Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Update	E. Browne, J. K. Tuli		1-Dec-2013

Q(β^-)=−6128.0 *16*; S(n)=11387.73 *5*; S(p)=9532.38 *20*; Q(α)=−6291.0 *3* 2012Wa38

Datasets given as xref=k and l, both from XUNDL, based on 2013Sc08 and 2013Sc20 ^{60}Ni3c were included after the publication of this evaluation in Nuclear Data Sheets. This dataset has been revised accordingly.

Others:

Nuclear Structure.

2012Bh08, 2012Ca27, 2012Do04, 2012Gu16, 2012Ni03, 2011Gu20, 2011Kh10, 2011Mi12, 2011Ni21, 2011Qu04, 2010Gu13, 2010So04, 2010Lo03, 2009Ku13, 2008Ma17, 2006An27, 2003Sa08, 2002Be59, 2002De27, 2002Ma64.

Level energies and densities.

2011Ba39, 2011Be41, 2011Bh06, 2011Na02, 2007Te10, 2004Sa40, 2003Na24, 2003Pe07, 2002No08.

Compilations of B(E2) values: 2012Go17, 2012Pr08.

Mass measurements: 2007Gu09, 2005Gu36, 2004He32.

Nuclear Reactions: 2012Fu04, 2012Sc01, 2011Ch57, 2011Gu15, 2010Gu03, 2010Pr07, 2008Av03, 2007Po09, 2005Ha54.

^{60}Ni(d,d): 2012Ku21, 2006Ch28.

^{60}Ni(p,p′): 2011Mu10, 2010Be11, 2009Ku13, 2008Li05, 2004Ko34, 2002Sa49.

^{60}Ni(^{3}He,^{3}He): 2010Ha19.

^{60}Ni(α,α'): 2010Sa34, 2006Lu01.

^{61}Ni(p,d): 2009Le14.

^{60}Ni(^{17}O,^{17}O′): 2006Ha54, 2006Lu08.

^{60}Ni(^{18}O,^{18}O′): 2009Pe14, 2002Al01, 2002Ro29.

^{60}Ni(n,n): 2006Hu14.

^{59}Co(d,p): 2007Vo08.

^{58}Ni(^{18}O,^{16}O): 2006Pe02, 2005Al03, 2002Al01.

Discovery of ^{60}Ni: 2012Ga06.

1998Go18: Measured photon rates and energy spectra from radiative muon capture.

^{56}Fe(α,γ): 1974Fo03 for splitting of GDR, 1978KeZQ threshold effects.

Some L-values and arguments for J^π assignments

E(level) Target J^π=	L(p,t) L(t,p) 0^+	L(^{3}He,d)@ $7/2^-$	L(p,d)& $3/2^-$	$\gamma(\theta)$ and lin pol in (^{7}Li,2npγ)	Other	Adopted
0	0	3	1 f		a,k	0^+
1332	2	1+3	1 f	2^+	b	2^+
2158	2	1	3 g	2^+	e	2^+
2284	0	3	1		l	0^+
2505	4	1+3	3 g	4^+	c	4^+
2626		1+3	3 g	3^+	e	3^+
3119	4	1				4^+
3124			1+3		d,h,q	2^+
3194		1+3	1+3		d,h,u	1^+
3269	2		1+3		e,h	2^+
3318		1			j?,l	0^+
3393	2		1+3		e,h	2^+
3588					k?,l	0^+
3670		1	(3)	(4^+)	m	4^+
3700					p	4^+
3736		1	1+3		e,h	2^+
3875			1+3		e,h	$1^+,2^+$
3925		1			e	$2^+,3^+$
4007			1+3		e,h,t	2^+
4020			1		d,h,t	1^+
4039	3		4			3^-
4078			1+3		d,h	$1^+,2^+$

4112		1+3		s,h,v	2^+
4165	1		5^+		5^+
4265			6^+		6^+
4319	1?	1+3		e,h	2^+
4335				v,e,h	2
4341	(0)				(0^+)
4355		1+3			$1^+,2^+,3^+$
4493	1+3?	1+3		d,h,p	2^+
4535		1+3		v,e,h	2^+
4548				d,h	$1^+,2^+$
4579	2			e	2^+
4760				e,h	1,2

Some L-values and arguments for J^π assignments (continued)

E(level)	L(p,t) L(t,p)	L(^{3}He,d)@	L(p,d)&	$\gamma(\theta)$ and lin pol in (^{7}Li,2npγ)	Other	Adopted
Target J^π=	0^+	$7/2^-$	$3/2^-$			
4844					e,h	1,2
4849					e	1,2,3
4958	4					4^+
4985				$(6^+,8^+)$	i	(6^+)
5015	4				p	(5^-)
5048					e,h	1,2
5069	(1)					(1^-)
5110					r	8^-
5120	4				p	4^+
5244	4					4^+
5348				7^-		7^-
5396	3				p	3^-
5449	2					2^+
5530	(0,2)				w	(2^+)
5662				5,7		5,7
5785				(7^+)		(7^+)
5800					p	2^+
5973					p	5^-
6181	(1)					(1^-)
6331					p	2^+
6810				$5^-,7^-,9^-$		$5^-,7^-,9^-$
7550					n	8^-
8280					o	(1^+)
8430	3					3^-
8433					n	8^-
8959					n	8^-
9208					n	8^-
11207	2					2^+
11620					o	(1^+)
11860					o	(1^+)
12333					n	8^-
12515					n	8^-
13908					n	8^-
14817					n	8^-
15499					n	8^-
16110					n	8^-

Question marks signify uncertain identification with E(level).
@ J^π of ^{59}Co(g.s.) is $7/2^-$.
& J^π of ^{61}Ni(g.s.) is $3/2^-$.
a. 0^+ from g.s. of even-even nucleus.
b. 1,2,3 from β^- decay of ^{60}Co(2^+) with logft=7.25 *6*.
c. 3^-,4,5,6,7^- from β^- decay of ^{60}Co(5^+) with logft=7.510 *1*.
d. $1^+,2^+,3^+$ from ε decay of ^{60}Cu(2^+) with logft<5.9.
e. 1,2,3 from ε decay of ^{60}Cu(2^+) with 5.9<logft<7.4.
f. J of transferred neutron is 3/2 from (pol p,d).

g. J of transferred neutron is 5/2 from (pol p,d).
h. Not 3^+ from γ decay to g.s.
i. 8^+ excluded from branch to 4^+ 2505 level.
j. 0^+ from $\sigma(\theta)$ in ^{56}Fe(^{6}Li,d).
k. 0^+ from $\sigma(\theta)$ in ^{58}Fe(^{3}He,n).
l. 0^+ from pair conversion and no corresponding γ (1981Pa10).
m. 4^+ from L(d,^{6}Li)=4 and $\sigma(\theta)$ in ^{60}Ni(e,e′).
n. 8^- from ^{60}Ni(e,e′).
o. (1^+) from $\sigma(\theta)$ and A(θ) in ^{60}Ni(p,p′), (pol p,p′).
p. From L(α,α')
q. Not 1^+ from γ decay from 5244, 4^+ level.
r. From $\sigma(\theta)$ in ^{60}Ni(π^+,$\pi^{+\prime}$), (π^-,$\pi^{-\prime}$).
s. Not 1^+ from γ decay to 2506, 4^+ level.
t. From (γ,γ')
u. From (n,n′γ), Hauser-Feshbach-Moldauer calculations
v. γ to 4^+
w. γ to 3^+

^{60}Ni Levels

For properties of 15 resonances in the range E(n)=0-18 keV from ^{59}Ni(n,γ), see 1981MuZQ.
Level configurations given in comments are from ^{58}Ni(α,^{2}He) and ^{60}Ni(pol p,p′) reactions.

Cross Reference (XREF) Flags

A	^{60}Co β^- decay (1925.28 d)	N	^{59}Co(α,t)	Others:	
B	^{60}Co β^- decay (10.467 min)	O	^{59}Co(^{3}He,dγ)	AA	^{56}Fe(^{16}O,^{12}C)
C	^{60}Cu ε decay	P	^{58}Ni(α,2pγ)	AB	^{60}Ni(n,n′γ)
D	^{60}Ni(p,p′), (pol p,p′)	Q	^{60}Ni(e,e′)	AC	^{60}Ni(π^+,$\pi^{+\prime}$), (π^-,$\pi^{-\prime}$)
E	^{28}Si(^{36}Ar,4pγ)	R	^{60}Ni(d,d′), (pol d,d′)	AD	^{64}Zn(d,^{6}Li)
F	^{59}Ni(n,γ) E=thermal	S	^{60}Ni(α,α')	AE	^{58}Fe(^{16}O,^{14}C)
G	^{60}Ni(p,p′γ)	T	^{56}Fe(^{6}Li,d)	AF	^{60}Ni(γ,γ')
H	^{59}Co(p,γ)	U	^{56}Fe(^{7}Li,2npγ)	AG	^{60}Ni(n,n′)
I	^{28}Si(^{35}Cl,3pγ)	V	^{58}Ni(α,^{2}He), (α,2p)	AH	^{61}Ni(^{3}He,α)
J	^{58}Ni(t,p), (pol t,p)	W	^{58}Ni(^{12}C,^{10}C)	AI	^{60}Ni(^{3}He,^{3}He′)
K	^{61}Ni(p,d), (pol p,d)	X	^{60}Ni(^{16}O,^{16}O′), (^{6}Li,^{6}Li′)	AJ	Coulomb excitation
L	^{62}Ni(p,t)	Y	^{50}Cr(^{12}C,2pγ)	AK	^{60}Ni(pol γ,γ'):res
M	^{59}Co(^{3}He,d)	Z	^{51}V(^{12}C,2npγ)	AL	^{60}Ni(γ,γ'),(pol γ,γ'):XUNDL-6

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0.0[l]	0^+	stable	ABCDEFGHIJKLMNOPQRSTUVWXYZ	XREF: Others: AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL
1332.514[l] *4*	2^+	0.735 ps *21*	ABCDEFGHIJKLMNOPQRSTUVWXYZ	XREF: Others: AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL μ=+0.32 *6* (2001Ke02,2011StZZ); Q=+0.03 *5* (1974Le13,2011StZZ) Configuration=(ν p$_{3/2}$)^2. T$_{1/2}$: From 2008Or02, recommended value based on all known measurements. T$_{1/2}$=0.77 *4* Wt. av.: 0.90 ps *+21−14* in (n,n′γ), 0.91 ps *2* from DSA in Coul. ex. (2001Ke08), 0.715 ps *16* in ^{60}Ni(γ,γ') (1970Me08), 0.9 ps *3* $\gamma\gamma$(t) (1976Kl04), 0.77 ps *6* from B(E2)=0.087 *7* (1974Si01), 0.73 ps *2* from B(E2)=0.0928 *20* (1974Li13), 0.69 ps *5* DSA (1973Fi15).

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				μ: other: 0.18 *24* from transient field integral PAC (1978Ha13). Q: from Coulomb excitation reorientation (1989Ra17,2011StZZ). Other value: −0.104 *18* from electron scattering (1972Li12).
2158.632[l] *18*	2+	0.59 ps *17*	ABCDEFGHIJKLMNOPQRSTU XYZ	XREF: Others: AA, AB, AG, AH, AJ, AK, AL $T_{1/2}$: calculated from measured B(E2)↑ in ^{60}Ni(e,e′). $T_{1/2}$: >1.0 ps (1989Ko54) in (n,n′γ).
2284.80 *4*	0+	>1.5 ps	CD FG JKLM O RST	XREF: Others: AB, AG, AK, AL $T_{1/2}$: >0.69 ps (1989Ko54) in (n,n′γ).
2505.753[l] *4*	4+	3.3 ps *10*	A CDEFGHIJKLMNOPQRSTUVWXYZ	XREF: Others: AA, AB, AD, AE, AG, AJ $T_{1/2}$: from Coul. ex. (2001Ke08). Others: 1.1 ps *3* from B(E4)=0.00165 *30* (from (e,e′), average of 0.0015 *3* (1969To08), 0.0018 *3*(1961Cr01)) and Iγ(2506γ)=2.0×10^{-6} *4* (1978Fu05)). Others (from DSA): 0.9 ps *+12−4* (1979Mo06), 3.3 ps *5* (1975Iv04), 0.5 ps *+19−3* (1973Ro20), ≤4 ps (1980Ke06), 0.4 ps *+4−2* (1989Ko54). Jπ: configuration=((ν $p_{3/2}$)(ν $f_{5/2}$)).
2626.06[l] *5*	3+	≈0.6 ps	CDEFGHIJKLM OP R U YZ	XREF: Others: AB, AG, AH $T_{1/2}$: from ≤0.7 ps in ^{56}Fe(^{7}Li,2npγ) and >0.5 ps in ^{60}Ni(p,p′γ), DSA. Other: 0.6 ps *+5−3* (1989Ko54) in (n,n′γ).
3119.87[l] *7*	4+	0.24 ps *10*	EFGHIJ LMnOPQR TU WXYZ	XREF: Others: AA, AB $T_{1/2}$: from ^{56}Fe(^{7}Li,2npγ), DSA; 0.04 ps *1* (1989Ko54) in (n,n′γ).
3123.698 *25*	2+	0.23 ps *+17−10*	CD FG K M P S U	XREF: Others: AA, AB, AF, AK, AL $T_{1/2}$: From (p,p′γ),
3185.98[n] *6*	(3+)[k]	0.14 ps *4*	CdEFGHIjk no U	XREF: Others: AB $T_{1/2}$: others: 1.6 ps *7* from ^{56}Fe(^{7}Li,2npγ), DSA, 0.12 ps *+5−2* (1989Ko54) in (n,n′γ). Jπ: J^{π}=3+ in ^{28}Si(^{35}Cl,3pγ), (p,γ).
3193.87 *3*	1+[k]	53 fs *14*	Cd FG jk M o	XREF: Others: AB, AF, AK, AL $T_{1/2}$: other: 19 fs *7* From ^{60}Ni(γ,γ′).
3269.19 *10*	2+	71 fs *21*	CD FGH JKLM O TU	XREF: Others: AB, AF, AK, AL $T_{1/2}$: other: 0.10 ps *+3−2* (1989Ko54) in (n,n′γ).
3317.829 *25*	0+	0.24 ps *+28−11*	D FG J M R T x	XREF: Others: AA, AB, AE, AK $T_{1/2}$: 0.10 ps *3* (1989Ko54) in (n,n′γ).
3381 *5*		0.23 ps *+35−11*	G N R x	
3393.14 *3*	2+	0.13 ps *+6−4*	CD FGH JKLM S	XREF: Others: AB, AK, AL XREF: S(3350). $T_{1/2}$: 0.08 ps *6* (1989Ko54) in (n,n′γ).
3587.72[a] *3*	0+	<40 ps	CD FG T	XREF: Others: AA, AB $T_{1/2}$: from ^{60}Ni(p,p′γ), pγ(t).
3619.46 *9*	3+[k]	0.2 ps *+5−1*	CDEFGH K O U	XREF: Others: AB
3671.16[m] *11*	4+	0.06 ps *4*	BCDE GHI K MNOPQ U	XREF: Others: AA, AB $T_{1/2}$: 0.11 ps *+7−3* (1989Ko54) in (n,n′γ).
3702.9[b] *10*	4+		O RS X	XREF: Others: AB Jπ: also L(^{16}O,^{16}O′)=4 for E=3690. *6+* in (n,n′γ).
3730.82[n] *8*	4+[k]	0.21 ps *+29−9*	DE GHIjk M O	XREF: Others: AB
3734.44 *6*	2+	0.11 ps *4*	C FG jkL	XREF: Others: AB, AK $T_{1/2}$: 0.10 ps *2* (1989Ko54) in (n,n′γ).

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$[#]	XREF	Comments
3798.0 *10*	1	118 fs *15*		XREF: Others: AL
3871.050 *22*	2+[k]	>3.0 ps	CD FG JK	XREF: Others: AB, AK T$_{1/2}$: 0.21 ps *+16–9* in (p,p′γ), 0.04 ps *1* (1989Ko54) in (n,n′γ).
3887.36 *7*	2+[k]	0.07 ps *+7–4*	C FG l	XREF: Others: AB
3895 *4*		59 fs *25*	D G l r	
3908 *3*	1	27 fs *5*		XREF: Others: AL
3925.18 *9*	2+,3+	0.19 ps *+19–8*	CD FGH M r	T$_{1/2}$: also from (p,p′γ): 0.09 ps *+16–12*.
4006.444 *24*	2+	21 fs *7*	CD FG JK N	XREF: Others: AF, AK, AL Jπ,T$_{1/2}$: from ^{60}Ni(γ,γ′). T$_{1/2}$: 28 fs *5* (1989Ko54) in (n,n′γ), 20 fs*10* in (p,p′γ).
4019.886 *24*	1+	12 fs *3*	CD F K	XREF: Others: AF, AK, AL T$_{1/2}$,Jπ: from ^{60}Ni(γ,γ′).
4035 *4*		25 fs *14*	G	
4039.89 *6*	3−	22 fs *10*	ABCD FGH JKLM QRST VWX	XREF: Others: AA, AB T$_{1/2}$: 33 fs *+15–12* from (p,p′γ), 38 fs *11* in (n,n′γ).
4077.99 *5*	1+,2+	>12 fs	CD FGH K	XREF: Others: AB T$_{1/2}$: 14 fs *7* (1989Ko54) in (n,n′γ).
4111.96 *9*	2+		D FG K	
4165.50[m] *8*	5+	0.8 ps *4*	DE GHI K M OP U	XREF: Others: AB T$_{1/2}$: from ^{56}Fe(^{7}Li,2npγ), DSA. 1.4 ps *+14–6* from ^{58}Ni(α,2pγ), DSA, 0.09 ps *+9–3* (1989Ko54) in (n,n′γ), DSA.
4186.19 *24*	(4+)		E	
4191.2 *10*			D G O	
4265.00[l] *8*	6+	0.45 ps *+11–21*	DE P U YZ	T$_{1/2}$: from ^{51}V(^{12}C,2npγ), DSA. 0.5 ps *3* from ^{56}Fe(^{7}Li,2npγ), DSA.
4294.5 *3*			D H M	
4300.8[b] *7*			O S X	Jπ: L(α,α′)=2+4 and L(^{3}He,d)=1 for E=4300; L(^{16}O,^{16}O′)=4 for E=4320.
4318.58 *5*	2+		CD FG JK X	XREF: Others: AK
4335.52 *4*	2		C F	
4341 *4*	(0+)	29 fs *+31–21*	D G L N	
4355.56 *14*	2+	45 fs *+26–18*	CD G JK R	
4400.0 *7*			O	
4407.46[n] *8*	5+[j]		D HI M P	
4450.7 *7*			O	
4493.16 *5*	2+	16 fs *14*	CD FG K MNO S	
4534.14 *14*	2+		CD F K R X	Jπ: L(^{16}O,^{16}O′)=4 for E=4540 multiplet. G to 0+ and 4+.
4547.96 *3*	1+,2+		CD FG O	
4577.45 *6*	2+	<18 fs	CD FG JK M	
4579.0 *5*	(4+)		E	
4613[c] *7*			D K R	
4760.23 *9*	1,2		C F H	
4768 *4*		0.05 ps *+6–3*	D G T	
4779.13[b] *6*			D F m O	
4800.0 *5*			D H mN	
4843.93 *8*	2+	6.9 fs *21*	Cd F jK	XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
4848.9 *6*	1,2,3		Cd H j M QR	
4859 *4*			G X	
4891 *10*			D	

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
4928.98 *14*			D F	
4953.36 *7*			F	
4958 *4*	4^+	61 fs *21*	D FG L	
4970.6 *10*		0.06 ps *+5−3*	D G K M O	
4986.00[m] *8*	(6^+)	1.0[@] ps *+25−7*	DE HI P U W	
5014.45 *8*	(5^-)[j]		DE IJ N P RS	Jπ: from L(α,α′)=5 but $J^\pi=4^+$ in (α,2pγ). $T_{1/2}$: 0.21 ps *+256−1* from ^{58}Ni(α,2pγ), DSA.
5048.3 *7*	1,2		CD Q	XREF: Q(?). Jπ: J^π(5050 *100*)=4^+,6^+ in (e,e′).
5065.02 *6*	(1^-)	2.98 fs *28*	b D F J T	XREF: Others: AL $T_{1/2}$: From (γ,γ′),(pol γ,γ′).
5091.1 *10*			b O X	
5106 *4*		0.03 ps *+5−3*	D G	
5110[f] *20*	8^-		A	
5120.7[b] *7*	4^+		LMNO S	
5127.16 *17*			F	
5133 *5*			D G r	E(level): 5120 keV and 5132 keV might be the same level.
5148.51[n] *8*	6^+[j]		DE I P r	
5174 *5*			D G	
5191.7 *8*			D I	XREF: I(5192).
5205 *5*		16 fs *16*	D G T	
5236.20 *10*	$5^{(+)}$		E	
5244 *5*	4^+	0.05 ps *+5−3*	D G J l	
5264[c] *10*			D l RS	Jπ: L(α,α′)=2 for E=5250.
5288.55 *14*			D F w	
5307 *8*			d K w	
5318 *5*			d G	
5348.79 *7*	7^-	250 ps *21*	DE IJ P U YZ	$T_{1/2}$: from ^{56}Fe(^{7}Li,2npγ), DSA. 290 ps *50* from ^{51}V(^{12}C,2npγ), RDM.
5379 *5*			D G K M	
5396[c] *10*	3^-		D J S	
5410.8 *10*			O	
5428 *10*			D	
5446.98 *11*	2^+		D FGH JKL R	E(level): ^{59}Co(p,γ) gives 5444.6 *10* keV.
5449.5 *4*	6^+		E	
5476.04 *21*			D F N	
5530 *4*	(2^+)	20 fs *14*	D GH JKL	Jπ: L(p,t)=(2) for E=5510 *30*. γ to 3^+.
5612.40 *4*			D F S	Jπ: L(α,α′)=3 for E=5600.
5642[c] *10*			D J T	
5650[b]			M O	
5663.03[m] *11*	7^+	0.7[@] ps *+21−3*	DE I P R U X	
5672.36 *7*			F	
5710.79 *4*			A D F	
5741 *10*			D	
5780.5 *5*			D GH L O	Jπ: L(p,t)=(6) for a multiplet at 5770 *30*.
5785.1 *4*	(7^+)		D M U	
5799 *4*	2^+		D G S	
5830.8[d] *7*			D G O R	
5859.9 *5*			D F M	
5878.05 *9*			F	
5901.69 *10*	6^-		E	
5902.44 *7*			D F N	
5918.54 *21*			D F JKL	Jπ: L(p,t)=4 for a level at 5920 *30*.

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$[#]	S	XREF	Comments
5931.1 *11*	1	21 fs *6*			XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
5946[c] *10*				D M R T	
5967.8 *3*				F	
5973[c] *10*	5−			B D S	
5992[c] *10*				D J	
6028 *10*				D	
6054[c] *10*				D jK	
6066.72 *11*				F	
6076.6[c] *9*	(8)[j]			D Ij L	Jπ: L(p,t)=(4) for E=6070 *30*.
6111.5[c] *10*				D IJ	XREF: I(6112).
6112.43[n] *15*	7+			E	
6142[c] *10*				D J S	Jπ: L(α,α′)=3 for E=6160.
6181.0[c] *7*	1−	1.80 fs *28*		D JK R T	XREF: Others: AL T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6192[c] *10*				D K Q	
6229.3 *11*	(2+)	20 fs *4*	0.023 *5*		XREF: Others: AL Jπ: assignment is tentative.
6239.2 *3*				A D F J N	
6278.34 *11*	(6−)			DE L	
6292[c] *10*				D J	
6327.21[c] *15*	2+			D F J S	
6362.05[c] *17*				D F J	
6382.4 *4*	1	12 fs *3*		D F	XREF: Others: AL T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6403[c] *10*				D L	Jπ: L(p,t)=(3) for E=6400 *30*.
6431 *10*				D	
6461.10[m] *14*	8+[j]	1.2[@] ps *+16−5*		E IJ P	
6465.25 *16*	1−	1.7 fs *5*		D F w	XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6489.28 *22*				D F N w	
6515.0 *9*	1+	3.0 fs *5*			XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6516.72 *23*				D F S	Jπ: L(α,α′)=3 for E=6530.
6551[c] *10*				D K	
6567.33 *20*				D F	
6587.6 *6*	1−	1.25 fs *28*		D J	XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6610[c] *10*				D K T	
6623 *10*				D	
6647.17 *9*				D F	
6658 *10*				D	
6672.4 *9*	(9)[j]			I	
6687 *10*				D	
6718.5 *10*	1−	6.7 fs *13*		D	XREF: Others: AL XREF: D(6708). E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6736.5 *10*	(1)	6 fs *3*		D	XREF: Others: AL XREF: D(6728). E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
6756.4 *3*				D F N	
6761.39 *14*	7(+)			E	
6765[c] *10*				DE L	Jπ: L(p,t)=(3) for E=6770 *30*.
6791 *10*				D	

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$[#]	XREF	Comments
6810.95 *16*	9$^-$[j]	0.55 ps *28*	DE I PQ U YZ	T$_{1/2}$: from ^{56}Fe(^{7}Li,2npγ), DSA. 0.6 ps *+4−2* from ^{58}Ni(α,2pγ), DSA.
6834.92[c] *19*			D F K	
6835.18 *24*			F	
6837.2 *3*	8$^-$	0.6[@] ps *+5−2*	DE I P	
6859[c] *10*			D Q T W	
6892[c] *10*			A D	
6911.93 *9*	1$^+$	1.46 fs *28*	F	XREF: Others: AL XREF: AL(6913.7). Jπ,T$_{1/2}$: From (g,γ′),(pol γ,γ′).
6950.4 *13*	(10)[j]		I	
6996.86 *20*			F S	Jπ: L(α,α′)=(3,4).
7027.83[n] *15*	8$^+$		E	
7038.7 *7*	1$^-$	1.3 fs *4*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7056.27 *14*	[j]		F I	
7101.4 *13*	(10)[j]		I	
7110[h] *30*			L N Q T	Jπ: L(p,t)=(2).
7207.6 *3*			F	
7222.80 *11*			F	
7250.0 *4*	8$^+$		E	
7290 *30*			L	
7316.13 *16*			F T W	
7339.68 *25*			F	
7360.97 *24*	(8)		E	
7380.3 *5*	8$^+$		E	
7414.16 *23*			F	
7433.45[m] *16*	9$^+$[j]		E I P	
7465.66 *25*	(7$^-$)		E	
7473.49 *24*	1$^+$	2.1 fs *3*	F	XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7495.2 *4*			F	
7531.4 *4*	8$^+$		E	
7550[e] *8*	8$^-$		N Q	XREF: Q(7522).
7552.0 *3*			F	
7559.5 *8*	1$^-$	6.5 fs *22*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
≈7570[g]			A T	
7590 *50*			W	
7627.4 *17*	[j]		I	
7647.4 *7*	1$^-$	0.27 fs *3*		XREF: Others: AK, AL XREF: AK(7650). E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7657.6 *8*	1$^+$	0.97 fs *14*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7684.1 *4*			F	
7690.0 *3*	1$^-$	0.208 fs *28*	F	XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7691.4 *3*	(9$^-$)[j]		I	
7732.5 *4*	8$^+$		E	
7747.6 *5*	1$^-$	0.55 fs *21*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7760.33 *18*	8$^-$		E I	
7761.8 *3*	1$^+$	1.7 fs *4*	F O	Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$[#]	XREF	Comments
7798.9 *3*			F	
7813.5 *13*	*j*		I	
7818.02 *13*			F	
7850.3 *10*	1$^+$	1.66 fs *28*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7880.4 *12*	1$^+$	2.6 fs *6*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7926.7 *17*	1$^+$	8.2 fs *36*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7950.93 *24*	1$^+$	0.76 fs *14*	F	XREF: Others: AL Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
7980.81 *21*	9$^+$		E	
8042.6 *16*	1$^+$	7.7 fs *28*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8044.26[o] *17*	9$^-$[j]	0.04[@] ps *+31−4*	E I L P	
8074.4 *4*	8$^+$		E	
8086.0 *5*	1$^-$	0.201 fs *35*		XREF: Others: AK, AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8111.8 *12*	1$^+$	3.0 fs *7*	W	XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8126.6 *7*	1$^-$	0.45 fs *6*		XREF: Others: AK, AL XREF: AK(8124). E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8189.1 *7*	1	1.04 fs *21*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8261.5 *8*	1$^-$	0.40 fs *6*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8272.09 *19*	10$^-$		E	
8286.3 *3*	(1$^+$)		D F	Configuration=((ν f$_{7/2}$)$^{-1}$(ν f$_{5/2}$))1$^+$.
8294.0 *8*	1$^-$	0.76 fs *28*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8351.8 *13*	1$^+$	2.4 fs *6*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8359.3 *15*	1$^+$	3.4 fs *11*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8389.9 *4*	9$^-$		E	
8407 *4*	1$^-$	6.3 fs *37*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8426.69 *12*	9$^-$		E	
8430 *30*	3$^-$		L	
8433[i] *10*	8$^-$		L N Q	XREF: N(8445).
8451.5 *16*	1	2.3 fs *6*		XREF: Others: AK, AL XREF: ak(6460). E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8464.0 *13*	1$^-$	2.7 fs *7*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8485.50[r] *24*	9$^-$		E	
8504.7 *3*			F	
8515.2 *9*	1$^-$	0.69 fs *14*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).
8521.11[o] *17*	10$^-$[j]	0.5[@] ps *+6−2*	E I P W	
8565.60 *18*			F	
8638.5 *3*			F	
8655.4 *9*	1$^-$	1.32 fs *28*		XREF: Others: AL E(level),Jπ,T$_{1/2}$: From (γ,γ′),(pol γ,γ′).

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
8656.8 *8*	1^+	0.7 fs *6*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8666.21 *22*			F L	
8688.4 *13*	1^+	2.6 fs *7*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8688.92[m] *23*	10^+		E I	
8747.0 *12*	1^-	0.90 fs *21*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8768 *4*	1^+	8 fs *8*		XREF: Others: AK, AL XREF: AK(8760). E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8778.6 *10*	1^+	1.25 fs *35*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8781.6 *10*	1^-	1.25 fs *35*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8793.6 *9*	1^+	1.11 fs *35*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8846.5 *14*	1^+	1.5 fs *4*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8871.7 *16*	1^+	1.6 fs *4*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8890.5 *12*	1^+	0.83 fs *21*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8924.1 *10*	1^-	0.36 fs *6*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
8959[i] *10*	8^-	79 keV	A N Q	XREF: N(8994). $T_{1/2}$: from (α,t).
9010.5 *19*	1^-	2.1 fs *7*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9045.20 *24*			F	
9053.3 *24*	1^-	2.9 fs *12*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9060 *50*			W	
9068.9 *13*	1^+	1.04 fs *28*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9076.66 *17*			F	
9092.3 *8*	1^-	0.132 fs *28*		XREF: Others: AK, AL XREF: AK(9110). E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9123.01[r] *21*	10^-		E	
9132.2 *15*	1^-	0.90 fs *21*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9132.27[o] *20*	11^-[j]	0.18[@] ps *+10–8*	E I P	
9149 *3*	1^-	0.69 fs *35*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9208[e] *10*	8^-	127 keV	A N Q	XREF: Q(9172). $T_{1/2}$: from (α,t).
9256.0 *25*	1^-	1.5 fs *7*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9264.30 *24*	11^-		E	
9266.5 *24*	1^-	1.4 fs *7*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9274.7 *15*	1	2.6 fs *19*		XREF: Others: AL E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9301.2 *15*	1^+	0.55 fs *21*		XREF: Others: AL

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9308.3 *14*	1^-	0.49 fs *21*		XREF: Others: AK, AL
				XREF: AK(9310).
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9346.82 *18*			F	
9352.6 *21*	1^-	1.9 fs *8*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9395.5 *15*	1^-	0.83 fs *35*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9410.7 *17*	1^-	1.2 fs *5*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9426.2 *4*	10^+		E	
9453.1 *16*	1^+	1.0 fs *4*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9463.9 *11*	1^-	0.21 fs *21*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9468 *4*	1^+	1.9 fs *12*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9504.9 *17*	1^-	10 fs *4*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9599.0 *15*	1^-	0.62 fs *28*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9622.5[t] *8*	10^-		E	
9640.2 *21*	1^-	3.0 fs *26*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9659.3 *8*	1^-	0.049 fs *14*		XREF: Others: AK, AL
				XREF: AK(9663).
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9665.67[v] *22*	10^+		E	
9701.4 *15*	1^-	0.8 fs *5*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9714.9 *4*	(10^+)		E	
9718.27 *22*	11^-		E	
9721.0 *18*	1^-	1.2 fs *8*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9751.5 *23*	1^-	4.2 fs *35*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9760.42 *24*	11^-		E	
9774.8 *20*	1^-	1.9 fs *14*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9807.5 *19*	1^-	1.6 fs *10*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9831 *4*	1^+	1.3 fs *6*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9832.0 *21*	1^-	1.3 fs *6*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9871.3 *20*	1^-	0.8 fs *6*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9887.9 *4*	10^+		E	
9893.5 *17*	1^-	0.49 fs *28*		XREF: Others: AL
				E(level),Jπ,$T_{1/2}$: From (γ,γ′),(pol γ,γ′).
9953.7 *3*			F	
9960.14[r] *23*	11^-		E	
9989.27[o] *24*	(12^-)[j]	0.21[@] ps *+21−7*	E I P	
10029.02 *17*			F W	

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
10054.23 *25*	(11$^-$)	E	
10158.6 *3*	(12$^-$)	E	
10241.7 *5*	(11$^-$)	E	
10697.3 *3*	12$^-$	E	
10788.66[r] *22*	12$^-$	E	
10825.23 *25*	11$^+$	E	
10872.60 *24*	11$^+$	E	
10977.68 *23*	11$^+$	E	
≈10985		H	
11030.60 *21*	11$^+$	E	
11044.14[v] *24*	12$^+$	E H	
11079.1 *4*	(12$^-$)	E	
11112.8[o] *3*	13$^-$[j]	E I	
11120.6[t] *9*	12$^-$	E L	
≈11138		H	
≈11149		H	
≈11158		H	
≈11207[&]	2$^+$	H L	Possible IAS of ^{60}Co, 58-keV level, ^{62}Ni(p,t).
11224.9[q] *5*	(11$^+$)	E H	
11255.23[p] *20*	12$^+$	E	
(11387.700 *17*)	(1$^-$,2$^-$)	F	E(level): S(n)=11387.73 *5* (2012Wa38).
≈11429		H	
11443.40[s] *25*	13$^-$	E H	
11493.6 *5*	(12$^+$)	E	
11553.3[r] *3*	13$^-$	E	
≈11599		H	
11620 *20*	(1$^+$)	D	
≈11647		H	
≈11702		H	
≈11732		H	
11750[h] *30*		H L	Jπ: L(p,t)=(2).
11785.6[q] *5*	(12$^+$)	E	
11851.17[p] *23*	13$^+$	E	
11860[a] *20*	(1$^+$)	D	Configuration=((ν $f_{7/2}$)$^{-1}$(ν $f_{5/2}$))1$^+$.
11878.0 *5*	(13)	E H	
≈11932		H	
11950 *30*		H L	Jπ: L(p,t)=(4). Possible IAS of ^{60}Co, 1006-keV level, ^{62}Ni(p,t).
≈12130		H	
12273.7[o] *4*	14$^-$[j]	I	
12333[i] *10*	8$^-$	E N Q	XREF: N(12305).
≈12355?		H	
≈12465		H	
12486.2[q] *5*	(13$^+$)	E H	
12515[e] *16*	8$^-$	H N Q	XREF: Q(12505).
12578.4[p] *3*	14$^+$	E	
12742.1 *5*	13$^+$	E	
12774.7[v] *4*	14$^+$	E	
12859.3 *6*	13$^+$	E	No information about γ decay of this level.
13037.5[s] *10*	14$^-$	E	
13246.3[u] *4*	13$^+$	E	
13282.3[w] *5*	(14$^+$)	E	
13353.0[q] *6*	(14$^+$)	E	

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Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	XREF	Comments
13615.4[s] 5	15$^-$		E	
13662.2[p] 4	15$^+$		E	
13760 30			L	J$^{\pi}$: L(p,t)=(0).
13810.0[o] 5	(15$^-$)		E	
13908[i] 10	8$^-$		A N Q	XREF: N(13883).
14201.0[q] 6	(15$^+$)		E	
14463.7[u] 4	15$^+$		E	
14645.5[v] 5	16$^+$		E	
14670 30			L	J$^{\pi}$: L(p,t)=(4).
14803.2[p] 4	16$^+$		E	
14817[e] 10	8$^-$	64 keV	N Q	XREF: Q(14840). T$_{1/2}$: from (α,t).
14933.9[w] 5	16$^+$		E	
15164.8[q] 7	(16$^+$)		E	
15281.5[t] 11	(16$^-$)		E	
15499[i] 10	8$^-$		N Q	XREF: N(15483).
16026.6[u] 5	17$^+$		E	
16098.1[p] 4	(17$^+$)		E	
16110 23	8$^-$		N	
16194.4[s] 8	17$^-$		E	
16242.0?[q] 13	(17$^+$)		E	
16842.4[v] 7	18$^+$		E	
17235.8[w] 8	18$^+$		E	
17911.6[u] 7	19$^+$		E	
18131.4[t] 13	(18$^-$)		E	
19238.4[s] 11	(19$^-$)		E	
19504.4[v] 10	20$^+$		E	
20017.9[w] 11	(20$^+$)		E	
20177.5[u] 9	21$^+$		E	
22863.5[v] 13	(22$^+$)		E	
22996.5[u] 12	23$^+$		E	

[†] Calculated from adopted gammas, except as noted.
[‡] Spin/parity and single-particle configuration assignments for levels de-excited by γ rays are based on band structure, γ-ray multipolarities and angular distributions. See separate table for comments to individual levels.
[#] From ^{60}Ni(p,p'γ) pγ coin DSA, except as noted.
[@] From ^{58}Ni(α,2pγ), DSA.
[&] From ^{59}Co(p,γ).
[a] From ^{59}Ni(n,γ) E=thermal.
[b] From ^{59}Co(^{3}He,dγ).
[c] From ^{60}Ni(p,p'), (pol p,p').
[d] From ^{60}Ni(p,p'γ).
[e] From ^{59}Co(α,t).
[f] From ^{60}Ni(π^+,$\pi^{+\prime}$), (π^-,$\pi^{-\prime}$).
[g] From ^{56}Fe(^{6}Li,d).
[h] From ^{62}Ni(p,t).
[i] From ^{60}Ni(e,e').
[j] From ^{28}Si(^{35}Cl,3p).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{60}Ni Levels (continued)

[k] From comparison with Hauser-Feshbach-Moldauer calculations in (n,n′γ).

