

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan		NDS 194,3 (2024)	8-Jan-2024

$Q(\beta^-) = -4963.9$; $S(n) = 11153.79$; $S(p) = 9506.7$; $Q(\alpha) = -5090.96$ 8 [2021Wa16](#)

$S(2n) = 19181.38$ 2, $S(2p) = 16407.45$ 2 ([2021Wa16](#)).

Other reactions:

$^{72}\text{Ge}(^6\text{Li},d), E=34$ MeV: [1984Co08](#), analyzed spectroscopic factors.

$^{76}\text{Se}(e,e), E=225$ MeV: [1988Kh02](#) (also [1987Ku21](#), [1987Kh07](#)). Measured σ and comparison with theory.

$^{76}\text{Se}(d,^3\text{He}), E=25$ MeV: [1983Ro08](#), deduced g.s. proton occupation numbers.

Giant dipole resonances studied by [1976Ca06](#) using (γ, xn) reactions.

$(^{12}\text{C}, X), (^{16}\text{O}, X), (^{18}\text{O}, X), E=40-52$ MeV: [1985GuZZ](#), GDR decay characteristics.

(γ, xn) : GDR study: [1975Go16](#).

GDR experimental study in $(^{12}\text{C}, X)$ reaction.

[Additional information 1](#).

For neutron resonances see [1971Fe01](#), [1969Ma15](#), [1964Co31](#).

$^{76}\text{Ge}(\pi^+, \pi^-)$: [1991Ka20](#), [1991Ci10](#).

Mass measurements: [2010Mo03](#), [2008Ra09](#), [2006Sc38](#), [2002Bf02](#), [2001Fr25](#), [2001Do08](#), [1993Hy02](#), [1991Hy01](#), [1985El01](#) (also [1984El01](#)).

 ^{76}Se Levels

In $^{74}\text{Ge}(^3\text{He}, n)$, a level is seen at 4.1 MeV *I* which may correspond to any of the 12 or so levels between 4.0 and 4.2 MeV.

Cross Reference (XREF) Flags

A	$^{76}\text{As} \beta^-$ decay (26.254 h)	I	$^{75}\text{As}(^3\text{He}, d)$	Q	$^{76}\text{Se}(p, p'\gamma), (\alpha, \alpha'\gamma)$
B	$^{76}\text{Br} \varepsilon + \beta^+$ decay (16.14 h)	J	$^{75}\text{Se}(n, \gamma)$ E=thermal	R	$^{76}\text{Se}(d, d'), (\text{pol } d, d')$
C	$^{76}\text{Br} \varepsilon$ decay (1.31 s):?	K	$^{75}\text{As}(p, n)$ IAR	S	$^{76}\text{Se}(\alpha, \alpha')$
D	$^{76}\text{Ge} 2\beta^-$ decay (1.926×10^{21} y)	L	$^{76}\text{Se}(\gamma, \gamma')$	T	Coulomb excitation
E	$^{70}\text{Zn}(^{12}\text{C}, \alpha 2n\gamma)$	M	$^{76}\text{Se}(\text{pol } \gamma, \gamma')$	U	$^{76}\text{Br}(n, p)$ E=thermal
F	$^{74}\text{Ge}(^3\text{He}, n)$	N	$^{76}\text{Se}(n, n')$	V	$^{77}\text{Se}(d, t)$
G	$^{74}\text{Ge}(\alpha, 2n\gamma)$	O	$^{76}\text{Se}(n, n'\gamma)$	W	$^{78}\text{Se}(p, t)$
H	$^{74}\text{Ge}(^{16}\text{O}, ^{14}\text{C})$	P	$^{76}\text{Se}(p, p'), (\text{pol } p, p')$		

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF	Comments
0.0 ^b	0 ⁺	stable	ABCDEFGHIJ LMNOPQRSTUVWXYZ	RMS charge radius ($\langle r^2 \rangle$) ^{1/2} = 4.1395 fm <i>I6</i> (2013An02 evaluation). J ^π : microwave absorption method (1950Ge05 , 1949St07 , 1933Ra02) consistent with J=0. Valence protons in g.s. from transfer reaction measurements (2009Ka06). From (p,t) reactions, 2007Fr10 deduce very similar neutron pair correlations for ^{76}Se and ^{76}Ge . From ($^3\text{He}, n$) reaction, 2013Ro10 deduce no evidence of pairing vibrations for ^{76}Se and ^{76}Ge , and conclude a simple BCS structure for the ground states of both nuclei.
559.103 ^b 5	2 ⁺	11.98 ps + <i>I6</i> –40	ABC EFGHIJ LMNOPQRSTUVWXYZ	$\mu = +0.70$ <i>II</i> (2019Mc05 , 2020StZV) $Q = -0.35$ <i>4</i> (2019He07 , 2021StZZ) $\beta_2 = 0.28$ <i>I</i> (1993Mo05) J ^π : E2 γ to 0 ⁺ . T _{1/2} : from averaged B(E2) \uparrow = 0.432 + <i>I5</i> –6 (2016Pr01)

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	T _{1/2} [‡]	XREF	Comments
				evaluation), based on the following measurements: mean lifetime $\tau=15.5$ ps $+13-19$ (1963Pr04 in (γ,γ')), 13 ps 2 (1960De08 in (γ,γ')), 33 ps 22 (1955Co55, $\gamma\gamma(t)$). Coulomb excitation measurements: B(E2) $\uparrow=0.419$ 43 (1995Ka29, incident energy above the Coulomb barrier), 0.425 9 (1984Zo01, RDM and DSA), 0.423 6 (1977Le11), 0.42 2 (1974Ba80, superseded by 1977Le11), 0.390 40 (1970AgZV), 0.45 4 (1962Ga13), 0.480 43 (1962St02), 0.42 8 (1960An07), 0.43 6 (1956Te26). μ : transient-field method in Coul. ex. (2019Mc05), with measured $g^{76}\text{Se}/g^{74}\text{Se}=0.96$ 7 for first 2^+ states. Others: $+0.806$ 46 (1998Sp03, transient-field method in Coul. ex.); $+0.81$ 22 (1967Mu10, $\gamma\gamma(\theta, H)$ in $^{76}\text{As } \beta^-$), $+0.80$ 22 (1969He11, IMPAC in Coul. Ex.). Q: reorientaton in Coul. ex. (2019He07). Others: -0.34 7 (1977Le11, reorientation in Coul. ex.); -0.30 5 (1976VoZY). $\beta_2(p,p')$: 0.28 1 (1993Mo05); 0.310 10, 0.301 15 (1984De01); 0.27 4, 0.28 4 (1983Ma59); 0.278 7, 0.293 7 (1979Ma28); 0.323 (1970He10). $\beta_2(n,n')$: 0.28 (1976La12). $\beta_2R=1.52$ 5 (1984Ku09), 1.72 5 (1981Br23). $\beta_2(\alpha,\alpha')$: 0.265, 0.356 (1988Ba35). β_2 (Coul. ex.): 0.268 (1977Le11), 0.309 (1974Ba80), 0.319 (1970AgZV). $\beta_2(^{16}\text{O}, ^{14}\text{O})$: 0.326 (1976Co09).
1122.279 8	0 ⁺	12.1 ps $+39-24$	AB IJ L OPQR T VW	T _{1/2} : from B(E2) in Coul. ex. Otehr: 11 ps 5 from B(E2) ratios of unresolved 563 γ and 559 γ (1964By02) in Coul. ex. J ^π : E0 transition to 0 ⁺ . Also $\gamma\gamma(\theta)$ in $^{76}\text{As } \beta^-$ and $^{76}\text{Br } \varepsilon$ decay.
1216.154 ^c 6	2 ⁺	3.3 ps 3	AB E G IJ LM OPQRSTUWV	$\mu=0.61$ 11 (1998Sp03, 2020StZV) Q $=+0.19$ 4 (2019He07, 2021StZZ) $\beta_2=0.28$ 1 (1993Mo05) μ : transient-field method in Coul. ex. (1998Sp03), measured value of 0.70 12 in 1998Sp03 is re-evaluated to 0.61 11 in 2020StZV. Q: reorientaton in Coul. ex. (2019He07). J ^π : E2 γ to 0 ⁺ . T _{1/2} : from B(E2) in Coul. ex. Other: 3.5 ps 14 (DSAM in $(\alpha, 2n\gamma)$). $\beta_2(p,p')$ =0.085 2 (1993Mo05). $\beta_2(\alpha,\alpha')$ =0.1 (1988Ba35).
1330.872 ^b 8	4 ⁺	1.52 ps 3	ABC E G IJ OPQR T VW	$\mu=2.2$ 4 (1998Sp03, 2020StZV) Q $=-0.29$ 4 (2019He07, 2021StZZ) μ : transient-field method in Coul. ex. (1998Sp03), measured value of 2.56 36 in 1998Sp03 is re-evaluated to 2.2 4 in 2020StZV. Q: reorientaton in Coul. ex. (2019He07). J ^π : $\Delta J=2$, E2 γ to 2 ⁺ . Observed anisotropy forbids J=0. T _{1/2} : from B(E2) in Coul. ex. Others: 0.7 ps $+5-4$ (DSAM in $(\alpha, 2n\gamma)$), 1.3 ps $+5-1$ (p,p' γ). $\beta_4(p,p')$ =0.049 10 or 0.012 (1986MoZR), 0.040 (1984De01), 0.014 5, 0.012 4 (1983Ma59); $\beta_4(n,n')$ =0 (1984Ku09).

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF						Comments
1688.971 ^d 7	3 ⁺	3.2 ps +12-6	AB	E G	J	OPQ	T V		J ^π : ΔJ=1 E2+M1 γ to 2 ⁺ ; γ to 4 ⁺ .
1787.655 7	2 ⁺	1.29 ps +42-24	AB		IJ	OPQRSTUV			J ^π : M1+E2 γ to 2 ⁺ ; γ rays to 0 ⁺ and 4 ⁺ and L(p,p')=2. T _{1/2} : weighted average of 1.18 ps +42-24 from DSAM in (n,n'γ) (2019Mu04) and 1.5 ps +5-4 from B(E2) for 1229γ in Coul. ex. β ₂ (α,α')=0.07 (1988Ba35).
1791.437 21	0 ⁺		AB			O Q			J ^π : from isotropic γ(θ) for 575.3γ and comparison of excitation function data with statistical model calculations using CINDY code in (n,n'γ); spin=0 also from γγ(θ) in ^{76}Br ε decay (2018MoZZ).
2026.020 ^c 8	4 ⁺	1.6 ps 2	AB	E G IJ		OPQR	T VW		J ^π : ΔJ=2, E2 γ to 2 ⁺ and M1+E2 γ to 4 ⁺ . T _{1/2} : weighted average of 1.8 ps 4 from DSAM in (α,2nγ) and 1.6 ps 2 from B(E2) in Coul. ex.
2127.224 7	(2) ⁺		AB		IJ	OPQR	V		J ^π : L=1+3 in (^3He ,d) from 3/2 ⁻ and γ rays to 0 ⁺ and 4 ⁺ .
2170.572 11	(0 ⁺)	1.5 ps +10-5	AB		IJ	OPQR	W		XREF: P(2177)R(2210). J ^π : L(p,t)=(0). But L(^3He ,d)=(1+3) from 3/2 ⁻ suggests (1 ⁺ ,2 ⁺ ,3 ⁺). E(level): there may be two separate levels near this energy as indicated by contradictory L(p,t) and L(^3He ,d).
2262.42 ^b 16	6 ⁺	0.58 ps 5		E G		OPQR	T		XREF: R(2290). J ^π : ΔJ=2, E2 γ to 4 ⁺ ; member of rotaional band.
2362.963 13					J		W		T _{1/2} : weighted average of 0.62 ps 7 from DSAM in (α,2nγ) and 0.56 ps 5 from B(E2) in Coul.ex. XREF: W(2347).
2429.131 ^e 8	3 ⁻	8.9 ps +15-12	AB	GHIJ		NOPQRST	W		J ^π : γ to 2 ⁺ ; possible γ to 4 ⁺ . β ₃ =0.17 1 (1993Mo05) B(E3)=0.032 7 (2002Ki06 evaluation, from Coulomb ex.).
									J ^π : L(d, ^3He)=4 from 3/2 ⁻ and L(p,p')=3. Also dipole γ rays to 2 ⁺ and 3 ⁺ ; 403γ to 4 ⁺ can only be D,E2 from RUL.
									T _{1/2} : weighted average of 14 ps 7 from DSAM in (α,2nγ) and 8.7 ps +15-12 from B(E3) in Coul. ex. and adopted γ branching ratios.
									β ₃ (p,p')=0.17 1 (1993Mo05), 0.15 (1984De01), 0.164 (1979Ma28, 1979Ma41); β ₃ (α,α')=0.183 (1988Ba35); β ₃ (Coul. ex.)=0.185 (1974Ba80); β ₃ (^{16}O , ^{14}O)=0.185 (1976Co09); β ₃ R(n,n')=0.77 5 (1984Ku09).
2485.02 5	4 ⁺	485 fs +76-62				OpQ			XREF: p(2487). J ^π : spin=4 from γ(θ) in (n,n'γ); γ M1+E2 to 3 ⁺ .
2489.35 ^d 5	5 ⁺	0.9 ps +3-2		E G		OpQ			XREF: p(2487).
2514.681 11	2 ⁺	1.18 ps +39-24	AB		IJ	OPQR	W		J ^π : ΔJ=2, E2 γ to 3 ⁺ ; E2+M1 γ to 4 ⁺ . XREF: R(2540).
									J ^π : M1+E2 γ to 2 ⁺ ; 825.8γ D+Q to 3 ⁺ ; 723.2γ to 0 ⁺ . L(p,t)=(2) also supports (2 ⁺).
2558.73 8			B				V		XREF: V(2570).
2604.09 4	1 ⁺ ,2 ⁺	1.08 ps +64-30	B			O			J ^π : M1+E2 γ to 2 ⁺ ; γ to 0 ⁺ .
2617.89 6	(4) ⁺	402 fs +76-55		I		OP	VW		J ^π : L(p,p')=4 and L(^3He ,d)=3 from 3/2 ⁻ ; M1+E2 γ to 4 ⁺ and 3 ⁺ .
2655.383 13	1	0.82 ps +22-15	AB		J	OPQ	w		J ^π : dipole γ to 0 ⁺ .

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Adopted Levels, Gammas (continued)

^{76}Se Levels (continued)						
E(level) [†]	J ^π #	T _{1/2} [‡]	XREF			
2669.904 14	2 ⁻	0.89 ps +27-17	AB	IJ	O QR	w
2691.2	(3 ⁻)				P	
2805.10 15	(4 ⁺)	0.39 ps +10-7			OP	
2812.130 34	(3 ⁺)		B	J	O Q	w
2817.24 4	(2 ⁺)	98 fs 6	B	J	O	w
2824.797 ^e 10	5 ⁻	6.2 ps +21-14		G iJ	O	
2829.61 19	(1,2)		B	i		
2853.2	(4 ⁺)				P r	v
2859.781 ^f 24	4 ⁻	1.2 ps 5	B	G IJ	O	v
2869.34 5	(1 ⁺ ,2 ⁺)	82 ps 6	B	J	O Qr	v
2910.993 18	(1 to 4) ^a			J		w
2917.32 8	(4 ⁺)			IJ	OP	w
2950.171 32	1 ⁺	92 fs 14	B	J L	O Q	
2969.48 6	2 ⁻ ,3 ⁻ ,4 ⁻			IJ	OP r	
2975.00 5	(2 ⁺ ,3,4 ⁺)		B		O	
2975.98 ^c 29	6 ⁺	1.2 ps +7-4		E G	r T	
3007.75 8	(2 ⁺)	27.0 fs 21		IJ	OP	VW
3031.57 7	0 ⁺	98 fs 8			O	
3042.4	(6 ⁺)				P	
3045.79 8	(5 ⁻)	0.39 ps +28-12		G	O	
3069.62 4	2 ⁺	457 fs +83-62	B	J	O Q	
3084.58 6	(1 ⁺ ,2 ⁺ ,3 ⁺)&	32.6 fs 21		I	OP	
3105.48 5	(3 ⁻)	202 fs 21	B	J	OP	w
3160.115 32	(2 ⁺)	0.38 ps +21-10	B	J	O Qr	
3161.80 5	(3 ⁻)	272 fs +63-43			OP r	

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	T _{1/2} [‡]	XREF			Comments
3191.67 8	(3) ⁺ &	112 fs 8	B	I J	0	XREF: I(3198). J ^π : (M1+E2) γs to 2 ⁺ and 4 ⁺ .
3212.98 10	1 ⁺ ,2 ⁺	11.1 fs 14		i L	0	XREF: i(3212). J ^π : γ to 0 ⁺ can only be D,E2 from RUL; M1+E2 γ to 2 ⁺ . T _{1/2} : from DSAM in (n,n'γ). Other: 11 fs 4 from (γ,γ').
3216 4	(3 ⁻ &4 ⁺)				P W	XREF: W(3232). J ^π : L(p,p')=3+4; also L(p,t)=(3,4) for a possible doublet.
3219.428 33	(2 ⁺ ,3 ⁺)	56.1 fs 42	B	i J	0	XREF: i(3212). J ^π : γs to 2 ⁺ and 4 ⁺ ; L(³ He,d)=1+3 for a group at 3212.
3225.7 5	(6,8 ⁺)			G		J ^π : ΔJ=0 or 2 γ to 6 ⁺ . T _{1/2} : from DSAM in (α,2nγ) 1981KiZW give 1.1 ps 3 but this value is not reported in authors' published work (1984Zo01).
3230.27 8	1,2 ⁺	0.7 ps +21-3			0	J ^π : γ to 0 ⁺ can only be D,E2 from RUL.
3238.78 8				G	0	J ^π : γ to 5 ⁻ .
3259.81 8			B		p	XREF: p(3259).
3262.34 ^f 25	6 ⁻	12 ps 6		G	p	XREF: p(3259). J ^π : ΔJ=2, (E2) γ to 4 ⁻ , M1+E2 γ to 5 ⁻ and D+Q γ to 6 ⁺ .
3262.96 8		201 fs +97-55		I J	Op	XREF: p(3259). J ^π : γ to 2 ⁺ .
3267.57 6	(2 ⁺ ,3,4 ⁺)	395 fs +97-69	B	i j	0	XREF: i(3268). J ^π : γs to 2 ⁺ and 4 ⁺ .
3268.70 4	(1 ⁻ ,2)		B	i j		XREF: i(3268). J ^π : ε feeding (log ft=7.2) from 1 ⁻ ; γ to (3 ⁻).
3269.75 ^b 33	8 ⁺	0.35 ps 7	E G		T	J ^π : ΔJ=2, E2 γ to 6 ⁺ ; member of rotational band. T _{1/2} : other: 0.34 ps 8 from B(E2) in Coul. Ex.
3282.19 11	1,2 ⁺	101 fs 9			0	J ^π : γ to 0 ⁺ can only be D,E2 from RUL.
3294.8 4	(4 ⁺)			J	P r w	XREF: P(3289). J ^π : L(p,p')=4.
3295.02 12	(1 ⁺ ,2 ⁺)		B	i	o r w	J ^π : γ to 0 ⁺ ; L(³ He,d)=1+3 for a group at 3295. E(level),T _{1/2} : 69 fs 5 for a 3295.28 level in (n,n'γ) could correspond to 3295.70+3297.05 levels in ⁷⁶ Br ε decay based on matching of their decaying γ transitions.
3296.2 6	(1 ⁺ ,2 ⁺)		B	i	o r w	XREF: i(3295). E(level),T _{1/2} : see comment at 3295.7 level. J ^π : γ to 0 ⁺ ; L(³ He,d)=1+3 for a group at 3295.
3312.04 30	(6 ⁻)	0.14 ns +14-7	G		w	J ^π : ΔJ=1, D+Q (δ=0.25) γ to 5 ⁻ .
3331.51 8		229 fs +42-35			0	J ^π : γ to 2 ⁺ .
3346.25 11					Op	XREF: p(3342). J ^π : γs to 4 ⁺ .
3348.48 11	(1 ⁺ ,2 ⁺)	0.3 ps +15-2		i	Op	XREF: i(3345)p(3342). J ^π : γ to 0 ⁺ ; L(³ He,d)=1+3 for a group at 3345.
3351.462 30	(2 ⁺)	90 fs 9	B	i J	0 Q	XREF: i(3345). J ^π : M1+E2 γ to 2 ⁺ ; γ to 0 ⁺ ; γs to 0 ⁺ and 3 ⁻ .
3376.37 12	1 ⁽⁺⁾ ,2 ⁺	77 fs +49-29		i	0	XREF: i(3378). J ^π : γ to 0 ⁺ can only be D,E2 from RUL; L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3378 could correspond to 3376.3+3377.2 levels.

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Adopted Levels, Gammas (continued)

^{76}Se Levels (continued)					
E(level) [†]	J ^π #	T _{1/2} [‡]	XREF		Comments
3377.0 4	(1 ⁺ ,2 ⁺ ,3 ⁺)		B	i	XREF: i(3378). J ^π : γ to 2 ⁺ ; L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3378 could correspond to 3376.3+3377.2 levels.
3403.82 9	(2 ⁺ ,3 ⁺ ,4 ⁺)	32.6 fs 35		0	J ^π : 592γ to 3 ⁺ can't be pure E1, E2 or M2 based on RUL; γ to 4 ⁺ . Note that (5 ⁺) is proposed in (n,n'γ), but it would require a B(E2)(W.u.)=5.5×10 ³ +7-6 for 592γ, which greatly exceeds RUL=300.
3405.9 7	(1)	205 fs 33		L	J ^π : (D) γ to 0 ⁺ .
3407.91 4	(4 ⁺)	0.52 ps +56-19		OP	J ^π : L(p,p')=4.
3417 10	-			I	J ^π : L(³ He,d)=4 from 3/2 ⁻ suggests J=2 to 6.
3432.31 ^d 33	7 ⁺	0.8 ps +4-2	E G		J ^π : ΔJ=2, E2 γ to 5 ⁺ and ΔJ=1, M1 γ to 6 ⁺ .
3436.09 16	1 ⁽⁺⁾ ,2 ⁺	63 fs 5		I 0	J ^π : γs to 0 ⁺ can only be D,E2; (M1+E2) γ to 2 ⁺ .
3441.27 22	(3 ⁻)			OP	W XREF: W(3458). J ^π : L(p,p')=3. Also L(p,t)=(3,4).
3441.54 ^e 26	7 ⁻	3.6 ps 7		G	J ^π : ΔJ=2, E2 γ to 5 ⁻ and γ to 6 ⁺ .
3459.13 5	(2 ⁺)		B	I Q	XREF: I(3467). J ^π : ε feeding (log ft=6.6) from 1 ⁻ ; γs to 3 ⁺ and 3 ⁻ ; L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3467.
3466.39 11	(1,2,3)		B	0	XREF: O(?). J ^π : γs to 2 ⁺ and 2 ⁻ .
3475 4	(4 ⁺)			P	J ^π : L(p,p')=4.
3528.69 30	1 ⁺	50 fs 5		I L 0 r	XREF: O(?). J ^π : L(³ He,d)=1+3 from 3/2 ⁻ ; dipole γ to 0 ⁺ from γ(θ).
3552.89 7	(1,2)		B	i r	T _{1/2} : from (γ,γ'). XREF: i(3558)r(3540).
3556.210 29	(2 ⁻)		B	iJ Qr	J ^π : 2431γ to 0 ⁺ . XREF: i(3558).
3566.6 10	1 ⁽⁺⁾	157 fs 24		i L P	J ^π : γs to 1 ⁺ and 4 ⁻ ; ε feeding (log ft=6.4) from 1 ⁻ .
3604.192 33	1 ⁺	55 fs 5	B	IJ L Q	W XREF: i(3558). J ^π : dipole γ to 0 ⁺ in (γ,γ'); L(³ He,d)=(1+3) for a group at 3558.
3636.88 6	(2 ⁺)		B	I P	XREF: I(3598)W(3591). J ^π : ε feeding (log ft=6.4) from 1 ⁻ ; γ to 0 ⁺ can only be D,E2 from RUL; L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3598; dipole γ to 0 ⁺ in (γ,γ').
3651.88 9	(1 ⁺ ,2 ⁺ ,3 ⁺)		B	iJ p	J ^π : γs to 0 ⁺ and (3 ⁻); L(³ He,d)=(1+3) for a group at 3634.
3657.7? 4	(1,2)			i Op	XREF: i(3659)p(3655). J ^π : 3657.8γ to 0 ⁺ .
3670.2 4	1 ⁽⁺⁾	73 fs 8		i L	XREF: i(3659). J ^π : dipole γ to 0 ⁺ ; L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3659.

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF				Comments
3696.27 28	(7 ⁻)	28 ps 7		G			J ^π : ΔJ=1, (M1+E2) γ to (6 ⁻); and DJ=(0) γ to 7 ⁻ .
3697 4	1 ⁺ , 2 ⁺ , 3 ⁺ &			I	P	W	
3716.52 6	(2)		B				J ^π : ε feednig (log ft=7.4 from 1 ⁻); ΔJ=0, 2 γ to 2 ⁺ .
3730.8 10	(3 ⁻)			J	P		J ^π : L(p,p')=3.
3752.1 14	1 ⁽⁺⁾	175 fs 50		I	L		XREF: I(3741).
3758.79 20	1	6.0 fs 6			L		J ^π : L(³ He,d)=1+3 from 3/2 ⁻ ; dipole γ to 0 ⁺ .
3776 4	(4 ⁺)				P		J ^π : dipole γ to 0 ⁺ .
3785.7 4	(8 ⁺)	0.9 ps +5-3		G			J ^π : L(p,p')=4.
3790	(≤3 ⁺)			I			J ^π : ΔJ=0, 2 γ to 6 ⁺ ; γ to 8 ⁺ is likely dipole from RUL.
3806 4	(5 ⁻)				P		J ^π : L(³ He,d)=1(+3) from 3/2 ⁻ .
3808 10	1 ⁺ , 2 ⁺ , 3 ⁺ &			I			J ^π : L(p,p')=5.
3853.75 ^c 33	(8 ⁺)	0.23 ps +8-5	E	G			J ^π : DJ=(0), M1+E2 γ to 8 ⁺ and γ to 6 ⁺ .
3857.8 11	1 ⁺	171 fs 35		I	L		J ^π : L(d, ³ He)=1+3 from 3/2 ⁻ ; dipole γ to 0 ⁺ .
3861.11 32	(4 ⁺)			J	P	W	XREF: P(3862)W(3843).
							J ^π : L(p,p')=4. Level in (p,t) probably corresponds to this level rather than 3857, 1 ⁺ .
3880.46 18			B				
3906.39 30	1 ⁺ , 2 ⁺ , 3 ⁺ &			IJ			
3915.48 5	(2 ⁻)		B	J			J ^π : γs to 1 ⁺ and 4 ⁻ ; possible ε feeding (log ft=7.0 from 1 ⁻).
3917 4	(4 ⁺)				P		J ^π : L(p,p')=4.
3922.5 4	1	42 fs 4			L		J ^π : dipole γ to 0 ⁺ .
3930.02 6	(1, 2 ⁺)		B	J			XREF: J(3926.9).
							J ^π : ε feeding (log ft=7.0) from 1 ⁻ ; 1759γ to 0 ⁺ .
3932.7 4				J			
3948 4	(4 ⁺)				P		J ^π : L(p,p')=4.
3970.407 32	(2 ⁺)		B	I			XREF: I(3955).
							J ^π : ε feeding (log ft=6.4) from 1 ⁻ ; γ to (30); L(³ He,d)=1+3 from 3/2 ⁻ for a group at 3955.
4001.81 23	(3 ⁻)			IJ	P	W	XREF: W(3980).
							J ^π : L(p,p')=3. But L(³ He,d)=(1+3) from 3/2 ⁻ suggests (1 ⁺ , 2 ⁺ , 3 ⁺).
4005.1 8				G			Additional information 2.
							J ^π : γ to (7 ⁻) suggests (7, 8, 9).
4008.7 ^f 6	(8 ⁻)	2.2 ps 7		G			J ^π : ΔJ=2, E2 γ to 6 ⁻ .
4045.61 10	1 ⁺	31.1 fs 29	B	iJ	L	P	XREF: i(4054).
							J ^π : dipole γ to 0 ⁺ ; γ to 3 ⁺ can only be D,E2.
4055.22 30	1 ⁺	29.3 ps 26		i	LM		XREF: i(4054).
							J ^π : M1 γ to 0 ⁺ .
4083.68 6	(1 ⁻ , 2)		B				J ^π : ε feeding (log ft=6.9) from 1 ⁻ ; γ to 3 ⁻ .
4086.58 19	(1, 2, 3 ⁺)		B				J ^π : γs to 1 ⁺ , 2 ⁺ , 2 ⁻ .
4119 4	2 ⁻ , 3 ⁻ , 4 ⁻			I	P		XREF: I(4103).
							J ^π : L(³ He,d)=2+4 from 3/2 ⁻ .
4125.5 10	1 ⁺	123 fs 25		I	LM		XREF: I(4137).
							J ^π : M1 γ to 0 ⁺ .
							T _{1/2} : weighted average of 134 fs 25 from (γ, γ') and 98 fs 38 from (pol γ, γ').
4151.36 6	(2)		B				J ^π : ε feeding (log ft=7.2 from 1 ⁻); γs to 3 ⁺ and 3 ⁻ .
4170 4	(4 ⁺)			i	P	W	J ^π : L(p,p')=4.
4174.33 6	(1, 2)		B	i		W	J ^π : ε feeding (log ft=6.7) from 1 ⁻ ; 2383γ to 0 ⁺ .

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	T _{1/2} [‡]	XREF			Comments
4199.19 5	(1 ⁻ ,2)	1.7 ps +15-8	B		w	J ^π : ε feeding (log ft=6.8) from 1 ⁻ ; γ to 3 ⁻ .
4205.44 5	(1 ⁻ ,2)		B	J	w	J ^π : ε feeding (log ft=6.9) from 1 ⁻ ; γ to 3 ⁻ .
4214.0 4	(8 ⁻)			G		J ^π : ΔJ=2, E2 γ to (6 ⁻).
4218 4	(3 ⁻)				P	J ^π : L(p,p')=3.
4218.81 10	1 ⁺	2.98 fs 35		I LM		XREF: I(4218).
						J ^π : M1 γ to 0 ⁺ .
4240.54 21	(1 to 4) ^a			iJ	P	XREF: i(4250).
4249.20 28	(1,2)		B	i		XREF: i(4250).
						J ^π : 4249γ to 0 ⁺ .
4257.59 13	(1,2)		B	iJ		XREF: i(4250).
						J ^π : 2087γ to 0 ⁺ .
4282.8 4	(2 ⁻ ,3 ⁻ ,4 ⁻)			iJ		XREF: i(4301).
						J ^π : L(³ He,d)=2+4 from 3/2 ⁻ .
4298.87 9	(1,2,3 ⁺)		B	i		XREF: i(4301).
						J ^π : γs to 1 ⁺ , 2 ⁻ , 2 ⁺ .
4299.5 ^b 5	10 ⁺	0.49 ps +10-7		E G		J ^π : ΔJ=2, E2 γ to 8 ⁺ ; member of rotational band.
4324.6 ^e 6	(9) ⁻	1.4 ps 4		G		J ^π : ΔJ=2, E2 γ to 7 ⁻ ; band assignment.
4328.36 7	(1,2)		B			J ^π : 4328γ to 0 ⁺ .
4329.2 4	1	6.1 fs 15			L	J ^π : γ(θ) in (γ,γ'); dipole γ to 0 ⁺ and 2 ⁺ .
4340 4	(3 ⁻)			i	P	J ^π : L(p,p')=3.
4347.53 33	(1,2)		B	i		XREF: i(4343).
						J ^π : 4347γ to 0 ⁺ .
4351.3 7	(1 to 4) ^a			iJ		XREF: i(4343).
4366.55 11			B			J ^π : γs to 2 ⁺ and 3 ⁺ .
4369.43 22	(4 ⁺)			IJ		XREF: I(4375).
						J ^π : L(p,p')=4.
4383.97 15	1 ⁺ ,2 ⁺ ,3 ⁺ &			IJ		XREF: I(4400).
4399 4	(4 ⁺)				P	J ^π : L(p,p')=4.
4405.9 ^d 4	(9 ⁺)	0.9 ps 2		E G		J ^π : ΔJ=2, (E2) γ to 7 ⁺ ; band assignment.
4411.65 4	(2)		B			J ^π : ε feeding (log ft=6.3) from 1 ⁻ ; γs to 3 ⁺ and 3 ⁻ .
4425 10	(3 ⁻ ,4 ⁺)				w	J ^π : L(p,t)=(3,4) from 0 ⁺ .
4437.72 5	(1 ⁺ ,2 ⁺)		B	I	p	XREF: I(4425)p(4447).
						J ^π : ε feeding (log ft=6.6) from 1 ⁻ ; 2267γ to 0 ⁺ ;
						L(³ He,d)=1+3 for a group at 4425.
4451.92 11	(1 ⁺ ,2 ⁺)		B	I		XREF: I(4459).
						J ^π : 4451.8γ to 0 ⁺ ; L(³ He,d)=1+3 from 3/2 ⁻ for a
						group at 4459.
4473.46 8	(2 ⁺)		B	iJ	P	XREF: i(4475).
						J ^π : L(p,p')=(2).
4489.23 6	(1,2)		B	iJ		XREF: i(4475).
						J ^π : 2698γ to 0 ⁺ .
4523.47 10	(3 ⁻)		B	IJ	P	J ^π : L(p,p')=3.
4532.91 12	(1 ⁻ ,2,3)		B			J ^π : γs to 2 ⁺ , 2 ⁻ , 3 ⁻ .
4534.93 8	(0,1,2)		B			J ^π : ε feeding (log ft=6.7 from 1 ⁻).
4535.7 5	1 ⁺	10.1 fs 17			LM	J ^π : M1 γ to 0 ⁺ .
						T _{1/2} : from (γ,γ'). Other: 10.1 fs 24 from (pol γ,γ').
4576.11 19	(1,2)		B	I		XREF: I(4567).
						J ^π : 3453.8γ to 0 ⁺ .
4581.05 10	(1,2)		B			J ^π : ε feeding (log ft=6.6) from 1 ⁻ ; 2152γ to 3 ⁻ .
4603.26 28	(1,2) ⁺		B	I		XREF: I(4603).
						J ^π : 4603γ to 0 ⁺ ; L(³ He,d)=1+3 from 3/2 ⁻ .
4603.3 6	1 ⁻	8.0 fs 24			M	J ^π : E1 γ to 0 ⁺ .
4611 4	(3 ⁻)				P	J ^π : L(p,p')=3.
4647 10	1 ⁺ ,2 ⁺ ,3 ⁺ &			I		

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF		Comments
4658 4	(3 ⁻)		I	P	XREF: I(4677).
4663.08 31	1 ⁻	5.4 fs 9		LM	J ^π : L(p,p')=3 and L(³ He,d)=2+4 from 3/2 ⁻ .
4673.7 14	1 ⁺	54 fs 18		M	J ^π : E1 γ to 0 ⁺ .
4687.21 11	(1,2,3 ⁺)		B		J ^π : M1 γ to 0 ⁺ .
4687.3 ^c 4	(10) ⁺	0.49 ps 7	E G		J ^π : γs to 1 ⁺ , (3).
4720.6 5	1 ⁻	6.4 fs 9	B	LM	J ^π : ΔJ=2, E2 γ to 8 ⁺ and γ to (10) ⁺ .
4723.2 4	(3 ⁺)		B	i P	J ^π : E1 γ to 0 ⁺ and 2 ⁺ .
					T _{1/2} : from (γ,γ'). Other: 6.4 fs 10 from (pol γ,γ').
					XREF: i(4729).
					J ^π : L(³ He,d)=1+3 from 3/2 ⁻ for a 4729 group gives 1 ⁺ ,2 ⁺ ,3 ⁺ and L(p,p')=4 gives 4 ⁺ . However, J ^π =3 ⁺ would agree with both if unnatural parity state is populated in (p,p').
4728.6 6			G		J ^π : γ to 7 ⁻ suggests (7,8,9).
					T _{1/2} : for a 1287γ, from DSAM 1981KiZW report T _{1/2} =0.6 ps 1, but this value is not reported in authors' published work (1984Zo01).
4731.6 4	(⁺)		B	i	XREF: i(4729).
					J ^π : L(³ He,d)=1+3 from 3/2 ⁻ for a 4729 group gives 1 ⁺ ,2 ⁺ ,3 ⁺ .
4751.6 5	1 ⁺ ,2 ⁺ ,3 ⁺ &			IJ	
4766.96 30	1	17.4 fs 15		L	J ^π : dipole γ to 0 ⁺ .
4771 4	(3 ⁻)			P	J ^π : L(p,p')=(3).
4794.97 13	(1,2)		B		J ^π : 3672.5γ to 0 ⁺ .
4811 4	1 ⁺ ,2 ⁺ ,3 ⁺ &			I P	
4836 10	1 ⁺ ,2 ⁺ ,3 ⁺ &			I	
4859 4	(⁺)			I P	J ^π : L(³ He,d)=1+3 from 3/2 ⁻ allows (1 ⁺ ,2 ⁺ ,3 ⁺) but L(p,p')=4 suggests 4 ⁺ . However, J ^π =3 ⁺ agrees with both if an unnatural parity state is populated in (p,p').
4880.0 4	1 ⁻	19.7 fs 19		LM	J ^π : E1 γ to 0 ⁺ .
					T _{1/2} : weighted average of 19.9 fs 19 from (γ,γ') and 19 fs 4 from (pol γ,γ').
4887.07 30	1 ⁻	27.0 fs 33		LM	J ^π : E1 γ to 0 ⁺ .
					T _{1/2} : from (γ,γ'). Other: 27 fs 9 from (pol γ,γ').
4911 10	1 ⁺ ,2 ⁺ ,3 ⁺ &			I	
4931.6 17	1 ⁻	79 fs 21		LM	J ^π : E1 γ to 0 ⁺ .
4935 4	(3 ⁻)			I P	J ^π : L(p,p')=3.
4938.6 15	1	43 fs 8		L	J ^π : dipole γ to 0 ⁺ .
4971.5 17	1 ⁺	38 fs 7		I L	J ^π : L(³ He,d)=1+3 FROM 3/2 ⁻ ; dipole γ to 0 ⁺ .
4984.81 31	1 ⁻	6.0 fs 8		LM	J ^π : E1 γ to 0 ⁺ .
					T _{1/2} : from (γ,γ'). Other: 6.0 fs 11 from (pol γ,γ').
4998 4	1 ⁺ ,2 ⁺ ,3 ⁺ &			I P	XREF: I(5013).
5001.48 20	1 ⁻	8.4 fs 6		M	J ^π : E1 γ to 0 ⁺ .
5010.76 21	1 ⁻	3.65 fs 35		LM	J ^π : E1 γ to 0 ⁺ .
					T _{1/2} : from (γ,γ'). Other: 3.7 fs 7 from (pol γ,γ').
5032.11 19	(2 ⁻ ,3 ⁻ ,4 ⁻)			IJ	XREF: I(5043).
					J ^π : L(³ He,d)=2+4 from 3/2 ⁻ .
5068.1 ^f 8	(10) ⁻	1.0 ps +4-2	G		J ^π : ΔJ=2, E2 γ to (8) ⁻ ; band assignment.
5074.00 10	1 ⁻	2.44 fs 15		LM	J ^π : E1 γ to 0 ⁺ .
					T _{1/2} : from (γ,γ'). Other: 2.43 fs 28 from (pol γ,γ').
5081 4	(3) ⁻			I P	J ^π : L(³ He,d)=2+4 from 3/2 ⁻ and L(p,p')=3.
5122.19 20	1	35 fs 8		L	J ^π : dipole γ to 0 ⁺ .
5128.59 10	1	25 fs 4		L	J ^π : dipole γ to 0 ⁺ .

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF	Comments
5139.9 5	(1 to 4) ^a		J	
5142.3 7	1	26.1 fs 32	L	J ^π : dipole γ to 0 ⁺ .
5174 4	(3 ⁻)		P	J ^π : L(p,p')=3.
5195.00 15	1 ⁻	2.27 fs 17	J LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : from (γ, γ'). Other: 2.29 fs 28 from (pol γ, γ').
5217.8 11	1 ⁻	12.1 fs 26	M	J ^π : E1 γ to 0 ⁺ .
5239.6 8	1	9.6 fs 15	L	J ^π : dipole γ to 0 ⁺ .
5261 4	(4 ⁺)		P	J ^π : L(p,p')=4.
5284.40 30	1	8.4 fs 6	L	J ^π : dipole γ to 0 ⁺ .
5297.90 30	(1 ⁺)	13.7 fs 8	M	J ^π : (M1) γ to 0 ⁺ .
5298.60 10	1 ⁻	1.98 fs 11	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : 3.56 fs 23 in (pol γ, γ'), where only the 5298 γ from this level was listed.
5303 4	(3 ⁻)		P	J ^π : L(p,p')=3.
5324.18 29	1 ⁻	3.12 fs 35	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : other: 8.8 fs 7 in (γ, γ'), where only the 5324 γ from this level was listed.
5346.94 23	1 ⁻	3.4 fs 4	LM	J ^π : E1 γ to 0 ⁺ .
5367.5 13	1	44 fs 10	L	T _{1/2} : from (γ, γ'). Other: 3.5 fs 8 from (pol γ, γ').
5368.3 ^d 5	(11 ⁺)		E	J ^π : γ to (10) ⁺ ; band assignment.
5375.45 18	1 ⁻	1.43 fs 13	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : from (γ, γ'). Other: 1.46 fs 14 from (pol γ, γ').
5405.2 18	1 ⁻	26 fs 8	M P	J ^π : E1 γ to 0 ⁺ .
5411.33 29	1 ⁻	1.53 fs 33	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : from (γ, γ'). Other: 1.5 fs 4 from (pol γ, γ').
5425.21 26	1 ⁻	3.6 fs 4	LM	J ^π : E1 γ to 0 ⁺ .
5431.8 ^b 6	12 ⁺	0.2 ps 1	E G	J ^π : $\Delta J=2$, (E2) γ to 10 ⁺ ; member of rotaional band.
5510 10			I	
5551.8 15	1 ⁻	9.4 fs 24	M	J ^π : E1 γ to 0 ⁺ .
5629.8 15	1 ⁻	24 fs 8	M	J ^π : E1 γ to 0 ⁺ .
5637.7 15	1 ⁻	24 fs 8	M	J ^π : E1 γ to 0 ⁺ .
5669.2 15	1 ⁻	22 fs 8	M	J ^π : E1 γ to 0 ⁺ .
5685.5 4	1 ⁻	8.0 fs 7	LM	J ^π : E1 γ to 0 ⁺ .
5709.8 4	1 ⁻	7.4 fs 7	LM	J ^π : E1 γ to 0 ⁺ .
5740.73 30	1 ⁻	5.6 fs 5	LM	J ^π : E1 γ to 0 ⁺ .
5762.0 10	1 ⁻	15.7 fs 34	M	J ^π : E1 γ to 0 ⁺ .
5773.3 10	1 ⁻	17.9 fs 26	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 19.2 fs 32 from (γ, γ') and 17.1 fs 26 from (pol γ, γ').
5781.24 20	1 ⁻	3.94 fs 29	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 3.90 fs 29 from (γ, γ') and 4.4 fs 10 from (pol γ, γ').
5796.7 ^c 5	(12 ⁺)		E	J ^π : γ to 10 ⁺ ; band assignment.
5804.0 6	1 ⁻	2.8 fs 6	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 3.1 fs 8 from (γ, γ') and 2.6 fs 6 from (pol γ, γ').
5813.9 5	1 ⁻	8.0 fs 8	LM	J ^π : E1 γ to 0 ⁺ .
5842.31 29	1 ⁻	3.1 fs 4	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 3.28 fs 24 from (γ, γ') and 2.1 fs 6 from (pol γ, γ').
5865.3 7	1 ⁻	7.6 fs 11	M	J ^π : E1 γ to 0 ⁺ .
5879.6 6	1 ⁻	14.8 fs 19	LM	J ^π : E1 γ to 0 ⁺ .
5892.30 31	1 ⁻	3.4 fs 5	LM	J ^π : E1 γ to 0 ⁺ .
5939.0 5	(1 to 4) ^a		J	

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	T _{1/2} [‡]	XREF	Comments
5996.1 9	1 ⁻	5.3 fs 12	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : other: 0.94 fs 21 in (γ, γ').
6005 10			I	
6035.4 5	1 ⁻	2.6 fs 4	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : other: 6.1 fs 6 in (γ, γ') for only the 6035 γ .
6099.3 4	1 ⁻	2.8 fs 5	LM	J ^π : E1 γ to 0 ⁺ .
6131.5 6	1 ⁻	11.5 fs 18	LM	J ^π : E1 γ to 0 ⁺ .
6156.6 14	1 ⁻	55 fs 10	M	J ^π : E1 γ to 0 ⁺ .
6165.1 11	1 ⁻	21 fs 6	M	J ^π : E1 γ to 0 ⁺ .
6196.2 11	1 ⁻	10.0 fs 13	M	J ^π : E1 γ to 0 ⁺ .
6208.7 15	1 ⁻	5.0 fs 10	M	J ^π : E1 γ to 0 ⁺ .
6242.7 6	1 ⁻	2.6 fs 11	LM	XREF: L(6247.4). E(level): evaluators assume that 6242.7 in (pol γ, γ') and 6247.4 in (γ, γ') correspond to the same level.
				J ^π : E1 γ to 0 ⁺ .
6250.7 5	1 ⁻	5.6 fs 8	LM	T _{1/2} : other: 4.6 fs 6 in (γ, γ'). XREF: L(6254.0). E(level): evaluators assume that 6250.7 in (pol γ, γ') and 6254.0 in (γ, γ') correspond to the same level.
				J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 5.5 fs 8 from (γ, γ') and 5.8 fs 15 from (pol γ, γ').
6297.9 14	1 ⁻	10.0 fs 15	LM	J ^π : E1 γ to 0 ⁺ .
6315.9 4	1 ⁻	3.1 fs 4	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 2.97 fs 25 from (γ, γ') and 5.1 fs 12 from (pol γ, γ').
6336.8 20	1 ⁻	4.4 fs 23	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : unweighted average of 6.6 fs 13 from (γ, γ') and 2.1 fs 10 from (pol γ, γ').
6342.64 29	1 ⁻	0.28 fs 7	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : other: 5.1 fs 8 in (γ, γ') from only the 6342 γ .
6387.5 14	1 ⁻	6.7 fs 10	LM	J ^π : E1 γ to 0 ⁺ .
6438.1 19	1	8.4 fs 19	L	
6449.0 20	1 ⁻	6.1 fs 10	LM	J ^π : E1 γ to 0 ⁺ .
6497.7 6	1 ⁻	3.6 fs 14	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : unweighted average of 5.0 fs 6 from (γ, γ') and 2.2 fs 7 from (pol γ, γ').
6500.8 ^d 6	(13 ⁺)		E	
6532.7 4	1 ⁻	3.05 fs 28	LM	J ^π : E1 γ to 0 ⁺ .
6551.00 30	1 ⁺	11.0 fs 19	LM	J ^π : M1 γ to 0 ⁺ .
6562.9 9	1 ⁻	7.69 fs 28	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : from (pol γ, γ'). Other: 8.1 fs 15 from (γ, γ').
6570.4 9	1 ⁻	4.9 fs 6	LM	J ^π : E1 γ to 0 ⁺ .
6596.2 7	1 ⁻	5.5 fs 7	LM	J ^π : E1 γ to 0 ⁺ .
6608.5 9	1 ⁻	6.0 fs 8	LM	J ^π : E1 γ to 0 ⁺ .
6631.8 7	1 ⁻	1.39 fs 28	LM	J ^π : E1 γ to 0 ⁺ .
6641.3 17	1 ⁻	5.5 fs 12	M	J ^π : E1 γ to 0 ⁺ .
6653.7 14	1 ⁻	3.3 fs 7	M	J ^π : E1 γ to 0 ⁺ .
6680.0 18	1 ⁻	6.1 fs 7	M	J ^π : E1 γ to 0 ⁺ .
6691.5 8	1 ⁻	9.9 fs 16	LM	J ^π : E1 γ to 0 ⁺ .
				T _{1/2} : weighted average of 9.6 fs 16 from (γ, γ') and 10.2 fs 17 from (pol γ, γ').
6700.3 20	1 ⁻	8.2 fs 21	M	J ^π : E1 γ to 0 ⁺ .
6709.0 21	1 ⁻	9.1 fs 25	M	J ^π : E1 γ to 0 ⁺ .
6736.2 15	1 ⁻	9.1 fs 25	M	J ^π : E1 γ to 0 ⁺ .

