Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni	NDS 111,2555 (2010)	30-Jun-2009

Q(β^-)=1123.5 *18*; S(n)=6462.0 *9*; S(p)=10598 *7*; Q(α)=−4434 *6* 2012Wa38
Note: Current evaluation has used the following Q record 1123.6 18 *6462*.1 *9* 10599 *7* −4429 5 2009AuZZ.
S(2n)=14682.9 *20*, S(2p)=20153 *8* (2009AuZZ).

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 TVOther   reactions:
   TV94Zr(16O,15O)          E=104 MeV: 1973Zi04 measured σ(θ=25°);     magnetic spectrometer.
   TV96Zr(12C,13C)          E=38 MeV: 1973Ch10 measured σ(θ=100°);     surface-barrier detector telescopes.
  TV96Zr(40Ca,41Ca)          E=152 MeV; 2007Sz05 measured Eγ,Iγ         of binary partners, σ(M, Q, θ=68°);
PRISMA + CLARA  setup.
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^{95}Zr Levels

Cross Reference (XREF) Flags

A	^{95}Y β^- decay	E	^{94}Zr(d,p),(d,pγ),(α,^{3}He)	I	^{96}Zr(^{3}He,α) IAS
B	^{94}Zr(n,γ) E=thermal	F	^{96}Zr(p,d)	J	^{173}Yb(^{24}Mg,Fγ)
C	^{94}Zr(n,γ) E=2,24 keV	G	^{96}Zr(d,t)	K	^{176}Yb(^{28}Si,Xγ)
D	^{94}Zr(p,p),(p,p′): ex from IAR	H	^{96}Zr(^{3}He,α)		

E(level)†	J$^\pi$‡	$T_{1/2}$#	XREF	Comments
0.0	5/2$^+$	64.032 d *6*	ABC EFGH JK	%β^-=100 Q=+0.22 *2* (1998Se01); μ=1.13 *2* $T_{1/2}$: from the weighted average of the following 7 values: 63 d *5* (1940Sa08), 65 d *2* (1951BrZZ), 65.2 d *10* (1953Co23), 65.1 d *9* (1965Si16), 64.05 d *2* (1976Ha51, with the published uncertainty divided by 3 to convert to 1σ), 64.030 d *6* (1980Ho17), and 64.09 d *10* (1983Wa26) with reduced-χ^2=0.72. The Limitation of Relative Statistical Weight, (LRSW) method (1985ZiZY,1992Ra09) gives this same result even though the 1980Ha17 value has a relative weight of 98.6%, because the set is consistent. Other values: 65.5 d *2* (1965Fl02, omitted because it is inconsistent with the other values) and 67.8 (1945Po01). If the value from 1965Fl02 is included, the set is inconsistent and the LRSW method increases the uncertainty of the value of 1980Ho17 from 0.006 to 0.05 and the resulting average is 64.09 with a reduced-χ^2 of 7.8. If one leaves the value of 1965Fl02 in the data set, the discrepancy can be dealt with by the RAJEVAL method (1992Ra08) which increase its uncertainty from 0.2 to 0.88 and gives the resulting value of 64.032 d *6*, or by the Normalized Residual method (1992Ja06) which increases this uncertainty to 0.58 and gives a result of 64.032 d *6*. So, the adopted value is the same for each of these three methods. J$^\pi$: from first-forbidden unique shape of β-spectra from 1/2$^-$, corroborated by spectroscopic factor data from (d,p) reactions (1986Fr05,1973Bi04). μ: NMR on oriented nuclei in iron; adopted value from 2005St24. Q: electric quadrupole alignment of ^{95}Zr+^{95}Nb in a Zr single crystal; others: (+)0.29 *5* (1992Be50).
953.97 *13*	1/2$^+$		ABCDEFGH	XREF: F(1020)G(960). J$^\pi$: from angular momentum transfer in stripping and pickup reactions.
1140 *50*	3/2$^+$,5/2$^+$		F	J$^\pi$: L(p,d)=2.
1323.80 *13*	3/2$^+$,5/2$^+$		A CDE G	XREF: G(1330). J$^\pi$: from angular momentum transfer in stripping and pickup reactions.
1618.35 *22*	(3/2)$^+$		ABCDE GH	XREF: D(1628)G(1650).