[l] Band(A): γ cascade based on g.s..

[m] Band(B): ΔJ=1 structure based on 3671, 4^+.

[n] Band(C): ΔJ=1 structure based on 3186, 3^+.

[o] Band(D): Magnetic-dipole rotational band-1. Band based on 8044, 9^- state. Configuration=$\pi[1f_{7/2}^{-1}(fp)^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[p] Band(E): Magnetic-dipole rotational band-2. Band based on 11255, 12^+ state. Configuration=$\pi[1f_{7/2}^{-1}(fp)^1]\otimes\nu[1g_{9/2}^2(fp)^2]$ or $\pi[1f_{7/2}^{-1}1g_{9/2}^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[q] Band(F): Magnetic-dipole rotational band-3. Band based on 11225, (11^+) state. Configuration=$\pi[1f_{7/2}^{-1}(fp)^1]\otimes\nu[1g_{9/2}^2(fp)^2]$ or $\pi[1f_{7/2}^{-1}1g_{9/2}^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[r] Band(G): Magnetic-dipole rotational band-4. Band based on 8485, 9^- state. Configuration=$\pi[1f_{7/2}^{-1}(fp)^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[s] Band(H): ΔJ=2 band based on 11443, 13^-. Configuration=$\pi[1f_{7/2}^{-2}(fp)^2]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[t] Band(h): ΔJ=2 band based on 11120, 12^-. Configuration=$\pi[1f_{7/2}^{-2}(fp)^2]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[u] Band(I): ΔJ=2 band based on 13246, 13^+. Configuration=$\pi[1f_{7/2}^{-3}(1g_{9/2}^1(fp)^2]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[v] Band(J): ΔJ=2 band based on 9665, 10^+. Two forked spin sequences, one based on 9665, 10^+ and the other on 13282, (14^+). Configuration=$\pi[1f_{7/2}^{-2}(1g_{9/2}^1(fp)^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

[w] Band(j): ΔJ=2 band based on 13282, (14^+). Two forked spin sequences, one based on 9665, 10^+ and the other on 13282, (14^+). Configuration=$\pi[1f_{7/2}^{-2}(1g_{9/2}^1(fp)^1]\otimes\nu[1g_{9/2}^1(fp)^3]$.

Adopted Levels, Gammas (continued)

γ(^{60}Ni)

All γ data from (^{36}Ar,4pγ) where Eγ is from this reaction.

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	$I_{(\gamma+ce)}$	Comments
1332.514	2+	1332.501[b] 5	100[b]	0.0	0+	E2		0.0001625 23		α=0.0001625 23; α(K)=0.0001137 16; α(L)=1.108×10^{-5} 16; α(M)=1.560×10^{-6} 22 α(N)=6.73×10^{-8} 10; α(IPF)=3.61×10^{-5} 5 B(E2)(W.u.)=13.1 4
2158.632	2+	826.06[&] 3	100.0[&] 24	1332.514	2+	M1+E2	+0.9 3	0.000337 18		α=0.000337 18; α(K)=0.000303 17; α(L)=2.97×10^{-5} 17; α(M)=4.18×10^{-6} 23; α(N+..)=1.80×10^{-7} 1 α(N)=1.80×10^{-7} 10 B(M1)(W.u.)=0.031 13; B(E2)(W.u.)=7.E+1 4 δ: av of +0.67 21 from ^{60}Ni(p,p′γ), and +1.2 3 from ^{60}Cu ε decay. Poor agreement with +0.03 +1−25 from ^{56}Fe(^{7}Li,2npγ). −0.2 2 from DCO (2008To15).
		2158.57[&] 10	17.6[&] 24	0.0	0+	(E2)		0.000439 7		B(E2)(W.u.)=0.22 7 α=0.000439 7; α(K)=4.45×10^{-5} 7; α(L)=4.32×10^{-6} 6; α(M)=6.08×10^{-7} 9; α(N+..)=0.000390 6 α(N)=2.64×10^{-8} 4; α(IPF)=0.000389 6 Mult.: Δπ=no from J^π′s of connecting levels.
2284.80	0+	952.4[a] 2	100[a]	1332.514	2+					
		2284.87		0.0	0+	E0			0.016	$I_{(\gamma+ce)}$: I(E±) from 1961Pa10 is given. Ice(K)(2285)/Ice(K)(952)=0.074 16, Ice(K)(2285)/I(pair)=0.130 28, B(E0)/B(E2)=0.027 4, ρ^2<0.028 (1981Pa10).
2505.753	4+	347.14[b] 7	0.0076[b] 5	2158.632	2+	E2		0.00557 8		α=0.00557 8; α(K)=0.00499 7; α(L)=0.000503 7; α(M)=7.06×10^{-5} 10; α(N+..)=2.90×10^{-6} 4 α(N)=2.90×10^{-6} 4 B(E2)(W.u.)=0.19 6 Mult.: From DCO (2008To15).
		1173.228[b] 3	100.00[b] 3	1332.514	2+	E2(+M3)	−0.0025 22	0.0001722 25		α=0.0001722 25; α(K)=0.0001500 21; α(L)=1.465×10^{-5} 21; α(M)=2.06×10^{-6} 3 α(N)=8.88×10^{-8} 13; α(IPF)=5.42×10^{-6} 8 B(E2)(W.u.)=(5.5 17); B(M3)(W.u.)=(1.8×10^2 +32−18)

$^{60}_{28}Ni_{32}$-15

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									Additional information 1. δ: from ^{60}Co β^- decay (1925.28 d). Others: −0.09 *+50−30* from ^{58}Ni(α,2pγ), +0.02 *+18−2* from ^{56}Fe(^{7}Li,2npγ).
2505.753	4+	2505.692 *5*	2.0×10^{-6} *4*	0.0	0+	[E4]		8.63×10^{-5} *12*	α=8.63×10^{-5} *12*; α(K)=7.76×10^{-5} *11*; α(L)=7.58×10^{-6} *11*; α(M)=1.069×10^{-6} *15*; α(N+..)=4.62×10^{-8} *7* α(N)=4.62×10^{-8} *7* B(E4)(W.u.)=1.8 *7* E_γ: from E(level). Mult.: from J^π's of connecting levels. Additional information 2. B(E4)(W.u.): 4.8 *10* from measured B(E4)↑ in ^{60}Ni(e,e′).
2626.06	3+	120.5[a] *3*	5.5[a] *5*	2505.753	4+	M1+E2		0.15 *13*	α(K)=0.14 *12*; α(L)=0.015 *13*; α(M)=0.0021 *18*; α(N+..)=8.E−5 *7* α(N)=8.E−5 *7*
		467.3[a] *2*	100[a] *5*	2158.632	2+	M1(+E2)	+0.02 *+11−27*	0.00102 *7*	α=0.00102 *7*; α(K)=0.00091 *6*; α(L)=9.0×10^{-5} *6*; α(M)=1.27×10^{-5} *8*; α(N+..)=5.4×10^{-7} *4* α(N)=5.4×10^{-7} *4* B(M1)(W.u.)≈(0.23); B(E2)(W.u.)≈(0.76) δ: +0.38 *18* (2008To15).
		1293.7[a] *2*	53[a] *5*	1332.514	2+	M1+E2	−3.1 *+4−6*	0.0001595 *23*	α=0.0001595 *23*; α(K)=0.0001198 *18*; α(L)=1.168×10^{-5} *17*; α(M)=1.646×10^{-6} *24* α(N)=7.10×10^{-8} *11*; α(IPF)=2.63×10^{-5} *5* B(M1)(W.u.)≈0.00053; B(E2)(W.u.)≈5.6 Mult.: from 1989Ko54 in (n,n′γ) and (^{36}Ar,4pγ). δ: from (n,n′γ); +0.11 *15* (2008To15).
3119.87	4+	493.90[&] *20*	8.7[&] *22*	2626.06	3+	M1+(E2)	+0.25 *40*	0.00094 *20*	α=0.00094 *20*; α(K)=0.00085 *18*; α(L)=8.4×10^{-5} *18*; α(M)=1.18×10^{-5} *25*; α(N+..)=5.1×10^{-7} *11* α(N)=5.1×10^{-7} *11* B(M1)(W.u.)=0.06 *3*; B(E2)(W.u.)=(3.E+1 *+9−3*) δ: From DCO (2008To15).
		1787.20[&] *10*	100.0[&] *22*	1332.514	2+	E2		0.000281 *4*	α=0.000281 *4*; α(K)=6.30×10^{-5} *9*; α(L)=6.12×10^{-6} *9*; α(M)=8.62×10^{-7} *12*; α(N+..)=0.000211 *3* α(N)=3.73×10^{-8} *6*; α(IPF)=0.000211 *3* B(E2)(W.u.)=9 *4* Mult.: From DCO=1.10 5 (2008To15).

$^{60}_{28}Ni_{32}$-16

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
3123.698	2+	497.9[a] 2	3.68[a] 20	2626.06	3+				
		613.7 3	4.4 11						Mult.: d not consistent with ΔJ^π.
		839.2[a] 4	1.01[a] 16	2284.80	0+				
		965.2[a] 3	0.66[a] 14	2158.632	2+				
		1791.6[a] 3	100[a] 5	1332.514	2+	M1+E2	−0.21 4	0.000237 4	α=0.000237 4; α(K)=5.93×10^{-5} 9; α(L)=5.75×10^{-6} 8; α(M)=8.10×10^{-7} 12; α(N+..)=0.000171 3 α(N)=3.52×10^{-8} 5; α(IPF)=0.000171 3 B(M1)(W.u.)=0.013 +6−10; B(E2)(W.u.)=0.34 +20−28 Mult.,δ: from γγ(θ) in ^{60}Cu ε decay.
		3124.1[a] 3	10.5[a] 6	0.0	0+				
3185.98	(3+)	680.30[&] 15	86[&] 14	2505.753	4+	M1+E2		0.00055 11	α=0.00055 11; α(K)=0.00050 10; α(L)=4.9×10^{-5} 10; α(M)=6.9×10^{-6} 14; α(N+..)=2.9×10^{-7} 6 α(N)=2.9×10^{-7} 6
		1027.33[&] 8	100[&] 14	2158.632	2+	M1+E2	−6.1 +9−10	0.000226 4	α=0.000226 4; α(K)=0.000203 3; α(L)=1.99×10^{-5} 3; α(M)=2.80×10^{-6} 4; α(N+..)=1.200×10^{-7} 17 α(N)=1.200×10^{-7} 17 B(M1)(W.u.)=0.0014 6; B(E2)(W.u.)=9.E+1 3 Mult.,δ: from 1989Ko54 in (n,n′γ).
		1853.8[&] 3	92[&] 14	1332.514	2+	M1+E2		0.00028 3	α=0.00028 3; α(K)=5.72×10^{-5} 18; α(L)=5.55×10^{-6} 18; α(M)=7.82×10^{-7} 25; α(N+..)=0.000218 24 α(N)=3.39×10^{-8} 11; α(IPF)=0.000218 24
3193.87	1+	909.2[a] 2	42.6[a] 19	2284.80	0+				
		1035.2[a] 2	78[a] 4	2158.632	2+				
		1861.6[a] 3	100[a] 6	1332.514	2+				
		3194.1[a] 3	42.6[a] 19	0.0	0+				
3269.19	2+	643.2[a] 3	44.0[a] 24	2626.06	3+				
		984.5[a] 6	3.6[a] 20	2284.80	0+	[E2]		0.000251 4	α=0.000251 4; α(K)=0.000225 4; α(L)=2.21×10^{-5} 4; α(M)=3.11×10^{-6} 5; α(N+..)=1.334×10^{-7} 19 α(N)=1.334×10^{-7} 19 B(E2)(W.u.)=10 6
		1110.5[a] 4	48[a] 8	2158.632	2+				
		1936.9[a] 3	100[a] 4	1332.514	2+				
		3269.4[a] 3	35.2[a] 20	0.0	0+	[E2]		0.000920 13	α=0.000920 13; α(K)=2.22×10^{-5} 4; α(L)=2.14×10^{-6} 3; α(M)=3.02×10^{-7} 5; α(N+..)=0.000895 13 α(N)=1.314×10^{-8} 19; α(IPF)=0.000895 13 B(E2)(W.u.)=0.23 7
3317.829	0+	1159.09[i] 13	1.18[i] 11	2158.632	2+				
		1985.27[i] 3	100.0[i] 19	1332.514	2+				

$^{60}_{28}Ni_{32}$-17

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	$I_{(\gamma+ce)}$	Comments
3317.829	0+	3318.6		0.0	0+	E0		0.064	$I_{(\gamma+ce)}$: I(E±) from 1961Pa10 is given. I(pair)(3318)/Ice(K)(1986)=11.5 *12*, B(E0)/B(E2)=0.49 *8*, ρ^2=0.077 *42* (1981Pa10).
3381		1222[c] *5*	100[c]	2158.632	2+				
3393.14	2+	1234.51[i] *7*	12.6[i] *7*	2158.632	2+				
		2060.58[i] *3*	100.0[i] *23*	1332.514	2+				
		3393.05[i] *20*	7.4[i] *7*	0.0	0+	[E2]	0.000968 *14*		α=0.000968 *14*; α(K)=2.09×10^{-5} *3*; α(L)=2.02×10^{-6} *3*; α(M)=2.85×10^{-7} *4*; α(N+..)=0.000945 *14* α(N)=1.239×10^{-8} *18*; α(IPF)=0.000945 *14* B(E2)(W.u.)=0.043 *+14−21*
3587.72	0+	393.76[i] *6*	32.7[i] *8*	3193.87	1+				
		1429.07[i] *3*	100[i] *2*	2158.632	2+				
		2255.18[i] *5*	46.4[i] *15*	1332.514	2+				
		3588		0.0	0+	E0		0.13	$I_{(\gamma+ce)}$: I(E±) from 1961Pa10 is given. I(pair)(3588)/Ice(K)(2256)=68 *11*, B(E0)/B(E2)(1429)=0.13 *3*, B(E0)/B(E2)(2256)=2.9 *5* (1981Pa10).
3619.46	3+	993.46[i] *10*	100[i]	2626.06	3+	D			
		1113.9[i] *3*	33[i] *4*	2505.753	4+				
		1460[dk]		2158.632	2+				
3671.16	4+	1165.2 *2*	100	2505.753	4+	M1+E2	0.000162 *12*		α=0.000162 *12*; α(K)=0.000142 *11*; α(L)=1.39×10^{-5} *11*; α(M)=1.96×10^{-6} *15*; α(N+..)=4.0×10^{-6} *7* α(N)=8.4×10^{-8} *6*; α(IPF)=3.9×10^{-6} *7*
		1512.1 *6*	1.6	2158.632	2+	[E2]	0.000189 *3*		α=0.000189 *3*; α(K)=8.75×10^{-5} *13*; α(L)=8.51×10^{-6} *12*; α(M)=1.199×10^{-6} *17*; α(N+..)=9.16×10^{-5} *13* α(N)=5.18×10^{-8} *8*; α(IPF)=9.15×10^{-5} *13* B(E2)(W.u.)=1.3 *9*
3702.9	4+	583 *1*	100	3119.87	4+				E_γ: from (n,n′γ).
3730.82	4+	545.0 *1*	27 *9*	3185.98	(3+)	M1+E2	0.0010 *3*		α=0.0010 *3*; α(K)=0.00089 *25*; α(L)=8.8×10^{-5} *25*; α(M)=1.2×10^{-5} *4*; α(N+..)=5.3×10^{-7} *15* α(N)=5.3×10^{-7} *15*
		610.9 *3*	27 *9*	3119.87	4+	D			
		1105.0 *4*	45 *9*	2626.06	3+	M1+E2	0.000178 *15*		α=0.000178 *15*; α(K)=0.000159 *13*; α(L)=1.56×10^{-5} *13*; α(M)=2.19×10^{-6} *18*; α(N+..)=9.3×10^{-7} *17* α(N)=9.5×10^{-8} *8*; α(IPF)=8.4×10^{-7} *16*
		1224.9 *2*	63 *18*	2505.753	4+	D			
		2398.4 *3*	100 *18*	1332.514	2+	E2	0.000547 *8*		α=0.000547 *8*; α(K)=3.70×10^{-5} *6*; α(L)=3.58×10^{-6} *5*; α(M)=5.05×10^{-7} *7*; α(N+..)=0.000506 *7* α(N)=2.19×10^{-8} *3*; α(IPF)=0.000506 *7* B(E2)(W.u.)=0.9 *+5−9*
3734.44	2+	611[ak]	≤3[a]	3123.698	2+				
		1451.4[a] *5*	22[a] *4*	2284.80	0+	[E2]	0.0001754 *25*		α=0.0001754 *25*; α(K)=9.51×10^{-5} *14*; α(L)=9.26×10^{-6} *13*;

$^{60}_{28}Ni_{32}$-18

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(M)=1.304×10^{-6} *19*; α(N+..)=6.98×10^{-5} α(N)=5.63×10^{-8} *8*; α(IPF)=6.97×10^{-5} *10* B(E2)(W.u.)=10 *5*
3734.44	2$^+$	2403.3[a] *6*	100[a] *11*	1332.514	2$^+$			
		3735.6[a] *13*	3.4[a] *12*	0.0	0$^+$	[E2]	0.001096 *16*	α=0.001096 *16*; α(K)=1.80×10^{-5} *3*; α(L)=1.742×10^{-6} *25*; α(M)=2.45×10^{-7} *4*; α(N+..)=0.001076 *15* α(N)=1.068×10^{-8} *15*; α(IPF)=0.001076 *15* B(E2)(W.u.)=0.014 *7*
3798.0	1	3797.9[j] *10*	100[j]	0.0	0$^+$	*j*		
3871.050	2$^+$	677.17[i] *5*	16.7[i] *4*	3193.87	1$^+$			
		747.33[i] *3*	100[i] *2*	3123.698	2$^+$			
		751.9[i] *4*	3.2[i] *7*	3119.87	4$^+$			
		1244.93[i] *22*	2.6[i] *5*	2626.06	3$^+$			
		1712.30[i] *9*	91[i] *2*	2158.632	2$^+$			
		2538.53[i] *4*	55[i] *1*	1332.514	2$^+$			
		3870.94[i] *7*	43.5[i] *15*	0.0	0$^+$			
3887.36	2$^+$	569.5[i] *4*	7[i] *3*	3317.829	0$^+$			
		693.57[i] *11*	30[i] *3*	3193.87	1$^+$			
		1381.8[i] *3*	28[i] *5*	2505.753	4$^+$			
		2554.69[i] *10*	100[i] *4*	1332.514	2$^+$			
3895		1269[c] *5*	67[c]	2626.06	3$^+$			
		2563[c] *5*	100[c]	1332.514	2$^+$			
3908	1	3908[j] *3*	100[j]	0.0	0$^+$	*j*		
3925.18	2$^+$,3$^+$	305.7[i] *3*	30[i] *6*	3619.46	3$^+$			
		739.2[i] *3*	57[i] *10*	3185.98	(3$^+$)			
		805.6[i] *4*	21[i] *6*	3119.87	4$^+$			
		1419.40[i] *10*	100[i] *8*	2505.753	4$^+$			
		1766.5[i] *3*	55[i] *8*	2158.632	2$^+$			
4006.444	2$^+$	883.1[i] *3*	1.0[i] *2*	3123.698	2$^+$			
		1380.4[i] *3*	2.8[i] *4*	2626.06	3$^+$			
		2673.86[i] *4*	100[i] *2*	1332.514	2$^+$			
		4006.30[i] *4*	75[i] *2*	0.0	0$^+$	E2	0.001190 *17*	α=0.001190 *17*; α(K)=1.622×10^{-5} *23*; α(L)=1.566×10^{-6} *22*; α(M)=2.21×10^{-7} *3*; α(N+..)=0.001172 α(N)=9.60×10^{-9} *14*; α(IPF)=0.001172 *17* B(E2)(W.u.)=0.8 *3* Mult.: From (γ,γ′),(pol γ,γ′).
4019.886	1$^+$	431.9[i] *4*	0.5[i] *2*	3587.72	0$^+$			
		702.11[i]	1.5[i] *2*	3317.829	0$^+$			
		896.23[i] *6*	7.1[i] *3*	3123.698	2$^+$			
		1734.98[i] *11*	9.3[i] *5*	2284.80	0$^+$			

$^{60}_{28}Ni_{32}$-19

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
4019.886	1+	2687.33[i] 4	42[i] 1	1332.514	2+				
		4019.74[i] 5	100[i] 3	0.0	0+	M1		0.001087 16	α=0.001087 16; α(K)=1.568×10^{-5} 22; α(L)=1.513×10^{-6} 22; α(M)=2.13×10^{-7} 3; α(N+..)=0.001069 α(N)=9.29×10^{-9} 13; α(IPF)=0.001069 15 Mult.: From (γ,γ′),(pol γ,γ′).
4035		2703[c] 5	100[c]	1332.514	2+				
		4035[c] 5	100[c]	0.0	0+				
4039.89	3−	853.8[i] 4	10[i] 2	3185.98	(3+)				
		1881.15[i] 12	51[i] 4	2158.632	2+	[E1]		0.000586 9	α=0.000586 9; α(K)=3.21×10^{-5} 5; α(L)=3.11×10^{-6} 5; α(M)=4.37×10^{-7} 7; α(N+..)=0.000550 8 α(N)=1.90×10^{-8} 3; α(IPF)=0.000550 8 B(E1)(W.u.)=0.0010 5
		2707.44[i] 8	100[i] 4	1332.514	2+	[E1]		0.001103 16	α=0.001103 16; α(K)=1.91×10^{-5} 3; α(L)=1.84×10^{-6} 3; α(M)=2.59×10^{-7} 4; α(N+..)=0.001082 16 α(N)=1.127×10^{-8} 16; α(IPF)=0.001082 16 B(E1)(W.u.)=0.0006 3
4077.99	1+,2+	1451.88[i] 16	14[i] 2	2626.06	3+				
		1919.28[i] 7	55[i] 3	2158.632	2+				
		2745.47[i] 6	100[i] 3	1332.514	2+				
		4077.6[i] 9	9[i] 2	0.0	0+				
4111.96	2+	992[c] 5	92[c]	3119.87	4+				
		1485.94[i] 19	46[i] 5	2626.06	3+				
		1606.10[i] 14	70[i] 6	2505.753	4+				
		2779.42[i] 14	100[i] 6	1332.514	2+				
		4111.6[i] 8	49[i] 9	0.0	0+				
4165.50	5+	494.4 2	9 2	3671.16	4+	M1+E2		0.0013 5	α=0.0013 5; α(K)=0.0012 4; α(L)=0.00012 4; α(M)=1.6×10^{-5} 6; α(N+..)=6.9×10^{-7} 22 α(N)=6.9×10^{-7} 22
		1044.4 2	14 4	3119.87	4+	M1+E2		0.000200 18	α=0.000200 18; α(K)=0.000180 16; α(L)=1.76×10^{-5} 16; α(M)=2.48×10^{-6} 23; α(N+..)=1.07×10^{-7} 1 α(N)=1.07×10^{-7} 10
		1539.0 3	14 4	2626.06	3+				
		1659.6 3	100 9	2505.753	4+	M1+E2	−1.7 4	0.000224 6	α=0.000224 6; α(K)=7.15×10^{-5} 12; α(L)=6.94×10^{-6} 12; α(M)=9.78×10^{-7} 16; α(N+..)=0.000145 5 α(N)=4.24×10^{-8} 7; α(IPF)=0.000145 5 B(M1)(W.u.)=0.0011 7; B(E2)(W.u.)=2.2 12 δ: other: −1.0 +5−4 from ^{58}Ni(α,2pγ), −1.1 +8-9 in (^{36}Ar,4pγ).
4186.19	(4+)	515 1	67 33	3671.16	4+	(D)			
		1560.2 4	100 33	2626.06	3+	(M1+E2)		0.000186 17	α=0.000186 17; α(K)=7.9×10^{-5} 4; α(L)=7.7×10^{-6} 4; α(M)=1.08×10^{-6} 5; α(N+..)=9.8×10^{-5} 13 α(N)=4.69×10^{-8} 19; α(IPF)=9.8×10^{-5} 13

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
4191.2		462[dk]		3730.82	4+				
		520[g]		3671.16	4+				
		572[c] *5*	75[c]	3619.46	3+				
		1565[c] *5*	100[c]	2626.06	3+				
4265.00	6+	1145.67[e] *15*	5.4[e] *8*	3119.87	4+	E2		0.000179 *3*	α=0.000179 *3*; α(K)=0.0001583 *23*; α(L)=1.546×10^{-5} *22*; α(M)=2.18×10^{-6} *3*; α(N+..)=3.06×10^{-6} *5* α(N)=9.37×10^{-8} *14*; α(IPF)=2.96×10^{-6} *5* B(E2)(W.u.)=2.3 *+12−7*
		1759.21[e] *15*	100[e] *5*	2505.753	4+	E2(+M3)	−0.08 *+3−7*	0.000270 *4*	α=0.000270 *4*; α(K)=6.57×10^{-5} *22*; α(L)=6.39×10^{-6} *21*; α(M)=9.0×10^{-7} *3*; α(N+..)=0.000197 *4* α(N)=3.89×10^{-8} *13*; α(IPF)=0.000197 *4* B(E2)(W.u.)=(5.0 *+24−13*); B(M3)(W.u.)=(7.E+4 *+7−6*) δ: other: −0.1 *+4−2* from ^{58}Ni(α,2pγ).
4294.5		1788.9[&] *4*	67[&] *17*	2505.753	4+				
		2961.8[&] *4*	100[&] *17*	1332.514	2+				
4300.8		1181[g]		3119.87	4+				
		1795[g]		2505.753	4+				
4318.58	2+	1692.45[i] *8*	37[i] *2*	2626.06	3+				
		1813.5[i] *5*	21[i] *2*	2505.753	4+				
		2985.97[i] *7*	100[i] *3*	1332.514	2+				
		4318.52[i] *11*	41[i] *2*	0.0	0+				
4335.52	2	1829.9[i] *4*	6[i] *2*	2505.753	4+				
		2176.84[i] *4*	100[i] *3*	2158.632	2+				
		3002.5[i] *4*	9[i] *2*	1332.514	2+				
		4335.37[i] *23*	31[i] *3*	0.0	0+				
4341	(0+)	1217[c] *5*	43[c]	3123.698	2+				
		2182[c] *5*	100[c]	2158.632	2+				
4355.56	2+	3024[ak]	100[a]	1332.514	2+				
4400.0		700[gk]		3702.9	4+				
		1130[g]		3269.19	2+				
		1895[g]		2505.753	4+				
4407.46	5+	241.8 *1*	45 *6*	4165.50	5+	D			
		676.6 *2*	100 *10*	3730.82	4+	M1+E2		0.00056 *11*	α=0.00056 *11*; α(K)=0.00050 *10*; α(L)=4.9×10^{-5} *10*; α(M)=7.0×10^{-6} *14*; α(N+..)=3.0×10^{-7} *6* α(N)=3.0×10^{-7} *6*
		736.4 *4*	61 *10*	3671.16	4+	M1+E2		0.00045 *8*	α=0.00045 *8*; α(K)=0.00041 *7*; α(L)=4.0×10^{-5} *7*; α(M)=5.6×10^{-6} *10*; α(N+..)=2.4×10^{-7} *4* α(N)=2.4×10^{-7} *4*
		1288.3 *4*	13 *3*	3119.87	4+	M1+E2		0.000151 *11*	α=0.000151 *11*; α(K)=0.000116 *7*; α(L)=1.13×10^{-5} *7*;

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(M)=1.59×10^{-6} *10*; α(N+..)=2.2×10^{-5} *4* α(N)=6.9×10^{-8} *4*; α(IPF)=2.2×10^{-5} *4*
4407.46	5$^+$	1781.3 *3*	29 *3*	2626.06	3$^+$	E2	0.000278 *4*	α=0.000278 *4*; α(K)=6.34×10^{-5} *9*; α(L)=6.16×10^{-6} *9*; α(M)=8.68×10^{-7} *13*; α(N+..)=0.000208 *3* α(N)=3.76×10^{-8} *6*; α(IPF)=0.000208 *3*
		1901.70 *15*	48 *6*	2505.753	4$^+$			
4450.7		1945[g]		2505.753	4$^+$			
		3118[g]		1332.514	2$^+$			
4493.16	2$^+$	758.5[i] *4*	8[i] *2*	3734.44	2$^+$			
		1306.5[i] *5*	7[i] *2*	3185.98	(3$^+$)			
		2334.4[i] *3*	12[i] *2*	2158.632	2$^+$			
		3160.60[i] *6*	100[i] *3*	1332.514	2$^+$			
		4494.0[a] *7*	6.8[a] *14*	0.0	0$^+$			
4534.14	2$^+$	2028.5[i] *5*	63[i] *17*	2505.753	4$^+$			
		2375.6[i] *3*	100[i] *14*	2158.632	2$^+$			
		3203[ak]	54[a] *18*	1332.514	2$^+$			
		4536[ak]	≤10[a]	0.0	0$^+$			
4547.96	1$^+$,2$^+$	813.48[i] *7*	20[i] *1*	3734.44	2$^+$			
		1154.82[i] *12*	13[i] *1*	3393.14	2$^+$			
		1354.08[i] *9*	19[i] *2*	3193.87	1$^+$			
		1424.24[i] *4*	72[i] *2*	3123.698	2$^+$			
		2263.17[i] *4*	100[i] *2*	2284.80	0$^+$			
		2389.25[i] *5*	86[i] *2*	2158.632	2$^+$			
		3215.27[i] *8*	35[i] *2*	1332.514	2$^+$			
		4548.2[i] *3*	47[i] *5*	0.0	0$^+$			
4577.45	2$^+$	1308.16[i] *25*	29[i] *4*	3269.19	2$^+$			
		2418.65[i] *20*	28[i] *4*	2158.632	2$^+$			
		3244.90[i] *9*	100[i] *4*	1332.514	2$^+$			
		4577.37[i] *14*	95[i] *6*	0.0	0$^+$			
4579.0	(4$^+$)	1952.9 *5*	100	2626.06	3$^+$	M1+E2	0.00032 *3*	α=0.00032 *3*; α(K)=5.21×10^{-5} *15*; α(L)=5.05×10^{-6} *15*; α(M)=7.11×10^{-7} *21*; α(N+..)=0.00026 *3* α(N)=3.09×10^{-8} *9*; α(IPF)=0.00026 *3*
4760.23	1,2	1491.5[i] *3*	31[i] *6*	3269.19	2$^+$			
		1636.42[i] *13*	85[i] *6*	3123.698	2$^+$			
		2601.5[i] *4*	26[i] *6*	2158.632	2$^+$			
		3428.0[i] *4*	100[i] *3*	1332.514	2$^+$			
		4760.1[i] *4*	56[i] *7*	0.0	0$^+$			
4768		1644[c] *5*	100[c]	3123.698	2$^+$			
		2142[c] *5*	82[c]	2626.06	3$^+$			
4779.13		667.4[i] *5*	6[i] *3*	4111.96	2$^+$			

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
4779.13		1385.97[i] *14*	28[i] *4*	3393.14	2^+			
		1585.33[i] *13*	54[i] *4*	3193.87	1^+			
		2493.8[i] *3*	26[i] *2*	2284.80	0^+			
		2620.40[i] *8*	100[i] *4*	2158.632	2^+			
		3446.77[i] *17*	65[i] *6*	1332.514	2^+			
4800.0		2641.3[&k] *5*	100[&]	2158.632	2^+			
4843.93	2^+	3511.07[i] *18*	45[i] *2*	1332.514	2^+			
		4843.76[i] *9*	100[i] *4*	0.0	0^+	E2	0.001458 *21*	α=0.001458 *21*; α(K)=1.228×10^{-5} *18*; α(L)=1.185×10^{-6} *17*; α(M)=1.669×10^{-7} *24* α(N)=7.27×10^{-9} *11*; α(IPF)=0.001444 *21* Mult.: From (γ,γ′),(pol γ,γ′).
4848.9	1,2,3	1579.5[a] *6*	1.0×10^2[a] *4*	3269.19	2^+			
		3518[a] *2*	2.×10^1[a] *1*	1332.514	2^+			
4859		3527[c] *5*	61[c]	1332.514	2^+			
		4859[c] *5*	100[c]	0.0	0^+			
4928.98		1194.4[i] *5*	38[i] *13*	3734.44	2^+			
		2770.5[i] *3*	98[i] *13*	2158.632	2^+			
		3596.4[i] *4*	100[i] *15*	1332.514	2^+			
4953.36		841.2[i] *3*	14[i] *3*	4111.96	2^+			
		913.63[i] *14*	40[i] *4*	4039.89	3^-			
		1684.4[i] *3*	26[i] *5*	3269.19	2^+			
		3620.64[i] *14*	100[i] *7*	1332.514	2^+			
4958	4^+	2452[c] *5*	100[c]	2505.753	4^+			
		3626[c] *5*	67[c]	1332.514	2^+			
4970.6		1299[c] *5*	25[c]	3671.16	4^+			
		2344[c] *5*	100[c]	2626.06	3^+			
		3638[g]		1332.514	2^+			
4986.00	(6^+)	578.3 *3*	17 *4*	4407.46	5^+	M1+E2	0.00084 *22*	α=0.00084 *22*; α(K)=0.00076 *20*; α(L)=7.5×10^{-5} *20*; α(M)=1.1×10^{-5} *3*; α(N+..)=4.5×10^{-7} *11* α(N)=4.5×10^{-7} *11*
		720.9 *2*	51 *4*	4265.00	6^+	D		
		820.5 *2*	13.2 *19*	4165.50	5^+	M1+E2	0.00035 *5*	α=0.00035 *5*; α(K)=0.00031 *5*; α(L)=3.1×10^{-5} *5*; α(M)=4.3×10^{-6} *7*; α(N+..)=1.9×10^{-7} *3* α(N)=1.9×10^{-7} *3*
		1255.8 *2*	9.4 *19*	3730.82	4^+	E2	0.0001623 *23*	α=0.0001623 *23*; α(K)=0.0001291 *18*; α(L)=1.260×10^{-5} *18*; α(M)=1.774×10^{-6} *25* α(N)=7.64×10^{-8} *11*; α(IPF)=1.88×10^{-5} *3* B(E2)(W.u.)=0.5 *+4−5*
		1314.5 *2*	34 *4*	3671.16	4^+	E2	0.0001619 *23*	α=0.0001619 *23*; α(K)=0.0001170 *17*; α(L)=1.141×10^{-5} *16*; α(M)=1.606×10^{-6} *23*