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Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	T _{1/2} [‡]	XREF	Comments
6743.31 28	1 ⁻	1.11 fs 14	LM	J ^π : E1 γ to 0 ⁺ .
6749.2 4	1 ⁻	1.32 fs 21	LM	J ^π : E1 γ to 0 ⁺ .
6751.5 ^b 7	(14 ⁺)		E	
6813.9 20	1 ⁻	16 fs 6	M	J ^π : E1 γ to 0 ⁺ .
6830.2 15	1 ⁻	8.3 fs 18	M	J ^π : E1 γ to 0 ⁺ .
6882.7 6	1 ⁻	1.52 fs 28	LM	J ^π : E1 γ to 0 ⁺ .
6908.3 20	1 ⁻	15 fs 4	M	J ^π : E1 γ to 0 ⁺ .
6913.3 17	1 ⁺	14 fs 4	M	J ^π : M1 γ to 0 ⁺ .
6922.2 18	1 ⁻	12.6 fs 33	M	J ^π : E1 γ to 0 ⁺ .
6970.3 5	1 ⁻	4.0 fs 9	LM	XREF: L(6973.0). E(level): evaluators assume that 6970.3 in (pol γ, γ') and 6973.0 in (γ, γ') correspond to the same level.
6992.9 5	1 ⁻	3.3 fs 5	LM	J ^π : E1 γ to 0 ⁺ .
7018.1 18	1 ⁻	11 fs 5	M	J ^π : E1 γ to 0 ⁺ .
7025.1 20	1 ⁺	12 fs 4	M	J ^π : E1 γ to 0 ⁺ .
7047.4 15	1 ⁺	14 fs 5	M	J ^π : E1 γ to 0 ⁺ .
7053.1 19	1 ⁻	12.5 fs 37	M	J ^π : E1 γ to 0 ⁺ .
7084.5 ^c 6	(14 ⁺)		E	
7093.1 20	1 ⁻	11.2 fs 30	M	J ^π : E1 γ to 0 ⁺ .
7101.1 19	1 ⁻	11.4 fs 35	M	J ^π : E1 γ to 0 ⁺ .
7110.1 19	1 ⁺	10.0 fs 29	M	J ^π : M1 γ to 0 ⁺ .
7115.5 12	1 ⁻	2.9 fs 10	M	J ^π : E1 γ to 0 ⁺ .
7128.4 11	1 ⁻	0.80 fs 21	M	J ^π : E1 γ to 0 ⁺ .
7156.0 17	1 ⁻	7.6 fs 21	M	J ^π : E1 γ to 0 ⁺ .
7168.1 18	1 ⁻	11.8 fs 35	M	J ^π : E1 γ to 0 ⁺ .
7195.6 14	1 ⁻	6.3 fs 18	M	J ^π : E1 γ to 0 ⁺ .
7225.6 20	1 ⁻	6.0 fs 15	M	J ^π : E1 γ to 0 ⁺ .
7241.6 7	1 ⁻	4.5 fs 8	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : weighted average of 4.3 fs 8 from (γ, γ') and 4.9 fs 10 from (pol γ, γ').
7292.8 15	1 ⁻	4.0 fs 10	M	J ^π : E1 γ to 0 ⁺ .
7324.6 18	1 ⁻	8.3 fs 24	M	J ^π : E1 γ to 0 ⁺ .
7335.0 20	1 ⁻	10.3 fs 33	M	J ^π : E1 γ to 0 ⁺ .
7342.2 14	1 ⁻	4.6 fs 12	M	J ^π : E1 γ to 0 ⁺ .
7362.2 21	1 ⁻	12 fs 4	M	J ^π : E1 γ to 0 ⁺ .
7392.6 8	1 ⁻	13 fs 4	M	J ^π : E1 γ to 0 ⁺ .
7406.0 11	1 ⁻	2.4 fs 12	M	J ^π : E1 γ to 0 ⁺ .
7427.1 14	1 ⁻	4.2 fs 11	M	J ^π : E1 γ to 0 ⁺ .
7455.5 13	1 ⁻	3.9 fs 13	LM	XREF: L(7457.6). E(level): evaluators assume that 7455.5 in (pol γ, γ') and 7457.6 in (γ, γ') correspond to the same level.
				J ^π : E1 γ to 0 ⁺ . T _{1/2} : unweighted average of 5.1 fs 10 from (γ, γ') and 2.6 fs 6 from (pol γ, γ').
7464.9 14	1 ⁻	1.8 fs 6	M	J ^π : E1 γ to 0 ⁺ .
7508.4 8	1 ⁻	4.0 fs 5	LM	J ^π : E1 γ to 0 ⁺ .
7522.7 5	1 ⁻	1.18 fs 21	LM	J ^π : E1 γ to 0 ⁺ .
7546.9 6	1 ⁻	1.63 fs 14	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : weighted average of 1.59 fs 14 from (γ, γ') and 1.66 fs 14 from (pol γ, γ').
7580.5 16	1 ⁻	8.3 fs 23	M	J ^π : E1 γ to 0 ⁺ .
7617.2 17	1 ⁻	5.5 fs 11	M	J ^π : E1 γ to 0 ⁺ .
7627.8 15	1 ⁻	4.1 fs 8	M	J ^π : E1 γ to 0 ⁺ .
7643.3 17	1 ⁻	7.5 fs 19	M	J ^π : E1 γ to 0 ⁺ .

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π #	T _{1/2} [‡]	XREF	Comments
7652.9 17	1 ⁻	4.1 fs 8	M	J ^π : E1 γ to 0 ⁺ .
7658.71 20	1 ⁻	6.4 fs 10	LM	J ^π : E1 γ to 0 ⁺ .
7698.3 8	1 ⁻	0.97 fs 28	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : other: 2.22 fs 28 in (γ,γ') from only the 7698γ.
7729.7 16	1 ⁻	3.7 fs 8	M	J ^π : E1 γ to 0 ⁺ .
7781.6 18	1 ⁻	6.9 fs 22	M	J ^π : E1 γ to 0 ⁺ .
7817.5 10	1 ⁻	9.7 fs 35	M	J ^π : E1 γ to 0 ⁺ .
7830.0 9	1 ⁻	9.0 fs 35	M	J ^π : E1 γ to 0 ⁺ .
7846.9 ^d 7	(15 ⁺)		E	
7866.1 17	1 ⁻	8.3 fs 27	M	J ^π : E1 γ to 0 ⁺ .
7890.9 18	1 ⁻	7.8 fs 25	M	J ^π : E1 γ to 0 ⁺ .
7920.1 17	1 ⁻	5.1 fs 16	M	J ^π : E1 γ to 0 ⁺ .
7927.6 17	1 ⁻	5.3 fs 17	M	J ^π : E1 γ to 0 ⁺ .
7952.1 21	1 ⁻	7.1 fs 24	M	J ^π : E1 γ to 0 ⁺ .
7960.4 18	1 ⁻	5.9 fs 19	M	J ^π : E1 γ to 0 ⁺ .
7979.0 8	1 ⁻	3.0 fs 6	LM	J ^π : E1 γ to 0 ⁺ . T _{1/2} : weighted average of 2.8 fs 6 from (γ,γ') and 3.3 fs 8 from (pol γ,γ').
8017.9 23	1 ⁻	6.6 fs 21	M	J ^π : E1 γ to 0 ⁺ .
8062.5 22	1 ⁻	5.4 fs 17	M	J ^π : E1 γ to 0 ⁺ .
8082.7 18	1 ⁻	2.3 fs 8	M	J ^π : E1 γ to 0 ⁺ .
8107.3 22	1 ⁻	5.7 fs 17	M	J ^π : E1 γ to 0 ⁺ .
8132.1 22	1 ⁻	5.7 fs 17	M	J ^π : E1 γ to 0 ⁺ .
8154.9 21	1 ⁻	6.5 fs 19	M	J ^π : E1 γ to 0 ⁺ .
8170.1 22	1 ⁻	6.0 fs 17	M	J ^π : E1 γ to 0 ⁺ .
8198.0 10	1 ⁻	0.76 fs 14	LM	J ^π : E1 γ to 0 ⁺ .
8210.5 20	1 ⁻	4.0 fs 10	M	J ^π : E1 γ to 0 ⁺ .
8222.5 20	1 ⁻	2.5 fs 6	M	J ^π : E1 γ to 0 ⁺ .
8251.9 23	1 ⁻	12 fs 5	M	J ^π : E1 γ to 0 ⁺ .
8268.5 ^b 8	(16 ⁺)		E	
8288.5 23	1 ⁻	3.6 fs 9	M	J ^π : E1 γ to 0 ⁺ .
8316.7 22	1 ⁻	6.1 fs 21	M	J ^π : E1 γ to 0 ⁺ .
8340.7 10	1 ⁻	4.4 fs 13	M	J ^π : E1 γ to 0 ⁺ .
8394.9 19	1 ⁻	2.50 fs 35	LM	J ^π : E1 γ to 0 ⁺ .
8453.5 21	1 ⁻	2.8 fs 7	M	J ^π : E1 γ to 0 ⁺ .
8486.5 18	1 ⁻	0.91 fs 23	M	J ^π : E1 γ to 0 ⁺ .
8528.1 4	1 ⁻	0.48 fs 10	LM	J ^π : E1 γ to 0 ⁺ .
8539.8 11	1 ⁻	0.94 fs 17	M	J ^π : E1 γ to 0 ⁺ .
8571.7 19	1 ⁻	1.7 fs 5	M	J ^π : E1 γ to 0 ⁺ .
8573.8 ^c 8	(16 ⁺)		E	
8590.1 20	1 ⁻	2.3 fs 8	M	J ^π : E1 γ to 0 ⁺ .
8654.9 19	1 ⁻	2.0 fs 6	M	J ^π : E1 γ to 0 ⁺ .
8709.9 13	1 ⁻	1.66 fs 28	LM	J ^π : E1 γ to 0 ⁺ .
8719.5 21	1 ⁻	3.0 fs 10	M	J ^π : E1 γ to 0 ⁺ .
8770.9 23	1 ⁻	1.9 fs 6	M	J ^π : E1 γ to 0 ⁺ .
8843.4 14	1 ⁻	0.83 fs 42	M	J ^π : E1 γ to 0 ⁺ .
8864.8 20	1 ⁻	2.9 fs 9	M	J ^π : E1 γ to 0 ⁺ .
8890.8 19	1 ⁻	2.1 fs 6	M	J ^π : E1 γ to 0 ⁺ .
8918.8 19	1 ⁻	2.1 fs 6	M	J ^π : E1 γ to 0 ⁺ .
8935.6 20	1 ⁻	2.6 fs 8	M	J ^π : E1 γ to 0 ⁺ .
9394.7 ^d 8	(17 ⁺)		E	
9963.8 ^b 10	(18 ⁺)		E	
11147.1 ^d 10	(19 ⁺)		E	
(11154.19 7)	2 ⁺ ,3 ⁺		J	J ^π : s-wave capture in ^{75}Se (g.g. J ^π =5/2 ⁺).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{76}Se Levels (continued)

E(level) [†]	J ^π [#]	XREF	Comments
E(level): S(n)=11153.79 7 (201Wa16).			
11774.8 ^b 11	(20 ⁺)	E	
12528 [@]		K	
12578 [@]		K	
12678 [@]		K	
12718 [@]		K	
12788 [@]		K	
12888 [@]		K	
12938 [@]		K	
13138 [@]		K	
13278 [@]		K	
13418 [@]		K	
13478 [@]		K	
13528 [@]		K	
13598 [@]		K	
13681.3 ^b 12	(22 ⁺)	E	
13728 [@]		K	
13928 [@]		K	
14038 [@]		K	
14118 [@]		K	
14198 [@]		K	

[†] From a least squares fit to E γ data for levels populated in γ -ray studies. In other cases, values are mainly from ($^3\text{He},d$), (p,p') and/or from primary transitions in (n, γ).

[‡] Unless otherwise indicated, values for high-spin states are from recoil-distance Doppler-shift (RDDS) or DSA methods in ($\alpha,2n\gamma$) (1984Zo01), DSAM in (n,n' γ), (pol γ,γ'), and from cross section data in (γ,γ') for J=1 levels above 2900 keV.

[#] When deduced from $\gamma(\theta)$ in ($\alpha,2n\gamma$), it is assumed that a γ -transition with large quadrupole component is E2 rather than M2, unless a long lifetime is indicated. Above 2800, values are given in parentheses when available only from L(p,p') due to following reasons: 1. The agreement of $\sigma(\theta)$ fits to DWBA is not good over the whole angular range. 2. The correspondence between levels in different reactions is not unique due to large level density and large uncertainties in E(level) from particle reactions. Above 2900 keV, levels populated in (γ,γ') and (pol γ,γ') are primarily J=1 states, determined from $\gamma(\theta)$ and $\gamma(\text{pol})$ data.

[@] Isobaric analog resonances from $^{75}\text{As}(p,n)$. Uncertainty ≈ 25 keV. See $^{75}\text{As}(p,n)$ IAR for assignment to analog states in ^{76}As .

[&] L($^3\text{He},d$)=1+3 from 3/2⁻.

^a Primary γ from 2⁺, 3⁺ in (n, γ).

^b Band(A): Yrast band based on ground state. First band crossing at $\hbar\omega \approx 0.55$ MeV due to pair of g_{9/2} neutrons, second crossing at $\hbar\omega \approx 0.80$ MeV, due to pair of g_{9/2} protons, and interpreted as shape transition from prolate to oblate (2015Xu09). Band parameters are: E₀=196.0, A=51.8, B=-0.12.

^c Band(B): γ band, even spin.

^d Band(b): γ band, odd spin.

^e Band(C): $K^\pi=3^-$ band. Band parameters are: E₀=2178.1, A=20.4, B=0.038.

^f Band(D): $\Delta J=2$ band. Band parameters are: E₀=2514.8, A=15.3, B=0.072.

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$

Additional information 3.

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\dagger}</u>	<u>I_{γ}^{\dagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.[#]</u>	<u>δ[#]</u>	<u>α^{\dagger}</u>	<u>I_($\gamma+ce$)</u>	<u>Comments</u>
559.103	2 ⁺	559.099 5	100	0.0	0 ⁺	E2		1.97×10 ⁻³ 3		B(E2)(W.u.)=45.1 +12-6 α (K)=0.001747 24; α (L)=0.0001872 26; α (M)=2.91×10 ⁻⁵ 4 α (N)=2.452×10 ⁻⁶ 34
1122.279	0 ⁺	563.171 7	100	559.103	2 ⁺	E2		1.92×10 ⁻³ 3		B(E2)(W.u.)=47 11 α (K)=0.001710 24; α (L)=0.0001832 26; α (M)=2.85×10 ⁻⁵ 4 α (N)=2.400×10 ⁻⁶ 34
		1122.3 3		0.0	0 ⁺	E0			0.023 5	q _K ² (E0/E2)=0.133 15, X(E0/E2)=0.0246 31, ρ ² (E0)=0.035 +14-13 (2022Ki03 evaluation). X(E0/E2)=0.023 4 (1986Gi12); ρ (E0)=0.17 4 (1986Gi12), 0.19 4 (1983Pa10) from ce data in ⁷⁶ Br ε decay.
1216.154	2 ⁺	657.041 5	100.0 22	559.103	2 ⁺	E2+M1(+E0)	+5.2 2	1.23×10 ⁻³ 2		B(M1)(W.u.)=5.31×10 ⁻⁴ +71-59; B(E2)(W.u.)=44.7 +45-38 α (K)=0.001090 15; α (L)=0.0001159 16; α (M)=1.802×10 ⁻⁵ 25 α (N)=1.524×10 ⁻⁶ 21 Mult., δ : from $\gamma(\theta)$ in ⁷⁶ As β^- . Others: +6 1 ($\gamma\gamma(\theta)$ in ⁷⁶ Br ε); +4.7 +11-20 (α ,2 γ). E0 from α (K) _{exp} =0.00167 15 (1970Dz09) in ⁷⁶ Br ε decay. X(E0/E2)≤0.14; ρ (E0)≤0.41 (1986Gi12). q _K ² (E0/E2)=0.25 14, X(E0/E2)=0.11 6, ρ ² (E0)=0.140 80, %E0=19 (2022Ki03 evaluation).
		1216.149 25	58.0 22	0.0	0 ⁺	E2		0.000281 4		B(E2)(W.u.)=1.24 +13-11 α (K)=0.0002408 34; α (L)=2.508×10 ⁻⁵ 35; α (M)=3.90×10 ⁻⁶ 5 α (N)=3.33×10 ⁻⁷ 5; α (IPF)=1.090×10 ⁻⁵ 15 I _{γ} : NRM weighted average; low value of 37.7 26 in (α ,2 γ) is not used in averaging.
1330.872	4 ⁺	771.757 9	100	559.103	2 ⁺	E2		0.000800 11		B(E2)(W.u.)=71.1 14 α (K)=0.000712 10; α (L)=7.52×10 ⁻⁵ 11;

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult. [#]	$\delta^\#$	α^\dagger	Comments
1688.971	3 ⁺	358.099 7	4.1 17	1330.872	4 ⁺	(M1+E2)		0.0059 21	$\alpha(\text{M})=1.170\times 10^{-5}$ 16 $\alpha(\text{N})=9.93\times 10^{-7}$ 14 $\alpha(\text{K})=0.0053$ 19; $\alpha(\text{L})=5.7\times 10^{-4}$ 22; $\alpha(\text{M})=8.9\times 10^{-5}$ 33 $\alpha(\text{N})=7.5\times 10^{-6}$ 27 B(M1)(W.u.)=0.0044 21 if M1, B(E2)(W.u.)=46 22 if E2. δ : +1.8 +10-12 or +0.8 +20-3 from (n,n' γ). B(M1)(W.u.)=0.00148 44; B(E2)(W.u.)=92 +23-25 $\alpha(\text{K})=0.00281$ 4; $\alpha(\text{L})=0.000303$ 5; $\alpha(\text{M})=4.71\times 10^{-5}$ 7 $\alpha(\text{N})=3.95\times 10^{-6}$ 6 I $_\gamma$: unweighted average of available values. δ : from ^{76}Br ε decay. Others: +2.1 9, +0.75 44 from $\gamma(\theta)$ in ($\alpha,2n\gamma$); +0.01 to +0.73, >+2.5 or <-6.7 from $\gamma(\theta)$ in ^{76}As β^- . B(M1)(W.u.)=0.00157 +40-42; B(E2)(W.u.)=1.93 +47-53 $\alpha(\text{K})=0.000275$ 4; $\alpha(\text{L})=2.86\times 10^{-5}$ 4; $\alpha(\text{M})=4.44\times 10^{-6}$ 6 $\alpha(\text{N})=3.80\times 10^{-7}$ 5; $\alpha(\text{IPF})=1.573\times 10^{-6}$ 33 δ : from $\gamma\gamma(\theta)$ in ^{76}As β^- decay. Others: +1.8 12 from $\gamma(\theta)$ in ($\alpha,2n\gamma$), +0.57 to +3.55 from $\gamma(\theta)$ in ^{76}As β^- , +1.9 2 from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. B(E2)(W.u.)=21.0 +48-51 $\alpha(\text{K})=0.00324$ 5; $\alpha(\text{L})=0.000351$ 5; $\alpha(\text{M})=5.46\times 10^{-5}$ 8 $\alpha(\text{N})=4.58\times 10^{-6}$ 6 B(M1)(W.u.)=0.0046 +11-13; B(E2)(W.u.)=0.32 +80-29 $\alpha(\text{K})=0.001148$ 26; $\alpha(\text{L})=0.0001203$ 29; $\alpha(\text{M})=1.87\times 10^{-5}$ 5 $\alpha(\text{N})=1.60\times 10^{-6}$ 4 I $_\gamma$: NRM weighted average. High value of 31 from (n,n' γ) is not used. δ : from $\gamma\gamma(\theta)$ in ^{76}As β^- decay. Other: -0.13 34 or >+1.37 from $\gamma(\theta)$ in ^{76}As β^- . Parity is from the Adopted Levels. B(E2)(W.u.)=33.7 +77-82 $\alpha(\text{K})=0.001062$ 15; $\alpha(\text{L})=0.0001128$ 16;
		472.813 7	36 4	1216.154	2 ⁺	M1+E2	+3.20 +27-24	0.00316 5	
		1129.873 16	100 5	559.103	2 ⁺	E2+M1	+1.08 10	0.000309 4	
1787.655	2 ⁺	456.77 5	3.06 8	1330.872	4 ⁺	[E2]		0.00365 5	
		571.495 9	8.7 10	1216.154	2 ⁺	(M1(+E2))	+0.13 12	1.29 $\times 10^{-3}$ 3	
		665.361 9	32.3 16	1122.279	0 ⁺	[E2]		1.19 $\times 10^{-3}$ 2	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	$\delta^{\#}$	α^{\dagger}	
1787.655	2 ⁺	1228.600 20	100.0 19	559.103	2 ⁺	M1+E2	-0.51 5	0.000264 4	$\alpha(\text{M})=1.755\times 10^{-5}$ 25 $\alpha(\text{N})=1.484\times 10^{-6}$ 21 B(M1)(W.u.)=0.0043 +10-11; B(E2)(W.u.)=1.00 28 $\alpha(\text{K})=0.0002259$ 32; $\alpha(\text{L})=2.340\times 10^{-5}$ 33; $\alpha(\text{M})=3.64\times 10^{-6}$ 5 $\alpha(\text{N})=3.12\times 10^{-7}$ 4; $\alpha(\text{IPF})=1.042\times 10^{-5}$ 18 Mult., δ : weighted average from $\gamma(\theta)$ and $\gamma\gamma(\theta)$ in $^{76}\text{As } \beta^-$. Others: -0.19 5 from $\gamma\gamma(\theta)$ in $^{76}\text{Br } \varepsilon$, -0.52 +9-7 from (n,n' γ). B(E2)(W.u.)=0.181 +42-44 $\alpha(\text{K})=0.0001103$ 15; $\alpha(\text{L})=1.139\times 10^{-5}$ 16; $\alpha(\text{M})=1.772\times 10^{-6}$ 25 $\alpha(\text{N})=1.517\times 10^{-7}$ 21; $\alpha(\text{IPF})=0.0002089$ 29 $\alpha(\text{K})=0.001607$ 22; $\alpha(\text{L})=0.0001719$ 24; $\alpha(\text{M})=2.67\times 10^{-5}$ 4 $\alpha(\text{N})=2.253\times 10^{-6}$ 32 $\alpha(\text{K})=0.0002340$ 33; $\alpha(\text{L})=2.436\times 10^{-5}$ 34; $\alpha(\text{M})=3.79\times 10^{-6}$ 5 $\alpha(\text{N})=3.24\times 10^{-7}$ 5; $\alpha(\text{IPF})=1.373\times 10^{-5}$ 19 $\alpha(\text{K})=0.0293$ 4; $\alpha(\text{L})=0.00335$ 5; $\alpha(\text{M})=0.000520$ 7 $\alpha(\text{N})=4.25\times 10^{-5}$ 6 B(M1)(W.u.)=0.00327 +57-73; B(E2)(W.u.)=26.3 +46-31 $\alpha(\text{K})=0.000889$ 24; $\alpha(\text{L})=9.40\times 10^{-5}$ 26; $\alpha(\text{M})=1.46\times 10^{-5}$ 4 $\alpha(\text{N})=1.240\times 10^{-6}$ 33 I $_\gamma$: high value of 79 5 in (α ,2n γ) is not used in averaging. B(E2)(W.u.)=35.5 +51-40 $\alpha(\text{K})=0.000629$ 9; $\alpha(\text{L})=6.63\times 10^{-5}$ 9; $\alpha(\text{M})=1.031\times 10^{-5}$ 14 $\alpha(\text{N})=8.76\times 10^{-7}$ 12 B(E2)(W.u.)=0.056 +15-14 $\alpha(\text{K})=0.0001626$ 23; $\alpha(\text{L})=1.685\times 10^{-5}$ 24; $\alpha(\text{M})=2.62\times 10^{-6}$ 4 $\alpha(\text{N})=2.241\times 10^{-7}$ 31; $\alpha(\text{IPF})=7.36\times 10^{-5}$ 10
		1787.62 2	24.3 7	0.0	0 ⁺	[E2]		0.000333 5	
1791.437	0 ⁺	575.28 3	100.0 20	1216.154	2 ⁺	(E2)		1.81×10^{-3} 3	
		1232.40 5	13.6 4	559.103	2 ⁺	(E2)		0.000276 4	
2026.020	4 ⁺	239.11 10		1787.655	2 ⁺	[E2]		0.0333 5	
		695.137 9	46.5 20	1330.872	4 ⁺	E2+M1	+1.7 +6-1	0.000999 27	
		809.828 11	100.0 22	1216.154	2 ⁺	E2		0.000706 10	
		1466.8 3	3.1 7	559.103	2 ⁺	[E2]		0.000256 4	
2127.224	(2) ⁺	335.87 10	6.7 7	1791.437	0 ⁺				
		339.569 5	19.8 19	1787.655	2 ⁺				E $_\gamma$: from (n, γ) E=thermal. Others: 339.62 10 from $^{76}\text{Br } \varepsilon+\beta^+$ decay (16.14 h), 339.60 10 from (n,n' γ),

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
2127.224	(2) ⁺							and 338.0 15 from (p,p' γ).
								I_γ : unweighted average of 21.5 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), 16.1 16 from (n, γ) E=thermal, and 22.4 4 from (n,n' γ).
		438.253 5	44 6	1688.971	3 ⁺			I_γ : unweighted average of 54.0 20 from ^{76}As β^- decay, 45 4 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), 26.8 29 from (n, γ) E=thermal, and 51.3 9 from (n,n' γ).
		796.10 6	1.49 33	1330.872	4 ⁺			E_γ : weighted average of 796.44 26 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), 796.08 6 from (n, γ) E=thermal, and 796.2 3 from (p,p' γ).
								I_γ : from ^{76}Br $\varepsilon+\beta^+$ decay (16.14h). Other: 18.7 32 from (n, γ) E=thermal questionable.
		910.06 10	4.79 18	1216.154	2 ⁺			E_γ : weighted average of 911.11 13 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 911.03 10 from (n,n' γ). Other: 910.7 8 from (p,p' γ).
		1005.01 16	4.8 14	1122.279	0 ⁺			I_γ : weighted average of 4.73 14 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 5.3 4 from (n,n' γ).
								E_γ : weighted average of 1005.06 22 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 1004.98 16 from (n,n' γ).
		1568.14 7	100.0 9	559.103	2 ⁺			I_γ : unweighted average of 3.4 4 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 6.1 4 from (n,n' γ).
								E_γ : weighted average of 1568.22 7 from ^{76}As β^- decay, 1568.25 10 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), 1568.02 7 from (n, γ) E=thermal, and 1568.07 12 from (n,n' γ). Other: 1568.1 5 from (p,p' γ).
		2127.30 21	18.3 4	0.0	0 ⁺			I_γ : from (n,n' γ). Others: 100.0 13 from ^{76}As β^- decay, 100 6 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), and 100 13 from (n, γ) E=thermal.
								E_γ : unweighted average of 2127.0 1 from ^{76}As β^- decay, 2127.69 20 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), and 2127.21 8 from (n,n' γ).
								I_γ : weighted average of 18.0 13 from ^{76}As β^- decay, 16.7 14 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), and 18.4 4 from (n,n' γ).
								$\alpha(\text{K})=0.00574$ 8; $\alpha(\text{L})=0.000629$ 9; $\alpha(\text{M})=9.77\times 10^{-5}$ 14
2170.572	(0) ⁺	382.904 9	3.5 9	1787.655	2 ⁺	[E2]	0.00647 9	$\alpha(\text{N})=8.14\times 10^{-6}$ 11
								B(E2)(W.u.)=70 +41-32
								E_γ : from (n, γ) E=thermal. Other: 382.92 44 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h).
		954.49 9	15.7 7	1216.154	2 ⁺	[E2]	0.000470 7	I_γ : from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h).
								$\alpha(\text{K})=0.000418$ 6; $\alpha(\text{L})=4.39\times 10^{-5}$ 6; $\alpha(\text{M})=6.83\times 10^{-6}$ 10
								$\alpha(\text{N})=5.81\times 10^{-7}$ 8
								B(E2)(W.u.)=3.3 +17-13
								E_γ : weighted average of 954.7 2 from ^{76}As β^- decay, 954.35 28 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), 954.47 9 from (n,n' γ), and 953.9 10 from (p,p' γ).
								I_γ : weighted average of 13.3 19 from ^{76}As β^- decay, 16.3 8 from ^{76}Br

Adopted Levels, Gammas (continued)

<u>$\gamma(^{76}\text{Se})$ (continued)</u>									Comments
<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ^{\ddagger}</u>	<u>I_γ^{\ddagger}</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[#]</u>	<u>$\delta^{\#}$</u>	<u>α^{\dagger}</u>	
2170.572	(0 ⁺)	1611.65 8	100.0 7	559.103	2 ⁺	[E2]		0.000282 4	$\varepsilon+\beta^+$ decay (16.14 h), and 15.6 7 from (n,n' γ). Other: 330 120 in (n, γ) E=thermal indicates contamination. $\alpha(\text{K})=0.0001347$ 19; $\alpha(\text{L})=1.394\times 10^{-5}$ 20; $\alpha(\text{M})=2.168\times 10^{-6}$ 30 $\alpha(\text{N})=1.855\times 10^{-7}$ 26; $\alpha(\text{IPF})=0.0001310$ 18 B(E2)(W.u.)=1.5 +8-6 E_γ : weighted average of 1611.5 3 from ^{76}As β^- decay, 1611.71 12 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h), and 1611.63 8 from (n,n' γ). Other: 1611.7 5 from (p,p' γ). I_γ : (n,n' γ). Others: 100 4 from ^{76}As β^- decay, ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h). B(E2)(W.u.)=72.7 +68-58 $\alpha(\text{K})=0.000444$ 6; $\alpha(\text{L})=4.66\times 10^{-5}$ 7; $\alpha(\text{M})=7.24\times 10^{-6}$ 10 $\alpha(\text{N})=6.16\times 10^{-7}$ 9
2262.42	6 ⁺	931.50 20	100	1330.872	4 ⁺	E2		0.000498 7	
2362.963		575.305 11 1032 ^b 1	100 10 <20	1787.655	2 ⁺ 4 ⁺				
2429.131	3 ⁻	301.96 5	0.67 3	2127.224	(2) ⁺	[E1]		0.00313 4	B(E1)(W.u.)=8.8 $\times 10^{-6}$ 14 $\alpha(\text{K})=0.00279$ 4; $\alpha(\text{L})=0.000292$ 4; $\alpha(\text{M})=4.52\times 10^{-5}$ 6 $\alpha(\text{N})=3.83\times 10^{-6}$ 5
		403.094 7	1.83 7	2026.020	4 ⁺	[E1]		1.44 $\times 10^{-3}$ 2	B(E1)(W.u.)=1.01 $\times 10^{-5}$ +16-15 $\alpha(\text{K})=0.001280$ 18; $\alpha(\text{L})=0.0001334$ 19; $\alpha(\text{M})=2.072\times 10^{-5}$ 29 $\alpha(\text{N})=1.759\times 10^{-6}$ 25
		740.147 20	8.49 18	1688.971	3 ⁺	(E1+M2)	-0.21 12	0.00040 9	B(E1)(W.u.)=7.2 $\times 10^{-6}$ +11-12 $\alpha(\text{K})=0.00036$ 8; $\alpha(\text{L})=3.7\times 10^{-5}$ 8; $\alpha(\text{M})=5.8\times 10^{-6}$ 13 $\alpha(\text{N})=5.0\times 10^{-7}$ 11 δ : from $\gamma\gamma(\theta)$ in ^{76}As β^- . Other: +0.08 16 from $\gamma(\theta)$ in ^{76}As β^- . Parity is from the Adopted Levels. B(M2)(W.u.)=2.7 +47-23 exceeds RUL=1. B(E1)(W.u.)=7.6 $\times 10^{-8}$ 18 $\alpha(\text{K})=0.0001358$ 19; $\alpha(\text{L})=1.400\times 10^{-5}$ 20; $\alpha(\text{M})=2.176\times 10^{-6}$ 30 $\alpha(\text{N})=1.861\times 10^{-7}$ 26
		1098.33 5	0.28 5	1330.872	4 ⁺	[E1]		0.0001521 21	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
2429.131	3 ⁻	1212.980 10	100.0 5	1216.154	2 ⁺	(E1+M2)	+0.025 20	0.0001820 26	B(E1)(W.u.)=2.02×10 ⁻⁵ +32-29; B(M2)(W.u.)=0.039 +89-35 $\alpha(\text{K})=0.0001136$ 17; $\alpha(\text{L})=1.170\times 10^{-5}$ 17; $\alpha(\text{M})=1.818\times 10^{-6}$ 27 $\alpha(\text{N})=1.556\times 10^{-7}$ 23; $\alpha(\text{IPF})=5.48\times 10^{-5}$ 8 δ : from $\gamma\gamma(\theta)$ in $^{76}\text{As } \beta^-$. Others: -0.27 13 from $\gamma(\theta)$ in $(\alpha, 2n\gamma)$, +0.11 10 from $\gamma(\theta)$ in $^{76}\text{As } \beta^-$. Parity is the Adopted Levels.
		1870.02 2	3.87 13	559.103	2 ⁺	(E1+M2)	+0.17 3	0.000589 9	B(E1)(W.u.)=2.07×10 ⁻⁷ +33-31; B(M2)(W.u.)=0.0079 +32-28 $\alpha(\text{K})=5.91\times 10^{-5}$ 16; $\alpha(\text{L})=6.06\times 10^{-6}$ 16; $\alpha(\text{M})=9.42\times 10^{-7}$ 25 $\alpha(\text{N})=8.08\times 10^{-8}$ 22; $\alpha(\text{IPF})=0.000523$ 9 δ : from $\gamma\gamma(\theta)$ in $^{76}\text{As } \beta^-$. Other: +0.00 8 from $\gamma(\theta)$ in $^{76}\text{As } \beta^-$. Parity is from the Adopted Levels.
		2429.49 22	2.41 4	0.0	0 ⁺	[E3]		0.000437 6	B(E3)(W.u.)=16.3 +26-24 $\alpha(\text{K})=9.90\times 10^{-5}$ 14; $\alpha(\text{L})=1.025\times 10^{-5}$ 14; $\alpha(\text{M})=1.596\times 10^{-6}$ 22 $\alpha(\text{N})=1.367\times 10^{-7}$ 19; $\alpha(\text{IPF})=0.000326$ 5 $\alpha(\text{K})=0.000553$ 13; $\alpha(\text{L})=5.76\times 10^{-5}$ 14; $\alpha(\text{M})=8.98\times 10^{-6}$ 22 $\alpha(\text{N})=7.68\times 10^{-7}$ 18 B(M1)(W.u.)=0.0153 +21-28; B(E2)(W.u.)=1.3 +32-11 E_γ, I_γ : from (n,n' γ) only. Mult., δ : D+Q from $\gamma(\theta)$ in (n,n' γ); E1+M2 ruled out by RUL.
2485.02	4 ⁺	796.08 6	29.5 7	1688.971	3 ⁺	M1+E2	+0.20 +19-13	0.000621 14	$\alpha(\text{K})=0.000255$ 4; $\alpha(\text{L})=2.64\times 10^{-5}$ 4; $\alpha(\text{M})=4.11\times 10^{-6}$ 6 $\alpha(\text{N})=3.52\times 10^{-7}$ 5; $\alpha(\text{IPF})=2.53\times 10^{-6}$ 4 B(M1)(W.u.)=0.0159 23; B(E2)(W.u.)=2.0 6 E_γ, I_γ : from (n,n' γ) only. Mult., δ : D+Q from $\gamma(\theta)$ in (n,n' γ); E1+M2 ruled out by RUL.
		1154.09 9	100 1	1330.872	4 ⁺	M1+E2	-0.35 5	0.000289 4	$\alpha(\text{K})=0.0002198$ 31; $\alpha(\text{L})=2.286\times 10^{-5}$ 32; $\alpha(\text{M})=3.56\times 10^{-6}$ 5 $\alpha(\text{N})=3.04\times 10^{-7}$ 4; $\alpha(\text{IPF})=2.098\times 10^{-5}$ 29 B(E2)(W.u.)=4.1 6 E_γ, I_γ : from (n,n' γ) only.
		1268.81 9	37.2 8	1216.154	2 ⁺	[E2]		0.000268 4	B(E2)(W.u.)=67 +19-17
2489.35	5 ⁺	800.41 9	100.0 6	1688.971	3 ⁺	E2		0.000728 10	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\ddagger}</u>	<u>I_{γ}^{\ddagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.#</u>	<u>$\delta^{\#}$</u>	<u>α^{\dagger}</u>	<u>Comments</u>
									$\alpha(\text{K})=0.000648$ 9; $\alpha(\text{L})=6.84\times 10^{-5}$ 10; $\alpha(\text{M})=1.063\times 10^{-5}$ 15 $\alpha(\text{N})=9.03\times 10^{-7}$ 13 E _{γ} : weighted average of 800.6 5 from ($\alpha,2n\gamma$) and 800.40 9 from (n,n' γ). I _{γ} : from (n,n' γ). Other: 100 7 from ($\alpha,2n\gamma$). B(M1)(W.u.)= 5.6×10^{-4} +46-23; B(E2)(W.u.)=4.7 13 $\alpha(\text{K})=0.000266$ 4; $\alpha(\text{L})=2.77\times 10^{-5}$ 4; $\alpha(\text{M})=4.31\times 10^{-6}$ 6 $\alpha(\text{N})=3.68\times 10^{-7}$ 5; $\alpha(\text{IPF})=3.57\times 10^{-6}$ 9 E _{γ} : from (n,n' γ). Other: 1158.4 5 from ($\alpha,2n\gamma$). I _{γ} : from (n,n' γ). Other: 50.0 33 from ($\alpha,2n\gamma$). $\alpha(\text{K})=0.0042$ 14; $\alpha(\text{L})=4.5\times 10^{-4}$ 15; $\alpha(\text{M})=7.0\times 10^{-5}$ 24 $\alpha(\text{N})=5.9\times 10^{-6}$ 19 B(M1)(W.u.)=0.00117 +39-37 if M1, B(E2)(W.u.)=10.5 +35-33 if E2.
2489.35	5 ⁺	1158.45 5	49.9 6	1330.872	4 ⁺	E2+M1	+2.9 8	0.000302 5	
2514.681	2 ⁺	387.66 49	0.61 12	2127.224	(2) ⁺	[M1,E2]		0.0047 15	
		723.24 11 727.014 10	6.5 12 100.0 15	1791.437 0 ⁺ 1787.655 2 ⁺		M1+E2	+0.22 5	0.000759 11	$\alpha(\text{K})=0.000676$ 10; $\alpha(\text{L})=7.06\times 10^{-5}$ 11; $\alpha(\text{M})=1.098\times 10^{-5}$ 17 $\alpha(\text{N})=9.39\times 10^{-7}$ 14 B(M1)(W.u.)=0.028 7; B(E2)(W.u.)=3.4 +18-16 δ : weighted average of +0.188 52 from ⁷⁶ Br ε decay and +0.24 5 from (n,n' γ). Others: >+3.0 or <-0.10 from $\gamma(\theta)$ in ⁷⁶ As β^- decay. $\alpha(\text{K})=0.00055$ 5; $\alpha(\text{L})=5.8\times 10^{-5}$ 5; $\alpha(\text{M})=9.0\times 10^{-6}$ 8 $\alpha(\text{N})=7.7\times 10^{-7}$ 7 δ : -3 +18-3 or -1 +15-1 from (n,n' γ). B(M1)(W.u.)= 6.0×10^{-4} 17 if M1, B(E2)(W.u.)=1.18 33 if E2.
		825.78 8	3.0 4	1688.971	3 ⁺	(M1+E2)		0.00062 5	
		1298.60 12	0.98 5	1216.154	2 ⁺	[M1,E2]		0.000254 9	$\alpha(\text{K})=0.000205$ 5; $\alpha(\text{L})=2.12\times 10^{-5}$ 6; $\alpha(\text{M})=3.30\times 10^{-6}$ 9 $\alpha(\text{N})=2.83\times 10^{-7}$ 8; $\alpha(\text{IPF})=2.43\times 10^{-5}$ 33 B(M1)(W.u.)= 5.0×10^{-5} 13 if M1, B(E2)(W.u.)=0.040 10 if E2.
		1392.36 12	2.1 4	1122.279	0 ⁺	[E2]		0.0002534 35	$\alpha(\text{K})=0.0001808$ 25; $\alpha(\text{L})=1.877\times 10^{-5}$ 26; $\alpha(\text{M})=2.92\times 10^{-6}$ 4 $\alpha(\text{N})=2.495\times 10^{-7}$ 35; $\alpha(\text{IPF})=5.07\times 10^{-5}$ 7 B(E2)(W.u.)=0.060 19
		1955.53 4	53.4 12	559.103	2 ⁺	(M1+E2)	-0.21 +5-6	0.000348 5	$\alpha(\text{K})=9.19\times 10^{-5}$ 13; $\alpha(\text{L})=9.45\times 10^{-6}$ 13; $\alpha(\text{M})=1.471\times 10^{-6}$ 21

