Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111,717 (2010)	1-Dec-2009

Q(β^-)=−4704 *6*; S(n)=9563.48 *9*; S(p)=9278.62 *10*; Q(α)=−3375.1 *6* 2012Wa38
Note: Current evaluation has used the following Q record −4707 5 *9563.45 109281* 4 −3374.9 *20* 2003Au03,2009AuZZ.

^{116}Sn Levels

Cross Reference (XREF) Flags

A	Coulomb excitation	J	^{116}In β^- decay (54.29 min)	S	^{114}Cd(^{3}He,n)
B	^{114}Cd(α,2nγ)	K	^{116}Sb ε decay (15.8 min)	T	^{115}In(p,n),(p,p) IAR
C	^{116}Sn(n,n′γ)	L	^{116}Sb ε decay (60.3 min)	U	^{116}Sn(α,α')
D	^{115}In(α,tγ)	M	^{116}Sn(p,p′)	V	^{116}Sn(p,p′γ)
E	^{115}In(^{3}He,d),(α,t)	N	^{104}Ru(^{18}O,α2nγ)	W	^{116}Sn(pol p,p′)
F	^{115}Sn(d,p)	O	^{116}Sn(e,e′)	X	^{116}Sn(d,d′)
G	^{115}Sn(n,γ) E=th	P	^{116}Cd(^{3}He,3nγ)	Y	^{116}Sn(γ,γ')
H	^{117}Sn(d,t),(^{3}He,α)	Q	^{117}Sn(p,d)	Z	^{116}Sn(^{6}Li,^{6}Li′)
I	^{116}In β^- decay (14.10 s)	R	^{118}Sn(p,t)		

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0	0^+	stable		
1293.560 *8*	2^+	0.374 ps *10*	ABCDEFGHIJKLMNOPQR X	Q=−0.17 *4* (1989Ra17,2005St24,1976Li19) μ=−0.32 *18* (2008Ea02) Q: others: +0.07 *10* (1975Gr30), +0.09 *13* (1970Kl06). Jπ: E2 γ to 0^+. $T_{1/2}$: from 1987Ra01 based on an average of available B(E2) and $T_{1/2\ 1/2}$ data; values included in 1987Ra01: 0.49 ps *9* (1962Li10), 0.44 ps *19* (1962Ka28), 0.195 (1975Gr30), 0.33 ps *7* (1963Be14), 0.37 ps *4* (1977Ca14,1981Ca10) via res fluorescence The recent value: 0.51 ps *+20−14* (2007Or04) in (n,n′γ) is in agreement.
1756.864# *24*	0^+	44 ps *6*	ABCD FGHIJK MNO V X	Jπ: E0 to g.s. $T_{1/2}$: average of 1978Ju02 and B(E2) in Coul. ex.
2027.48 *3*	0^+	160 ps *20*	A C FGH K M O S X	Jπ: E0 to g.s. $T_{1/2}$: from 1978Ju02.
2112.323# *15*	2^+	1.89 ps *10*	ABCD GHIJK MNOP X	Jπ: E2 γ to g.s. $T_{1/2}$: from B(E2) in (e,e′). Other: 1.8 ps *+11−5* from B(E2) in Coul. ex.
2225.379 *17*	2^+	2.4 ps *12*	A C EFGHIJK M QR V	Jπ: L(d,p)=2, log *ft*=4.7 from 3^+ parent, excited in Coul. ex. $T_{1/2}$: from B(E2) in Coul. ex.
2266.159 *19*	3^-	0.34 ps *4*	ABCDE GH JKLMNO WX	Jπ: E1 γ to 2^+, L=(p,p′)=3, (972γ)(1293γ)(θ). $T_{1/2}$: from B(E3) in Coul. ex.
2365.975 *21*	5^-	348 ns *19*	BCD fGH J LMNO QR WX	Q=0.26 *1* (1989Ra17,2005St24) μ=−0.376 *3* (1989Ra17,2005St24) Jπ: E2 γ to 3^-, E3 γ to 2^+, L(p,p′)=5. $T_{1/2}$: weighted av of 335 ns *50* from (α,2nγ) (1980Va13) and 350 ns *20* from ε decay (1966Rg02). Others: 370 ns from (α,2nγ) (1973IsZQ), 230 ns *20* from ε decay (1964Bo21).
2390.879 *18*	4^+	0.28 ps *14*	ABCDEfGH JK MNO W	Jπ: E2 γ to 2^+ (1097γ)(1293γ)(θ), L=4 (d,t). $T_{1/2}$: from 1972Ka66, res fluorescence, $T_{1/2\ 1/2}$=0.47 ps *9* from Coul. ex.

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Adopted Levels, Gammas (continued)

^{116}Sn Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2529.202[#] *18*	4^+	<100 ps	ABCDE GH JK MNO qR WX	Jπ: E2 γ to 2^+, (417γ)(2112γ)(θ), L(p,p′)=4, L=4 (d,t). $T_{1/2}$: from β(417γ) coin (1979Ka01).
2545.71 *3*	(0^+)		A C GHI K M q V	Jπ: primary γ from 0^+,1^+, L=0(d,t).
2585.564 *24*	1^+		C fGH K M	Jπ: based on γ to 0^+ and 2^+, from (n,γ),(n,n′γ).
2650.438 *23*	2^+		C EfGHI K M O	Jπ: L(p,p′)=2, L=2 (d,t).
2773.33 *3*	6^-		BCD fGH LMN Q	Jπ: M1 γ to 5^-, L=5 (d,t).
2790.55 *4*	$(0)^+$		C FG O X	XREF: F(2780). Jπ: L(d,p)=2 gives 2^+, but 1991Ra01 based his argument on cross sections to assign 0^+.
2801.28 *4*	4^+		BCDEfGH JK M O R U W	Jπ: E2 γ to 2^+, L(p,p′)=4, L(p,t)=4.
2843.82 *5*	2^+		C E GH K M	Jπ: L(p,p′)=2 L=2 (d,t).
2908.85 *3*	7^-	0.5 ns *3*	CDE H LMNO	Jπ: M1 γ to 6^-, log *ft*=4.9 from 8^- parent. $T_{1/2}$: from (α,2nγ) (1980Va13). Other: ≤0.5 ns from ε decay (1966Rg02).
2960.03 *3*	2^+		C FGH K M	Jπ: γ to 0^+ in (n,γ), L(d,p)=2.
2996.27 *3*	3^+		C E GH K M	Jπ: L=2+4 (d,t), and measured g7/2 strength (1990Sc12).
3016.44 *7*	$6^{(-)}$		C G	
3032.70[#] *17*	6^+		BCD N	Jπ: E2 γ′s to 4^+, ΔJ=2 collective band.
3046.40 *9*	4^+		CDE GH J M O QR WX	Jπ: L=4 (d,t), E2 γ to 2^+ level.
3088.63 *3*	2^+		C fG K M	Jπ: γ to 0^+, from (n,γ),(n,n′γ).
3096.93 *13*	4^+		CDEf H J w	Jπ: L=4 (d,t), log *ft*=5.6 from 5^+ parent.
3105.18 *17*	5^-		BCD fG M w	Jπ: 1978VaZK suggest (7^-), excit in (n,n′γ), also 7^- in (α,tγ).
3157.73 *7*	3^-,4		C G M QR wx	
3179.68 *6*	3^+		C EFGH K x	Jπ: L=2+4 (^{3}He,d), from (n,γ),(n,n′γ).
3184 *5*	3^-		M x	Jπ: L(p,p′)=3.
3194.32 *6*	0^+		C G M	Jπ: L(p,p′)=0, from (n,γ),(n,n′γ).
3210.00 *5*	7^-	<0.5 ns	BCD L NO W	Jπ: E2 γ to 5^-, log *ft*=5.6 from 8^- parent. $T_{1/2}$: from 1966Rg02.
3227.45 *5*	(2^+)		C Gh m x	Jπ: L=2 (d,t), from (n,γ),(n,n′γ).
3227.95 *11*	8^-		B D L N	Jπ: γ(θ) for M1 γ to 7^-.
3228.06 *14*	2^+		C Gh K m x	Jπ: L=2 (d,t) but not resolved with 3227 level from (n,γ),(n,n′γ).
3236.02 *6*	0^+		C G	
3257.67 *12*	3^-,4^-,5^-		C G M	
3277.6 *5*	6^+		BCDE M	Jπ: L(^{3}He,d)=2.
3288.99 *17*	≤4		C G	
3309.0 *4*	6^-		C	
3314.99 *13*	3^+		C GH	Jπ: L=4 (d,t), J^π=2^+,3^+ from (n,γ),(n,n′γ).
3333.78 *6*	1^-		C G M	Jπ: J^π determined in (pol γ,γ′) experiment 1994Go25.
3344.34 *5*	2^+		C FG X	Jπ: L=2 (d,t), J^π=2 from (n,γ),(n,n′γ).
3350.5 *4*	(5^+)		C	
3371.42 *8*	3^+		C G K	
3379.8 *5*	3^+		DE H M	Jπ: γ decay in (α,tγ).
3416.2 *3*	2^+		C GH K M QR	Jπ: L=2 (d,t), J=2 in (n,γ),(n,n′γ).
3427.91 *14*	4^-		C G	
3453.2 *3*	4,5		C M X	
3469.61 *9*	2^+		C GH M	Jπ: L=2 (d,t).
3492.98 *12*	8^+		B D N	Jπ: from γ(θ) for 584 E1 γ to 7^-.
3507.25 *20*	5^-		C G	
3508.33 *7*	2^+		C G	
3510 *5*	4^+		M	Jπ: L(p,p′)=4.

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Adopted Levels, Gammas (continued)

^{116}Sn Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
3513.6 *3*	$(2)^+$	C E GH K		Jπ: L=2 (d,t), J^π=(2) from (n,γ),(n,n′γ).
3522.66 *25*	9^-	B D LMN W		E(level): 1987Va30 have studied the role of core polarization and of the quenching of the leading shell model configuration in stretched spin states for this state. Jπ: from γ(θ) for M1+E2 γ to 8^-.
3547.16 *17*	10^+	833 ns *30*	B N	Q=0.50 (1989Ra17,2005St24,1975Di02) μ=−2.326 *15* (1989Ra17,2005St24) Jπ: M2 γ to 8^-, E2 γ to 8^+. $T_{1/2}$: from 1978VaZK (time distribution/beam burst of cyclotron).
3551.7 *5*	3^+	C G		
3572.77 *17*	2^+,3	C G m x		
3576.2 *6*	4^+,5	C m x		
3586.63 *10*	2^+	C Gh K m x		
3593.76 *9*	3^+	C Gh K		
3616.3 *4*	4^-	C H		Jπ: L(d,t)=2, J^π=4 in (n,γ),(n,n′γ).
3624.6 *7*	4^+	C M		Jπ: L(p,p′)=4, from (n,γ),(n,n′γ).
3640.7 *7*	$4,5^+$	C		
3648.1 *5*	3^-,5^-	C m		
3658.05 *6*	2^+	C EFG m R		
3706.9 *7*	3^+	C H		Jπ: L=2+4 (d,t).
3711.89 *8*	$(1)^+$	C G m		
3712.4# *3*	8^+	B D N		Jπ: E2 γ to 6^+, ΔJ=2 collective band.
3730.6 *4*	≤3	C G		
3739	3^+	DE H Q		Jπ: L(d,t)=2, γ from 5^+.
3742.90 *18*	3^-	C G m		
3747.9 *4*	≤3	C G K m		
3776.78 *15*	1^+	C GH M		Jπ: L=2 (d,t), J=1 from (n,γ),(n,n′γ).
3787.2 *5*	(6^-)	C f		
3797	$^+$	Ef		Jπ: L=0+2 in (3He,D).
3805.5 *5*	4^+	C F m		
3806.02 *18*	2^+	C FG m		Jπ: L=2 in (p,p′), from (n,γ),(n,n′γ).
3809.3 *8*	2^+,3	C m		
3836.67 *23*	0^+	C G		
3843.66 *19*	2^+,3	C G		
3850.9 *5*	$1,2^+$	C G		
3851? *5*		M		Jπ: probably different from the 3850.9 level $(1,2^+)$ since σ(θ) in (p,p′) requires a high -L component (see comment in (p,p′)).
3886.9 *4*	5^+	DE		Jπ: L(^{3}He,d)=0+2+4. γ to 6^-.
3903.58 *24*	2^+	C G K		
3904.91 *6*	1	C G		
3916.91 *7*	2^+	C G M		Jπ: L(p,p′)=2.
3945.8 *5*	1^+,2^+,3	C e Gh m q		
3950.52 *21*	1^-,2,3	C e Gh m q		
3952.9 *3*	2^+	C e Gh m q		Jπ: L(^{3}He,d)=2, L=2 (d,t).
3973.7 *8*	4^+	C		
3985.5 *2*		L		
4001.10 *7*	$1^{(-)}$	C G		
4013.27 *15*	2^+	C e G r w		Jπ: L(^{3}He,d)=2, primary γ from 0^+,1^+.
4015.1 *6*	$2,3,4^+$	C e r w		
4023 *1*	5^+	DE M		Jπ: L(^{3}He,d)=0+2+4. γ from 7^+.
4026.4 *3*	1	C G m		
4028.5 *5*	≤3	C G		