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(N)=6.93×10^{-8} *10*; α(IPF)=3.18×10^{-5} *5* B(E2)(W.u.)=1.5 *+11−15*
4986.00	(6$^+$)	1867.0 *3*	11.3 *19*	3119.87	4$^+$	E2	0.000312 *5*	α=0.000312 *5*; α(K)=5.80×10^{-5} *9*; α(L)=5.63×10^{-6} *8*; α(M)=7.94×10^{-7} *12*; α(N+..)=0.000248 *4* α(N)=3.44×10^{-8} *5*; α(IPF)=0.000248 *4* B(E2)(W.u.)=0.09 *+7−9*
		2480.6 *3*	100 *6*	2505.753	4$^+$	E2	0.000584 *9*	α=0.000584 *9*; α(K)=3.49×10^{-5} *5*; α(L)=3.38×10^{-6} *5*; α(M)=4.76×10^{-7} *7*; α(N+..)=0.000546 *8* α(N)=2.07×10^{-8} *3*; α(IPF)=0.000546 *8* B(E2)(W.u.)=0.18 *+13−18*
5014.45	(5$^-$)	749.5 *3*	3 *3*	4265.00	6$^+$	E1	0.000189 *3*	α=0.000189 *3*; α(K)=0.0001700 *24*; α(L)=1.655×10^{-5} *24*; α(M)=2.33×10^{-6} *4*; α(N+..)=1.002×10^{-7} α(N)=1.002×10^{-7} *14*
		828.3 *3*	6 *3*	4186.19	(4$^+$)	(E1)	0.0001528 *22*	α=0.0001528 *22*; α(K)=0.0001375 *20*; α(L)=1.337×10^{-5} *19*; α(M)=1.88×10^{-6} *3* α(N)=8.11×10^{-8} *12*
		848.9 *1*	3 *3*	4165.50	5$^+$	E1	0.0001452 *21*	α=0.0001452 *21*; α(K)=0.0001307 *19*; α(L)=1.271×10^{-5} *18*; α(M)=1.79×10^{-6} *3* α(N)=7.71×10^{-8} *11*
		1283.8 *4*	9 *3*	3730.82	4$^+$	E1	0.0001733 *25*	α=0.0001733 *25*; α(K)=5.97×10^{-5} *9*; α(L)=5.78×10^{-6} *9*; α(M)=8.14×10^{-7} *12*; α(N+..)=0.0001070 *1* α(N)=3.52×10^{-8} *5*; α(IPF)=0.0001070 *16*
		1343.3 *2*	55 *6*	3671.16	4$^+$	E1	0.000208 *3*	α=0.000208 *3*; α(K)=5.52×10^{-5} *8*; α(L)=5.35×10^{-6} *8*; α(M)=7.53×10^{-7} *11*; α(N+..)=0.0001466 *21* α(N)=3.26×10^{-8} *5*; α(IPF)=0.0001465 *21*
		1894.7 *3*	100 *10*	3119.87	4$^+$	E1	0.000595 *9*	α=0.000595 *9*; α(K)=3.18×10^{-5} *5*; α(L)=3.07×10^{-6} *5*; α(M)=4.33×10^{-7} *6*; α(N+..)=0.000560 *8* α(N)=1.88×10^{-8} *3*; α(IPF)=0.000560 *8*
		2508.7 *4*	87 *10*	2505.753	4$^+$	E1	0.000989 *14*	α=0.000989 *14*; α(K)=2.12×10^{-5} *3*; α(L)=2.05×10^{-6} *3*; α(M)=2.88×10^{-7} *4*; α(N+..)=0.000966 *14* α(N)=1.251×10^{-8} *18*; α(IPF)=0.000966 *14*
5048.3	1,2	2889.6[a] *7*	1.0×10^{2}[a] *4*	2158.632	2$^+$			
		3716[ak]	≤35[a]	1332.514	2$^+$			
		5048[a] *3*	9[a] *5*	0.0	0$^+$			
5065.02	(1$^-$)	3732.23[i] *22*	30[i] *3*	1332.514	2$^+$			
		5064.79[i] *7*	100[i] *3*	0.0	0$^+$			
5091.1		2465[f]	100[f]	2626.06	3$^+$			
5106		1435[c] *5*	100[c]	3671.16	4$^+$			
		2600[c] *5*	82[c]	2505.753	4$^+$			
5120.7	4$^+$	2615[g]		2505.753	4$^+$			
		3788[g]		1332.514	2$^+$			

$^{60}_{28}Ni_{32}$-24

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
5127.16		1392.3[i] *5*	18[i] *7*	3734.44	2^+				
		3794.8[i] *4*	100[i] *13*	1332.514	2^+				
5133		3800[c] *5*	100[c]	1332.514	2^+				
5148.51	6^+	740.9 *2*	100 *10*	4407.46	5^+	M1+E2	+0.4 *1*	0.000391 *11*	α=0.000391 *11*; α(K)=0.000351 *10*; α(L)=3.44×10^{-5} *10*; α(M)=4.84×10^{-6} *14*; α(N+..)=2.09×10^{-7} *6* α(N)=2.09×10^{-7} *6*
		883.5 *1*	28.6 *24*	4265.00	6^+	D			
		982.9 *3*	11.9 *24*	4165.50	5^+	M1+E2		0.000229 *23*	α=0.000229 *23*; α(K)=0.000206 *21*; α(L)=2.01×10^{-5} *21*; α(M)=2.8×10^{-6} *3*; α(N+..)=1.22×10^{-7} *12* α(N)=1.22×10^{-7} *12*
		1477.3 *4*	4.8 *24*	3671.16	4^+	E2		0.000181 *3*	α=0.000181 *3*; α(K)=9.17×10^{-5} *13*; α(L)=8.92×10^{-6} *13*; α(M)=1.257×10^{-6} *18*; α(N+..)=7.87×10^{-5} *12* α(N)=5.43×10^{-8} *8*; α(IPF)=7.86×10^{-5} *12*
		2029.0 *5*	7.1 *24*	3119.87	4^+	E2		0.000381 *6*	α=0.000381 *6*; α(K)=4.98×10^{-5} *7*; α(L)=4.83×10^{-6} *7*; α(M)=6.80×10^{-7} *10*; α(N+..)=0.000326 *5* α(N)=2.95×10^{-8} *5*; α(IPF)=0.000326 *5*
		2643.0 *4*	60 *7*	2505.753	4^+	E2		0.000657 *10*	α=0.000657 *10*; α(K)=3.14×10^{-5} *5*; α(L)=3.04×10^{-6} *5*; α(M)=4.28×10^{-7} *6*; α(N+..)=0.000622 *9* α(N)=1.86×10^{-8} *3*; α(IPF)=0.000622 *9*
5174		2548[c] *5*	100[c]	2626.06	3^+				
5191.7		927[h]	100	4265.00	6^+				
5205		2699[c] *5*	100[c]	2505.753	4^+				
5236.20	$5^{(+)}$	2116.0 *1*	100	3119.87	4^+	D+Q			
5244	4^+	2120[c] *5*	100[c]	3123.698	2^+				
5288.55		1248.86[i] *15*	100[i] *12*	4039.89	3^-				
		3955.2[i] *6*	69[i] *17*	1332.514	2^+				
		5287.8[i] *7*	61[i] *14*	0.0	0^+				
5318		2812[c] *5*	100[c]	2505.753	4^+				
5348.79	7^-	200.2 *1*	5.3 *4*	5148.51	6^+	E1		0.00621 *9*	α=0.00621 *9*; α(K)=0.00558 *8*; α(L)=0.000547 *8*; α(M)=7.67×10^{-5} *11*; α(N+..)=3.22×10^{-6} *5* α(N)=3.22×10^{-6} *5* B(E1)(W.u.)=8.7×10^{-6} *10*
		334.2 *1*	16.9 *8*	5014.45	(5^-)	E2		0.00636 *9*	α=0.00636 *9*; α(K)=0.00570 *8*; α(L)=0.000575 *8*; α(M)=8.06×10^{-5} *12*; α(N+..)=3.30×10^{-6} *5* α(N)=3.30×10^{-6} *5* B(E2)(W.u.)=4.9 *5*
		362.8 *1*	7.6 *6*	4986.00	(6^+)	E1		0.001128 *16*	α=0.001128 *16*; α(K)=0.001014 *15*; α(L)=9.92×10^{-5} *14*; α(M)=1.395×10^{-5} *20*; α(N+..)=5.93×10^{-7} α(N)=5.93×10^{-7} *9* B(E1)(W.u.)=2.10×10^{-6} *25*
		1083.6 *2*	100.0 *4*	4265.00	6^+	E1		9.00×10^{-5} *13*	α=9.00×10^{-5} *13*; α(K)=8.10×10^{-5} *12*; α(L)=7.86×10^{-6}

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									11; α(M)=1.106×10^{-6} *16*; α(N+..)=4.78×10^{-8} *7* α(N)=4.78×10^{-8} *7* B(E1)(W.u.)=1.04×10^{-6} *9*
5348.79	7$^-$	2843.0 *1*	3.7 *4*	2505.753	4$^+$	E3		0.000528 *8*	α=0.000528 *8*; α(K)=4.11×10^{-5} *6*; α(L)=3.99×10^{-6} *6*; α(M)=5.62×10^{-7} *8*; α(N+..)=0.000482 *7* α(N)=2.44×10^{-8} *4*; α(IPF)=0.000482 *7* B(E3)(W.u.)=0.42 *6*
5379		2255[c] *5*	100[c]	3123.698	2$^+$				
5410.8		2905[f]	100[f]	2505.753	4$^+$				
5446.98	2$^+$	1091.42[i] *9*	94[i] *5*	4355.56	2$^+$				
		1575.84[i] *13*	100[i] *7*	3871.050	2$^+$				
		3288.5[i] *3*	27[i] *7*	2158.632	2$^+$				
		4114.4[i] *6*	99[i] *12*	1332.514	2$^+$				
5449.5	6$^+$	2944.4 *7*	100	2505.753	4$^+$	E2		0.000787 *11*	α=0.000787 *11*; α(K)=2.62×10^{-5} *4*; α(L)=2.54×10^{-6} *4*; α(M)=3.58×10^{-7} *5*; α(N+..)=0.000758 *11* α(N)=1.554×10^{-8} *22*; α(IPF)=0.000758 *11*
5476.04		1888.4[i] *3*	100[i] *13*	3587.72	0$^+$				
		2282.0[i] *3*	81[i] *13*	3193.87	1$^+$				
5530	(2$^+$)	2904[c] *5*	67[c]	2626.06	3$^+$				
		3371[c] *5*	100[c]	2158.632	2$^+$				
5612.40		851.9[i] *3*	4.5[i] *7*	4760.23	1,2				
		1064.2[i] *4*	4.8[i] *9*	4547.96	1$^+$,2$^+$				
		1592.53[i] *4*	100[i] *3*	4019.886	1$^+$				
		1741.3[i] *5*	3.0[i] *9*	3871.050	2$^+$				
		1878.0[i] *4*	5[i] *1*	3734.44	2$^+$				
		2488.73[i] *10*	20[i] *1*	3123.698	2$^+$				
		3453.67[i] *11*	30[i] *1*	2158.632	2$^+$				
		4279.8[i] *4*	7.7[i] *14*	1332.514	2$^+$				
		5611.8[i] *4*	8.2[i] *12*	0.0	0$^+$				
5663.03	7$^+$	514.4 *2*	11.1 *19*	5148.51	6$^+$	M1+E2		0.0012 *4*	α=0.0012 *4*; α(K)=0.0010 *4*; α(L)=0.00010 *4*; α(M)=1.5×10^{-5} *5*; α(N+..)=6.2×10^{-7} *18* α(N)=6.2×10^{-7} *18*
		677.7 *2*	100 *7*	4986.00	(6$^+$)	M1+E2	+0.18 *+17−16*	0.000454 *19*	α=0.000454 *19*; α(K)=0.000408 *17*; α(L)=4.00×10^{-5} *17*; α(M)=5.63×10^{-6} *23*; α(N+..)=2.43×10^{-7} *1* α(N)=2.43×10^{-7} *10* B(M1)(W.u.)=0.048 *+21−48*; B(E2)(W.u.)=6 *+12−6*
		1255.1 *3*	22.2 *19*	4407.46	5$^+$	E2		0.0001624 *23*	α=0.0001624 *23*; α(K)=0.0001293 *19*; α(L)=1.261×10^{-5} *18*; α(M)=1.776×10^{-6} *25* α(N)=7.65×10^{-8} *11*; α(IPF)=1.86×10^{-5} *3* B(E2)(W.u.)=2.0 *+9−20*
		1397.7 *2*	69 *6*	4265.00	6$^+$	M1(+E2)	−0.12 *13*	0.0001438 *23*	α=0.0001438 *23*; α(K)=9.35×10^{-5} *14*;

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Adopted Levels, Gammas (continued)

$\gamma(^{60}Ni)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									α(L)=9.08×10^{-6} *14*; α(M)=1.280×10^{-6} *19*; α(N+..)=3.99×10^{-5}

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									α(N)=5.56×10^{-8} *9*; α(IPF)=3.98×10^{-5} *9* B(M1)(W.u.)=(0.0038 *+17−38*); B(E2)(W.u.)=(0.05 *+12−5*)
5663.03	7$^+$	1498.0 *4*	3.7 *19*	4165.50	5$^+$	E2		0.000185 *3*	α=0.000185 *3*; α(K)=8.91×10^{-5} *13*; α(L)=8.67×10^{-6} *13*; α(M)=1.222×10^{-6} *18*; α(N+..)=8.62×10^{-5} *13* α(N)=5.28×10^{-8} *8*; α(IPF)=8.62×10^{-5} *13* B(E2)(W.u.)=0.14 *+10−14*
5672.36		2478.42[i] *7*	100[i] *4*	3193.87	1$^+$				
		3046.7[i] *7*	13[i] *4*	2626.06	3$^+$				
		3513.6[i] *3*	56[i] *6*	2158.632	2$^+$				
5710.79		1632.99[i] *18*	15[i] *1*	4077.99	1$^+$,2$^+$				
		2317.65[i] *20*	13[i] *2*	3393.14	2$^+$				
		2392.6[i] *3*	11[i] *1*	3317.829	0$^+$				
		2517.00[i] *9*	68[i] *2*	3193.87	1$^+$				
		2586.98[i] *12*	20[i] *1*	3123.698	2$^+$				
		3426.3[i] *5*	26[i] *7*	2284.80	0$^+$				
		3551.94[i] *14*	36[i] *2*	2158.632	2$^+$				
		5710.52[i] *10*	100[i] *4*	0.0	0$^+$				
5780.5		3153.6[&] *7*	82[&] *13*	2626.06	3$^+$				
		3275.4[&] *7*	100[&] *13*	2505.753	4$^+$				
5785.1	(7$^+$)	799.0[ek] *2*	100[e]	4986.00	(6$^+$)	D(+Q)	−0.07 *+9−27*		
5799	2$^+$	3293[d] *5*		2505.753	4$^+$				
		4467[d] *5*		1332.514	2$^+$				
5830.8		2711[g]		3119.87	4$^+$				
		4498[g]		1332.514	2$^+$				
5859.9		3700.9[i] *9*	100[i]	2158.632	2$^+$				
5878.05		2684.19[i] *12*	100[i] *5*	3193.87	1$^+$				
		4545.9[i] *5*	45[i] *9*	1332.514	2$^+$				
5901.69	6$^-$	1637.0 *1*	38 *8*	4265.00	6$^+$	E1		0.000411 *6*	α=0.000411 *6*; α(K)=3.98×10^{-5} *6*; α(L)=3.86×10^{-6} *6*; α(M)=5.43×10^{-7} *8*; α(N+..)=0.000366 *6* α(N)=2.35×10^{-8} *4*; α(IPF)=0.000366 *6*
		1736.0 *1*	100 *8*	4165.50	5$^+$	E1		0.000483 *7*	α=0.000483 *7*; α(K)=3.63×10^{-5} *5*; α(L)=3.52×10^{-6} *5*; α(M)=4.95×10^{-7} *7*; α(N+..)=0.000442 *7* α(N)=2.15×10^{-8} *3*; α(IPF)=0.000442 *7*
5902.44		2633.3[i] *3*	18[i] *3*	3269.19	2$^+$				
		3276.32[i] *20*	24[i] *3*	2626.06	3$^+$				
		3743.71[i] *13*	100[i] *5*	2158.632	2$^+$				
5918.54		1562.8[i] *3*	100[i] *10*	4355.56	2$^+$				

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
5918.54		2525.4[i] *3*	83[i] *15*	3393.14	2^+				
5931.1	1	5930.8[j] *11*	100[j]	0.0	0^+	*j*			
5967.8		1474.6[i] *3*	100[i] *13*	4493.16	2^+				
		5967.5[i] *8*	29[i] *11*	0.0	0^+				
6066.72		1532.65[i] *12*	60[i] *6*	4534.14	2^+				
		2797.7[i] *5*	23[i] *6*	3269.19	2^+				
		3440.37[i] *17*	100[i] *9*	2626.06	3^+				
		6067.2[i] *8*	15[i] *6*	0.0	0^+				
6076.6	(8)	727[h]		5348.79	7^-				
6111.5		963[h]		5148.51	6^+				
6112.43	7^+	963.7 *3*	100 *7*	5148.51	6^+	M1+E2	+0.3 *2*	0.000219 *7*	α=0.000219 *7*; α(K)=0.000197 *6*; α(L)=1.92×10^{-5} *6*; α(M)=2.70×10^{-6} *9*; α(N+..)=1.17×10^{-7} *4* α(N)=1.17×10^{-7} *4*
		1847.2 *5*	61 *7*	4265.00	6^+	M1+E2		0.00028 *3*	α=0.00028 *3*; α(K)=5.76×10^{-5} *18*; α(L)=5.59×10^{-6} *18*; α(M)=7.87×10^{-7} *25*; α(N+..)=0.000215 *24* α(N)=3.42×10^{-8} *11*; α(IPF)=0.000215 *24*
		1946.6 *5*	29 *4*	4165.50	5^+	E2		0.000346 *5*	α=0.000346 *5*; α(K)=5.37×10^{-5} *8*; α(L)=5.21×10^{-6} *8*; α(M)=7.34×10^{-7} *11*; α(N+..)=0.000286 *4* α(N)=3.18×10^{-8} *5*; α(IPF)=0.000286 *4*
6181.0	1^-	4848.4 *14*	10 *4*	1332.514	2^+				
		6180.6 *7*	100 *1*	0.0	0^+	E1			α(IPF)=0.00233 *4*
6229.3	(2^+)	6229.0[j] *11*	100[j]	0.0	0^+	(E2)[j]			α(IPF)=0.00180 *3*
6239.2		4906.1[i] *5*	100[i]	1332.514	2^+				
6278.34	(6^-)	1042.0 *1*	75 *33*	5236.20	$5^{(+)}$	(E1)		9.68×10^{-5} *14*	α=9.68×10^{-5} *14*; α(K)=8.71×10^{-5} *13*; α(L)=8.46×10^{-6} *12*; α(M)=1.191×10^{-6} *17*; α(N+..)=5.14×10^{-8} *8* α(N)=5.14×10^{-8} *8*
		1264.0[g] *1*	100 *33*	5014.45	(5^-)	(M1+E2)		0.000151 *11*	α=0.000151 *11*; α(K)=0.000120 *8*; α(L)=1.17×10^{-5} *8*; α(M)=1.65×10^{-6} *11*; α(N+..)=1.8×10^{-5} *3* α(N)=7.1×10^{-8} *5*; α(IPF)=1.8×10^{-5} *3*
6327.21	2^+	1568.0[i] *5*	14[i] *3*	4760.23	1,2				
		2320.7[i] *4*	25[i] *4*	4006.444	2^+				
		3058.0[i] *7*	16[i] *4*	3269.19	2^+				
		4168.32[i] *19*	100[i] *8*	2158.632	2^+				
6362.05		749.7[i] *3*	100[i] *12*	5612.40					
		3167.7[i] *4*	90[i] *10*	3193.87	1^+				
6382.4	1	6382.3[i] *5*	100[i]	0.0	0^+				
6461.10	8^+	348.7 *2*	9 *3*	6112.43	7^+	M1+E2		0.0037 *18*	α=0.0037 *18*; α(K)=0.0034 *16*; α(L)=0.00034 *16*; α(M)=4.7×10^{-5} *23*; α(N+..)=2.0×10^{-6} *9* α(N)=2.0×10^{-6} *9*
		798.1 *2*	100 *5*	5663.03	7^+	M1+E2	+0.45 *5*	0.000335 *6*	α=0.000335 *6*; α(K)=0.000301 *6*; α(L)=2.94×10^{-5} *6*;

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(M)=4.15×10^{-6} *8*; α(N+..)=1.79×10^{-7} *3* α(N)=1.79×10^{-7} *3* B(M1)(W.u.)=0.019 *+8−19*; B(E2)(W.u.)=11 *+6−11*
6461.10	8$^+$	1312.4 *4*	27 *3*	5148.51	6$^+$	E2	0.0001618 *23*	α=0.0001618 *23*; α(K)=0.0001174 *17*; α(L)=1.145×10^{-5} *16*; α(M)=1.612×10^{-6} *23* α(N)=6.95×10^{-8} *10*; α(IPF)=3.13×10^{-5} *5* B(E2)(W.u.)=1.5 *+7−15*
		1475.0 *4*	16 *1*	4986.00	(6$^+$)	E2	0.000180 *3*	α=0.000180 *3*; α(K)=9.20×10^{-5} *13*; α(L)=8.95×10^{-6} *13*; α(M)=1.261×10^{-6} *18*; α(N+..)=7.79×10^{-5} *11* α(N)=5.45×10^{-8} *8*; α(IPF)=7.78×10^{-5} *11* B(E2)(W.u.)=0.49 *+21−49*
		2195.9 *5*	6 *1*	4265.00	6$^+$	E2	0.000456 *7*	α=0.000456 *7*; α(K)=4.32×10^{-5} *6*; α(L)=4.18×10^{-6} *6*; α(M)=5.89×10^{-7} *9*; α(N+..)=0.000408 *6* α(N)=2.56×10^{-8} *4*; α(IPF)=0.000408 *6* B(E2)(W.u.)=0.025 *+12−25*
6465.25	1$^-$	1621.2[i] *5*	19[i] *6*	4843.93	2$^+$			
		2578.2[i] *5*	16[i] *5*	3887.36	2$^+$			
		5132.6[i] *5*	31[i] *7*	1332.514	2$^+$			
		6464.9[i] *3*	100[i] *6*	0.0	0$^+$	E1		α(IPF)=0.00240 *4* Mult.: From (γ,γ′),(pol γ,γ′).
6489.28		3369.4[i] *4*	46[i] *8*	3119.87	4$^+$			
		3983.6[i] *4*	100[i] *12*	2505.753	4$^+$			
		4204.0[i] *7*	42[i] *12*	2284.80	0$^+$			
6515.0	1$^+$	6514.6[j] *9*	100[j]	0.0	0$^+$	M1[j]		α(IPF)=0.001745 *25*
6516.72		2198.1[i] *4*	100[i] *19*	4318.58	2$^+$			
		2496.9[i] *3*	70[i] *12*	4019.886	1$^+$			
6567.33		2547.35[i] *21*	100[i]	4019.886	1$^+$			
6587.6	1$^-$	4302.0[j] *11*	30[j] *6*	2284.80	0$^+$	*j*		
		5254.7[j] *10*	19[j] *6*	1332.514	2$^+$	*j*		
		6587.6[j] *8*	100[j] *3*	0.0	0$^+$	E1[j]		α(IPF)=0.00243 *4*
6647.17		2607.10[i] *22*	55[i] *7*	4039.89	3$^-$			
		2627.4[i] *3*	39[i] *6*	4019.886	1$^+$			
		3027.86[i] *16*	100[i] *8*	3619.46	3$^+$			
		4021.4[i] *5*	100[i] *11*	2626.06	3$^+$			
6672.4	(9)	595[h]		6076.6	(8)			
6718.5	1$^-$	6718.1[j] *10*	100[j]	0.0	0$^+$	E1[j]		α(IPF)=0.00246 *4*
6736.5	(1)	4577.7[j] *13*	100[j] *21*	2158.632	2$^+$	*j*		
		6736.1[j] *16*	85[j] *21*	0.0	0$^+$	*j*		
6756.4		2831.3[i] *6*	78[i] *22*	3925.18	2$^+$,3$^+$			
		3487.1[i] *4*	100[i] *22*	3269.19	2$^+$			

$^{60}_{28}Ni_{32}$-30

Adopted Levels, Gammas (continued)

$\gamma(^{60}Ni)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
6761.39	$7^{(+)}$	861.4 *4*	30 *10*	5901.69	6^-	(E1)	0.0001409 *20*	α=0.0001409 *20*; α(K)=0.0001268 *18*; α(L)=1.233×10^{-5} *18*;

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									α(M)=1.736×10^{-6} *25* α(N)=7.48×10^{-8} *11*
6761.39	7$^{(+)}$	1525.0 *1*	30 *10*	5236.20	5$^{(+)}$	E2		0.000192 *3*	α=0.000192 *3*; α(K)=8.60×10^{-5} *12*; α(L)=8.36×10^{-6} *12*; α(M)=1.178×10^{-6} *17*; α(N+..)=9.66×10^{-5} *14* α(N)=5.09×10^{-8} *8*; α(IPF)=9.65×10^{-5} *14*
		2498.5 *6*	100 *10*	4265.00	6$^+$	(M1+E2)		0.00055 *5*	α=0.00055 *5*; α(K)=3.39×10^{-5} *8*; α(L)=3.28×10^{-6} *8*; α(M)=4.62×10^{-7} *11*; α(N+..)=0.00051 *5* α(N)=2.01×10^{-8} *5*; α(IPF)=0.00051 *5*
6810.95	9$^-$	1461.5[e] *2*	100[e]	5348.79	7$^-$	E2(+M3)	−0.02 *+30−7*	0.000177 *12*	α=0.000177 *12*; α(K)=9.4×10^{-5} *15*; α(L)=9.1×10^{-6} *15*; α(M)=1.29×10^{-6} *21*; α(N+..)=7.3×10^{-5} *5* α(N)=5.6×10^{-8} *9*; α(IPF)=7.3×10^{-5} *5* B(E2)(W.u.)=(11 *6*); B(M3)(W.u.)=(1.4×10^4 *+434−14*) δ: other: −0.10 *+20−15* from ^{58}Ni(α,2pγ).
6834.92		3517.3[i] *3*	93[i] *12*	3317.829	0$^+$				
		3641.1[i] *4*	100[i] *14*	3193.87	1$^+$				
6835.18		3517.3[i] *3*	93[i] *11*	3317.829	0$^+$				
		3641.1[i] *4*	100[i] *13*	3193.87	1$^+$				
6837.2	8$^-$	1487.8	100	5348.79	7$^-$	M1+E2		0.000169 *15*	α=0.000169 *15*; α(K)=8.7×10^{-5} *4*; α(L)=8.4×10^{-6} *4*; α(M)=1.19×10^{-6} *6*; α(N+..)=7.3×10^{-5} *10* α(N)=5.14×10^{-8} *22*; α(IPF)=7.3×10^{-5} *10*
6911.93	1$^+$	2593.3[i] *4*	15[i] *4*	4318.58	2$^+$				
		3040.5[i] *4*	31[i] *6*	3871.050	2$^+$				
		5578.7[i] *6*	22[i] *6*	1332.514	2$^+$				
		6911.7[i] *3*	100[i] *7*	0.0	0$^+$	M1			α(IPF)=0.00182 *3* Mult.: From (γ,γ′),(pol γ,γ′).
6950.4	(10)	278[h]	100	6672.4	(9)				
6996.86		2152.6[i] *3*	100[i] *15*	4843.93	2$^+$				
		4370.7[i] *5*	71[i] *12*	2626.06	3$^+$				
7027.83	8$^+$	914.8 *3*	70 *10*	6112.43	7$^+$	M1+E2		0.00027 *4*	α=0.00027 *4*; α(K)=0.00024 *3*; α(L)=2.4×10^{-5} *3*; α(M)=3.3×10^{-6} *4*; α(N+..)=1.44×10^{-7} *16* α(N)=1.44×10^{-7} *16*
		1365.0 *2*	100 *10*	5663.03	7$^+$	M1+E2		0.000153 *12*	α=0.000153 *12*; α(K)=0.000103 *6*; α(L)=1.00×10^{-5} *6*; α(M)=1.41×10^{-6} *8*; α(N+..)=3.9×10^{-5} *6* α(N)=6.1×10^{-8} *3*; α(IPF)=3.9×10^{-5} *6*
		1578.6 *4*	60 *10*	5449.5	6$^+$	E2		0.000208 *3*	α=0.000208 *3*; α(K)=8.02×10^{-5} *12*; α(L)=7.80×10^{-6} *11*; α(M)=1.099×10^{-6} *16*; α(N+..)=0.0001184 α(N)=4.75×10^{-8} *7*; α(IPF)=0.0001184 *17*
		1880.9 *5*	100 *20*	5148.51	6$^+$	E2		0.000318 *5*	α=0.000318 *5*; α(K)=5.72×10^{-5} *8*; α(L)=5.56×10^{-6} *8*; α(M)=7.83×10^{-7} *11*; α(N+..)=0.000254 *4* α(N)=3.39×10^{-8} *5*; α(IPF)=0.000254 *4*
		2041.9 *5*	40 *20*	4986.00	(6$^+$)	E2		0.000387 *6*	α=0.000387 *6*; α(K)=4.92×10^{-5} *7*; α(L)=4.77×10^{-6} *7*;

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									α(M)=6.72×10^{-7} *10*; α(N+..)=0.000332 *5* α(N)=2.91×10^{-8} *4*; α(IPF)=0.000332 *5*
7038.7	1$^-$	5705.6[j] *9*	64[j] *9*	1332.514	2$^+$	[j]			
		7038.7[j] *10*	100[j] *7*	0.0	0$^+$	E1[j]			α(IPF)=0.00253 *4*
7056.27		383[h]		6672.4	(9)				
		4430.3[i] *4*	100[i] *13*	2626.06	3$^+$				
		5723.0[i] *5*	80[i] *13*	1332.514	2$^+$				
7101.4	(10)	429[h]		6672.4	(9)				
7207.6		3129.6[i] *3*	100[i] *13*	4077.99	1$^+$,2$^+$				
		5875.2[i] *7*	52[i] *13*	1332.514	2$^+$				
7222.80		3603.4[i] *7*	61[i] *16*	3619.46	3$^+$				
		5889.9 *5*	100 *16*	1332.514	2$^+$				
7250.0	8$^+$	2986.5 *7*	100	4265.00	6$^+$	E2		0.000804 *12*	α=0.000804 *12*; α(K)=2.56×10^{-5} *4*; α(L)=2.48×10^{-6} *4*; α(M)=3.49×10^{-7} *5*; α(N+..)=0.000776 *11* α(N)=1.519×10^{-8} *22*; α(IPF)=0.000776 *11*
7316.13		1643.6[i] *4*	68[i] *14*	5672.36					
		3296.3[i] *3*	100[i] *14*	4019.886	1$^+$				
		5983.4[i] *5*	63[i] *14*	1332.514	2$^+$				
7339.68		1628.9[i] *4*	85[i] *16*	5710.79					
		2846.9[i] *5*	100[i] *20*	4493.16	2$^+$				
7360.97	(8)	2012.2 *5*	100	5348.79	7$^-$	(D+Q)			
7380.3	8$^+$	3114.7 *7*	100	4265.00	6$^+$	E2		0.000857 *12*	α=0.000857 *12*; α(K)=2.40×10^{-5} *4*; α(L)=2.32×10^{-6} *4*; α(M)=3.26×10^{-7} *5*; α(N+..)=0.000830 *12* α(N)=1.419×10^{-8} *20*; α(IPF)=0.000830 *12*
7414.16		3302.11[i] *24*	100[i]	4111.96	2$^+$				
7433.45	9$^+$	405.7 *2*	10 *2*	7027.83	8$^+$	M1+E2		0.0023 *10*	α=0.0023 *10*; α(K)=0.0021 *9*; α(L)=0.00021 *9*; α(M)=2.9×10^{-5} *12*; α(N+..)=1.2×10^{-6} *5* α(N)=1.2×10^{-6} *5*
		972.3 *2*	100 *10*	6461.10	8$^+$	M1+E2	+0.4 *2*	0.000217 *7*	α=0.000217 *7*; α(K)=0.000196 *6*; α(L)=1.91×10^{-5} *6*; α(M)=2.69×10^{-6} *9*; α(N+..)=1.16×10^{-7} *4* α(N)=1.16×10^{-7} *4*
		1321.1 *4*	32 *8*	6112.43	7$^+$	E2		0.0001620 *23*	α=0.0001620 *23*; α(K)=0.0001157 *17*; α(L)=1.128×10^{-5} *16*; α(M)=1.589×10^{-6} *23* α(N)=6.85×10^{-8} *10*; α(IPF)=3.34×10^{-5} *5*
		1770.6 *5*	4 *2*	5663.03	7$^+$	E2		0.000274 *4*	α=0.000274 *4*; α(K)=6.42×10^{-5} *9*; α(L)=6.23×10^{-6} *9*; α(M)=8.78×10^{-7} *13*; α(N+..)=0.000203 *3* α(N)=3.80×10^{-8} *6*; α(IPF)=0.000203 *3*
7465.66	(7$^-$)	2451.5 *6*	100	5014.45	(5$^-$)	E2		0.000571 *8*	α=0.000571 *8*; α(K)=3.56×10^{-5} *5*; α(L)=3.45×10^{-6} *5*; α(M)=4.86×10^{-7} *7*; α(N+..)=0.000532 *8* α(N)=2.11×10^{-8} *3*; α(IPF)=0.000532 *8*