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Adopted Levels, Gammas (continued)

^{95}Zr Levels (continued)

E(level)[†]	J^{π}[‡]	XREF	Comments
1624.7 *3*		E	J^{π}: L(d,t)=2; $3/2^+$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb. E(level): observed only in 2003So23. dσ/dω (30°)=612 μb/sr; dσ/dω (70°)=34 μb/sr.
1676.32 *19*	$(7/2^+)$	JK	
1721.50 *21*	$(5/2)^+$	A DE G	XREF: D(1745)G(1750). J^{π}: L(d,p),(α,^{3}He)=2. $5/2^+$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
1792.2 *3*	$(9/2^+)$	EF H JK	XREF: E(1793.4)F(1790)H(1788). J^{π}: L(^{3}He,α)=5,(4).
1892.66 *18*	$3/2^+$	A E H	XREF: H(1900). J^{π}: L(d,p)=2.
1903.97 *20*	$1/2^{(+)},3/2,5/2^+$	A E GH	XREF: G(1920)H(1900). J^{π}: log *ft*=7.8 to 8.8 (log $f^{1u}t$≥8.5) from $1/2^-$. γ to $5/2^+$.
1940.24 *20*	$1/2^{(+)},3/2,5/2^+$	A DE	XREF: D(1942). J^{π}: log *ft*=7.8 to 8.8 (log $f^{1u}t$≥8.5) from $1/2^-$. γ to $5/2^+$, supported by $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
1955.92 *15*	$5/2^{(+)}$	A C E	J^{π}: 5/2,7/2 from primary γ from p-wave res but none from s-wave in (n,γ) E=2,24 keV. γ to $1/2^+$, supported by $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
2021.6 *3*	$(11/2^-)$	EFGH JK	XREF: F(2030)G(2030)H(2032). J^{π}: from L=5 in (d,p),(^{3}He,α), ^{94}Zr(^{3}He,d) IAR, and (^{3}He,α). L(p,d)=(4) and L(d,t)=4 are discrepant. L(^{3}He,α)=5,(4). Shown without parentheses in level scheme figure 6 of 2005Pa48.
2120? *50*		F	
2250 *8*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
2253.7? *3*	$(1/2^+,3/2,5/2^+)$	AB	J^{π}: log *ft*=7.7 (log $f^{1u}t$≥8.5)? from $1/2^-$; possible γ to $5/2^+$.
2293.7 *8*	$3/2^+,5/2^+$	CDE	XREF: D(2279)E(2291). J^{π}: $1/2^+$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb discrepant.
2317? *10*	$(3/2^+)$	D G	XREF: G(2300). J^{π}: from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb; not consistent with L(d,t)=(1).
2372.27 *19*	$3/2^+$	A DEFG	XREF: D(2389)E(2376)F(2370)G(2400). J^{π}: L(d,p),(α,^{3}He)=2; log *ft*=6.7 from $1/2^-$.
2466 *7*	$7/2^+,9/2^+$	DE H	XREF: D(2471)E(2450)H(2472). E(level): weighted average of 2471 *10* (p,p),(p,p′)), 2450 *10* ((d,p),(α,^{3}He)) and 2472 *8* (^{3}He,α). J^{π}: from angular momentum transfer in stripping and pickup reactions.
2510? *40*	$3/2^+,5/2^+$	F	J^{π}: L(p,d)=2.
2629.1 *3*	$(11/2^+)$[@]	JK	
2636 *7*	$(3/2^+)$	DE GH	XREF: E(2625)G(2670)H(2647). E(level): weighted average of 2641 *11* (p,p),(p,p′)), 2625 *10* ((d,p),(α,^{3}He)) and 2647 *10* (^{3}He,α). J^{π}: L(d,p),(α,^{3}He)=2+5, L(^{3}He,α)=4, L(d,t)=(2), and $3/2^+$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
2744 *10*	$(7/2)^+$	DE H	XREF: D(2744)E(2724)H(2725). J^{π}: L(^{3}He,α)=4.
2770	$7/2^+$	G	J^{π}: L(d,t)=4.
2816 *12*	$1/2^-,3/2^-$	H	J^{π}: L^{3}He,α)=1.
2837.2 *3*	$(13/2^+)$[@]	JK	
2841 *12*	$(3/2^+)$	DE H	XREF: E(2834)H(2827). J^{π}: L(d,p),(^{3}He,α)=2+5, L(^{3}He,α)=4, L(^{3}He,d)=4, and $3/2^+$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
2880 *12*	$7/2^+,9/2^+$	GH	J^{π}: L^{3}He,α)=4.
2948 *10*	$7/2^+,9/2^+$	E H	XREF: H(2930). J^{π}: L(^{3}He,α)=4.