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Adopted Levels, Gammas (continued)

^{116}Sn Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
4037.2 *4*	2+,3+	C GH	
4075.87 *20*	1+,2+,3+	C GH w	
4077 *10*	4+,5+	DE m w	Jπ: L(^{3}He,d)=0+2+4.
4113.89 *6*	1,2+	C G	
4128.28 *20*	1,2+	C G	
4143.9 *5*	1+,2+,3	C e G m	
4162.108 *24*	2	C e G m	Jπ: (^{3}He,d)=2, primary γ from 0+,1+.
4170.9 *4*	2+	C e G m	
4190.5 *4*	2+,3+,4+	C G	
4200.09 *14*	1	C G m Y	
4201.52 *8*	1,2	C G m	
4211.59 *12*	0+,1,2	C G m S	
4238.15 *22*	2+	C G	
4240	4+,5+	E	Jπ: L(^{3}He,d)=0+2+4.
4251.68 *11*	1	C G m w	
4278.51 *20*	1,2+	C G m w	Jπ: L(^{3}He,d)=2.
4280.7 *7*	2,3−,4	C m w	
4285.0 *4*	(7)+	DE	Jπ: L(^{3}He,d)=2+4, γ's to 8-and 5−. γ to 8− is stronger Than γ to 5−.
4297.1 *5*	≤3	C G	
4308.5 *3*		G	
4340	+	E	Jπ: (^{3}He,d)=2.
4365		E	
4392.62 *8*		E G	
4410.98 *15*		G	
4430.45 *23*		G	
4480.19 *11*		E G	Jπ: L(^{3}He,d)=2.
4496.0 *6*	(10−)	B N	Jπ: probable stretched E2 to 8−. No γ to J<8.
4506.2[#] *4*	10+	B N	Jπ: E2 γ to 8+, ΔJ=2 collective band.
4511.36 *17*		G	
4548.38 *14*	1−	E G Y	
4584.13 *24*		G	
4649.21 *10*		G	
4701.83 *23*	11+	N	
4765 *1*	7+	DE	Jπ: L(^{3}He,d)=2. γ's to 8−,6−,6+.
4840 *10*	(8,10−)	DE w	Jπ: strong feeding to 8−. L(^{3}He,d)=4,5. 1992Sc20 suggest that this state contains part of the fragmented 10−,8− or 8+ configurations.
4852.7 *3*		G w	
4877.07 *14*		G	
4879.5 *6*	(11−)	B N	Jπ: stretched E2 to 9−. No γ to J<9.
4881.95 *23*	12+	N	
4892.55 *21*	1−	E G Y	Jπ: L(^{3}He,d)=2 (1969Sh14), 1986Va02 report L=4.
4925.92 *14*		G	
4940	0+	S	Jπ: L(^{3}He,n)=0.
4952.02 *20*		G	
4980.3 *5*	1	Y	
5055.53 *8*		G	
5066.3 *4*		G	
5085.7 *6*	1	Y	
5161.27 *23*	12+	N	
5174.4 *5*		G	
5242.3 *3*		G	
5329.90 *24*	12+	N	
5357.9 *3*		G	
5390.4[#] *5*	12+	B N	Jπ: E2 γ to 10+, ΔJ=2 collective band.

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Adopted Levels, Gammas (continued)

^{116}Sn Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
5391.2 *6*	1	Y	
5395.5 *3*		G	
5453.5 *4*	1(−)	Y	
5474.9 *3*		G	
5484.24 *22*		G	
5493.2 *6*		G	
5495.91 *23*	13+	N	
5500		DE	
5522.19 *23*	13+	N	
5550.7 *5*	1	Y	
5555.4 *5*	1	Y	
5562.72 *21*		G	
5573.6 *5*	(12+)	N	
5630.2 *5*	1−	Y	
5668.1 *4*		G	
5707.2 *3*		N	
5716.7 *4*		G	
5723.24 *25*	(12−)	G	
5730 *10*		E	
5740 *10*		E	
5767.19 *11*		G	
5780	(−)	DE	Jπ: L(^{3}He,d)=5.
5823.68 *23*	14+	N	
5834.7 *5*	1	Y	
5860	(−)	E	Jπ: L(^{3}He,d)=5.
5923.6 *3*		G	
5929.3 *3*	(13+)	N	
5968.4 *4*		G	
5977.57 *23*	13−	N	
5989.53 *10*		G	
5995.58 *11*		G	
6006.2 *5*	1(−)	Y	
6041.59 *22*		G	
6083.0 *5*	1	Y	
6088.7 *4*	1	Y	
6098.30 *24*	14+	N	
6116.8 *3*		G	
6130.97 *17*		G	
6151.9 *4*		G	
6159.57 *10*		G	
6180.5 *4*	1−	Y	
6198.74 *11*		G	
6213.01 *23*	14−	N	
6216.7 *5*	1−	Y	
6289.0 *4*	1−	Y	
6292.7 *11*	(10−)	DE	Jπ: L(^{3}He,d)=5. γ to 9−.
6313.4[#] *6*	14+	N	
6323.0 *6*	1−	Y	
6339.3 *5*	1−	Y	
6344.08 *23*	15−	N	
6357.7 *3*		G	
6358.0 *6*	(14+)	N	
6363.6 *5*	1	Y	
6371.9 *5*	1−	Y	
6373.0 *3*		G	

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Adopted Levels, Gammas (continued)

^{116}Sn Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
6398.5 *5*	1	Y	7235.5 *11*	1	Y
6405.59 *15*		G	7241.4 *6*	1	Y
6423.1 *5*	1⁻	Y	7246.3 *5*		G
6428.05 *23*		G	7319.9 *7*	1	Y
6436.31 *21*		G	7325.27 *22*		G
6446.5 *5*	1⁻	Y	7353.4 *3*	1⁻	Y
6457.2 *5*	1⁻	Y	7457.3 *6*	(16⁺)	N
6466.1 *10*	1	Y	7479.8 *14*	1⁻	Y
6468.7 *3*		G	7597.8 *10*	1	Y
6472.3 *3*	1⁻	Y	7654.3 *7*	1⁻	Y
6482.59 *17*		G	7659.94 *19*		G
6484.1 *4*	1⁻	Y	7692.77 *18*		G
6507.6 *6*	1⁻	Y	7758.8 *9*	1	Y
6510.55 *9*		G	7826.3 *10*	1(−)	Y
6518.7 *4*	1⁻	Y	7896.6 *8*	1	Y
6532.01 *21*		G	7917.1 *7*	1⁻	Y
6581.9 *6*	1⁻	Y	7925.2 *8*	1(+)	Y
6593.2 *5*	1⁻	Y	7933.7 *6*	1	Y
6654.9 *7*	(1)	Y	7947.0 *8*	1	Y
6659.52 *25*	16⁻	N	7961.1 *6*	1⁻	Y
6663.1 *6*	(15⁺)	N	7991.6 *8*	1⁻	Y
6717.24 *11*		G	8187.4 *7*	1	Y
6741.4 *6*	(1)	Y	8214.3 *6*	1⁻	Y
6749.5 *5*	1	Y	8227.9# *6*	18⁺	N
6754.07 *18*		G	8234.5 *8*	1	Y
6834.1 *3*	1	Y	8247.8 *7*	1	Y
6877.0 *7*	1	Y	8282.9 *9*	1	Y
6889.4 *5*	1⁻	Y	8361.3 *8*	1⁻	Y
6967.3 *5*	1	Y	8427.9 *11*	1	Y
7011.5 *6*	1	Y	8457.9 *8*	1	Y
7035.01 *8*		G	8585.6 *3*		N
7082.15 *25*	17⁻	N	8661.2 *4*		N
7125.6 *5*	1⁻	Y	8739.7 *7*	(1)	Y
7145.8 *6*	1	Y	9141.4 *4*		N
7154.7 *5*	1⁻	Y	9321.9# *12*	(20⁺)	N
7165.0 *6*	1	Y	16198		T
7173.9 *4*		G	16308		T
7203.7 *8*	1	Y	16388		T
7215.3 *6*	1	Y	16478		T
7224.7 *4*		G	16568		T
7229.2# *6*	16⁺	N	17708		T

† From a least-squares fit to the adopted Eγ. Other levels are from the reactions indicated.

‡ From (n,γ),(n,n′γ) (1991Ra01), except where noted otherwise. Values from 1991Ra01 are based on γ(θ), decay modes and σ and σ(E) in (n,n′γ). All the J^π for levels only seen in (γ,γ′) are derived from nuclear resonance fluorescence with polarized γ. J^π for levels seen only in (^{18}O,α2nγ) are based on γγ(q) data.

Band(A): 0^+ intruder band, configuration=$\pi g_{9/2}^{-2} g_{7/2}^{2}$.

Adopted Levels, Gammas (continued)

γ(^{116}Sn)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.	δ	α #	$I_{(\gamma+ce)}$	Comments
1293.560	2^+	1293.558 *15*	100	0	0^+	E2‡		0.00075		B(E2)(W.u.)=12.4 *4* E_γ: from 1994Ga14.
1756.864	0^+	463.25 *3*	100 *6*	1293.560	2^+	[E2]				B(E2)(W.u.)=18 *3*
		1757.06 *21*		0	0^+	E0			0.35 *2*	
2027.48	0^+	733.89 *3*	100	1293.560	2^+	[E2]				B(E2)(W.u.)=0.49 *7*
		2027.3 *10*		0	0^+	E0				
2112.323	2^+	84.9 *5*	0.006 *3*	2027.48	0^+	[E2]		2.86 *8*		B(E2)(W.u.)=7.E+1 *4*
		355.40 *4*	5.0 *5*	1756.864	0^+	E2		0.01861		B(E2)(W.u.)=44 *5*
		818.718 *21*	75 *4*	1293.560	2^+	M1+E2‡	−1.8 *2*	0.00216		B(M1)(W.u.)=0.0021 *4*; B(E2)(W.u.)=7.7 *8*
		2112.312 *22*	100	0	0^+	E2				B(E2)(W.u.)=0.118 *7*
2225.379	2^+	113.1 *10*	<0.0017	2112.323	2^+					
		198.0 *7*	<0.014	2027.48	0^+					
		468.5 *5*	0.52 *11*	1756.864	0^+	[E2]				B(E2)(W.u.)=1.0 *6*
		931.814 *20*	100 *15*	1293.560	2^+	M1+E2	−1.9 *+5−7*			B(M1)(W.u.)=0.0015 *10*; B(E2)(W.u.)=5 *3*
		2225.33 *3*	67 *6*	0	0^+	[E2]				B(E2)(W.u.)=0.05 *3*
2266.159	3^-	972.564 *19*	100 *4*	1293.560	2^+	E1‡				B(E1)(W.u.)=0.00091 *12*
		2266 *1*	0.154 *24*	0	0^+	[E3]				B(E3)(W.u.)=22 *5*
2365.975	5^-	99.802 *11*	100	2266.159	3^-	E2‡		1.624		B(E2)(W.u.)=2.46 *16* E_γ: from 1994Ga14.
		1072.37 *3*	99 *6*	1293.560	2^+	E3‡		0.00229		B(E3)(W.u.)=1.33 *12*
2390.879	4^+	124.75 *7*	0.02 *1*	2266.159	3^-	[E1]				B(E1)(W.u.)=0.00010 *8*
		165.5 *10*	<0.00089	2225.379	2^+					
		278.49 *6*	0.26 *3*	2112.323	2^+	[E2]				B(E2)(W.u.)=9.E+1 *5*
		1097.326 *22*	100 *15*	1293.560	2^+	E2‡				B(E2)(W.u.)=38 *21*
2529.202	4^+	138.327 *8*	11.3 *4*	2390.879	4^+	M1‡		0.2284		B(M1)(W.u.)>0.0084
		262.95 *8*	0.4 *1*	2266.159	3^-	[E1]				B(E1)(W.u.)>5.6×10^{-7}
		303.80 *5*	0.4 *1*	2225.379	2^+	[E2]				B(E2)(W.u.)>0.23
		416.86 *3*	100 *5*	2112.323	2^+	E2‡		0.0126		B(E2)(W.u.)>12
		1235.6 *3*	0.32 *6*	1293.560	2^+	[E2]				B(E2)(W.u.)>0.00017
2545.71	(0^+)	433.9 *3*	3 *1*	2112.323	2^+					
		1252.118 *24*	100 *12*	1293.560	2^+					
2585.564	1^+	360.17 *3*	13 *2*	2225.379	2^+					
		828.79 *7*	6 *18*	1756.864	0^+					
		1292.00 *14*	100 *18*	1293.560	2^+					
		2585.70 *7*	66 *9*	0	0^+					
2650.438	2^+	384.22 *6*	2.0 *4*	2266.159	3^-					
		538.21 *6*	2.8 *5*	2112.323	2^+					
		1356.850 *22*	100 *19*	1293.560	2^+					
		2650.5 *4*	8 *1*	0	0^+					