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
7473.49	1+	2938.6[i] *4*	80[i] *17*	4534.14	2+			
		7473.0[i] *8*	100[i] *20*	0.0	0+	M1		α(IPF)=0.00193 *3* Mult.: from (γ,γ′),(pol γ,γ′).
7495.2		6162.5[i] *6*	100.0[i]	1332.514	2+			
7531.4	8+	1418.9 *4*	75 *25*	6112.43	7+	M1+E2	0.000158 *13*	α=0.000158 *13*; α(K)=9.5×10^{-5} *5*; α(L)=9.3×10^{-6} *5*; α(M)=1.30×10^{-6} *7*; α(N+..)=5.2×10^{-5} *8* α(N)=5.6×10^{-8} *3*; α(IPF)=5.2×10^{-5} *8*
		3266.9 *8*	100 *25*	4265.00	6+	E2	0.000919 *13*	α=0.000919 *13*; α(K)=2.22×10^{-5} *4*; α(L)=2.15×10^{-6} *3*; α(M)=3.02×10^{-7} *5*; α(N+..)=0.000894 *13* α(N)=1.315×10^{-8} *19*; α(IPF)=0.000894 *13*
7552.0		5393.3[i] *3*	100.0[i]	2158.632	2+			
7559.5	1−	7559.0[j] *8*	100[j]	0.0	0+	E1[j]		α(IPF)=0.00262 *4*
7627.4		677		6950.4	(10)			
7647.4	1−	7646.9 *7*	100	0.0	0+	E1		α(IPF)=0.00264 *4*
7657.6	1+	7657.1[j] *8*	100[j]	0.0	0+	M1[j]		α(IPF)=0.00196 *3*
7684.1		6351.2[i] *4*	100.0[i]	1332.514	2+			
7690.0	1−	3354.5[i] *4*	100[i] *11*	4335.52	2			
		6358.8[j] *16*	2[j] *1*	1332.514	2+	[j]		
		7689.5[i] *5*	90[i] *13*	0.0	0+	E1		α(IPF)=0.00265 *4* Mult.: from (γ,γ′),(pol γ,γ′).
7691.4	(9−)	2500[h]		5191.7				
7732.5	8+	2586.2 *6*	75 *25*	5148.51	6+	E2	0.000632 *9*	α=0.000632 *9*; α(K)=3.25×10^{-5} *5*; α(L)=3.15×10^{-6} *5*; α(M)=4.44×10^{-7} *7*; α(N+..)=0.000595 *9* α(N)=1.93×10^{-8} *3*; α(IPF)=0.000595 *9*
		3465.8 *8*	100 *25*	4265.00	6+	E2	0.000995 *14*	α=0.000995 *14*; α(K)=2.02×10^{-5} *3*; α(L)=1.96×10^{-6} *3*; α(M)=2.76×10^{-7} *4*; α(N+..)=0.000972 *14* α(N)=1.199×10^{-8} *17*; α(IPF)=0.000972 *14*
7747.6	1−	5461.9[j] *11*	20[j] *4*	2284.80	0+	[j]		
		5590.1[j] *10*	16.7[j] *19*	2158.632	2+	[j]		
		6413.8[j] *9*	50[j] *6*	1332.514	2+	[j]		
		7747.3[j] *8*	100[j] *8*	0.0	0+	E1[j]		α(IPF)=0.00266 *4*
7760.33	8−	294.7 *2*	20 *10*	7465.66	(7−)	(M1+E2)	0.006 *4*	α=0.006 *4*; α(K)=0.006 *4*; α(L)=0.0006 *4*; α(M)=8.E−5 *5*; α(N+..)=3.4×10^{-6} *18* α(N)=3.4×10^{-6} *18*
		948.5 *3*	20 *10*	6810.95	9−	M1+E2	0.00025 *3*	α=0.00025 *3*; α(K)=0.000223 *24*; α(L)=2.18×10^{-5} *24*; α(M)=3.1×10^{-6} *4*; α(N+..)=1.32×10^{-7} *14* α(N)=1.32×10^{-7} *14*
		1648.0 *4*	40 *10*	6112.43	7+	E1	0.000419 *6*	α=0.000419 *6*; α(K)=3.94×10^{-5} *6*; α(L)=3.82×10^{-6} *6*; α(M)=5.37×10^{-7} *8*; α(N+..)=0.000375 *6* α(N)=2.33×10^{-8} *4*; α(IPF)=0.000375 *6*
		1860.4 *5*	10 *10*	5901.69	6−	E2	0.000310 *5*	α=0.000310 *5*; α(K)=5.84×10^{-5} *9*; α(L)=5.67×10^{-6} *8*; α(M)=7.99×10^{-7}

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									12; α(N+..)=0.000245 *4*
									α(N)=3.46×10^{-8} *5*; α(IPF)=0.000245 *4*
7760.33	8$^-$	2411.4 *6*	100 *10*	5348.79	7$^-$	M1+E2		0.00051 *4*	α=0.00051 *4*; α(K)=3.60×10^{-5} *9*; α(L)=3.48×10^{-6} *9*;
									α(M)=4.91×10^{-7} *12*; α(N+..)=0.00047 *4*
									α(N)=2.13×10^{-8} *5*; α(IPF)=0.00047 *4*
7761.8	1$^+$	1399.4[i] *4*	37[i] *12*	6362.05					
		4492.3[i] *6*	81[i] *15*	3269.19	2$^+$				
		7761.6[i] *8*	100[i] *23*	0.0	0$^+$	M1			α(IPF)=0.00198 *3*
									Mult.: from (γ,γ′),(pol γ,γ′).
7798.9		1472.6[i] *6*	1.0×10^2[i] *3*	6327.21	2$^+$				
		5640.4[i] *7*	95[i] *24*	2158.632	2$^+$				
7813.5		1141[h]		6672.4	(9)				
7818.02		4693.6[i] *5*	100.0[i]	3123.698	2$^+$				
7850.3	1$^+$	7849.7[j] *10*	100[j]	0.0	0$^+$	M1[j]			α(IPF)=0.00200 *3*
7880.4	1$^+$	7879.8[j] *12*	100[j]	0.0	0$^+$	M1[j]			α(IPF)=0.00200 *3*
7926.7	1$^+$	7926.1[j] *17*	100[j]	0.0	0$^+$	M1[j]			α(IPF)=0.00201 *3*
7950.93	1$^+$	3632.4[i] *6*	89[i] *23*	4318.58	2$^+$				
		4080.0[i] *7*	100[i] *23*	3871.050	2$^+$				
		7951.4[i] *8*	93[i] *23*	0.0	0$^+$	M1			α(IPF)=0.00201 *3*
									Mult.: from (γ,γ′),(pol γ,γ′).
7980.81	9$^+$	547.2 *4*	7 *7*	7433.45	9$^+$	D			
		1519.9 *4*	100 *36*	6461.10	8$^+$	M1+E2		0.000176 *15*	α=0.000176 *15*; α(K)=8.3×10^{-5} *4*; α(L)=8.1×10^{-6} *4*;
									α(M)=1.14×10^{-6} *5*; α(N+..)=8.3×10^{-5} *12*
									α(N)=4.94×10^{-8} *21*; α(IPF)=8.3×10^{-5} *12*
		2317.5 *3*	71 *21*	5663.03	7$^+$	E2		0.000511 *8*	α=0.000511 *8*; α(K)=3.93×10^{-5} *6*; α(L)=3.80×10^{-6} *6*;
									α(M)=5.36×10^{-7} *8*; α(N+..)=0.000467 *7*
									α(N)=2.33×10^{-8} *4*; α(IPF)=0.000467 *7*
8042.6	1$^+$	8042.0[j] *16*	100[j]	0.0	0$^+$	M1[j]			
8044.26	9$^-$	283.9 *2*	27 *4*	7760.33	8$^-$	M1+E2		0.007 *4*	α=0.007 *4*; α(K)=0.007 *4*; α(L)=0.0007 *4*; α(M)=9.E−5 *6*;
									α(N+..)=3.8×10^{-6} *21*
									α(N)=3.8×10^{-6} *21*
		352.9 *2*	44 *6*	7691.4	(9$^-$)	M1+E2		0.0036 *17*	α=0.0036 *17*; α(K)=0.0032 *15*; α(L)=0.00032 *16*;
									α(M)=4.5×10^{-5} *22*; α(N+..)=1.9×10^{-6} *9*
									α(N)=1.9×10^{-6} *9*
		683.3 *2*	2.1 *2*	7360.97	(8)	(D+Q)			
		1207.0 *3*	100 *10*	6837.2	8$^-$	M1+E2	+0.37 *4*	0.0001471 *22*	α=0.0001471 *22*; α(K)=0.0001257 *18*; α(L)=1.223×10^{-5} *18*;
									α(M)=1.724×10^{-6} *25*
									α(N)=7.47×10^{-8} *11*; α(IPF)=7.37×10^{-6} *13*
									B(M1)(W.u.)=0.10 *+11−10*; B(E2)(W.u.)=18 *+19−18*
		1233.0 *3*	23 *4*	6810.95	9$^-$	D			
		1583.3 *4*	13 *2*	6461.10	8$^+$	E1		0.000370 *6*	α=0.000370 *6*; α(K)=4.20×10^{-5} *6*; α(L)=4.07×10^{-6} *6*;

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Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								α(M)=5.73×10^{-7} *8*; α(N+..)=0.000324 *5* α(N)=2.48×10^{-8} *4*; α(IPF)=0.000323 *5* B(E1)(W.u.)=0.00013 *+14−13*
8044.26	9$^-$	2696.1 *6*	60 *4*	5348.79	7$^-$	E2	0.000680 *10*	α=0.000680 *10*; α(K)=3.03×10^{-5} *5*; α(L)=2.94×10^{-6} *5*; α(M)=4.14×10^{-7} *6*; α(N+..)=0.000646 *9* α(N)=1.80×10^{-8} *3*; α(IPF)=0.000646 *9* B(E2)(W.u.)=1.6 *16*
8074.4	8$^+$	3807.8 *9*	100	4265.00	6$^+$	E2	0.001123 *16*	α=0.001123 *16*; α(K)=1.752×10^{-5} *25*; α(L)=1.692×10^{-6} *24*; α(M)=2.38×10^{-7} *4*; α(N+..)=0.001104 α(N)=1.037×10^{-8} *15*; α(IPF)=0.001104 *16*
8086.0	1$^-$	5800.8[j] *8*	16.0[j] *25*	2284.80	0$^+$	[j]		
		6752.3[j] *13*	7.4[j] *25*	1332.514	2$^+$	[j]		
		8085.7[j] *7*	100[j] *25*	0.0	0$^+$	E1[j]		
8111.8	1$^+$	8111.2 *12*	100	0.0	0$^+$	M1		
8126.6	1$^-$	8126.0 *7*	100	0.0	0$^+$	E1		
8189.1	1	8188.5[j] *7*	100[j]	0.0	0$^+$	[j]		
8261.5	1$^-$	8260.9[j] *8*	100[j]	0.0	0$^+$	E1[j]		
8272.09	10$^-$	1435.0 *4*	18 *2*	6837.2	8$^-$	E2	0.0001726 *25*	α=0.0001726 *25*; α(K)=9.73×10^{-5} *14*; α(L)=9.48×10^{-6} *14*; α(M)=1.335×10^{-6} *19*; α(N+..)=6.44×10^{-5} α(N)=5.76×10^{-8} *8*; α(IPF)=6.44×10^{-5} *10*
		1461.6 *4*	100 *15*	6810.95	9$^-$	M1+E2	0.000164 *14*	α=0.000164 *14*; α(K)=9.0×10^{-5} *5*; α(L)=8.7×10^{-6} *5*; α(M)=1.23×10^{-6} *6*; α(N+..)=6.4×10^{-5} *9* α(N)=5.33×10^{-8} *24*; α(IPF)=6.4×10^{-5} *9*
8286.3	(1$^+$)	2613.9[i] *3*	100[i] *16*	5672.36				
		5659.9[i] *8*	58[i] *16*	2626.06	3$^+$			
8294.0	1$^-$	6135.5[j] *11*	54[j] *8*	2158.632	2$^+$	[j]		
		8293.0[j] *10*	100[j] *7*	0.0	0$^+$	E1[j]		
8351.8	1$^+$	8351.2[j] *13*	100[j]	0.0	0$^+$	M1[j]		
8359.3	1$^+$	8358.7[j] *15*	100[j]	0.0	0$^+$	M1[j]		
8389.9	9$^-$	3039.2 *7*	100	5348.79	7$^-$	E2	0.000826 *12*	α=0.000826 *12*; α(K)=2.49×10^{-5} *4*; α(L)=2.41×10^{-6} *4*; α(M)=3.40×10^{-7} *5*; α(N+..)=0.000799 *12* α(N)=1.476×10^{-8} *21*; α(IPF)=0.000799 *12*
8407	1$^-$	8406 *4*	100	0.0	0$^+$	E1		
8426.69	9$^-$	3077.8 *1*	100	5348.79	7$^-$	E2	0.000842 *12*	α=0.000842 *12*; α(K)=2.44×10^{-5} *4*; α(L)=2.36×10^{-6} *4*; α(M)=3.33×10^{-7} *5*; α(N+..)=0.000815 *12* α(N)=1.447×10^{-8} *21*; α(IPF)=0.000815 *12*
8451.5	1	8450.9[j] *16*	100[j]	0.0	0$^+$	[j]		
8464.0	1$^-$	8463.4[j] *13*	100[j]	0.0	0$^+$	E1[j]		
8485.50	9$^-$	1648.2 *4*	86 *14*	6837.2	8$^-$	M1+E2	0.000211 *20*	α=0.000211 *20*; α(K)=7.1×10^{-5} *3*; α(L)=6.9×10^{-6} *3*; α(M)=9.7×10^{-7} *4*; α(N+..)=0.000132 *17* α(N)=4.23×10^{-8} *16*; α(IPF)=0.000132 *17*

$^{60}_{28}Ni_{32}$-36

Adopted Levels, Gammas (continued)

$\gamma(^{60}Ni)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
		1674.5 *4*	29 *14*	6810.95	9^-	M1	0.000200 *3*	α=0.000200 *3*; α(K)=6.68×10^{-5} *10*; α(L)=6.48×10^{-6} *9*; α(M)=9.14×10^{-7}

$^{60}_{28}Ni_{32}$-37

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
									13; α(N+..)=0.0001253 *18* α(N)=3.97×10^{-8} *6*; α(IPF)=0.0001253 *18*
8485.50	9$^-$	3136.9 *7*	100 *14*	5348.79	7$^-$	E2		0.000866 *13*	α=0.000866 *13*; α(K)=2.37×10^{-5} *4*; α(L)=2.29×10^{-6} *4*; α(M)=3.23×10^{-7} *5*; α(N+..)=0.000839 *12* α(N)=1.403×10^{-8} *20*; α(IPF)=0.000839 *12*
8504.7		4617.2[i] *4*	100[i] *13*	3887.36	2$^+$				
		8504.2[i] *9*	42[i] *9*	0.0	0$^+$				
8515.2	1$^-$	8514.6[j] *9*	100[j]	0.0	0$^+$	E1[j]			
8521.11	10$^-$	249.0 *1*	2.3 *6*	8272.09	10$^-$	M1		0.00449 *7*	α=0.00449 *7*; α(K)=0.00403 *6*; α(L)=0.000401 *6*; α(M)=5.65×10^{-5} *8*; α(N+..)=2.41×10^{-6} *4* α(N)=2.41×10^{-6} *4* B(M1)(W.u.)=0.040 *+20−40*
		476.7 *2*	100 *3*	8044.26	9$^-$	M1(+E2)		0.0014 *5*	α=0.0014 *5*; α(K)=0.0013 *5*; α(L)=0.00013 *5*; α(M)=1.8×10^{-5} *6*; α(N+..)=7.7×10^{-7} *25* α(N)=7.7×10^{-7} *25*
		1710.1 *4*	60 *4*	6810.95	9$^-$	M1+E2	+0.34 *5*	0.000214 *4*	α=0.000214 *4*; α(K)=6.48×10^{-5} *10*; α(L)=6.28×10^{-6} *9*; α(M)=8.85×10^{-7} *13*; α(N+..)=0.0001422 *23* α(N)=3.85×10^{-8} *6*; α(IPF)=0.0001422 *23* B(M1)(W.u.)=0.0029 *+12−29*; B(E2)(W.u.)=0.21 *+11−21*
8565.60		4487.56[i] *25*	100[i] *9*	4077.99	1$^+$,2$^+$				
		4678.3[i] *5*	91[i] *9*	3887.36	2$^+$				
8638.5		2572.2[i] *4*	61[i] *15*	6066.72					
		5452.1[i] *5*	100[i] *18*	3185.98	(3$^+$)				
8655.4	1$^-$	8654.7[j] *9*	100[j]	0.0	0$^+$	[j]			
8656.8	1$^+$	7324.2[j] *14*	75[j] *13*	1332.514	2$^+$	[j]			
		8655.9[j] *9*	100[j] *20*	0.0	0$^+$	[j]			
8666.21		5046.4[i] *7*	89[i] *17*	3619.46	3$^+$				
		5472.8[i] *5*	100[i] *14*	3193.87	1$^+$				
8688.4	1$^+$	8687.7[j] *13*	100[j]	0.0	0$^+$	M1[j]			
8688.92	10$^+$	1255.4 *4*	100 *18*	7433.45	9$^+$	M1+E2	+0.5 *3*	0.000145 *5*	α=0.000145 *5*; α(K)=0.000118 *4*; α(L)=1.14×10^{-5} *4*; α(M)=1.61×10^{-6} *5*; α(N+..)=1.46×10^{-5} *11* α(N)=6.98×10^{-8} *19*; α(IPF)=1.45×10^{-5} *11*
		1661.9 *4*	35 *6*	7027.83	8$^+$	E2		0.000235 *4*	α=0.000235 *4*; α(K)=7.25×10^{-5} *11*; α(L)=7.05×10^{-6} *10*; α(M)=9.92×10^{-7} *14*; α(N+..)=0.0001545 *2* α(N)=4.29×10^{-8} *6*; α(IPF)=0.0001544 *22*
		2227.2 *5*	47 *12*	6461.10	8$^+$	E2		0.000470 *7*	α=0.000470 *7*; α(K)=4.21×10^{-5} *6*; α(L)=4.08×10^{-6} *6*; α(M)=5.75×10^{-7} *8*; α(N+..)=0.000423 *6* α(N)=2.49×10^{-8} *4*; α(IPF)=0.000423 *6*
8747.0	1$^-$	8746.3[j] *12*	100[j]	0.0	0$^+$	E1[j]			
8768	1$^+$	8767 *4*	100	0.0	0$^+$	M1			
8778.6	1$^+$	8777.9[j] *10*	100[j]	0.0	0$^+$	M1[j]			

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
8781.6	1⁻	8780.9[j] *10*	100[j]	0.0	0⁺	E1[j]			
8793.6	1⁺	7459.5[j] *11*	100[j] *20*	1332.514	2⁺	[j]			
		8795.2[j] *16*	82[j] *19*	0.0	0⁺	M1[j]			
8846.5	1⁺	8845.8[j] *14*	100[j]	0.0	0⁺	M1[j]			
8871.7	1⁺	8871.0[j] *16*	100[j]	0.0	0⁺	M1[j]			
8890.5	1⁺	8889.8[j] *12*	100[j]	0.0	0⁺	M1[j]			
8924.1	1⁻	8923.4[j] *10*	100[j]	0.0	0⁺	E1[j]			
9010.5	1⁻	9009.8[j] *19*	100[j]	0.0	0⁺	E1[j]			
9045.20		5173.6[i] *3*	100[i]	3871.050	2⁺				
9053.3	1⁻	9052.6[j] *24*	100[j]	0.0	0⁺	E1[j]			
9068.9	1⁺	9068.2[j] *13*	100[j]	0.0	0⁺	M1[j]			
9076.66		5759.1[i] *7*	100[i] *21*	3317.829	0⁺				
		5952.4[i] *5*	100[i] *21*	3123.698	2⁺				
9092.3	1⁻	7761.2 *19*	25 *8*	1332.514	2⁺	E1			α(IPF)=0.00266 *4*
		9091.2 *8*	100 *25*	0.0	0⁺	E1			
9123.01	10⁻	601.6 *2*	11 *6*	8521.11	10⁻	D			
		637.5 *2*	100 *6*	8485.50	9⁻	M1+E2		0.00065 *15*	α=0.00065 *15*; α(K)=0.00059 *13*; α(L)=5.8×10^{-5} *13*; α(M)=8.1×10^{-6} *18*; α(N+..)=3.5×10^{-7} *8* α(N)=3.5×10^{-7} *8*
		2311.8 *6*	28 *5*	6810.95	9⁻	M1+E2		0.00047 *4*	α=0.00047 *4*; α(K)=3.87×10^{-5} *10*; α(L)=3.75×10^{-6} *10*; α(M)=5.28×10^{-7} *13*; α(N+..)=0.00043 *4* α(N)=2.29×10^{-8} *6*; α(IPF)=0.00043 *4*
9132.2	1⁻	9131.5[j] *15*	100[j]	0.0	0⁺	E1[j]			
9132.27	11⁻	611.5 *2*	100 *3*	8521.11	10⁻	M1+E2	+0.08 *7*	0.000561 *10*	α=0.000561 *10*; α(K)=0.000504 *9*; α(L)=4.94×10^{-5} *9*; α(M)=6.96×10^{-6} *12*; α(N+..)=3.00×10^{-7} *5* α(N)=3.00×10^{-7} *5* B(M1)(W.u.)=0.52 *+23−29*; B(E2)(W.u.)=2.E+1 *+3−2*
		1088.2 *3*	2.8 *4*	8044.26	9⁻	E2		0.000198 *3*	α=0.000198 *3*; α(K)=0.0001780 *25*; α(L)=1.741×10^{-5} *25*; α(M)=2.45×10^{-6} *4*; α(N+..)=1.054×10^{-7} α(N)=1.054×10^{-7} *15* B(E2)(W.u.)=4.0 *+19−24*
9149	1⁻	9148.7[j] *30*	100[j]	0.0	0⁺	E1[j]			
9256.0	1⁻	9255.2[j] *25*	100[j]	0.0	0⁺	E1[j]			
9264.30	11⁻	874.1 *3*	9 *9*	8389.9	9⁻	E2		0.000337 *5*	α=0.000337 *5*; α(K)=0.000303 *5*; α(L)=2.97×10^{-5} *5*; α(M)=4.18×10^{-6} *6*; α(N+..)=1.79×10^{-7} *3* α(N)=1.79×10^{-7} *3*
		2452.2 *6*	100 *9*	6810.95	9⁻	E2		0.000571 *8*	α=0.000571 *8*; α(K)=3.56×10^{-5} *5*; α(L)=3.45×10^{-6} *5*; α(M)=4.86×10^{-7} *7*; α(N+..)=0.000532 *8* α(N)=2.11×10^{-8} *3*; α(IPF)=0.000532 *8*
9266.5	1⁻	9265.7[j] *24*	100[j]	0.0	0⁺	E1[j]			

$^{60}_{28}Ni_{32}$-39

Adopted Levels, Gammas (continued)

$\gamma(^{60}Ni)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
9274.7	1	9273.9[j] *15*	100[j]	0.0	0^+	[j]			
9301.2	1^+	9300.4[j] *15*	100[j]	0.0	0^+	M1[j]			

$^{60}_{28}Ni_{32}$-40

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
9308.3	1⁻	9307.5 *14*	100	0.0	0⁺	E1		
9346.82		5306.7[i] *4*	100.0[i]	4039.89	3⁻			
9352.6	1⁻	9351.8[j] *21*	100[j]	0.0	0⁺	E1[j]		
9395.5	1⁻	9394.7[j] *15*	100[j]	0.0	0⁺	E1[j]		
9410.7	1⁻	9409.9[j] *17*	100[j]	0.0	0⁺	E1[j]		
9426.2	10⁺	1992.9 *5*	100	7433.45	9⁺	M1+E2	0.00034 *3*	α=0.00034 *3*; α(K)=5.02×10^{-5} *14*; α(L)=4.87×10^{-6} *14*; α(M)=6.86×10^{-7} *20*; α(N+..)=0.00028 *3* α(N)=2.98×10^{-8} *9*; α(IPF)=0.00028 *3*
9453.1	1⁺	9452.3[j] *16*	100[j]	0.0	0⁺	M1[j]		
9463.9	1⁻	7303.2[j] *16*	1.0×10^2[j] *3*	2158.632	2⁺	[j]		
		9464.5[j] *15*	61[j] *20*	0.0	0⁺	E1[j]		
9468	1⁺	9466.8[j] *35*	100[j]	0.0	0⁺	M1[j]		
9504.9	1⁻	9504.1[j] *17*	100[j]	0.0	0⁺	E1[j]		
9599.0	1⁻	9598.2[j] *15*	100[j]	0.0	0⁺	E1[j]		
9622.5	10⁻	2785.2 *7*	100	6837.2	8⁻	E2	0.000718 *10*	α=0.000718 *10*; α(K)=2.87×10^{-5} *4*; α(L)=2.78×10^{-6} *4*; α(M)=3.92×10^{-7} *6*; α(N+..)=0.000686 *10* α(N)=1.703×10^{-8} *24*; α(IPF)=0.000686 *10*
9640.2	1⁻	9639.4[j] *21*	100[j]	0.0	0⁺	E1[j]		
9659.3	1⁻	8326.0 *16*	11 *4*	1332.514	2⁺			
		9658.5 *9*	100 *23*	0.0	0⁺	E1		
9665.67	10⁺	1590.9 *4*	33 *7*	8074.4	8⁺	E2	0.000211 *3*	α=0.000211 *3*; α(K)=7.90×10^{-5} *11*; α(L)=7.68×10^{-6} *11*; α(M)=1.082×10^{-6} *16*; α(N+..)=0.0001237 α(N)=4.68×10^{-8} *7*; α(IPF)=0.0001236 *18*
		1934.0 *5*	27 *7*	7732.5	8⁺	E2	0.000340 *5*	α=0.000340 *5*; α(K)=5.43×10^{-5} *8*; α(L)=5.27×10^{-6} *8*; α(M)=7.43×10^{-7} *11*; α(N+..)=0.000280 *4* α(N)=3.22×10^{-8} *5*; α(IPF)=0.000280 *4*
		2134.4 *5*	27 *7*	7531.4	8⁺	E2	0.000428 *6*	α=0.000428 *6*; α(K)=4.54×10^{-5} *7*; α(L)=4.40×10^{-6} *7*; α(M)=6.20×10^{-7} *9*; α(N+..)=0.000378 *6* α(N)=2.69×10^{-8} *4*; α(IPF)=0.000378 *6*
		2233.0 *5*	20 *7*	7433.45	9⁺	M1+E2	0.00044 *4*	α=0.00044 *4*; α(K)=4.11×10^{-5} *11*; α(L)=3.98×10^{-6} *10*; α(M)=5.60×10^{-7} *15*; α(N+..)=0.00039 *4* α(N)=2.43×10^{-8} *6*; α(IPF)=0.00039 *4*
		2284.9 *6*	20 *7*	7380.3	8⁺	E2	0.000496 *7*	α=0.000496 *7*; α(K)=4.03×10^{-5} *6*; α(L)=3.90×10^{-6} *6*; α(M)=5.49×10^{-7} *8*; α(N+..)=0.000451 *7* α(N)=2.38×10^{-8} *4*; α(IPF)=0.000451 *7*
		2416.3 *6*	47 *7*	7250.0	8⁺	E2	0.000555 *8*	α=0.000555 *8*; α(K)=3.65×10^{-5} *6*; α(L)=3.54×10^{-6} *5*; α(M)=4.98×10^{-7} *7*; α(N+..)=0.000515 *8* α(N)=2.16×10^{-8} *3*; α(IPF)=0.000515 *8*
		2854.4 *7*	100 *13*	6810.95	9⁻	E1	0.001180 *17*	α=0.001180 *17*; α(K)=1.777×10^{-5} *25*; α(L)=1.715×10^{-6} *24*; α(M)=2.41×10^{-7} *4*; α(N+..)=0.001160 α(N)=1.049×10^{-8} *15*; α(IPF)=0.001160 *17*
		3204.6 *7*	13 *7*	6461.10	8⁺	E2	0.000893 *13*	α=0.000893 *13*; α(K)=2.29×10^{-5} *4*; α(L)=2.21×10^{-6} *4*; α(M)=3.12×10^{-7}

$^{60}_{28}Ni_{32}$-41

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
								5; α(N+..)=0.000868 *13* α(N)=1.356×10^{-8} *19*; α(IPF)=0.000868 *13*
9701.4	1$^-$	9700.6[j] *15*	100[j]	0.0	0$^+$	E1[j]		
9714.9	(10$^+$)	1287.9 *4*	100	8426.69	9$^-$	(E1)	0.0001757 *25*	α=0.0001757 *25*; α(K)=5.93×10^{-5} *9*; α(L)=5.75×10^{-6} *8*; α(M)=8.10×10^{-7} *12*; α(N+..)=0.0001098 *1* α(N)=3.50×10^{-8} *5*; α(IPF)=0.0001098 *16*
9718.27	11$^-$	454.0 *2*	9 *9*	9264.30	11$^-$	M1	0.001084 *16*	α=0.001084 *16*; α(K)=0.000974 *14*; α(L)=9.59×10^{-5} *14*; α(M)=1.351×10^{-5} *19*; α(N+..)=5.81×10^{-7} α(N)=5.81×10^{-7} *9*
		1196.8 *3*	65 *6*	8521.11	10$^-$	M1+E2	0.000157 *12*	α=0.000157 *12*; α(K)=0.000135 *10*; α(L)=1.31×10^{-5} *10*; α(M)=1.85×10^{-6} *13*; α(N+..)=7.2×10^{-6} *13* α(N)=8.0×10^{-8} *6*; α(IPF)=7.2×10^{-6} *13*
		1447.1 *4*	41 *6*	8272.09	10$^-$	M1+E2	0.000162 *14*	α=0.000162 *14*; α(K)=9.2×10^{-5} *5*; α(L)=8.9×10^{-6} *5*; α(M)=1.25×10^{-6} *6*; α(N+..)=6.0×10^{-5} *9* α(N)=5.43×10^{-8} *25*; α(IPF)=6.0×10^{-5} *9*
		2905.9 *7*	100 *6*	6810.95	9$^-$	E2	0.000770 *11*	α=0.000770 *11*; α(K)=2.68×10^{-5} *4*; α(L)=2.59×10^{-6} *4*; α(M)=3.65×10^{-7} *6*; α(N+..)=0.000740 *11* α(N)=1.588×10^{-8} *23*; α(IPF)=0.000740 *11*
9721.0	1$^-$	9720.2[j] *18*	100[j]	0.0	0$^+$	E1[j]		
9751.5	1$^-$	9750.6[j] *23*	100[j]	0.0	0$^+$	E1[j]		
9760.42	11$^-$	1239.0 *3*	44 *5*	8521.11	10$^-$	M1+E2	0.000152 *11*	α=0.000152 *11*; α(K)=0.000125 *8*; α(L)=1.22×10^{-5} *8*; α(M)=1.72×10^{-6} *12*; α(N+..)=1.33×10^{-5} *23* α(N)=7.4×10^{-8} *5*; α(IPF)=1.33×10^{-5} *22*
		2948.8 *7*	100 *9*	6810.95	9$^-$	E2	0.000789 *11*	α=0.000789 *11*; α(K)=2.62×10^{-5} *4*; α(L)=2.53×10^{-6} *4*; α(M)=3.57×10^{-7} *5*; α(N+..)=0.000759 *11* α(N)=1.550×10^{-8} *22*; α(IPF)=0.000759 *11*
9774.8	1$^-$	9773.9[j] *20*	100[j]	0.0	0$^+$	E1[j]		
9807.5	1$^-$	9806.6[j] *19*	100[j]	0.0	0$^+$	E1[j]		
9831	1$^+$	9830[j] *4*	100[j]	0.0	0$^+$	M1[j]		
9832.0	1$^-$	9831.1[j] *21*	100[j]	0.0	0$^+$	E1[j]		
9871.3	1$^-$	9870.4[j] *20*	100[j]	0.0	0$^+$	E1[j]		
9887.9	10$^+$	2638.4 *6*	100 *50*	7250.0	8$^+$	E2	0.000655 *10*	α=0.000655 *10*; α(K)=3.15×10^{-5} *5*; α(L)=3.04×10^{-6} *5*; α(M)=4.29×10^{-7} *6*; α(N+..)=0.000620 *9* α(N)=1.86×10^{-8} *3*; α(IPF)=0.000620 *9*
		3079.0 *7*	100 *50*	6810.95	9$^-$	E1	0.001289 *18*	α=0.001289 *18*; α(K)=1.607×10^{-5} *23*; α(L)=1.550×10^{-6} *22*; α(M)=2.18×10^{-7} *3*; α(N+..)=0.001271 α(N)=9.49×10^{-9} *14*; α(IPF)=0.001271 *18*
9893.5	1$^-$	9892.6[j] *17*	100[j]	0.0	0$^+$	E1[j]		
9953.7		5933.3[i] *7*	100[i]	4019.886	1$^+$			
9960.14	11$^-$	827.8 *6*	15 *8*	9132.27	11$^-$	M1	0.000293 *5*	α=0.000293 *5*; α(K)=0.000264 *4*; α(L)=2.57×10^{-5} *4*; α(M)=3.63×10^{-6} *6*; α(N+..)=1.569×10^{-7} *22*

$^{60}_{28}Ni_{32}$-42

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J^π_i	E_γ‡	I_γ	E_f	J^π_f	Mult.#	α†	Comments
								α(N)=1.569×10^{-7} *22*

$^{60}_{28}Ni_{32}$-43

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
9960.14	11⁻	836.4 *3*	100 *8*	9123.01	10⁻	M1+E2		0.00033 *5*	α=0.00033 *5*; α(K)=0.00030 *4*; α(L)=2.9×10^{-5} *4*; α(M)=4.1×10^{-6} *6*; α(N+..)=1.77×10^{-7} *24* α(N)=1.77×10^{-7} *24*
		1438.6 *4*	38 *8*	8521.11	10⁻	M1+E2		0.000160 *13*	α=0.000160 *13*; α(K)=9.3×10^{-5} *5*; α(L)=9.0×10^{-6} *5*; α(M)=1.27×10^{-6} *7*; α(N+..)=5.7×10^{-5} *9* α(N)=5.5×10^{-8} *3*; α(IPF)=5.7×10^{-5} *9*
9989.27	(12⁻)	856.9 *3*	100 *5*	9132.27	11⁻	M1(+E2)	+0.13 *15*	0.000274 *6*	α=0.000274 *6*; α(K)=0.000247 *6*; α(L)=2.41×10^{-5} *6*; α(M)=3.39×10^{-6} *8*; α(N+..)=1.47×10^{-7} *4* α(N)=1.47×10^{-7} *4* B(M1)(W.u.)=(0.16 +*6*−*16*); B(E2)(W.u.)=(7 +*16*−*7*)
		1468.3 *4*	4.2 *8*	8521.11	10⁻	E2		0.000179 *3*	α=0.000179 *3*; α(K)=9.28×10^{-5} *13*; α(L)=9.04×10^{-6} *13*; α(M)=1.273×10^{-6} *18*; α(N+..)=7.55×10^{-5} *11* α(N)=5.50×10^{-8} *8*; α(IPF)=7.55×10^{-5} *11* B(E2)(W.u.)=1.1 +*5*−*11*
10029.02		5184.9 *5*	100	4843.93	2⁺				
10054.23	(11⁻)	789.4 *3*	33 *33*	9264.30	11⁻	(M1)		0.000324 *5*	α=0.000324 *5*; α(K)=0.000291 *4*; α(L)=2.84×10^{-5} *4*; α(M)=4.01×10^{-6} *6*; α(N+..)=1.733×10^{-7} *25* α(N)=1.733×10^{-7} *25*
		3243.4 *7*	100 *33*	6810.95	9⁻	(E2)		0.000909 *13*	α=0.000909 *13*; α(K)=2.25×10^{-5} *4*; α(L)=2.17×10^{-6} *3*; α(M)=3.06×10^{-7} *5*; α(N+..)=0.000884 *13* α(N)=1.331×10^{-8} *19*; α(IPF)=0.000884 *13*
10158.6	(12⁻)	894.1 *3*	100	9264.30	11⁻	(M1+E2)		0.00028 *4*	α=0.00028 *4*; α(K)=0.00026 *3*; α(L)=2.5×10^{-5} *3*; α(M)=3.5×10^{-6} *5*; α(N+..)=1.51×10^{-7} *18* α(N)=1.51×10^{-7} *18*
10241.7	(11⁻)	3428.9 *8*	100	6810.95	9⁻	(E2)		0.000981 *14*	α=0.000981 *14*; α(K)=2.06×10^{-5} *3*; α(L)=1.99×10^{-6} *3*; α(M)=2.80×10^{-7} *4*; α(N+..)=0.000959 *14* α(N)=1.219×10^{-8} *17*; α(IPF)=0.000959 *14*
10697.3	12⁻	936.7 *3*	100 *25*	9760.42	11⁻	M1+E2		0.00026 *3*	α=0.00026 *3*; α(K)=0.00023 *3*; α(L)=2.2×10^{-5} *3*; α(M)=3.2×10^{-6} *4*; α(N+..)=1.36×10^{-7} *15* α(N)=1.36×10^{-7} *15*
		979.1 *3*	75 *25*	9718.27	11⁻	M1+E2		0.000231 *24*	α=0.000231 *24*; α(K)=0.000208 *21*; α(L)=2.03×10^{-5} *21*; α(M)=2.9×10^{-6} *3*; α(N+..)=1.23×10^{-7} *12* α(N)=1.23×10^{-7} *12*
10788.66	12⁻	734.1 *2*	40 *20*	10054.23	(11⁻)	M1+E2		0.00046 *8*	α=0.00046 *8*; α(K)=0.00041 *7*; α(L)=4.0×10^{-5} *7*; α(M)=5.7×10^{-6} *10*; α(N+..)=2.4×10^{-7} *4* α(N)=2.4×10^{-7} *4*
		828.5 *3*	100 *20*	9960.14	11⁻	M1+E2		0.00034 *5*	α=0.00034 *5*; α(K)=0.00031 *5*; α(L)=3.0×10^{-5} *5*; α(M)=4.2×10^{-6} *6*; α(N+..)=1.81×10^{-7} *25* α(N)=1.81×10^{-7} *25*
		1028.0 *9*	80 *20*	9760.42	11⁻	M1+E2		0.000207 *19*	α=0.000207 *19*; α(K)=0.000186 *17*; α(L)=1.82×10^{-5} *18*; α(M)=2.57×10^{-6} *24*; α(N+..)=1.11×10^{-7} *1* α(N)=1.11×10^{-7} *10*