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Adopted Levels, Gammas (continued)

^{95}Zr Levels (continued)

E(level)[†]	J^{π}[‡]	XREF	Comments
2983 *5*	$3/2^+,5/2^+$	D F	XREF: F(2970). J^{π}: L(p,d)=2.
3009? *6*	$(3/2^+)$	DE	XREF: D(3012)E(2996). E(level): weighted average of 3012 *5* (p,p),(p,p′)) and 2996 *10* ((d,p),(α,^{3}He)). J^{π}: from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb.
3062 *8*	$3/2^+,5/2^+$	DE G	XREF: G(3050). E(level): weighted average of 3061 *12* (p,p),(p,p′)) and 3062 *10* ((d,p),(α,^{3}He)). J^{π}: From angular momentum transfer in (d,p),(α,^{3}He)t. J^{π}: $(7/2^-)$ from $\sigma(\theta)$ in ^{94}Zr(p,p),(p,p′) in ^{95}Nb discrepant.
3078.2 *4*	$(15/2^-)$[@]	JK	
3102 *12*	$9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3117 *10*	$11/2^-$	E	J^{π}: L(d,p),(α,^{3}He)=5.
3117.5? *4*		B	Probably not the same as the preceding state since it is populated in (n,γ) E=thermal.
3129.55 *16*	$1/2^-,3/2^-$	A	J^{π}: log *ft*=5.5 from $1/2^-$.
3152? *12*		H	May correspond to the previous state.
3180.7 *6*	$(15/2^-)$[@]	JK	
3205 *10*	$3/2^+,5/2^+$	E	J^{π}: From angular momentum transfer in (d,p),(α,^{3}He).
3249.10 *18*	$(3/2)^-$	AB	J^{π}: log *ft*=4.9 to 5.8 from $1/2^-$. γ to $5/2^+$.
3250 *12*	$9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3300? *10*	$1/2^+$	E	J^{π}: L(d,p),(α,^{3}He)=0.
3320 *30*	$9/2^+$	F	J^{π}: L(p,d)=4.
3330 *10*	$11/2^-$	E	J^{π}: L(d,p),(α,^{3}He)=5.
3386? *12*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3398.7 *4*	$(17/2^+)$[@]	JK	
3420? *10*	$9/2^-,11/2^-$	E	E(level): 3386 and 3420 may be the same state. However, their energies do not overlap within uncertainties. J^{π}: L(d,p),(α,^{3}He)=5.
3451.15 *20*	$1/2^{(+)},3/2$	A	J^{π}: log *ft*=6.0 to 7.1 from $1/2^-$. γ to $5/2^+$.
3458 *12*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3528 *10*	$3/2^+,5/2^+$	E	J^{π}: L(d,p),(α,^{3}He)=2.
3575.83 *18*	$(3/2)^-$	A E	XREF: E(3579). J^{π}: log *ft*=4.9 to 5.8 from $1/2^-$. γ to $5/2^+$.
3586.3 *3*	$1/2^-,3/2^-$	A	J^{π}: log *ft*=5.0 from $1/2^-$.
3650 *10*	$9/2^+$	F	J^{π}: L(p,d)=4.
3662 *10*	$11/2^-$	E	J^{π}: L(d,p),(α,^{3}He)=5.
3684.89 *22*	$1/2^-,3/2^-$	A	J^{π}: log *ft*=5.8 from $1/2^-$.
3780 *12*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3810? *10*		E	May correspond to the preceding state.
3855 *10*		E	L,S: L=2,s($3/2^+$)=0.031 (1963Co10).
3887.0 *5*	$1/2^{(+)},3/2$	A	J^{π}: log *ft*=6.0 to 7.1 from $1/2^-$. γ to $5/2^+$.
3900 *12*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
3926.1 *20*	$1/2^+$	A E	XREF: E(3960). J^{π}: L((d,p),(^{3}He,α))=0 favors $1/2^+$ assignment.
3955.0 *4*	$(19/2^-)$[@]	JK	
4058.0 *5*	$(21/2^+)$[@]	JK	
4068? *10*	$(7/2^+,9/2^+)$	E	J^{π}: L(d,p),(α,^{3}He)=(4).
4070.5 *4*	$(3/2)^-$	A	J^{π}: log *ft*=4.9 to 5.8 from $1/2^-$. γ to $5/2^+$.
4236.1 *6*		J	
4300 *12*	$7/2^+,9/2^+$	H	J^{π}: L(^{3}He,α)=4.
4483.5 *5*	$(23/2^+)$[@]	K	E(level): corresponding level at 4236 with the reversed ordering of 178-426 cascade in 2002Fo03.

