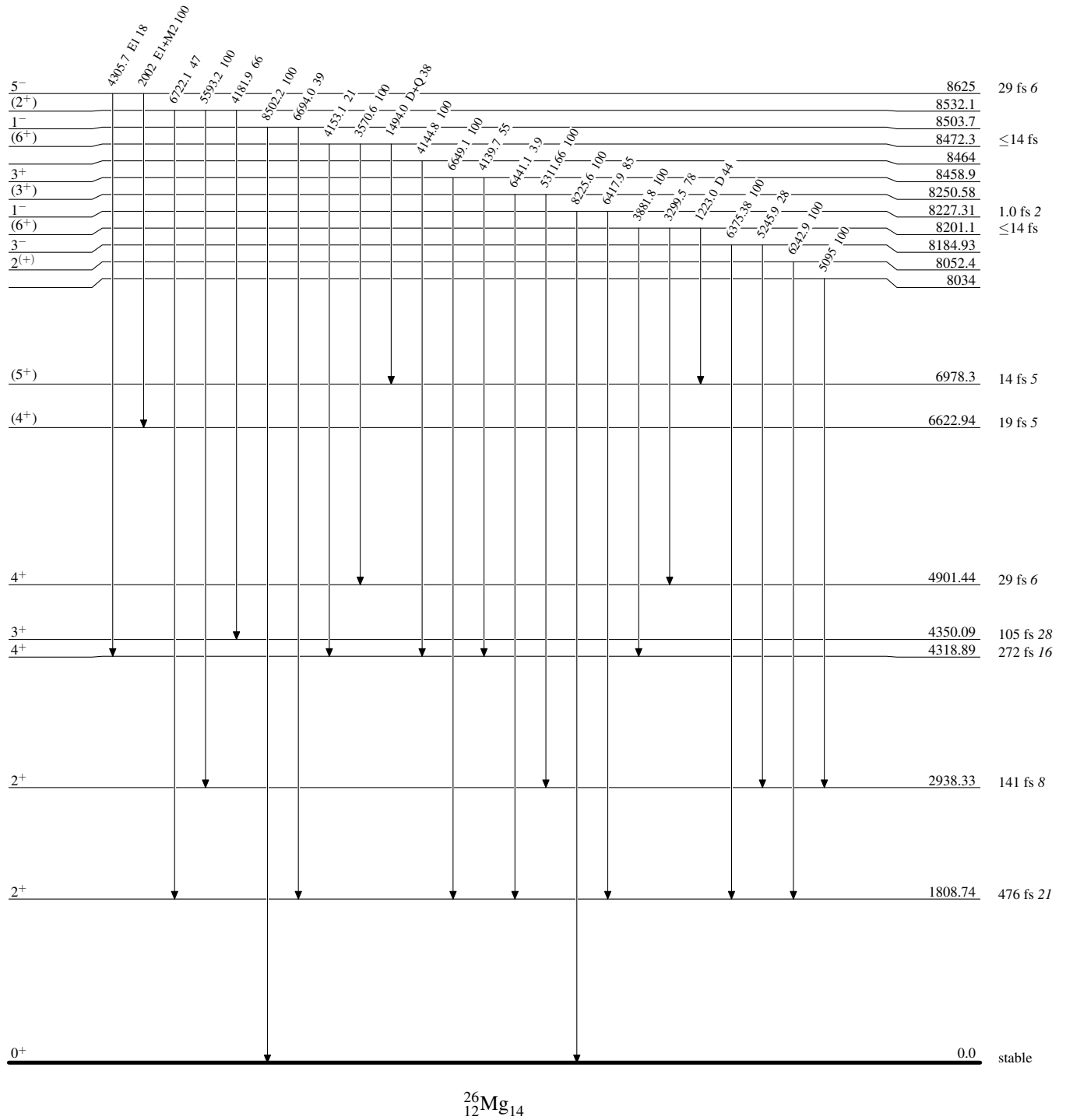
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



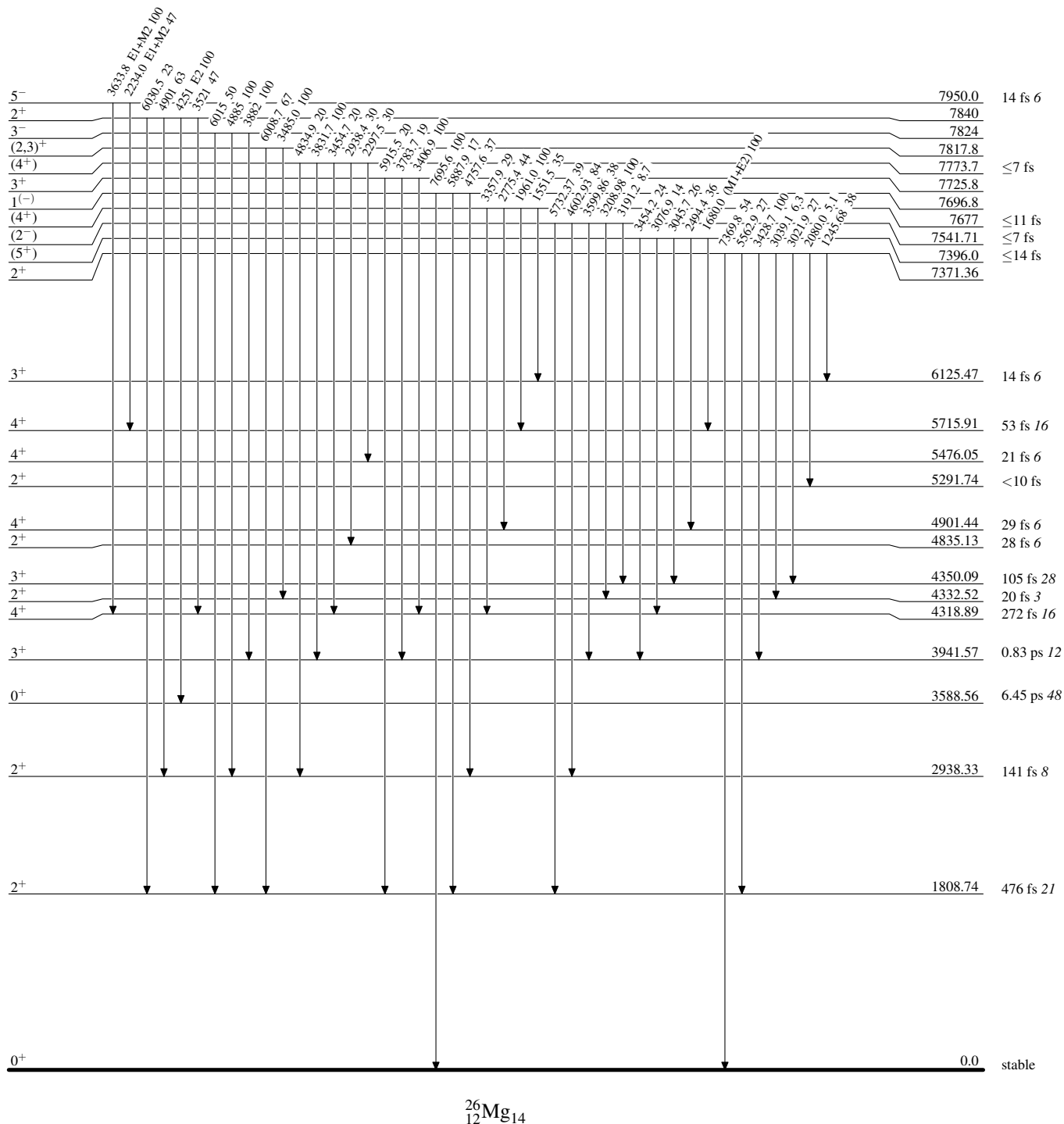