$^{60}_{28}Ni_{32}$-44

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
10788.66	12⁻	1657.5 *4*	60 *20*	9132.27	11⁻	M1+E2	0.000214 *20*	α=0.000214 *20*; α(K)=7.0×10^{-5} *3*; α(L)=6.8×10^{-6} *3*; α(M)=9.6×10^{-7} *4*; α(N+..)=0.000136 *17* α(N)=4.18×10^{-8} *15*; α(IPF)=0.000136 *17*
10825.23	11⁺	1398.8 *9*	33 *33*	9426.2	10⁺	M1+E2	0.000156 *13*	α=0.000156 *13*; α(K)=9.8×10^{-5} *5*; α(L)=9.5×10^{-6} *5*; α(M)=1.34×10^{-6} *7*; α(N+..)=4.7×10^{-5} *7* α(N)=5.8×10^{-8} *3*; α(IPF)=4.7×10^{-5} *7*
		2135.8 *5*	100 *33*	8688.92	10⁺	M1+E2	0.00040 *4*	α=0.00040 *4*; α(K)=4.44×10^{-5} *12*; α(L)=4.30×10^{-6} *12*; α(M)=6.06×10^{-7} *16*; α(N+..)=0.00035 *4* α(N)=2.63×10^{-8} *7*; α(IPF)=0.00035 *4*
		2844.8 *7*	100 *33*	7980.81	9⁺	E2	0.000744 *11*	α=0.000744 *11*; α(K)=2.78×10^{-5} *4*; α(L)=2.69×10^{-6} *4*; α(M)=3.78×10^{-7} *6*; α(N+..)=0.000713 *10* α(N)=1.644×10^{-8} *23*; α(IPF)=0.000713 *10*
		3390.8 *8*	33 *33*	7433.45	9⁺	E2	0.000968 *14*	α=0.000968 *14*; α(K)=2.10×10^{-5} *3*; α(L)=2.02×10^{-6} *3*; α(M)=2.85×10^{-7} *4*; α(N+..)=0.000944 *14* α(N)=1.241×10^{-8} *18*; α(IPF)=0.000944 *14*
10872.60	11⁺	1446.6 *4*	33 *33*	9426.2	10⁺	M1+E2	0.000162 *14*	α=0.000162 *14*; α(K)=9.2×10^{-5} *5*; α(L)=8.9×10^{-6} *5*; α(M)=1.26×10^{-6} *6*; α(N+..)=6.0×10^{-5} *9* α(N)=5.44×10^{-8} *25*; α(IPF)=6.0×10^{-5} *9*
		2184.4 *5*	67 *33*	8688.92	10⁺	M1+E2	0.00042 *4*	α=0.00042 *4*; α(K)=4.27×10^{-5} *11*; α(L)=4.13×10^{-6} *11*; α(M)=5.82×10^{-7} *15*; α(N+..)=0.00037 *4* α(N)=2.53×10^{-8} *7*; α(IPF)=0.00037 *4*
		2891.7 *7*	67 *33*	7980.81	9⁺	E2	0.000764 *11*	α=0.000764 *11*; α(K)=2.70×10^{-5} *4*; α(L)=2.61×10^{-6} *4*; α(M)=3.68×10^{-7} *6*; α(N+..)=0.000734 *11* α(N)=1.601×10^{-8} *23*; α(IPF)=0.000734 *11*
		3439.2 *8*	100 *33*	7433.45	9⁺	E2	0.000985 *14*	α=0.000985 *14*; α(K)=2.05×10^{-5} *3*; α(L)=1.98×10^{-6} *3*; α(M)=2.79×10^{-7} *4*; α(N+..)=0.000962 *14* α(N)=1.213×10^{-8} *17*; α(IPF)=0.000962 *14*
10977.68	11⁺	2289.1 *6*	<17	8688.92	10⁺	M1+E2	0.00046 *4*	α=0.00046 *4*; α(K)=3.93×10^{-5} *10*; α(L)=3.81×10^{-6} *10*; α(M)=5.37×10^{-7} *14*; α(N+..)=0.00042 *4* α(N)=2.33×10^{-8} *6*; α(IPF)=0.00042 *4*
		2705.8 *6*	17 *17*	8272.09	10⁻	E1	0.001102 *16*	α=0.001102 *16*; α(K)=1.91×10^{-5} *3*; α(L)=1.84×10^{-6} *3*; α(M)=2.60×10^{-7} *4*; α(N+..)=0.001081 *16* α(N)=1.128×10^{-8} *16*; α(IPF)=0.001081 *16*
		2996.6 *7*	100 *50*	7980.81	9⁺	E2	0.000809 *12*	α=0.000809 *12*; α(K)=2.55×10^{-5} *4*; α(L)=2.47×10^{-6} *4*; α(M)=3.47×10^{-7} *5*; α(N+..)=0.000780 *11* α(N)=1.511×10^{-8} *22*; α(IPF)=0.000780 *11*
		3544.2 *8*	83 *17*	7433.45	9⁺	E2	0.001022 *15*	α=0.001022 *15*; α(K)=1.96×10^{-5} *3*; α(L)=1.89×10^{-6} *3*; α(M)=2.66×10^{-7} *4*; α(N+..)=0.001000 *14* α(N)=1.158×10^{-8} *17*; α(IPF)=0.001000 *14*
11030.60	11⁺	2341.7 *6*	100 *50*	8688.92	10⁺	M1+E2	0.00048 *4*	α=0.00048 *4*; α(K)=3.78×10^{-5} *9*; α(L)=3.66×10^{-6} *9*; α(M)=5.16×10^{-7} *13*; α(N+..)=0.00044 *4* α(N)=2.24×10^{-8} *6*; α(IPF)=0.00044 *4*

$^{60}_{28}Ni_{32}$-45

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
11030.60	11^+	3048.4 *7*	50 *50*	7980.81	9^+	E2		0.000830 *12*	α=0.000830 *12*; α(K)=2.48×10^{-5} *4*; α(L)=2.40×10^{-6} *4*; α(M)=3.38×10^{-7} *5*; α(N+..)=0.000802 *12* α(N)=1.469×10^{-8} *21*; α(IPF)=0.000802 *12*
		3596.7 *8*	50 *50*	7433.45	9^+	E2		0.001041 *15*	α=0.001041 *15*; α(K)=1.91×10^{-5} *3*; α(L)=1.85×10^{-6} *3*; α(M)=2.60×10^{-7} *4*; α(N+..)=0.001020 *15* α(N)=1.132×10^{-8} *16*; α(IPF)=0.001020 *15*
11044.14	12^+	1156.8 *3*	12 *2*	9887.9	10^+	E2		0.0001760 *25*	α=0.0001760 *25*; α(K)=0.0001548 *22*; α(L)=1.513×10^{-5} *22*; α(M)=2.13×10^{-6} *3* α(N)=9.17×10^{-8} *13*; α(IPF)=3.83×10^{-6} *6*
		1283.0 *4*	3 *2*	9760.42	11^-	E1		0.0001728 *25*	α=0.0001728 *25*; α(K)=5.97×10^{-5} *9*; α(L)=5.79×10^{-6} *9*; α(M)=8.15×10^{-7} *12*; α(N+..)=0.0001065 *1* α(N)=3.53×10^{-8} *5*; α(IPF)=0.0001064 *16*
		1329.0 *4*	1.5 *15*	9714.9	(10^+)	(E2)		0.0001623 *23*	α=0.0001623 *23*; α(K)=0.0001143 *16*; α(L)=1.114×10^{-5} *16*; α(M)=1.569×10^{-6} *22* α(N)=6.77×10^{-8} *10*; α(IPF)=3.53×10^{-5} *5*
		1378.7 *4*	100 *3*	9665.67	10^+	E2		0.0001655 *24*	α=0.0001655 *24*; α(K)=0.0001058 *15*; α(L)=1.030×10^{-5} *15*; α(M)=1.451×10^{-6} *21* α(N)=6.26×10^{-8} *9*; α(IPF)=4.79×10^{-5} *7*
		1911.4 *5*	3 *1*	9132.27	11^-	E1		0.000607 *9*	α=0.000607 *9*; α(K)=3.14×10^{-5} *5*; α(L)=3.03×10^{-6} *5*; α(M)=4.27×10^{-7} *6*; α(N+..)=0.000572 *8* α(N)=1.85×10^{-8} *3*; α(IPF)=0.000572 *8*
11079.1	(12^-)	837.1 *3*	100 *50*	10241.7	(11^-)	(M1+E2)		0.00033 *5*	α=0.00033 *5*; α(K)=0.00030 *4*; α(L)=2.9×10^{-5} *4*; α(M)=4.1×10^{-6} *6*; α(N+..)=1.77×10^{-7} *24* α(N)=1.77×10^{-7} *24*
		1025.1 *3*	100 *50*	10054.23	(11^-)	(M1+E2)		0.000209 *20*	α=0.000209 *20*; α(K)=0.000188 *18*; α(L)=1.83×10^{-5} *18*; α(M)=2.58×10^{-6} *25*; α(N+..)=1.11×10^{-7} *1* α(N)=1.11×10^{-7} *10*
11112.8	13^-	954.1 *3*	1.7 *17*	10158.6	(12^-)	(M1+E2)		0.00024 *3*	α=0.00024 *3*; α(K)=0.000220 *24*; α(L)=2.15×10^{-5} *24*; α(M)=3.0×10^{-6} *4*; α(N+..)=1.31×10^{-7} *14* α(N)=1.31×10^{-7} *14*
		1123.4 *3*	100 *7*	9989.27	(12^-)	M1+E2	+0.13 *7*	0.0001597 *24*	α=0.0001597 *24*; α(K)=0.0001426 *21*; α(L)=1.388×10^{-5} *21*; α(M)=1.96×10^{-6} *3* α(N)=8.48×10^{-8} *13*; α(IPF)=1.168×10^{-6} *23*
		1981.1 *5*	7 *2*	9132.27	11^-	E2		0.000360 *5*	α=0.000360 *5*; α(K)=5.20×10^{-5} *8*; α(L)=5.04×10^{-6} *7*; α(M)=7.10×10^{-7} *10*; α(N+..)=0.000303 *5* α(N)=3.08×10^{-8} *5*; α(IPF)=0.000303 *5*
11120.6	12^-	1498.1 *4*	100	9622.5	10^-	E2		0.000185 *3*	α=0.000185 *3*; α(K)=8.91×10^{-5} *13*; α(L)=8.67×10^{-6} *13*; α(M)=1.222×10^{-6} *18*; α(N+..)=8.63×10^{-5} *13* α(N)=5.28×10^{-8} *8*; α(IPF)=8.62×10^{-5} *13*
11224.9	(11^+)	2705 *2*	50 *50*	8521.11	10^-	(E1)		0.001102 *16*	α=0.001102 *16*; α(K)=1.91×10^{-5} *3*; α(L)=1.84×10^{-6} *3*; α(M)=2.60×10^{-7} *4*; α(N+..)=0.001080 *16* α(N)=1.128×10^{-8} *16*; α(IPF)=0.001080 *16*

$^{60}_{28}Ni_{32}$-46

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
11224.9	(11$^+$)	3792.5 *9*	100 *50*	7433.45	9$^+$	(E2)		0.001118 *16*	α=0.001118 *16*; α(K)=1.763×10^{-5} *25*; α(L)=1.702×10^{-6} *24*; α(M)=2.40×10^{-7} *4*; α(N+..)=0.001098 α(N)=1.044×10^{-8} *15*; α(IPF)=0.001098 *16*
11255.23	12$^+$	224.6 *1*	14 *5*	11030.60	11$^+$	M1+E2	−0.12 *10*	0.0061 *7*	α=0.0061 *7*; α(K)=0.0055 *6*; α(L)=0.00055 *7*; α(M)=7.7×10^{-5} *9*; α(N+..)=3.3×10^{-6} *4* α(N)=3.3×10^{-6} *4*
		278.0 *2*	100 *5*	10977.68	11$^+$	M1(+E2)	−0.03 *5*	0.00344 *7*	α=0.00344 *7*; α(K)=0.00309 *7*; α(L)=0.000307 *7*; α(M)=4.32×10^{-5} *9*; α(N+..)=1.85×10^{-6} *4* α(N)=1.85×10^{-6} *4*
		382.8 *2*	33 *5*	10872.60	11$^+$	M1+E2	−0.05 *4*	0.00161 *3*	α=0.00161 *3*; α(K)=0.001447 *24*; α(L)=0.0001430 *24*; α(M)=2.01×10^{-5} *4*; α(N+..)=8.64×10^{-7} *14* α(N)=8.64×10^{-7} *14*
		429.9 *2*	43 *5*	10825.23	11$^+$	M1(+E2)	−0.04 *4*	0.001230 *19*	α=0.001230 *19*; α(K)=0.001105 *17*; α(L)=0.0001089 *17*; α(M)=1.535×10^{-5} *24* α(N)=6.59×10^{-7} *10*
		1293.4 *4*	29 *5*	9960.14	11$^-$	E1		0.000179 *3*	α=0.000179 *3*; α(K)=5.89×10^{-5} *9*; α(L)=5.71×10^{-6} *8*; α(M)=8.04×10^{-7} *12*; α(N+..)=0.0001135 *17* α(N)=3.48×10^{-8} *5*; α(IPF)=0.0001135 *17*
		1590.3 *4*	33 *5*	9665.67	10$^+$	E2		0.000211 *3*	α=0.000211 *3*; α(K)=7.91×10^{-5} *11*; α(L)=7.69×10^{-6} *11*; α(M)=1.083×10^{-6} *16*; α(N+..)=0.0001234 α(N)=4.68×10^{-8} *7*; α(IPF)=0.0001234 *18*
		2123.4 *5*	4.8 *5*	9132.27	11$^-$	E1		0.000751 *11*	α=0.000751 *11*; α(K)=2.68×10^{-5} *4*; α(L)=2.59×10^{-6} *4*; α(M)=3.65×10^{-7} *6*; α(N+..)=0.000722 *11* α(N)=1.586×10^{-8} *23*; α(IPF)=0.000722 *11*
(11387.700)	(1$^-$,2$^-$)	1358.67 *18*	0.126 *19*	10029.02					
		1434.0 *3*	0.084 *19*	9953.7					
		2040.85 *19*	0.223 *23*	9346.82					
		2311.00 *18*	0.223 *23*	9076.66					
		2341.9 *4*	0.107 *19*	9045.20					
		2721.59 *25*	0.177 *23*	8666.21					
		2749.5 *4*	0.121 *23*	8638.5					
		2822.3 *3*	0.186 *23*	8565.60					
		2883.0 *4*	0.172 *23*	8504.7					
		3101.2 *6*	0.070 *19*	8286.3	(1$^+$)				
		3436.9 *3*	0.35 *3*	7950.93	1$^+$				
		3569.53 *13*	0.409 *23*	7818.02					
		3589.0 *3*	0.24 *4*	7798.9					
		3625.6 *4*	0.16 *3*	7761.8	1$^+$				
		3697.7 *6*	0.15 *3*	7690.0	1$^-$				
		3703.4 *8*	0.18 *5*	7684.1					
		3836.1 *5*	0.15 *3*	7552.0					
		3892.4 *5*	0.20 *3*	7495.2					

$^{60}_{28}Ni_{32}$-47

γ(^{60}Ni) (continued)

E_i(level)	J^{π}_i	E_{γ}‡	I_{γ}	E_f	J^{π}_f
(11387.700)	(1$^-$,2$^-$)	3913.7 *3*	0.19 *3*	7473.49	1$^+$
		3973.4 *5*	0.19 *3*	7414.16	
		4048.2 *4*	0.22 *3*	7339.68	
		4071.49 *22*	0.34 *4*	7316.13	
		4164.75 *11*	0.90 *4*	7222.80	
		4180.5 *7*	0.084 *18*	7207.6	
		4331.24 *15*	0.53 *3*	7056.27	
		4390.4 *3*	0.19 *2*	6996.86	
		4475.58 *10*	0.70 *3*	6911.93	1$^+$
		4553.0 *3*	0.33 *3*	6834.92	
		4631.2 *5*	0.17 *3*	6756.4	
		4740.48 *12*	1.05 *5*	6647.17	
		4819.9 *6*	0.15 *3*	6567.33	
		4871.7 *8*	0.11 *3*	6516.72	
		4898.4 *4*	0.30 *3*	6489.28	
		4922.34 *25*	0.72 *5*	6465.25	1$^-$
		5005.5 *7*	0.14 *3*	6382.4	1
		5025.43 *25*	0.43 *4*	6362.05	
		5059.8 *6*	0.19 *3*	6327.21	2$^+$
		5148.1 *3*	0.29 *2*	6239.2	
		5320.69 *18*	0.44 *3*	6066.72	
		5419.5 *6*	0.12 *2*	5967.8	
		5468.5 *6*	0.13 *2*	5918.54	
		5485.02 *8*	1.75 *4*	5902.44	
		5509.46 *11*	1.04 *4*	5878.05	
		5527.4 *5*	0.16 *2*	5859.9	
		5676.64 *4*	4.35 *8*	5710.79	
		5714.96 *18*	0.74 *4*	5672.36	
		5775.08 *6*	3.32 *7*	5612.40	
		5911.3 *8*	0.074 *23*	5476.04	
		5940.5 *3*	0.34 *3*	5446.98	2$^+$
		6099.4 *3*	0.29 *3*	5288.55	
		6260.19 *20*	0.33 *3*	5127.16	
		6322.29 *11*	2.59 *7*	5065.02	(1$^-$)
		6434.01 *10*	1.04 *3*	4953.36	
		6458.42 *18*	0.46 *3*	4928.98	
		6543.44 *18*	2.7 *1*	4843.93	2$^+$
		6608.29 *15*	1.36 *6*	4779.13	
		6627.12 *19*	0.59 *4*	4760.23	1,2
		6809.91 *9*	1.55 *6*	4577.45	2$^+$
		6839.38 *12*	5.6 *3*	4547.96	1$^+$,2$^+$
		6894.23 *11*	1.28 *5*	4493.16	2$^+$
		7051.67 *12*	1.02 *4*	4335.52	2
		7068.67 *8*	1.93 *6*	4318.58	2$^+$

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
(11387.700)	(1⁻,2⁻)	7275.9 *9*	0.09 *2*	4111.96	2⁺				
		7309.22 *14*	0.99 *5*	4077.99	1⁺,2⁺				
		7367.31 *5*	9.1 *2*	4019.886	1⁺				
		7380.77 *4*	11.3 *3*	4006.444	2⁺				
		7499.4 *4*	0.35 *3*	3887.36	2⁺				
		7516.17 *4*	9.5 *2*	3871.050	2⁺				
		7652.88 *8*	2.00 *5*	3734.44	2⁺				
		7799.40 *6*	3.20 *7*	3587.72	0⁺				
		7993.95 *10*	1.44 *5*	3393.14	2⁺				
		8069.26 *4*	14.8 *3*	3317.829	0⁺				
		8117.6 *9*	0.20 *6*	3269.19	2⁺				
		8193.24 *4*	8.8 *2*	3193.87	1⁺				
		8200.88 *17*	0.96 *4*	3185.98	(3⁺)				
		8263.35 *5*	7.4 *2*	3123.698	2⁺				
		9102.10 *4*	41.1 *7*	2284.80	0⁺				
		9228.19 *9*	5.3 *2*	2158.632	2⁺				
		10054.14 *7*	38.2 *7*	1332.514	2⁺				
		11386.50 *9*	100 *4*	0.0	0⁺				
11443.40	13⁻	654.9 *2*	29 *7*	10788.66	12⁻	M1+E2		0.00061 *13*	α=0.00061 *13*; α(K)=0.00055 *12*; α(L)=5.4×10^{-5} *12*; α(M)=7.6×10^{-6} *16*; α(N+..)=3.2×10^{-7} *7* α(N)=3.2×10^{-7} *7*
		1683.2 *4*	100 *7*	9760.42	11⁻	E2		0.000242 *4*	α=0.000242 *4*; α(K)=7.07×10^{-5} *10*; α(L)=6.87×10^{-6} *10*; α(M)=9.68×10^{-7} *14*; α(N+..)=0.0001639 *2* α(N)=4.19×10^{-8} *6*; α(IPF)=0.0001638 *23*
		1724.9 *4*	79 *7*	9718.27	11⁻	E2		0.000257 *4*	α=0.000257 *4*; α(K)=6.74×10^{-5} *10*; α(L)=6.55×10^{-6} *10*; α(M)=9.23×10^{-7} *13*; α(N+..)=0.000182 *3* α(N)=4.00×10^{-8} *6*; α(IPF)=0.000182 *3*
11493.6	(12⁺)	2361.4 *9*	100	9132.27	11⁻	(E1)		0.000901 *13*	α=0.000901 *13*; α(K)=2.31×10^{-5} *4*; α(L)=2.23×10^{-6} *4*; α(M)=3.14×10^{-7} *5*; α(N+..)=0.000876 *13* α(N)=1.362×10^{-8} *19*; α(IPF)=0.000876 *13*
11553.3	13⁻	764.2 *3*	100	10788.66	12⁻	M1+E2		0.00041 *7*	α=0.00041 *7*; α(K)=0.00037 *6*; α(L)=3.6×10^{-5} *6*; α(M)=5.1×10^{-6} *9*; α(N+..)=2.2×10^{-7} *4* α(N)=2.2×10^{-7} *4*
11785.6	(12⁺)	560.8 *2*	50 *25*	11224.9	(11⁺)	M1+E2		0.00092 *25*	α=0.00092 *25*; α(K)=0.00082 *22*; α(L)=8.1×10^{-5} *22*; α(M)=1.1×10^{-5} *3*; α(N+..)=4.9×10^{-7} *13* α(N)=4.9×10^{-7} *13*
		2654.2 *6*	100 *25*	9132.27	11⁻	(E1)		0.001073 *15*	α=0.001073 *15*; α(K)=1.96×10^{-5} *3*; α(L)=1.89×10^{-6} *3*; α(M)=2.66×10^{-7} *4*; α(N+..)=0.001051 *15* α(N)=1.158×10^{-8} *17*; α(IPF)=0.001051 *15*
11851.17	13⁺	596.0 *2*	100 *5*	11255.23	12⁺	M1(+E2)	−0.03 *4*	0.000591 *9*	α=0.000591 *9*; α(K)=0.000531 *8*; α(L)=5.21×10^{-5} *8*; α(M)=7.34×10^{-6} *11*; α(N+..)=3.17×10^{-7} *5* α(N)=3.17×10^{-7} *5*

$^{60}_{28}Ni_{32}$-49

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ ‡	I_γ	E_f	J_f^π	Mult. #	δ @	α †	Comments
11851.17	13^+	872.6 *3*	4.5 *15*	10977.68	11^+	E2		0.000338 *5*	α=0.000338 *5*; α(K)=0.000304 *5*; α(L)=2.99×10^{-5} *5*; α(M)=4.20×10^{-6} *6*; α(N+..)=1.80×10^{-7} *3* α(N)=1.80×10^{-7} *3*
		1862.9 *5*	4.5 *15*	9989.27	(12^-)	E1		0.000573 *8*	α=0.000573 *8*; α(K)=3.26×10^{-5} *5*; α(L)=3.15×10^{-6} *5*; α(M)=4.44×10^{-7} *7*; α(N+..)=0.000537 *8* α(N)=1.93×10^{-8} *3*; α(IPF)=0.000536 *8*
11878.0	(13)	1180.7 *3*	100	10697.3	12^-	(D+Q)			
12273.7	14^-	1160.8 *3*	100 *12*	11112.8	13^-	M1+E2	+0.11 *6*	0.0001515 *22*	α=0.0001515 *22*; α(K)=0.0001336 *19*; α(L)=1.300×10^{-5} *19*; α(M)=1.83×10^{-6} *3* α(N)=7.95×10^{-8} *12*; α(IPF)=2.94×10^{-6} *5*
		2284.6 *6*	15 *4*	9989.27	(12^-)	E2		0.000496 *7*	α=0.000496 *7*; α(K)=4.03×10^{-5} *6*; α(L)=3.90×10^{-6} *6*; α(M)=5.50×10^{-7} *8*; α(N+..)=0.000451 *7* α(N)=2.39×10^{-8} *4*; α(IPF)=0.000451 *7*
12486.2	(13^+)	700.8 *2*	100 *25*	11785.6	(12^+)	M1+E2		0.00051 *10*	α=0.00051 *10*; α(K)=0.00046 *9*; α(L)=4.5×10^{-5} *9*; α(M)=6.4×10^{-6} *12*; α(N+..)=2.7×10^{-7} *5* α(N)=2.7×10^{-7} *5*
		2495.3 *6*	75 *25*	9989.27	(12^-)	(E1)		0.000981 *14*	α=0.000981 *14*; α(K)=2.13×10^{-5} *3*; α(L)=2.06×10^{-6} *3*; α(M)=2.90×10^{-7} *4*; α(N+..)=0.000958 *14* α(N)=1.261×10^{-8} *18*; α(IPF)=0.000958 *14*
12578.4	14^+	727.1 *2*	100 *6*	11851.17	13^+	M1(+E2)	+0.03 *5*	0.000385 *6*	α=0.000385 *6*; α(K)=0.000346 *5*; α(L)=3.38×10^{-5} *5*; α(M)=4.77×10^{-6} *7*; α(N+..)=2.06×10^{-7} *3* α(N)=2.06×10^{-7} *3*
		1025.1 *3*	4 *2*	11553.3	13^-	E1		9.99×10^{-5} *14*	α=9.99×10^{-5} *14*; α(K)=8.99×10^{-5} *13*; α(L)=8.73×10^{-6} *13*; α(M)=1.229×10^{-6} *18*; α(N+..)=5.31×10^{-8} *8* α(N)=5.31×10^{-8} *8*
		1323.9 *4*	6 *2*	11255.23	12^+	E2		0.0001621 *23*	α=0.0001621 *23*; α(K)=0.0001152 *17*; α(L)=1.123×10^{-5} *16*; α(M)=1.582×10^{-6} *23* α(N)=6.82×10^{-8} *10*; α(IPF)=3.40×10^{-5} *5*
12742.1	13^+	1956.0 *12*	100 *50*	10788.66	12^-	E1		0.000638 *9*	α=0.000638 *9*; α(K)=3.03×10^{-5} *5*; α(L)=2.93×10^{-6} *5*; α(M)=4.12×10^{-7} *6*; α(N+..)=0.000604 *9* α(N)=1.79×10^{-8} *3*; α(IPF)=0.000604 *9*
		2753.2 *7*	50 *50*	9989.27	(12^-)	E1		0.001128 *16*	α=0.001128 *16*; α(K)=1.87×10^{-5} *3*; α(L)=1.80×10^{-6} *3*; α(M)=2.54×10^{-7} *4*; α(N+..)=0.001107 *16* α(N)=1.102×10^{-8} *16*; α(IPF)=0.001107 *16*
12774.7	14^+	1281.1 *4*	1 *1*	11493.6	(12^+)	(E2)		0.0001616 *23*	α=0.0001616 *23*; α(K)=0.0001236 *18*; α(L)=1.206×10^{-5} *17*; α(M)=1.698×10^{-6} *24* α(N)=7.32×10^{-8} *11*; α(IPF)=2.41×10^{-5} *4*
		1730.4 *4*	100 *5*	11044.14	12^+	E2		0.000259 *4*	α=0.000259 *4*; α(K)=6.70×10^{-5} *10*; α(L)=6.51×10^{-6} *10*; α(M)=9.17×10^{-7} *13*; α(N+..)=0.000185 *3* α(N)=3.97×10^{-8} *6*; α(IPF)=0.000185 *3*

$^{60}_{28}Ni_{32}$-50

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
13037.5	14⁻	1916.9 *5*	100	11120.6	12⁻	E2	0.000333 *5*	α=0.000333 *5*; α(K)=5.52×10^{-5} *8*; α(L)=5.36×10^{-6} *8*; α(M)=7.55×10^{-7} *11*; α(N+..)=0.000272 *4* α(N)=3.27×10^{-8} *5*; α(IPF)=0.000272 *4*
13246.3	13⁺	2202.3 *5*	100 *50*	11044.14	12⁺	M1+E2	0.00042 *4*	α=0.00042 *4*; α(K)=4.21×10^{-5} *11*; α(L)=4.08×10^{-6} *11*; α(M)=5.74×10^{-7} *15*; α(N+..)=0.00038 *4* α(N)=2.49×10^{-8} *7*; α(IPF)=0.00038 *4*
		2456.4 *6*	100 *50*	10788.66	12⁻	E1	0.000958 *14*	α=0.000958 *14*; α(K)=2.18×10^{-5} *3*; α(L)=2.11×10^{-6} *3*; α(M)=2.97×10^{-7} *5*; α(N+..)=0.000934 *13* α(N)=1.288×10^{-8} *18*; α(IPF)=0.000934 *13*
13282.3	(14⁺)	1839.1 *5*	100 *20*	11443.40	13⁻	(E1)	0.000556 *8*	α=0.000556 *8*; α(K)=3.32×10^{-5} *5*; α(L)=3.22×10^{-6} *5*; α(M)=4.53×10^{-7} *7*; α(N+..)=0.000519 *8* α(N)=1.96×10^{-8} *3*; α(IPF)=0.000519 *8*
		2238.1 *9*	40 *20*	11044.14	12⁺	(E2)	0.000475 *7*	α=0.000475 *7*; α(K)=4.17×10^{-5} *6*; α(L)=4.05×10^{-6} *6*; α(M)=5.70×10^{-7} *8*; α(N+..)=0.000428 *6* α(N)=2.47×10^{-8} *4*; α(IPF)=0.000428 *6*
13353.0	(14⁺)	866.8 *3*	100	12486.2	(13⁺)	M1+E2	0.00031 *4*	α=0.00031 *4*; α(K)=0.00027 *4*; α(L)=2.7×10^{-5} *4*; α(M)=3.8×10^{-6} *5*; α(N+..)=1.63×10^{-7} *21* α(N)=1.63×10^{-7} *21*
13615.4	15⁻	2061.2 *5*	13 *7*	11553.3	13⁻	E2	0.000395 *6*	α=0.000395 *6*; α(K)=4.84×10^{-5} *7*; α(L)=4.69×10^{-6} *7*; α(M)=6.61×10^{-7} *10*; α(N+..)=0.000342 *5* α(N)=2.87×10^{-8} *4*; α(IPF)=0.000342 *5*
		2172.9 *5*	100 *7*	11443.40	13⁻	E2	0.000445 *7*	α=0.000445 *7*; α(K)=4.40×10^{-5} *7*; α(L)=4.26×10^{-6} *6*; α(M)=6.01×10^{-7} *9*; α(N+..)=0.000397 *6* α(N)=2.61×10^{-8} *4*; α(IPF)=0.000397 *6*
13662.2	15⁺	1083.9 *3*	100 *8*	12578.4	14⁺	M1+E2	0.000185 *16*	α=0.000185 *16*; α(K)=0.000166 *14*; α(L)=1.62×10^{-5} *14*; α(M)=2.28×10^{-6} *20*; α(N+..)=9.9×10^{-8} *8* α(N)=9.9×10^{-8} *8*
		1811.0 *5*	11 *3*	11851.17	13⁺	E2	0.000290 *4*	α=0.000290 *4*; α(K)=6.15×10^{-5} *9*; α(L)=5.97×10^{-6} *9*; α(M)=8.41×10^{-7} *12*; α(N+..)=0.000222 *4* α(N)=3.64×10^{-8} *6*; α(IPF)=0.000222 *4*
13810.0	(15⁻)	1536.2 *4*	100 *33*	12333	8⁻	(M1+E2)	0.000180 *16*	α=0.000180 *16*; α(K)=8.1×10^{-5} *4*; α(L)=7.9×10^{-6} *4*; α(M)=1.12×10^{-6} *5*; α(N+..)=8.9×10^{-5} *12* α(N)=4.83×10^{-8} *20*; α(IPF)=8.9×10^{-5} *12*
		2697.2 *6*	67 *33*	11112.8	13⁻	(E2)	0.000680 *10*	α=0.000680 *10*; α(K)=3.03×10^{-5} *5*; α(L)=2.93×10^{-6} *5*; α(M)=4.13×10^{-7} *6*; α(N+..)=0.000646 *9* α(N)=1.80×10^{-8} *3*; α(IPF)=0.000646 *9*
14201.0	(15⁺)	848.0 *3*	100	13353.0	(14⁺)	M1+E2	0.00032 *5*	α=0.00032 *5*; α(K)=0.00029 *4*; α(L)=2.8×10^{-5} *4*; α(M)=4.0×10^{-6} *6*; α(N+..)=1.71×10^{-7} *23* α(N)=1.71×10^{-7} *23*
14463.7	15⁺	1217.1 *3*	56 *12*	13246.3	13⁺	E2	0.0001653 *24*	α=0.0001653 *24*; α(K)=0.0001383 *20*; α(L)=1.350×10^{-5} *19*; α(M)=1.90×10^{-6} *3* α(N)=8.19×10^{-8} *12*; α(IPF)=1.153×10^{-5} *17*