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Adopted Levels, Gammas (continued)

^{95}Zr Levels (continued)

E(level)†	Jπ‡	T1/2#	XREF	Comments
4580 *12*	7/2+,9/2+		H	Jπ: L(^{3}He,α)=4.
4661.6 *5*	(25/2+)@		JK	
4932.3 *6*			J	
5389.3 *6*	(25/2+)		K	
5660.7 *7*	(27/2+)		K	
6464.8 *6*	1/2+		C	
6486.8 *4*	1/2−,3/2−		C	
6561.8 *7*	(31/2+)@		K	
14980 *20*	1/2−	32 keV *10*	I	IAS(^{95}Y, g.s.).
15640 *20*	3/2−	70 keV *10*	I	IAS(^{95}Y, 0.69 MeV).
15790 *20*	5/2−	55 keV *10*	I	IAS(^{95}Y, 0.83 MeV).
17000 *20*	3/2−	90 keV *10*	I	IAS(^{95}Y, 2.04 MeV).

† From least-squares fit to Eγ′s, except as indicated.
‡ From angular momentum transfer in (^{3}He,α) for bound states, except as noted, and from angular momentum transfer in (^{3}He,α) IAS and parent spin for unbound states.
# From comparison of line widths in (^{3}He,α) IAS to those of the quasi-bound states observed in ^{90}Zr(^{3}He,α), except for $T_{1/2}$(g.s.) which is a weighted average of 63.98 d *6* (1971De11. Ge(Li)) and 64.05 d *6* (1976Ha51. Ge(Li),NaI).
@ From high-spin data in ^{173}Yb(^{24}Mg,Fγ) and ^{176}Yb(^{28}Si,Xγ), based on γγ(θ) and γ decay pattern.

γ(^{95}Zr)

All data are from β− decay, except as noted. See β− decay for unplaced γ′s.