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	$\delta^{\#}$	α^{\dagger}	Comments
									$\alpha(\text{N})=1.262\times 10^{-7}$ 18; $\alpha(\text{IPF})=0.000245$ 4 B(M1)(W.u.)= 7.6×10^{-4} 19; B(E2)(W.u.)=0.012 +8-6 δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay.
2558.73		1342.30 14 1999.74 10	100.0 25 31.3 14	1216.154 2+ 559.103 2+					
2604.09	1 ⁺ ,2 ⁺	816.47 17	6.2 10	1787.655 2+		[M1,E2]		0.00064 5	$\alpha(\text{K})=0.00057$ 5; $\alpha(\text{L})=6.0\times 10^{-5}$ 5; $\alpha(\text{M})=9.3\times 10^{-6}$ 8 $\alpha(\text{N})=7.9\times 10^{-7}$ 7 B(M1)(W.u.)=0.0017 +7-6 if M1, B(E2)(W.u.)=3.4 +15-13 if E2.
		1387.87 6	30.1 10	1216.154 2+		[M1,E2]		0.000244 10	$\alpha(\text{K})=0.000179$ 4; $\alpha(\text{L})=1.85\times 10^{-5}$ 5; $\alpha(\text{M})=2.88\times 10^{-6}$ 7 $\alpha(\text{N})=2.47\times 10^{-7}$ 6; $\alpha(\text{IPF})=4.4\times 10^{-5}$ 6 E_γ : weighted average of 1388.13 27 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 1387.86 6 from (n,n' γ). I_γ : weighted average of 28.6 14 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 30.7 9 from (n,n' γ). B(M1)(W.u.)=0.0017 +7-6 if M1, B(E2)(W.u.)=1.17 +46-40 if E2.
		2044.93 6	100.0 9	559.103 2+		M1+E2	-3.0 +14-60	0.000423 11	$\alpha(\text{K})=8.58\times 10^{-5}$ 12; $\alpha(\text{L})=8.84\times 10^{-6}$ 13; $\alpha(\text{M})=1.375\times 10^{-6}$ 20 $\alpha(\text{N})=1.178\times 10^{-7}$ 17; $\alpha(\text{IPF})=0.000327$ 10 B(M1)(W.u.)= 1.7×10^{-4} +35-14; B(E2)(W.u.)=0.50 +18-21 E_γ : from (n,n' γ). Other: 2045.49 70 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h). I_γ : from (n,n' γ). Other: 100 4 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h). Mult., δ : D+Q from $\gamma\gamma(\theta)$ in ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h); E1+M2 ruled out by RUL.
		2604.10 41	0.91 4	0.0 0 ⁺		[M1,E2]		0.00063 4	$\alpha(\text{K})=5.57\times 10^{-5}$ 9; $\alpha(\text{L})=5.72\times 10^{-6}$ 9; $\alpha(\text{M})=8.90\times 10^{-7}$ 15 $\alpha(\text{N})=7.64\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000567$ 35 B(M1)(W.u.)= 7.7×10^{-6} +31-26 if M1, B(E2)(W.u.)=0.0015 +6-5 if E2.
2617.89	(4) ⁺	830.41 11	26.8 7	1787.655 2+		[E2]		0.000662 9	$\alpha(\text{K})=0.000590$ 8; $\alpha(\text{L})=6.21\times 10^{-5}$ 9; $\alpha(\text{M})=9.67\times 10^{-6}$ 14 $\alpha(\text{N})=8.21\times 10^{-7}$ 11 B(E2)(W.u.)=31.1 50
		928.82 14	15.5 5	1688.971 3 ⁺		M1+E2		0.000473 30	$\alpha(\text{K})=0.000421$ 26; $\alpha(\text{L})=4.40\times 10^{-5}$ 30; $\alpha(\text{M})=6.8\times 10^{-6}$ 5 $\alpha(\text{N})=5.8\times 10^{-7}$ 4 δ : +8 +21-5 or +0.15 11 from (n,n' γ). B(M1)(W.u.)=0.0066 11 if M1, B(E2)(W.u.)=10.3 17 if E2.
		1286.91 10	100 1	1330.872 4 ⁺		M1+E2	-0.22 4	0.0002480 35	$\alpha(\text{K})=0.0002041$ 29; $\alpha(\text{L})=2.111\times 10^{-5}$ 30;

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	$\delta^\#$	α^\dagger	Comments
2617.89	(4) ⁺	1401.70 11	18.0 7	1216.154	2 ⁺	[E2]		0.0002532 35	$\alpha(\text{M})=3.29\times 10^{-6}$ 5 $\alpha(\text{N})=2.82\times 10^{-7}$ 4; $\alpha(\text{IPF})=1.918\times 10^{-5}$ 29 $\text{B}(\text{M1})(\text{W.u.})=0.0152$ 25; $\text{B}(\text{E2})(\text{W.u.})=0.60$ +24-21 $\alpha(\text{K})=0.0001784$ 25; $\alpha(\text{L})=1.851\times 10^{-5}$ 26; $\alpha(\text{M})=2.88\times 10^{-6}$ 4 $\alpha(\text{N})=2.461\times 10^{-7}$ 34; $\alpha(\text{IPF})=5.32\times 10^{-5}$ 7 $\text{B}(\text{E2})(\text{W.u.})=1.53$ +24-26
2655.383	1	484.69 5 528.15 6 863.90 5 867.723 26	1.33 15 0.62 3 1.79 7 25 3	2170.572 (0 ⁺) 2127.224 (2) ⁺ 1791.437 0 ⁺ 1787.655 2 ⁺		D(+Q)	+0.013 20		δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. Others: +0.08 7 from $\gamma\gamma(\theta)$ in ^{76}As β^- , +0.4 +6-3 from $\gamma(\theta)$ in ^{76}As β^- .
		1439.211 21	48.3 8	1216.154 2 ⁺		D+Q	-0.043 19		δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. Others: +0.01 3, +0.13 9 from $\gamma\gamma(\theta)$ in ^{76}As β^- , -0.02 10 from $\gamma(\theta)$ in ^{76}As β^- .
		1533.11 5 2096.17 3	4.11 8 100.0 8	1122.279 0 ⁺ 559.103 2 ⁺		D D(+Q)	-0.043 +43-42		δ : 0.0 from $\gamma(\theta)$ in ^{76}As β^- . δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. Others: +0.02 6 from $\gamma\gamma(\theta)$ in ^{76}As β^- , 0.00 8 from $\gamma(\theta)$ in ^{76}As β^- .
2669.904	2 ⁻	2655.47 8 882.213 20	7.3 5 18.2 6	0.0 0 ⁺ 1787.655 2 ⁺		(E1)		0.0002325 33	$\alpha(\text{K})=0.0002074$ 29; $\alpha(\text{L})=2.144\times 10^{-5}$ 30; $\alpha(\text{M})=3.33\times 10^{-6}$ 5 $\alpha(\text{N})=2.85\times 10^{-7}$ 4 $\text{B}(\text{E1})(\text{W.u.})=6.7\times 10^{-5}$ 16 δ : +0.26 15 from $\gamma\gamma(\theta)$ in ^{76}As β^- but it would give a large $\text{B}(\text{M2})(\text{W.u.})$ exceeding RUL.
		980.80 8	13.0 5	1688.971 3 ⁺		(E1)		0.0001885 26	$\text{B}(\text{E1})(\text{W.u.})=3.5\times 10^{-5}$ 8 $\alpha(\text{K})=0.0001683$ 24; $\alpha(\text{L})=1.737\times 10^{-5}$ 24; $\alpha(\text{M})=2.70\times 10^{-6}$ 4 $\alpha(\text{N})=2.307\times 10^{-7}$ 32
		1453.717 20	35.4 16	1216.154 2 ⁺		(E1+M2)	+0.045 19	0.000308 4	δ : <+0.24 or >+16.4 from $\gamma(\theta)$ in ^{76}As β^- . $\alpha(\text{K})=8.34\times 10^{-5}$ 13; $\alpha(\text{L})=8.57\times 10^{-6}$ 13; $\alpha(\text{M})=1.333\times 10^{-6}$ 20 $\alpha(\text{N})=1.141\times 10^{-7}$ 17; $\alpha(\text{IPF})=0.0002150$ 30 $\text{B}(\text{E1})(\text{W.u.})=2.9\times 10^{-5}$ 7; $\text{B}(\text{M2})(\text{W.u.})=0.13$ +13-9 δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. Others: +0.05 2 from $\gamma\gamma(\theta)$, -0.11 12 from $\gamma(\theta)$ in ^{76}As β^- .

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
2669.904	2^-	2110.75 5	100.0 7	559.103	2^+	(E1+M2)	+0.047 12	0.000758 11	$\alpha(\text{K})=4.64 \times 10^{-5}$ 7; $\alpha(\text{L})=4.75 \times 10^{-6}$ 7; $\alpha(\text{M})=7.39 \times 10^{-7}$ 11 $\alpha(\text{N})=6.34 \times 10^{-8}$ 9; $\alpha(\text{IPF})=0.000706$ 10 $\text{B}(\text{E1})(\text{W.u.})=2.7 \times 10^{-5}$ 6; $\text{B}(\text{M2})(\text{W.u.})=0.061$ +39-30 E_γ : from ^{76}As decay. Value of 2111.27 8 from ^{76}Br decay fits poorly. Weighted average (NRM) of all available values is 2111.23 12. δ : from $\gamma\gamma(\theta)$ in ^{76}Br ε decay. Others: -0.09 2 from $\gamma\gamma(\theta)$, -0.02 16 from $\gamma(\theta)$ in ^{76}As β^- . $\alpha(\text{K})=8.79 \times 10^{-5}$ 12; $\alpha(\text{L})=9.08 \times 10^{-6}$ 13; $\alpha(\text{M})=1.413 \times 10^{-6}$ 20 $\alpha(\text{N})=1.213 \times 10^{-7}$ 17; $\alpha(\text{IPF})=0.000362$ 5 $\text{B}(\text{M2})(\text{W.u.})=0.014$ +7-6
		2670.1 5	0.16 7	0.0	0^+	[M2]		0.000460 6	
2805.10	(4^+)	1474.21 15	100	1330.872	4^+				
2812.130	(3^+)	382.92 17	22.4 9	2429.131	3^-				
		1123.07 10	27.1 11	1688.971	3^+	(M1+E2)		0.000312 12	$\alpha(\text{K})=0.000277$ 11; $\alpha(\text{L})=2.88 \times 10^{-5}$ 12; $\alpha(\text{M})=4.49 \times 10^{-6}$ 18 $\alpha(\text{N})=3.84 \times 10^{-7}$ 15; $\alpha(\text{IPF})=1.29 \times 10^{-6}$ 21 Mult., δ : D+Q with $\delta=-1.61$ +30-21 or -0.045 12 from (n,n' γ) are likely M1+E2.
		1481.48 16	9.6 11	1330.872	4^+				
		1595.93 13	100.0 11	1216.154	2^+	(M1(+E2))	+0.03 3	0.0002500 35	$\alpha(\text{K})=0.0001341$ 19; $\alpha(\text{L})=1.383 \times 10^{-5}$ 19; $\alpha(\text{M})=2.152 \times 10^{-6}$ 30 $\alpha(\text{N})=1.847 \times 10^{-7}$ 26; $\alpha(\text{IPF})=9.97 \times 10^{-5}$ 14
		2253.00 18	27.0 12	559.103	2^+	(M1+E2)		0.000485 30	$\alpha(\text{K})=7.17 \times 10^{-5}$ 11; $\alpha(\text{L})=7.37 \times 10^{-6}$ 12; $\alpha(\text{M})=1.147 \times 10^{-6}$ 18 $\alpha(\text{N})=9.84 \times 10^{-8}$ 16; $\alpha(\text{IPF})=0.000404$ 30 δ : -1.0 +14-2 or -4.8 +10-3 from (n,n' γ). $\alpha(\text{K})=0.0001582$ 22; $\alpha(\text{L})=1.639 \times 10^{-5}$ 23; $\alpha(\text{M})=2.55 \times 10^{-6}$ 4 $\alpha(\text{N})=2.181 \times 10^{-7}$ 31; $\alpha(\text{IPF})=8.06 \times 10^{-5}$ 11 $\text{B}(\text{E2})(\text{W.u.})=0.33$ 10
2817.24	(2^+)	1486.67 13	1.3 4	1330.872	4^+	[E2]		0.000258 4	$\alpha(\text{K})=0.0001349$ 25; $\alpha(\text{L})=1.394 \times 10^{-5}$ 27; $\alpha(\text{M})=2.17 \times 10^{-6}$ 4 $\alpha(\text{N})=1.858 \times 10^{-7}$ 34; $\alpha(\text{IPF})=0.000114$ 13 $\text{B}(\text{M1})(\text{W.u.})=0.0331$ 21 if M1, $\text{B}(\text{E2})(\text{W.u.})=17.4$ 11 if E2.
		1600.92 7	100.0 10	1216.154	2^+	[M1,E2]		0.000265 15	
		2258.04 8	63.9 10	559.103	2^+	[M1,E2]		0.000487 30	$\alpha(\text{K})=7.14 \times 10^{-5}$ 11; $\alpha(\text{L})=7.34 \times 10^{-6}$ 12; $\alpha(\text{M})=1.142 \times 10^{-6}$ 18

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
2817.24	(2 ⁺)	2817.20 28	0.61 9	0.0	0 ⁺	[E2]		0.000753 11	$\alpha(\text{N})=9.80\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.000407$ 30 B(M1)(W.u.)=0.00752 +50-45 if M1, B(E2)(W.u.)=1.99 13 if E2. $\alpha(\text{K})=4.92\times 10^{-5}$ 7; $\alpha(\text{L})=5.05\times 10^{-6}$ 7; $\alpha(\text{M})=7.86\times 10^{-7}$ 11
2824.797	5 ⁻	335.5 5	5.8	2489.35	5 ⁺	(E1)		2.34×10^{-3} 3	$\alpha(\text{N})=6.74\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.000698$ 10 B(E2)(W.u.)=0.0063 10 B(E1)(W.u.)=4.2 $\times 10^{-5}$ +15-14 $\alpha(\text{K})=0.002089$ 30; $\alpha(\text{L})=0.0002181$ 32; $\alpha(\text{M})=3.39\times 10^{-5}$ 5 $\alpha(\text{N})=2.87\times 10^{-6}$ 4 γ from ($\alpha, 2n\gamma$) only. $\delta(\text{M2/E1})=+0.35$ 15 gives B(M2)(W.u.)=210 180. RUL ≤ 1 for M2 gives $\delta < 0.01$. Parity from the Adopted Levels.
		395.665 5	39 3	2429.131	3 ⁻	E2		0.00581 8	B(E2)(W.u.)=87 +27-23 $\alpha(\text{K})=0.00515$ 7; $\alpha(\text{L})=0.000563$ 8; $\alpha(\text{M})=8.75\times 10^{-5}$ 12 $\alpha(\text{N})=7.30\times 10^{-6}$ 10 B(E1)(W.u.)<4.2 $\times 10^{-5}$ $\alpha(\text{K})=0.000557$ 8; $\alpha(\text{L})=5.79\times 10^{-5}$ 8; $\alpha(\text{M})=9.00\times 10^{-6}$ 13 $\alpha(\text{N})=7.67\times 10^{-7}$ 11
		562.3 5	<20	2262.42	6 ⁺	[E1]		0.000625 9	B(E1)(W.u.)=5.4 $\times 10^{-5}$ +16-14 $\alpha(\text{K})=0.000254$ 4; $\alpha(\text{L})=2.63\times 10^{-5}$ 4; $\alpha(\text{M})=4.09\times 10^{-6}$ 6 $\alpha(\text{N})=3.49\times 10^{-7}$ 5 $\delta(\text{Q/D})=+0.04$ 4 from $\gamma(\theta)$ in ($\alpha, 2n\gamma$). Parities from the Adopted Levels give mult=E1.
		798.83 6	100 8	2026.020	4 ⁺	(E1)		0.000285 4	B(E1)(W.u.)=5.4 $\times 10^{-6}$ +16-15 $\alpha(\text{K})=7.93\times 10^{-5}$ 11; $\alpha(\text{L})=8.14\times 10^{-6}$ 11; $\alpha(\text{M})=1.266\times 10^{-6}$ 18 $\alpha(\text{N})=1.084\times 10^{-7}$ 15; $\alpha(\text{IPF})=0.0002457$ 34 δ : +0.03 5 from $\gamma(\theta, \text{pol})$ in ($\alpha, 2n\gamma$).
		1493.88 6	65 7	1330.872	4 ⁺	E1		0.000335 5	
2829.61	(1,2)	1041.18 32 2829.99 24	100 6 0.54 18	1787.655 0.0	2 ⁺ 0 ⁺				
2859.781	4 ⁻	430.649 27	71 9	2429.131	3 ⁻	M1+E2	-0.7 +4-12	0.0031 9	B(M1)(W.u.)=0.053 +41-32; B(E2)(W.u.)=1.9 $\times 10^2$ +27-15 $\alpha(\text{K})=0.0028$ 8; $\alpha(\text{L})=2.9\times 10^{-4}$ 9; $\alpha(\text{M})=4.6\times 10^{-5}$ 14

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	$\delta^\#$	α^\dagger	
2859.781	4 ⁻	1170.85 8	35 7	1688.971	3 ⁺	[E1]		0.0001659 23	$\alpha(\text{N})=3.9\times 10^{-6}$ 11 B(E2)(W.u.)= 1.9×10^2 +27-15 upper bound exceeds RUL=300. $\alpha(\text{K})=0.0001208$ 17; $\alpha(\text{L})=1.244\times 10^{-5}$ 17; $\alpha(\text{M})=1.934\times 10^{-6}$ 27 $\alpha(\text{N})=1.655\times 10^{-7}$ 23; $\alpha(\text{IPF})=3.06\times 10^{-5}$ 4 B(E1)(W.u.)= 3.3×10^{-5} +23-11 B(E1)(W.u.)= 4.3×10^{-5} +37-15 $\alpha(\text{K})=7.74\times 10^{-5}$ 15; $\alpha(\text{L})=7.95\times 10^{-6}$ 16; $\alpha(\text{M})=1.235\times 10^{-6}$ 24 $\alpha(\text{N})=1.058\times 10^{-7}$ 21; $\alpha(\text{IPF})=0.000272$ 4 δ : ≈ 0.4 for $\Delta J=0$ from $\gamma(\theta)$ in $(\alpha, 2n\gamma)$ is too high. From RUL(M2)=1, $\delta < 0.1$. B(M2)(W.u.) < 1.6 upper limit exceeds RUL=1. $\alpha(\text{K})=0.0001268$ 22; $\alpha(\text{L})=1.310\times 10^{-5}$ 24; $\alpha(\text{M})=2.04\times 10^{-6}$ 4 $\alpha(\text{N})=1.746\times 10^{-7}$ 31; $\alpha(\text{IPF})=0.000135$ 14 δ : +0.38 +14-12 or +1.1 +3-8 from $(n, n'\gamma)$. B(M1)(W.u.)= 1.76×10^{-5} +15-13 if M1, B(E2)(W.u.)=0.0086 7 if E2. $\alpha(\text{K})=6.86\times 10^{-5}$ 11; $\alpha(\text{L})=7.05\times 10^{-6}$ 11; $\alpha(\text{M})=1.097\times 10^{-6}$ 18 $\alpha(\text{N})=9.41\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.000431$ 31 δ : -0.52 9 or -12 +52-6 from $(n, n'\gamma)$. B(M1)(W.u.)= 1.25×10^{-5} 10 if M1, B(E2)(W.u.)=0.00314 +25-22 if E2.
		1528.87 8	100.0 13	1330.872	4 ⁺	(E1(+M2))	<0.1	0.000359 5	
2869.34	(1 ⁺ , 2 ⁺)	1653.06 10	51.7 18	1216.154	2 ⁺	(M1+E2)		0.000277 16	
		2310.09 16	100.0 11	559.103	2 ⁺	(M1+E2)		0.000508 31	
2910.993	(1 to 4)	2869.40 31	23.1 15	0.0	0 ⁺				
2917.32	(4) ⁺	548.028 ^b 12	100	2362.963					
		1586.41 8	100	1330.872	4 ⁺	(M1+E2)	+0.34 4	0.000251 4	$\alpha(\text{K})=0.0001360$ 19; $\alpha(\text{L})=1.403\times 10^{-5}$ 20; $\alpha(\text{M})=2.183\times 10^{-6}$ 31 $\alpha(\text{N})=1.873\times 10^{-7}$ 26; $\alpha(\text{IPF})=9.87\times 10^{-5}$ 15
2950.171	1 ⁺	294.60 17	0.108 24	2655.383	1				
		779.48 10	0.287 28	2170.572	(0 ⁺)	[M1]		0.000645 9	$\alpha(\text{K})=0.000575$ 8; $\alpha(\text{L})=5.99\times 10^{-5}$ 8; $\alpha(\text{M})=9.32\times 10^{-6}$ 13 $\alpha(\text{N})=7.98\times 10^{-7}$ 11 B(M1)(W.u.)= 9.0×10^{-4} +19-15 $\alpha(\text{K})=0.00056$ 5; $\alpha(\text{L})=5.8\times 10^{-5}$ 5; $\alpha(\text{M})=9.1\times 10^{-6}$ 8 $\alpha(\text{N})=7.7\times 10^{-7}$ 7
		822.92 31	0.26 5	2127.224	(2) ⁺	[M1,E2]		0.00063 5	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\ddagger}</u>	<u>I_{γ}^{\ddagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.[#]</u>	<u>$\delta^{\#}$</u>	<u>α^{\dagger}</u>	<u>Comments</u>
2950.171	1 ⁺	1158.68 13	1.64 20	1791.437	0 ⁺	[M1]		0.000284 4	B(M1)(W.u.)=7.0×10 ⁻⁴ +20-16 if M1, B(E2)(W.u.)=1.38 +39-31 if E2. $\alpha(K)$ =0.0002512 35; $\alpha(L)$ =2.60×10 ⁻⁵ 4; $\alpha(M)$ =4.05×10 ⁻⁶ 6 $\alpha(N)$ =3.47×10 ⁻⁷ 5; $\alpha(IPF)$ =2.70×10 ⁻⁶ 4 B(M1)(W.u.)=0.00157 +35-28
		1733.96 19	0.34 5	1216.154	2 ⁺	[M1,E2]		0.000298 18	$\alpha(K)$ =0.0001158 20; $\alpha(L)$ =1.195×10 ⁻⁵ 21; $\alpha(M)$ =1.859×10 ⁻⁶ 33 $\alpha(N)$ =1.593×10 ⁻⁷ 27; $\alpha(IPF)$ =0.000168 17 B(M1)(W.u.)=9.7×10 ⁻⁵ +24-19 if M1, B(E2)(W.u.)=0.044 +11-8 if E2.
		1828.22 39	0.59 18	1122.279	0 ⁺	[M1]		0.000305 4	$\alpha(K)$ =0.0001039 15; $\alpha(L)$ =1.070×10 ⁻⁵ 15; $\alpha(M)$ =1.665×10 ⁻⁶ 23 $\alpha(N)$ =1.429×10 ⁻⁷ 20; $\alpha(IPF)$ =0.0001888 26 B(M1)(W.u.)=1.4×10 ⁻⁴ 5
		2391.14 30	57.2 14	559.103	2 ⁺	M1+E2	-0.058 +4-5	0.000509 7	B(M1)(W.u.)=0.0062 +12-9; B(E2)(W.u.)=0.0049 +14-9 $\alpha(K)$ =6.41×10 ⁻⁵ 9; $\alpha(L)$ =6.58×10 ⁻⁶ 9; $\alpha(M)$ =1.024×10 ⁻⁶ 14 $\alpha(N)$ =8.79×10 ⁻⁸ 12; $\alpha(IPF)$ =0.000437 6 Mult.: M1,E2 from $\alpha(K)$ exp and D+Q from $\gamma\gamma(\theta)$ in ⁷⁶ Br ε decay.
		2950.49 9	100.0 13	0.0	0 ⁺	(M1)		0.000731 10	B(M1)(W.u.)=0.0058 +11-8 $\alpha(K)$ =4.47×10 ⁻⁵ 6; $\alpha(L)$ =4.58×10 ⁻⁶ 6; $\alpha(M)$ =7.13×10 ⁻⁷ 10 $\alpha(N)$ =6.12×10 ⁻⁸ 9; $\alpha(IPF)$ =0.000681 10 Mult.: from $\alpha(K)$ exp in ⁷⁶ Br ε ; $\gamma(\theta)$ in (γ,γ'). $\alpha(K)$ =0.00161 32; $\alpha(L)$ =0.00017 4; $\alpha(M)$ =2.7×10 ⁻⁵ 6 $\alpha(N)$ =2.3×10 ⁻⁶ 5 δ : -0.44 12 or -1.7 4 from (n,n' γ).
2969.48	2 ⁻ ,3 ⁻ ,4 ⁻	540.40 8	48.2 13	2429.131	3 ⁻	(M1+E2)		0.0018 4	
2975.00	(2 ⁺ ,3,4 ⁺)	1280.44 10 847.51 11 1286.04 11 1644.28 12 1758.90 12 2415.96 34	100.0 13 16.6 16 100 10 9.1 10 6.8 7 9.9 10	1688.971 2127.224 1688.971 1330.872 1216.154 559.103	3 ⁺ (2) ⁺ 3 ⁺ 4 ⁺ 2 ⁺ 2 ⁺				
2975.98	6 ⁺	713.8 5	9.5	2262.42	6 ⁺	[M1+E2]		0.00088 10	$\alpha(K)$ =0.00079 9; $\alpha(L)$ =8.3×10 ⁻⁵ 10; $\alpha(M)$ =1.29×10 ⁻⁵ 16

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	$\delta^\#$	α^\ddagger	Comments
2975.98	6^+	950.0 5	100 7	2026.020	4^+	E2		0.000475 7	$\alpha(\text{N})=1.09\times 10^{-6}$ 13 B(M1)(W.u.)=0.0044 +24-18 if M1, B(E2)(W.u.)=12 +7-5 if E2. B(E2)(W.u.)=29 +15-11 $\alpha(\text{K})=0.000423$ 6; $\alpha(\text{L})=4.44\times 10^{-5}$ 6; $\alpha(\text{M})=6.91\times 10^{-6}$ 10 $\alpha(\text{N})=5.88\times 10^{-7}$ 8
3007.75	$(2)^+$	1791.52 12	10.3 6	1216.154	2^+	(M1+E2)		0.000314 20	$\alpha(\text{K})=0.0001089$ 18; $\alpha(\text{L})=1.123\times 10^{-5}$ 19; $\alpha(\text{M})=1.747\times 10^{-6}$ 30 $\alpha(\text{N})=1.497\times 10^{-7}$ 25; $\alpha(\text{IPF})=0.000192$ 19 δ : +5 +58-2 or -0.21 19 from (n,n' γ). B(M1)(W.u.)=0.0127 12 if M1, B(E2)(W.u.)=5.3 5 if E2. $\alpha(\text{K})=6.15\times 10^{-5}$ 9; $\alpha(\text{L})=6.31\times 10^{-6}$ 9; $\alpha(\text{M})=9.82\times 10^{-7}$ 14 $\alpha(\text{N})=8.43\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000464$ 7 B(M1)(W.u.)=0.0470 +38-36; B(E2)(W.u.)=0.27 +19-14 $\alpha(\text{K})=4.42\times 10^{-5}$ 6; $\alpha(\text{L})=4.53\times 10^{-6}$ 6; $\alpha(\text{M})=7.05\times 10^{-7}$ 10 $\alpha(\text{N})=6.05\times 10^{-8}$ 8; $\alpha(\text{IPF})=0.000782$ 11 B(E2)(W.u.)=0.194 33
		2448.74 12	100.0 8	559.103	2^+	M1+E2	-0.16 5	0.000533 8	$\alpha(\text{K})=0.0001072$ 15; $\alpha(\text{L})=1.106\times 10^{-5}$ 15; $\alpha(\text{M})=1.721\times 10^{-6}$ 24 $\alpha(\text{N})=1.473\times 10^{-7}$ 21; $\alpha(\text{IPF})=0.0002217$ 31 B(E2)(W.u.)=5.8 +6-5 $\alpha(\text{K})=6.14\times 10^{-5}$ 9; $\alpha(\text{L})=6.31\times 10^{-6}$ 9; $\alpha(\text{M})=9.82\times 10^{-7}$ 14 $\alpha(\text{N})=8.42\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000539$ 8 B(E2)(W.u.)=2.04 +19-16 B(M1)(W.u.)=2.8 +13-11 $\alpha(\text{K})=0.01111$ 16; $\alpha(\text{L})=0.001191$ 17; $\alpha(\text{M})=0.0001856$ 26 $\alpha(\text{N})=1.578\times 10^{-5}$ 22 Mult., δ : $\gamma(\theta)$ in ($\alpha,2n\gamma$) consistent with $\Delta J=0$ or 2; $\delta(\text{Q/D})=+0.6$ 3 from $\gamma(\theta)$ in ($\alpha,2n\gamma$) (1984Zo01) would require a B(E2)(W.u.)= 2.0×10^4 +17-15 exceeding RUL=300; POL from ($\alpha,2n\gamma$) seems consistent with E1 but it would require a B(E1)(W.u.)=0.048 15-34 exceeding RUL=0.01. B(M1)(W.u.)=2.0 +10-9 upper bound exceeds RUL=3. B(E1)(W.u.)= 8.8×10^{-5} +40-33 $\alpha(\text{K})=6.35\times 10^{-5}$ 9; $\alpha(\text{L})=6.51\times 10^{-6}$ 9; $\alpha(\text{M})=1.012\times 10^{-6}$ 14 $\alpha(\text{N})=8.67\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000420$ 6
		3007.40 20	5.0 8	0.0	0^+	[E2]		0.000832 12	
3031.57	0^+	1815.40 8	60.5 19	1216.154	2^+	[E2]		0.000342 5	
		2472.39 12	100.0 19	559.103	2^+	[E2]		0.000608 9	
3045.79	(5^-)	221.21 11	100 6	2824.797	5^-	(M1)		0.0125 2	
		1714.73 10	87 6	1330.872	4^+	[E1]		0.000491 7	
3069.62	2^+	257.63 12	0.056 9	2812.130	(3^+)				

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
3069.62	2 ⁺	399.59 52	1.77 11	2669.904	2 ⁻	[E1]		1.47×10 ⁻³ 2	$\alpha(\text{K})=0.001310$ 19; $\alpha(\text{L})=0.0001365$ 20; $\alpha(\text{M})=2.120\times 10^{-5}$ 31 $\alpha(\text{N})=1.800\times 10^{-6}$ 26 $\text{B}(\text{E1})(\text{W.u.})=1.64\times 10^{-4}$ 28
		414.14 10 640.46 31	0.093 7 0.151 27	2655.383 1 2429.131 3 ⁻		[M2]		0.00281 4	$\alpha(\text{K})=0.002498$ 35; $\alpha(\text{L})=0.000269$ 4; $\alpha(\text{M})=4.20\times 10^{-5}$ 6 $\alpha(\text{N})=3.58\times 10^{-6}$ 5 $\text{B}(\text{M2})(\text{W.u.})=38+10-9$ exceeds RUL=1.
		942.21 12	4.1 26	2127.224 (2) ⁺	(M1+E2))		+0.04 5	0.000431 6	$\alpha(\text{K})=0.000384$ 5; $\alpha(\text{L})=3.99\times 10^{-5}$ 6; $\alpha(\text{M})=6.21\times 10^{-6}$ 9 $\alpha(\text{N})=5.32\times 10^{-7}$ 7 $\text{B}(\text{M1})(\text{W.u.})=0.0017+16-12$; $\text{B}(\text{E2})(\text{W.u.})<0.04$
		1380.52 9	20.6 28	1688.971 3 ⁺	(M1+E2)			0.000245 10	$\alpha(\text{K})=0.000181$ 4; $\alpha(\text{L})=1.87\times 10^{-5}$ 5; $\alpha(\text{M})=2.91\times 10^{-6}$ 7 $\alpha(\text{N})=2.49\times 10^{-7}$ 6; $\alpha(\text{IPF})=4.2\times 10^{-5}$ 5 $\delta: +0.04$ 9 or $-7+14-3$ from (n,n' γ). $\text{B}(\text{M1})(\text{W.u.})=0.0027$ 5 if M1, $\text{B}(\text{E2})(\text{W.u.})=1.91$ 37 if E2.
		1853.24 20	100.0 9	1216.154 2 ⁺	M1+E2		+0.035 4	0.000313 4	$\alpha(\text{K})=0.0001013$ 14; $\alpha(\text{L})=1.043\times 10^{-5}$ 15; $\alpha(\text{M})=1.624\times 10^{-6}$ 23 $\alpha(\text{N})=1.393\times 10^{-7}$ 20; $\alpha(\text{IPF})=0.0001993$ 28 $\text{B}(\text{M1})(\text{W.u.})=0.0054$ 9; $\text{B}(\text{E2})(\text{W.u.})=0.0026+8-7$
		2510.68 19	12.7 16	559.103 2 ⁺	(M1+E2)		+0.069 6	0.000557 8	$\alpha(\text{K})=5.88\times 10^{-5}$ 8; $\alpha(\text{L})=6.04\times 10^{-6}$ 8; $\alpha(\text{M})=9.40\times 10^{-7}$ 13 $\alpha(\text{N})=8.07\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.000491$ 7 $\text{B}(\text{M1})(\text{W.u.})=2.8\times 10^{-4}$ 5; $\text{B}(\text{E2})(\text{W.u.})=2.8\times 10^{-4}+8-7$
		3070.08 20	0.065 4	0.0 0 ⁺	[E2]			0.000857 12	$\alpha(\text{K})=4.27\times 10^{-5}$ 6; $\alpha(\text{L})=4.38\times 10^{-6}$ 6; $\alpha(\text{M})=6.81\times 10^{-7}$ 10 $\alpha(\text{N})=5.85\times 10^{-8}$ 8; $\alpha(\text{IPF})=0.000809$ 11 $\text{B}(\text{E2})(\text{W.u.})=1.10\times 10^{-4}$ 19
3084.58	(1 ⁺ ,2 ⁺ ,3 ⁺)	2525.43 6	100	559.103 2 ⁺					
3105.48	(3 ⁻)	1774.58 23	33.8 23	1330.872 4 ⁺	[E1]			0.000532 7	$\alpha(\text{K})=6.01\times 10^{-5}$ 8; $\alpha(\text{L})=6.17\times 10^{-6}$ 9; $\alpha(\text{M})=9.59\times 10^{-7}$ 13 $\alpha(\text{N})=8.21\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000465$ 7 $\text{B}(\text{E1})(\text{W.u.})=6.8\times 10^{-5}+10-8$

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
3105.48	(3 ⁻)	1889.2 6	31 9	1216.154	2 ⁺	[E1]		0.000610 9	$\alpha(\text{K})=5.46\times 10^{-5}$ 8; $\alpha(\text{L})=5.59\times 10^{-6}$ 8; $\alpha(\text{M})=8.70\times 10^{-7}$ 12 $\alpha(\text{N})=7.46\times 10^{-8}$ 10; $\alpha(\text{IPF})=0.000549$ 8 $\text{B}(\text{E1})(\text{W.u.})=5.2\times 10^{-5}$ 14
		2546.6 4	100.0 12	559.103	2 ⁺	[E1]		1.03×10^{-3} 1	$\alpha(\text{K})=3.53\times 10^{-5}$ 5; $\alpha(\text{L})=3.61\times 10^{-6}$ 5; $\alpha(\text{M})=5.61\times 10^{-7}$ 8 $\alpha(\text{N})=4.81\times 10^{-8}$ 7; $\alpha(\text{IPF})=0.000986$ 14 $\text{B}(\text{E1})(\text{W.u.})=6.9\times 10^{-5}$ +9-7
3160.115	(2 ⁺)	209.92 10	1.86 9	2950.171	1 ⁺	[M1,E2]		0.034 20	$\alpha(\text{K})=0.030$ 17; $\alpha(\text{L})=0.0034$ 20; $\alpha(\text{M})=5.3\times 10^{-4}$ 32 $\alpha(\text{N})=4.3\times 10^{-5}$ 25 $\text{B}(\text{M1})(\text{W.u.})=0.048$ +18-16 if M1. $\text{B}(\text{E2})(\text{W.u.})=1.5\times 10^3$ +6-5 exceeds RUL=300 if E2.
		290.79 35 347.88 10 489.98 13	0.171 18 1.32 18 12.9 8	2869.34 (1 ⁺ ,2 ⁺) 2812.130 (3 ⁺) 2669.904 2 ⁻		[E1]		0.000873 12	$\alpha(\text{K})=0.000779$ 11; $\alpha(\text{L})=8.10\times 10^{-5}$ 11; $\alpha(\text{M})=1.259\times 10^{-5}$ 18 $\alpha(\text{N})=1.071\times 10^{-6}$ 15 $\text{B}(\text{E1})(\text{W.u.})=4.5\times 10^{-4}$ +17-15
		504.54 10	10.7 25	2655.383 1		[E1]		0.000812 11	$\alpha(\text{K})=0.000724$ 10; $\alpha(\text{L})=7.53\times 10^{-5}$ 11; $\alpha(\text{M})=1.171\times 10^{-5}$ 16 $\alpha(\text{N})=9.96\times 10^{-7}$ 14 $\text{B}(\text{E1})(\text{W.u.})=3.4\times 10^{-4}$ +15-14
		730.71 11	20.8 17	2429.131 3 ⁻		[E1]		0.000345 5	$\alpha(\text{K})=0.000307$ 4; $\alpha(\text{L})=3.19\times 10^{-5}$ 4; $\alpha(\text{M})=4.95\times 10^{-6}$ 7 $\alpha(\text{N})=4.23\times 10^{-7}$ 6 $\text{B}(\text{E1})(\text{W.u.})=2.2\times 10^{-4}$ +8-7
		1032.58 10	25 5	2127.224 (2 ⁺)		[M1,E2]		0.000373 18	$\alpha(\text{K})=0.000333$ 16; $\alpha(\text{L})=3.47\times 10^{-5}$ 18; $\alpha(\text{M})=5.39\times 10^{-6}$ 28 $\alpha(\text{N})=4.61\times 10^{-7}$ 22 $\text{B}(\text{M1})(\text{W.u.})=0.0055$ +22-20 if M1, $\text{B}(\text{E2})(\text{W.u.})=6.9$ +27-25 if E2.
		1372.29 13	24.2 22	1787.655 2 ⁺		[M1,E2]		0.000245 10	$\alpha(\text{K})=0.000183$ 4; $\alpha(\text{L})=1.89\times 10^{-5}$ 5; $\alpha(\text{M})=2.95\times 10^{-6}$ 7 $\alpha(\text{N})=2.52\times 10^{-7}$ 6; $\alpha(\text{IPF})=4.0\times 10^{-5}$ 5 $\text{B}(\text{M1})(\text{W.u.})=0.0023$ +9-8 if M1, $\text{B}(\text{E2})(\text{W.u.})=1.6$ +6-5 if E2.
		1471.08 7	100.0 18	1688.971 3 ⁺		[M1,E2]		0.000245 11	$\alpha(\text{K})=0.0001592$ 33; $\alpha(\text{L})=1.65\times 10^{-5}$ 4; $\alpha(\text{M})=2.56\times 10^{-6}$ 6 $\alpha(\text{N})=2.19\times 10^{-7}$ 5; $\alpha(\text{IPF})=6.7\times 10^{-5}$ 8

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	$\delta^{\#}$	α^\dagger	Comments
3160.115	(2 ⁺)	1830.80 15	0.72 6	1330.872	4 ⁺	[E2]		0.000347 5	B(M1)(W.u.)=0.0075 +27-24 if M1, B(E2)(W.u.)=4.7 +17-15 if E2. $\alpha(\text{K})=0.0001055$ 15; $\alpha(\text{L})=1.088\times 10^{-5}$ 15; $\alpha(\text{M})=1.693\times 10^{-6}$ 24 $\alpha(\text{N})=1.450\times 10^{-7}$ 20; $\alpha(\text{IPF})=0.0002289$ 32
		1944.18 10	17.0 7	1216.154	2 ⁺	(M1+(E2))	+0.05 6	0.000342 5	B(E2)(W.u.)=0.0113 +42-37 $\alpha(\text{K})=9.28\times 10^{-5}$ 13; $\alpha(\text{L})=9.55\times 10^{-6}$ 13; $\alpha(\text{M})=1.486\times 10^{-6}$ 21 $\alpha(\text{N})=1.275\times 10^{-7}$ 18; $\alpha(\text{IPF})=0.0002384$ 34
		2601.36 20	26.8 11	559.103	2 ⁺	(M1+E2)	+0.149 22	0.000595 8	B(M1)(W.u.)=5.5 $\times 10^{-4}$ +28-24; B(E2)(W.u.)<0.0036 $\alpha(\text{K})=5.54\times 10^{-5}$ 8; $\alpha(\text{L})=5.68\times 10^{-6}$ 8; $\alpha(\text{M})=8.84\times 10^{-7}$ 12 $\alpha(\text{N})=7.59\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.000533$ 7
3161.80	(3 ⁻)	732.77 6	47.3 31	2429.131	3 ⁻	(M1+E2)	+0.2 +14-1	0.00074 12	B(M1)(W.u.)=3.6 $\times 10^{-4}$ +13-12; B(E2)(W.u.)=0.0016 +8-7 This γ is placed in (n,n' γ) from a different level with $J^\pi=0^+$. $\alpha(\text{K})=0.00066$ 11; $\alpha(\text{L})=6.9\times 10^{-5}$ 12; $\alpha(\text{M})=1.08\times 10^{-5}$ 19 $\alpha(\text{N})=9.2\times 10^{-7}$ 15
		1830.79 8	60.2 21	1330.872	4 ⁺	[E1]		0.000570 8	B(M1)(W.u.)=0.045 +8-13; B(E2)(W.u.)=5 +14-4 $\alpha(\text{K})=5.73\times 10^{-5}$ 8; $\alpha(\text{L})=5.87\times 10^{-6}$ 8; $\alpha(\text{M})=9.13\times 10^{-7}$ 13 $\alpha(\text{N})=7.83\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.000506$ 7
		1945.48 10	100.0 29	1216.154	2 ⁺	[E1]		0.000649 9	B(E1)(W.u.)=6.5 $\times 10^{-5}$ 13 $\alpha(\text{K})=5.22\times 10^{-5}$ 7; $\alpha(\text{L})=5.35\times 10^{-6}$ 7; $\alpha(\text{M})=8.32\times 10^{-7}$ 12 $\alpha(\text{N})=7.13\times 10^{-8}$ 10; $\alpha(\text{IPF})=0.000590$ 8
3191.67	(3) ⁺	1502.74 20	100.0 32	1688.971	3 ⁺	(M1+E2)		0.000249 12	B(E1)(W.u.)=9.1 $\times 10^{-5}$ 17 $\alpha(\text{K})=0.0001526$ 30; $\alpha(\text{L})=1.578\times 10^{-5}$ 34; $\alpha(\text{M})=2.46\times 10^{-6}$ 5 $\alpha(\text{N})=2.10\times 10^{-7}$ 4; $\alpha(\text{IPF})=7.7\times 10^{-5}$ 9 δ : +1.93 +28-34 or -0.14 5 from (n,n' γ). B(M1)(W.u.)=0.0392 +36-32 if M1, B(E2)(W.u.)=23.3 +22-19 if E2.
		1860.91 26	17 6	1330.872	4 ⁺	(M1+E2)	-0.2 +88-1	0.00032 4	$\alpha(\text{K})=0.0001006$ 22; $\alpha(\text{L})=1.036\times 10^{-5}$ 24; $\alpha(\text{M})=1.61\times 10^{-6}$ 4 $\alpha(\text{N})=1.383\times 10^{-7}$ 29; $\alpha(\text{IPF})=0.00020$ 4
		1975.6 6	17.5 10	1216.154	2 ⁺	(M1+E2)		0.000377 24	B(M1)(W.u.)<0.0052; B(E2)(W.u.)<2.0 $\alpha(\text{K})=9.08\times 10^{-5}$ 15; $\alpha(\text{L})=9.35\times 10^{-6}$ 15;