$^{60}_{28}Ni_{32}$-51

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	δ[@]	α[†]	Comments
14463.7	15^+	1604.3 *4*	38 *6*	12859.3	13^+	E2		0.000216 *3*	α=0.000216 *3*; α(K)=7.77×10^{-5} *11*; α(L)=7.56×10^{-6} *11*; α(M)=1.064×10^{-6} *15*; α(N+..)=0.0001294 α(N)=4.60×10^{-8} *7*; α(IPF)=0.0001293 *19*
		1688.8 *4*	50 *6*	12774.7	14^+	M1(+E2)		0.000224 *21*	α=0.000224 *21*; α(K)=6.80×10^{-5} *25*; α(L)=6.61×10^{-6} *24*; α(M)=9.3×10^{-7} *4*; α(N+..)=0.000148 *18* α(N)=4.04×10^{-8} *14*; α(IPF)=0.000148 *18*
		1722.0 *4*	100 *6*	12742.1	13^+	E2		0.000256 *4*	α=0.000256 *4*; α(K)=6.77×10^{-5} *10*; α(L)=6.57×10^{-6} *10*; α(M)=9.26×10^{-7} *13*; α(N+..)=0.000181 *3* α(N)=4.01×10^{-8} *6*; α(IPF)=0.000181 *3*
		2189.9 *5*	13 *6*	12333	8^-	E1		0.000795 *12*	α=0.000795 *12*; α(K)=2.57×10^{-5} *4*; α(L)=2.48×10^{-6} *4*; α(M)=3.49×10^{-7} *5*; α(N+..)=0.000766 *11* α(N)=1.516×10^{-8} *22*; α(IPF)=0.000766 *11*
14645.5	16^+	1870.8 *5*	100	12774.7	14^+	E2		0.000314 *5*	α=0.000314 *5*; α(K)=5.78×10^{-5} *8*; α(L)=5.61×10^{-6} *8*; α(M)=7.90×10^{-7} *11*; α(N+..)=0.000250 *4* α(N)=3.42×10^{-8} *5*; α(IPF)=0.000250 *4*
14803.2	16^+	1141.1 *3*	100 *7*	13662.2	15^+	M1(+E2)	−0.01 *10*	0.0001552 *22*	α=0.0001552 *22*; α(K)=0.0001379 *20*; α(L)=1.342×10^{-5} *19*; α(M)=1.89×10^{-6} *3* α(N)=8.20×10^{-8} *12*; α(IPF)=1.84×10^{-6} *3*
		2224.5 *5*	29 *7*	12578.4	14^+	E2		0.000469 *7*	α=0.000469 *7*; α(K)=4.22×10^{-5} *6*; α(L)=4.09×10^{-6} *6*; α(M)=5.76×10^{-7} *8*; α(N+..)=0.000422 *6* α(N)=2.50×10^{-8} *4*; α(IPF)=0.000422 *6*
14933.9	16^+	1651.7 *4*	27 *7*	13282.3	(14^+)	(E2)		0.000231 *4*	α=0.000231 *4*; α(K)=7.34×10^{-5} *11*; α(L)=7.13×10^{-6} *10*; α(M)=1.005×10^{-6} *14*; α(N+..)=0.0001500 α(N)=4.35×10^{-8} *6*; α(IPF)=0.0001499 *21*
		2158.9 *5*	100 *13*	12774.7	14^+	E2		0.000439 *7*	α=0.000439 *7*; α(K)=4.45×10^{-5} *7*; α(L)=4.31×10^{-6} *6*; α(M)=6.08×10^{-7} *9*; α(N+..)=0.000390 *6* α(N)=2.64×10^{-8} *4*; α(IPF)=0.000390 *6*
15164.8	(16^+)	963.8 *3*	100	14201.0	(15^+)	(M1+E2)		0.000239 *25*	α=0.000239 *25*; α(K)=0.000215 *23*; α(L)=2.10×10^{-5} *23*; α(M)=3.0×10^{-6} *4*; α(N+..)=1.28×10^{-7} *13* α(N)=1.28×10^{-7} *13*
15281.5	(16^-)	2243.9 *5*	100	13037.5	14^-	(E2)		0.000477 *7*	α=0.000477 *7*; α(K)=4.16×10^{-5} *6*; α(L)=4.03×10^{-6} *6*; α(M)=5.67×10^{-7} *8*; α(N+..)=0.000431 *6* α(N)=2.46×10^{-8} *4*; α(IPF)=0.000431 *6*
16026.6	17^+	1381.2 *4*	3 *1*	14645.5	16^+	M1+E2		0.000154 *12*	α=0.000154 *12*; α(K)=0.000100 *6*; α(L)=9.8×10^{-6} *6*; α(M)=1.38×10^{-6} *8*; α(N+..)=4.2×10^{-5} *7* α(N)=6.0×10^{-8} *3*; α(IPF)=4.2×10^{-5} *7*
		1562.9 *4*	100 *5*	14463.7	15^+	E2		0.000203 *3*	α=0.000203 *3*; α(K)=8.18×10^{-5} *12*; α(L)=7.96×10^{-6} *12*; α(M)=1.121×10^{-6} *16*; α(N+..)=0.0001119 α(N)=4.85×10^{-8} *7*; α(IPF)=0.0001118 *16*
16098.1	(17^+)	1294.8 *1*	100	14803.2	16^+	(M1+E2)		0.000151 *11*	α=0.000151 *11*; α(K)=0.000114 *7*; α(L)=1.11×10^{-5} *7*; α(M)=1.57×10^{-6} *10*; α(N+..)=2.4×10^{-5} *4* α(N)=6.8×10^{-8} *4*; α(IPF)=2.3×10^{-5} *4*

$^{60}_{28}Ni_{32}$-52

Adopted Levels, Gammas (continued)

γ(^{60}Ni) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ	E_f	J_f^π	Mult.[#]	α[†]	Comments
16194.4	17⁻	2578.9 *6*	100	13615.4	15⁻	E2	0.000628 *9*	α=0.000628 *9*; α(K)=3.27×10^{-5} *5*; α(L)=3.16×10^{-6} *5*; α(M)=4.46×10^{-7} *7*; α(N+..)=0.000592 *9* α(N)=1.94×10^{-8} *3*; α(IPF)=0.000592 *9*
16242.0?	(17⁺)	1077[k] *1*		15164.8	(16⁺)	(M1+E2)	0.000187 *16*	α=0.000187 *16*; α(K)=0.000168 *14*; α(L)=1.64×10^{-5} *15*; α(M)=2.32×10^{-6} *20*; α(N+..)=1.00×10^{-7} *9* α(N)=1.00×10^{-7} *9*
16842.4	18⁺	2196.9 *5*	100	14645.5	16⁺	E2	0.000456 *7*	α=0.000456 *7*; α(K)=4.31×10^{-5} *6*; α(L)=4.18×10^{-6} *6*; α(M)=5.89×10^{-7} *9*; α(N+..)=0.000408 *6* α(N)=2.56×10^{-8} *4*; α(IPF)=0.000408 *6*
17235.8	18⁺	2301.9 *6*	100	14933.9	16⁺	E2	0.000504 *7*	α=0.000504 *7*; α(K)=3.97×10^{-5} *6*; α(L)=3.85×10^{-6} *6*; α(M)=5.42×10^{-7} *8*; α(N+..)=0.000459 *7* α(N)=2.35×10^{-8} *4*; α(IPF)=0.000459 *7*
17911.6	19⁺	1884.9 *5*	100	16026.6	17⁺	E2	0.000320 *5*	α=0.000320 *5*; α(K)=5.70×10^{-5} *8*; α(L)=5.53×10^{-6} *8*; α(M)=7.79×10^{-7} *11*; α(N+..)=0.000256 *4* α(N)=3.38×10^{-8} *5*; α(IPF)=0.000256 *4*
18131.4	(18⁻)	2849.9 *7*	100	15281.5	(16⁻)	(E2)	0.000746 *11*	α=0.000746 *11*; α(K)=2.77×10^{-5} *4*; α(L)=2.68×10^{-6} *4*; α(M)=3.77×10^{-7} *6*; α(N+..)=0.000715 *10* α(N)=1.639×10^{-8} *23*; α(IPF)=0.000715 *10*
19238.4	(19⁻)	3043.9 *7*	100	16194.4	17⁻	(E2)	0.000828 *12*	α=0.000828 *12*; α(K)=2.49×10^{-5} *4*; α(L)=2.40×10^{-6} *4*; α(M)=3.39×10^{-7} *5*; α(N+..)=0.000801 *12* α(N)=1.473×10^{-8} *21*; α(IPF)=0.000801 *12*
19504.4	20⁺	2661.9 *6*	100	16842.4	18⁺	E2	0.000665 *10*	α=0.000665 *10*; α(K)=3.10×10^{-5} *5*; α(L)=3.00×10^{-6} *5*; α(M)=4.23×10^{-7} *6*; α(N+..)=0.000630 *9* α(N)=1.84×10^{-8} *3*; α(IPF)=0.000630 *9*
20017.9	(20⁺)	2782.0 *7*	100	17235.8	18⁺	(E2)	0.000717 *10*	α=0.000717 *10*; α(K)=2.88×10^{-5} *4*; α(L)=2.79×10^{-6} *4*; α(M)=3.93×10^{-7} *6*; α(N+..)=0.000685 *10* α(N)=1.706×10^{-8} *24*; α(IPF)=0.000685 *10*
20177.5	21⁺	2265.9 *6*	100	17911.6	19⁺	E2	0.000487 *7*	α=0.000487 *7*; α(K)=4.08×10^{-5} *6*; α(L)=3.96×10^{-6} *6*; α(M)=5.58×10^{-7} *8*; α(N+..)=0.000442 *7* α(N)=2.42×10^{-8} *4*; α(IPF)=0.000442 *7*
22863.5	(22⁺)	3359.0 *8*	100	19504.4	20⁺	(E2)	0.000955 *14*	α=0.000955 *14*; α(K)=2.13×10^{-5} *3*; α(L)=2.05×10^{-6} *3*; α(M)=2.89×10^{-7} *4*; α(N+..)=0.000932 *13* α(N)=1.259×10^{-8} *18*; α(IPF)=0.000932 *13*
22996.5	23⁺	2818.9 *7*	100	20177.5	21⁺	E2	0.000733 *11*	α=0.000733 *11*; α(K)=2.82×10^{-5} *4*; α(L)=2.73×10^{-6} *4*; α(M)=3.84×10^{-7} *6*; α(N+..)=0.000701 *10* α(N)=1.669×10^{-8} *24*; α(IPF)=0.000701 *10*

[†] Additional information 3.
[‡] From (^{36}Ar,4pγ), unless given otherwise. For additional γ's from unbound states, see ^{59}Co(p,γ).
[#] Multipolarity from γ(θ) in ^{56}Fe(^{7}Li,2npγ); character (E or M) from RUL or ΔJ$^\pi$, except as noted.

$^{60}_{28}Ni_{32}$-53

Adopted Levels, Gammas (continued)

$\gamma(^{60}Ni)$ (continued)

@ From $^{56}Fe(^{7}Li,2np\gamma)$, except as noted.
& From $^{59}Co(p,\gamma)$.
a From ^{60}Cu ε decay.
b From ^{60}Co β^- decay (1925.28 d).
c From $^{60}Ni(p,p'\gamma)$.
d From $^{60}Ni(p,p'\gamma)$.
e From $^{56}Fe(^{7}Li,2np\gamma)$.
f From $^{59}Co(^{3}He,d\gamma)$. Eγ deduced from level separation and not included in energy fit.
g From $^{59}Co(^{3}He,d\gamma)$. Eγ deduced from level separation and not included in energy fit.
h From $^{28}Si(^{35}Cl,3p)$.
i From $^{59}Ni(n,\gamma)$ E=thermal.
j From (γ,γ'),(pol γ,γ').
k Placement of transition in the level scheme is uncertain.

$^{60}_{28}Ni_{32}$-54

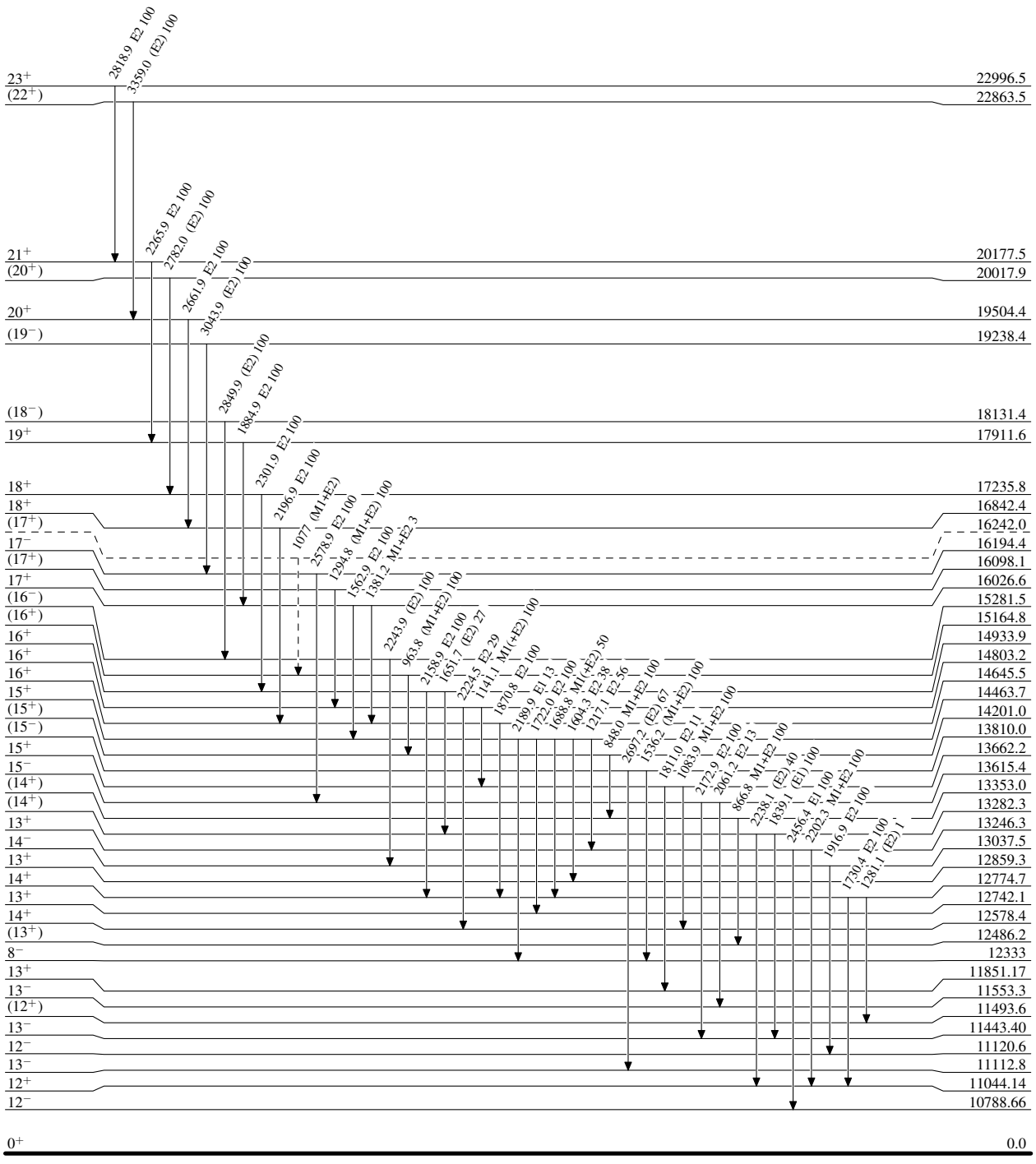
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