Ei(level)	Jπi	Eγ	Iγ	Ef	Jπf	Mult.	Comments
953.97	1/2+	954.00 *20*	100	0.0	5/2+	[E2]	
1323.80	3/2+,5/2+	1324.0 *3*	100	0.0	5/2+		
1618.35	(3/2)+	1618.5 *5*	100	0.0	5/2+		Eγ: weighted average of 1617.9 *3* (^{95}Y β− decay), 1619.0 *3* (^{94}Zr(n,γ) E=thermal).
1676.32	(7/2+)	1676.3 *2*	100	0.0	5/2+		Eγ: from ^{173}Yb(^{24}Mg,Fγ).
1721.50	(5/2)+	396.2‡ *6*	91 *13*	1323.80	3/2+,5/2+		
		1721.4 *3*	100 *14*	0.0	5/2+		
1792.2	(9/2+)	115.9 *2*	100 *4*	1676.32	(7/2+)		Eγ: from ^{173}Yb(^{24}Mg,Fγ). Iγ: from (^{176}Yb(^{28}Si,Xγ).
		1792.3 *7*	11.9 *17*	0.0	5/2+		Eγ: from ^{173}Yb(^{24}Mg,Fγ). Iγ: from (^{176}Yb(^{28}Si,Xγ).
1892.66	3/2+	569.07 *24*	31 *9*	1323.80	3/2+,5/2+		
		1892.5 *3*	100 *13*	0.0	5/2+		
1903.97	1/2(+),3/2,5/2+	580.25 *25*	69 *14*	1323.80	3/2+,5/2+		
		1904.0 *5*	100 *23*	0.0	5/2+		
1940.24	1/2(+),3/2,5/2+	1940.3 *3*	100	0.0	5/2+		
1955.92	5/2(+)	632.30 *22*	63 *6*	1323.80	3/2+,5/2+		
		1002.13 *24*	51 *7*	953.97	1/2+	[E2]	
		1955.8 *3*	100 *18*	0.0	5/2+		
2021.6	(11/2−)	229.4 *2*	100	1792.2	(9/2+)		Eγ,Iγ: from ^{173}Yb(^{24}Mg,Fγ).
2253.7?	(1/2+,3/2,5/2+)	2253.7‡ *3*	100	0.0	5/2+		Eγ: weighted average of 2253.6 *3* (^{95}Y β− decay), 2254.1 *5* (^{94}Zr(n,γ).

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Adopted Levels, Gammas (continued)

$\gamma(^{95}Zr)$ (continued)