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	$\delta^{\#}$	α^{\ddagger}	
3191.67	(3) ⁺	2632.9 5	13.4 34	559.103	2 ⁺	(M1+E2)		0.00064 4	$\alpha(\text{M})=1.455\times 10^{-6}$ 24 $\alpha(\text{N})=1.248\times 10^{-7}$ 20; $\alpha(\text{IPF})=0.000275$ 23 δ : -0.02 9 or -4.6 +33-14 from (n,n' γ). $\text{B}(\text{M1})(\text{W.u.})=0.00302$ +33-29 if M1, $\text{B}(\text{E2})(\text{W.u.})=1.04$ +11-10 if E2. $\alpha(\text{K})=5.47\times 10^{-5}$ 9; $\alpha(\text{L})=5.61\times 10^{-6}$ 9; $\alpha(\text{M})=8.73\times 10^{-7}$ 14 $\alpha(\text{N})=7.49\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.00058$ 4 δ : $+0.26$ 10 or $+14$ +50-8 from (n,n' γ). $\text{B}(\text{M1})(\text{W.u.})=9.8\times 10^{-4}$ 24 if M1, $\text{B}(\text{E2})(\text{W.u.})=0.189$ +48-46 if E2.
3212.98	1 ⁺ ,2 ⁺	2653.82 10	100.0 4	559.103	2 ⁺	M1+E2		0.00065 4	$\alpha(\text{K})=5.39\times 10^{-5}$ 9; $\alpha(\text{L})=5.54\times 10^{-6}$ 9; $\alpha(\text{M})=8.61\times 10^{-7}$ 14 $\alpha(\text{N})=7.39\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.00059$ 4 δ : $+3.2$ +7-4 or -0.10 5 from (n,n' γ). $\text{B}(\text{M1})(\text{W.u.})=0.098$ +15-11 if M1, $\text{B}(\text{E2})(\text{W.u.})=18.6$ +28-21 if E2.
3219.428	(2 ⁺ ,3 ⁺)	790.12 4	38 12	2429.131	3 ⁻	[E1]		0.000292 4	$\alpha(\text{K})=3.92\times 10^{-5}$ 7; $\alpha(\text{L})=4.02\times 10^{-6}$ 7; $\alpha(\text{M})=6.25\times 10^{-7}$ 11 $\alpha(\text{N})=5.37\times 10^{-8}$ 10; $\alpha(\text{IPF})=0.00083$ 4 $\text{B}(\text{M1})(\text{W.u.})=0.0047$ +7-6 if M1, $\text{B}(\text{E2})(\text{W.u.})=0.62$ +9-7 if E2. $\alpha(\text{K})=0.000260$ 4; $\alpha(\text{L})=2.69\times 10^{-5}$ 4; $\alpha(\text{M})=4.19\times 10^{-6}$ 6 $\alpha(\text{N})=3.57\times 10^{-7}$ 5 $\text{B}(\text{E1})(\text{W.u.})=0.0033$ +8-9
		1530.32 43	1.57 27	1688.971	3 ⁺	[M1,E2]		0.000252 13	$\alpha(\text{K})=0.0001473$ 29; $\alpha(\text{L})=1.523\times 10^{-5}$ 32; $\alpha(\text{M})=2.37\times 10^{-6}$ 5 $\alpha(\text{N})=2.03\times 10^{-7}$ 4; $\alpha(\text{IPF})=8.7\times 10^{-5}$ 10 $\text{B}(\text{M1})(\text{W.u.})=0.00110$ +23-21 if M1, $\text{B}(\text{E2})(\text{W.u.})=0.63$ +13-12 if E2.
		1888.95 36	17.4 10	1330.872	4 ⁺	[M1,E2]		0.000346 22	$\alpha(\text{K})=9.86\times 10^{-5}$ 16; $\alpha(\text{L})=1.017\times 10^{-5}$ 17; $\alpha(\text{M})=1.581\times 10^{-6}$ 26 $\alpha(\text{N})=1.356\times 10^{-7}$ 22; $\alpha(\text{IPF})=0.000235$ 21 $\text{B}(\text{M1})(\text{W.u.})=0.0065$ +8-7 if M1, $\text{B}(\text{E2})(\text{W.u.})=2.43$ +31-27 if E2.
		2660.38 11	100.0 12	559.103	2 ⁺	[M1,E2]		0.00065 4	$\alpha(\text{K})=5.37\times 10^{-5}$ 9; $\alpha(\text{L})=5.51\times 10^{-6}$ 9; $\alpha(\text{M})=8.58\times 10^{-7}$ 14 $\alpha(\text{N})=7.36\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.00059$ 4 $\text{B}(\text{M1})(\text{W.u.})=0.0133$ +16-13 if M1, $\text{B}(\text{E2})(\text{W.u.})=2.52$ +29-25 if E2.
3225.7	(6,8 ⁺)	963.3 5	100	2262.42	6 ⁺	[D,E2]			Mult.: $\gamma(\theta)$ in ($\alpha,2n\gamma$) consistent with $\Delta J=0$ or 2.
3230.27	1,2 ⁺	1059.69 8	100	2170.572	(0 ⁺)				$\text{B}(\text{E2})(\text{W.u.})=32$ +25-16 if E2.
3238.78		413.98 8	100	2824.797	5 ⁻				
3259.81		309.77 12	46.2 21	2950.171	1 ⁺				
		604.33 10	100 5	2655.383	1				
3262.34	6 ⁻	402.7 5	27.3 23	2859.781	4 ⁻	(E2)		0.00548 8	$\text{B}(\text{E2})(\text{W.u.})=38$ +32-13

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	
3262.34	6^-	437.6 5	100 7	2824.797	5^-	M1+E2	-0.25 5	0.00247 6	$\alpha(\text{K})=0.00486$ 7; $\alpha(\text{L})=0.000531$ 8; $\alpha(\text{M})=8.25\times 10^{-5}$ 12 $\alpha(\text{N})=6.88\times 10^{-6}$ 10 $\text{B}(\text{M1})(\text{W.u.})=0.012$ +11-4; $\text{B}(\text{E2})(\text{W.u.})=5$ +5-3 $\alpha(\text{K})=0.00220$ 5; $\alpha(\text{L})=0.000232$ 5; $\alpha(\text{M})=3.62\times 10^{-5}$ 8 $\alpha(\text{N})=3.08\times 10^{-6}$ 7 $\delta=-0.25$ 5 from $(\alpha, 2n\gamma)$. RUL (for E2 and M2) favors M1+E2. $\text{B}(\text{E1})(\text{W.u.})=7\times 10^{-6}$ +6-3 $\alpha(\text{K})=1.9\times 10^{-4}$ 5; $\alpha(\text{L})=2.0\times 10^{-5}$ 6; $\alpha(\text{M})=3.1\times 10^{-6}$ 9 $\alpha(\text{N})=2.7\times 10^{-7}$ 8 $\text{B}(\text{M2})(\text{W.u.})=1.8$ +42-15 exceeds RUL=1.
		999.9 5	40.9 23	2262.42	6^+	(E1+M2)	-0.23 17	2.2×10^{-4} 6	
3262.96		1135.73 8	100	2127.224	$(2)^+$				
3267.57	$(2^+, 3, 4^+)$	1578.45 16	15 8	1688.971	3^+				
		1936.54 24	100.0 22	1330.872	4^+				
		2051.3 5	42 6	1216.154	2^+				
		2708.8 5	84.2 22	559.103	2^+				
3268.70	$(1^-, 2)$	163.35 11	2.81 21	3105.48	(3^-)				
		318.74 10	15.0 7	2950.171	1^+				
		456.75 16	2.8 4	2812.130	(3^+)				
		598.78 10	100 7	2669.904	2^-				
		613.35 10	11.9 6	2655.383	1				
		1141.62 14	3.15 27	2127.224	$(2)^+$				
3269.75	8^+	1007.2 5	100	2262.42	6^+	E2		0.000414 6	$\text{B}(\text{E2})(\text{W.u.})=82$ +21-14 $\alpha(\text{K})=0.000368$ 5; $\alpha(\text{L})=3.86\times 10^{-5}$ 5; $\alpha(\text{M})=6.00\times 10^{-6}$ 8 $\alpha(\text{N})=5.11\times 10^{-7}$ 7
3282.19	$1, 2^+$	464.67 20	50.6 14	2817.24	$(2)^+$				
		2160.00 13	100.0 14	1122.279	0^+	[D,E2]			$\text{B}(\text{E2})(\text{W.u.})=4.14$ +40-36 if E2.
3295.02	$(1^+, 2^+)$	1124.33 13	11.2 8	2170.572	(0^+)				
		2736.6 4	100.0 19	559.103	2^+				E_γ : unweighted average of 2737.07 24 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 2736.21 10 from $(n, n'\gamma)$. I_γ : from $(n, n'\gamma)$. Other: 100 6 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h).
		3295.6 6	42.6 34	0.0	0^+	[M1,E2]		0.00090 4	$\alpha(\text{K})=3.77\times 10^{-5}$ 7; $\alpha(\text{L})=3.86\times 10^{-6}$ 7; $\alpha(\text{M})=6.00\times 10^{-7}$ 11 $\alpha(\text{N})=5.15\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.00086$ 4

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	
3296.2	(1 ⁺ ,2 ⁺)	1508.4 9	80 41	1787.655	2 ⁺				E_γ : unweighted average of 3296.14 20 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 3295.07 14 from (n,n' γ). I_γ : unweighted average of 45.9 17 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 39.2 14 from (n,n' γ). E_γ : unweighted average of 1509.23 16 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 1507.52 14 from (n,n' γ). I_γ : from ^{76}Br $\varepsilon+\beta^+$ decay. E_γ : unweighted average of 2174.66 30 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 2173.06 18 from (n,n' γ). I_γ : from ^{76}Br $\varepsilon+\beta^+$ decay. $\alpha(\text{K})=0.014$ 7; $\alpha(\text{L})=0.0015$ 8; $\alpha(\text{M})=2.3\times 10^{-4}$ 12 $\alpha(\text{N})=1.9\times 10^{-5}$ 9 $\text{B}(\text{M1})(\text{W.u.})=0.0045$ +45-22 if M1, $\text{B}(\text{E2})(\text{W.u.})=9\times 10^{11}$ +9-4 if E2. $\text{B}(\text{M1})(\text{W.u.})=6\times 10^{-4}$ +6-3; $\text{B}(\text{E2})(\text{W.u.})=0.21$ +23-11 $\alpha(\text{K})=0.001700$ 34; $\alpha(\text{L})=0.000179$ 4; $\alpha(\text{M})=2.79\times 10^{-5}$ 6 $\alpha(\text{N})=2.38\times 10^{-6}$ 5
		2173.9 8	100 7	1122.279	0 ⁺				
3312.04	(6 ⁻)	266.1 5	100 8	3045.79	(5 ⁻)	(M1+E2)		0.015 7	
		487.1 5	85 8	2824.797	5 ⁻	(M1+E2)	+0.25 5	0.00191 4	
3331.51		2772.35 8	100	559.103	2 ⁺				
3346.25		1320.57 18	100.0 35	2026.020	4 ⁺				
		2015.13 14	73.3 35	1330.872	4 ⁺				
3348.48	(1 ⁺ ,2 ⁺)	1177.90 11	100	2170.572	(0 ⁺)	[M1,E2]		0.000286 10	
3351.462	(2 ⁺)	191.44 30	0.42 33	3160.115	(2 ⁺)				$\alpha(\text{K})=0.000251$ 8; $\alpha(\text{L})=2.60\times 10^{-5}$ 10; $\alpha(\text{M})=4.05\times 10^{-6}$ 15 $\alpha(\text{N})=3.47\times 10^{-7}$ 12; $\alpha(\text{IPF})=4.8\times 10^{-6}$ 7 $\text{B}(\text{M1})(\text{W.u.})=0.05$ +10-3 if M1, $\text{B}(\text{E2})(\text{W.u.})=4\times 10^{11}$ +9-3 if E2. $\alpha(\text{K})=0.0037$ 12; $\alpha(\text{L})=4.0\times 10^{-4}$ 13; $\alpha(\text{M})=6.3\times 10^{-5}$ 21 $\alpha(\text{N})=5.3\times 10^{-6}$ 17 $\text{B}(\text{M1})(\text{W.u.})=0.0134$ +18-15 if M1, $\text{B}(\text{E2})(\text{W.u.})=112$ +15-13 if E2. $\alpha(\text{K})=0.000358$ 5; $\alpha(\text{L})=3.72\times 10^{-5}$ 5; $\alpha(\text{M})=5.78\times 10^{-6}$ 8 $\alpha(\text{N})=4.93\times 10^{-7}$ 7 $\text{B}(\text{E1})(\text{W.u.})=6.3\times 10^{-4}$ +8-7 $\alpha(\text{K})=0.00054$ 4; $\alpha(\text{L})=5.6\times 10^{-5}$ 5; $\alpha(\text{M})=8.7\times 10^{-6}$ 8
		401.30 11	0.58 4	2950.171	1 ⁺	[M1,E2]		0.0042 13	
		539.25 14	0.148 13	2812.130	(3 ⁺)				
		681.44 10	7.8 4	2669.904	2 ⁻	[E1]		0.000402 6	
		695.95 10	9.1 5	2655.383	1				
		747.28 13	1.48 11	2604.09	1 ⁺ ,2 ⁺				
		836.62 10	6.30 31	2514.681	2 ⁺	[M1,E2]		0.00060 5	

Adopted Levels, Gammas (continued)

$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	$\gamma(^{76}\text{Se})$ (continued)		Comments
							$\delta^\#$	α^\dagger	
3351.462	(2) ⁺	922.21 11	0.51 8	2429.131	3 ⁻	[E1]		0.0002127 30	$\alpha(\text{N})=7.5\times 10^{-7}$ 6 B(M1)(W.u.)=0.0161 +20-17 if M1, B(E2)(W.u.)=30.9 +38-32 if E2. $\alpha(\text{K})=0.0001898$ 27; $\alpha(\text{L})=1.961\times 10^{-5}$ 27; $\alpha(\text{M})=3.05\times 10^{-6}$ 4 $\alpha(\text{N})=2.60\times 10^{-7}$ 4 B(E1)(W.u.)=1.67 $\times 10^{-5}$ +33-30 $\alpha(\text{K})=0.000257$ 4; $\alpha(\text{L})=2.68\times 10^{-5}$ 4; $\alpha(\text{M})=4.17\times 10^{-6}$ 6 $\alpha(\text{N})=3.55\times 10^{-7}$ 5; $\alpha(\text{IPF})=5.90\times 10^{-6}$ 8 B(E2)(W.u.)=1.84 +25-21 $\alpha(\text{K})=0.000231$ 7; $\alpha(\text{L})=2.40\times 10^{-5}$ 8; $\alpha(\text{M})=3.73\times 10^{-6}$ 12 $\alpha(\text{N})=3.19\times 10^{-7}$ 10; $\alpha(\text{IPF})=1.07\times 10^{-5}$ 16 B(M1)(W.u.)=0.0041 5 if M1, B(E2)(W.u.)=3.70 +48-41 if E2. $\alpha(\text{K})=0.0001437$ 20; $\alpha(\text{L})=1.487\times 10^{-5}$ 21; $\alpha(\text{M})=2.314\times 10^{-6}$ 32 $\alpha(\text{N})=1.979\times 10^{-7}$ 28; $\alpha(\text{IPF})=0.0001091$ 15 B(E2)(W.u.)=1.94 +28-24 $\alpha(\text{K})=0.0001411$ 27; $\alpha(\text{L})=1.459\times 10^{-5}$ 29; $\alpha(\text{M})=2.27\times 10^{-6}$ 5 $\alpha(\text{N})=1.94\times 10^{-7}$ 4; $\alpha(\text{IPF})=0.000100$ 11 B(M1)(W.u.)=1.72 $\times 10^{-4}$ +21-18 if M1, B(E2)(W.u.)=0.094 +12-10 if E2. $\alpha(\text{K})=7.83\times 10^{-5}$ 11; $\alpha(\text{L})=8.05\times 10^{-6}$ 11; $\alpha(\text{M})=1.252\times 10^{-6}$ 18 $\alpha(\text{N})=1.075\times 10^{-7}$ 15; $\alpha(\text{IPF})=0.000323$ 5 B(M1)(W.u.)=0.00262 +30-24; B(E2)(W.u.)=0.0014 +8-6 $\alpha(\text{K})=7.36\times 10^{-5}$ 10; $\alpha(\text{L})=7.57\times 10^{-6}$ 11; $\alpha(\text{M})=1.177\times 10^{-6}$ 16 $\alpha(\text{N})=1.009\times 10^{-7}$ 14; $\alpha(\text{IPF})=0.000422$ 6 B(E2)(W.u.)=0.0142 +20-17 $\alpha(\text{K})=4.90\times 10^{-5}$ 7; $\alpha(\text{L})=5.03\times 10^{-6}$ 7; $\alpha(\text{M})=7.82\times 10^{-7}$ 11 $\alpha(\text{N})=6.72\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.000615$ 9 B(M1)(W.u.)=0.0069 +8-6; B(E2)(W.u.)=0.0043 +32-23 Mult.: from $\alpha(\text{K})$ exp in ^{76}Br ε . $\alpha(\text{K})=3.71\times 10^{-5}$ 5; $\alpha(\text{L})=3.80\times 10^{-6}$ 5; $\alpha(\text{M})=5.91\times 10^{-7}$ 8
		1180.71 10	2.10 15	2170.572	(0) ⁺	[E2]		0.000294 4	
		1224.19 12	5.06 33	2127.224	(2) ⁺	[M1,E2]		0.000270 9	
		1559.98 10	8.9 8	1791.437	0 ⁺	[E2]		0.000270 4	
		1564.10 57	0.439 21	1787.655	2 ⁺	[M1,E2]		0.000258 14	
		2135.60 8	17.06 13	1216.154	2 ⁺	(M1+E2)	-0.042 10	0.000411 6	
		2229.91 22	0.390 29	1122.279	0 ⁺	[E2]		0.000504 7	
		2792.61 21	100.0 5	559.103	2 ⁺	M1+E2	-0.060 19	0.000670 9	
		3351.94 22	3.09 12	0.0	0 ⁺	[E2]		0.000967 14	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									Comments
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult. #	$\delta^\#$	α^\dagger	
									$\alpha(\text{N})=5.07\times 10^{-8}$ 7; $\alpha(\text{IPF})=0.000926$ 13 $\text{B}(\text{E}2)(\text{W.u.})=0.0147$ +18-15
3376.37	$1^{(+)}, 2^+$	3376.29 12	100	0.0	0^+				
3377.0	$(1^+, 2^+, 3^+)$	2160.80 41	100	1216.154	2^+				
3403.82	$(2^+, 3^+, 4^+)$	592.02 14	79.9 34	2812.130	(3^+)	[M1]			$\text{B}(\text{M}1)(\text{W.u.})=1.45$ +18-15 If E2, $\text{B}(\text{E}2)(\text{W.u.})=5.5\times 10^3$ +7-6 exceeds RUL=300; if E1, $\text{B}(\text{E}1)(\text{W.u.})=0.0248$ 28 exceeds RUL=0.01; $\alpha(\text{K})=8.32\times 10^{-5}$ 13; $\alpha(\text{L})=8.57\times 10^{-6}$ 14; $\alpha(\text{M})=1.333\times 10^{-6}$ 22 $\alpha(\text{N})=1.143\times 10^{-7}$ 18; $\alpha(\text{IPF})=0.000320$ 25 $\text{B}(\text{M}1)(\text{W.u.})=0.042$ +5-4 if M1, $\text{B}(\text{E}2)(\text{W.u.})=13.2$ +17-13 if E2. If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.0027$ 5. If E1, $\text{B}(\text{E}1)(\text{W.u.})=4.7\text{E}-5$ 8.
		2072.68 12	100.0 34	1330.872	4^+	[M1,E2]		0.000413 26	$\alpha(\text{K})=0.000592$ 8; $\alpha(\text{L})=6.16\times 10^{-5}$ 9; $\alpha(\text{M})=9.57\times 10^{-6}$ 13 $\alpha(\text{N})=8.15\times 10^{-7}$ 11 $\text{B}(\text{E}1)(\text{W.u.})=0.0035$ +20-16 $\alpha(\text{K})=0.0001177$ 20; $\alpha(\text{L})=1.215\times 10^{-5}$ 22; $\alpha(\text{M})=1.890\times 10^{-6}$ 34 $\alpha(\text{N})=1.620\times 10^{-7}$ 28; $\alpha(\text{IPF})=0.000162$ 16 $\text{B}(\text{M}1)(\text{W.u.})=0.0017$ +10-8 if M1, $\text{B}(\text{E}2)(\text{W.u.})=0.78$ +46-35 if E2. $\text{B}(\text{E}2)(\text{W.u.})=40$ 13 $\alpha(\text{K})=0.000431$ 6; $\alpha(\text{L})=4.52\times 10^{-5}$ 6; $\alpha(\text{M})=7.03\times 10^{-6}$ 10 $\alpha(\text{N})=5.99\times 10^{-7}$ 8 $\text{B}(\text{M}1)(\text{W.u.})=0.0033$ +18-15; $\text{B}(\text{E}2)(\text{W.u.})<0.25$ $\alpha(\text{K})=0.0002466$ 35; $\alpha(\text{L})=2.55\times 10^{-5}$ 4; $\alpha(\text{M})=3.97\times 10^{-6}$ 6 $\alpha(\text{N})=3.41\times 10^{-7}$ 5; $\alpha(\text{IPF})=3.46\times 10^{-6}$ 8 $\alpha(\text{K})=4.69\times 10^{-5}$ 7; $\alpha(\text{L})=4.81\times 10^{-6}$ 7; $\alpha(\text{M})=7.48\times 10^{-7}$ 11 $\alpha(\text{N})=6.42\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.000672$ 16 $\text{B}(\text{M}1)(\text{W.u.})=0.0081$ +16-20; $\text{B}(\text{E}2)(\text{W.u.})=0.54$ +31-25 $\alpha(\text{K})=3.52\times 10^{-5}$ 7; $\alpha(\text{L})=3.61\times 10^{-6}$ 7; $\alpha(\text{M})=5.61\times 10^{-7}$ 10
3405.9	(1)	3405.8 7	100	0.0	0^+	(D)			
3407.91	(4^+)	548.12 4	100.0 24	2859.781	4^-	[E1]		0.000664 9	
		1718.93 10	25.9 24	1688.971	3^+	[M1,E2]		0.000294 18	
3432.31	7^+	942.8 5	100 8	2489.35	5^+	E2		0.000484 7	
		1169.6 5	24 2	2262.42	6^+	M1(+E2)	+0.08 15	0.000280 4	
3436.09	$1^{(+)}, 2^+$	2876.40 28	100.0 14	559.103	2^+	(M1+E2)	+0.64 +28-20	0.000724 16	
		3436.28 20	28.0 14	0.0	0^+	[M1,E2]		0.00096 4	

Adopted Levels, Gammas (continued)

<u>$\gamma(^{76}\text{Se})$ (continued)</u>								
<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\ddagger}</u>	<u>I_{γ}^{\ddagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.[#]</u>	<u>α^{\ddagger}</u>	<u>Comments</u>
								$\alpha(\text{N})=4.82\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.00092$ 4 B(M1)(W.u.)=0.00188 +18-16 if M1, B(E2)(W.u.)=0.214 +20-18 if E2.
3441.27	(3 ⁻)	2882.11 22	100	559.103	2 ⁺			
3441.54	7 ⁻	179.2 5	8.1 9	3262.34	6 ⁻	[M1]	0.02147 34	B(M1)(W.u.)=0.070 +20-14 $\alpha(\text{K})=0.01907$ 30; $\alpha(\text{L})=0.002056$ 33; $\alpha(\text{M})=0.000321$ 5 $\alpha(\text{N})=2.72\times 10^{-5}$ 4 $\delta(\text{E2/M1})<0.7$ for RUL<300 for E2. B(E1)(W.u.)=5.3 $\times 10^{-5}$ +18-13 $\alpha(\text{K})=0.000886$ 13; $\alpha(\text{L})=9.22\times 10^{-5}$ 13; $\alpha(\text{M})=1.433\times 10^{-5}$ 20 $\alpha(\text{N})=1.218\times 10^{-6}$ 17 B(E2)(W.u.)=74 +18-13 $\alpha(\text{K})=0.001314$ 19; $\alpha(\text{L})=0.0001401$ 20; $\alpha(\text{M})=2.178\times 10^{-5}$ 31 $\alpha(\text{N})=1.840\times 10^{-6}$ 26 B(E1)(W.u.)=4.7 $\times 10^{-6}$ +15-11 $\alpha(\text{K})=0.0001193$ 17; $\alpha(\text{L})=1.228\times 10^{-5}$ 17; $\alpha(\text{M})=1.909\times 10^{-6}$ 27 $\alpha(\text{N})=1.634\times 10^{-7}$ 23; $\alpha(\text{IPF})=3.48\times 10^{-5}$ 6
		465.3 5	6.3	2975.98	6 ⁺	[E1]	0.000994 14	
		616.8 5	100 7	2824.797	5 ⁻	E2	1.48 $\times 10^{-3}$ 2	
		1179.1 5	9.0	2262.42	6 ⁺	[E1]	0.0001684 24	
3459.13	(2 ⁺)	191.68 15	0.88 18	3267.57	(2 ⁺ ,3,4 ⁺)			
		267.47 36	0.26 5	3191.67	(3) ⁺			
		353.68 17	1.17 9	3105.48	(3 ⁻)			
		389.50 18	1.77 23	3069.62	2 ⁺			
		647.05 33	0.63 13	2812.130	(3 ⁺)			
		789.09 10	74 5	2669.904	2 ⁻			
		803.59 10	87 4	2655.383	1			
		1029.89 15	100 11	2429.131	3 ⁻			
		1671.78 16	14.2 6	1787.655	2 ⁺			
		1769.93 41	6.3 6	1688.971	3 ⁺			
		2900.53 20	63.4 26	559.103	2 ⁺			
3466.39	(1,2,3)	796.15 19	7.8 14	2669.904	2 ⁻			
		2250.64 23	2.8 5	1216.154	2 ⁺			
		2907.28 24	100 19	559.103	2 ⁺			
3528.69	1 ⁺	3528.6 3	100	0.0	0 ⁺	[M1]	0.000951 13	B(M1)(W.u.)=0.0100 +11-9 $\alpha(\text{K})=3.33\times 10^{-5}$ 5; $\alpha(\text{L})=3.41\times 10^{-6}$ 5; $\alpha(\text{M})=5.31\times 10^{-7}$ 7 $\alpha(\text{N})=4.56\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000913$ 13 E _{γ} : from (γ,γ').
3552.89	(1,2)	897.57 11	31.5 17	2655.383	1			
		2337.37 26	35.0 19	1216.154	2 ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\ddagger	Comments
3552.89	(1,2)	2431.38 24	38.2 20	1122.279	0 ⁺			
		2994.27 20	100 6	559.103	2 ⁺			
		3553.53 96	7.1 18	0.0	0 ⁺			
3556.210	(2 ⁻)	287.32 25	1.32 13	3268.70	(1 ⁻ ,2)			
		288.68 20	0.085 26	3267.57	(2 ⁺ ,3,4 ⁺)			
		336.61 12	2.1 5	3219.428	(2 ⁺ ,3 ⁺)			
		450.83 13	1.78 14	3105.48	(3 ⁻)			
		486.44 10	10.5 7	3069.62	2 ⁺			
		581.20 11	1.18 16	2975.00	(2 ⁺ ,3,4 ⁺)			
		605.97 14	2.3 4	2950.171	1 ⁺			
		686.81 12	1.69 12	2869.34	(1 ⁺ ,2 ⁺)			
		696.39 10	5.4 33	2859.781	4 ⁻			
		738.88 13	0.57 5	2817.24	(2 ⁺)			
		744.40 45	0.44 4	2812.130	(3 ⁺)			
		886.14 12	32.4 21	2669.904	2 ⁻			
		900.71 10	10.9 5	2655.383	1			
		1127.15 23	15.4 22	2429.131	3 ⁻			
		1428.91 10	27.5 18	2127.224	(2) ⁺			
		1768.52 10	24.5 10	1787.655	2 ⁺			
		1867.35 10	13.8 13	1688.971	3 ⁺			
		2339.53 21	6.54 26	1216.154	2 ⁺			
		2997.40 8	100 4	559.103	2 ⁺			
3566.6	1 ⁽⁺⁾	3566.5 10	100	0.0	0 ⁺	(M1)	0.000964 14	$\alpha(\text{K})=3.28\times 10^{-5}$ 5; $\alpha(\text{L})=3.36\times 10^{-6}$ 5; $\alpha(\text{M})=5.22\times 10^{-7}$ 7 $\alpha(\text{N})=4.48\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000928$ 13 $\text{B}(\text{M1})(\text{W.u.})=0.0031$ +6-4
3604.192	1 ⁺	734.78 14	0.238 19	2869.34	(1 ⁺ ,2 ⁺)			
		934.26 12	4.9 4	2669.904	2 ⁻	[E1]	0.0002073 29	$\alpha(\text{K})=0.0001850$ 26; $\alpha(\text{L})=1.911\times 10^{-5}$ 27; $\alpha(\text{M})=2.97\times 10^{-6}$ 4 $\alpha(\text{N})=2.54\times 10^{-7}$ 4 $\text{B}(\text{E1})(\text{W.u.})=3.14\times 10^{-4}$ +43-36
		948.70 13	2.91 14	2655.383	1			
		999.96 10	2.46 18	2604.09	1 ⁺ ,2 ⁺			
		1089.42 10	5.17 27	2514.681	2 ⁺	[M1,E2]	0.000332 14	$\alpha(\text{K})=0.000296$ 12; $\alpha(\text{L})=3.08\times 10^{-5}$ 14; $\alpha(\text{M})=4.79\times 10^{-6}$ 21 $\alpha(\text{N})=4.10\times 10^{-7}$ 17 $\text{B}(\text{M1})(\text{W.u.})=0.0122$ +14-12 if M1, $\text{B}(\text{E2})(\text{W.u.})=13.8$ +16-14 if E2.
		1433.53 10	2.37 16	2170.572	(0 ⁺)	[M1]	0.0002337 33	$\alpha(\text{K})=0.0001648$ 23; $\alpha(\text{L})=1.702\times 10^{-5}$ 24; $\alpha(\text{M})=2.65\times 10^{-6}$ 4 $\alpha(\text{N})=2.272\times 10^{-7}$ 32; $\alpha(\text{IPF})=4.90\times 10^{-5}$ 7 $\text{B}(\text{M1})(\text{W.u.})=0.00245$ +31-27
		1476.91 10	0.70 11	2127.224	(2) ⁺	[M1,E2]	0.000246 11	$\alpha(\text{K})=0.0001579$ 32; $\alpha(\text{L})=1.63\times 10^{-5}$ 4; $\alpha(\text{M})=2.54\times 10^{-6}$ 6

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)							
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	α^\ddagger
3604.192	1 ⁺	1812.92 12	1.9 5	1791.437	0 ⁺	[M1]	0.000301 4
							$\alpha(\text{N})=2.18\times 10^{-7}$ 5; $\alpha(\text{IPF})=6.9\times 10^{-5}$ 8 B(M1)(W.u.)= 6.6×10^{-4} +13-12 if M1, B(E2)(W.u.)=0.41 +8-7 if E2.
		1816.71 12	2.06 10	1787.655	2 ⁺	[M1,E2]	0.000322 21
							B(M1)(W.u.)= 9.7×10^{-4} +28-26 $\alpha(\text{K})=0.0001055$ 15; $\alpha(\text{L})=1.087\times 10^{-5}$ 15; $\alpha(\text{M})=1.691\times 10^{-6}$ 24
		2482.60 20	6.42 27	1122.279	0 ⁺	[M1]	0.000545 8
3604.01		3045.51 20	2.15 24	559.103	2 ⁺	[M1,E2]	0.00081 4
							$\alpha(\text{N})=1.451\times 10^{-7}$ 20; $\alpha(\text{IPF})=0.0001825$ 26 $\alpha(\text{K})=0.0001061$ 18; $\alpha(\text{L})=1.094\times 10^{-5}$ 19; $\alpha(\text{M})=1.701\times 10^{-6}$ 29
		3604.01 8	100 3	0.0	0 ⁺	(M1)	0.000978 14
3636.88	(2 ⁺)						$\alpha(\text{N})=1.458\times 10^{-7}$ 24; $\alpha(\text{IPF})=0.000203$ 19 B(M1)(W.u.)=0.00105 +12-11 if M1, B(E2)(W.u.)=0.426 +49-42 if E2. B(M1)(W.u.)=0.00128 +15-12 $\alpha(\text{K})=6.00\times 10^{-5}$ 8; $\alpha(\text{L})=6.16\times 10^{-6}$ 9; $\alpha(\text{M})=9.58\times 10^{-7}$ 13 $\alpha(\text{N})=8.23\times 10^{-8}$ 12; $\alpha(\text{IPF})=0.000478$ 7 $\alpha(\text{K})=4.28\times 10^{-5}$ 7; $\alpha(\text{L})=4.39\times 10^{-6}$ 8; $\alpha(\text{M})=6.83\times 10^{-7}$ 12 $\alpha(\text{N})=5.86\times 10^{-8}$ 10; $\alpha(\text{IPF})=0.00076$ 4 B(M1)(W.u.)= 2.32×10^{-4} +37-32 if M1, B(E2)(W.u.)=0.034 5 if E2. B(M1)(W.u.)=0.0065 +7-6 $\alpha(\text{K})=3.22\times 10^{-5}$ 5; $\alpha(\text{L})=3.30\times 10^{-6}$ 5; $\alpha(\text{M})=5.13\times 10^{-7}$ 7 $\alpha(\text{N})=4.41\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000941$ 13 E _γ : weighted average of 3603.99 8 from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h) and 3604.3 3 from (γ,γ'). I _γ : from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h).
		531.36 37	1.64 18	3105.48	(3 ⁻)		
		767.61 14	1.64 18	2869.34	(1 ⁺ ,2 ⁺)		
		966.78 11	9.7 7	2669.904	2 ⁻		
		981.24 20	26.9 28	2655.383	1		
		1122.12 43	7.8 26	2514.681	2 ⁺		
		1466.13 35	2.4 5	2170.572	(0 ⁺)		
		1509.44 11	28.7 21	2127.224	(2 ⁺)		
		1845.58 16	90 8	1791.437	0 ⁺		
		1848.72 72	23.6 13	1787.655	2 ⁺		
		2421.08 20	17.7 9	1216.154	2 ⁺		
		2515.16 59	100 4	1122.279	0 ⁺		
		3078.56 21	10.0 5	559.103	2 ⁺		
		701.66 12	10.8 19	2950.171	1 ⁺		
		1963.00 34	6.5 7	1688.971	3 ⁺		
3651.88	(1 ⁺ ,2 ⁺ ,3 ⁺)	2436.05 27	8.2 7	1216.154	2 ⁺		

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	$\delta^\#$	α^\dagger	Comments
3651.88	(1 ⁺ , 2 ⁺ , 3 ⁺)	3092.95 20	100 6	559.103	2 ⁺				
3657.7?	(1, 2)	3098.3 ^b 5	100	559.103	2 ⁺				
		3657.8 5		0.0	0 ⁺				
3670.2	1 ⁽⁺⁾	3670.1 4	100	0.0	0 ⁺	(M1)		1.00×10 ⁻³ 1	$\alpha(\text{K})=3.13\times 10^{-5}$ 4; $\alpha(\text{L})=3.20\times 10^{-6}$ 4; $\alpha(\text{M})=4.98\times 10^{-7}$ 7 $\alpha(\text{N})=4.28\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000965$ 14 B(M1)(W.u.)=0.0061 +8-6 E _γ : from (γ, γ') only. B(M1)(W.u.)=0.019 +7-4; B(E2)(W.u.)=0.79 +36-23 $\alpha(\text{K})=0.00784$ 12; $\alpha(\text{L})=0.000838$ 12; $\alpha(\text{M})=0.0001305$ 19 $\alpha(\text{N})=1.110\times 10^{-5}$ 17 Mult.: $\gamma(\theta)$ in (α, 2nγ) consistent with ΔJ=0.
3696.27	(7 ⁻)	254.5 5	100 8	3441.54	7 ⁻	(M1+E2)	+0.045 5	0.00882 13	B(M1)(W.u.)=0.013 +8-5; B(E2)(W.u.)=9 6 $\alpha(\text{K})\approx 0.00412$; $\alpha(\text{L})\approx 0.000445$; $\alpha(\text{M})\approx 6.92\times 10^{-5}$ $\alpha(\text{N})\approx 5.82\times 10^{-6}$
		384.2 5	42	3312.04	(6 ⁻)	(M1+E2)	≈-0.9	≈0.00464	$\alpha(\text{K})=0.0030$ 8; $\alpha(\text{L})=3.2\times 10^{-4}$ 9; $\alpha(\text{M})=5.0\times 10^{-5}$ 15 $\alpha(\text{N})=4.2\times 10^{-6}$ 12 B(M1)(W.u.)=0.00106 +43-28 if M1, B(E2)(W.u.)=7.6 +31-20 if E2.
		434.1 5	28	3262.34	6 ⁻	[M1+E2]		0.0034 9	B(E2)(W.u.)=3.0 +11-7 $\alpha(\text{K})=0.001129$ 16; $\alpha(\text{L})=0.0001201$ 17; $\alpha(\text{M})=1.868\times 10^{-5}$ 26 $\alpha(\text{N})=1.579\times 10^{-6}$ 22
		650.8 5	83	3045.79	(5 ⁻)	[E2]		1.27×10 ⁻³ 2	
3716.52	(2)	1060.87 10 1929.05 11 2028.04 54 3157.64 20	24.2 12 14.9 8 7.6 8 100 4	2655.383 1 1787.655 2 ⁺ 1688.971 3 ⁺ 559.103 2 ⁺		D(+Q)	+0.004 +34-35		Mult.: $\gamma(\theta)$ in ⁷⁶ Br ε decay consistent with ΔJ=0 or 2.
3752.1	1 ⁽⁺⁾	3752.0 14	100	0.0	0 ⁺	(M1)		1.03×10 ⁻³ 1	B(M1)(W.u.)=0.0024 +9-5 $\alpha(\text{K})=3.02\times 10^{-5}$ 4; $\alpha(\text{L})=3.09\times 10^{-6}$ 4; $\alpha(\text{M})=4.81\times 10^{-7}$ 7 $\alpha(\text{N})=4.13\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000995$ 14
3758.79	1	2542.6 8 2636.1 6	19 5 42 6	1216.154 2 ⁺ 1122.279 0 ⁺		D			IF M1, B(M1)(W.u.)=0.040 8. IF E1, B(E1)(W.u.)=0.00069 13.