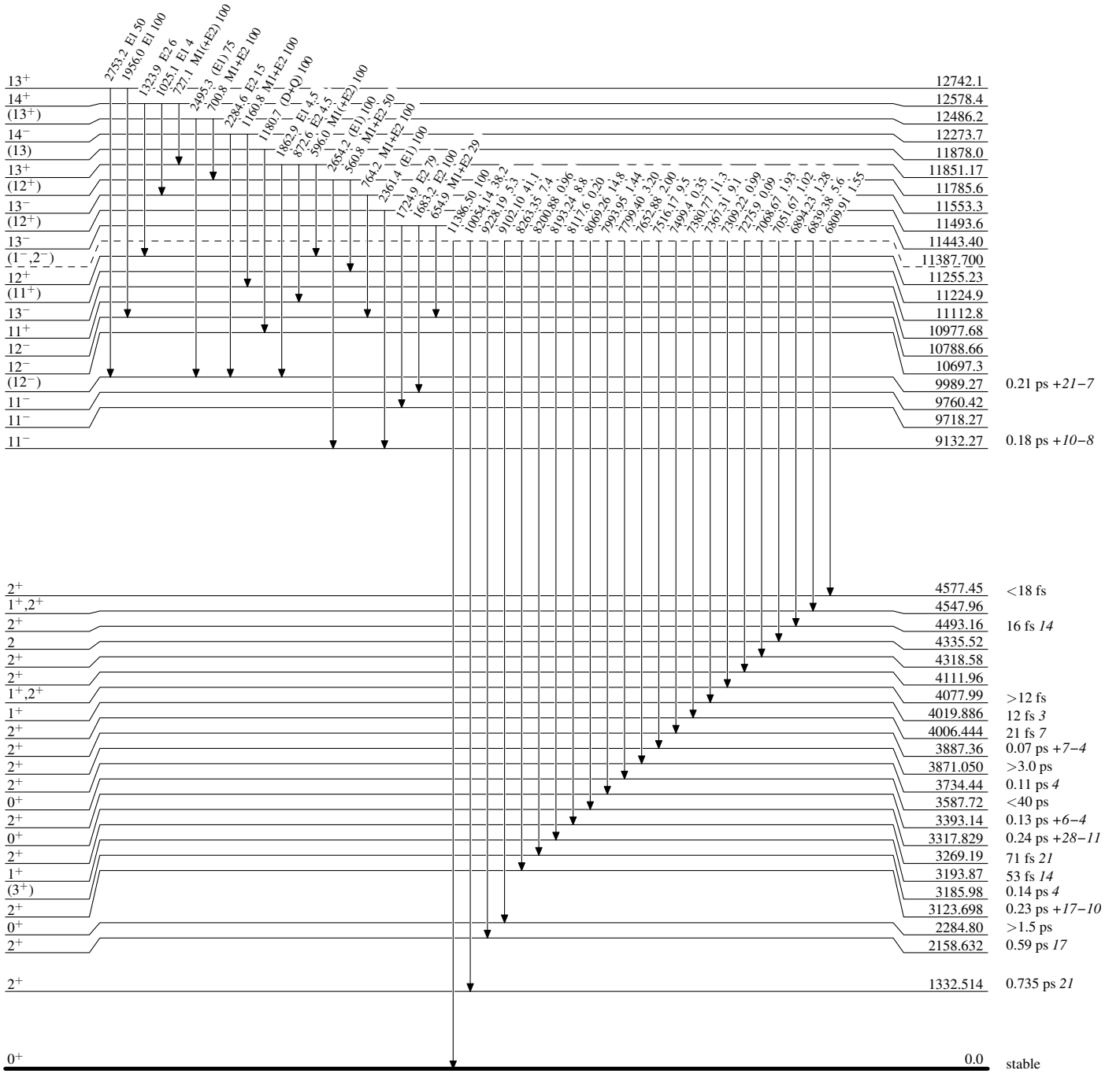


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

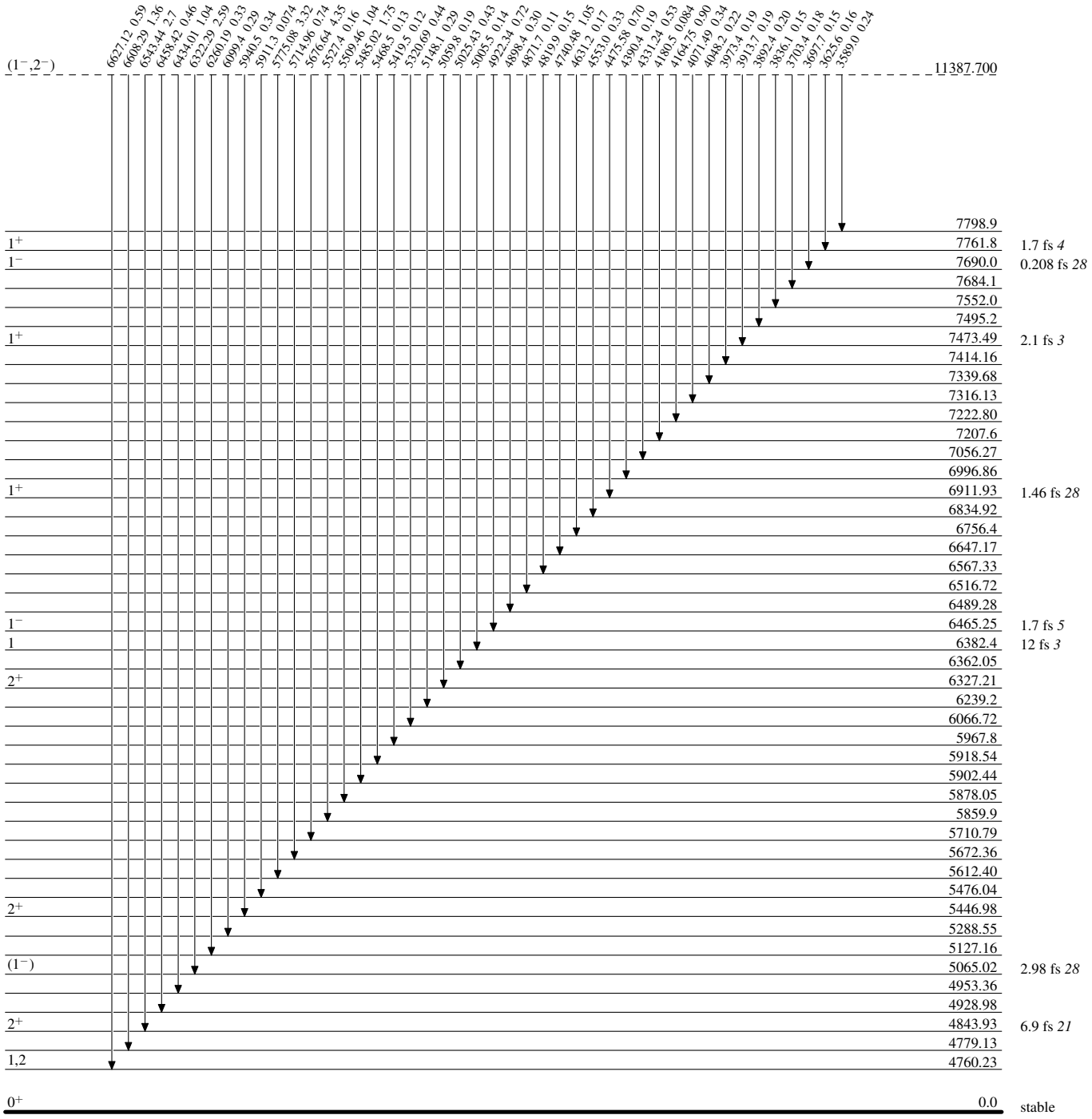


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

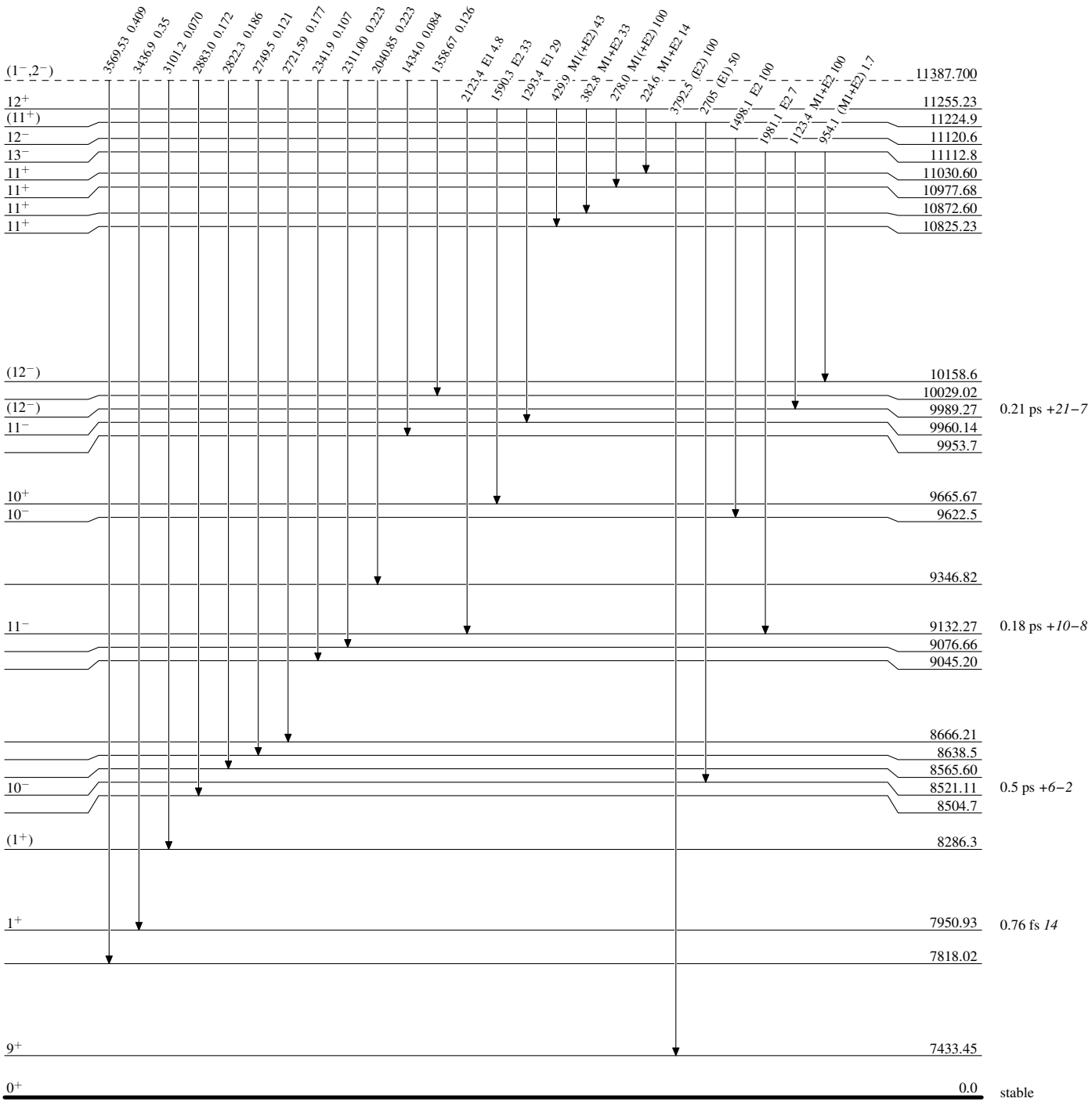


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

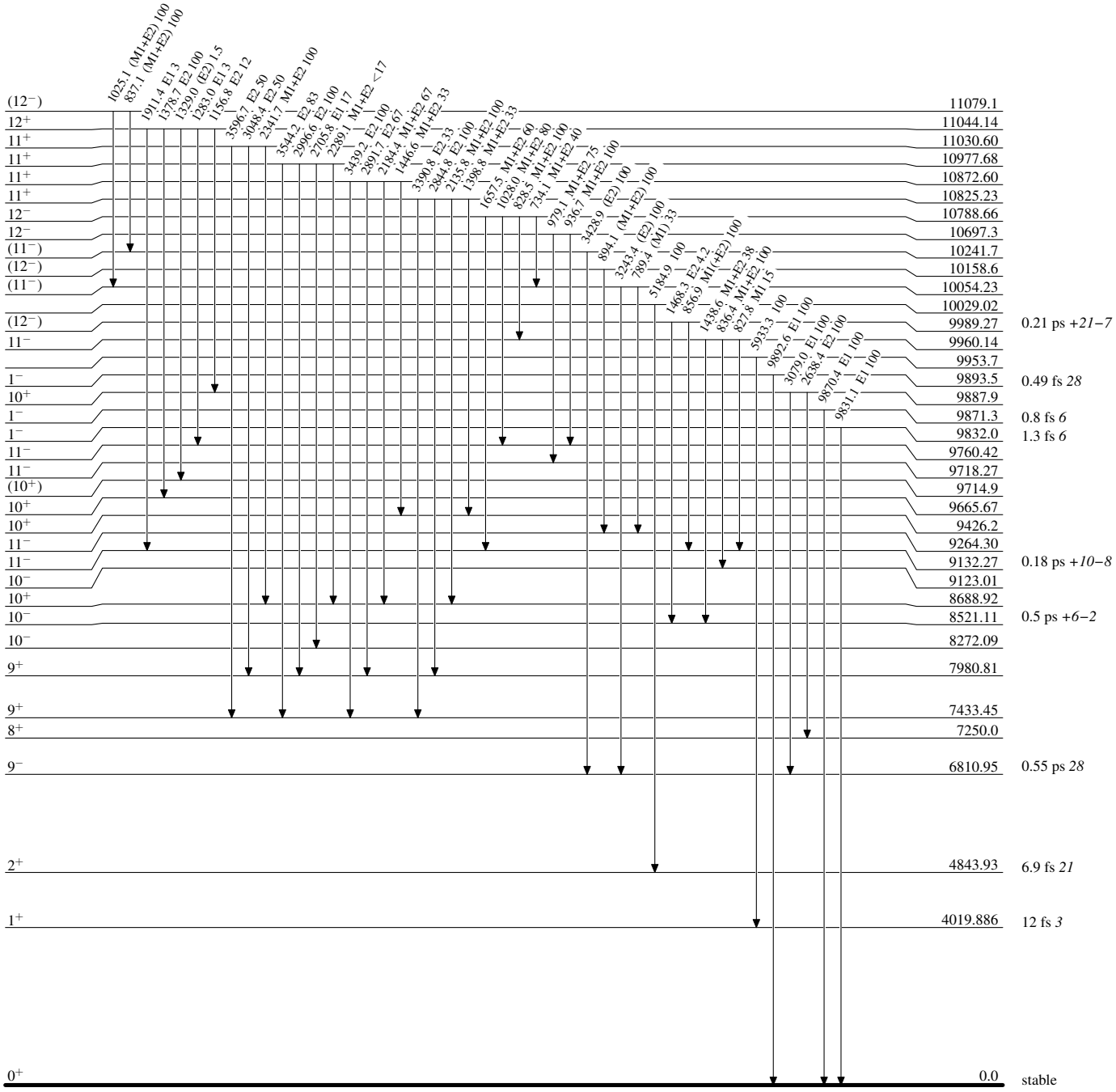


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

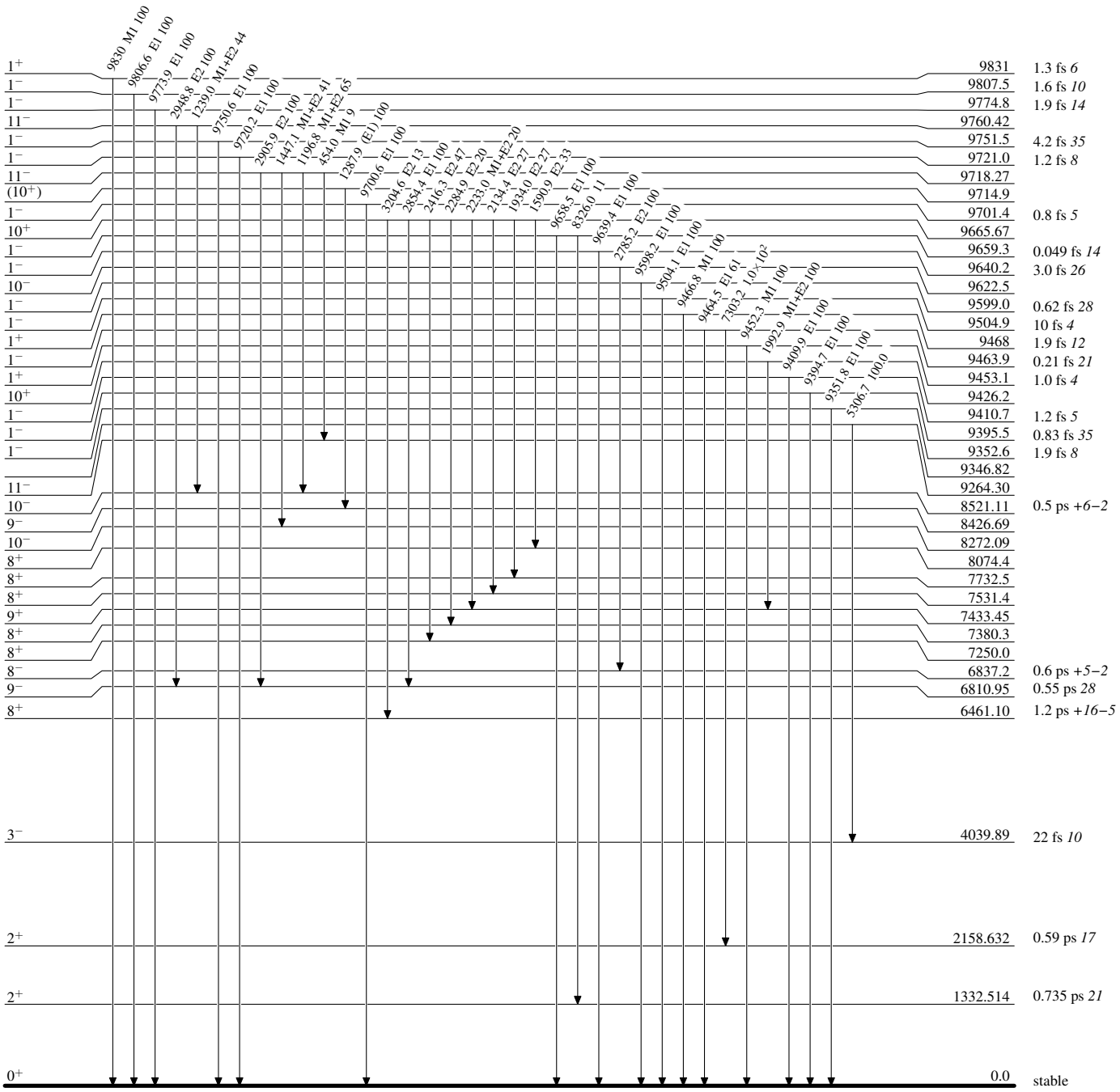


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

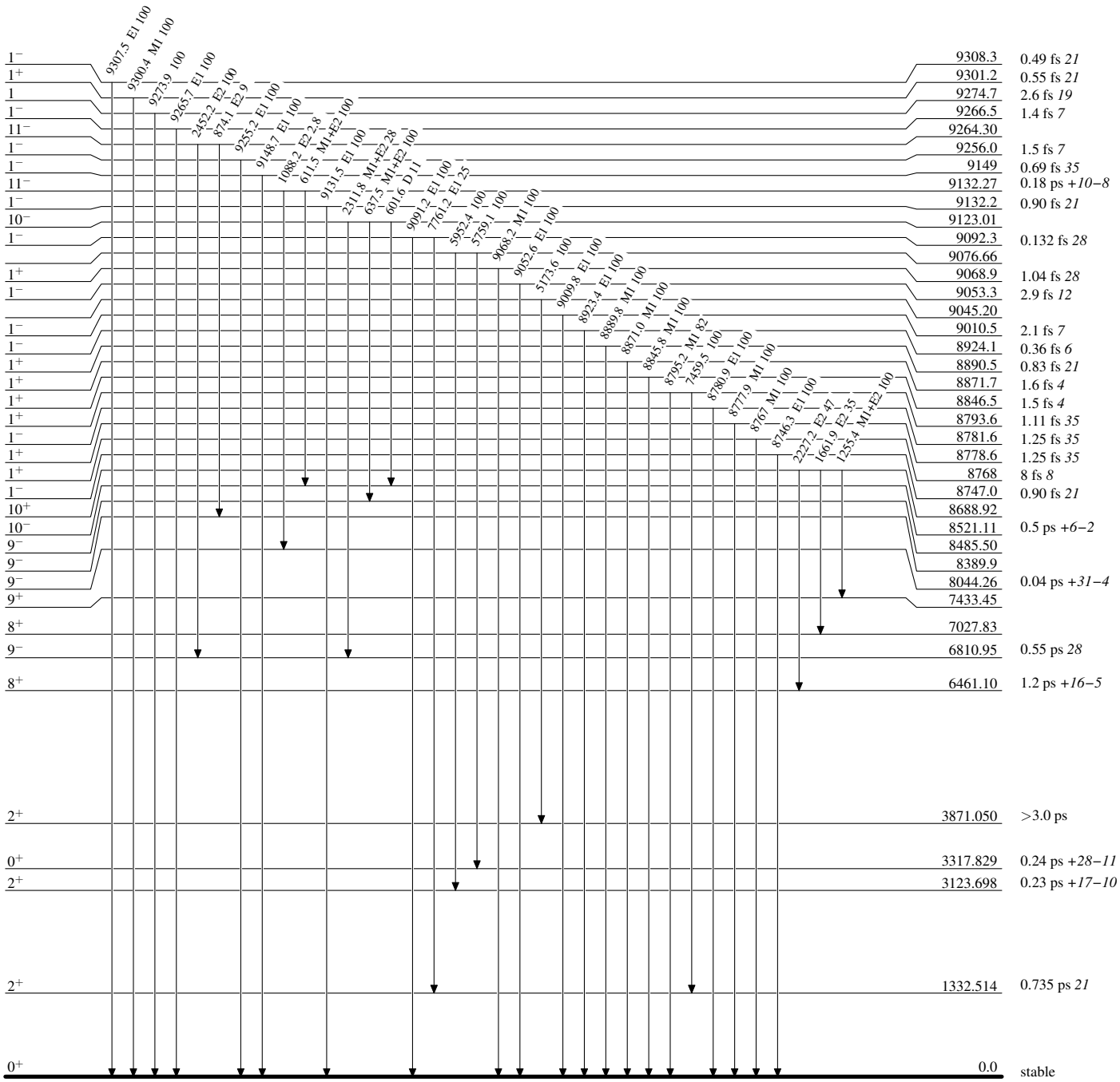


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

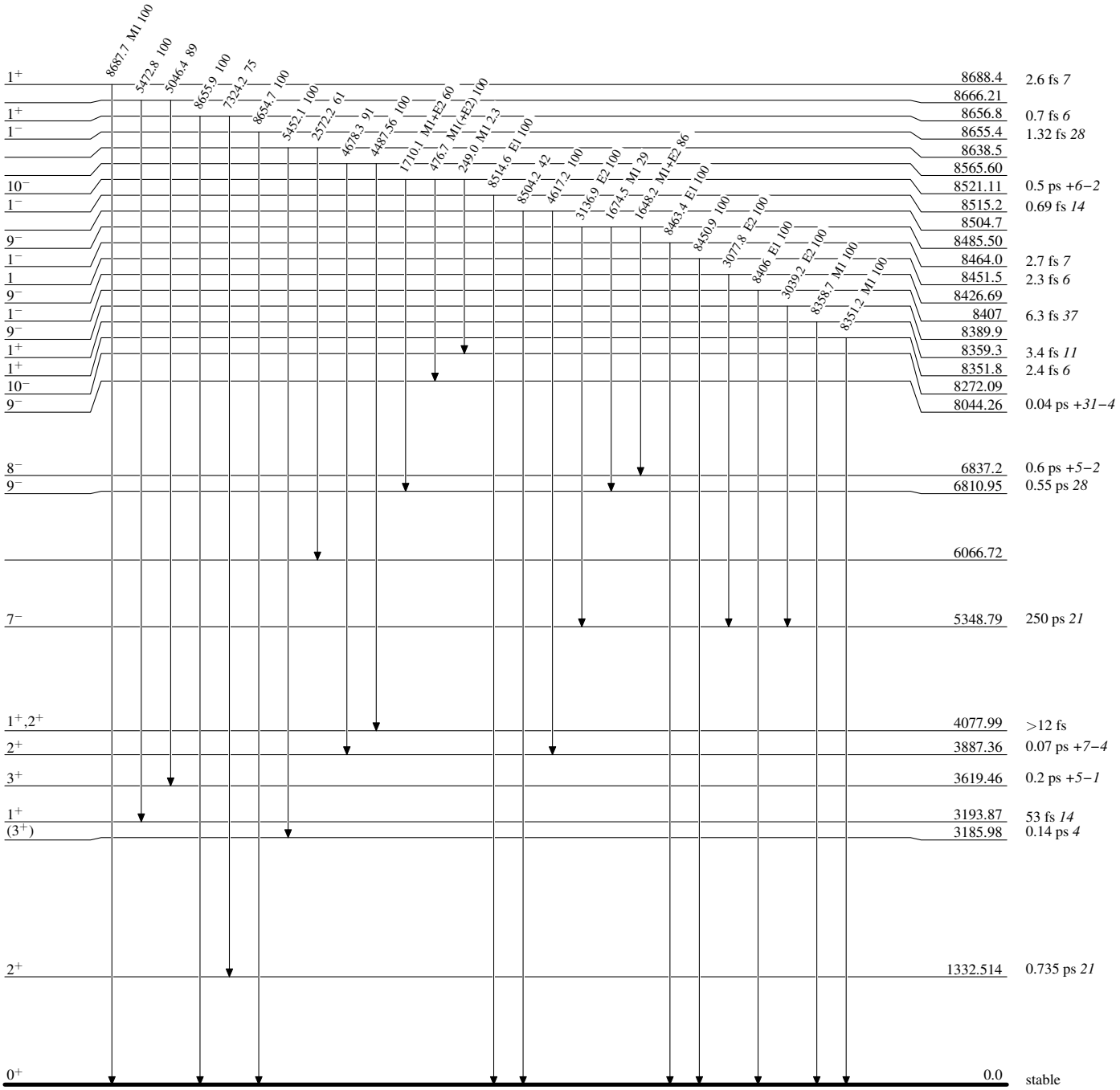


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

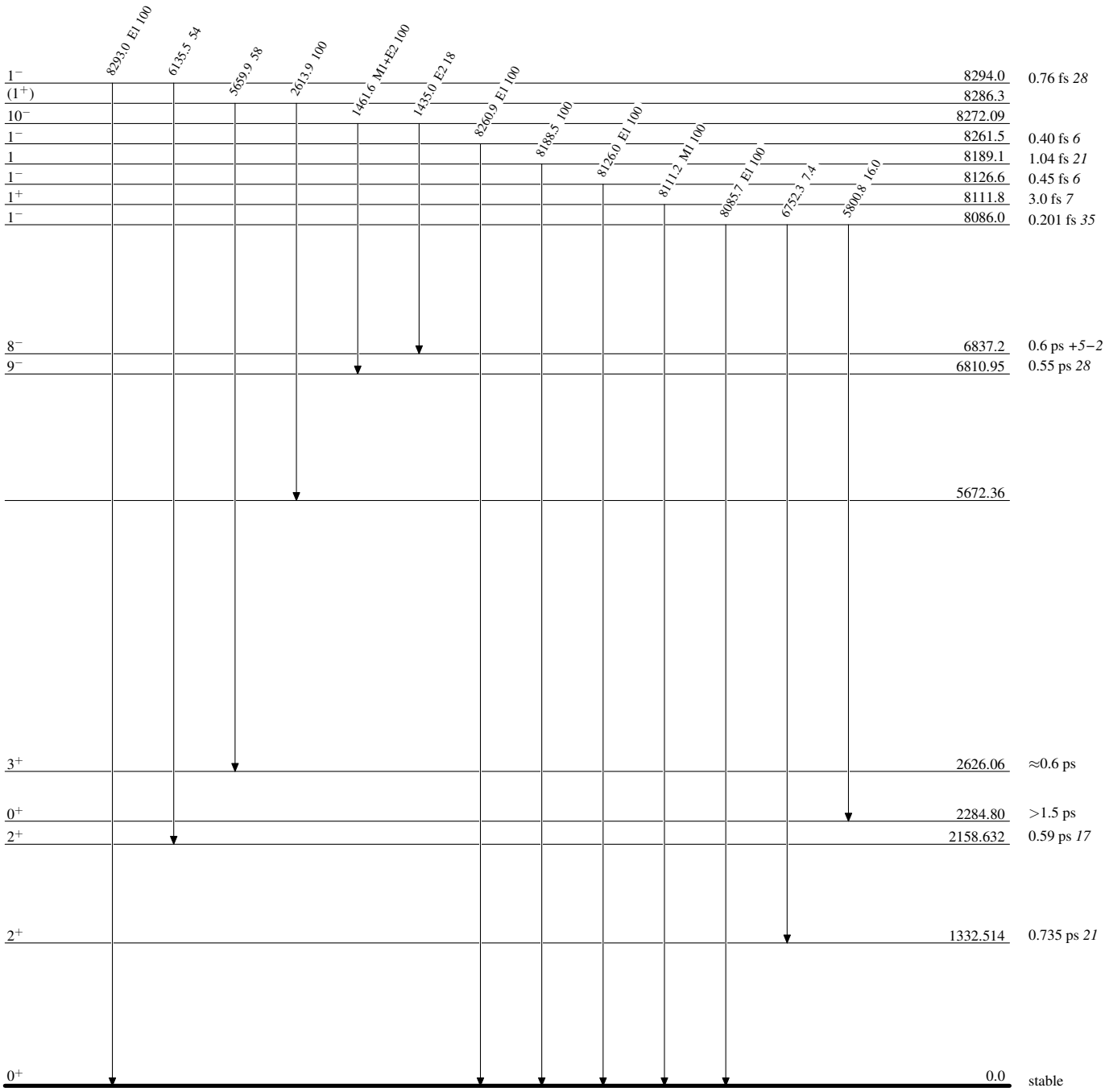


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

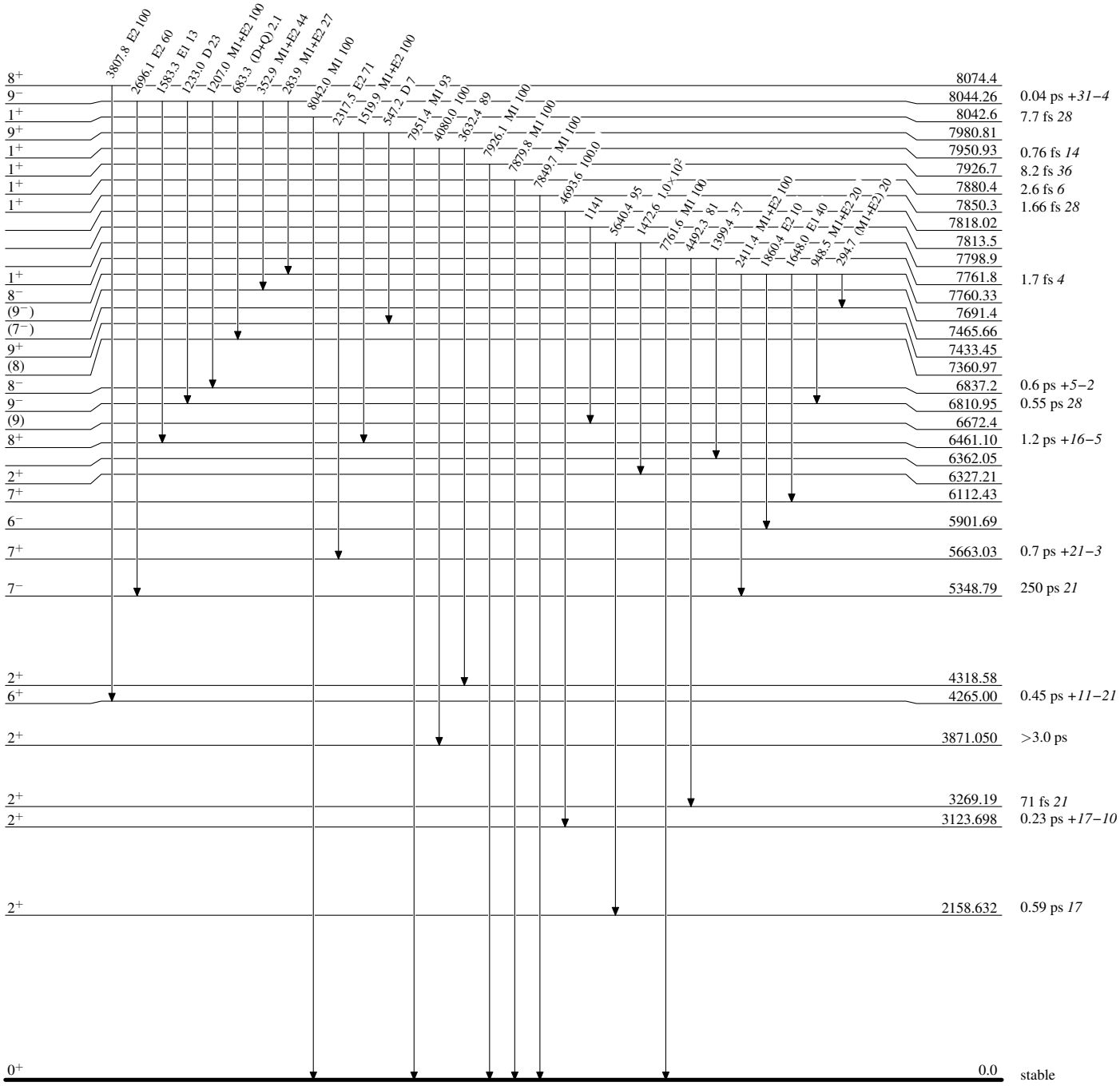


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

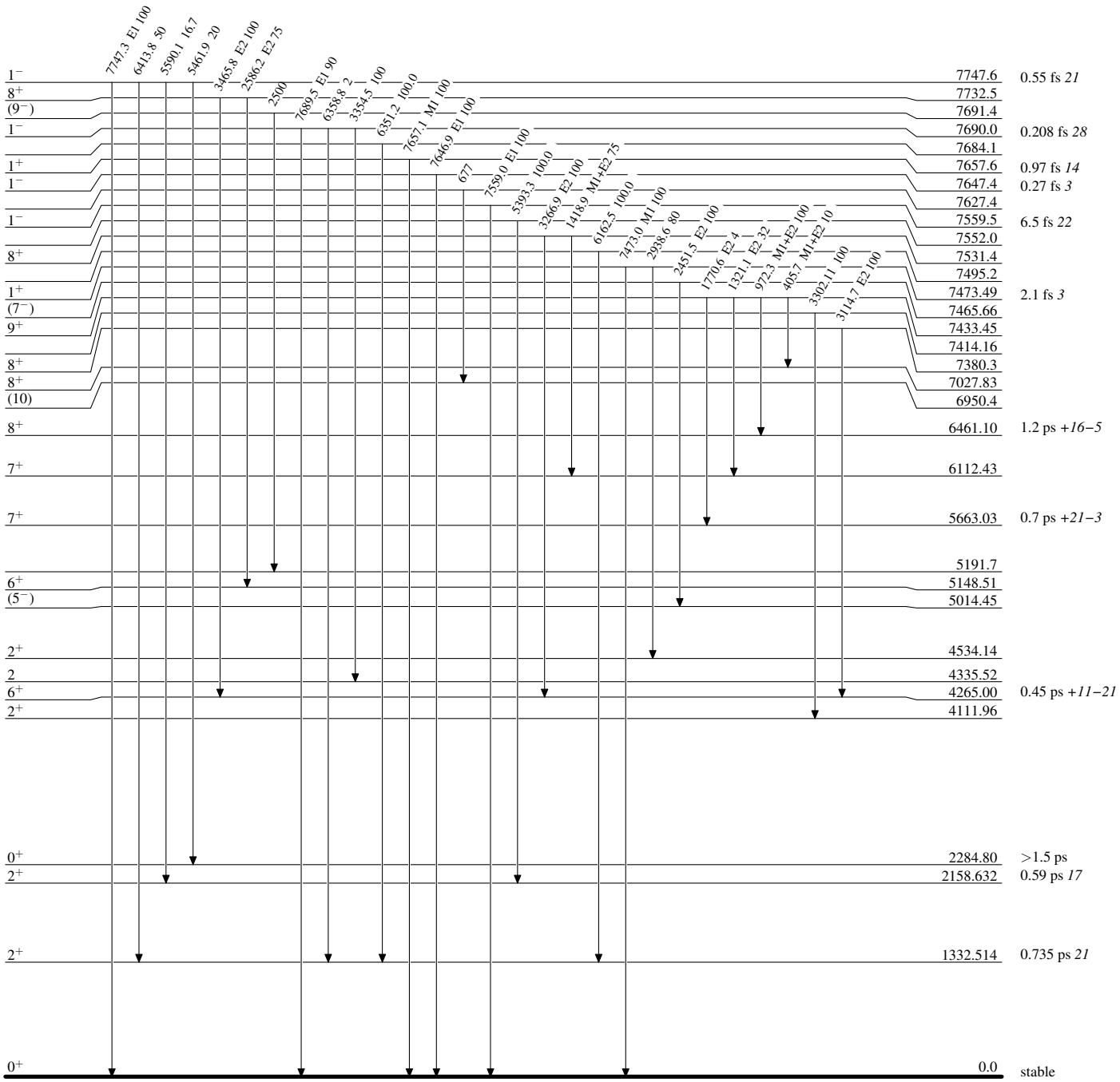


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

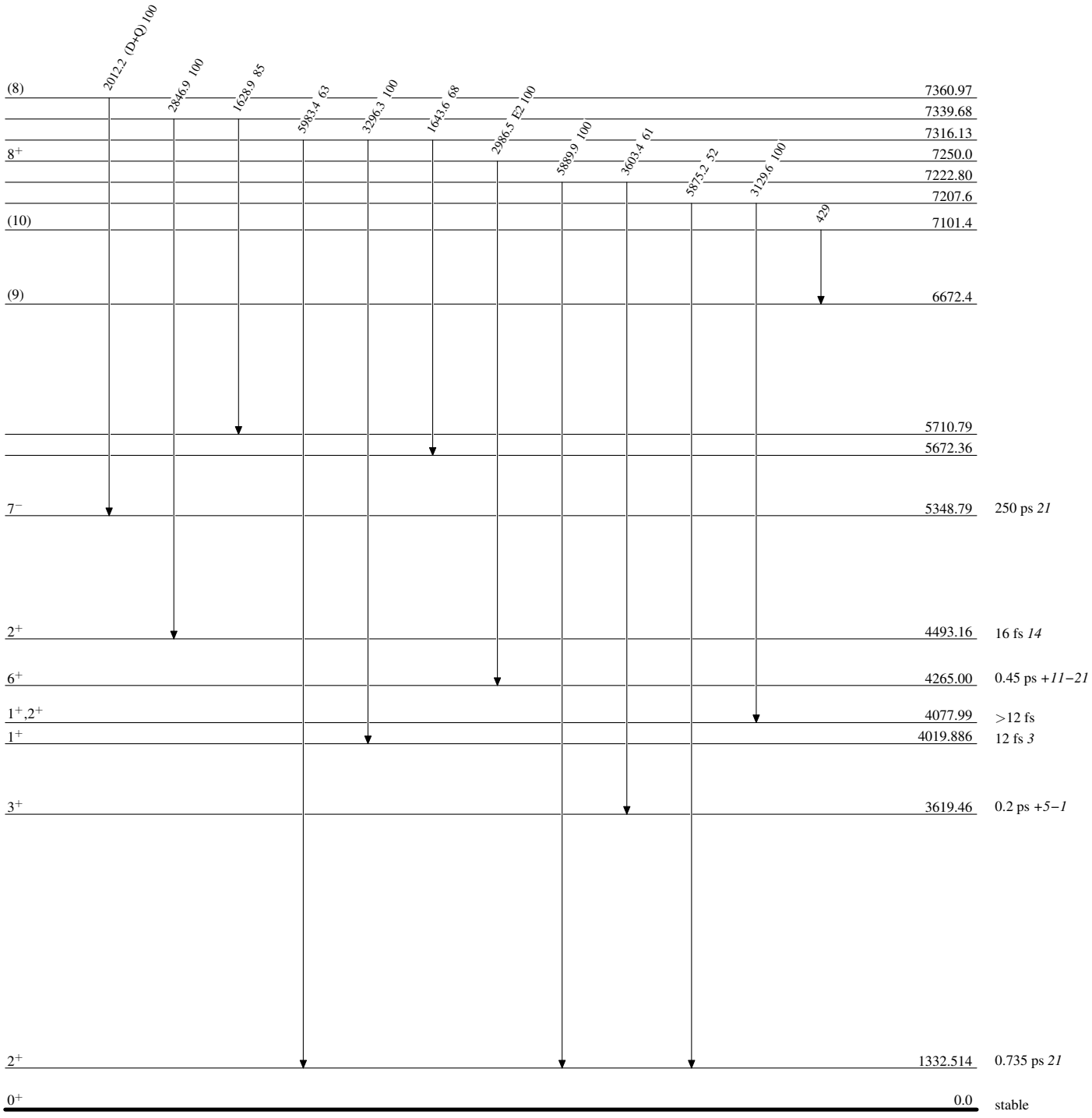


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

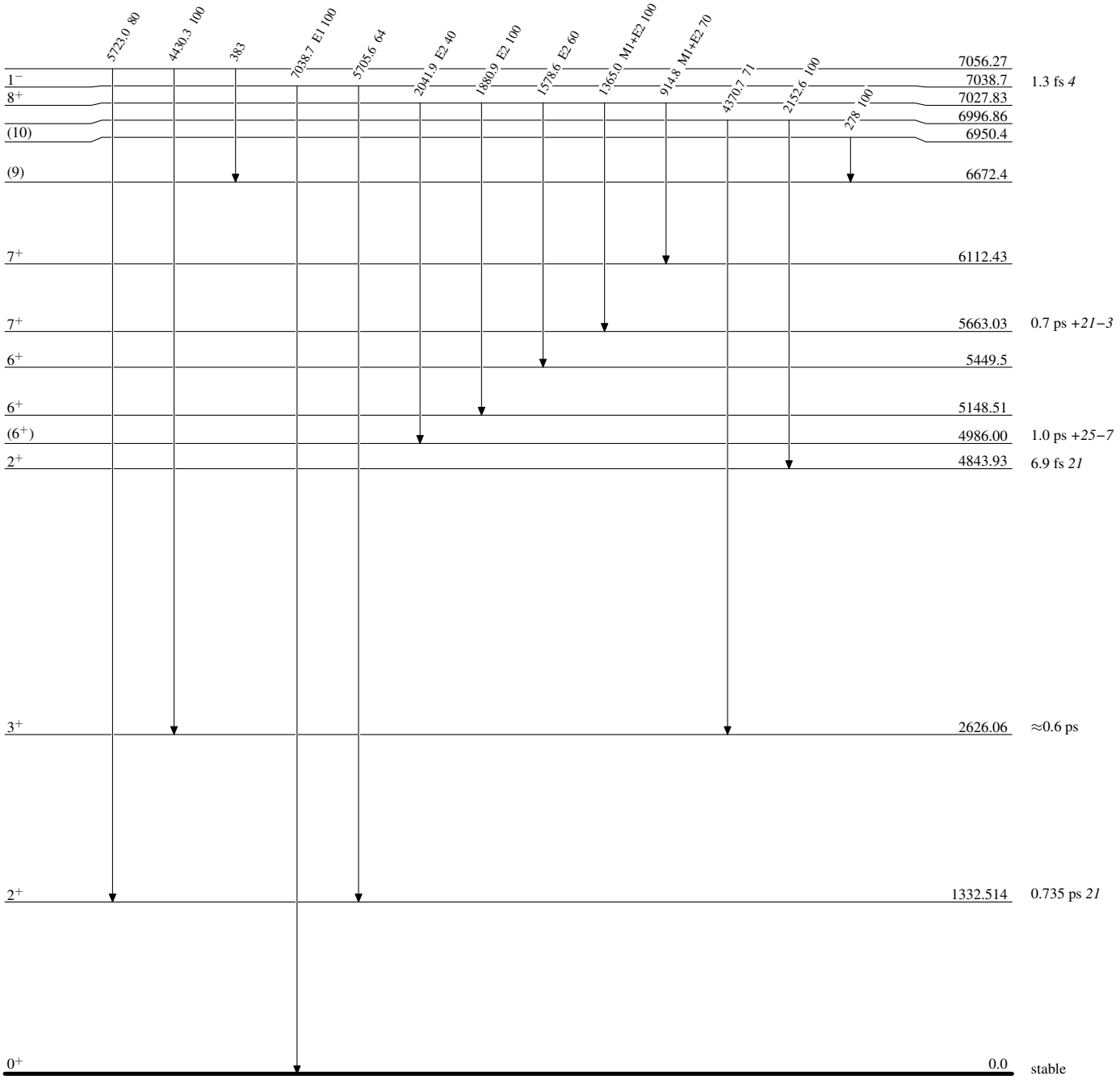


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

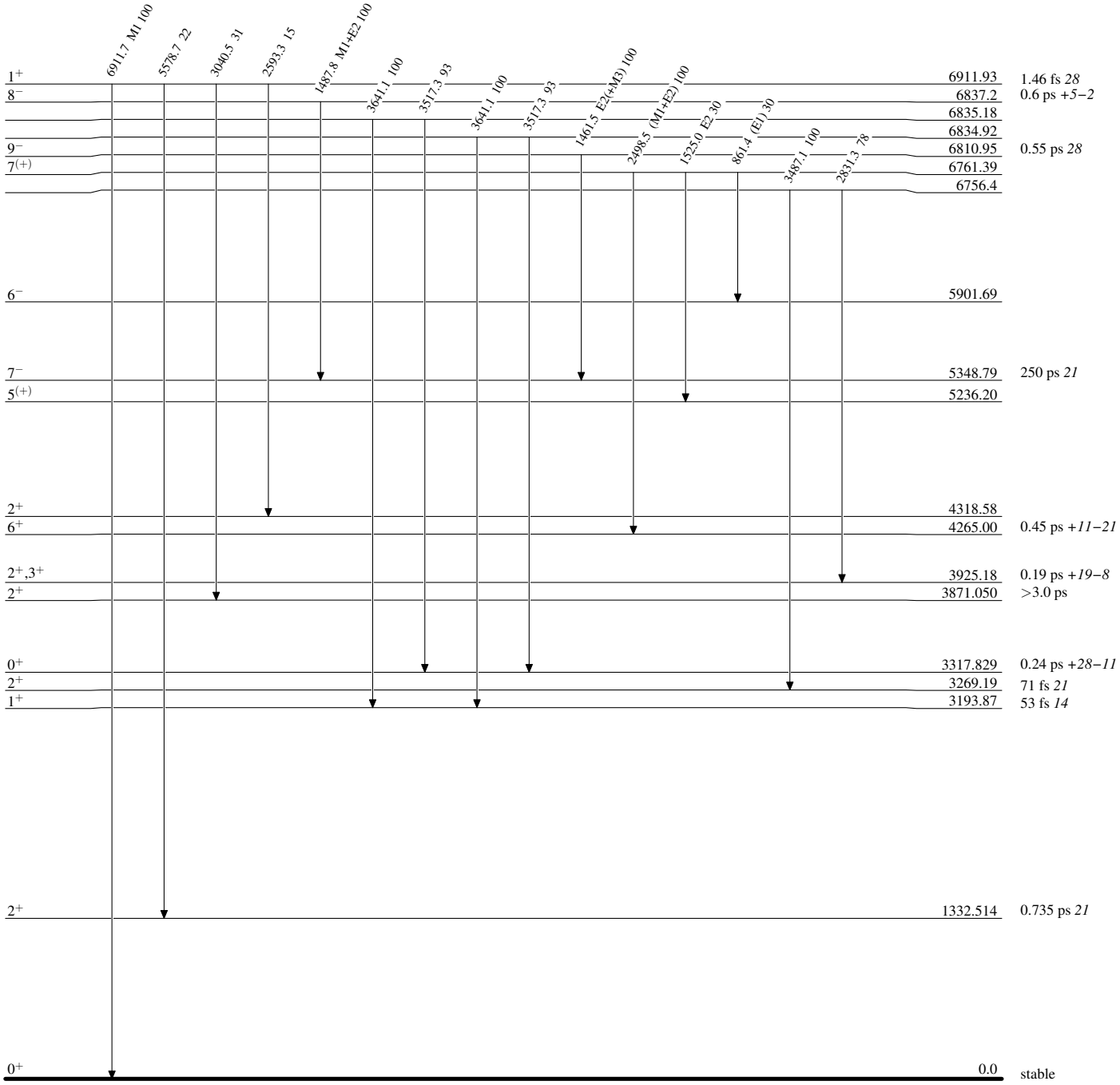


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

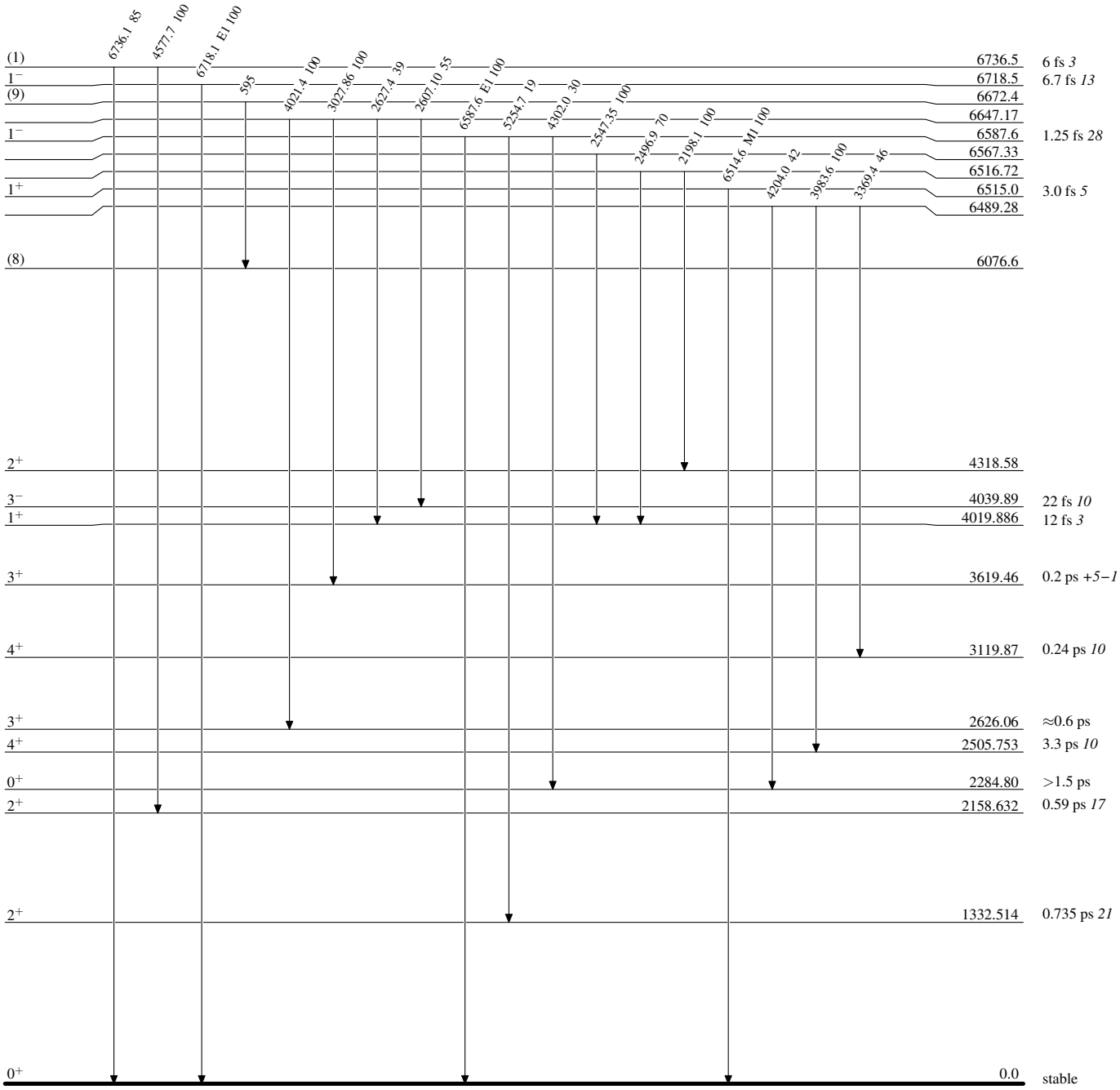


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

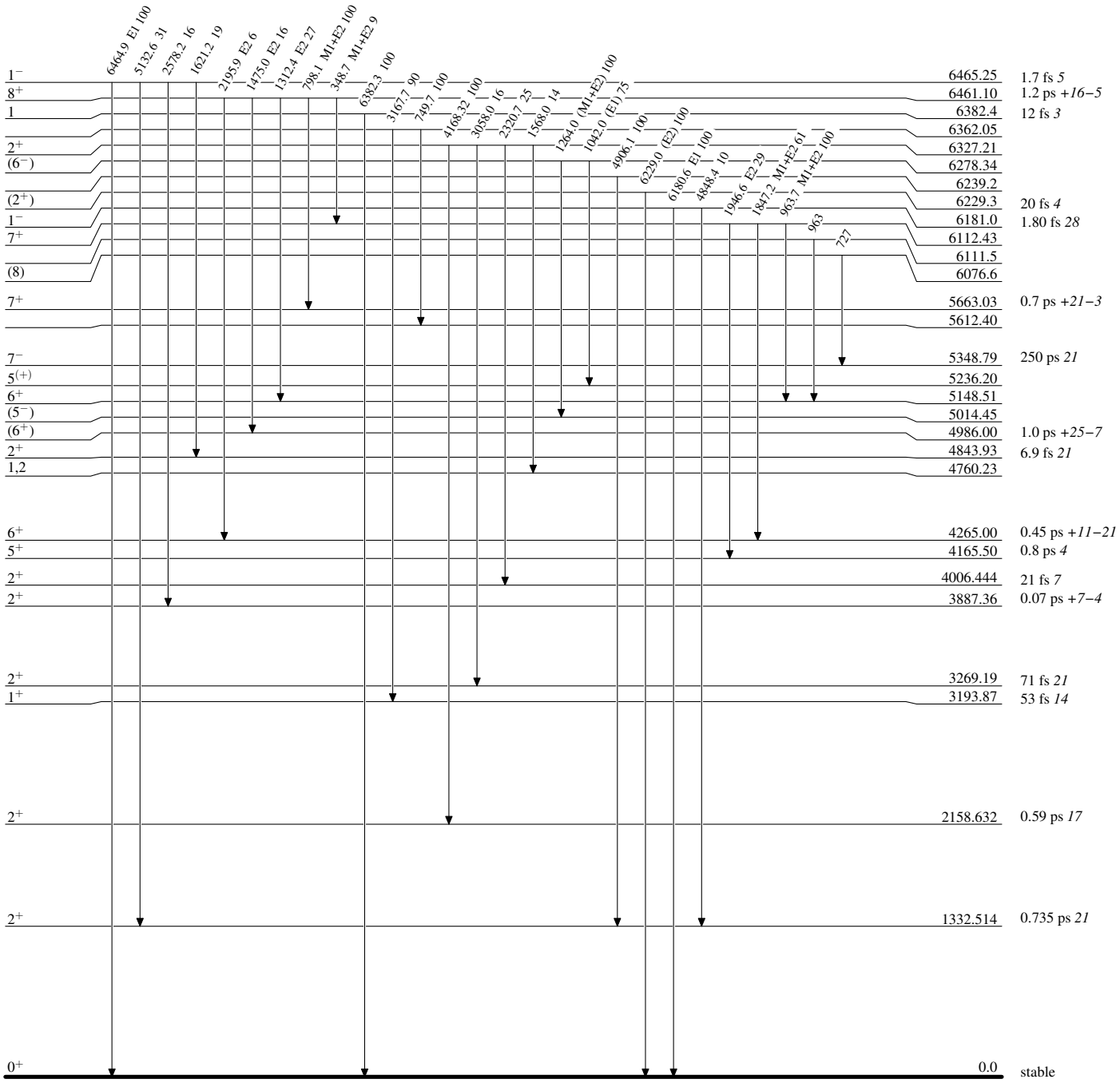


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{60}_{28}Ni_{32}$

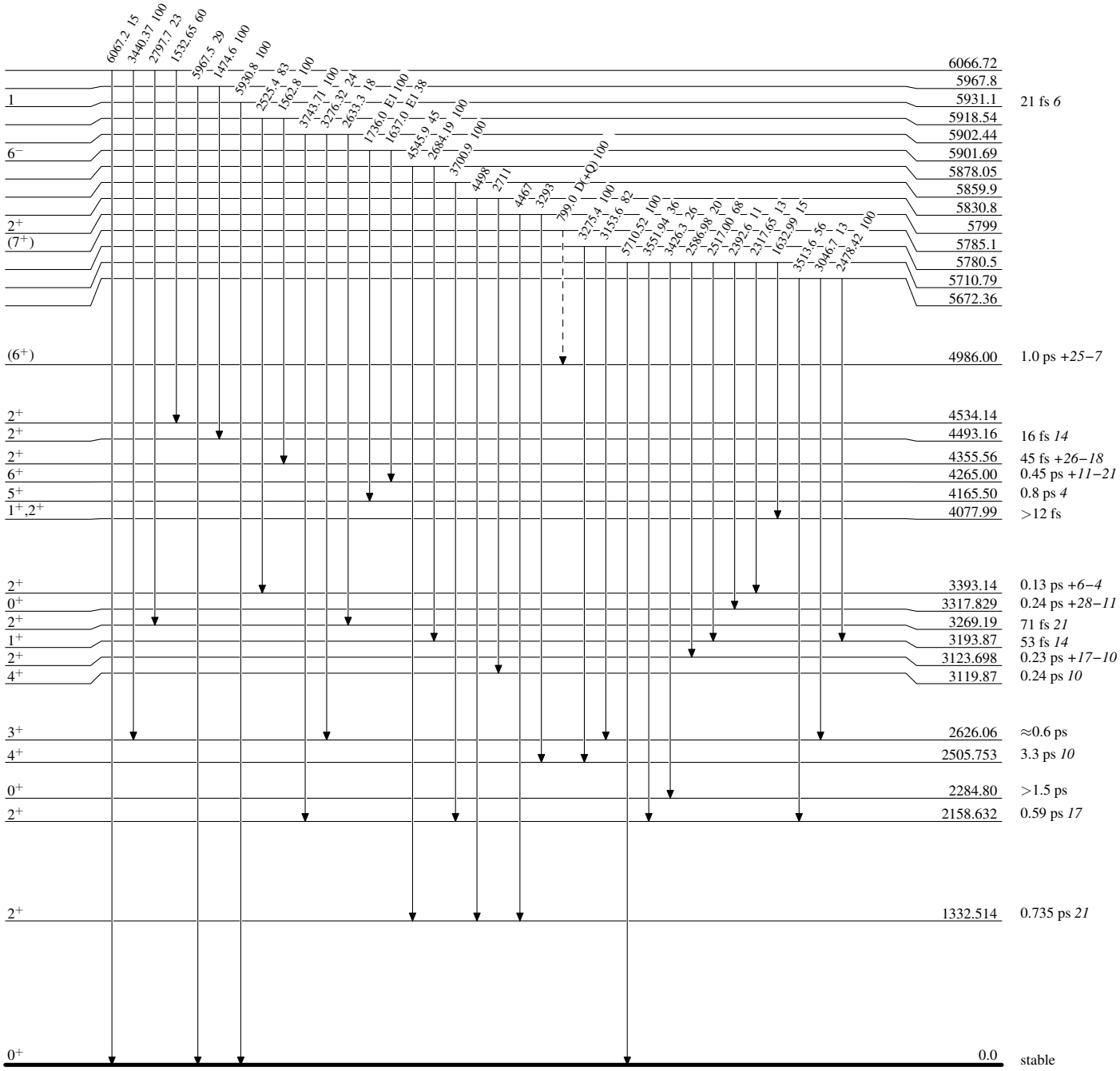
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