E_i(level)	J^π_i	E_γ	I_γ	E_f	J^π_f	Comments
2372.27	3/2$^+$	432.0 *4*	100 *6*	1940.24	1/2$^{(+)}$,3/2,5/2$^+$	
		1048.31 *24*	56 *3*	1323.80	3/2$^+$,5/2$^+$	
		1418.4 *4*	27 *3*	953.97	1/2$^+$	
		2372.5 *8*	49 *5*	0.0	5/2$^+$	
2629.1	(11/2$^+$)	607.5 *2*	100 *6*	2021.6	(11/2$^-$)	E_γ: from ^{173}Yb(^{24}Mg,Fγ). I_γ: from ^{176}Yb(^{28}Si,Xγ).
		836.8 *2*	75 *5*	1792.2	(9/2$^+$)	E_γ: from ^{173}Yb(^{24}Mg,Fγ). I_γ: from ^{176}Yb(^{28}Si,Xγ).
2837.2	(13/2$^+$)	208.1 *2*	100 *20*	2629.1	(11/2$^+$)	E_γ,I_γ: from ^{173}Yb(^{24}Mg,Fγ).
		815.4 *4*	53 *10*	2021.6	(11/2$^-$)	E_γ,I_γ: from ^{173}Yb(^{24}Mg,Fγ).
		1045.3 *4*	53 *10*	1792.2	(9/2$^+$)	E_γ,I_γ: from ^{173}Yb(^{24}Mg,Fγ).
3078.2	(15/2$^-$)	241.0 *2*	100 *5*	2837.2	(13/2$^+$)	E_γ: from ^{173}Yb(^{24}Mg,Fγ). I_γ: from ^{176}Yb(^{28}Si,Xγ).
		1056.4 *7*	63 *8*	2021.6	(11/2$^-$)	E_γ: from ^{173}Yb(^{24}Mg,Fγ). I_γ: from ^{176}Yb(^{28}Si,Xγ).
3117.5?		3117.4[‡] *4*	100	0.0	5/2$^+$	E_γ: from ^{94}Zr(n,γ),E=thermal.
3129.55	1/2$^-$,3/2$^-$	1173.75 *25*	8.9 *9*	1955.92	5/2$^{(+)}$	
		1225.6 *3*	1.3 *4*	1903.97	1/2$^{(+)}$,3/2,5/2$^+$	
		1408.2 *13*	1.9 *6*	1721.50	(5/2)$^+$	
		1511.5 *4*	4.00 *18*	1618.35	(3/2)$^+$	
		1805.6 *3*	20.1 *18*	1323.80	3/2$^+$,5/2$^+$	
		2175.6 *4*	100 *3*	953.97	1/2$^+$	
		3129.1 *5*	8.4 *6*	0.0	5/2$^+$	
3180.7	(15/2$^-$)	1159.0 *7*	100	2021.6	(11/2$^-$)	E_γ,I_γ: from ^{173}Yb(^{24}Mg,Fγ).
3249.10	(3/2)$^-$	1293.6 *4*	23 *5*	1955.92	5/2$^{(+)}$	
		1309.9 *6*	13 *5*	1940.24	1/2$^{(+)}$,3/2,5/2$^+$	
		1356.8 *4*	48 *6*	1892.66	3/2$^+$	
		1527.0 *3*	4.9 *12*	1721.50	(5/2)$^+$	
		1925.2 *3*	56 *8*	1323.80	3/2$^+$,5/2$^+$	
		2295.0 *7*	100 *10*	953.97	1/2$^+$	E_γ: weighted average of 2295.5 *4* (^{95}Y β^- decay), 2294.0 *6* (^{94}Zr(n,γ) E=thermal). E_γ: only γ ray observed in (^{94}Zr(n,γ) E=thermal).
		3249.0 *5*	84 *7*	0.0	5/2$^+$	
3398.7	(17/2$^+$)	561.4 *2*	100	2837.2	(13/2$^+$)	E_γ,I_γ: from ^{173}Yb(^{24}Mg,Fγ).
3451.15	1/2$^{(+)}$,3/2	1832.6 *3*	20 *5*	1618.35	(3/2)$^+$	
		2127.4 *3*	14 *7*	1323.80	3/2$^+$,5/2$^+$	
		2497.2 *3*	9.7 *21*	953.97	1/2$^+$	
		3451.4 *7*	100 *11*	0.0	5/2$^+$	
3575.83	(3/2)$^-$	1635.4 *3*	2.0 *12*	1940.24	1/2$^{(+)}$,3/2,5/2$^+$	
		1683.0[†] *7*	4.5[†] *5*	1892.66	3/2$^+$	
		1855.2 *8*	3.5 *17*	1721.50	(5/2)$^+$	
		2252.0 *3*	2.1 *7*	1323.80	3/2$^+$,5/2$^+$	
		2621.8 *3*	3.6 *7*	953.97	1/2$^+$	
		3576.0 *5*	100 *7*	0.0	5/2$^+$	
3586.3	1/2$^-$,3/2$^-$	1213.8 *4*	0.9 *3*	2372.27	3/2$^+$	
		1631.0 *8*	1.9 *8*	1955.92	5/2$^{(+)}$	
		1683.0[†] *7*	6.0[†] *6*	1903.97	1/2$^{(+)}$,3/2,5/2$^+$	
		1967.9 *3*	2.1 *5*	1618.35	(3/2)$^+$	
		2632.4 *7*	100 *7*	953.97	1/2$^+$	
3684.89	1/2$^-$,3/2$^-$	555.5 *3*	100 *11*	3129.55	1/2$^-$,3/2$^-$	
		2730.7 *3*	19 *6*	953.97	1/2$^+$	
		3684.9 *5*	5 *3*	0.0	5/2$^+$	