$^{116}_{50}Sn_{66}$-7

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[#]	Comments
2773.33	6^-	407.351 *15*	100	2365.975	5^-	M1(+E2)[‡]	+0.02 *2*		E_γ: from 1994Ga14.
2790.55	$(0)^+$	204.96 *6*	11 *1*	2585.564	1^+				
		565.16 *12*	14 *2*	2225.379	2^+				
		678.28 *5*	68 *8*	2112.323	2^+				
		1496.91 *6*	100	1293.560	2^+				
2801.28	4^+	434.9 *7*	0.36 *8*	2365.975	5^-				
		536.0 *6*	0.35 *8*	2266.159	3^-				
		689.0 *3*	1.6 *3*	2112.323	2^+				
		1507.67 *4*	100 *4*	1293.560	2^+	E2[‡]			
2843.82	2^+	577.36 *25*	1.5 *7*	2266.159	3^-				
		1550.03 *20*	69 *18*	1293.560	2^+				
		2843.85 *7*	100 *24*	0	0^+				
2908.85	7^-	135.511 *10*	56 *6*	2773.33	6^-	M1+E2[‡]	−0.04 *3*	0.2419	B(M1)(W.u.)=0.006 *4*; B(E2)(W.u.)=0.4 *+7−4* E_γ: from 1994Ga14.
		542.867 *15*	100 *6*	2365.975	5^-	E2[‡]		0.00593	B(E2)(W.u.)=0.5 *3* E_γ: from 1994Ga14.
2960.03	2^+	309.75 *22*	2.2 *7*	2650.438	2^+				
		374.52 *4*	15 *2*	2585.564	1^+				
		693.82 *6*	17 *2*	2266.159	3^-				
		1666.38 *5*	52 *7*	1293.560	2^+				
		2960.03 *8*	100 *16*	0	0^+				
2996.27	3^+	194.83 *9*	3.8 *6*	2801.28	4^+				
		466.7 *4*	16 *6*	2529.202	4^+				
		605.34 *6*	22 *3*	2390.879	4^+				
		770.95 *5*	20 *2*	2225.379	2^+				
		1702.68 *4*	100 *16*	1293.560	2^+				
3016.44	$6^{(-)}$	650.46 *6*	100	2365.975	5^-				
3032.70	6^+	503.3 *6*	55.7 *25*	2529.202	4^+	E2			
		641.1 *5*	100 *7*	2390.879	4^+	E2			
3046.40	4^+	245.0 *3*	1.5 *3*	2801.28	4^+				
		655.65 *14*	4.5 *10*	2390.879	4^+				
		781.1 *8*	4.5 *8*	2266.159	3^-				E_γ: Not confirmed by 2006Kr04, could be a single-escape (Se) peak of the 1293.56-keV transition.
		1752.72 *12*	100 *5*	1293.560	2^+	E2			
3088.63	2^+	1331.68 *7*	19 *3*	1756.864	0^+				
		1795.02 *5*	34 *5*	1293.560	2^+				
		3088.58 *4*	100 *20*	0	0^+				
3096.93	4^+	567.7 *3*	24 *7*	2529.202	4^+				
		706.00 *22*	100 *15*	2390.879	4^+				
		730.8 *3*	40 *15*	2365.975	5^-				
		831.0 *3*	31 *6*	2266.159	3^-				

$^{116}_{50}Sn_{66}$-8

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[#]	Comments
3105.18	5⁻	331.8 *2*	100 *18*	2773.33	6⁻				
		714.4 *5*	45 *18*	2390.879	4⁺				
		738.8 *5*	73 *25*	2365.975	5⁻				
		839.6 *5*	45 *18*	2266.159	3⁻				
3157.73	3⁻,4	791.75 *6*	100	2365.975	5⁻				
3179.68	3⁺	378.24 *14*	9 *1*	2801.28	4⁺				
		788.81 *8*	27 *3*	2390.879	4⁺				
		1886.12 *10*	100 *21*	1293.560	2⁺				
3194.32	0⁺	1900.72 *5*	100	1293.560	2⁺				
3210.00	7⁻	436.68 *6*	30 *7*	2773.33	6⁻	M1,E2			
		844.001 *19*	100 *10*	2365.975	5⁻	E2[‡]		0.00191	B(E2)(W.u.)>0.060 E_γ: from 1994Ga14.
3227.45	(2⁺)	641.63 *14*	7.5 *11*	2585.564	1⁺				
		698.0 *3*	6 *1*	2529.202	4⁺				
		961.3 *4*	25 *8*	2266.159	3⁻				
		1115.16 *5*	100 *14*	2112.323	2⁺				
3227.95	8⁻	319.1 *1*	100	2908.85	7⁻	M1+E2	+0.11 *1*		
3228.06	2⁺	961.9 *4*	14 *6*	2266.159	3⁻				
		1002.6 *4*	6 *2*	2225.379	2⁺				
		1200.5 *3*	100 *8*	2027.48	0⁺				
		1934.52 *21*	21 *6*	1293.560	2⁺				
3236.02	0⁺	1123.68 *6*	100 *20*	2112.323	2⁺				
		1942.51 *13*	27 *6*	1293.560	2⁺				
3257.67	3⁻,4⁻,5⁻	891.69 *11*	100	2365.975	5⁻				
3277.6	6⁺	748.0 *6*	100	2529.202	4⁺				
3288.99	≤4	1022.83 *17*	100	2266.159	3⁻				
3309.0	6⁻	535.5 *6*		2773.33	6⁻				
		943.1 *4*		2365.975	5⁻				
3314.99	3⁺	1089.56 *14*	24 *10*	2225.379	2⁺				
		1202.9 *3*	100 *14*	2112.323	2⁺				
		2021.3 *5*	17 *7*	1293.560	2⁺				
3333.78	1⁻	3333.73 *6*	100	0	0⁺				
3344.34	2⁺	500.84 *20*	8 *1*	2843.82	2⁺				
		1078.14 *7*	94 *30*	2266.159	3⁻				
		1119.00 *7*	100 *19*	2225.379	2⁺				
		1231.94 *11*	42 *6*	2112.323	2⁺				
		2050.4 *7*	94 *25*	1293.560	2⁺				
3350.5	(5⁺)	355.0 *9*		2996.27	3⁺				
		549.1 *4*		2801.28	4⁺				
3371.42	3⁺	980.42 *22*	18 *14*	2390.879	4⁺				
		1146.03 *22*	31 *6*	2225.379	2⁺				

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Adopted Levels, Gammas (continued)

$\gamma(^{116}Sn)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[#]	Comments
3371.42	3^+	2077.82 *10*	100 *14*	1293.560	2^+				
3379.8	3^+	578		2801.28	4^+				
		853		2529.202	4^+				
		989		2390.879	4^+				
3416.2	2^+	831.03 *10*	67 *7*	2585.564	1^+				
		1150.31 *6*	100 *16*	2266.159	3^-				
		2122.3 *7*	83 *15*	1293.560	2^+				
3427.91	4^-	1060.9 *6*	50 *17*	2365.975	5^-				
		1161.80 *14*	100 *17*	2266.159	3^-				
3453.2	4,5	407.5 *3*	100	3046.40	4^+				
		1187.0 *3*	32 *8*	2266.159	3^-				
		3454.9 *15*	100 *20*	0	0^+				
3469.61	2^+	125.7 *3*	2.3 *7*	3344.34	2^+				
		668.5 *4*	8 *2*	2801.28	4^+				
		1244.25 *12*	94 *11*	2225.379	2^+				
		2175.89 *13*	100 *15*	1293.560	2^+				
3492.98	8^+	214.0 *10*		3277.6	6^+				
		264.0 *10*		3227.95	8^-				
		584.16 *12*		2908.85	7^-	E1			
3507.25	5^-	1241.08 *20*	100	2266.159	3^-				
3508.33	2^+	419.60 *12*	50 *8*	3088.63	2^+				
		548.34 *9*	41 *6*	2960.03	2^+				
		664.54 *20*	18 *3*	2843.82	2^+				
		1396.03 *15*	100 *7*	2112.323	2^+				
3513.6	$(2)^+$	2220.1	100 *24*	1293.560	2^+				
		3514.0 *5*	27 *7*	0	0^+				
3522.66	9^-	294.6 *2*	100	3227.95	8^-	M1+E2[‡]	+0.13 *2*		
3547.16	10^+	54.0 *5*	8 *6*	3492.98	8^+	E2		14.4 *6*	B(E2)(W.u.)=3 *3*
		319.1 *1*	100 *21*	3227.95	8^-	M2		0.104	B(M2)(W.u.)=0.44 *13*
3551.7	3^+	2258.1 *5*	100	1293.560	2^+				
3572.77	2^+,3	2279.16 *17*	100	1293.560	2^+				
3576.2	4^+,5	1185.3 *6*	100	2390.879	4^+				
3586.63	2^+	1000.92 *12*	73 *11*	2585.564	1^+				
		1474.45 *19*	81 *13*	2112.323	2^+				
		3586.83 *22*	100 *9*	0	0^+				
3593.76	3^+	1368.38 *9*	100	2225.379	2^+				
		1481.4 *4*	<26	2112.323	2^+				I_γ: from β^- decay. Transition is multiply placed in (n,γ).
3616.3	4^-	1350.1 *4*	100	2266.159	3^-				
3624.6	4^+	2331.0 *7*	100	1293.560	2^+				
3640.7	$4,5^+$	1249.8 *7*	100	2390.879	4^+				
3648.1	3^-,5^-	1257.0 *5*		2390.879	4^+				

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.
3648.1	3⁻,5⁻	1282.5 *8*		2365.975	5⁻	
3658.05	2⁺	857.19 *15*	31 *5*	2801.28	4⁺	
		1433.40 *14*	18 *4*	2225.379	2⁺	
		1545.42 *7*	50 *14*	2112.323	2⁺	
		3658.5 *15*	100 *20*	0	0⁺	
3706.9	3⁺	1440.7 *7*	100	2266.159	3⁻	
3711.89	(1)⁺	868.04 *6*	45 *5*	2843.82	2⁺	
		3712.06 *16*	100 *21*	0	0⁺	
3712.4	8⁺	679.7 *2*	100	3032.70	6⁺	E2
3730.6	≤3	2437.0 *4*	100	1293.560	2⁺	
3739	3⁺	1348	100	2390.879	4⁺	
3742.90	3⁻	1476.75 *19*	100 *16*	2266.159	3⁻	
		1631.0 *10*	53 *9*	2112.323	2⁺	
		2449.0	44 *7*	1293.560	2⁺	
3747.9	≤3	2454.3 *4*	100	1293.560	2⁺	
3776.78	1⁺	1191.08 *17*	34 *8*	2585.564	1⁺	
		3777.1 *3*	100 *25*	0	0⁺	
3787.2	(6⁻)	1421.2 *5*	100	2365.975	5⁻	
3805.5	4⁺	1693.1 *8*		2112.323	2⁺	
		2511.9 *6*		1293.560	2⁺	
3806.02	2⁺	3805.95 *18*	100	0	0⁺	
3809.3	2⁺,3	1697.0 *8*	100	2112.323	2⁺	
3836.67	0⁺	2543.06 *23*	100	1293.560	2⁺	
3843.66	2⁺,3	1618.7 *6*	18 *7*	2225.379	2⁺	
		1731.8 *4*	22 *6*	2112.323	2⁺	
		2549.85 *22*	100 *18*	1293.560	2⁺	
3850.9	1,2⁺	1584.1 *6*	40 *15*	2266.159	3⁻	
		3852.0 *8*	100 *50*	0	0⁺	
3886.9	5⁺	509	100	3379.8	3⁺	
		791	20	3096.93	4⁺	
		841	15	3046.40	4⁺	
		1086	22	2801.28	4⁺	
		1114	22	2773.33	6⁻	
		1358	11	2529.202	4⁺	
		1494	75	2390.879	4⁺	
		1521	91	2365.975	5⁻	
		1618	68	2266.159	3⁻	
3903.58	2⁺	1678.2 *3*	27 *6*	2225.379	2⁺	
		3903.5 *4*	100 *17*	0	0⁺	
3904.91	1	1877.36 *8*	92 *12*	2027.48	0⁺	
		2148.06 *6*	100 *16*	1756.864	0⁺	
3916.91	2⁺	1650.74 *6*	100	2266.159	3⁻	
3945.8	1⁺,2⁺,3	2652.2 *5*	100	1293.560	2⁺	
3950.52	1⁻,2,3	1684.6 *8*	27 *13*	2266.159	3⁻	
		1724.6 *3*	100 *17*	2225.379	2⁺	
		2657.4 *3*	22 *11*	1293.560	2⁺	
3952.9	2⁺	439.32 *17*	21 *6*	3513.6	(2)⁺	
		3952.5 *4*	100 *17*	0	0⁺	
3973.7	4⁺	1861.4 *8*	100	2112.323	2⁺	
3985.5		1076.72 *13*	100	2908.85	7⁻	
4001.10	1(−)	1210.6 *7*	7 *4*	2790.55	(0)⁺	
		2244.21 *7*	100 *13*	1756.864	0⁺	
		2707.48 *22*	78 *17*	1293.560	2⁺	
4013.27	2⁺	1787.54 *25*	11 *2*	2225.379	2⁺	
		2719.7 *4*	29 *11*	1293.560	2⁺	
		4013.4 *2*	100 *11*	0	0⁺	
4015.1	2,3,4⁺	1902.7 *8*		2112.323	2⁺	
		2721.5 *9*		1293.560	2⁺	
4023	5⁺	136		3886.9	5⁺	
		284		3739	3⁺	
		746		3277.6	6⁺	
4026.4	1	4026.5 *3*	100	0	0⁺	
4028.5	≤3	2734.9 *5*	100	1293.560	2⁺	
4037.2	2⁺,3⁺	1771.2 *5*	32 *6*	2266.159	3⁻	
		2743.5 *4*	100 *36*	1293.560	2⁺	
4075.87	1⁺,2⁺,3⁺	417.4 *4*	100 *35*	3658.05	2⁺	
		1963.67 *23*	73 *13*	2112.323	2⁺	
4077	4⁺,5⁺	189		3886.9	5⁺	
		799		3277.6	6⁺	
		1028		3046.40	4⁺	
		1549		2529.202	4⁺	
		1685		2390.879	4⁺	
		1712		2365.975	5⁻	
4113.89	1,2⁺	1568.02 *20*	11 *3*	2545.71	(0⁺)	
		2357.01 *6*	100 *13*	1756.864	0⁺	
		4113.9 *2*	71 *13*	0	0⁺	
4128.28	1,2⁺	4128.2 *2*	100	0	0⁺	
4143.9	1⁺,2⁺,3	2850.3 *5*	100	1293.560	2⁺	
4162.108	2	1576.74 *21*	21 *5*	2585.564	1⁺	
		1896.49 *19*	46 *6*	2266.159	3⁻	
		2868.48 *2*	100 *22*	1293.560	2⁺	
4170.9	2⁺	2877.5 *4*	100 *21*	1293.560	2⁺	
		4170.4 *6*	82 *23*	0	0⁺	
4190.5	2⁺,3⁺,4⁺	1924.3 *6*	37 *15*	2266.159	3⁻	