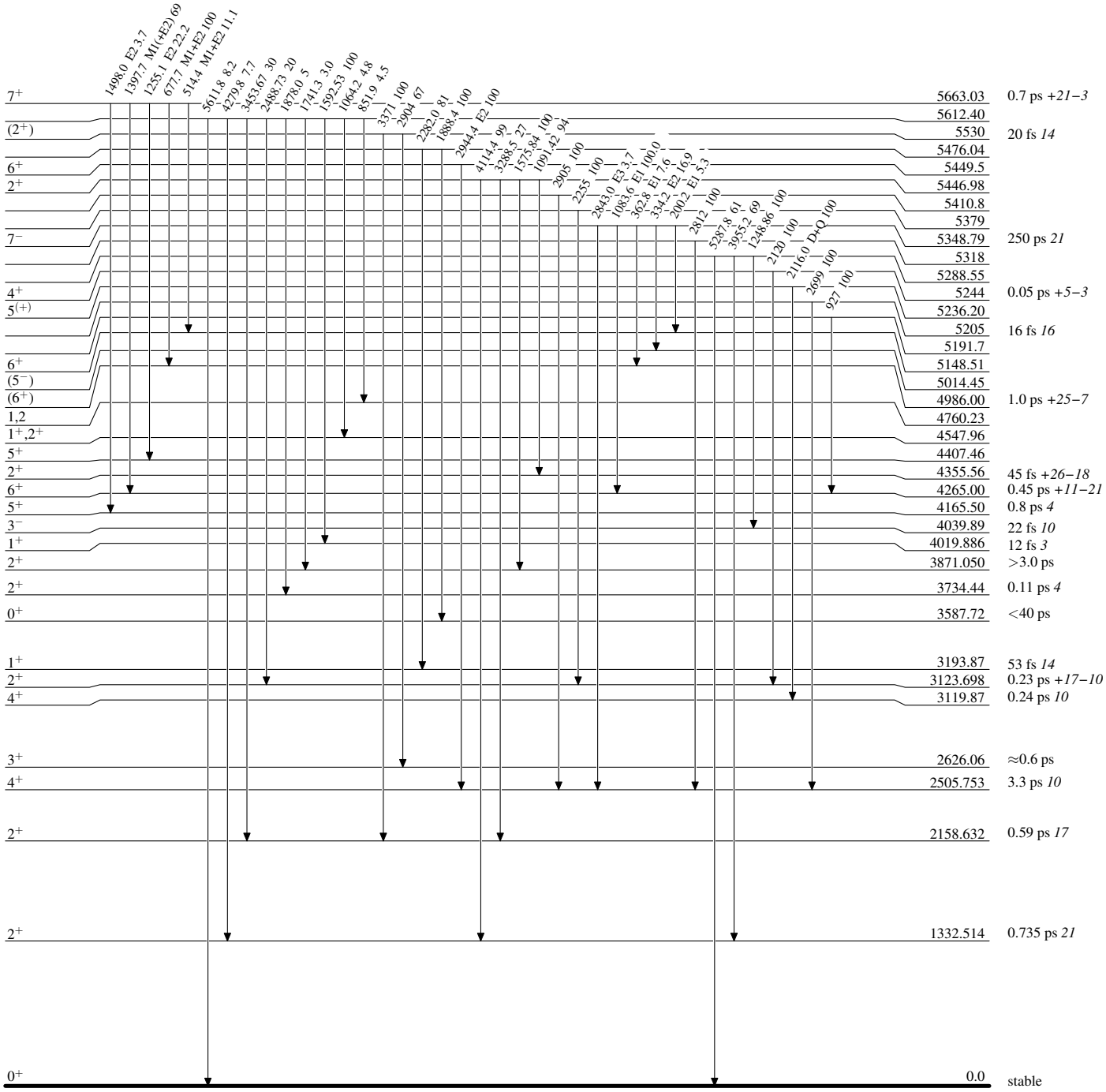


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{60}_{28}Ni_{32}$

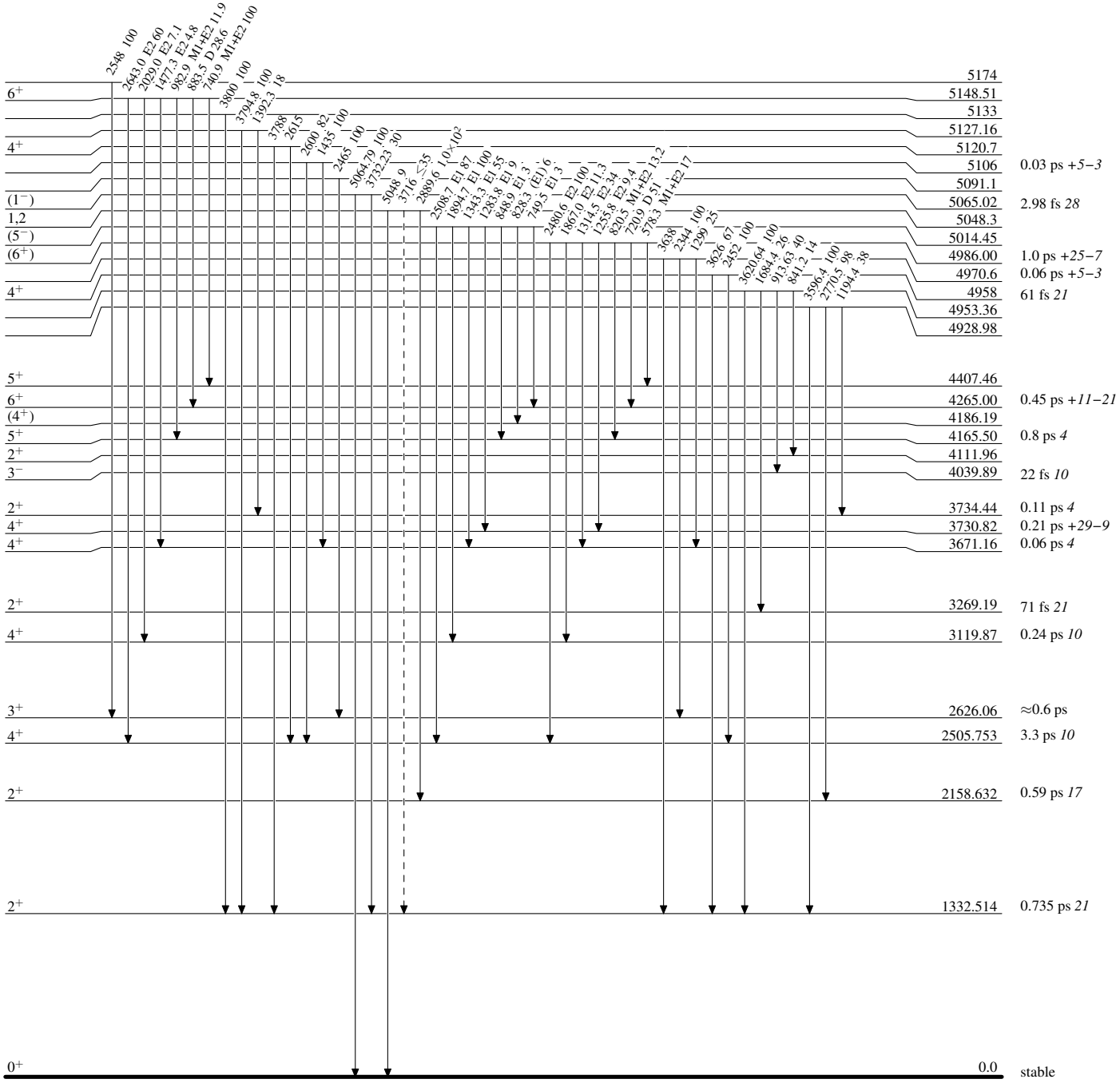
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{60}_{28}Ni_{32}$

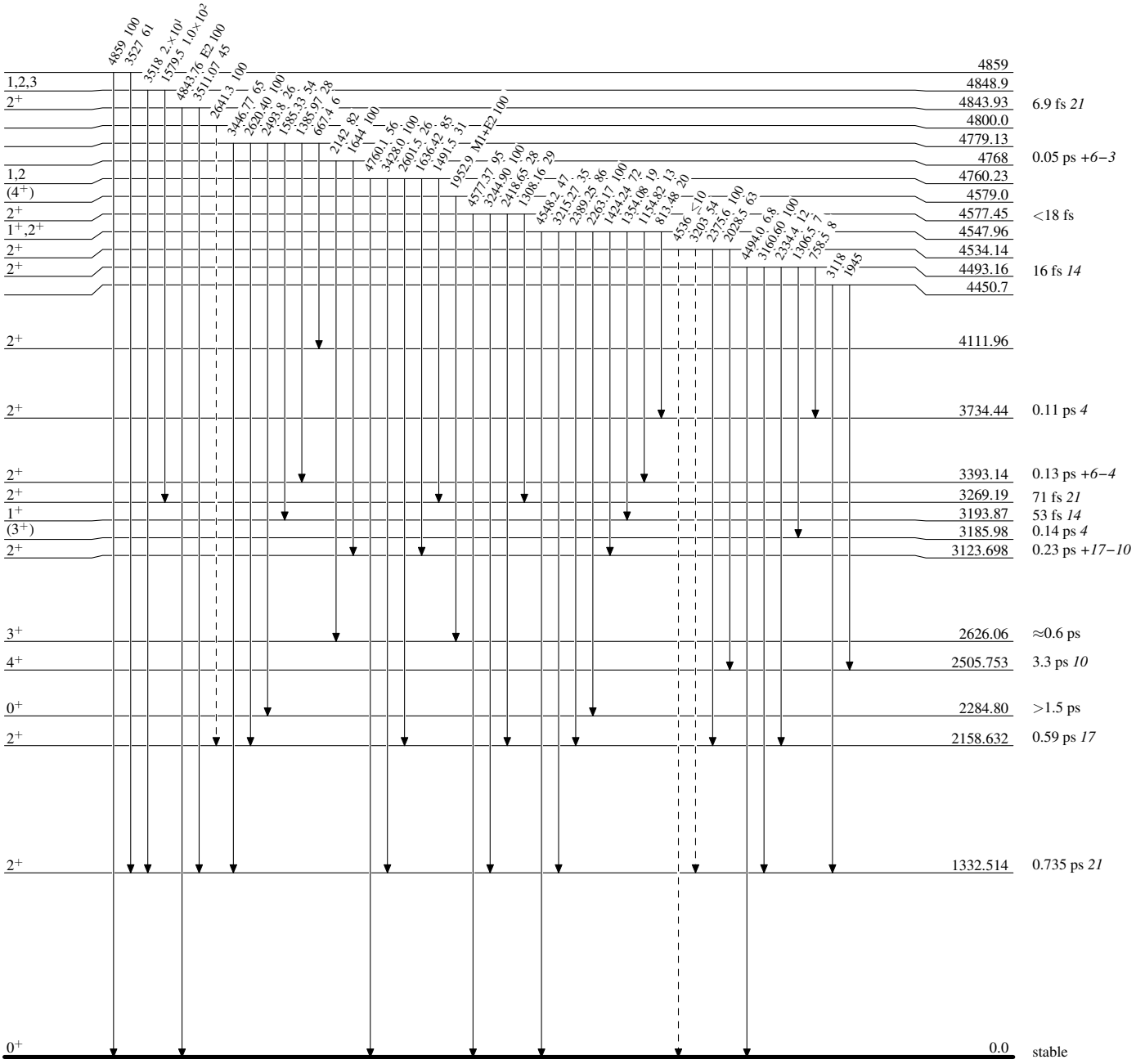
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{60}_{28}Ni_{32}$

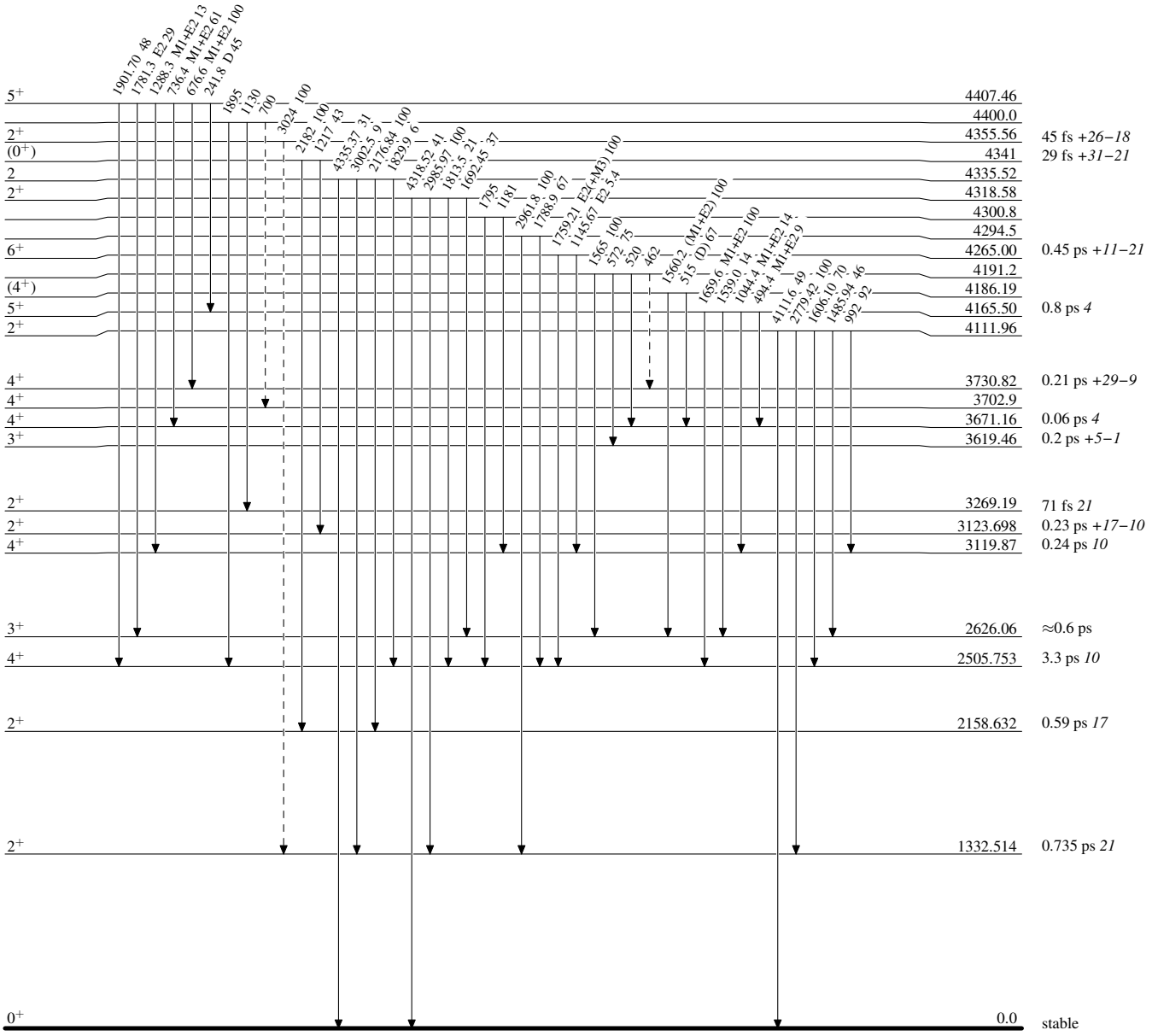
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{60}_{28}Ni_{32}$

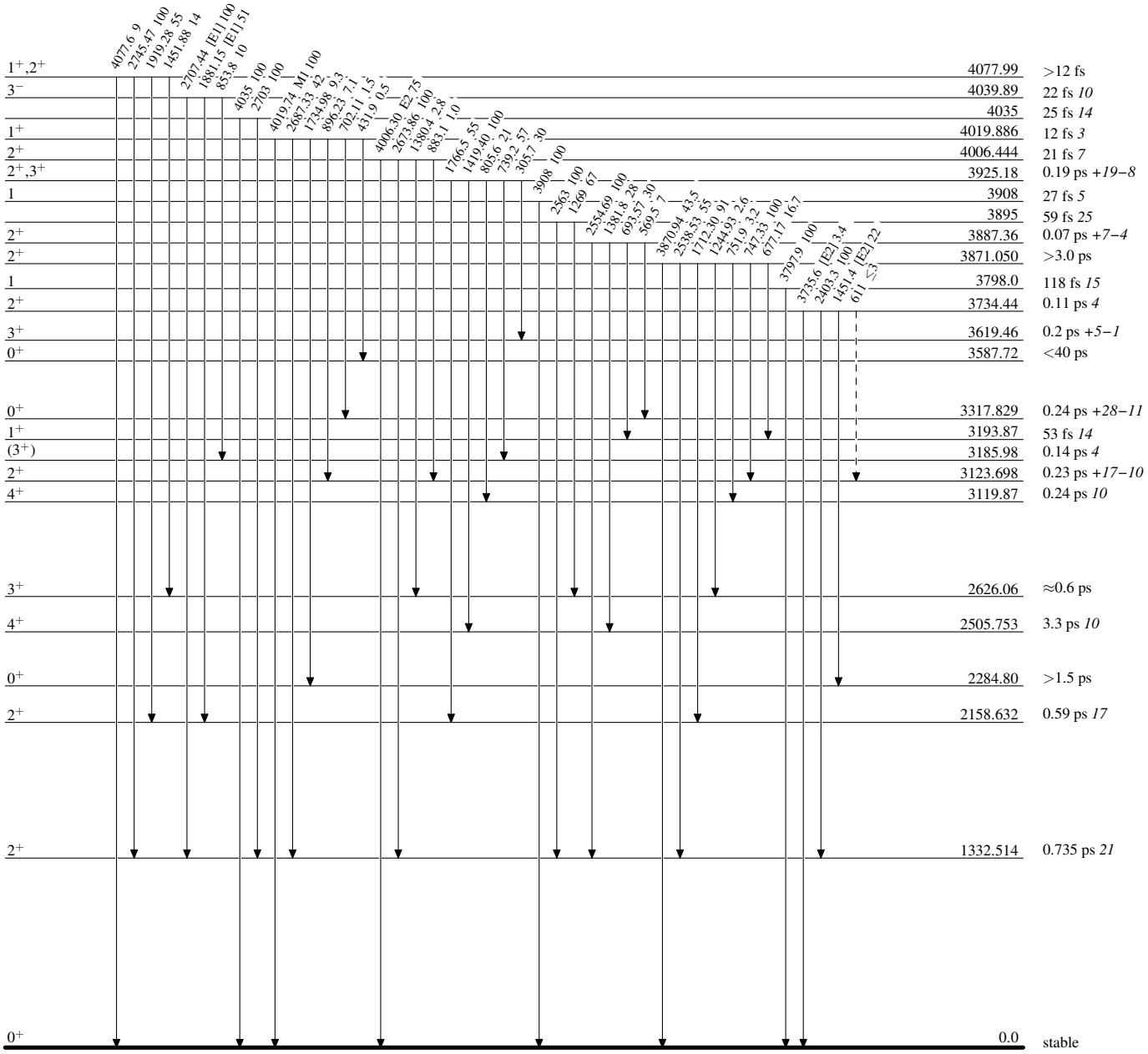
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{60}_{28}Ni_{32}$

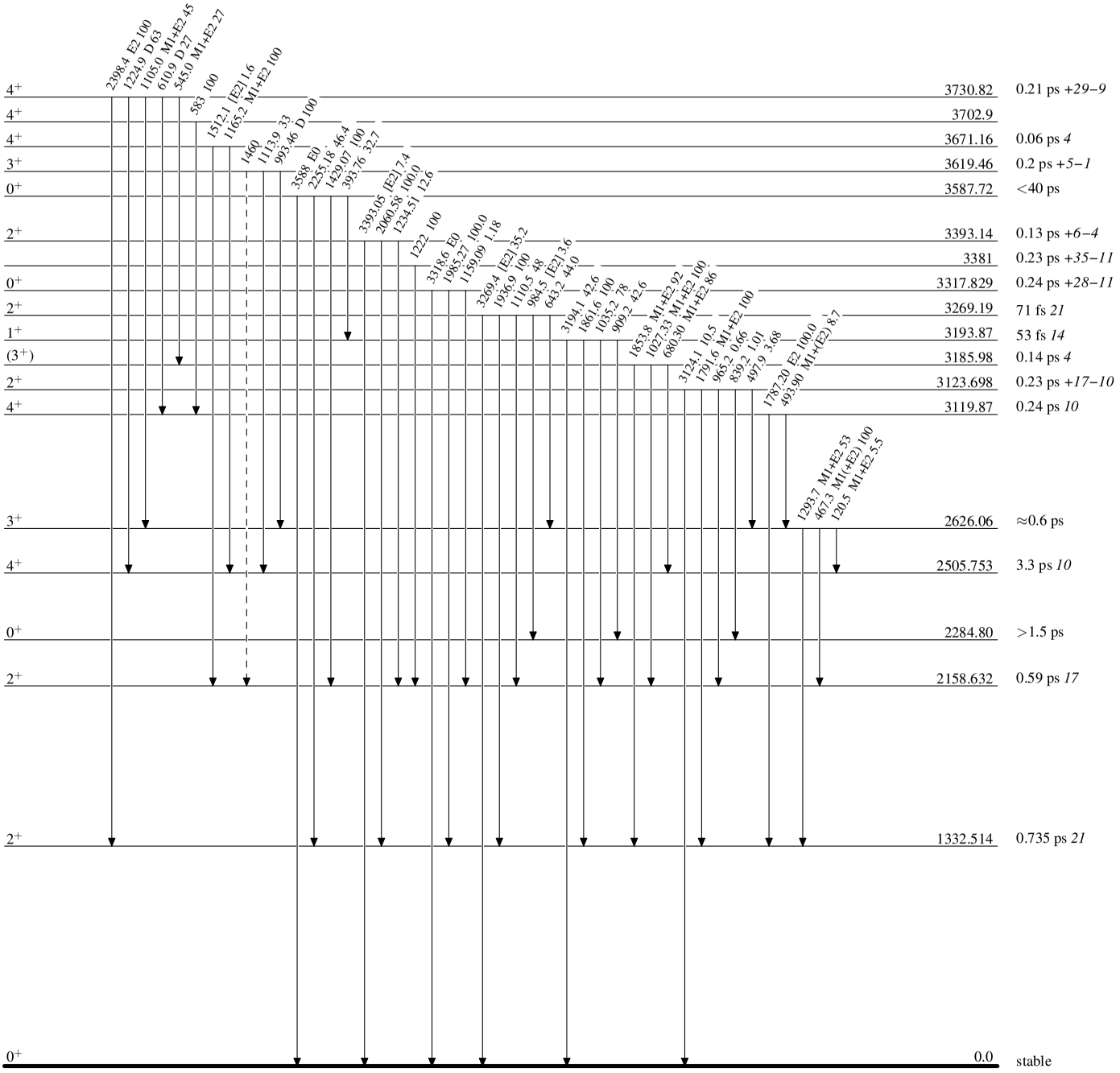
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

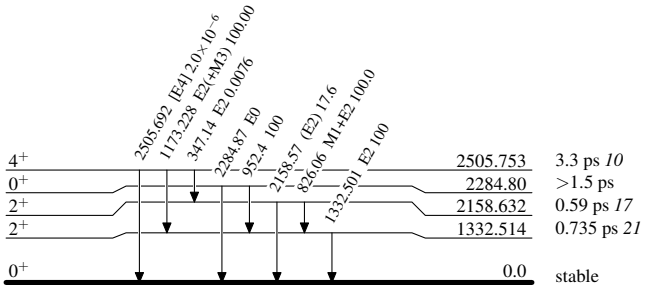


$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas

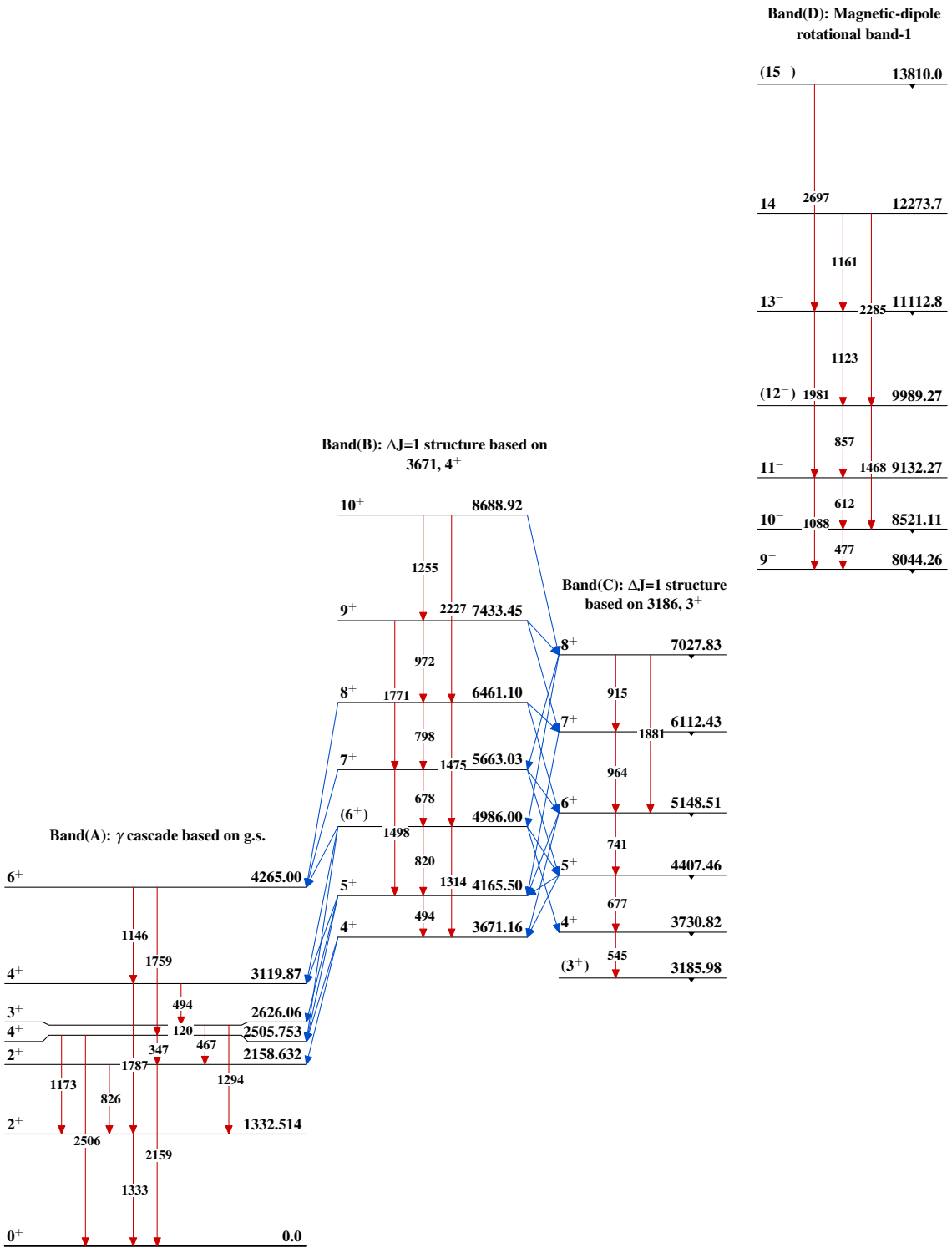
Level Scheme (continued)

Intensities: Relative photon branching from each level



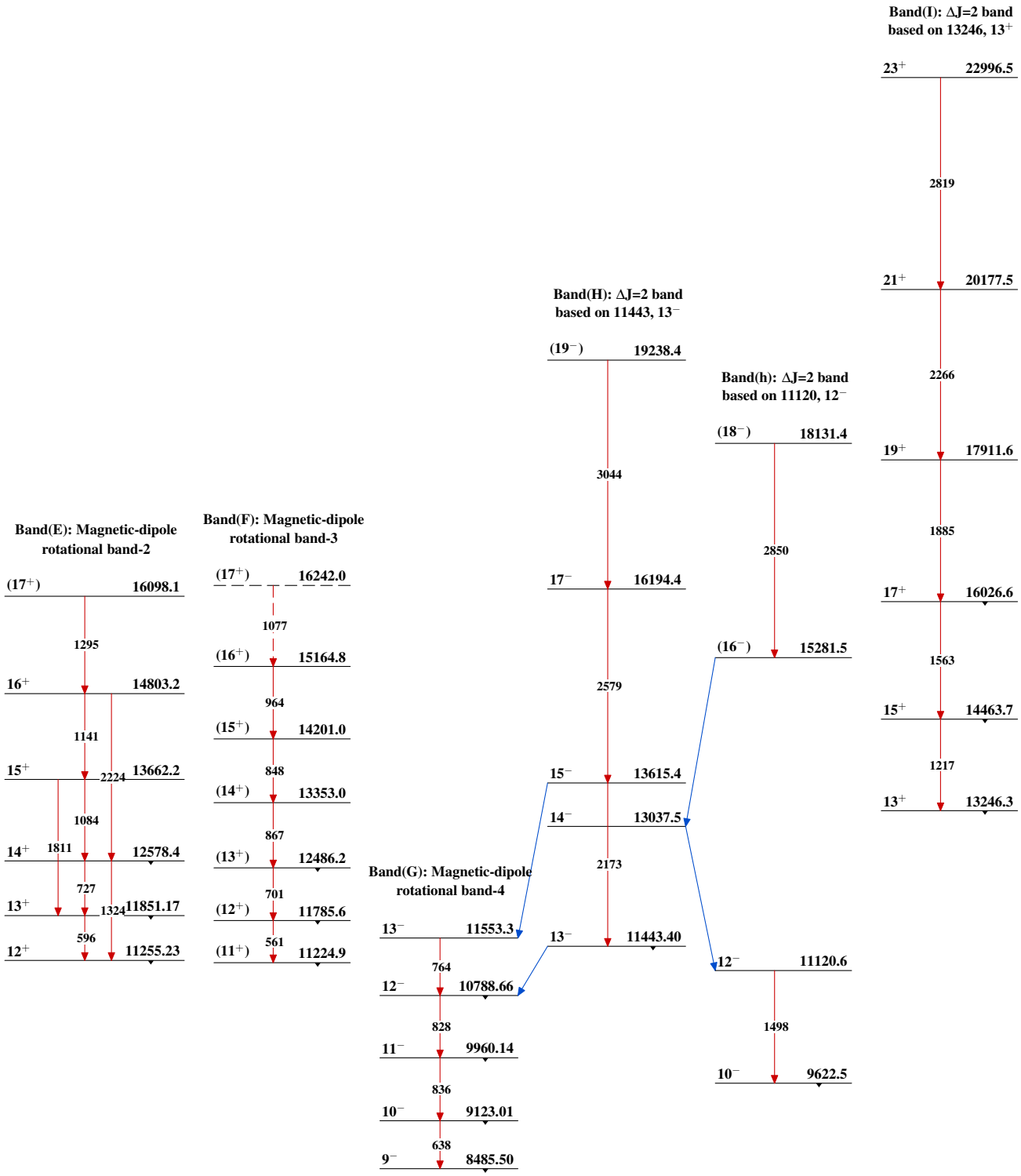
$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas



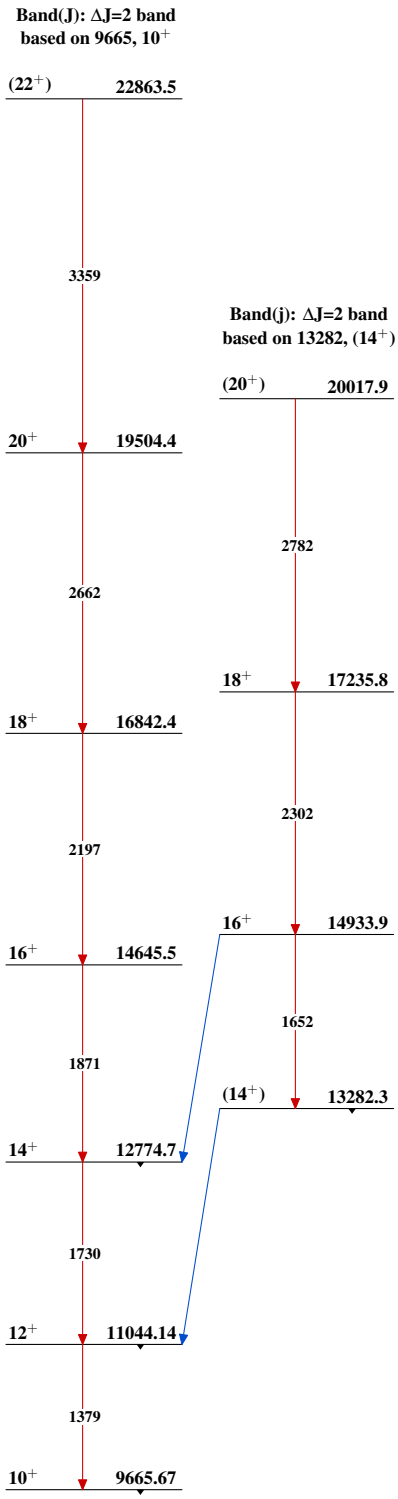
$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas (continued)



$^{60}_{28}Ni_{32}$

Adopted Levels, Gammas (continued)



$^{60}_{28}Ni_{32}$