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	$\delta^\#$	α^\dagger	Comments
3758.79	1	3199.8 3 3758.6 3	47 5 100 9	559.103 0.0	2 ⁺ 0 ⁺	D			IF M1, B(M1)(W.u.)=0.033 5. IF E1, B(E1)(W.u.)=0.00057 9.
3785.7	(8 ⁺)	515.7 5	89	3269.75	8 ⁺	[M1+E2]		0.0021 4	$\alpha(\text{K})=0.0018$ 4; $\alpha(\text{L})=0.00020$ 4; $\alpha(\text{M})=3.0\times 10^{-5}$ 7 $\alpha(\text{N})=2.6\times 10^{-6}$ 6 B(M1)(W.u.)=0.084 +46-31 if M1. B(E2)(W.u.)=4.2 $\times 10^2$ +23-16 exceeds RUL=300 if E2.
		1523.5 5	100	2262.42	6 ⁺	[E2]		0.000263 4	B(E2)(W.u.)=2.1 +11-8 $\alpha(\text{K})=0.0001506$ 21; $\alpha(\text{L})=1.560\times 10^{-5}$ 22; $\alpha(\text{M})=2.427\times 10^{-6}$ 34 $\alpha(\text{N})=2.076\times 10^{-7}$ 29; $\alpha(\text{IPF})=9.44\times 10^{-5}$ 13 Mult.: $\gamma(\theta)$ in ($\alpha, 2n\gamma$) consistent with $\Delta J=0, 2$.
3853.75	(8 ⁺)	583.9 5	58 4	3269.75	8 ⁺	M1+E2	-0.45 25	0.00131 8	B(M1)(W.u.)=0.147 49; B(E2)(W.u.)=1.2 $\times 10^2$ +12-9 $\alpha(\text{K})=0.00116$ 7; $\alpha(\text{L})=0.000122$ 8; $\alpha(\text{M})=1.90\times 10^{-5}$ 13 $\alpha(\text{N})=1.62\times 10^{-6}$ 11 E γ : γ from ($^{12}\text{C}, \alpha 2n\gamma$) only.
		878.3 1591.1 5	100	2975.98 2262.42	6 ⁺ 6 ⁺	[E2]		0.000277 4	B(E2)(W.u.)=8.0 22 $\alpha(\text{K})=0.0001382$ 19; $\alpha(\text{L})=1.430\times 10^{-5}$ 20; $\alpha(\text{M})=2.224\times 10^{-6}$ 31 $\alpha(\text{N})=1.903\times 10^{-7}$ 27; $\alpha(\text{IPF})=0.0001222$ 17
3857.8	1 ⁺	3857.7 11	100	0.0	0 ⁺	(M1)		1.07 $\times 10^{-3}$ 2	B(M1)(W.u.)=0.0022 +6-4 $\alpha(\text{K})=2.89\times 10^{-5}$ 4; $\alpha(\text{L})=2.96\times 10^{-6}$ 4; $\alpha(\text{M})=4.60\times 10^{-7}$ 6 $\alpha(\text{N})=3.95\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.001034$ 14
3880.46		1225.07 18	100	2655.383	1				
3915.48	(2 ⁻)	647.79 20 695.70 33 809.89 12 845.76 17 965.33 15 1055.90 13 1103.25 10 1245.49 32 1400.74 18 1787.99 32 2226.68 20	4.9 18 36 9 3.04 29 27.5 27 8.6 11 1.9 13 30 6 8.8 8 8.7 8 58 5 61 6	3267.57 3219.428 3105.48 3069.62 2950.171 2859.781 2812.130 2669.904 2514.681 2127.224 1688.971	(2 ⁺ , 3, 4 ⁺) (2 ⁺ , 3 ⁺) (3 ⁻) 2 ⁺ 1 ⁺ 4 ⁻ (3 ⁺) 2 ⁻ 2 ⁺ (2) ⁺ 3 ⁺				

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
3915.48	(2 ⁻)	2699.08 20	28.6 26	1216.154	2 ⁺			
		3356.87 20	100 5	559.103	2 ⁺			
3922.5	1	3922.4 4	100	0.0	0 ⁺	D		If M1, B(M1)(W.u.)=0.0087 9. If E1, B(E1)(W.u.)=0.000149 15.
3930.02	(1,2 ⁺)	1060.51 25	3.94 32	2869.34	(1 ⁺ ,2 ⁺)			
		1259.87 19	17.8 13	2669.904	2 ⁻			
		1759.34 13	1.23 13	2170.572	(0 ⁺)			
		1802.65 11	26.1 18	2127.224	(2 ⁺)			
		2142.50 21	10.5 7	1787.655	2 ⁺			
		2714.09 20	37.8 25	1216.154	2 ⁺			
		2808.17 22	46.2 19	1122.279	0 ⁺			
		3371.00 20	100 7	559.103	2 ⁺			
		3929.96 40	65 4	0.0	0 ⁺			
3970.407	(2 ⁺)	701.64 10	15.3 14	3268.70	(1 ⁻ ,2)			
		750.94 20	0.97 24	3219.428	(2 ⁺ ,3 ⁺)			
		778.84 12	7.0 13	3191.67	(3 ⁺)			
		810.32 18	6.4 5	3160.115	(2 ⁺)			
		864.93 11	2.92 22	3105.48	(3 ⁻)			
		900.82 14	27.7 18	3069.62	2 ⁺			
		995.41 13	11.9 15	2975.00	(2 ⁺ ,3,4 ⁺)			
		1020.32 11	7.1 4	2950.171	1 ⁺			
		1101.07 11	21.6 15	2869.34	(1 ⁺ ,2 ⁺)			
		1153.14 10	21.8 18	2817.24	(2 ⁺)			
		1158.27 10	9.4 7	2812.130	(3 ⁺)			
		1300.48 12	43.8 29	2669.904	2 ⁻			
		1314.70 11	22.4 27	2655.383	1			
		1455.63 10	30.5 16	2514.681	2 ⁺			
		1541.25 11	8.0 13	2429.131	3 ⁻			
		2183.01 20	55.8 24	1787.655	2 ⁺			
		2754.54 20	5.8 6	1216.154	2 ⁺			
		3411.55 20	100 4	559.103	2 ⁺			
4005.1		309.3 5	100	3696.27	(7 ⁻)			
4008.7	(8 ⁻)	746.3 5	100	3262.34	6 ⁻	E2	0.000874 12	B(E2)(W.u.)=58 +27-14 $\alpha(K)=0.000778$ 11; $\alpha(L)=8.23 \times 10^{-5}$ 12; $\alpha(M)=1.280 \times 10^{-5}$ 18 $\alpha(N)=1.085 \times 10^{-6}$ 15
4045.61	1 ⁺	1440.7 12	13.0 19	2604.09	1 ⁺ ,2 ⁺			
		1918.41 45	56 5	2127.224	(2 ⁺)	[M1,E2]	0.000356 23	$\alpha(K)=9.59 \times 10^{-5}$ 16; $\alpha(L)=9.88 \times 10^{-6}$ 16; $\alpha(M)=1.537 \times 10^{-6}$ 26 $\alpha(N)=1.317 \times 10^{-7}$ 21; $\alpha(\text{IPF})=0.000249$ 22 B(M1)(W.u.)=0.0151 +22-19 if M1, B(E2)(W.u.)=5.5 +8-7 if E2.
		2258.06 23	100 5	1787.655	2 ⁺	[M1,E2]	0.000487 30	$\alpha(K)=7.14 \times 10^{-5}$ 11; $\alpha(L)=7.34 \times 10^{-6}$ 12; $\alpha(M)=1.142 \times 10^{-6}$ 18 $\alpha(N)=9.80 \times 10^{-8}$ 15; $\alpha(\text{IPF})=0.000407$ 30

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
E_γ, I_γ : from ^{76}Br $\varepsilon+\beta^+$ decay (16.14 h). B(M1)(W.u.)=0.0165 +21-17 if M1, B(E2)(W.u.)=4.3 +6-5 if E2. $\alpha(\text{K})=6.67\times 10^{-5}$ 9; $\alpha(\text{L})=6.86\times 10^{-6}$ 10; $\alpha(\text{M})=1.067\times 10^{-6}$ 15 $\alpha(\text{N})=9.15\times 10^{-8}$ 13; $\alpha(\text{IPF})=0.000484$ 7 B(E2)(W.u.)=1.33 +23-20 $\alpha(\text{K})=4.84\times 10^{-5}$ 8; $\alpha(\text{L})=4.96\times 10^{-6}$ 8; $\alpha(\text{M})=7.72\times 10^{-7}$ 13 $\alpha(\text{N})=6.63\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.00067$ 4 B(M1)(W.u.)=0.0055 +8-6 if M1, B(E2)(W.u.)=0.93 +13-10 if E2. B(M1)(W.u.)=0.0029 5 $\alpha(\text{K})=2.69\times 10^{-5}$ 4; $\alpha(\text{L})=2.75\times 10^{-6}$ 4; $\alpha(\text{M})=4.27\times 10^{-7}$ 6 $\alpha(\text{N})=3.67\times 10^{-8}$ 5; $\alpha(\text{IPF})=0.001100$ 15 B(M1)(W.u.)=1.13 $\times 10^{-5}$ +11-9 $\alpha(\text{K})=2.68\times 10^{-5}$ 4; $\alpha(\text{L})=2.74\times 10^{-6}$ 4; $\alpha(\text{M})=4.26\times 10^{-7}$ 6 $\alpha(\text{N})=3.66\times 10^{-8}$ 5; $\alpha(\text{IPF})=0.001102$ 15								
4045.61	1 ⁺	2356.89 21	38 5	1688.971	3 ⁺	[E2]	0.000558 8	
		2830.11 23	66 4	1216.154	2 ⁺	[M1,E2]	0.00072 4	
		4046.2 3	100	0.0	0 ⁺	(M1)	1.13 $\times 10^{-3}$ 2	
4055.22	1 ⁺	4055.1 3	100	0.0	0 ⁺	M1	1.13 $\times 10^{-3}$ 2	
4083.68	(1 ⁻ ,2)	816.29 13 864.16 70 979.0 17 1133.70 61 1271.45 12 1413.70 14 1428.61 57 1568.63 14 1654.57 21 2296.07 26 3524.99 20	1.55 24 3.5 8 0.66 10 7.7 4 5.8 5 2.66 24 5.7 34 8.6 12 41 5 6.00 17 100 4	3267.57 3219.428 3105.48 2950.171 2812.130 2669.904 2655.383 2514.681 2429.131 1787.655 559.103	(2 ⁺ ,3,4 ⁺) (2 ⁺ ,3 ⁺) (3 ⁻) 1 ⁺ (3 ⁺) 2 ⁻ 1 2 ⁺ 3 ⁻ 2 ⁺ 2 ⁺			
4086.58	(1,2,3 ⁺)	1136.10 71 1416.48 49 1431.9 22 2298.95 22	14.7 31 12.5 22 17 6 100 6	2950.171 2669.904 2655.383 1787.655	1 ⁺ 2 ⁻ 1 2 ⁺			
4125.5	1 ⁺	4125.4 10	100	0.0	0 ⁺	M1	1.15 $\times 10^{-3}$ 2	B(M1)(W.u.)=0.0026 +7-4 $\alpha(\text{K})=2.61\times 10^{-5}$ 4; $\alpha(\text{L})=2.66\times 10^{-6}$ 4; $\alpha(\text{M})=4.14\times 10^{-7}$ 6 $\alpha(\text{N})=3.56\times 10^{-8}$ 5; $\alpha(\text{IPF})=0.001124$ 16
4151.36	(2)	1481.34 11 1495.89 13 1636.56 10 1722.24 12	78 7 78 4 67.8 35 100 15	2669.904 2655.383 2514.681 2429.131	2 ⁻ 1 2 ⁺ 3 ⁻			

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	α^\ddagger	Comments
4151.36	(2)	2364.10 23	46.9 29	1787.655	2 ⁺			
		2462.82 20	90 9	1688.971	3 ⁺			
4174.33	(1,2)	1504.32 10	63 5	2669.904	2 ⁻			
		1518.79 10	55.8 27	2655.383	1			
		1659.66 30	13.2 6	2514.681	2 ⁺			
		2003.79 20	6.9 5	2170.572	(0 ⁺)			
		2047.10 21	62 5	2127.224	(2) ⁺			
		2383.45 20	53 8	1791.437	0 ⁺			
		2386.77 33	100 12	1787.655	2 ⁺			
		3052.38 26	18.1 26	1122.279	0 ⁺			
		3615.08 22	6.0 8	559.103	2 ⁺			
		4174.22 40	20.0 16	0.0	0 ⁺			
4199.19	(1 ⁻ ,2)	482.72 29	6.6 5	3716.52	(2)			
		980.1 13	10.7 26	3219.428	(2 ⁺ ,3 ⁺)			
		1093.62 10	21.3 17	3105.48	(3 ⁻)			
		1249.15 25	12.6 12	2950.171	1 ⁺			
		1329.77 30	5.0 4	2869.34	(1 ⁺ ,2 ⁺)			
		1543.69 15	12.9 8	2655.383	1			
		1684.40 12	10.1 6	2514.681	2 ⁺			
		1770.02 10	56 8	2429.131	3 ⁻			
		2072.05 22	71 5	2127.224	(2) ⁺			
		2411.79 20	47.0 23	1787.655	2 ⁺			
		2983.39 20	38.5 21	1216.154	2 ⁺			
		3639.99 20	100 5	559.103	2 ⁺			
4205.44	(1 ⁻ ,2)	937.73 13	8.6 13	3267.57	(2 ⁺ ,3,4 ⁺)			
		985.62 10	79 19	3219.428	(2 ⁺ ,3 ⁺)			
		1255.15 44	44 6	2950.171	1 ⁺			
		1335.66 34	1.43 22	2869.34	(1 ⁺ ,2 ⁺)			
		1388.08 11	9.9 11	2817.24	(2 ⁺)			
		1393.21 10	43 4	2812.130	(3 ⁺)			
		1549.99 14	31.7 18	2655.383	1			
		1776.22 11	100 13	2429.131	3 ⁻			
		2989.94 69	14.1 22	1216.154	2 ⁺			
		3646.17 21	50.1 24	559.103	2 ⁺			
4214.0	(8 ⁻)	518.0 5	37	3696.27	(7 ⁻)	[M1+E2]	0.0020 4	$\alpha(\text{K})=0.0018$ 4; $\alpha(\text{L})=0.00019$ 4; $\alpha(\text{M})=3.0\times 10^{-5}$ 7 $\alpha(\text{N})=2.5\times 10^{-6}$ 6 B(M1)(W.u.)=0.025 +22-12 if M1, B(E2)(W.u.)=1.3×10 ² +11-6 if E2.
		901.7 5	100 5	3312.04	(6 ⁻)	E2	0.000539 8	B(E2)(W.u.)=21 +19-10 $\alpha(\text{K})=0.000480$ 7; $\alpha(\text{L})=5.05\times 10^{-5}$ 7; $\alpha(\text{M})=7.85\times 10^{-6}$ 11 $\alpha(\text{N})=6.68\times 10^{-7}$ 9

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
4218.81	1 ⁺	3659.6 1	100 8	559.103	2 ⁺	(M1)	0.000997 14	B(M1)(W.u.)=0.077 +11-9 $\alpha(\text{K})=3.15\times 10^{-5}$ 4; $\alpha(\text{L})=3.22\times 10^{-6}$ 5; $\alpha(\text{M})=5.01\times 10^{-7}$ 7 $\alpha(\text{N})=4.30\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000962$ 13
		4218.8 3	95 8	0.0	0 ⁺	M1	1.18 $\times 10^{-3}$ 2	B(M1)(W.u.)=0.048 +7-6 $\alpha(\text{K})=2.517\times 10^{-5}$ 35; $\alpha(\text{L})=2.57\times 10^{-6}$ 4; $\alpha(\text{M})=4.00\times 10^{-7}$ 6 $\alpha(\text{N})=3.44\times 10^{-8}$ 5; $\alpha(\text{IPF})=0.001153$ 16
4249.20	(1,2)	2121.95 38	100 12	2127.224	(2) ⁺			
		4249.06 41	7.1 14	0.0	0 ⁺			
4257.59	(1,2)	2087.00 28	14.7 13	2170.572	(0 ⁺)			
		2470.0 11	91 7	1787.655	2 ⁺			
		3042.4 15	100 9	1216.154	2 ⁺			
		3698.41 26	47 5	559.103	2 ⁺			
		4257.79 43	14.7 13	0.0	0 ⁺			
4298.87	(1,2,3 ⁺)	1107.17 11	11.2 17	3191.67	(3) ⁺			
		1349.0 13	21.2 17	2950.171	1 ⁺			
		1481.59 20	30.7 29	2817.24	(2 ⁺)			
		1628.81 28	100 7	2669.904	2 ⁻			
		1643.28 28	23 4	2655.383	1			
		3082.92 21	61 8	1216.154	2 ⁺			
4299.5	10 ⁺	1029.8 5	100	3269.75	8 ⁺	E2	0.000393 6	B(E2)(W.u.)=52 9 $\alpha(\text{K})=0.000350$ 5; $\alpha(\text{L})=3.66\times 10^{-5}$ 5; $\alpha(\text{M})=5.69\times 10^{-6}$ 8 $\alpha(\text{N})=4.85\times 10^{-7}$ 7
4324.6	(9) ⁻	883.0 5	100	3441.54	7 ⁻	E2	0.000568 8	B(E2)(W.u.)=39 +16-9 $\alpha(\text{K})=0.000506$ 7; $\alpha(\text{L})=5.32\times 10^{-5}$ 7; $\alpha(\text{M})=8.27\times 10^{-6}$ 12 $\alpha(\text{N})=7.03\times 10^{-7}$ 10
4328.36	(1,2)	724.15 11	13.3 7	3604.192	1 ⁺			
		976.89 16	7.9 8	3351.462	(2) ⁺			
		1672.95 10	100 5	2655.383	1			
		4328.36 42	0.33 6	0.0	0 ⁺			
4329.2	1	3112.4 6	100 14	1216.154	2 ⁺			
		4329.7 6	30 6	0.0	0 ⁺			
4347.53	(1,2)	3131.30 56	100 5	1216.154	2 ⁺			
		4347.40 41	23.7 13	0.0	0 ⁺			
4366.55		649.76 40	64 5	3716.52	(2)			
		1098.81 15	100 11	3267.57	(2 ⁺ ,3,4 ⁺)			
		1146.32 64	37 9	3219.428	(2 ⁺ ,3 ⁺)			
		2239.60 24	57 7	2127.224	(2) ⁺			
		2677.57 28	29.6 35	1688.971	3 ⁺			
		3150.67 26	18.3 35	1216.154	2 ⁺			
4383.97	1 ⁺ ,2 ⁺ ,3 ⁺	2257 ^{ab}		2127.224	(2) ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
4405.9	(9 ⁺)	973.1 5	100	3432.31	7 ⁺	(E2)	0.000449 6	B(E2)(W.u.)=38 +11-7 $\alpha(\text{K})=0.000400$ 6; $\alpha(\text{L})=4.19\times 10^{-5}$ 6; $\alpha(\text{M})=6.52\times 10^{-6}$ 9 $\alpha(\text{N})=5.55\times 10^{-7}$ 8 E_γ : from ($^{12}\text{C}, \alpha 2n\gamma$).
4411.65	(2)	1136.1		3269.75	8 ⁺			
		859.45 12	7.1 11	3552.89	(1,2)			
		945.27 18	26 7	3466.39	(1,2,3)			
		1143.89 12	16.3 12	3267.57	(2 ⁺ ,3,4 ⁺)			
		1191.79 10	17 4	3219.428	(2 ⁺ ,3 ⁺)			
		1219.73 59	8.2 11	3191.67	(3) ⁺			
		1342.03 12	40.0 27	3069.62	2 ⁺			
		1461.42 12	17.2 8	2950.171	1 ⁺			
		1542.28 38	1.92 16	2869.34	(1 ⁺ ,2 ⁺)			
		1599.21 25	38.2 29	2812.130	(3 ⁺)			
		1741.51 ^b 10	100 7	2669.904	2 ⁻			
		1756.42 11	27.2 14	2655.383	1			
		1896.96 34	1.14 26	2514.681	2 ⁺			
		1982.31 46	17.0 29	2429.131	3 ⁻			
		2284.54 24	6.0 5	2127.224	(2) ⁺			
		2624.11 20	20.6 12	1787.655	2 ⁺			
		2722.99 21	5.1 5	1688.971	3 ⁺			
		3195.52 20	13.8 9	1216.154	2 ⁺			
		3853.03 45	0.10 5	559.103	2 ⁺			
4437.72	(1 ⁺ ,2 ⁺)	721.22 11	5.8 5	3716.52	(2)			
		1277.59 15	26 4	3160.115	(2 ⁺)			
		1782.38 11	14.2 6	2655.383	1			
		1833.61 25	19.9 15	2604.09	1 ⁺ ,2 ⁺			
		1922.89 10	75 4	2514.681	2 ⁺			
		2267.05 20	12.1 10	2170.572	(0 ⁺)			
		2310.69 27	58 8	2127.224	(2) ⁺			
		2650.64 44	9.8 15	1787.655	2 ⁺			
		3221.81 20	17.1 10	1216.154	2 ⁺			
		3315.98 52	3.59 33	1122.279	0 ⁺			
		3878.09 23	1.09 22	559.103	2 ⁺			
		4437.33 40	100 6	0.0	0 ⁺			
4451.92	(1 ⁺ ,2 ⁺)	1501.99 24	28.9 22	2950.171	1 ⁺			
		1796.56 21	21.7 17	2655.383	1			
		3235.88 22	28.3 17	1216.154	2 ⁺			
		3892.32 20	100 6	559.103	2 ⁺			
		4451.81 40	59.4 33	0.0	0 ⁺			
4473.46	(2 ⁺)	1803.44 13	39 4	2669.904	2 ⁻			
		1817.96 19	39 5	2655.383	1			

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. [#]	α^\dagger	Comments
4473.46	(2 ⁺)	3257.58 21	37.0 21	1216.154	2 ⁺			
		3913.93 21	100 6	559.103	2 ⁺			
4489.23	(1,2)	936.04 26	24.6 33	3552.89	(1,2)			
		1137.74 10	44.3 35	3351.462	(2) ⁺			
		1539.05 30	9.7 6	2950.171	1 ⁺			
		1819.27 12	9.0 8	2669.904	2 ⁻			
		1833.87 10	100 5	2655.383	1			
		2698.18 21	10.3 12	1791.437	0 ⁺			
		3366.2 19	9.9 6	1122.279	0 ⁺			
		3930.06 40	32.4 22	559.103	2 ⁺			
		4488.56 40	3.24 34	0.0	0 ⁺			
4523.47	(3 ⁻)	1255.89 72	43 20	3267.57	(2 ⁺ ,3,4 ⁺)			
		1304.1 10	30 7	3219.428	(2 ⁺ ,3 ⁺)			
		1653.91 63	29.3 35	2869.34	(1 ⁺ ,2 ⁺)			
		1711.26 12	80 13	2812.130	(3 ⁺)			
		2008.33 83	19.0 26	2514.681	2 ⁺			
		2835.30 45	25.9 35	1688.971	3 ⁺			
		3307.29 21	100 10	1216.154	2 ⁺			
4532.91	(1 ⁻ ,2,3)	1265.30 78	30 11	3267.57	(2 ⁺ ,3,4 ⁺)			
		1862.81 13	100 8	2669.904	2 ⁻			
		2103.93 60	50 14	2429.131	3 ⁻			
		2746.09 47	41 6	1787.655	2 ⁺			
		3974.67 41	55.4 27	559.103	2 ⁺			
4534.93	(0,1,2)	1584.72 10	57.9 28	2950.171	1 ⁺			
		1879.55 12	100 5	2655.383	1			
4535.7	1 ⁺	3977.2 11	68 13	559.103	2 ⁺	[M1]	1.11×10^{-3} 2	B(M1)(W.u.)=0.0140 +35-29 $\alpha(\text{K})=2.76 \times 10^{-5}$ 4; $\alpha(\text{L})=2.82 \times 10^{-6}$ 4; $\alpha(\text{M})=4.39 \times 10^{-7}$ 6 $\alpha(\text{N})=3.77 \times 10^{-8}$ 5; $\alpha(\text{IPF})=0.001077$ 15
		4535.4 6	100 13	0.0	0 ⁺	M1	1.28×10^{-3} 2	B(M1)(W.u.)=0.0139 +32-24 $\alpha(\text{K})=2.254 \times 10^{-5}$ 32; $\alpha(\text{L})=2.304 \times 10^{-6}$ 32; $\alpha(\text{M})=3.58 \times 10^{-7}$ 5 $\alpha(\text{N})=3.08 \times 10^{-8}$ 4; $\alpha(\text{IPF})=0.001260$ 18
4576.11	(1,2)	1906.26 35	67 11	2669.904	2 ⁻			
		1921.1 12	76 31	2655.383	1			
		3453.80 27	50 5	1122.279	0 ⁺			
		4575.70 40	100 11	0.0	0 ⁺			
4581.05	(1,2)	1313.70 81	4.0 21	3267.57	(2 ⁺ ,3,4 ⁺)			
		1420.92 49	20 7	3160.115	(2 ⁺)			
		1605.80 88	4.1 6	2975.00	(2 ⁺ ,3,4 ⁺)			
		1911.10 12	9.2 10	2669.904	2 ⁻			
		2152.17 35	6.1 18	2429.131	3 ⁻			
		2454.00 52	20.2 16	2127.224	(2) ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\ddagger	Comments	
4581.05	(1,2)	3364.74 32 4021.65 40	11.2 9 100 9	1216.154 559.103	2 ⁺ 2 ⁺				
4603.26	(1,2) ⁺	4043.89 40 4603.27 40	61 5 100 5	559.103 0.0	2 ⁺ 0 ⁺				
4603.3	1 ⁻	4603.1 6	100 5	0.0	0 ⁺	E1	1.91×10^{-3} 3	B(E1)(W.u.)= 4.8×10^{-4} +20-11 $\alpha(K)=1.624 \times 10^{-5}$ 23; $\alpha(L)=1.655 \times 10^{-6}$ 23; $\alpha(M)=2.57 \times 10^{-7}$ 4 $\alpha(N)=2.209 \times 10^{-8}$ 31; $\alpha(\text{IPF})=0.001887$ 26	
4663.08	1 ⁻	4104.2 5	32 4	559.103	2 ⁺	(E1)	1.73×10^{-3} 2	B(E1)(W.u.)= 2.4×10^{-4} +6-5 $\alpha(K)=1.873 \times 10^{-5}$ 26; $\alpha(L)=1.910 \times 10^{-6}$ 27; $\alpha(M)=2.97 \times 10^{-7}$ 4 $\alpha(N)=2.55 \times 10^{-8}$ 4; $\alpha(\text{IPF})=0.001713$ 24	
		4662.7 4	100 10	0.0	0 ⁺	E1	1.92×10^{-3} 3	B(E1)(W.u.)= 5.2×10^{-4} +11-8 $\alpha(K)=1.598 \times 10^{-5}$ 22; $\alpha(L)=1.629 \times 10^{-6}$ 23; $\alpha(M)=2.532 \times 10^{-7}$ 35 $\alpha(N)=2.174 \times 10^{-8}$ 30; $\alpha(\text{IPF})=0.001905$ 27	
4673.7	1 ⁺	4673.5 14	100	0.0	0 ⁺	M1	1.32×10^{-3} 2	B(M1)(W.u.)=0.0040 +19-10 $\alpha(K)=2.154 \times 10^{-5}$ 30; $\alpha(L)=2.201 \times 10^{-6}$ 31; $\alpha(M)=3.42 \times 10^{-7}$ 5 $\alpha(N)=2.94 \times 10^{-8}$ 4; $\alpha(\text{IPF})=0.001299$ 18	
4687.21	(1,2,3 ⁺)	1736.92 17 1875.23 16 2017.14 46 3470.50 50 4127.74 50	100 11 65 25 52 6 63 4 6.3 21	2950.171 2812.130 2669.904 1216.154 559.103	1 ⁺ (3 ⁺) 2 ⁻ 2 ⁺ 2 ⁺				
4687.3	(10) ⁺	388.0 5	30	4299.5	10 ⁺	[M1]	0.00314 4	B(M1)(W.u.)=0.108 +29-25 $\alpha(K)=0.00279$ 4; $\alpha(L)=0.000295$ 4; $\alpha(M)=4.60 \times 10^{-5}$ 7 $\alpha(N)=3.92 \times 10^{-6}$ 6 δ : RUL=300 for E2 suggests $\delta(E2/M1)<0.7$.	
		833.8 5	100	3853.75	(8) ⁺	[E2]	0.000656 9	B(E2)(W.u.)=70 +14-13 $\alpha(K)=0.000584$ 8; $\alpha(L)=6.15 \times 10^{-5}$ 9; $\alpha(M)=9.56 \times 10^{-6}$ 13 $\alpha(N)=8.13 \times 10^{-7}$ 11	
		1417.7 5	83 4	3269.75	8 ⁺	E2	0.0002532 35	B(E2)(W.u.)=4.1 +9-6 $\alpha(K)=0.0001742$ 24; $\alpha(L)=1.808 \times 10^{-5}$ 25; $\alpha(M)=2.81 \times 10^{-6}$ 4 $\alpha(N)=2.404 \times 10^{-7}$ 34; $\alpha(\text{IPF})=5.79 \times 10^{-5}$ 8	
4720.6	1 ⁻	4161.3 6	100 10	559.103	2 ⁺	E1	1.75×10^{-3} 3	B(E1)(W.u.)= 4.9×10^{-4} +9-7 $\alpha(K)=1.841 \times 10^{-5}$ 26; $\alpha(L)=1.877 \times 10^{-6}$ 26; $\alpha(M)=2.92 \times 10^{-7}$ 4 $\alpha(N)=2.505 \times 10^{-8}$ 35; $\alpha(\text{IPF})=0.001732$ 24	
		4720.5 7	66 8	0.0	0 ⁺	E1	1.94×10^{-3} 3	B(E1)(W.u.)= 2.22×10^{-4} +43-34 $\alpha(K)=1.574 \times 10^{-5}$ 22; $\alpha(L)=1.605 \times 10^{-6}$ 22; $\alpha(M)=2.494 \times 10^{-7}$ 35 $\alpha(N)=2.141 \times 10^{-8}$ 30; $\alpha(\text{IPF})=0.001924$ 27	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\dagger	Comments	
4723.2	(3 ⁺)	1772.95 59	100 8	2950.171	1 ⁺				
		3507.05 54	86 12	1216.154	2 ⁺				
		4163.45 98	80 8	559.103	2 ⁺				
4728.6		1287.0 5	100	3441.54	7 ⁻				
4731.6	(⁺)	1781.37 40	100 6	2950.171	1 ⁺				
		3515.7 11	46 6	1216.154	2 ⁺				
4766.96	1	4766.8 3	100	0.0	0 ⁺	D		If M1, B(M1)(W.u.)=0.0117 10. If E1, B(E1)(W.u.)=0.000200 18.	
4794.97	(1,2)	1982.95 56	36 9	2812.130	(3 ⁺)				
		2139.93 26	60.4 27	2655.383	1				
		2365.29 27	100 15	2429.131	3 ⁻				
		3672.54 22	19.5 14	1122.279	0 ⁺				
		4235.89 41	53 4	559.103	2 ⁺				
		4794.96 40	8.7 7	0.0	0 ⁺				
4880.0	1 ⁻	4879.8 4	100	0.0	0 ⁺	E1	1.99×10^{-3} 3	B(E1)(W.u.)= 1.64×10^{-4} +18-15 $\alpha(K)=1.512 \times 10^{-5}$ 21; $\alpha(L)=1.540 \times 10^{-6}$ 22; $\alpha(M)=2.394 \times 10^{-7}$ 34 $\alpha(N)=2.056 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001976$ 28	
4887.07	1 ⁻	4886.9 3	100	0.0	0 ⁺	E1	2.00×10^{-3} 3	B(E1)(W.u.)= 1.19×10^{-4} +17-13 $\alpha(K)=1.509 \times 10^{-5}$ 21; $\alpha(L)=1.538 \times 10^{-6}$ 22; $\alpha(M)=2.390 \times 10^{-7}$ 33 $\alpha(N)=2.052 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001978$ 28	
4931.6	1 ⁻	4931.4 17	100	0.0	0 ⁺	E1	2.01×10^{-3} 3	B(E1)(W.u.)= 4.0×10^{-5} +14-9 $\alpha(K)=1.492 \times 10^{-5}$ 21; $\alpha(L)=1.521 \times 10^{-6}$ 21; $\alpha(M)=2.364 \times 10^{-7}$ 33 $\alpha(N)=2.029 \times 10^{-8}$ 28; $\alpha(\text{IPF})=0.001993$ 28	
4938.6	1	4938.4 15	100 10	0.0	0 ⁺	D		If M1, B(M1)(W.u.)=0.0043 8. If E1, B(E1)(W.u.)= $7.3 \times 10_5$ 14.	
4971.5	1 ⁺	4971.3 17	100	0.0	0 ⁺	(M1)	1.41×10^{-3} 2	B(M1)(W.u.)=0.0047 +11-7 $\alpha(K)=1.964 \times 10^{-5}$ 28; $\alpha(L)=2.006 \times 10^{-6}$ 28; $\alpha(M)=3.12 \times 10^{-7}$ 4 $\alpha(N)=2.68 \times 10^{-8}$ 4; $\alpha(\text{IPF})=0.001390$ 19	
4984.81	1 ⁻	4426.1 5	73 12	559.103	2 ⁺	(E1)	1.85×10^{-3} 3	B(E1)(W.u.)= 3.1×10^{-4} +6-5 $\alpha(K)=1.705 \times 10^{-5}$ 24; $\alpha(L)=1.738 \times 10^{-6}$ 24; $\alpha(M)=2.70 \times 10^{-7}$ 4 $\alpha(N)=2.319 \times 10^{-8}$ 32; $\alpha(\text{IPF})=0.001829$ 26	
		4984.3 4	100 9	0.0	0 ⁺	E1	2.03×10^{-3} 3	B(E1)(W.u.)= 2.9×10^{-4} +5-4 $\alpha(K)=1.473 \times 10^{-5}$ 21; $\alpha(L)=1.501 \times 10^{-6}$ 21; $\alpha(M)=2.333 \times 10^{-7}$ 33 $\alpha(N)=2.003 \times 10^{-8}$ 28; $\alpha(\text{IPF})=0.002011$ 28	
5001.48	1 ⁻	5001.3 2	100	0.0	0 ⁺	E1	2.03×10^{-3} 3	B(E1)(W.u.)= 3.58×10^{-4} +27-24 $\alpha(K)=1.467 \times 10^{-5}$ 21; $\alpha(L)=1.495 \times 10^{-6}$ 21; $\alpha(M)=2.323 \times 10^{-7}$ 33 $\alpha(N)=1.995 \times 10^{-8}$ 28; $\alpha(\text{IPF})=0.002016$ 28	
5010.76	1 ⁻	4451.8 3	36 6	559.103	2 ⁺	(E1)	1.86×10^{-3} 3	B(E1)(W.u.)= 3.1×10^{-4} 5 $\alpha(K)=1.692 \times 10^{-5}$ 24; $\alpha(L)=1.725 \times 10^{-6}$ 24; $\alpha(M)=2.68 \times 10^{-7}$ 4 $\alpha(N)=2.302 \times 10^{-8}$ 32; $\alpha(\text{IPF})=0.001838$ 26	
		5010.3 3	100 7	0.0	0 ⁺	E1	2.04×10^{-3} 3	B(E1)(W.u.)= 6.0×10^{-4} +7-6	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)							
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\dagger
							Comments
5068.1	(10) ⁻	1059.4 5	100	4008.7	(8 ⁻)	E2	0.000368 5
							$\alpha(\text{K})=1.464\times 10^{-5}$ 20; $\alpha(\text{L})=1.492\times 10^{-6}$ 21; $\alpha(\text{M})=2.318\times 10^{-7}$ 32 $\alpha(\text{N})=1.990\times 10^{-8}$ 28; $\alpha(\text{IPF})=0.002019$ 28 $\text{B}(\text{E}2)(\text{W.u.})=22$ 6 $\alpha(\text{K})=0.000328$ 5; $\alpha(\text{L})=3.43\times 10^{-5}$ 5; $\alpha(\text{M})=5.33\times 10^{-6}$ 7 $\alpha(\text{N})=4.54\times 10^{-7}$ 6
5074.00	1 ⁻	4515.8 3	35 3	559.103	2 ⁺	(E1)	1.88 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=4.34\times 10^{-4}$ +48-42 $\alpha(\text{K})=1.663\times 10^{-5}$ 23; $\alpha(\text{L})=1.695\times 10^{-6}$ 24; $\alpha(\text{M})=2.63\times 10^{-7}$ 4 $\alpha(\text{N})=2.262\times 10^{-8}$ 32; $\alpha(\text{IPF})=0.001859$ 26
		5073.7 1	100 7	0.0	0 ⁺	E1	2.06 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=8.7\times 10^{-4}$ 6 $\alpha(\text{K})=1.442\times 10^{-5}$ 20; $\alpha(\text{L})=1.469\times 10^{-6}$ 21; $\alpha(\text{M})=2.283\times 10^{-7}$ 32 $\alpha(\text{N})=1.960\times 10^{-8}$ 27; $\alpha(\text{IPF})=0.002039$ 29
5122.19	1	5122.0 2	100	0.0	0 ⁺	D	If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.0047$ 11. If E1, $\text{B}(\text{E}1)(\text{W.u.})=8.0\times 10_5$ 19.
5128.59	1	5128.4 1	100	0.0	0 ⁺	D	If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.0065$ 11. If E1, $\text{B}(\text{E}1)(\text{W.u.})=0.000112$ 18.
5142.3	1	5142.1 7	100	0.0	0 ⁺	D	If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.0062$ 8. If E1, $\text{B}(\text{E}1)(\text{W.u.})=0.000106$ 13.
5195.00	1 ⁻	4635.1 3	67 6	559.103	2 ⁺	(E1)	1.91 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=6.7\times 10^{-4}$ 7 $\alpha(\text{K})=1.610\times 10^{-5}$ 23; $\alpha(\text{L})=1.641\times 10^{-6}$ 23; $\alpha(\text{M})=2.55\times 10^{-7}$ 4 $\alpha(\text{N})=2.190\times 10^{-8}$ 31; $\alpha(\text{IPF})=0.001897$ 27
		5194.5 3	100 7	0.0	0 ⁺	E1	2.09 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=7.1\times 10^{-4}$ +7-6 $\alpha(\text{K})=1.401\times 10^{-5}$ 20; $\alpha(\text{L})=1.427\times 10^{-6}$ 20; $\alpha(\text{M})=2.219\times 10^{-7}$ 31 $\alpha(\text{N})=1.905\times 10^{-8}$ 27; $\alpha(\text{IPF})=0.002074$ 29
5217.8	1 ⁻	5217.6 11	100	0.0	0 ⁺	E1	2.10 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=2.2\times 10^{-4}$ +6-4 $\alpha(\text{K})=1.394\times 10^{-5}$ 20; $\alpha(\text{L})=1.420\times 10^{-6}$ 20; $\alpha(\text{M})=2.207\times 10^{-7}$ 31 $\alpha(\text{N})=1.895\times 10^{-8}$ 27; $\alpha(\text{IPF})=0.002081$ 29
5239.6	1	4023.1 10	28 6	1216.154	2 ⁺		
		5239.7 12	100 18	0.0	0 ⁺	D	If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.012$ 4. If E1, $\text{B}(\text{E}1)(\text{W.u.})=0.00021$ 6.
5284.40	1	5284.2 3	100	0.0	0 ⁺	D	If M1, $\text{B}(\text{M}1)(\text{W.u.})=0.0178$ 13. If E1, $\text{B}(\text{E}1)(\text{W.u.})=0.000304$ 22.
5297.90	(1 ⁺)	5297.7 3	100	0.0	0 ⁺	(M1)	1.50 $\times 10^{-3}$ 2
							$\text{B}(\text{M}1)(\text{W.u.})=0.0108$ 6 $\alpha(\text{K})=1.788\times 10^{-5}$ 25; $\alpha(\text{L})=1.826\times 10^{-6}$ 26; $\alpha(\text{M})=2.84\times 10^{-7}$ 4 $\alpha(\text{N})=2.440\times 10^{-8}$ 34; $\alpha(\text{IPF})=0.001481$ 21
5298.60	1 ⁻	4175.0@ 12	3.9 9	1122.279	0 ⁺	(E1)	1.76 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=8.6\times 10^{-5}$ 20 $\alpha(\text{K})=1.834\times 10^{-5}$ 26; $\alpha(\text{L})=1.870\times 10^{-6}$ 26; $\alpha(\text{M})=2.91\times 10^{-7}$ 4 $\alpha(\text{N})=2.495\times 10^{-8}$ 35; $\alpha(\text{IPF})=0.001737$ 24
		4739.6@ 5	15.1 16	559.103	2 ⁺	(E1)	1.95 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=2.26\times 10^{-4}$ +28-26 $\alpha(\text{K})=1.567\times 10^{-5}$ 22; $\alpha(\text{L})=1.597\times 10^{-6}$ 22; $\alpha(\text{M})=2.482\times 10^{-7}$ 35 $\alpha(\text{N})=2.131\times 10^{-8}$ 30; $\alpha(\text{IPF})=0.001930$ 27
		5298.4 1	100 6	0.0	0 ⁺	E1	2.12 $\times 10^{-3}$ 3
							$\text{B}(\text{E}1)(\text{W.u.})=0.00108$ 7 $\alpha(\text{K})=1.368\times 10^{-5}$ 19; $\alpha(\text{L})=1.394\times 10^{-6}$ 20; $\alpha(\text{M})=2.166\times 10^{-7}$ 30 $\alpha(\text{N})=1.860\times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002102$ 29

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\dagger	Comments	
5324.18	1 ⁻	4766.9 10	67 10	559.103	2 ⁺	[E1]	1.96×10^{-3} 3	B(E1)(W.u.)= 4.5×10^{-4} 7 $\alpha(\text{K})=1.556 \times 10^{-5}$ 22; $\alpha(\text{L})=1.585 \times 10^{-6}$ 22; $\alpha(\text{M})=2.464 \times 10^{-7}$ 35 $\alpha(\text{N})=2.116 \times 10^{-8}$ 30; $\alpha(\text{IPF})=0.001938$ 27	
		5323.8 3	100 10	0.0	0 ⁺	E1	2.12×10^{-3} 3	B(E1)(W.u.)= 4.8×10^{-4} +7-6 $\alpha(\text{K})=1.360 \times 10^{-5}$ 19; $\alpha(\text{L})=1.386 \times 10^{-6}$ 19; $\alpha(\text{M})=2.154 \times 10^{-7}$ 30 $\alpha(\text{N})=1.849 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002109$ 30	
5346.94	1 ⁻	4131.5 9	38 6	1216.154	2 ⁺	(E1)	1.74×10^{-3} 2	B(E1)(W.u.)= 3.3×10^{-4} +7-6 $\alpha(\text{K})=1.858 \times 10^{-5}$ 26; $\alpha(\text{L})=1.895 \times 10^{-6}$ 27; $\alpha(\text{M})=2.94 \times 10^{-7}$ 4 $\alpha(\text{N})=2.528 \times 10^{-8}$ 35; $\alpha(\text{IPF})=0.001722$ 24	
		4788.0 3	43 6	559.103	2 ⁺	(E1)	1.96×10^{-3} 3	B(E1)(W.u.)= 2.40×10^{-4} +45-39 $\alpha(\text{K})=1.547 \times 10^{-5}$ 22; $\alpha(\text{L})=1.577 \times 10^{-6}$ 22; $\alpha(\text{M})=2.451 \times 10^{-7}$ 34 $\alpha(\text{N})=2.104 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001945$ 27	
		5346.0 4	100 9	0.0	0 ⁺	E1	2.13×10^{-3} 3	B(E1)(W.u.)= 4.0×10^{-4} +6-5 $\alpha(\text{K})=1.353 \times 10^{-5}$ 19; $\alpha(\text{L})=1.379 \times 10^{-6}$ 19; $\alpha(\text{M})=2.143 \times 10^{-7}$ 30 $\alpha(\text{N})=1.840 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002115$ 30	
5367.5	1	5367.3 13	100	0.0	0 ⁺	D		If M1, B(M1)(W.u.)=0.0032 8. If E1, B(E1)(W.u.)= $5.5 \times 10_5$ 13.	
5368.3	(11 ⁺)	681.4 962.0 1068.5		4687.3 4405.9 4299.5	(10) ⁺ (9 ⁺) 10 ⁺				
5375.45	1 ⁻	4816.1 2	100 8	559.103	2 ⁺	(E1)	1.97×10^{-3} 3	B(E1)(W.u.)=0.00129 +14-12 $\alpha(\text{K})=1.536 \times 10^{-5}$ 22; $\alpha(\text{L})=1.565 \times 10^{-6}$ 22; $\alpha(\text{M})=2.433 \times 10^{-7}$ 34 $\alpha(\text{N})=2.089 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001954$ 27	
		5375.6 4	83 6	0.0	0 ⁺	E1	2.14×10^{-3} 3	B(E1)(W.u.)= 7.7×10^{-4} +9-8 $\alpha(\text{K})=1.344 \times 10^{-5}$ 19; $\alpha(\text{L})=1.369 \times 10^{-6}$ 19; $\alpha(\text{M})=2.129 \times 10^{-7}$ 30 $\alpha(\text{N})=1.828 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002122$ 30	
5405.2	1 ⁻	5405.0 18	100	0.0	0 ⁺	E1	2.15×10^{-3} 3	B(E1)(W.u.)= 9.2×10^{-5} +40-22 $\alpha(\text{K})=1.336 \times 10^{-5}$ 19; $\alpha(\text{L})=1.361 \times 10^{-6}$ 19; $\alpha(\text{M})=2.115 \times 10^{-7}$ 30 $\alpha(\text{N})=1.816 \times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002130$ 30	
5411.33	1 ⁻	4852.0 3	100 9	559.103	2 ⁺	(E1)	1.98×10^{-3} 3	B(E1)(W.u.)=0.00168 +46-32 $\alpha(\text{K})=1.522 \times 10^{-5}$ 21; $\alpha(\text{L})=1.551 \times 10^{-6}$ 22; $\alpha(\text{M})=2.411 \times 10^{-7}$ 34 $\alpha(\text{N})=2.070 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001966$ 28	
		5412.4 14	28 7	0.0	0 ⁺	E1	2.15×10^{-3} 3	B(E1)(W.u.)= 3.4×10^{-4} +12-9 $\alpha(\text{K})=1.333 \times 10^{-5}$ 19; $\alpha(\text{L})=1.358 \times 10^{-6}$ 19; $\alpha(\text{M})=2.111 \times 10^{-7}$ 30 $\alpha(\text{N})=1.813 \times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002132$ 30	
5425.21	1 ⁻	4865.9 3	100 10	559.103	2 ⁺	(E1)	1.99×10^{-3} 3	B(E1)(W.u.)= 4.5×10^{-4} +7-6 $\alpha(\text{K})=1.517 \times 10^{-5}$ 21; $\alpha(\text{L})=1.546 \times 10^{-6}$ 22; $\alpha(\text{M})=2.403 \times 10^{-7}$ 34 $\alpha(\text{N})=2.063 \times 10^{-8}$ 29; $\alpha(\text{IPF})=0.001971$ 28	
		5425.1 5	100 10	0.0	0 ⁺	E1	2.15×10^{-3} 3	B(E1)(W.u.)= 3.27×10^{-4} +48-40	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	α^\dagger	Comments
5431.8	12 ⁺	1133.0 5	100	4299.5	10 ⁺	(E2)	0.000318 4	$\alpha(\text{K})=1.330\times 10^{-5}$ 19; $\alpha(\text{L})=1.354\times 10^{-6}$ 19; $\alpha(\text{M})=2.105\times 10^{-7}$ 29 $\alpha(\text{N})=1.808\times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002136$ 30 B(E2)(W.u.)= $8\times 10^1 +7-3$ $\alpha(\text{K})=0.000282$ 4; $\alpha(\text{L})=2.94\times 10^{-5}$ 4; $\alpha(\text{M})=4.57\times 10^{-6}$ 6 $\alpha(\text{N})=3.90\times 10^{-7}$ 5; $\alpha(\text{IPF})=1.96\times 10^{-6}$ 4
5551.8	1 ⁻	5551.6 15	100	0.0	0 ⁺	E1	2.19 $\times 10^{-3}$ 3	B(E1)(W.u.)= $2.3\times 10^{-4} +8-5$ $\alpha(\text{K})=1.294\times 10^{-5}$ 18; $\alpha(\text{L})=1.317\times 10^{-6}$ 18; $\alpha(\text{M})=2.048\times 10^{-7}$ 29 $\alpha(\text{N})=1.758\times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002171$ 30
5629.8	1 ⁻	5629.6 15	100	0.0	0 ⁺	E1	2.21 $\times 10^{-3}$ 3	B(E1)(W.u.)= $8.8\times 10^{-5} +42-22$ $\alpha(\text{K})=1.272\times 10^{-5}$ 18; $\alpha(\text{L})=1.296\times 10^{-6}$ 18; $\alpha(\text{M})=2.014\times 10^{-7}$ 28 $\alpha(\text{N})=1.729\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002193$ 31
5637.7	1 ⁻	5637.5 15	100	0.0	0 ⁺	E1	2.21 $\times 10^{-3}$ 3	B(E1)(W.u.)= $8.8\times 10^{-5} +44-22$ $\alpha(\text{K})=1.270\times 10^{-5}$ 18; $\alpha(\text{L})=1.293\times 10^{-6}$ 18; $\alpha(\text{M})=2.010\times 10^{-7}$ 28 $\alpha(\text{N})=1.726\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002196$ 31
5669.2	1 ⁻	5669.0 15	100	0.0	0 ⁺	E1	2.22 $\times 10^{-3}$ 3	B(E1)(W.u.)= $9\times 10^{-5} +5-3$ $\alpha(\text{K})=1.262\times 10^{-5}$ 18; $\alpha(\text{L})=1.285\times 10^{-6}$ 18; $\alpha(\text{M})=1.997\times 10^{-7}$ 28 $\alpha(\text{N})=1.715\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002205$ 31
5685.5	1 ⁻	5685.3 4	100	0.0	0 ⁺	E1	2.22 $\times 10^{-3}$ 3	B(E1)(W.u.)= $2.56\times 10^{-4} +25-21$ $\alpha(\text{K})=1.257\times 10^{-5}$ 18; $\alpha(\text{L})=1.280\times 10^{-6}$ 18; $\alpha(\text{M})=1.990\times 10^{-7}$ 28 $\alpha(\text{N})=1.709\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002209$ 31
5709.8	1 ⁻	5709.6 4	100	0.0	0 ⁺	E1	2.23 $\times 10^{-3}$ 3	B(E1)(W.u.)= $2.73\times 10^{-4} +29-23$ $\alpha(\text{K})=1.251\times 10^{-5}$ 18; $\alpha(\text{L})=1.274\times 10^{-6}$ 18; $\alpha(\text{M})=1.980\times 10^{-7}$ 28 $\alpha(\text{N})=1.700\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002216$ 31
5740.73	1 ⁻	5740.5 3	100	0.0	0 ⁺	E1	2.24 $\times 10^{-3}$ 3	B(E1)(W.u.)= $3.55\times 10^{-4} +35-29$ $\alpha(\text{K})=1.243\times 10^{-5}$ 17; $\alpha(\text{L})=1.266\times 10^{-6}$ 18; $\alpha(\text{M})=1.967\times 10^{-7}$ 28 $\alpha(\text{N})=1.689\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002224$ 31
5762.0	1 ⁻	5761.8 10	100	0.0	0 ⁺	E1	2.24 $\times 10^{-3}$ 3	B(E1)(W.u.)= $1.25\times 10^{-4} +34-23$ $\alpha(\text{K})=1.237\times 10^{-5}$ 17; $\alpha(\text{L})=1.260\times 10^{-6}$ 18; $\alpha(\text{M})=1.959\times 10^{-7}$ 27 $\alpha(\text{N})=1.682\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.002230$ 31
5773.3	1 ⁻	5773.1 10	100	0.0	0 ⁺	E1	2.25 $\times 10^{-3}$ 3	B(E1)(W.u.)= $1.09\times 10^{-4} +19-14$ $\alpha(\text{K})=1.235\times 10^{-5}$ 17; $\alpha(\text{L})=1.257\times 10^{-6}$ 18; $\alpha(\text{M})=1.954\times 10^{-7}$ 27 $\alpha(\text{N})=1.678\times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002233$ 31
5781.24	1 ⁻	5781.0 2	100	0.0	0 ⁺	E1	2.25 $\times 10^{-3}$ 3	B(E1)(W.u.)= $4.94\times 10^{-4} +39-34$ $\alpha(\text{K})=1.233\times 10^{-5}$ 17; $\alpha(\text{L})=1.255\times 10^{-6}$ 18; $\alpha(\text{M})=1.951\times 10^{-7}$ 27 $\alpha(\text{N})=1.675\times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002235$ 31
5796.7	(12 ⁺)	1109.6 1496.7		4687.3 (10) ⁺ 4299.5 10 ⁺				E_γ : 5783.3 3 in (γ, γ') .