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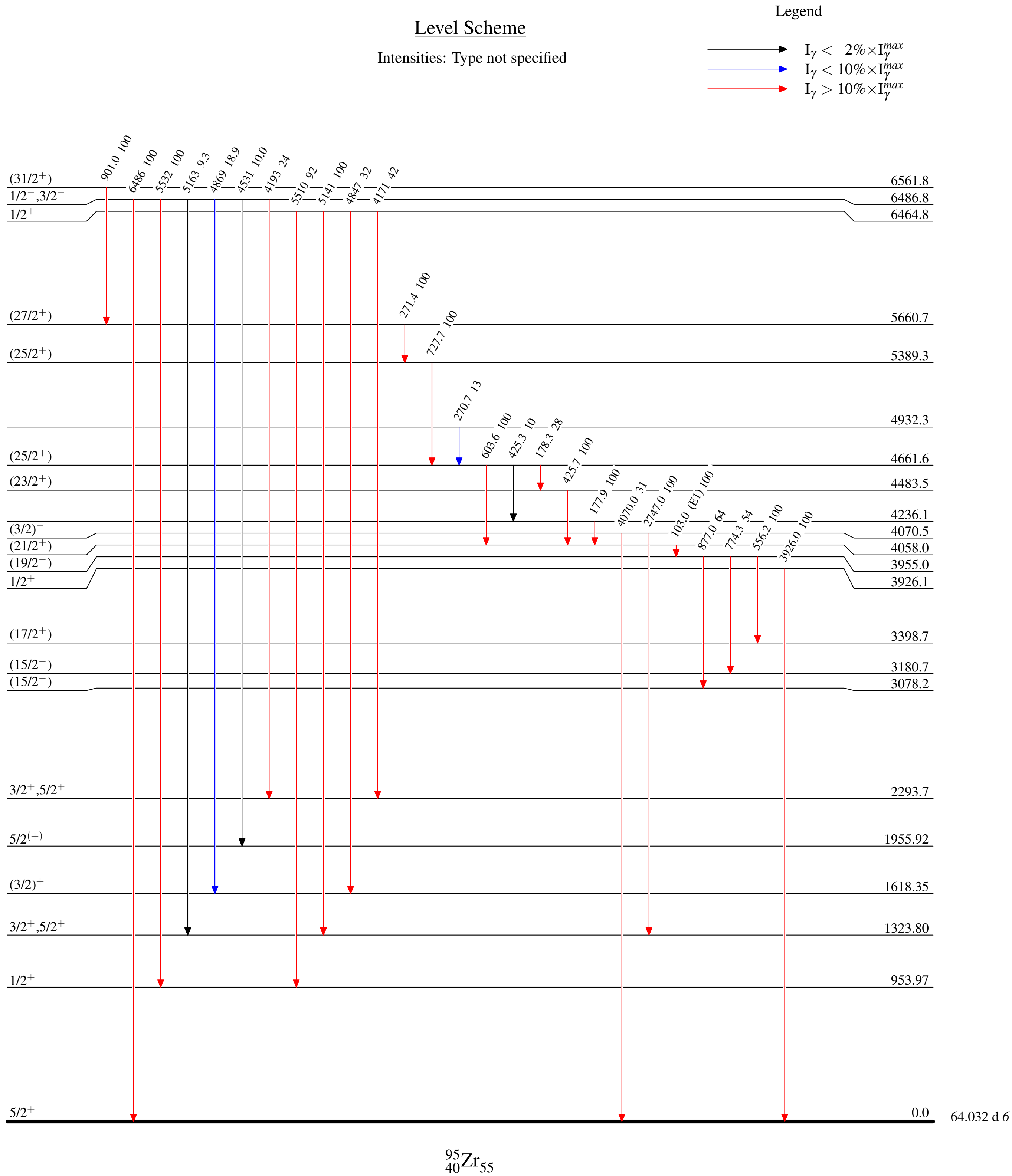
Adopted Levels, Gammas (continued)