$^{116}_{50}Sn_{66}$-11

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.
4190.5	$2^+,3^+,4^+$	2896.9 *4*	100 *22*	1293.560	2^+	4496.0	(10^-)	1267.9 *5*	100	3227.95	8^-	
4200.09	1	1409.66 *17*	53 *11*	2790.55	$(0)^+$	4506.2	10^+	793.8 *2*	100	3712.4	8^+	E2
		4199.79 *22*	100 *17*	0	0^+	4511.36		1860.4 *3*	34 *5*	2650.438	2^+	
4201.52	1,2	1551.3 *6*	68 *40*	2650.438	2^+			1926.3 *4*	28 *8*	2585.564	1^+	
		1616.06 *14*	55 *7*	2585.564	1^+			2754.7 *3*	100 *22*	1756.864	0^+	
		1935.46 *22*	60 *12*	2266.159	3^-			4511.2 *4*	61 *17*	0	0^+	
		1976.06 *9*	100 *21*	2225.379	2^+	4548.38	1^-	4548.28 *14*	100	0	0^+	
		2907.2 *5*	31 *9*	1293.560	2^+	4584.13		4584.03 *24*	100	0	0^+	
4211.59	$0^+,1,2$	840.14 *11*	24 *3*	3371.42	3^+	4649.21		2535.9 *5*	17 *8*	2112.323	2^+	
		2918.07 *22*	100 *22*	1293.560	2^+			2620.7 *6*	50 *20*	2027.48	0^+	
4238.15	2^+	2944.8 *3*	100 *33*	1293.560	2^+			3356.5 *6*	24 *6*	1293.560	2^+	
		4237.8 *3*	100 *33*	0	0^+			4649.15 *10*	100 *10*	0	0^+	
4251.68	1	835.07 *19*	13 *3*	3416.2	2^+	4701.83	11^+	1154.9 *1*	100	3547.16	10^+	
		4251.64 *12*	100 *19*	0	0^+	4765	7^+	1487	100	3277.6	6^+	
4278.51	$1,2^+$	2984.70 *23*	100 *17*	1293.560	2^+			1537	24	3227.95	8^-	
		4279.0 *4*	20 *6*	0	0^+			1555	80	3210.00	7^-	
4280.7	$2,3^-,4$	2014.5 *7*	100	2266.159	3^-	4840	$(8,10^-)$	1325		3522.66	9^-	
4285.0	$(7)^+$	260	7	4023	5^+			1354		3492.98	8^+	
		1008	27	3277.6	6^+			1936		2908.85	7^-	
		1057	100	3227.95	8^-	4852.7		3558.9 *5*	100 *25*	1293.560	2^+	
		1252	23	3032.70	6^+			4852.6 *3*	100 *25*	0	0^+	
		1375	29	2908.85	7^-	4877.07		2291.68 *25*	50 *7*	2585.564	1^+	
		1512	25	2773.33	6^-			4876.88 *17*	100 *15*	0	0^+	
		1918	48	2365.975	5^-	4879.5	(11^-)	1356.8 *5*	100	3522.66	9^-	
4297.1	≤3	3003.5 *5*	100	1293.560	2^+	4881.95	12^+	1335.2 *1*	100	3547.16	10^+	
4308.5		1517.9 *3*	55 *10*	2790.55	$(0)^+$	4892.55	1^-	3598.4 *5*	100 *17*	1293.560	2^+	
		3015.1 *5*	100 *23*	1293.560	2^+			4892.54 *22*	99 *14*	0	0^+	
4392.62		1165.15 *25*	18 *3*	3227.45	(2^+)	4925.92		2275.6 *6*	28 *6*	2650.438	2^+	
		1303.86 *15*	13 *3*	3088.63	2^+			3632.26 *20*	94 *12*	1293.560	2^+	
		1863.5 *4*	15 *3*	2529.202	4^+			4925.8 *2*	100 *15*	0	0^+	
		2001.8 *3*	14 *3*	2390.879	4^+	4952.02		2301.62 *26*	37 *6*	2650.438	2^+	
		3099.3 *3*	47 *9*	1293.560	2^+			3658.3 *3*	100 *22*	1293.560	2^+	
		4392.54 *12*	100 *17*	0	0^+	5055.53		1711.16 *9*	100 *14*	3344.34	2^+	
4410.98		1882.9 *7*	35 *11*	2529.202	4^+			2211.72 *11*	37 *6*	2843.82	2^+	
		3117.6 *5*	66 *12*	1293.560	2^+	5066.3		3309.4 *4*	100 *33*	1756.864	0^+	
		4410.81 *16*	100 *30*	0	0^+			5066.2 *6*	33 *11*	0	0^+	
4430.45		1586.4 *3*	42 *8*	2843.82	2^+	5161.27	12^+	459.3 *1*	54 *5*	4701.83	11^+	
		2402.2 *7*	100 *28*	2027.48	0^+			1614.7 *1*	100 *5*	3547.16	10^+	
		4431.0 *4*	95 *24*	0	0^+	5174.4		3417.6 *5*	37 *13*	1756.864	0^+	
4480.19		1136.2 *4*	11 *4*	3344.34	2^+			5172.9 *20*	100 *55*	0	0^+	
		2254.72 *24*	52 *8*	2225.379	2^+	5242.3		2282.4 *3*	100 *16*	2960.03	2^+	
		3186.55 *12*	100 *18*	1293.560	2^+			3947.9 *6*	60 *15*	1293.560	2^+	

$^{116}_{50}Sn_{66}$-12

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.
5329.90	12^+	1783.5 *2*	100	3547.16	10^+	
5357.9		3132.7 *6*	17 *62*	2225.379	2^+	
		3331.0 *7*	100 *25*	2027.48	0^+	
		4064.0 *3*	37 *6*	1293.560	2^+	
5390.4	12^+	884.2 *3*	100	4506.2	10^+	E2
5395.5		2051.5 *7*	100 *32*	3344.34	2^+	
		4101.8 *3*	59 *9*	1293.560	2^+	
5474.9		4181.5 *3*	100 *20*	1293.560	2^+	
		5474.0 *5*	27 *7*	0	0^+	
5484.24		3456.68 *22*	100 *10*	2027.48	0^+	
		5484.5 *9*	30 *10*	0	0^+	
5493.2		5493.1 *6*	100	0	0^+	
5495.91	13^+	166.1 *1*	27.1 *14*	5329.90	12^+	
		334.7 *1*	31 *3*	5161.27	12^+	
		613.8 *1*	73 *4*	4881.95	12^+	
		794.0 *1*	100 *9*	4701.83	11^+	
5500		≈2285	100	3210.00	7^-	
5522.19	13^+	360.9 *1*	100 *5*	5161.27	12^+	
		820.4 *1*	22.7 *23*	4701.83	11^+	
5562.72		2977.2 *4*	60 *20*	2585.564	1^+	
		3296.7 *4*	47 *20*	2266.159	3^-	
		4268.9 *3*	100 *20*	1293.560	2^+	
5573.6	(12^+)	1068.4 *3*	100	4506.2	10^+	
5668.1		3554.5 *7*	100 *33*	2112.323	2^+	
		3911.6 *4*	95 *20*	1756.864	0^+	
5707.2		1005.3 *2*	100	4701.83	11^+	
5716.7		3491.2 *6*	43 *21*	2225.379	2^+	
		4423.0 *4*	100 *14*	1293.560	2^+	
5723.24	(12^-)	844.6 *1*	100	4877.07		
5767.19		3500.4 *3*	79 *11*	2266.159	3^-	
		3740.6 *6*	18 *8*	2027.48	0^+	
		4473.57 *12*	100 *16*	1293.560	2^+	
5780	$(^-)$	≈2260	100	3522.66	9^-	
5823.68	14^+	301.5 *1*	100 *4*	5522.19	13^+	
		662.4 *2*	19 *3*	5161.27	12^+	
		941.6 *1*	57 *3*	4881.95	12^+	
5923.6		3811.2 *6*	60 *20*	2112.323	2^+	
		4629.9 *3*	100 *20*	1293.560	2^+	
5929.3	(13^+)	1050.7 *2*	100	4879.5	(11^-)	
5968.4		3008.2 *5*	100 *40*	2960.03	2^+	
		3578.1 *7*	52 *22*	2390.879	4^+	
		3855.6 *8*	80 *40*	2112.323	2^+	
5977.57	13^-	270.3 *2*	3 *5*	5707.2		
		1095.9 *2*	18.8 *18*	4881.95	12^+	
		1098.9 *1*	100 *4*	4879.5	(11^-)	
5989.53		3764.8 *6*	6 *2*	2225.379	2^+	
		3876.8 *4*	9 *2*	2112.323	2^+	
		4695.85 *10*	100 *11*	1293.560	2^+	
5995.58		3968.18 *20*	72 *12*	2027.48	0^+	
		4701.85 *12*	100 *12*	1293.560	2^+	
6041.59		2944.5 *3*	100 *30*	3096.93	4^+	
		3650.4 *8*	34 *13*	2390.879	4^+	
		3816.3 *3*	100 *30*	2225.379	2^+	
6098.30	14^+	1217.1 *2*	100	4881.95	12^+	
6116.8		3026.8 *6*	91 *23*	3088.63	2^+	
		4360.1 *5*	100 *23*	1756.864	0^+	
		4823.0 *3*	94 *19*	1293.560	2^+	
6130.97		4374.15 *20*	100 *19*	1756.864	0^+	
		4837.0 *3*	33 *7*	1293.560	2^+	
6151.9		3926.4 *6*	29 *15*	2225.379	2^+	
		4858.2 *4*	100 *16*	1293.560	2^+	
6159.57		4865.97 *11*	100 *10*	1293.560	2^+	
		6158.96 *24*	28 *5*	0	0^+	
6198.74		3549.0 *4*	26 *6*	2650.438	2^+	
		3932.5 *4*	29 *7*	2266.159	3^-	
		4441.68 *11*	100 *14*	1756.864	0^+	
		4905.9 *5*	13 *4*	1293.560	2^+	
6213.01	14^-	114.9 *1*	10.5	6098.30	14^+	
		235.4 *1*	89 *3*	5977.57	13^-	
		505.6 *3*	2.9	5707.2		
		717.0 *1*	100 *4*	5495.91	13^+	
6292.7	(10^-)	2770	100	3522.66	9^-	
6313.4	14^+	925.4 *1*	100	5390.4	12^+	
6344.08	15^-	131.1 *1*	100 *3*	6213.01	14^-	
		366.6 *1*	25.0 *13*	5977.57	13^-	
		520.3 *1*	66 *3*	5823.68	14^+	
6357.7		4246.1 *5*	61 *14*	2112.323	2^+	
		4600.4 *3*	100 *25*	1756.864	0^+	
6358.0	(14^+)	970.0 *1*	100	5390.4	12^+	
6373.0		3528.8 *4*	86 *25*	2843.82	2^+	
		5079.6 *4*	100 *25*	1293.560	2^+	
6405.59		4293.18 *15*	100	2112.323	2^+	
6428.05		3626.7 *5*	40 *10*	2801.28	4^+	
		3637.0 *4*	65 *12*	2790.55	$(0)^+$	