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult.#	α^\ddagger	Comments	
5804.0	1 ⁻	5246.1 14	100 19	559.103	2 ⁺	(E1)	2.10×10^{-3} 3	B(E1)(W.u.)=5.7×10 ⁻⁴ +16-12 $\alpha(\text{K})=1.385 \times 10^{-5}$ 19; $\alpha(\text{L})=1.410 \times 10^{-6}$ 20; $\alpha(\text{M})=2.192 \times 10^{-7}$ 31 $\alpha(\text{N})=1.882 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002088$ 29	
		5803.4 7	64 11	0.0	0 ⁺	E1	2.25×10^{-3} 3	B(E1)(W.u.)=2.7×10 ⁻⁴ +9-6 $\alpha(\text{K})=1.227 \times 10^{-5}$ 17; $\alpha(\text{L})=1.249 \times 10^{-6}$ 17; $\alpha(\text{M})=1.942 \times 10^{-7}$ 27 $\alpha(\text{N})=1.668 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002241$ 31	
5813.9	1 ⁻	5813.7 5	100	0.0	0 ⁺	E1	2.26×10^{-3} 3	B(E1)(W.u.)=2.39×10 ⁻⁴ +27-22 $\alpha(\text{K})=1.224 \times 10^{-5}$ 17; $\alpha(\text{L})=1.247 \times 10^{-6}$ 17; $\alpha(\text{M})=1.938 \times 10^{-7}$ 27 $\alpha(\text{N})=1.664 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002243$ 31	
5842.31	1 ⁻	5283.8 & 10	25 8	559.103	2 ⁺	[E1]	2.11×10^{-3} 3	B(E1)(W.u.)=1.7×10 ⁻⁴ 5 $\alpha(\text{K})=1.373 \times 10^{-5}$ 19; $\alpha(\text{L})=1.398 \times 10^{-6}$ 20; $\alpha(\text{M})=2.173 \times 10^{-7}$ 30 $\alpha(\text{N})=1.866 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002098$ 29	
		5842.0 3	100 11	0.0	0 ⁺	E1	2.26×10^{-3} 3	B(E1)(W.u.)=4.9×10 ⁻⁴ +8-6 $\alpha(\text{K})=1.217 \times 10^{-5}$ 17; $\alpha(\text{L})=1.240 \times 10^{-6}$ 17; $\alpha(\text{M})=1.927 \times 10^{-7}$ 27 $\alpha(\text{N})=1.654 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002251$ 32	
5865.3	1 ⁻	5865.1 7	100	0.0	0 ⁺	E1	2.27×10^{-3} 3	B(E1)(W.u.)=2.45×10 ⁻⁴ +40-31 $\alpha(\text{K})=1.212 \times 10^{-5}$ 17; $\alpha(\text{L})=1.234 \times 10^{-6}$ 17; $\alpha(\text{M})=1.918 \times 10^{-7}$ 27 $\alpha(\text{N})=1.647 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002256$ 32	
5879.6	1 ⁻	5879.4 6	100	0.0	0 ⁺	E1	2.27×10^{-3} 3	B(E1)(W.u.)=1.25×10 ⁻⁴ +18-14 $\alpha(\text{K})=1.208 \times 10^{-5}$ 17; $\alpha(\text{L})=1.230 \times 10^{-6}$ 17; $\alpha(\text{M})=1.912 \times 10^{-7}$ 27 $\alpha(\text{N})=1.642 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002260$ 32	
5892.30	1 ⁻	5333.1 4	81 11	559.103	2 ⁺	(E1)	2.13×10^{-3} 3	B(E1)(W.u.)=3.3×10 ⁻⁴ +7-5 $\alpha(\text{K})=1.357 \times 10^{-5}$ 19; $\alpha(\text{L})=1.383 \times 10^{-6}$ 19; $\alpha(\text{M})=2.149 \times 10^{-7}$ 30 $\alpha(\text{N})=1.845 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.002111$ 30	
		5891.9 5	100 11	0.0	0 ⁺	E1	2.28×10^{-3} 3	B(E1)(W.u.)=3.0×10 ⁻⁴ +6-5 $\alpha(\text{K})=1.205 \times 10^{-5}$ 17; $\alpha(\text{L})=1.227 \times 10^{-6}$ 17; $\alpha(\text{M})=1.907 \times 10^{-7}$ 27 $\alpha(\text{N})=1.638 \times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002263$ 32	
5996.1	1 ⁻	5435.2 11	100 22	559.103	2 ⁺	(E1)	2.15×10^{-3} 3	B(E1)(W.u.)=2.6×10 ⁻⁴ +9-6 $\alpha(\text{K})=1.327 \times 10^{-5}$ 19; $\alpha(\text{L})=1.351 \times 10^{-6}$ 19; $\alpha(\text{M})=2.101 \times 10^{-7}$ 29 $\alpha(\text{N})=1.804 \times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002139$ 30	
		5998.4 14	69 19	0.0	0 ⁺	E1	2.30×10^{-3} 3	E_γ : 5438.0 4 in (γ, γ') due to very different branching ratio. B(E1)(W.u.)=1.3×10 ⁻⁴ +5-4 $\alpha(\text{K})=1.180 \times 10^{-5}$ 17; $\alpha(\text{L})=1.201 \times 10^{-6}$ 17; $\alpha(\text{M})=1.867 \times 10^{-7}$ 26 $\alpha(\text{N})=1.603 \times 10^{-8}$ 22; $\alpha(\text{IPF})=0.002289$ 32	
6035.4	1 ⁻	5474.6 & 13	52 11	559.103	2 ⁺	[E1]	2.16×10^{-3} 3	I_γ : 21 5 IN (γ, γ'). B(E1)(W.u.)=3.0×10 ⁻⁴ +8-6 $\alpha(\text{K})=1.315 \times 10^{-5}$ 18; $\alpha(\text{L})=1.340 \times 10^{-6}$ 19; $\alpha(\text{M})=2.082 \times 10^{-7}$ 29 $\alpha(\text{N})=1.788 \times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002149$ 30	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	α^\dagger	Comments
6035.4	1 ⁻	6035.4 5	100 12	0.0	0 ⁺	E1		B(E1)(W.u.)=4.3×10 ⁻⁴ +9-7
6099.3	1 ⁻	5540.2 7	54 6	559.103	2 ⁺	(E1)	2.18×10 ⁻³ 3	B(E1)(W.u.)=2.8×10 ⁻⁴ +7-5 $\alpha(\text{K})=1.297\times 10^{-5}$ 18; $\alpha(\text{L})=1.321\times 10^{-6}$ 18; $\alpha(\text{M})=2.053\times 10^{-7}$ 29 $\alpha(\text{N})=1.763\times 10^{-8}$ 25; $\alpha(\text{IPF})=0.002168$ 30
		6098.9 5	100 11	0.0	0 ⁺	E1		B(E1)(W.u.)=3.9×10 ⁻⁴ +9-6
6131.5	1 ⁻	6131.2 6	100	0.0	0 ⁺	E1		B(E1)(W.u.)=1.42×10 ⁻⁴ +27-19
6156.6	1 ⁻	6156.3 14	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.9×10 ⁻⁵ +7-5
6165.1	1 ⁻	6164.8 11	100	0.0	0 ⁺	E1		B(E1)(W.u.)=7.7×10 ⁻⁵ +30-17
6196.2	1 ⁻	6195.9 11	100	0.0	0 ⁺	E1		B(E1)(W.u.)=1.59×10 ⁻⁴ +24-18
6208.7	1 ⁻	6208.4 15	100	0.0	0 ⁺	E1		B(E1)(W.u.)=3.2×10 ⁻⁴ +8-5
6242.7	1 ⁻	6242.4 6	100	0.0	0 ⁺	E1		B(E1)(W.u.)=6.0×10 ⁻⁴ +41-18 E_γ : 6247.4 9 in (γ, γ').
6250.7	1 ⁻	6250.4 5	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.76×10 ⁻⁴ +47-34 E_γ : 6254.0 9 in (γ, γ').
6297.9	1 ⁻	6297.6 14	100	0.0	0 ⁺	E1		B(E1)(W.u.)=1.51×10 ⁻⁴ +27-20
6315.9	1 ⁻	6315.6 4	100	0.0	0 ⁺	E1		B(E1)(W.u.)=4.8×10 ⁻⁴ +7-6
6336.8	1 ⁻	6336.5 20	100	0.0	0 ⁺	E1		B(E1)(W.u.)=3.4×10 ⁻⁴ +30-12
6342.64	1 ⁻	5783.3 & 3	100 14	559.103	2 ⁺	[E1]	2.25×10 ⁻³ 3	B(E1)(W.u.)=0.0054 +19-12 $\alpha(\text{K})=1.232\times 10^{-5}$ 17; $\alpha(\text{L})=1.255\times 10^{-6}$ 18; $\alpha(\text{M})=1.950\times 10^{-7}$ 27 $\alpha(\text{N})=1.674\times 10^{-8}$ 23; $\alpha(\text{IPF})=0.002236$ 31
		6342.3 11	30 7	0.0	0 ⁺	E1		B(E1)(W.u.)=0.00122 +50-34
6387.5	1 ⁻	6387.2 14	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.16×10 ⁻⁴ +38-28
6438.1	1	6437.8 19	100	0.0	0 ⁺	D		If M1, B(M1)(W.u.)=0.0098 23. If E1, B(E1)(W.u.)=0.00017 4.
6449.0	1 ⁻	6448.7 20	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.31×10 ⁻⁴ +43-33
6497.7	1 ⁻	6497.4 6	100	0.0	0 ⁺	E1		B(E1)(W.u.)=3.8×10 ⁻⁴ +23-11
6500.8	(13 ⁺)	1069.3		5431.8	12 ⁺			
		1132.0		5368.3	(11 ⁺)			
6532.7	1 ⁻	6532.4 4	100	0.0	0 ⁺	E1		B(E1)(W.u.)=4.43×10 ⁻⁴ +45-38
6551.00	1 ⁺	6550.7 3	100	0.0	0 ⁺	M1		B(M1)(W.u.)=0.0071 +15-11
6562.9	1 ⁻	6562.6 9	100	0.0	0 ⁺	E1		B(E1)(W.u.)=1.74×10 ⁻⁴ 6
6570.4	1 ⁻	6570.1 9	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.71×10 ⁻⁴ +38-31
6596.2	1 ⁻	6595.9 7	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.39×10 ⁻⁴ +35-27
6608.5	1 ⁻	6608.2 9	100	0.0	0 ⁺	E1		B(E1)(W.u.)=2.18×10 ⁻⁴ +33-26
6631.8	1 ⁻	6071.8 8	40 15	559.103	2 ⁺	(E1)		B(E1)(W.u.)=3.5×10 ⁻⁴ +15-12
		6632.9 12	100 23	0.0	0 ⁺	E1		B(E1)(W.u.)=6.6×10 ⁻⁴ +20-14 E_γ : 6630.8 4 in (γ, γ').

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)							
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	Comments
6641.3	1 ⁻	6641.0 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.3×10^{-4} +7-4
6653.7	1 ⁻	6653.4 14	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 3.9×10^{-4} +11-7
6680.0	1 ⁻	6679.7 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.07×10^{-4} +26-22
6691.5	1 ⁻	6691.2 8	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.27×10^{-4} +24-18
6700.3	1 ⁻	6700.0 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.5×10^{-4} +6-3
6709.0	1 ⁻	6708.7 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.4×10^{-4} +5-3
6736.2	1 ⁻	6735.9 15	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.4×10^{-4} +5-3
6743.31	1 ⁻	6182.8 7	30 5	559.103	2 ⁺	(E1)	B(E1)(W.u.)= 3.3×10^{-4} +7-6
		6743.2 3	100 8	0.0	0 ⁺	E1	B(E1)(W.u.)= 8.5×10^{-4} +13-10
6749.2	1 ⁻	6190.0 6	52 13	559.103	2 ⁺	(E1)	B(E1)(W.u.)= 4.1×10^{-4} +12-10
		6748.7 5	100 18	0.0	0 ⁺	E1	B(E1)(W.u.)= 6.1×10^{-4} +13-11
6751.5	(14 ⁺)	1319.8		5431.8	12 ⁺		
6813.9	1 ⁻	6813.6 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 7.5×10^{-5} +43-21
6830.2	1 ⁻	6829.9 15	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.43×10^{-4} +39-26
6882.7	1 ⁻	6323.4 6	86 24	559.103	2 ⁺	(E1)	B(E1)(W.u.)= 4.5×10^{-4} +12-11
		6881.9 14	100 14	0.0	0 ⁺	E1	B(E1)(W.u.)= 4.1×10^{-4} +12-8
6908.3	1 ⁻	6908.0 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 7.6×10^{-5} +27-16
6913.3	1 ⁺	6913.0 17	100	0.0	0 ⁺	M1	B(M1)(W.u.)=0.0048 +19-11
6922.2	1 ⁻	6921.9 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.0×10^{-5} +32-18
6970.3	1 ⁻	6970.0 5	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.8×10^{-4} +8-5
		E_γ : 6973.0 8 in (γ, γ') .					
6992.9	1 ⁻	6992.5 5	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 3.3×10^{-4} +6-5
7018.1	1 ⁻	7017.7 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.0×10^{-4} +8-3
7025.1	1 ⁺	7024.7 20	100	0.0	0 ⁺	M1	B(M1)(W.u.)=0.0053 +26-14
7047.4	1 ⁺	7047.0 15	100	0.0	0 ⁺	M1	B(M1)(W.u.)=0.0045 +25-12
7053.1	1 ⁻	7052.7 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 8.6×10^{-5} +37-20
7084.5	(14 ⁺)	1287.5		5796.7	(12 ⁺)		
		1653.0		5431.8	12 ⁺		
7093.1	1 ⁻	7092.7 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.4×10^{-5} +34-21
7101.1	1 ⁻	7100.7 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.2×10^{-5} +40-22
7110.1	1 ⁺	7109.7 19	100	0.0	0 ⁺	M1	B(M1)(W.u.)=0.0061 +26-14
7115.5	1 ⁻	6557.2 16	100 37	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 2.4×10^{-4} +15-9
		7113.6 19	96 35	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.8×10^{-4} +11-6
7128.4	1 ⁻	6570.6 19	30 22	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 3.8×10^{-4} +31-19
		7127.3 13	100 30	0.0	0 ⁺	E1	B(E1)(W.u.)=0.00100 +37-28
7156.0	1 ⁻	7155.6 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.4×10^{-4} +5-3
7168.1	1 ⁻	7167.7 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 8.7×10^{-5} +36-20
7195.6	1 ⁻	7195.2 14	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.6×10^{-4} +7-4

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)							Comments
$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult. #	
7225.6	1 ⁻	7225.2 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.7×10^{-4} +6-4
7241.6	1 ⁻	7241.2 7	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.21×10^{-4} +49-34
7292.8	1 ⁻	7292.4 15	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.4×10^{-4} +8-5
7324.6	1 ⁻	7324.2 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.16×10^{-4} +47-26
7335.0	1 ⁻	7334.6 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.3×10^{-5} +44-23
7342.2	1 ⁻	7341.8 14	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.1×10^{-4} +7-4
7362.2	1 ⁻	7361.8 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 7.9×10^{-5} +37-20
7392.6	1 ⁻	7392.2 8	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 7.2×10^{-5} +31-17
7406.0	1 ⁻	6846.0 17	45 29	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 1.5×10^{-4} +18-8
		7406.0 15	100 38	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.7×10^{-4} +23-11
7427.1	1 ⁻	7426.7 14	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.2×10^{-4} +8-5
7455.5	1 ⁻	7455.1 13	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.3×10^{-4} +12-6
7464.9	1 ⁻	6905.8 21	82 35	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 2.9×10^{-4} +18-11
		7464.3 18	100 36	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.8×10^{-4} +16-10
7508.4	1 ⁻	7508.0 8	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.23×10^{-4} +32-25
7522.7	1 ⁻	6963.9 7	56 12	559.103	2 ⁺	(E1)	B(E1)(W.u.)= 3.4×10^{-4} +10-8
		7521.7 7	100 19	0.0	0 ⁺	E1	B(E1)(W.u.)= 4.8×10^{-4} +12-9
7546.9	1 ⁻	7546.5 6	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 5.4×10^{-4} +5-4
7580.5	1 ⁻	7580.1 16	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.04×10^{-4} +41-23
7617.2	1 ⁻	7616.8 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.55×10^{-4} +40-27
7627.8	1 ⁻	7627.4 15	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.1×10^{-4} +5-3
7643.3	1 ⁻	7642.9 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.13×10^{-4} +39-23
7652.9	1 ⁻	7652.5 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.05×10^{-4} +49-34
7658.71	1 ⁻	7658.3 2	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.31×10^{-4} +24-18
7698.3	1 ⁻	7137.0 & 20	54 22	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 3.8×10^{-4} +20-14
		7698.2 9	100 25	0.0	0 ⁺	E1	B(E1)(W.u.)= 5.5×10^{-4} +25-15
7729.7	1 ⁻	7729.3 16	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.2×10^{-4} +6-4
7781.6	1 ⁻	7781.2 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.2×10^{-4} +6-3
7817.5	1 ⁻	7817.1 10	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 8.1×10^{-5} +44-22
7830.0	1 ⁻	7829.6 9	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9×10^{-5} +6-3
7846.9	(15 ⁺)	1095.5		6751.5	(14 ⁺)		
		1346.0		6500.8	(13 ⁺)		
7866.1	1 ⁻	7865.7 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.3×10^{-5} +43-23
7890.9	1 ⁻	7890.5 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 9.8×10^{-5} +44-25
7920.1	1 ⁻	7919.7 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.5×10^{-4} +7-4
7927.6	1 ⁻	7927.2 17	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.4×10^{-4} +7-4
7952.1	1 ⁻	7951.6 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.1×10^{-4} +6-3
7960.4	1 ⁻	7959.9 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.3×10^{-4} +6-3

Adopted Levels, Gammas (continued) $\gamma(^{76}\text{Se})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^{\ddagger}	I_γ^{\ddagger}	E_f	J_f^π	Mult.#	Comments
7979.0	1 ⁻	7978.5 8	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.5×10^{-4} +6-4
8017.9	1 ⁻	8017.4 23	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.1×10^{-4} +5-3
8062.5	1 ⁻	8062.0 22	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.3×10^{-4} +6-3
8082.7	1 ⁻	7521.3 25	100 58	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 2.1×10^{-4} +14-9
		8084.2 26	85 46	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.4×10^{-4} +11-7
8107.3	1 ⁻	8106.8 22	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.2×10^{-4} +6-3
8132.1	1 ⁻	8131.6 22	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.23×10^{-4} +50-29
8154.9	1 ⁻	8154.4 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.07×10^{-4} +42-25
8170.1	1 ⁻	8169.6 22	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.15×10^{-4} +45-26
8198.0	1 ⁻	6982.8 15	92 22	1216.154	2 ⁺	(E1)	B(E1)(W.u.)= 7.0×10^{-4} +19-15
		8196.5 13	100 15	0.0	0 ⁺	E1	B(E1)(W.u.)= 4.7×10^{-4} +13-9
8210.5	1 ⁻	8210.0 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.7×10^{-4} +6-4
8222.5	1 ⁻	8222.0 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.7×10^{-4} +9-6
8251.9	1 ⁻	8251.4 23	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 5.6×10^{-5} +37-17
8268.5	(16 ⁺)	1517.0		6751.5	(14 ⁺)		
8288.5	1 ⁻	8288.0 23	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.8×10^{-4} +6-4
8316.7	1 ⁻	8316.2 22	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.1×10^{-4} +6-3
8340.7	1 ⁻	8340.2 10	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.5×10^{-4} +7-3
8394.9	1 ⁻	8394.4 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.55×10^{-4} +42-31
8453.5	1 ⁻	8453.0 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.2×10^{-4} +7-5
8486.5	1 ⁻	8486.0 18	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 6.8×10^{-4} +23-14
8528.1	1 ⁻	7970.8 6	100 28	559.103	2 ⁺	(E1)	B(E1)(W.u.)= 7.9×10^{-4} +25-19
		8526.0 5	97 22	0.0	0 ⁺	E1	B(E1)(W.u.)= 6.2×10^{-4} +22-15
8539.8	1 ⁻	7979.7 13	100 29	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 4.9×10^{-4} +15-12
		8540.4 20	61 24	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.4×10^{-4} +10-8
8571.7	1 ⁻	8571.2 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 3.5×10^{-4} +15-8
8573.8	(16 ⁺)	1489.3		7084.5	(14 ⁺)		
8590.1	1 ⁻	8589.6 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.6×10^{-4} +14-7
8654.9	1 ⁻	8654.4 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.9×10^{-4} +13-7
8709.9	1 ⁻	8709.4 13	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 3.4×10^{-4} +7-5
8719.5	1 ⁻	8719.0 21	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.9×10^{-4} +10-5
8770.9	1 ⁻	8770.4 23	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.9×10^{-4} +14-7
8843.4	1 ⁻	8283.3 20	47 29	559.103	2 ⁺	[E1]	B(E1)(W.u.)= 2.6×10^{-4} +28-13
		8843.2 18	100 38	0.0	0 ⁺	E1	B(E1)(W.u.)= 4.5×10^{-4} +40-18
8864.8	1 ⁻	8864.2 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 1.9×10^{-4} +9-5
8890.8	1 ⁻	8890.2 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.6×10^{-4} +10-6
8918.8	1 ⁻	8918.2 19	100	0.0	0 ⁺	E1	B(E1)(W.u.)= 2.5×10^{-4} +10-6

E_γ : not used in the fitting procedure due to its poor fit. Level-energy difference=7967.4.

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{Se})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult. [#]	Comments
8935.6	1 ⁻	8935.0 20	100	0.0	0 ⁺	E1	B(E1)(W.u.)=2.0×10 ⁻⁴ +9-5
9394.7	(17 ⁺)	1547.8		7846.9	(15 ⁺)		
9963.8	(18 ⁺)	1695.3		8268.5	(16 ⁺)		
11147.1	(19 ⁺)	1752.4		9394.7	(17 ⁺)		
(11154.19)	2 ⁺ ,3 ⁺	8284.0 5	4.1 3	2869.34	(1 ⁺ ,2 ⁺)		
		8293.2 5	3.8 3	2859.781	4 ⁻		
		8336.5 5	8.0 9	2817.24	(2 ⁺)		
		8341.8 5	8.1 9	2812.130	(3 ⁺)		
		8483.7 4	11.2 6	2669.904	2 ⁻		
		8639.6 10	0.61 11	2514.681	2 ⁺		
		8724.4 5	100 5	2429.131	3 ⁻		
		9027.4 13	0.40 10	2127.224	(2) ⁺		
		9127.3 7	2.45 16	2026.020	4 ⁺		
		9365.9 9	2.07 14	1787.655	2 ⁺		
		9464.9 9	2.06 14	1688.971	3 ⁺		
		9937.5 14	4.7 4	1216.154	2 ⁺		
		10031.5 16	1.22 10	1122.279	0 ⁺		
		10594.5 25	16.0 9	559.103	2 ⁺		
		11153.0 40	1.01 11	0.0	0 ⁺		
11774.8	(20 ⁺)	1810.9		9963.8	(18 ⁺)		
13681.3	(22 ⁺)	1906.5		11774.8	(20 ⁺)		

[†] [Additional information 4.](#)

[‡] Weighted average of available values from various γ -ray studies.

[#] From $\gamma(\theta)$, $\gamma\gamma(\theta)$, $\gamma(\text{lin pol})$ in $(\alpha,2n\gamma)$, $^{76}\text{As } \beta^-$ and some data in $^{76}\text{Br } \varepsilon$ decay, unless otherwise noted.

@ The γ from (γ,γ') ; not given in $(\text{pol } \gamma,\gamma')$.

& The γ from $(\text{pol } \gamma,\gamma')$; not given in (γ,γ') .

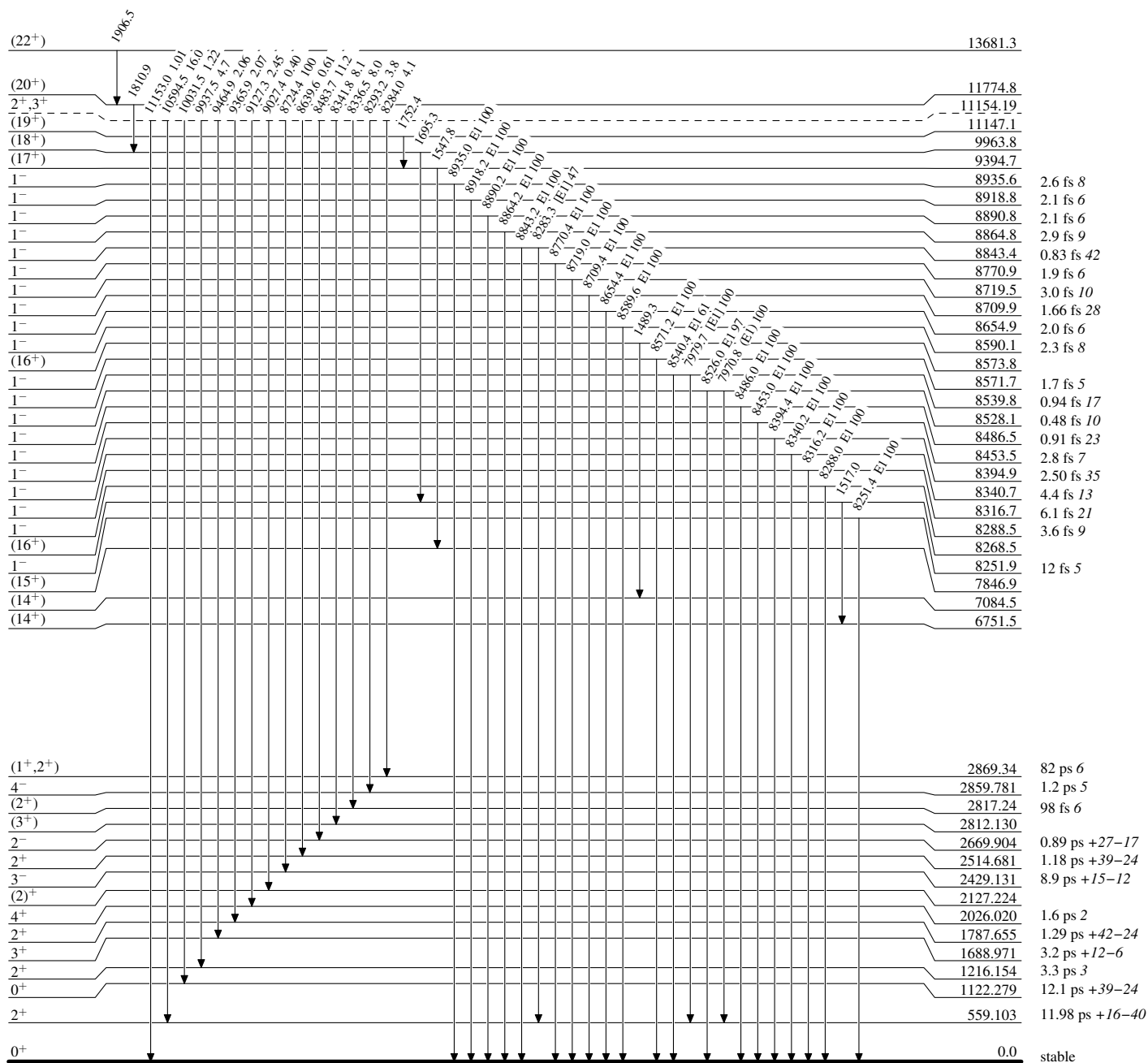
^a Multiply placed.

^b Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

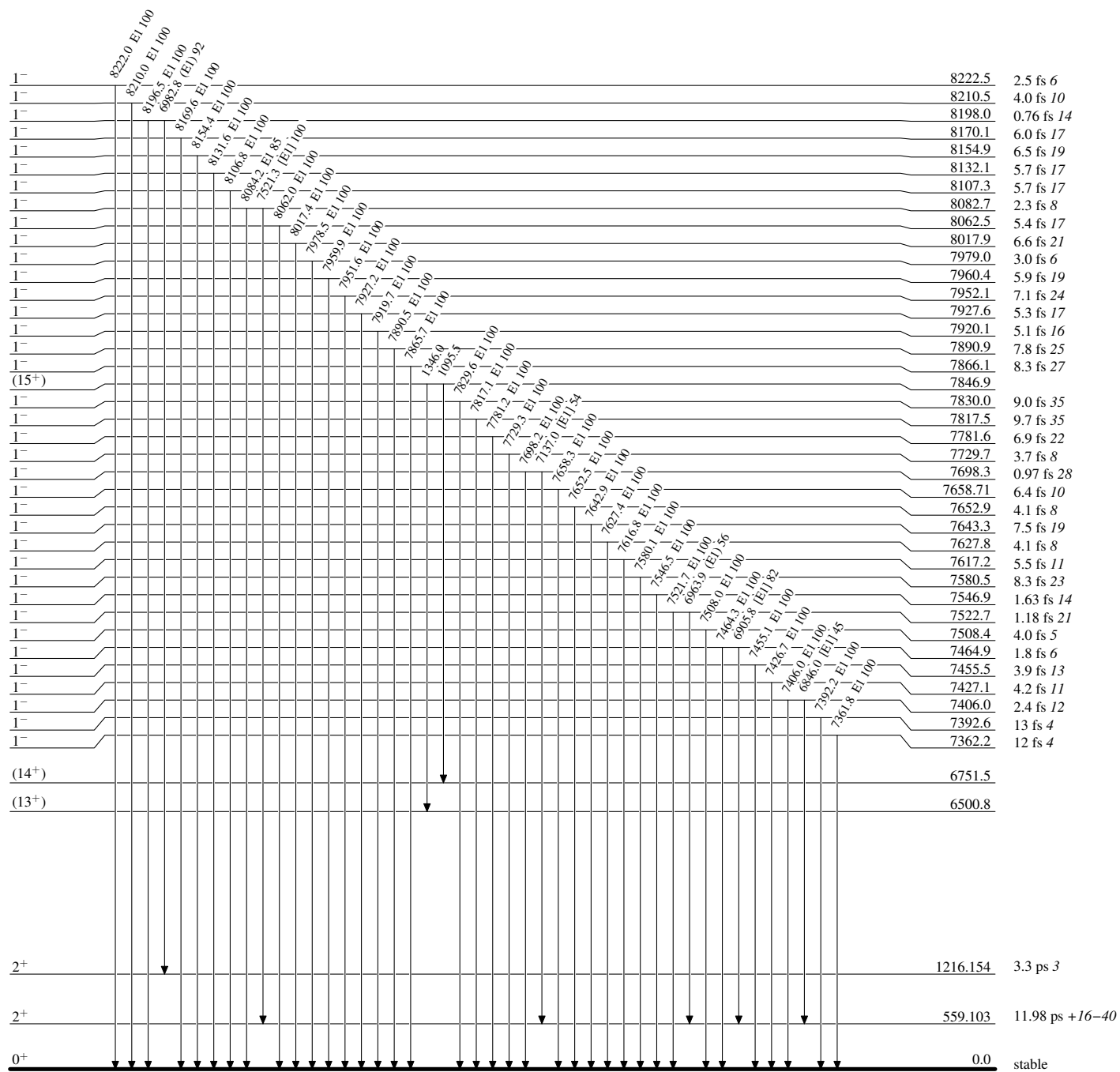
Level Scheme

Intensities: Relative photon branching from each level



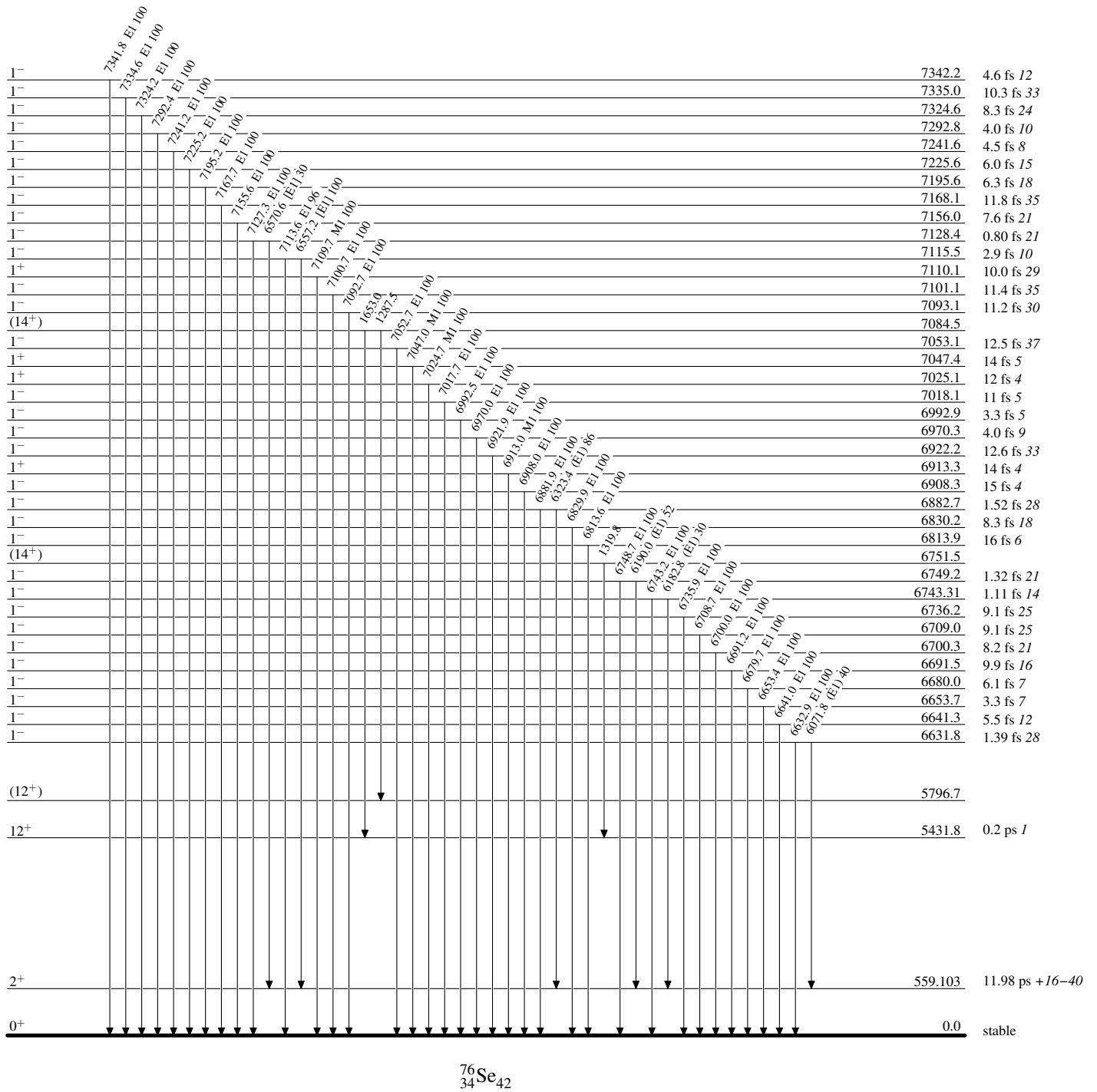
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{76}_{34}\text{Se}_{42}$

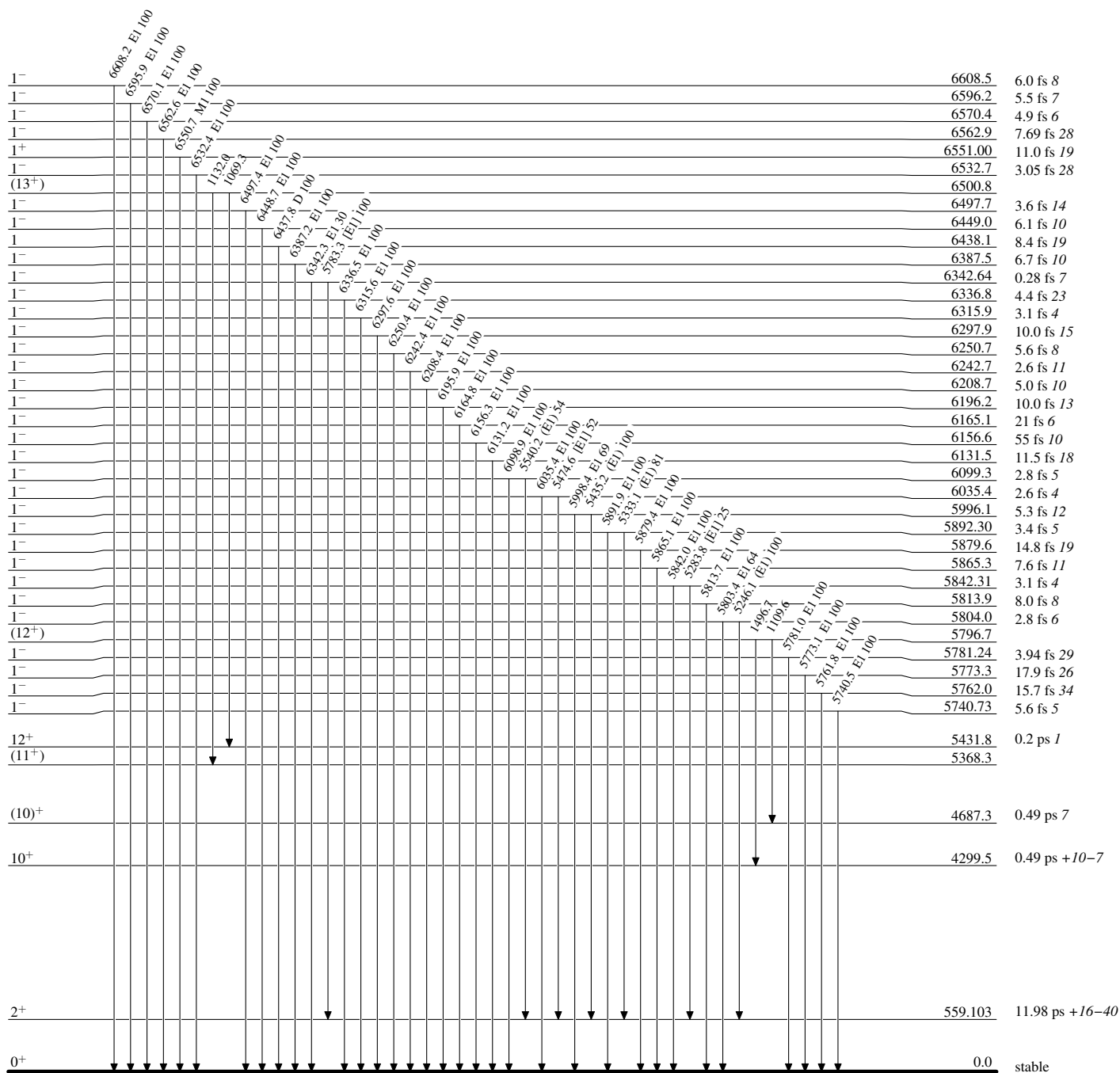
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