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



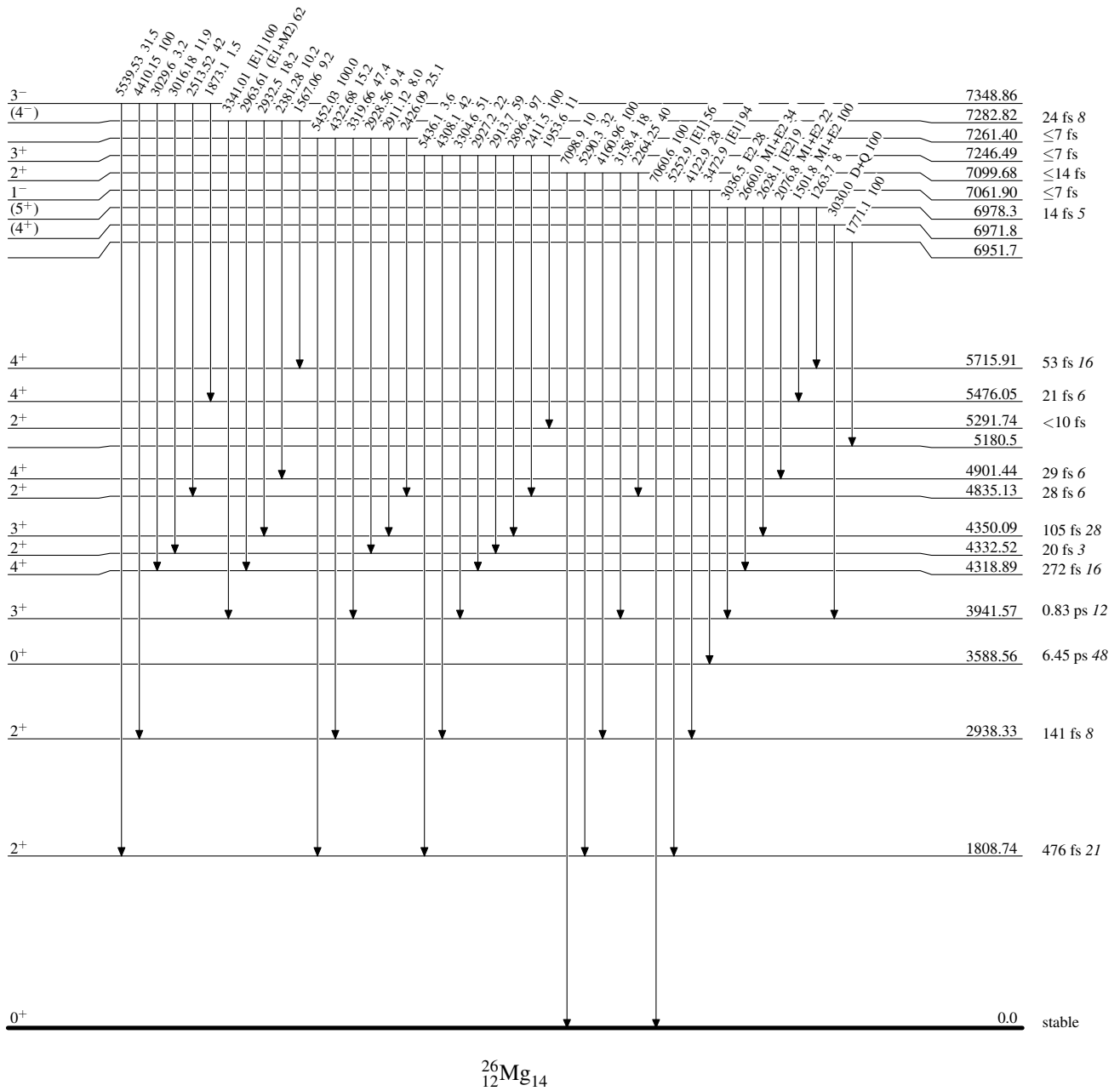
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



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: intensity suitably divided