$^{116}_{50}Sn_{66}$-13

Adopted Levels, Gammas (continued)

γ(^{116}Sn) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
6428.05		3842.6 *4*	70 *20*	2585.564	1^+
		4162.4 *6*	100 *25*	2266.159	3^-
6436.31		3592.8 *3*	100 *10*	2843.82	2^+
		3646.6 *6*	20 *10*	2790.55	$(0)^+$
		4209.8 *5*	46 *13*	2225.379	2^+
		5142.2 *4*	44 *12*	1293.560	2^+
6468.7		3677.7 *4*	100 *21*	2790.55	$(0)^+$
		4076.9 *6*	70 *19*	2390.879	4^+
		4712.7 *5*	93 *16*	1756.864	0^+
		5176.4 *15*	58 *25*	1293.560	2^+
6482.59		3393.8 *4*	43 *14*	3088.63	2^+
		3521.4 *7*	36 *14*	2960.03	2^+
		3832.3 *6*	29 *7*	2650.438	2^+
		4092.4 *4*	100 *21*	2390.879	4^+
		4257.5 *7*	29 *7*	2225.379	2^+
		4725.6 *3*	57 *14*	1756.864	0^+
		5188.4 *4*	34 *7*	1293.560	2^+
6510.55		3720.5 *6*	44 *13*	2790.55	$(0)^+$
		3859.9 *8*	19 *13*	2650.438	2^+
		4483.12 *23*	100 *19*	2027.48	0^+
		5216.8 *1*	94 *13*	1293.560	2^+
6532.01		3351.4 *5*	69 *15*	3179.68	3^+
		4306.74 *25*	100 *15*	2225.379	2^+
		5238.4 *6*	28 *6*	1293.560	2^+
6659.52	16^-	315.4 *1*	100 *3*	6344.08	15^-
		447 *1*	1.9 *4*	6213.01	14^-
6663.1	(15^+)	305.1 *1*	100	6358.0	(14^+)
6717.24		4959.7 *3*	32 *49*	1756.864	0^+
		5423.60 *11*	100 *12*	1293.560	2^+
6754.07		3793.6 *6*	33 *11*	2960.03	2^+
		4641.5 *2*	100 *22*	2112.323	2^+
6754.07		5461.1 *4*	89 *22*	1293.560	2^+
7035.01		4449.50 *12*	63 *9*	2585.564	1^+
		4769.4 *10*	26 *14*	2266.159	3^-
		4809.42 *10*	100 *11*	2225.379	2^+
7082.15	17^-	422.6 *1*	100 *3*	6659.52	16^-
		738.1 *1*	16.7 *20*	6344.08	15^-
7173.9		3938.0 *5*	100 *25*	3236.02	0^+
		5062.1 *8*	60 *15*	2112.323	2^+
		5416.3 *6*	75 *25*	1756.864	0^+
7224.7		4135.8 *4*	100 *30*	3088.63	2^+
		5931.4 *6*	23 *8*	1293.560	2^+
7229.2	16^+	915.8 *1*	100	6313.4	14^+
7246.3		5134.2 *6*	100 *33*	2112.323	2^+
		5952.3 *6*	100 *33*	1293.560	2^+
7325.27		4674.6 *3*	100 *17*	2650.438	2^+
		4780.2 *15*	44 *20*	2545.71	(0^+)
		4934.0 *4*	50 *11*	2390.879	4^+
		5298.4 *5*	71 *18*	2027.48	0^+
7457.3	(16^+)	1143.9 *2*	100	6313.4	14^+
7659.94		4816.1 *3*	100 *14*	2843.82	2^+
		5114.1 *3*	92 *17*	2545.71	(0^+)
		5268.8 *4*	48 *16*	2390.879	4^+
7692.77		5427.8 *7*	60 *10*	2266.159	3^-
		5467.1 *2*	100 *10*	2225.379	2^+
		5580.6 *5*	50 *10*	2112.323	2^+
8227.9	18^+	998.7 *1*	100	7229.2	16^+
8585.6		1503.4 *1*	100	7082.15	17^-
8661.2		1579.0 *2*	100	7082.15	17^-
9141.4		480.2 *1*	100	8661.2	
9321.9	(20^+)	1094.0 *10*	100	8227.9	18^+

† Average of all available data; otherwise noted.

‡ From ce data in ^{116}Sb decay and (α,2nγ).

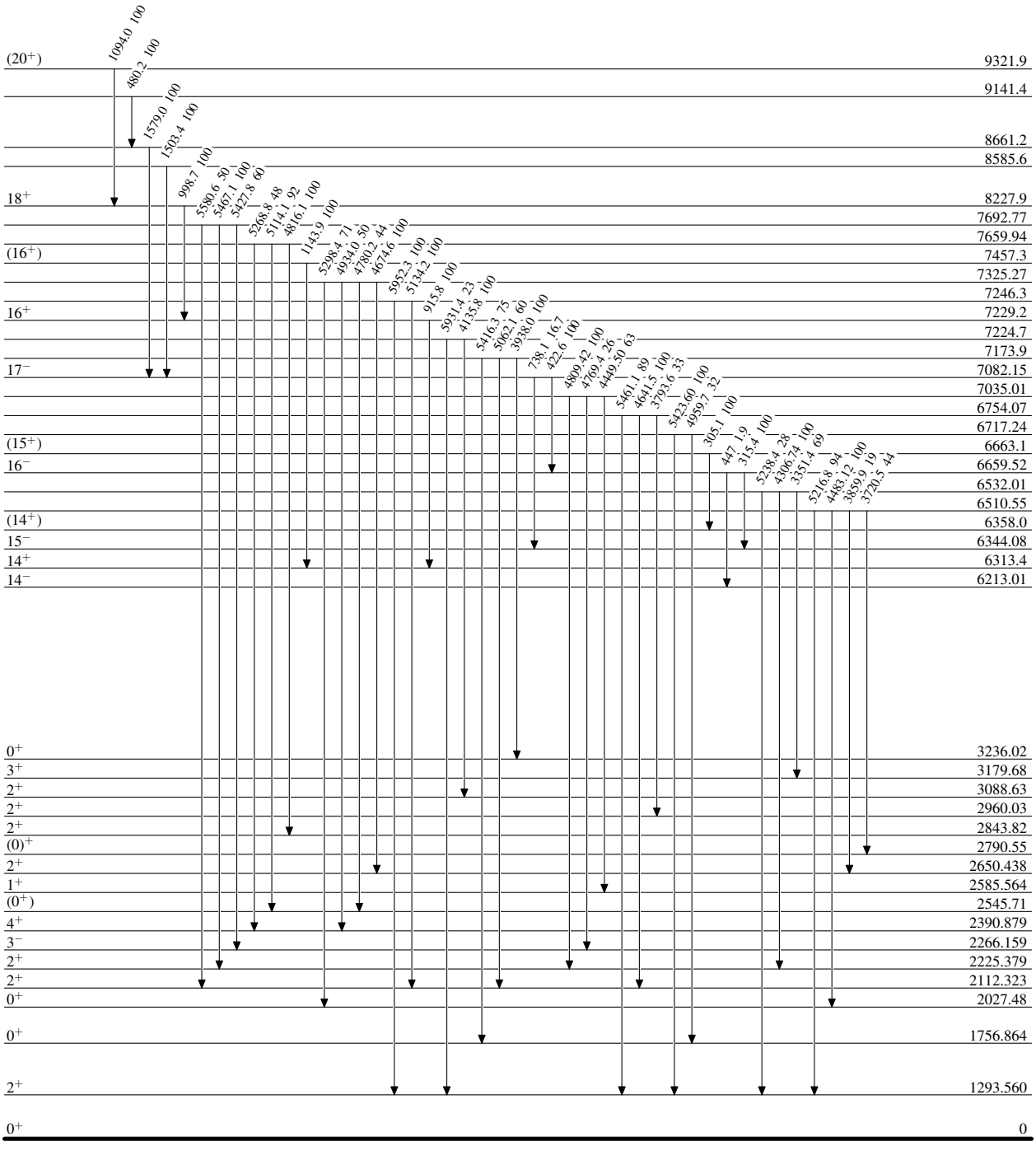
Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{116}_{50}Sn_{66}$-14