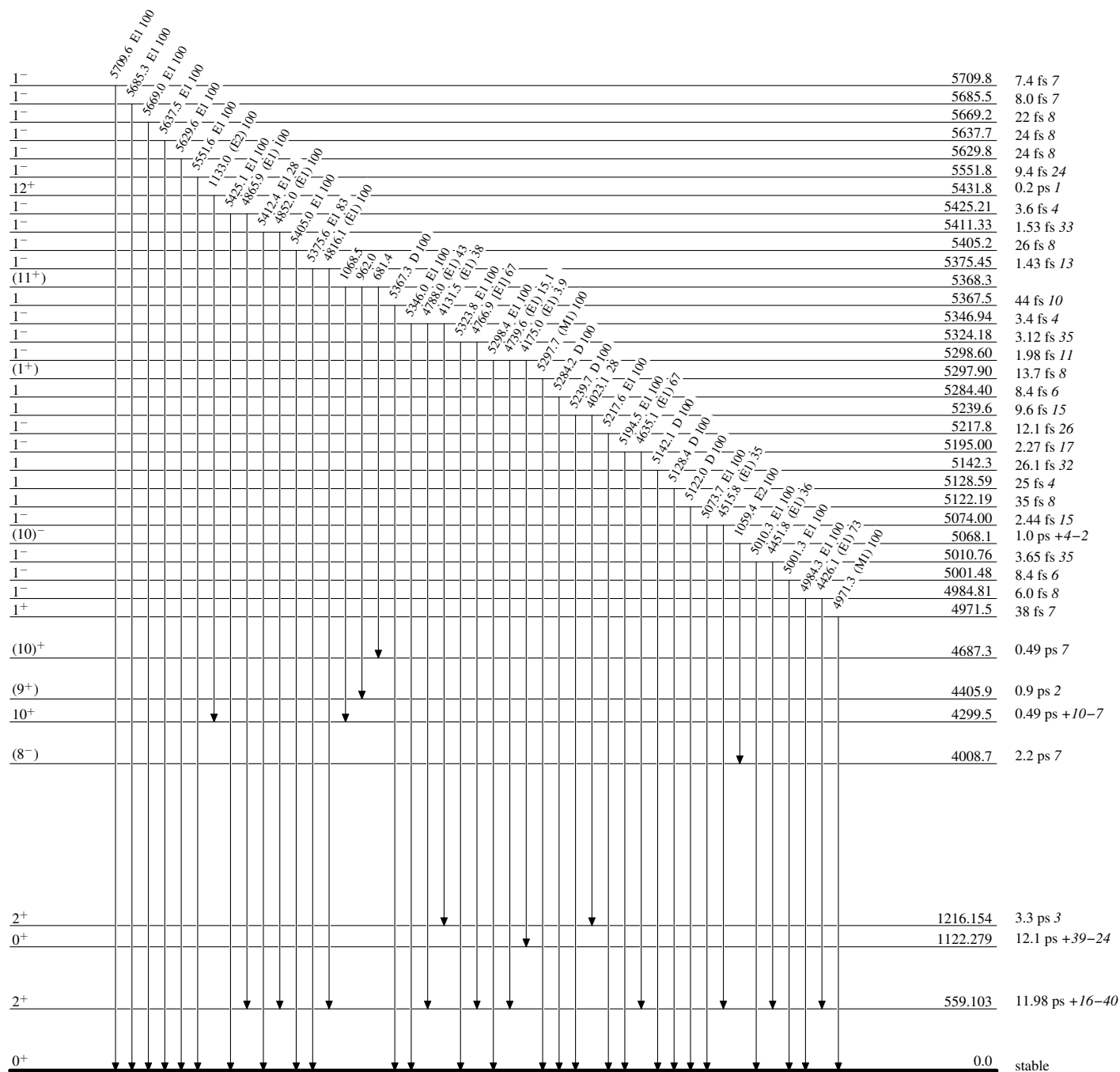
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



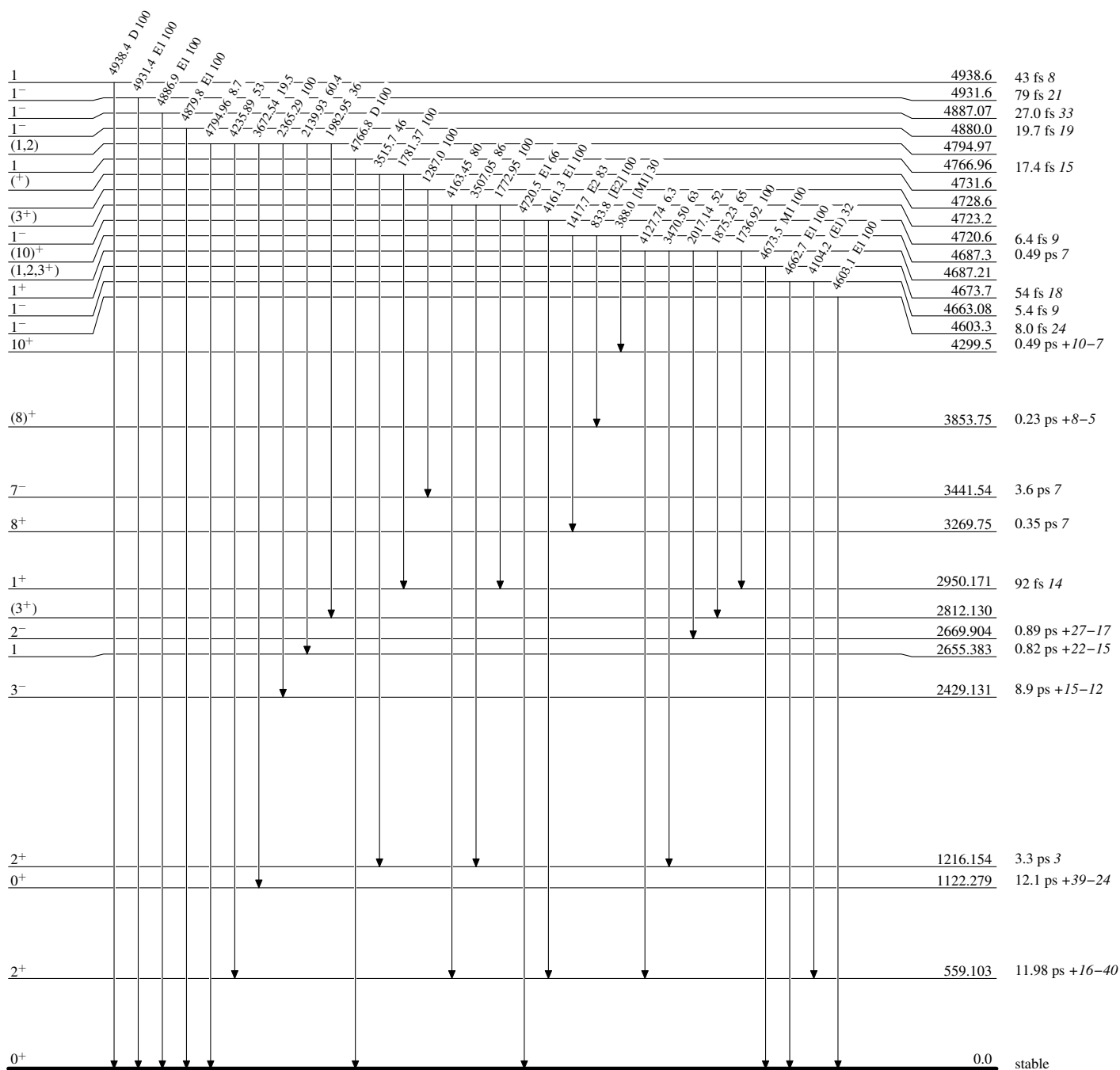
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{76}_{34}\text{Se}_{42}$

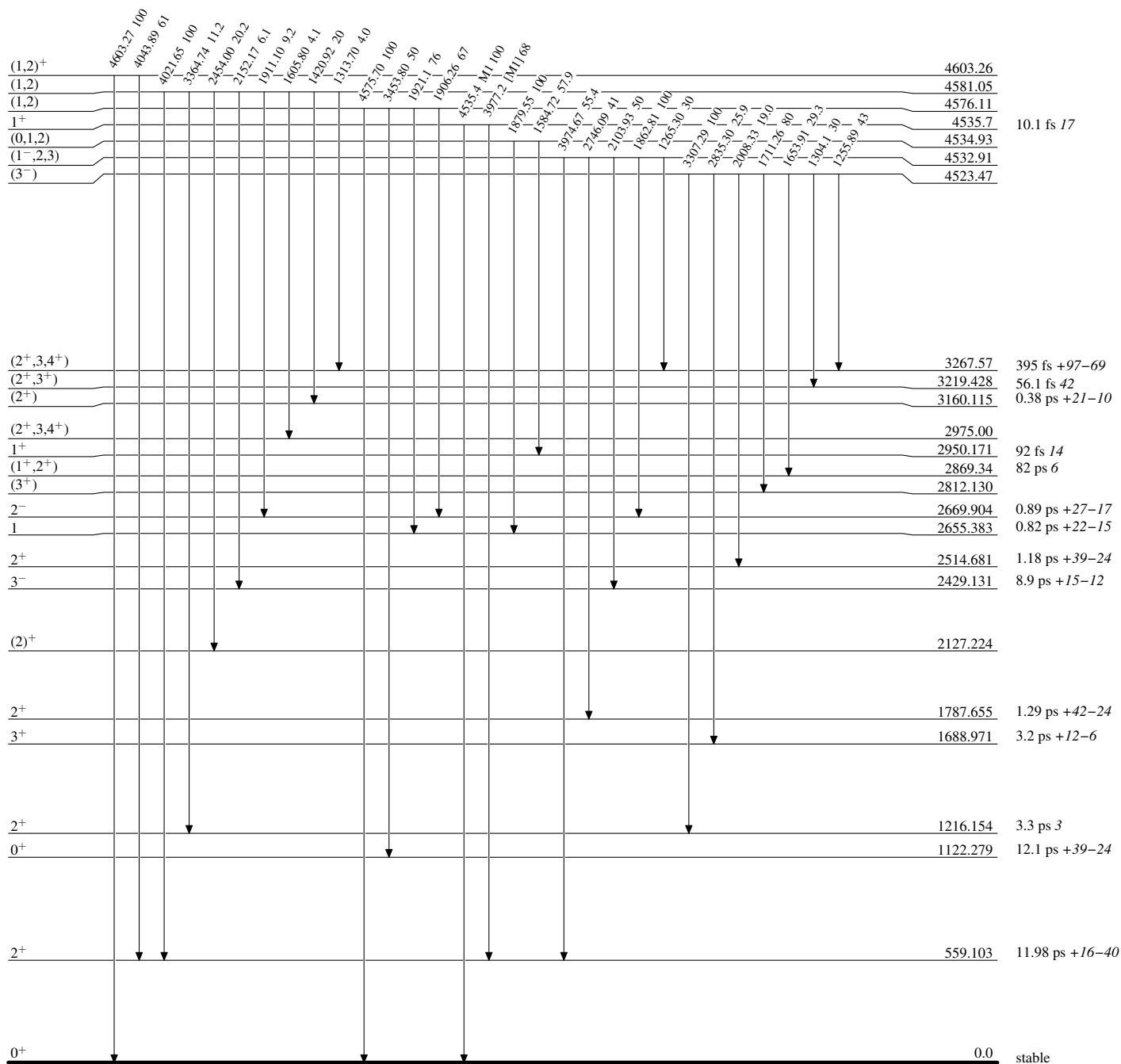
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



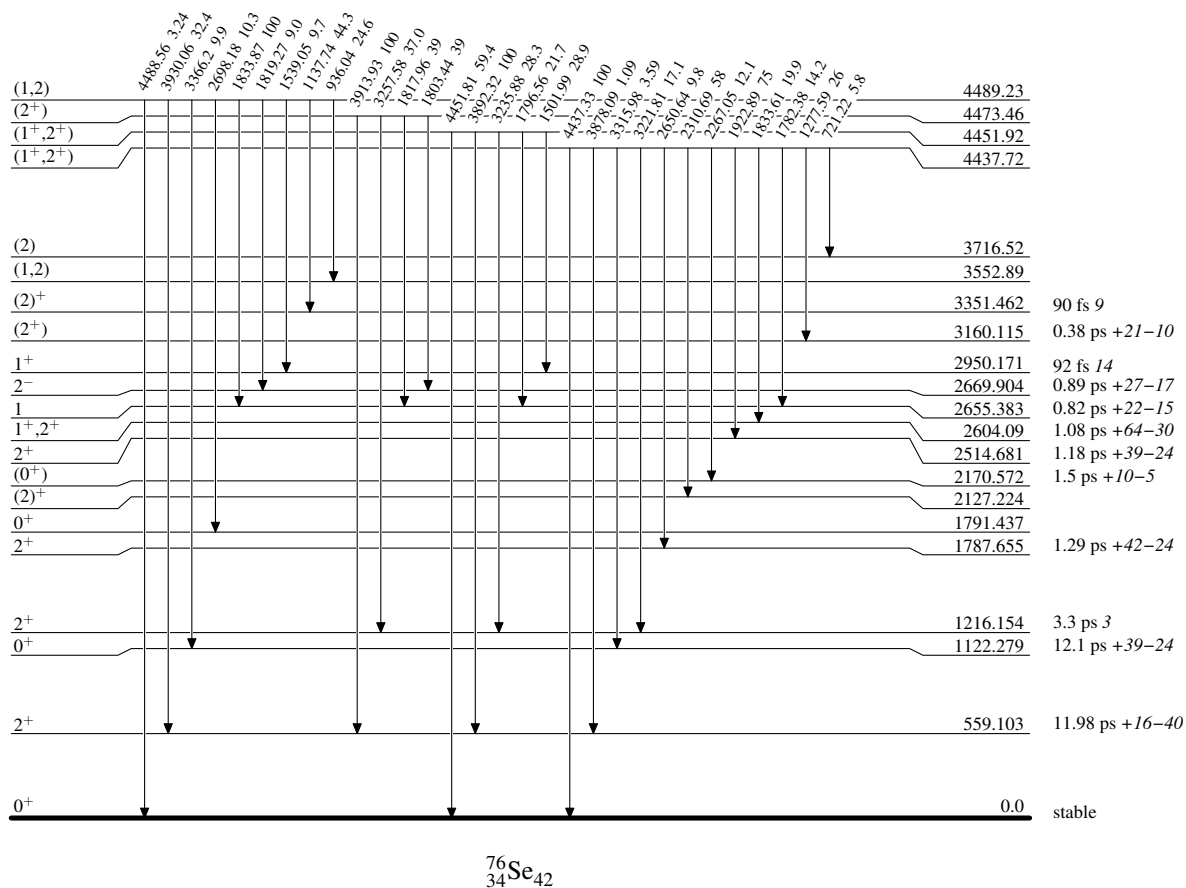
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



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

Intensities: Relative photon branching from each level

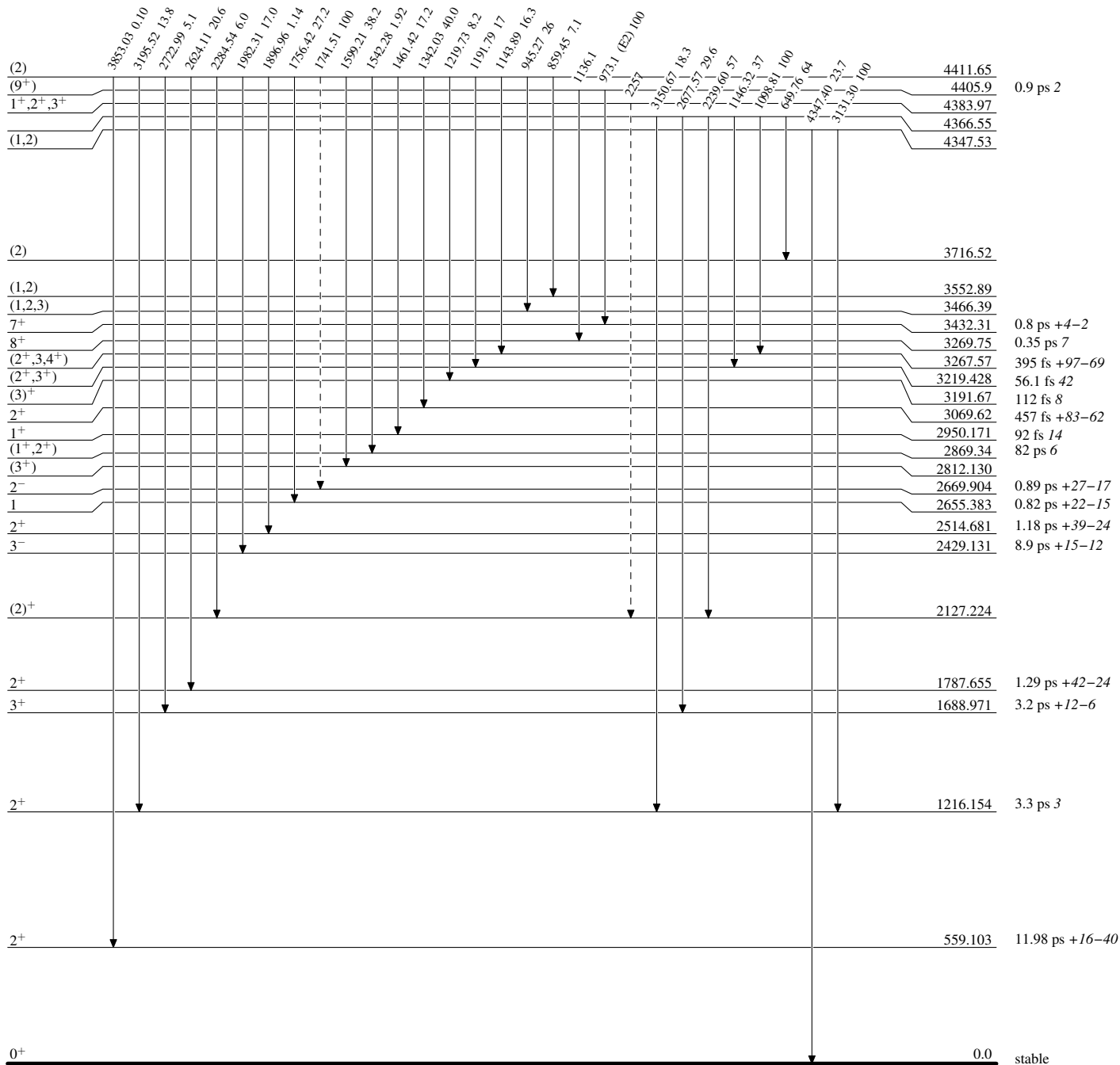


Adopted Levels, Gammas

Legend

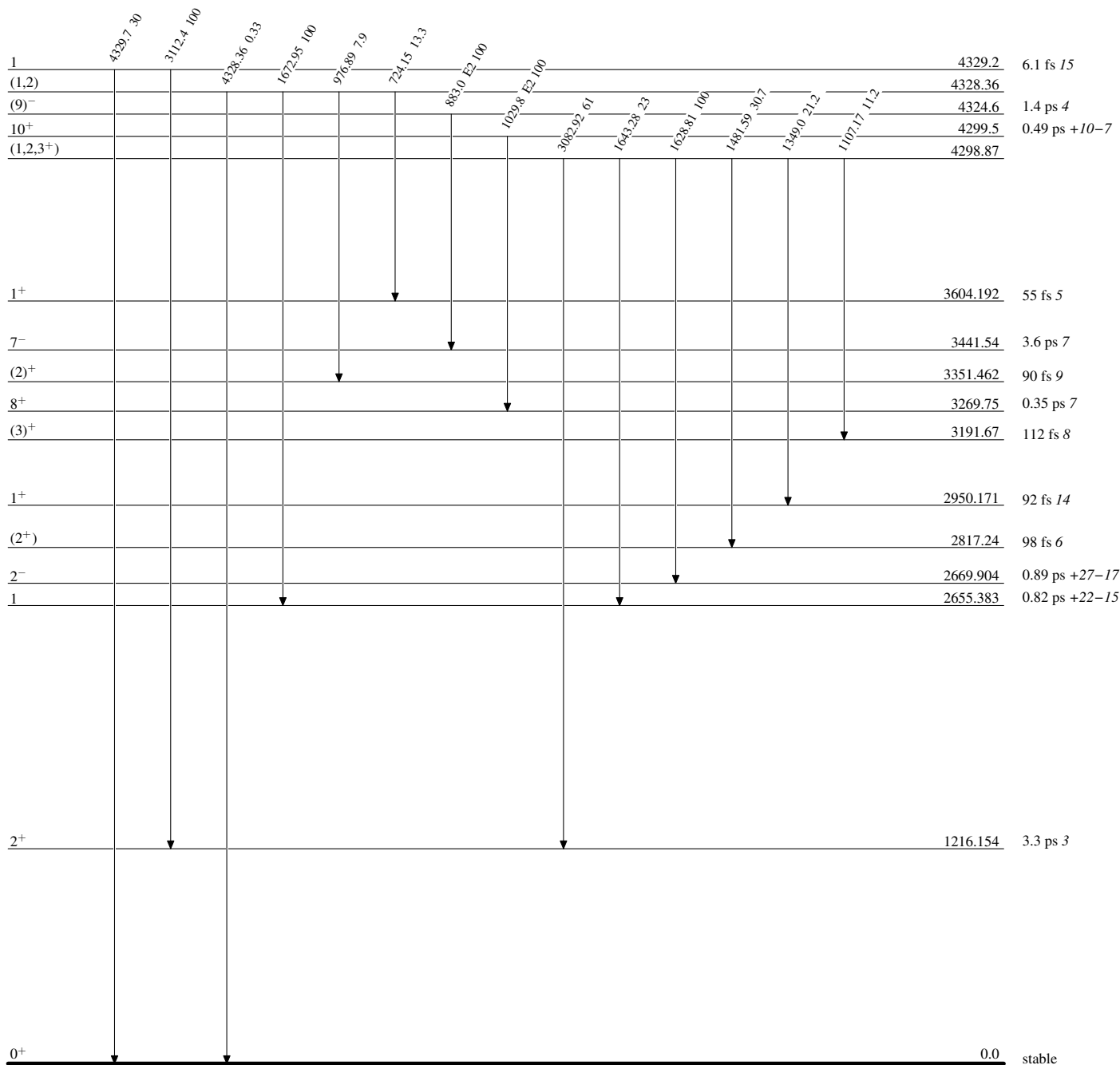
Level Scheme (continued)

Intensities: Relative photon branching from each level

-----> γ Decay (Uncertain)

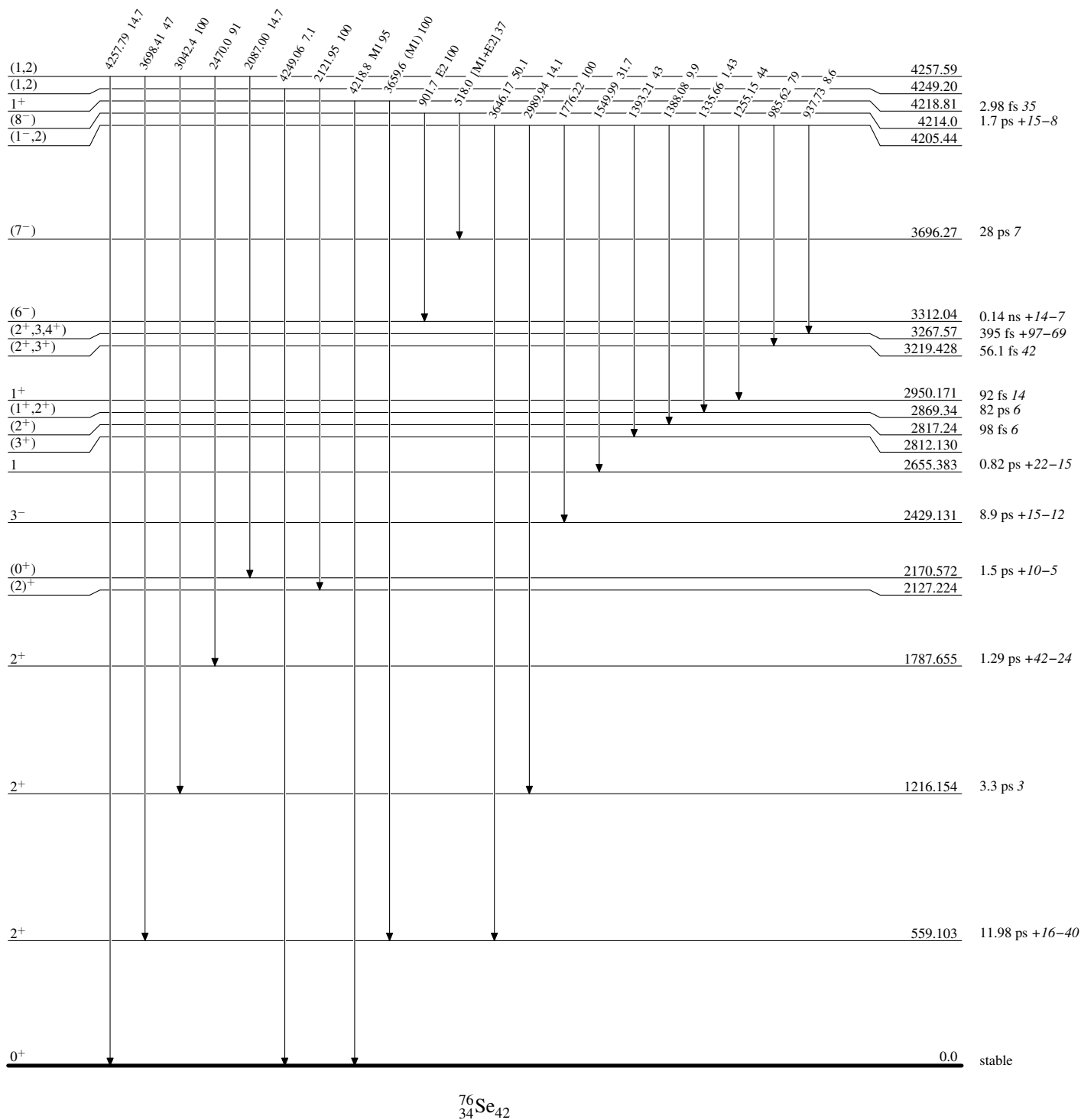
Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



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

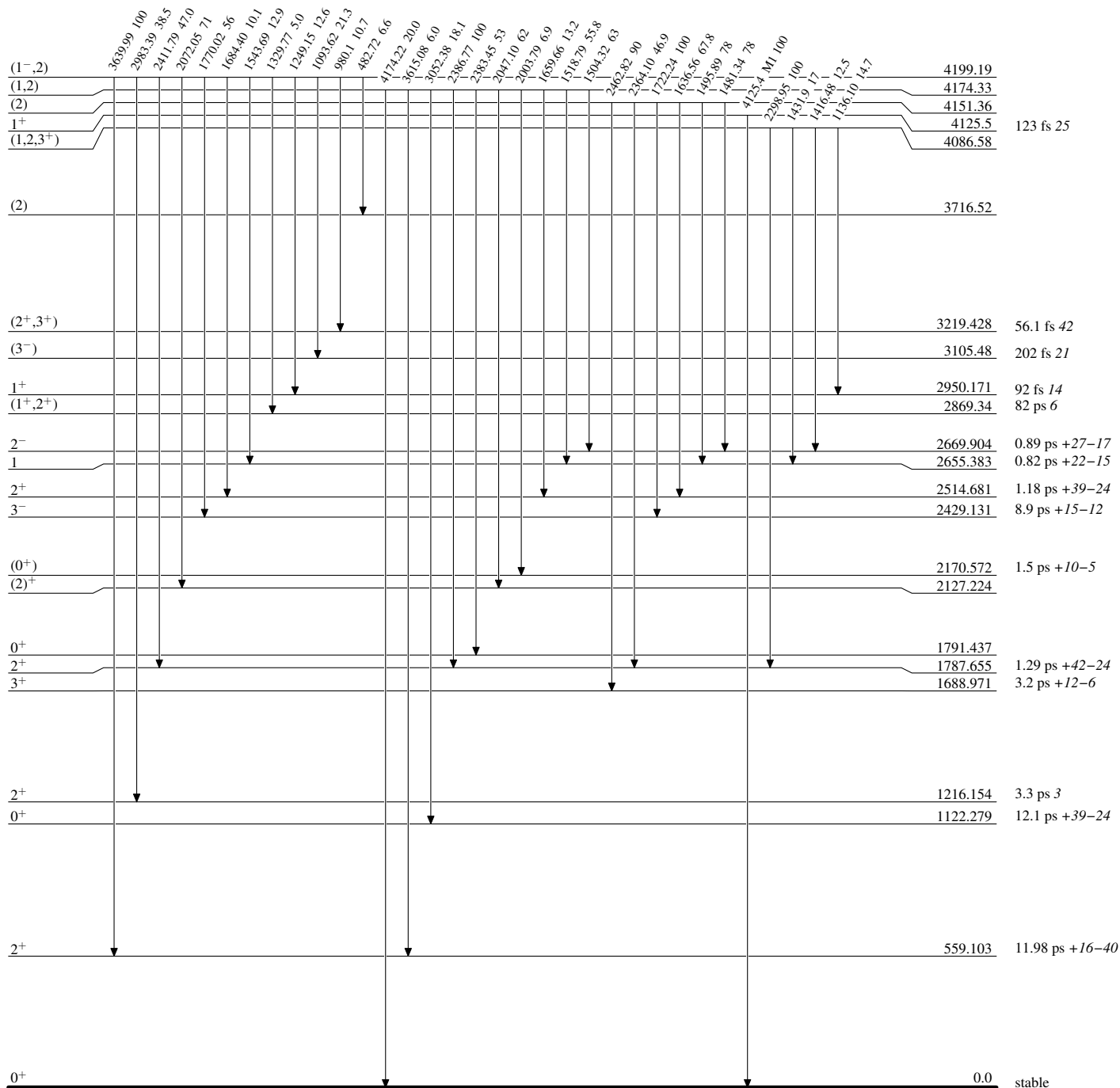
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

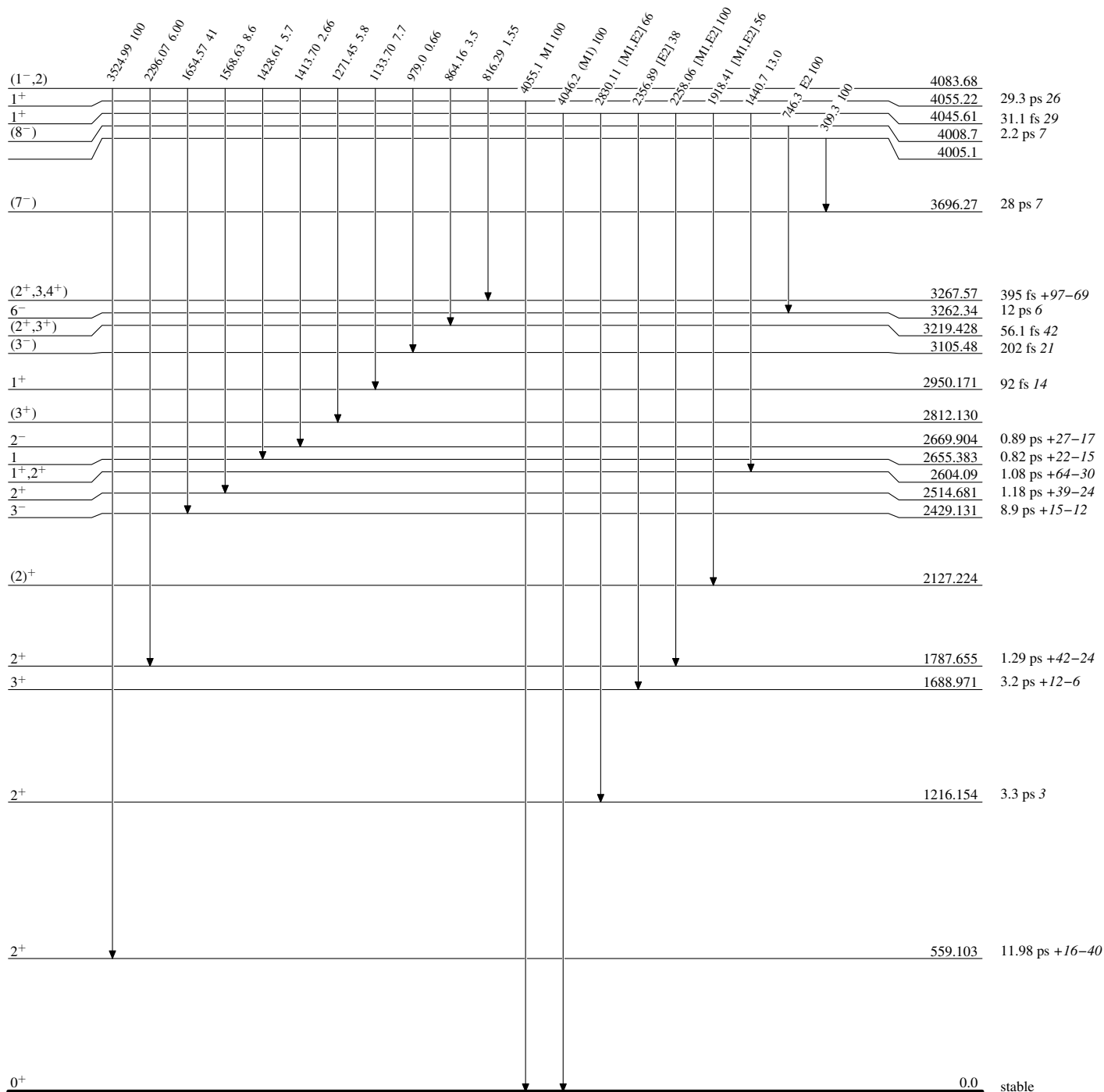
Level Scheme (continued)

Intensities: Relative photon branching from each level



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

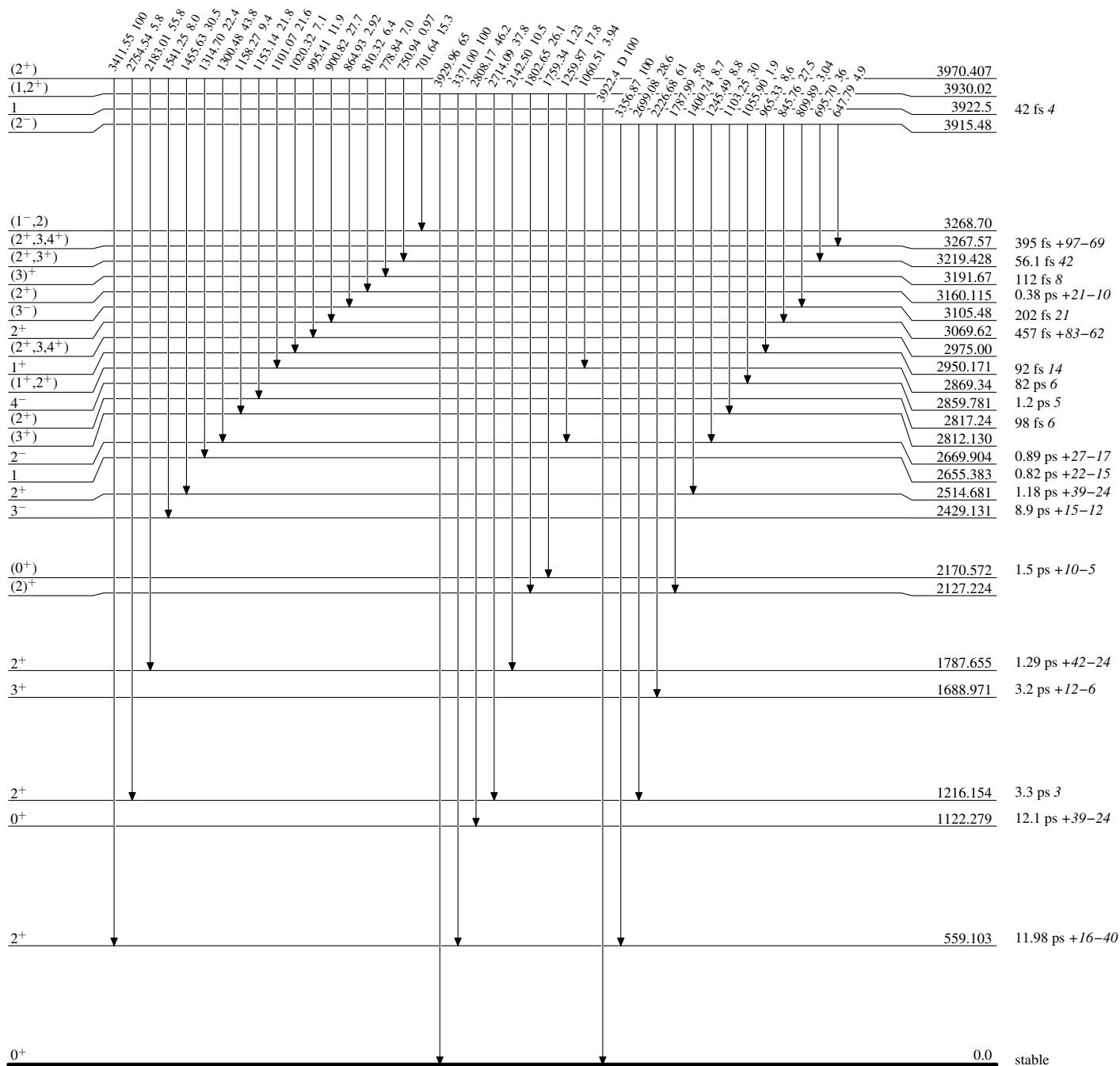
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

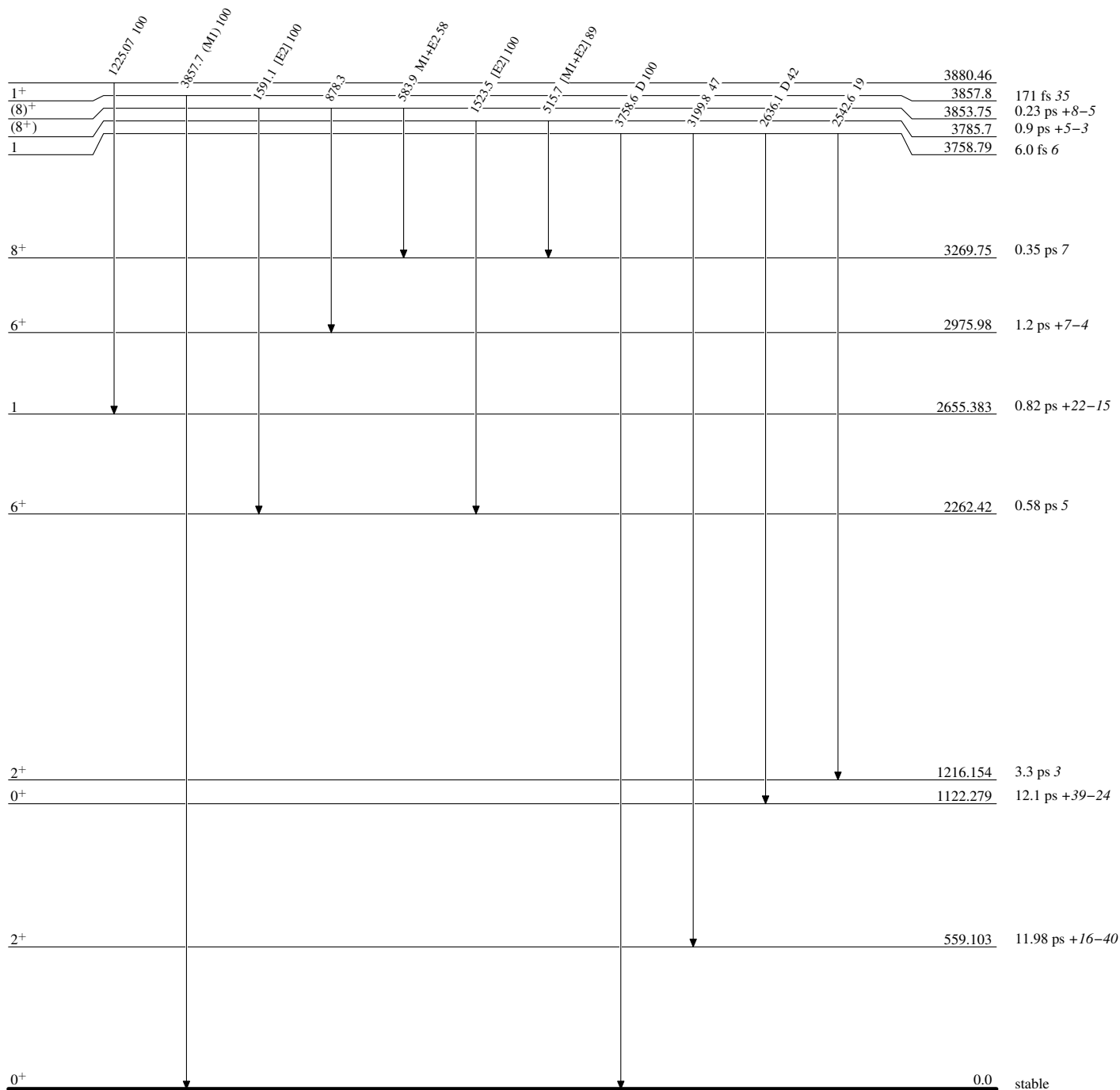
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

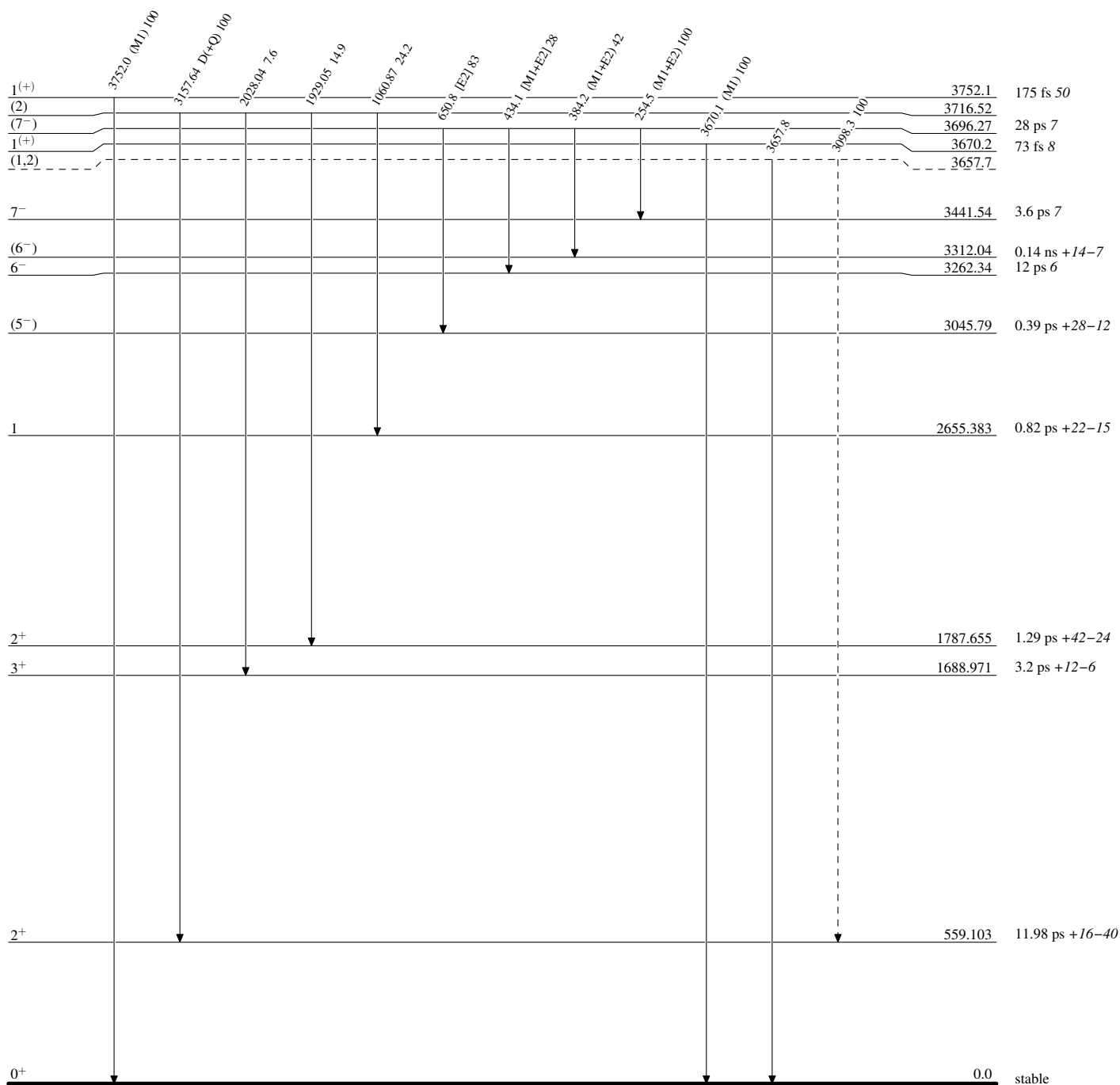
Intensities: Relative photon branching from each level



Legend

Intensities: Relative photon branching from each level

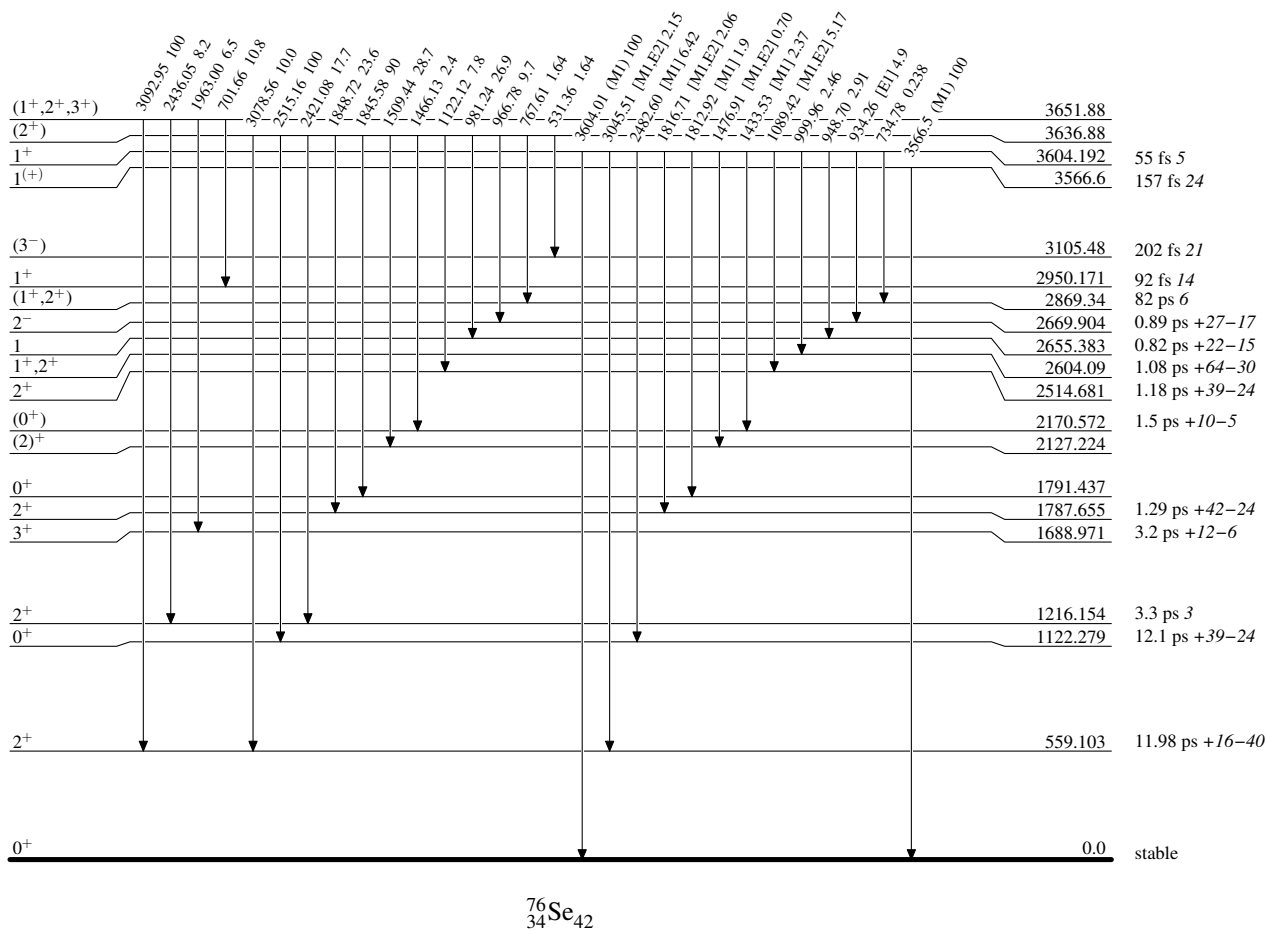
-----► γ Decay (Uncertain)

 $^{76}_{34}\text{Se}_{42}$

Adopted Levels, Gammas

Level Scheme (continued)

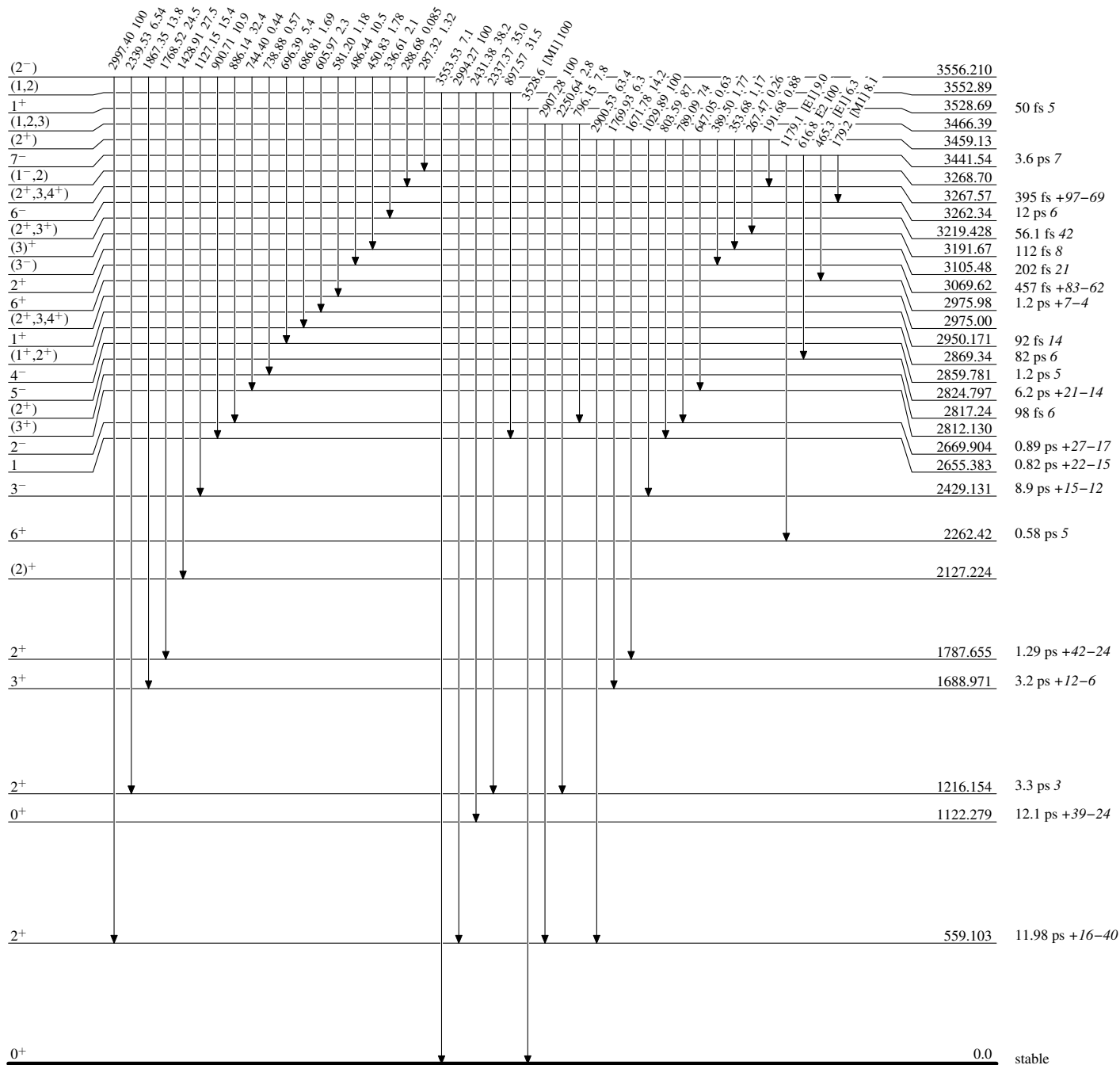
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

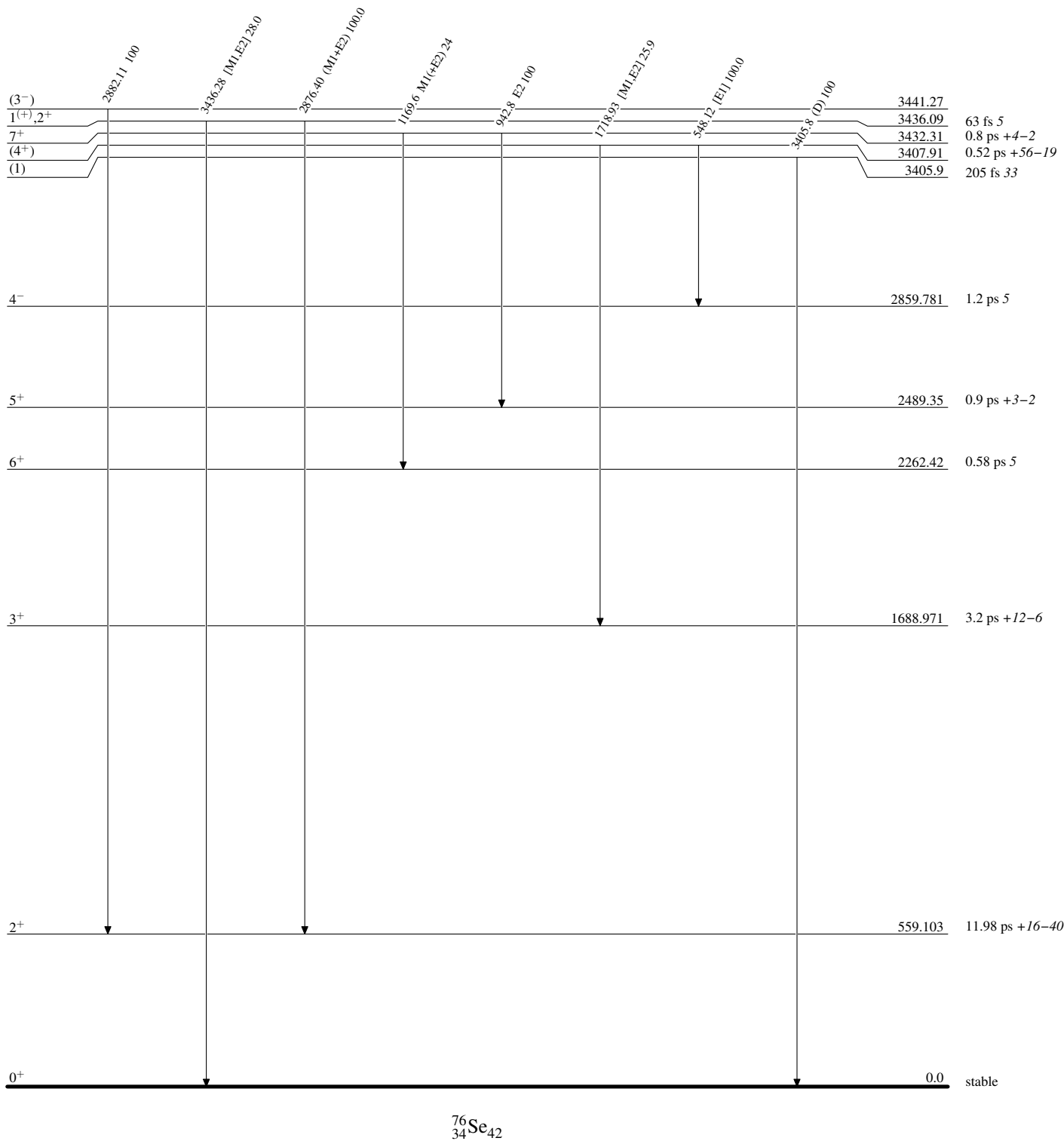
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

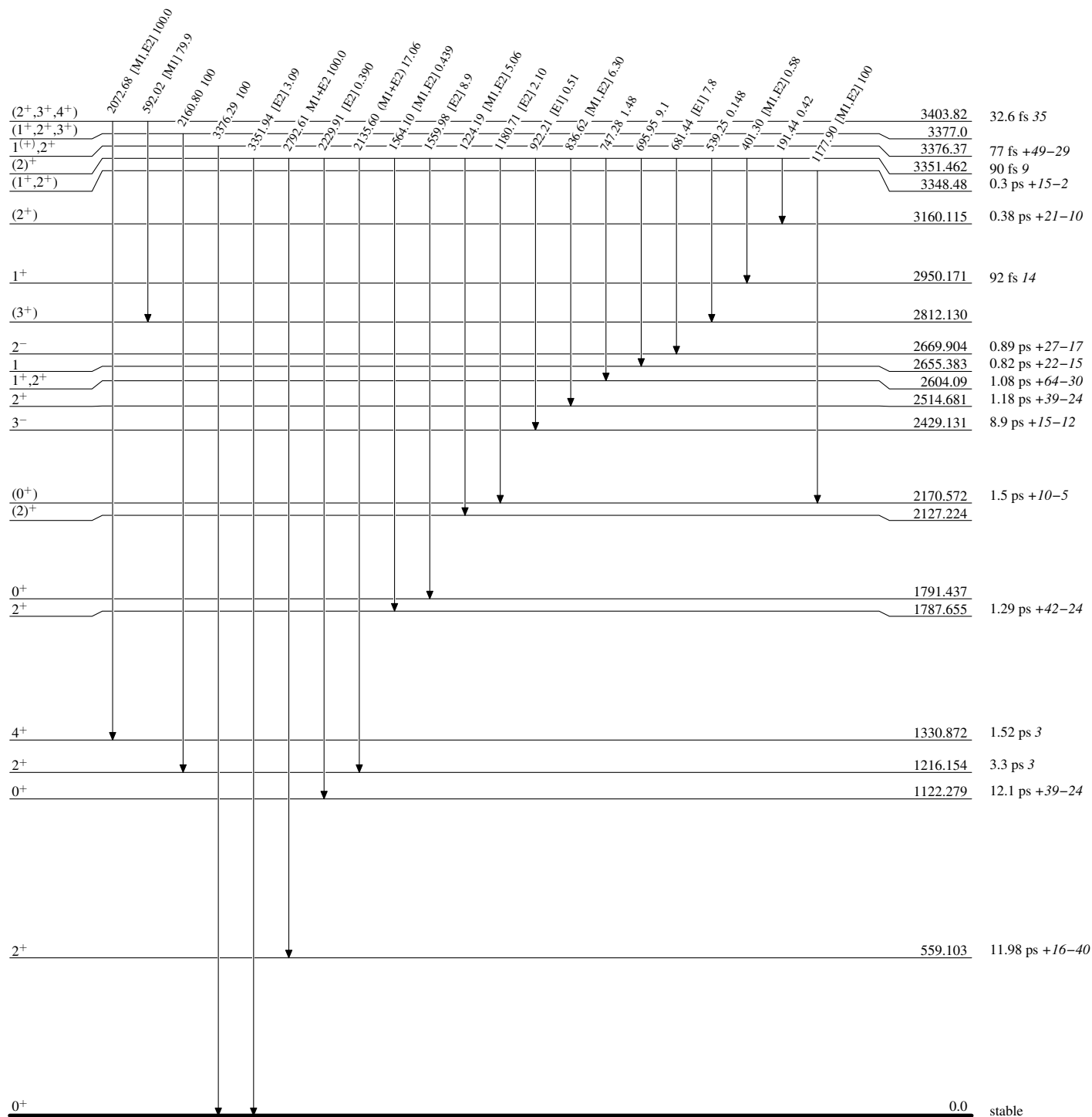
Level Scheme (continued)

Intensities: Relative photon branching from each level



Adopted Levels, GammasLevel Scheme (continued)

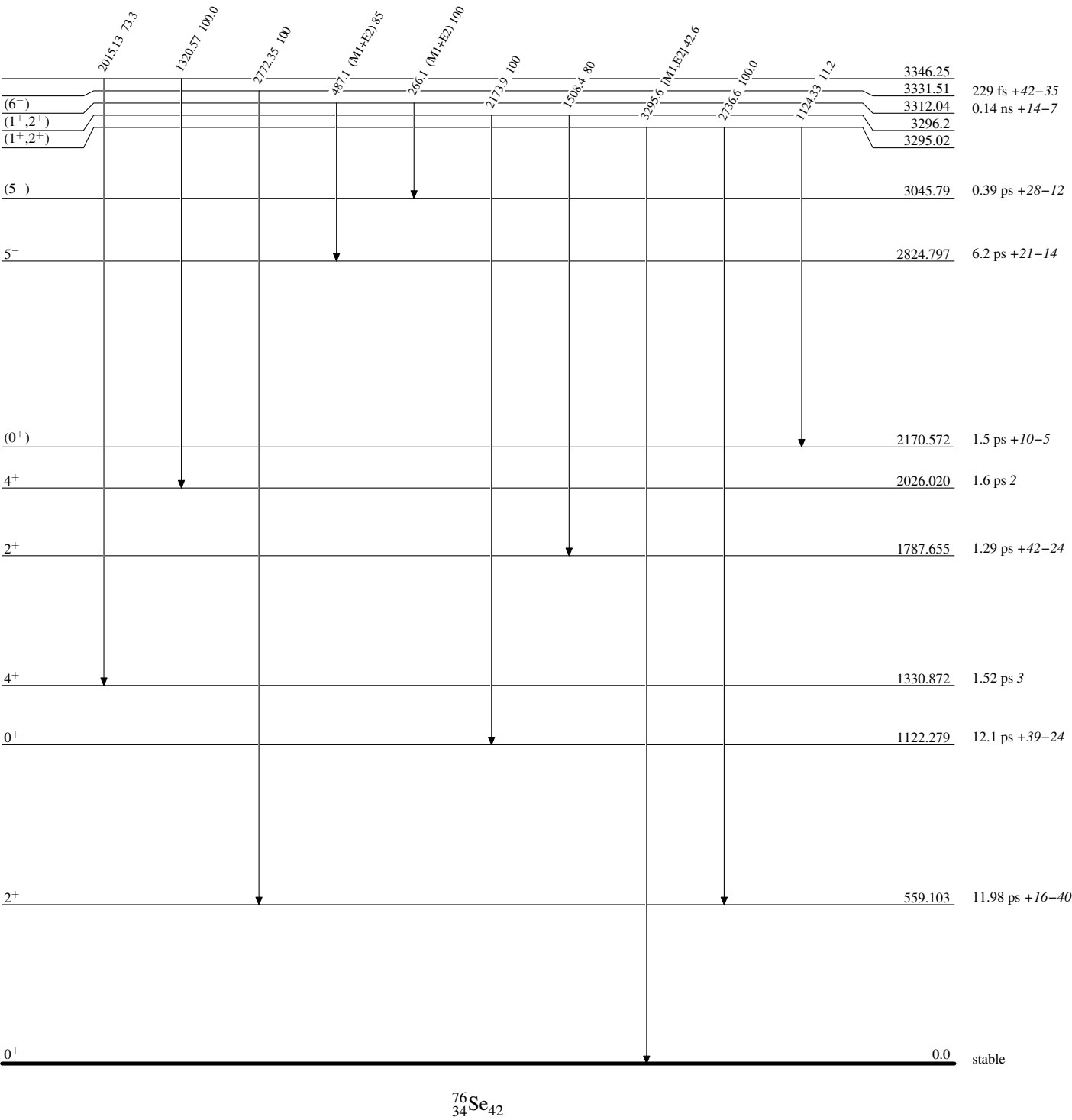
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

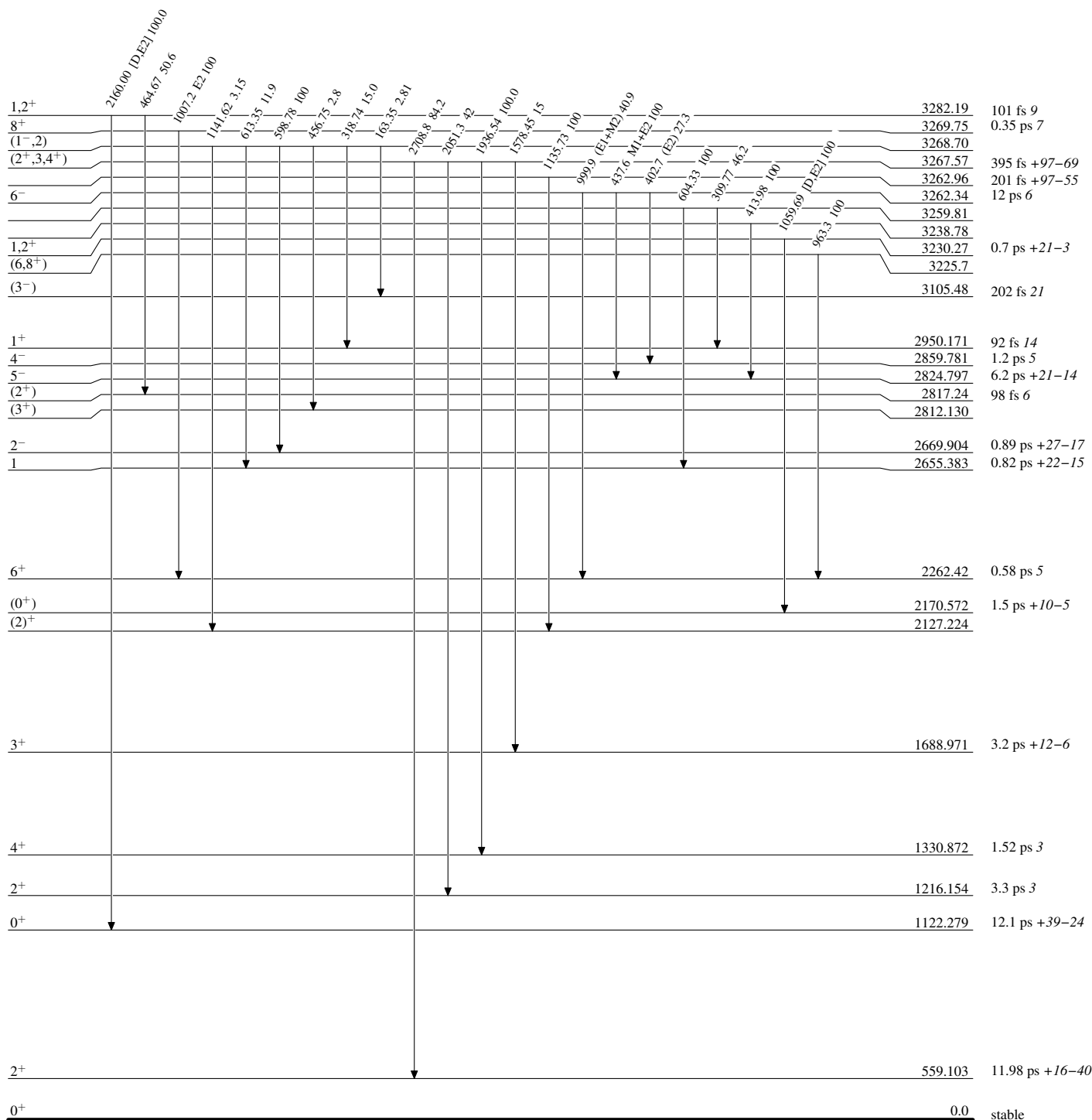
Level Scheme (continued)

Intensities: Relative photon branching from each level



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

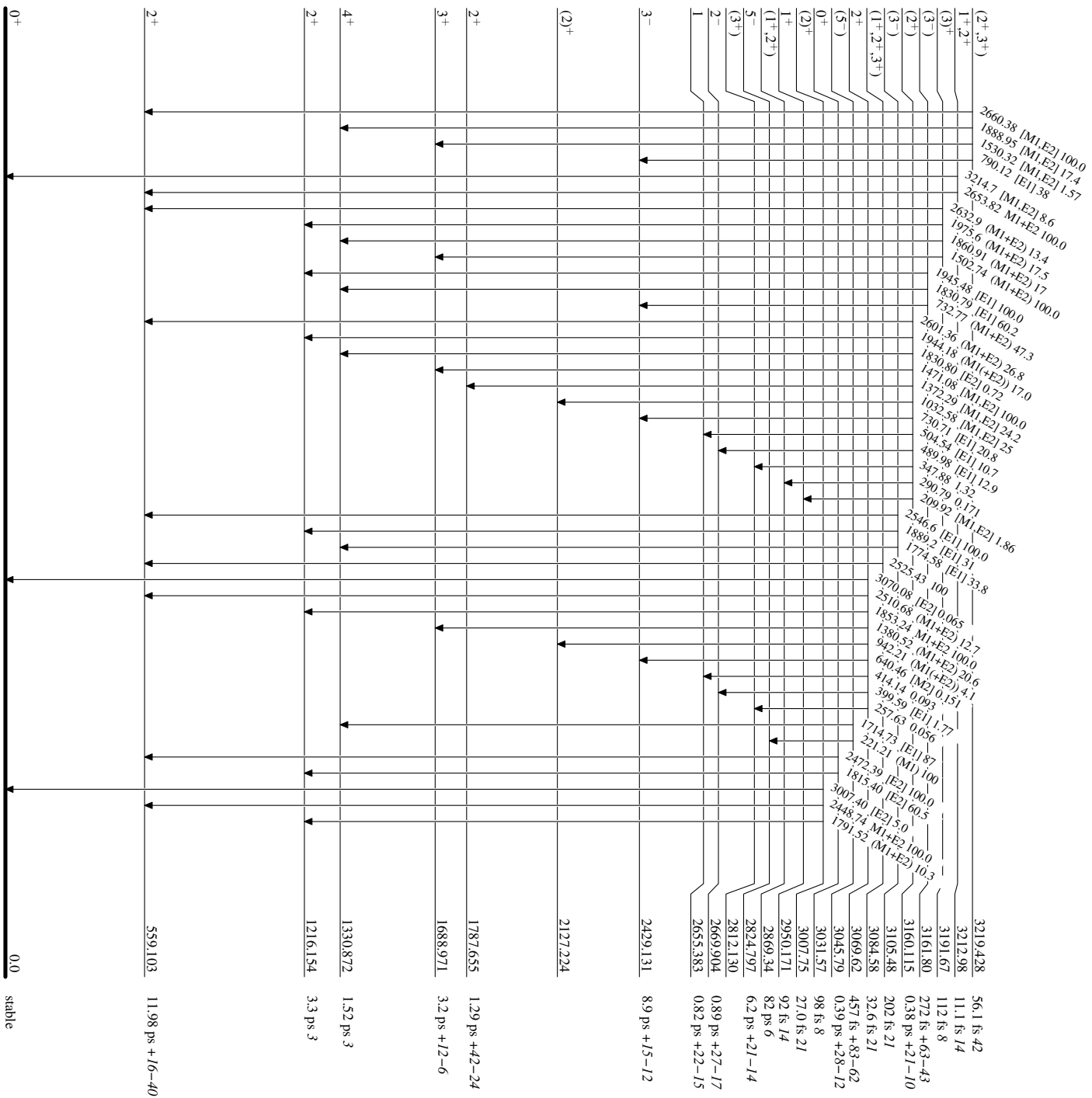
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

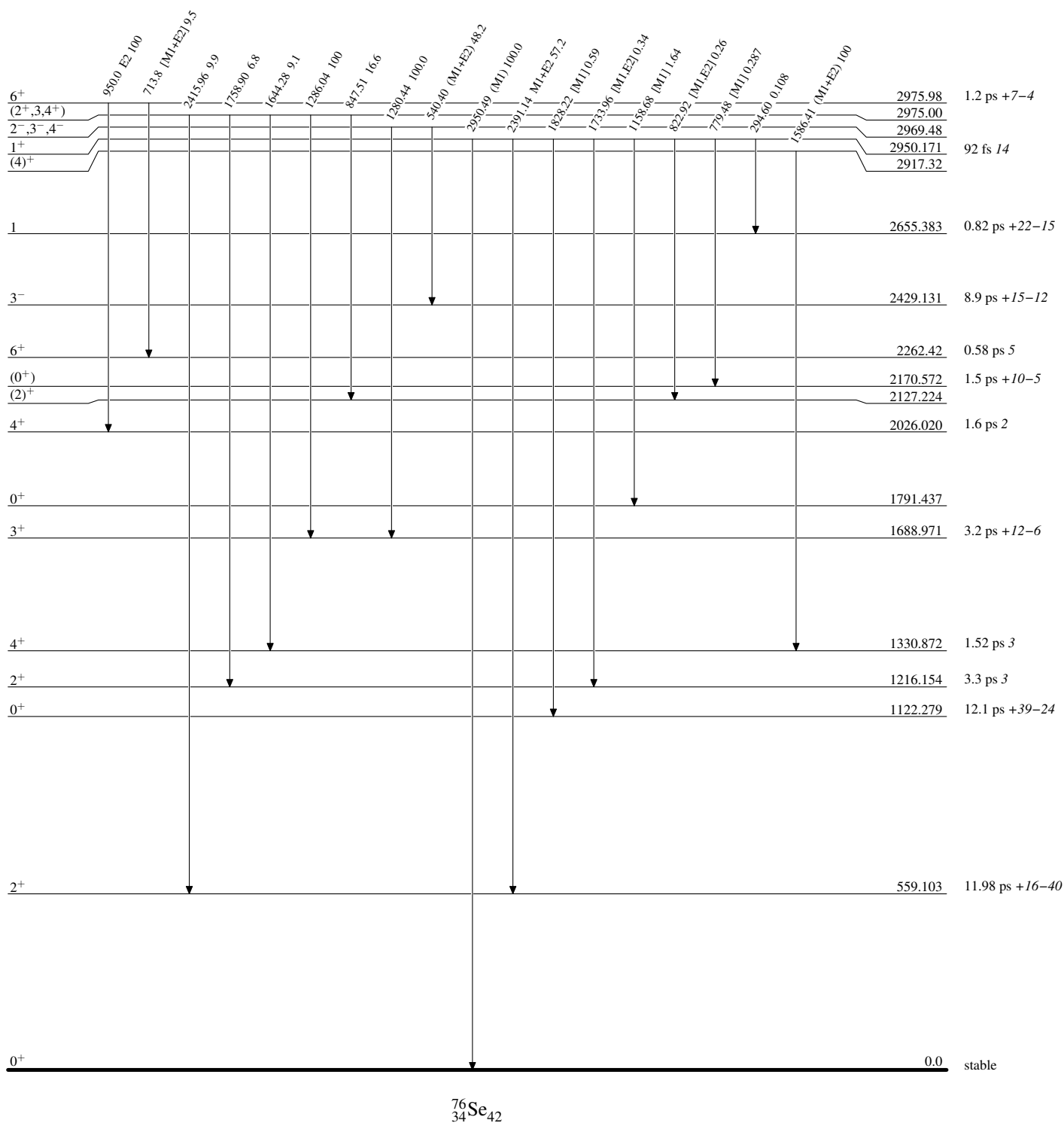
Intensities: Relative photon branching from each level



⁷⁶Se₄₂
³⁴Se₄₂

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

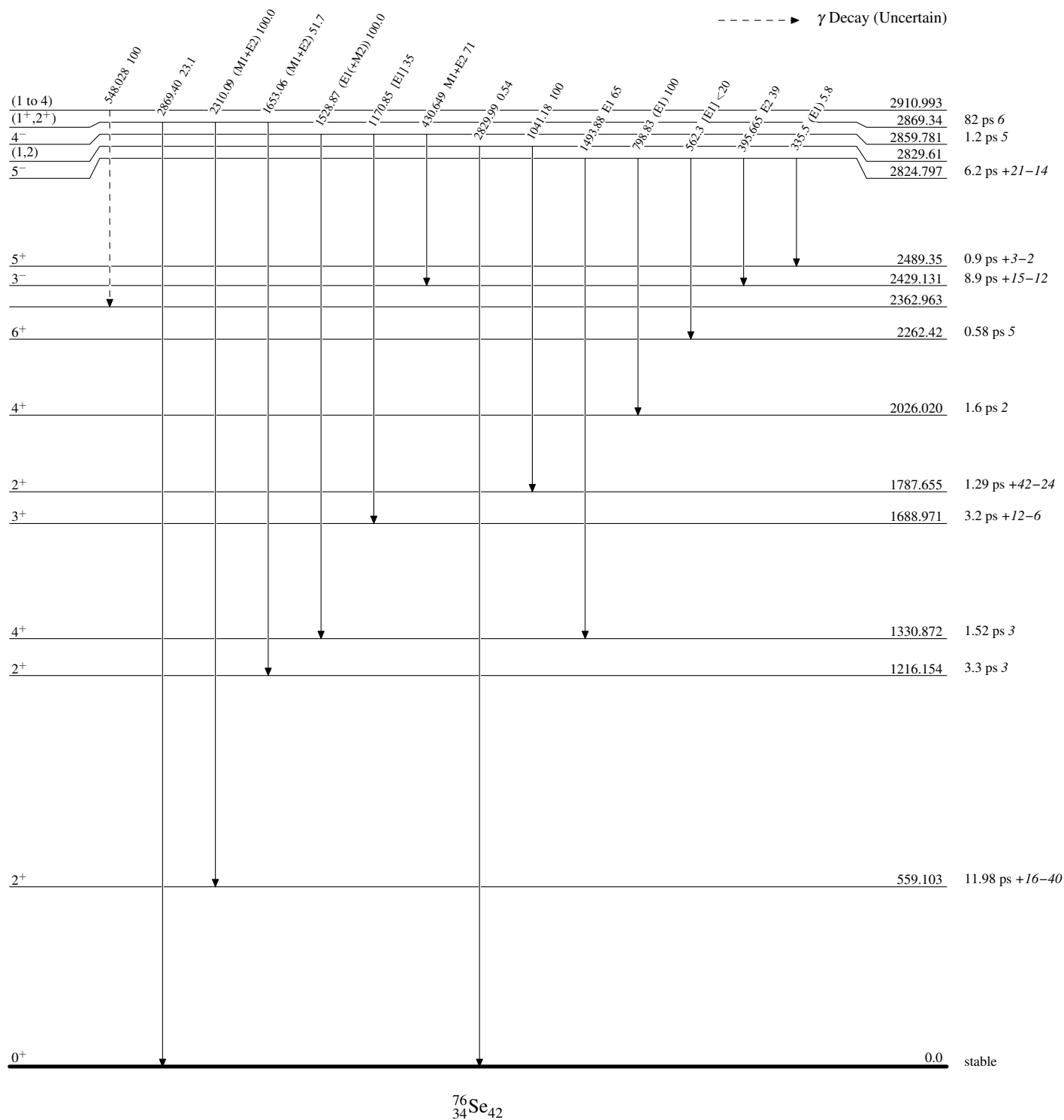
Intensities: Relative photon branching from each level



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

Legend

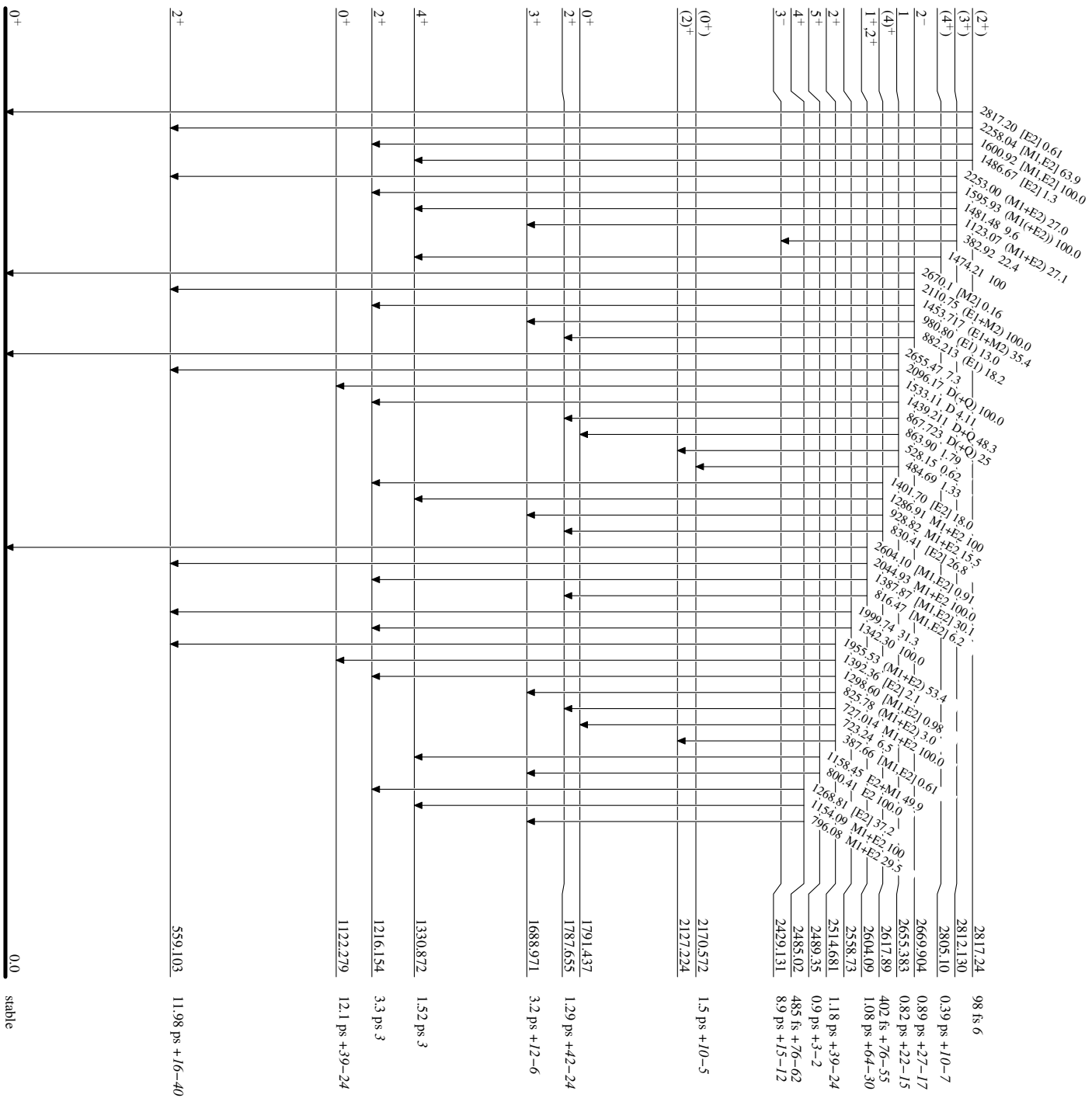
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



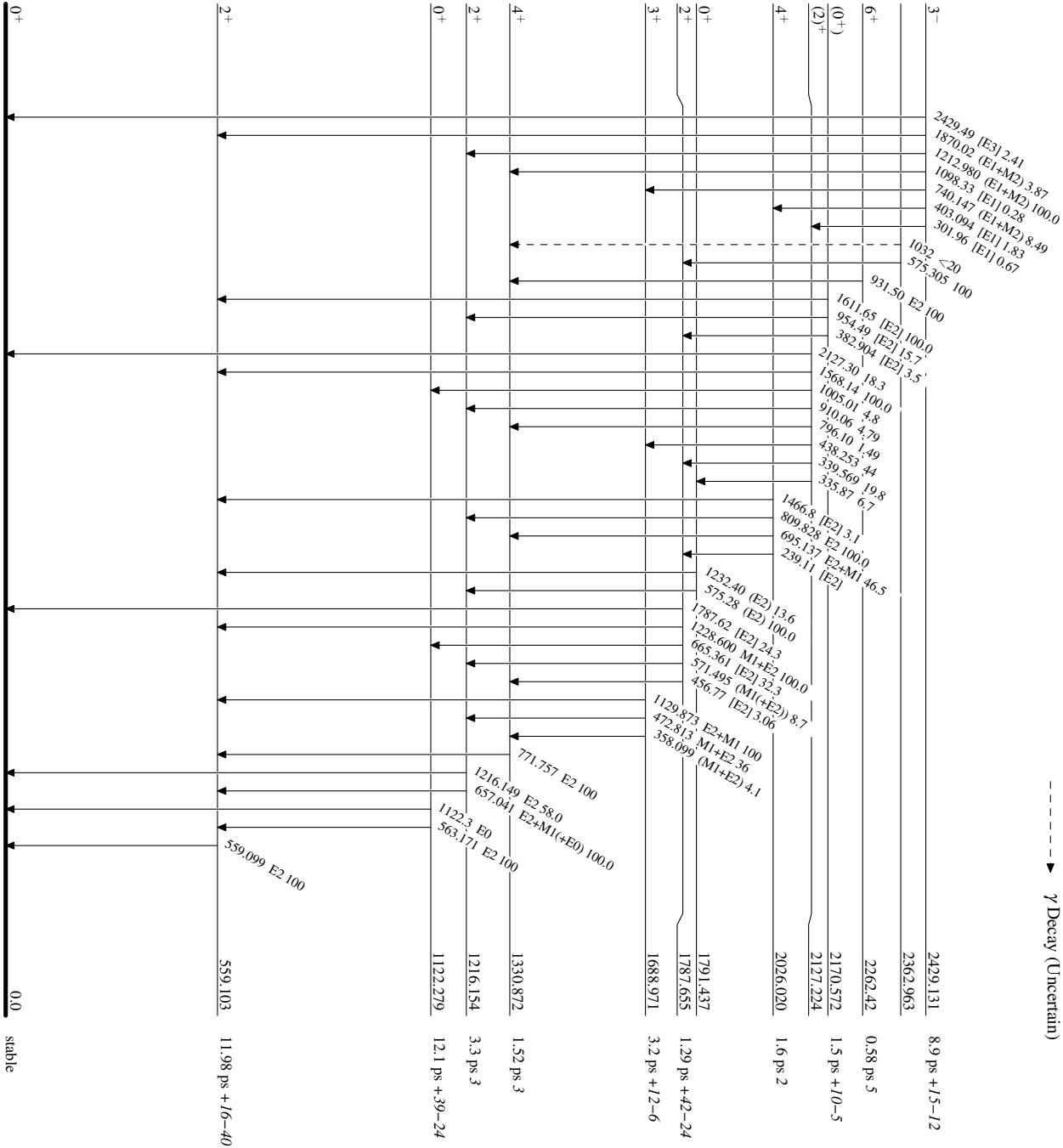
Adopted Levels, Gammas

Legend

Level Scheme (continued)

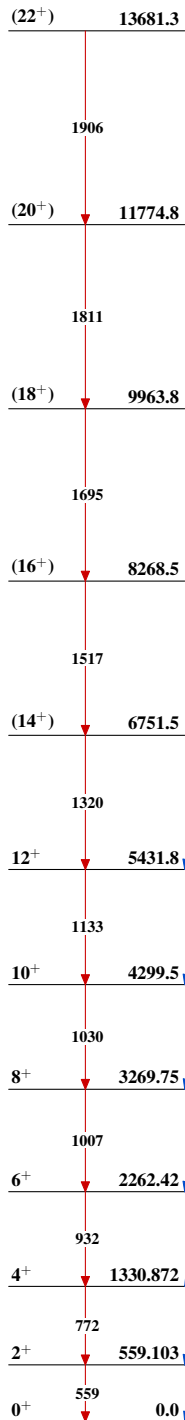
Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)

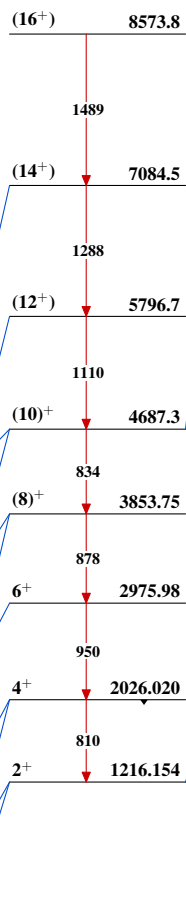


Adopted Levels, Gammas

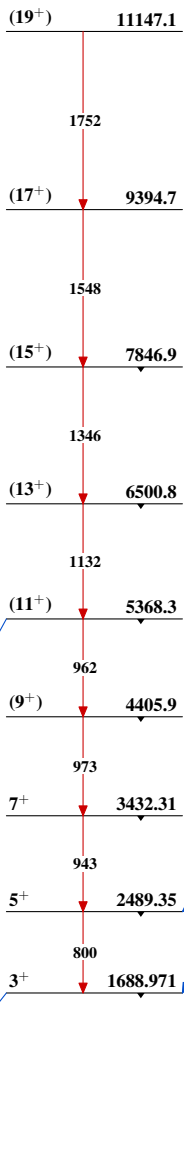
Band(A): Yrast band
based on ground state



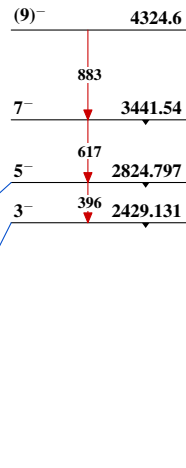
Band(B): γ band, even
spin



Band(b): γ band, odd
spin



Band(C): $K^\pi=3^-$ band



Band(D): $\Delta J=2$ band