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

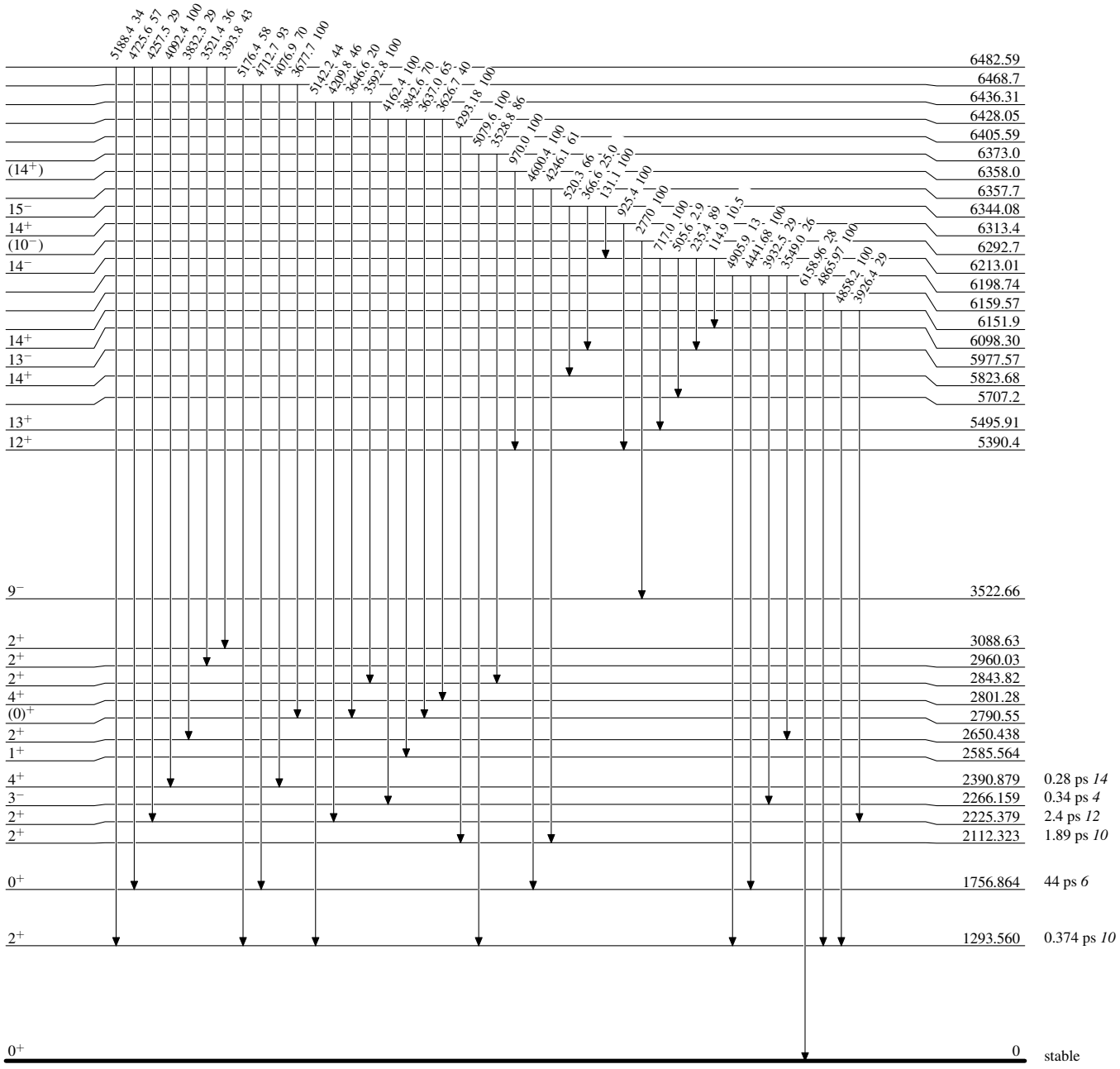


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

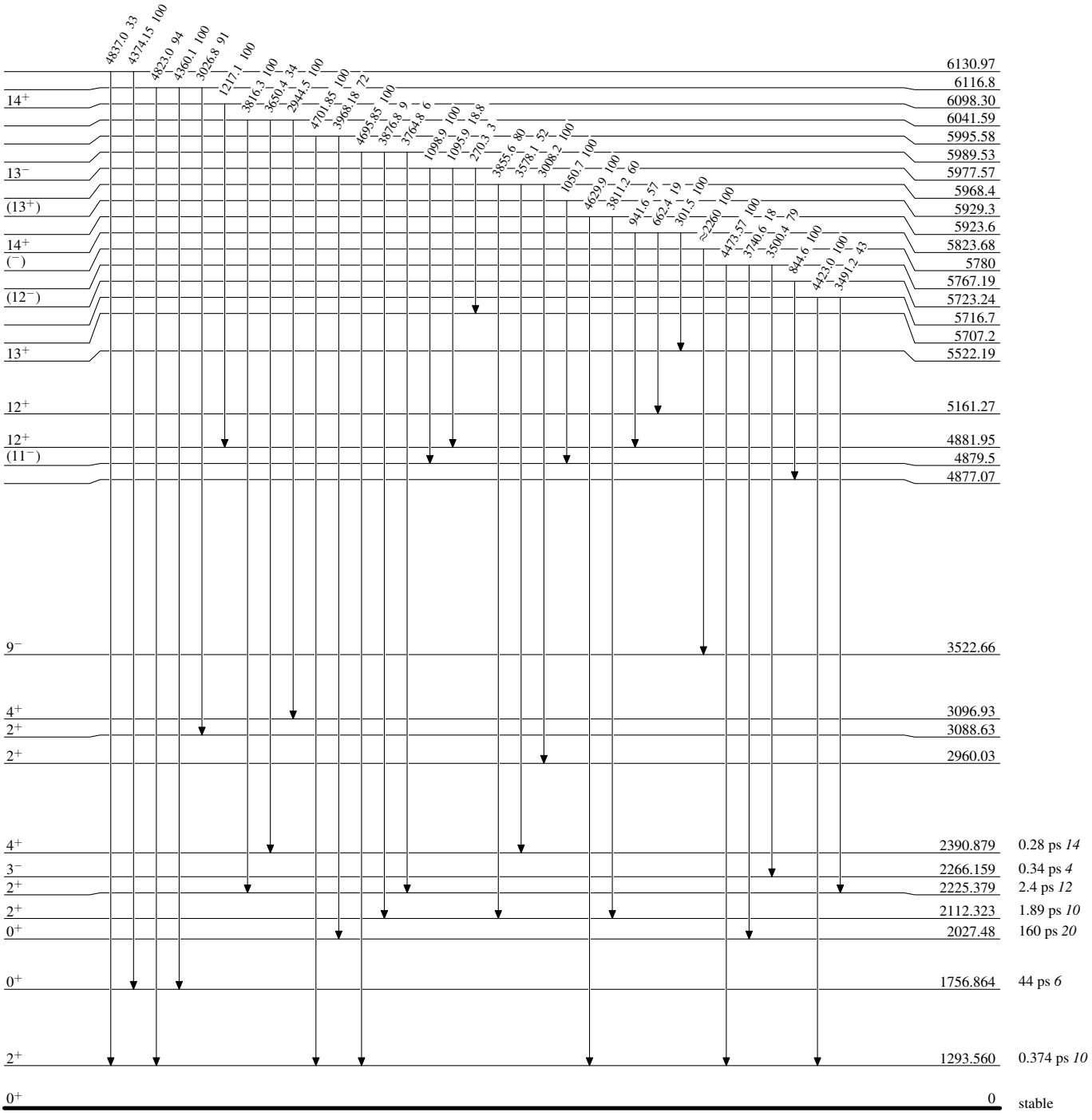


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

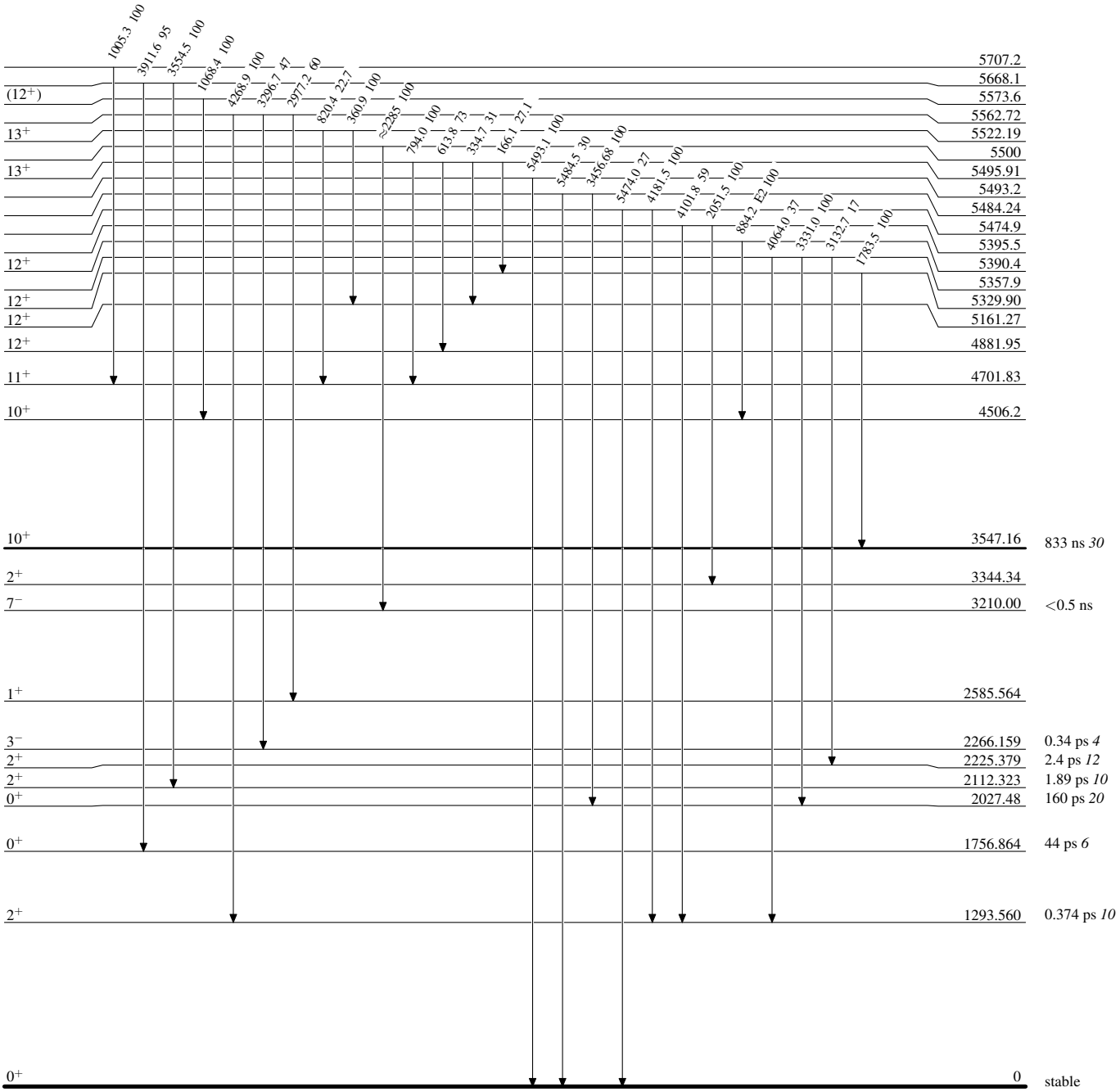


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

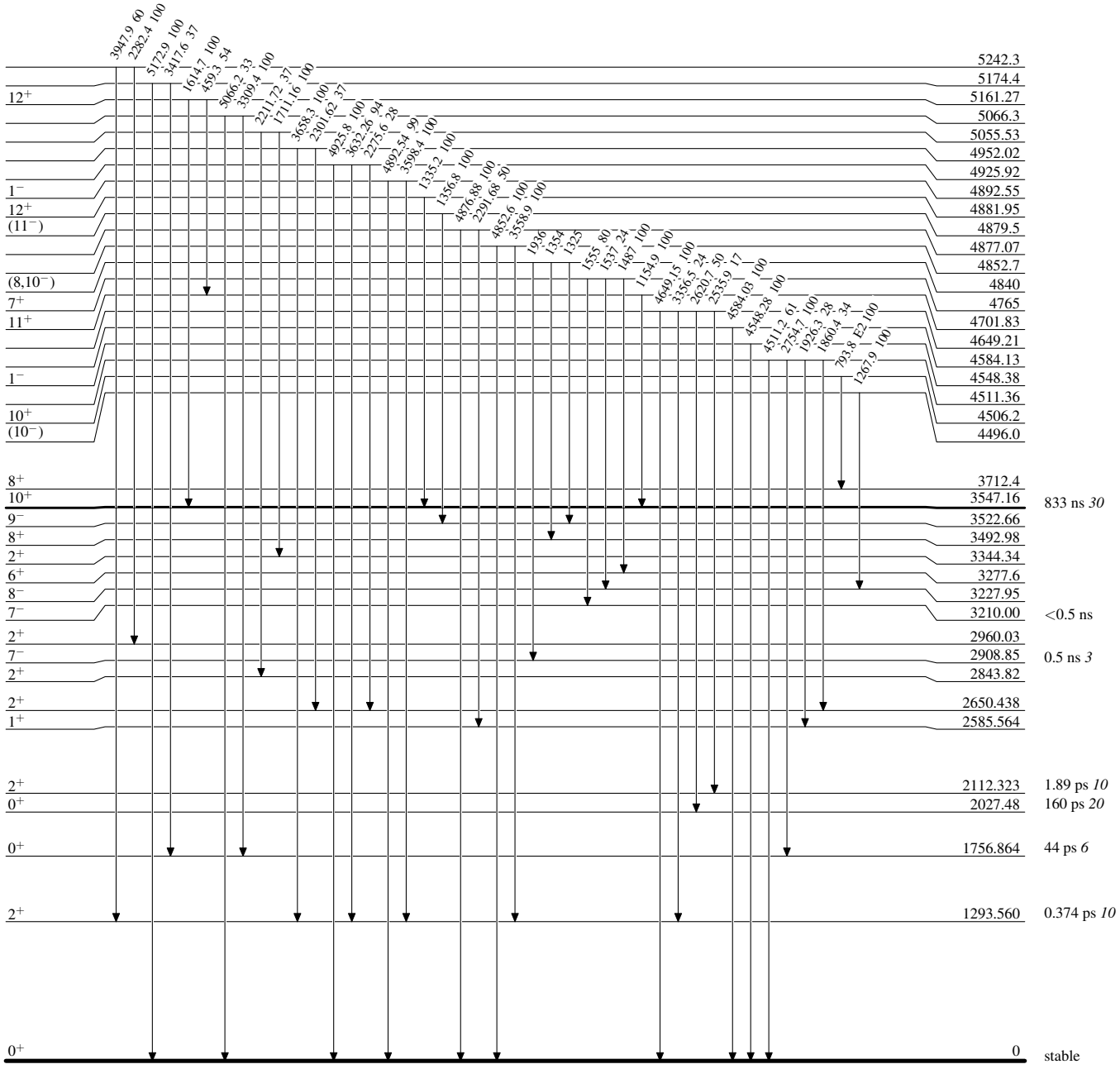


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

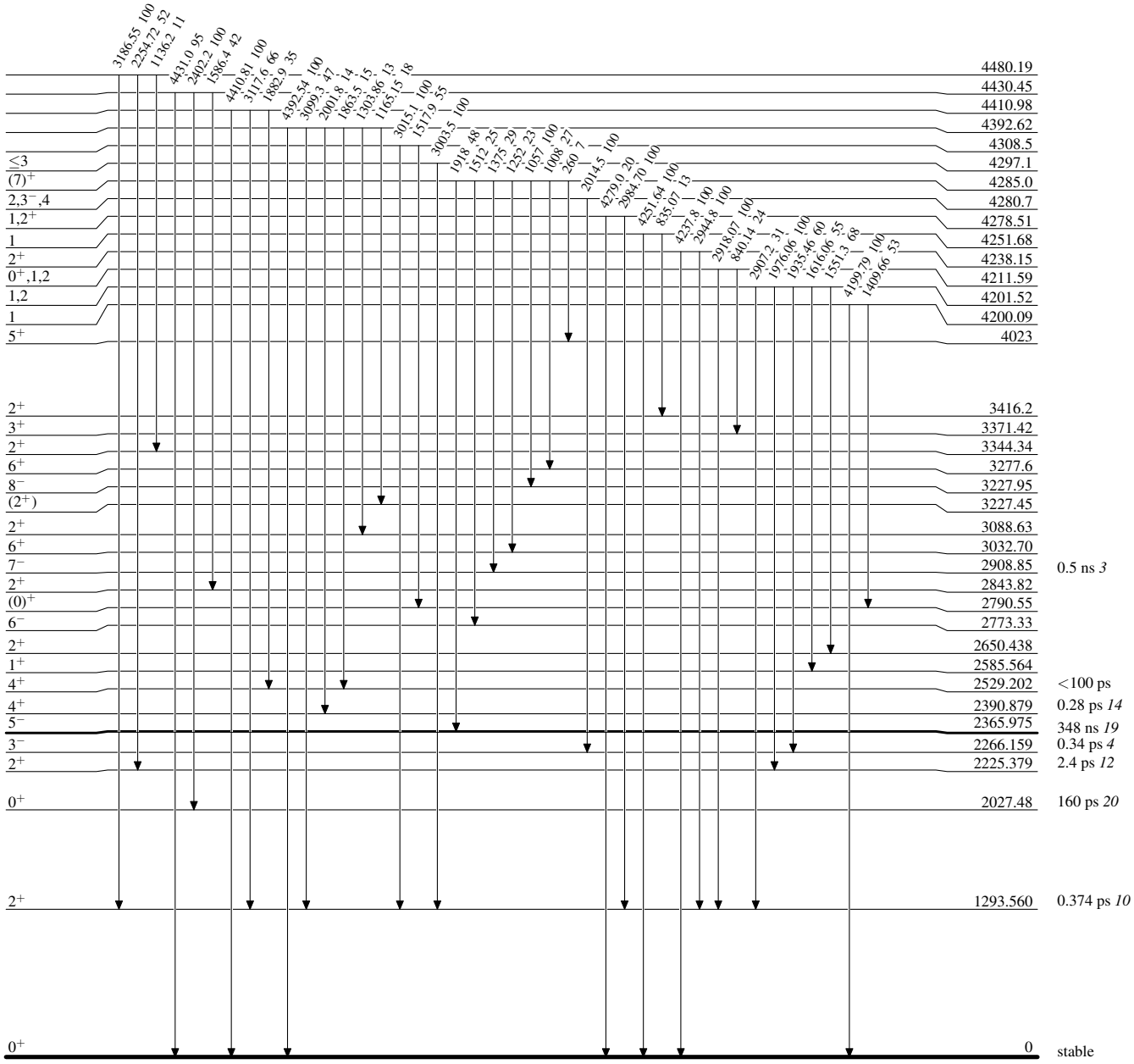


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

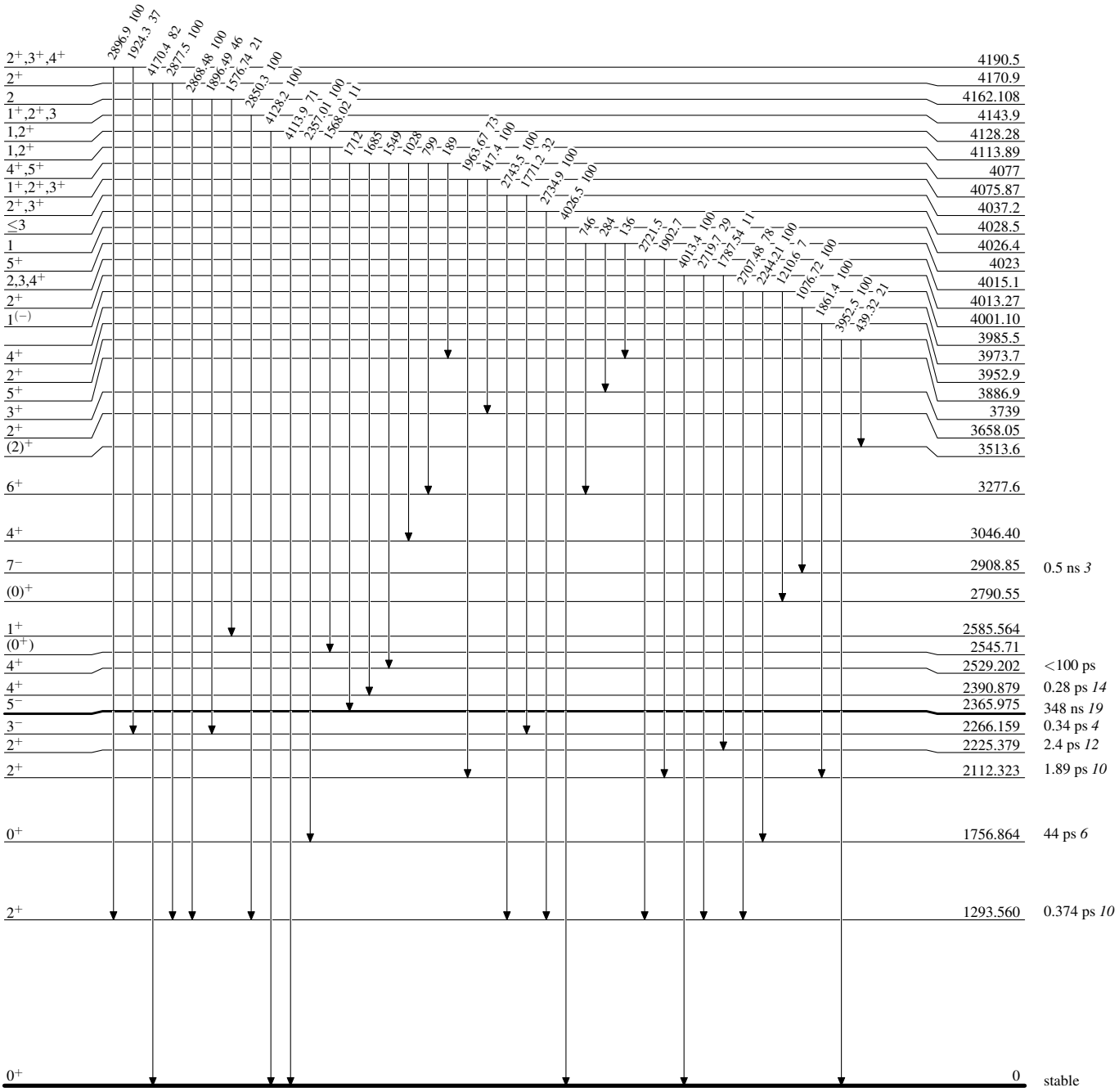


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

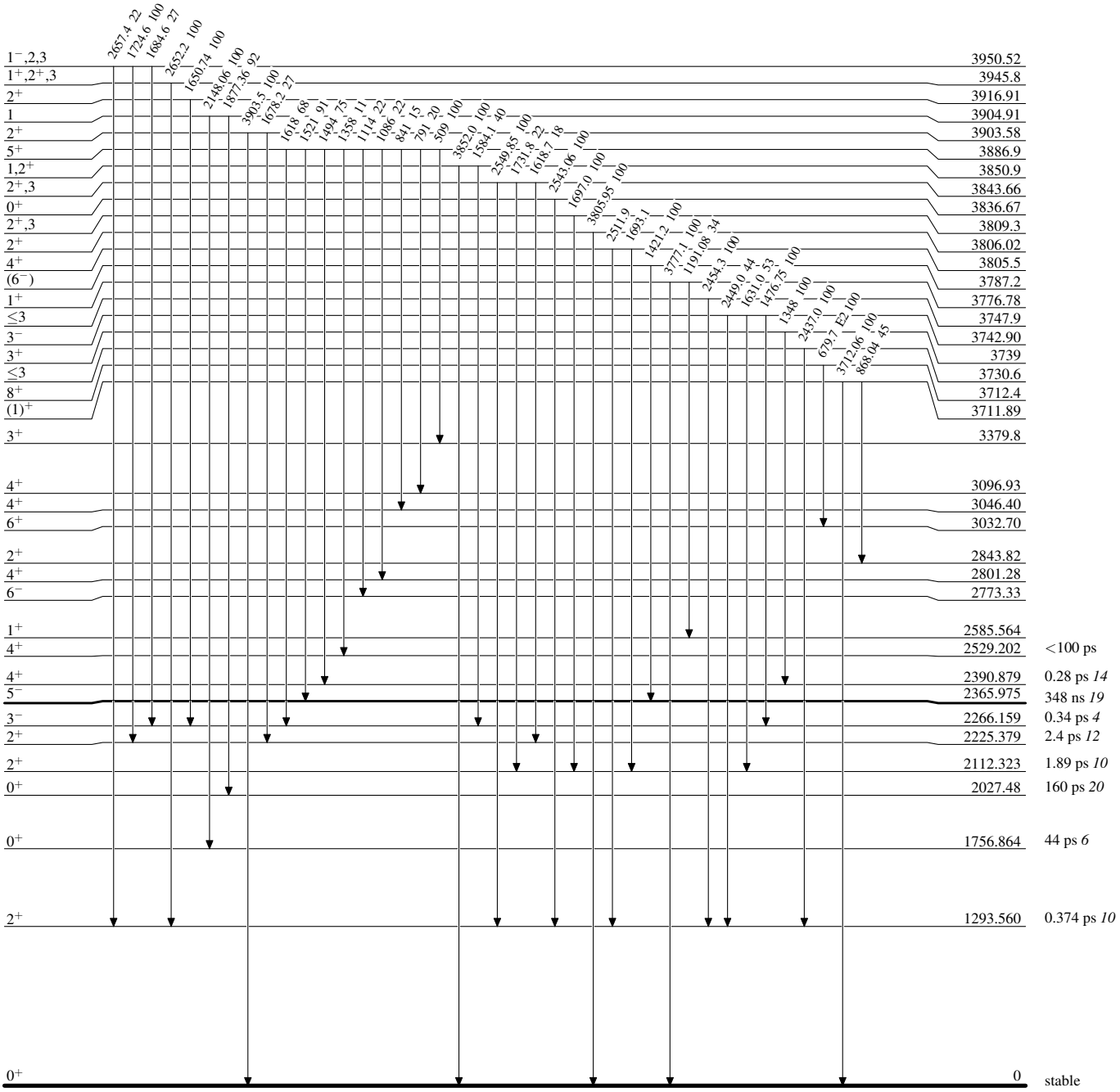


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

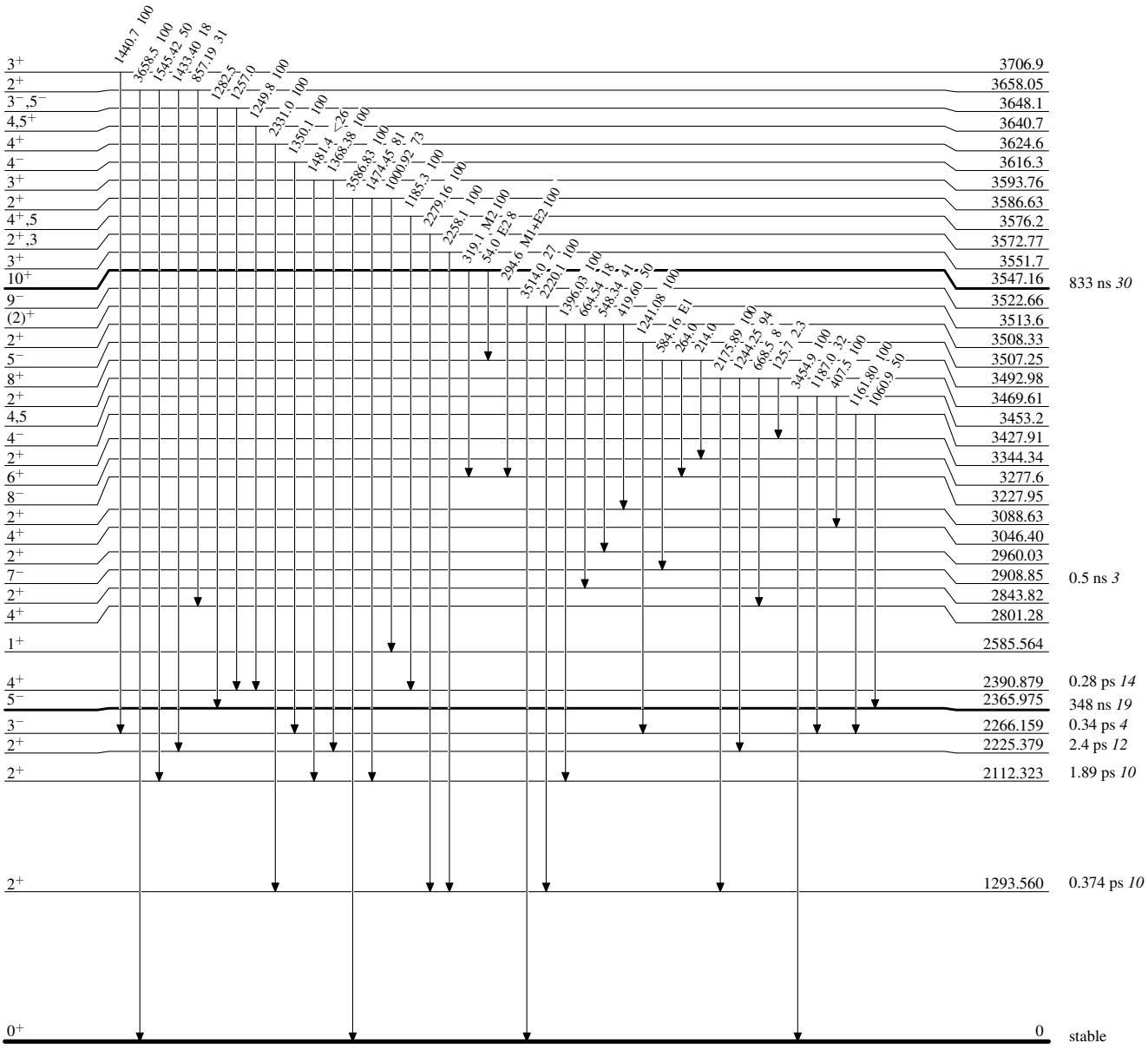


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

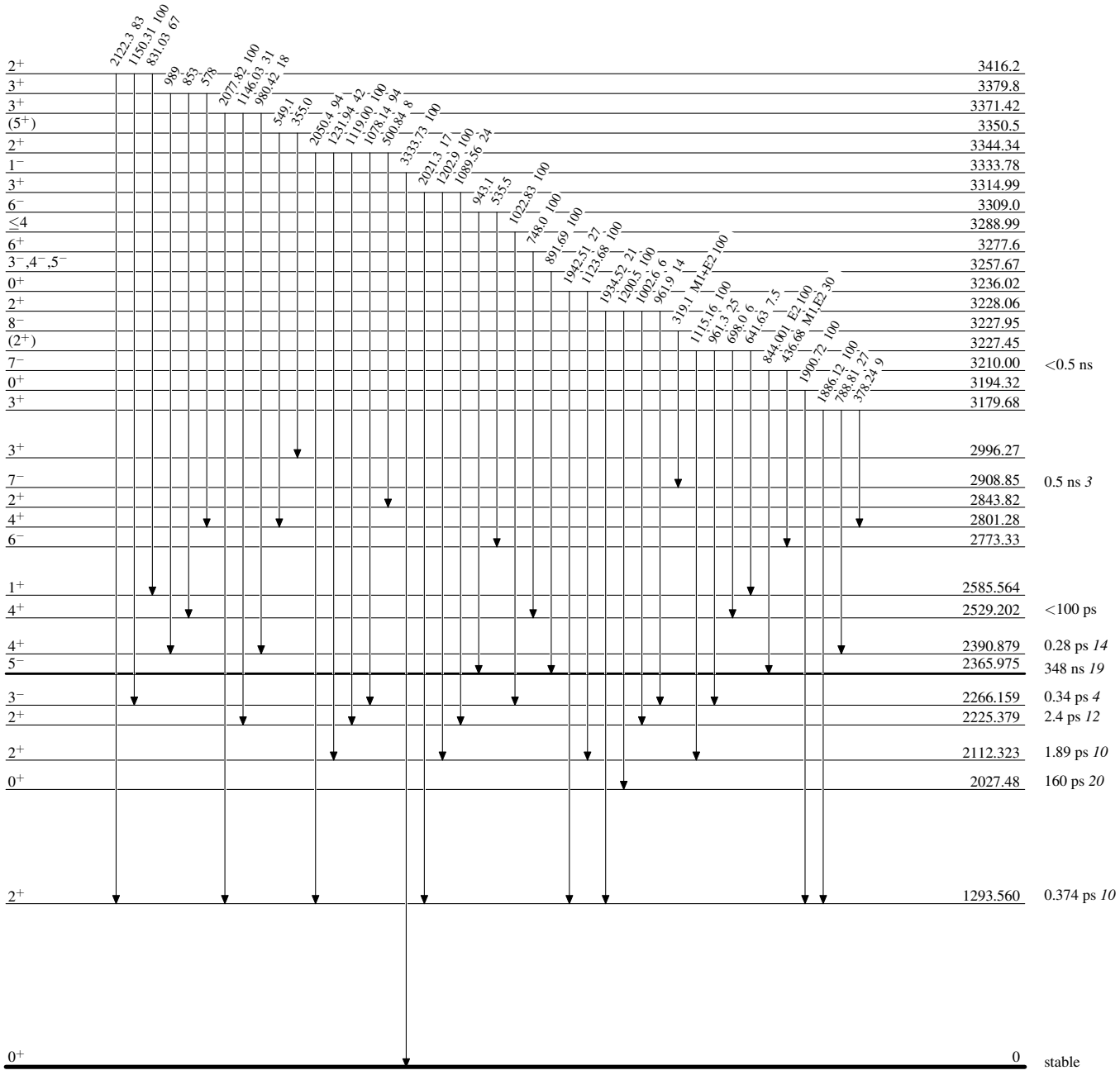


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

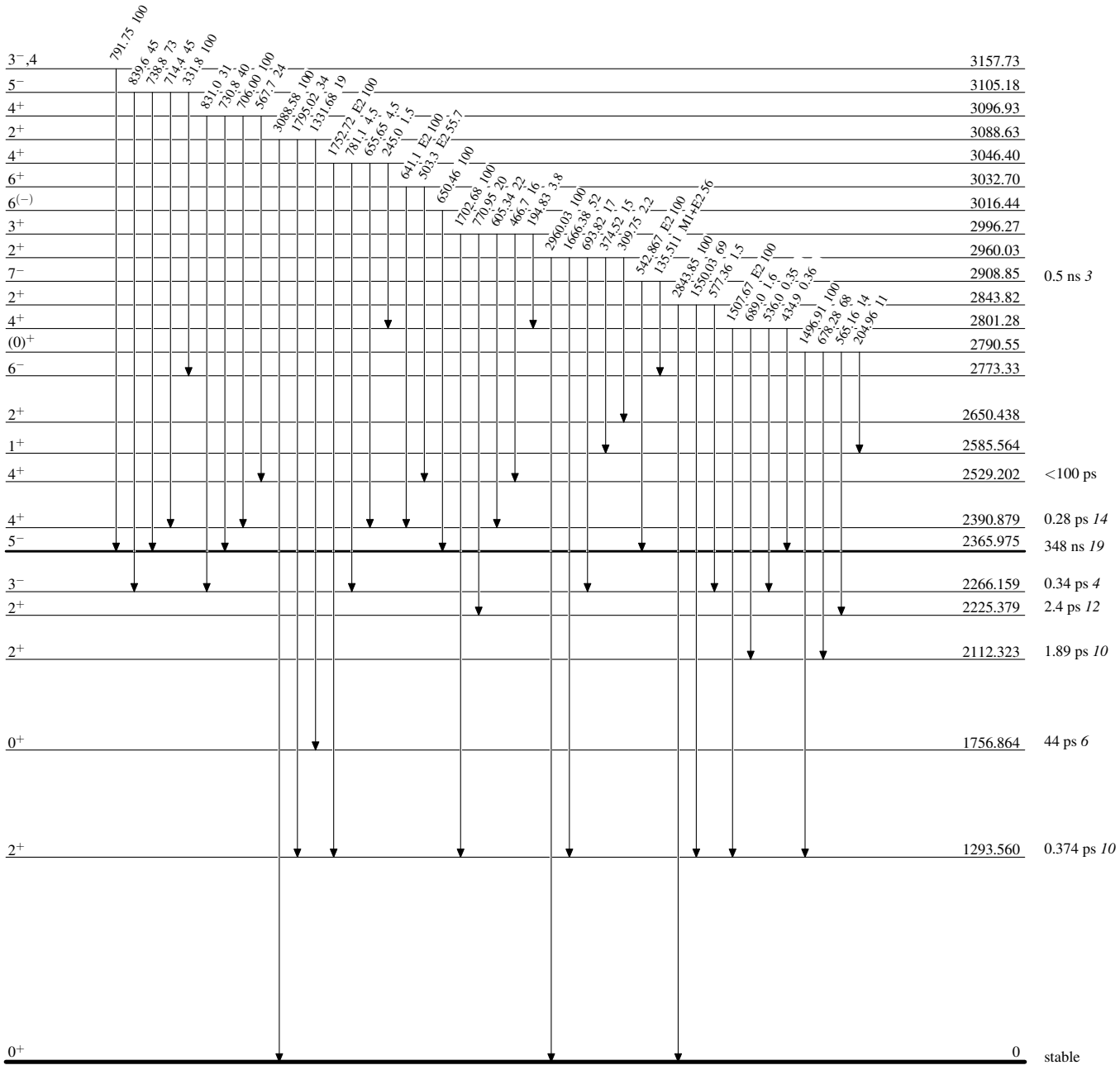


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

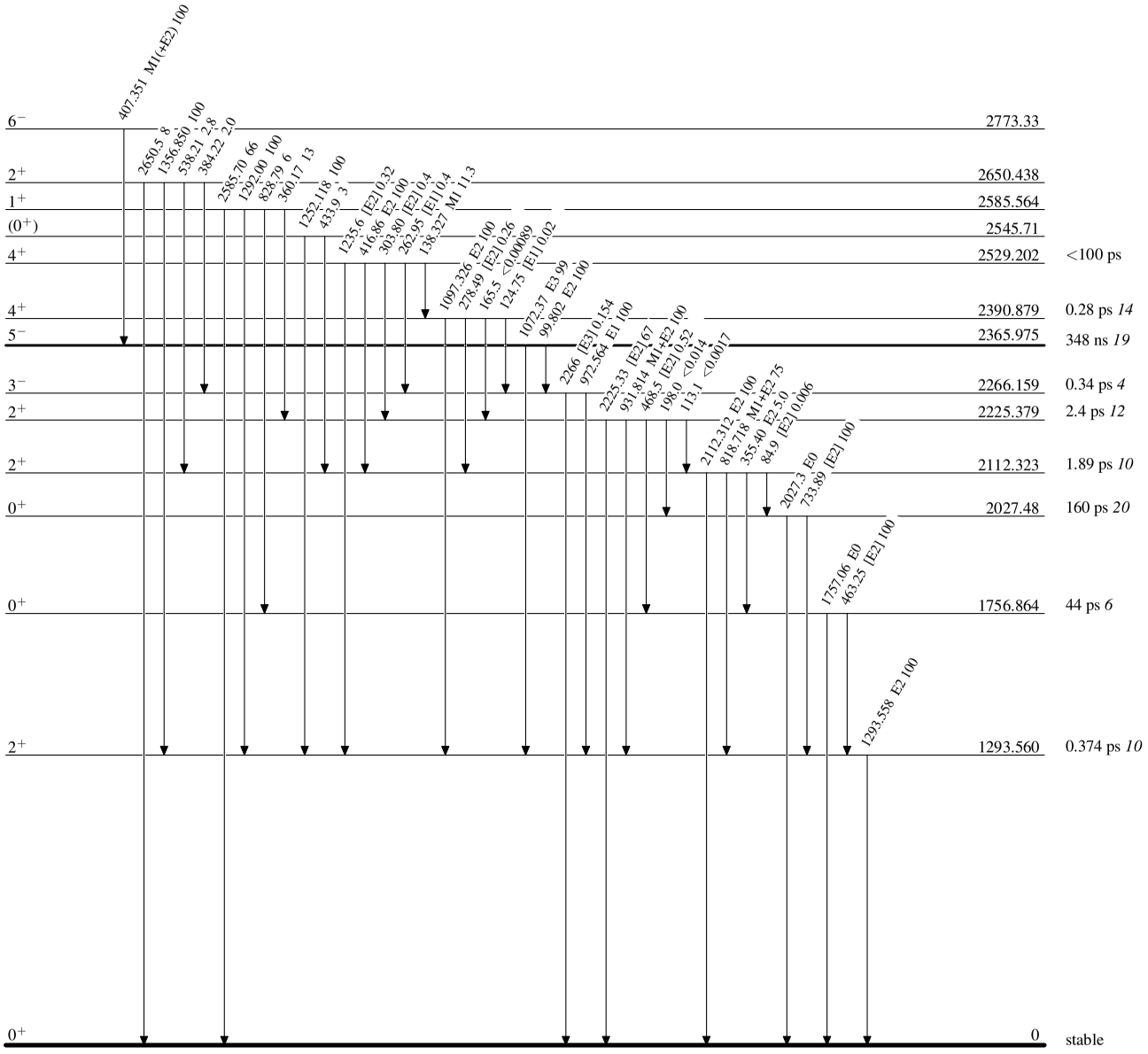


$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas

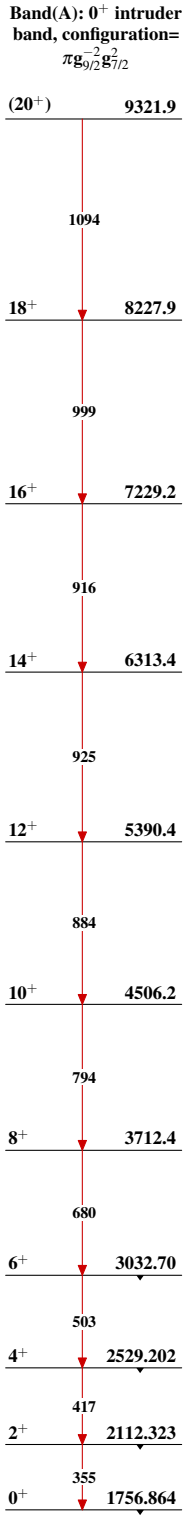
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{116}_{50}Sn_{66}$

Adopted Levels, Gammas



$^{116}_{50}Sn_{66}$