$\gamma(^{95}Zr)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	Comments
3887.0	$1/2^{(+)}$,3/2	3886.9 *5*	100	0.0	$5/2^+$		
3926.1	$1/2^+$	3926.0 *20*	100	0.0	$5/2^+$		
3955.0	$(19/2^-)$	556.2 *4*	100 *6*	3398.7	$(17/2^+)$		E_γ: from $^{173}Yb(^{24}Mg,F\gamma)$. I_γ: from $^{176}Yb(^{28}Si,X\gamma)$.
		774.3 *7*	54 *6*	3180.7	$(15/2^-)$		E_γ: from $^{173}Yb(^{24}Mg,F\gamma)$. I_γ: from $^{176}Yb(^{28}Si,X\gamma)$.
		877.0 *4*	64 *6*	3078.2	$(15/2^-)$		E_γ: from $^{173}Yb(^{24}Mg,F\gamma)$. I_γ: from $^{176}Yb(^{28}Si,X\gamma)$.
4058.0	$(21/2^+)$	103.0 *2*	100	3955.0	$(19/2^-)$	(E1)	E_γ: from $^{173}Yb(^{24}Mg,F\gamma)$. Mult.: suggested to be (E2) by $^{173}Yb(^{24}Mg,F\gamma)$; not consistent with $^{176}Yb(^{28}Si,X\gamma)$; adopted as (E1) following Jπi assignments of ($^{176}Yb(^{28}Si,X\gamma)$).
4070.5	$(3/2)^-$	2747.0 *5*	100 *30*	1323.80	$3/2^+,5/2^+$		
		4070.0 *5*	31 *10*	0.0	$5/2^+$		
4236.1		177.9 *4*	100	4058.0	$(21/2^+)$		
4483.5	$(23/2^+)$	425.7 *3*	100	4058.0	$(21/2^+)$		
4661.6	$(25/2^+)$	178.3 *3*	28 *3*	4483.5	$(23/2^+)$		E_γ,I_γ: observed only in $^{176}Yb(^{28}Si,F\gamma)$.
		425.3 *4*	10 *4*	4236.1			E_γ,I_γ: observed only in $^{173}Yb(^{24}Mg,X\gamma)$.
		603.6 *2*	100 *8*	4058.0	$(21/2^+)$		E_γ,I_γ: from $^{173}Yb(^{24}Mg,F\gamma)$.
4932.3		270.7 *4*	13 *3*	4661.6	$(25/2^+)$		
5389.3	$(25/2^+)$	727.7 *3*	100	4661.6	$(25/2^+)$		
5660.7	$(27/2^+)$	271.4 *3*	100	5389.3	$(25/2^+)$		E_γ: γ placed above the 4663 level in 2002Fo03.
6464.8	$1/2^+$	4171	42 *4*	2293.7	$3/2^+,5/2^+$		
		4847	32 *3*	1618.35	$(3/2)^+$		
		5141	100 *10*	1323.80	$3/2^+,5/2^+$		
		5510	92 *9*	953.97	$1/2^+$		
6486.8	$1/2^-,3/2^-$	4193	24 *3*	2293.7	$3/2^+,5/2^+$		
		4531	10.0 *14*	1955.92	$5/2^{(+)}$		
		4869	18.9 *25*	1618.35	$(3/2)^+$		
		5163	9.3 *14*	1323.80	$3/2^+,5/2^+$		
		5532	100 *10*	953.97	$1/2^+$		
		6486	100 *10*	0.0	$5/2^+$		
6561.8	$(31/2^+)$	901.0 *3*	100	5660.7	$(27/2^+)$		

† Multiply placed with intensity suitably divided.
‡ Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas



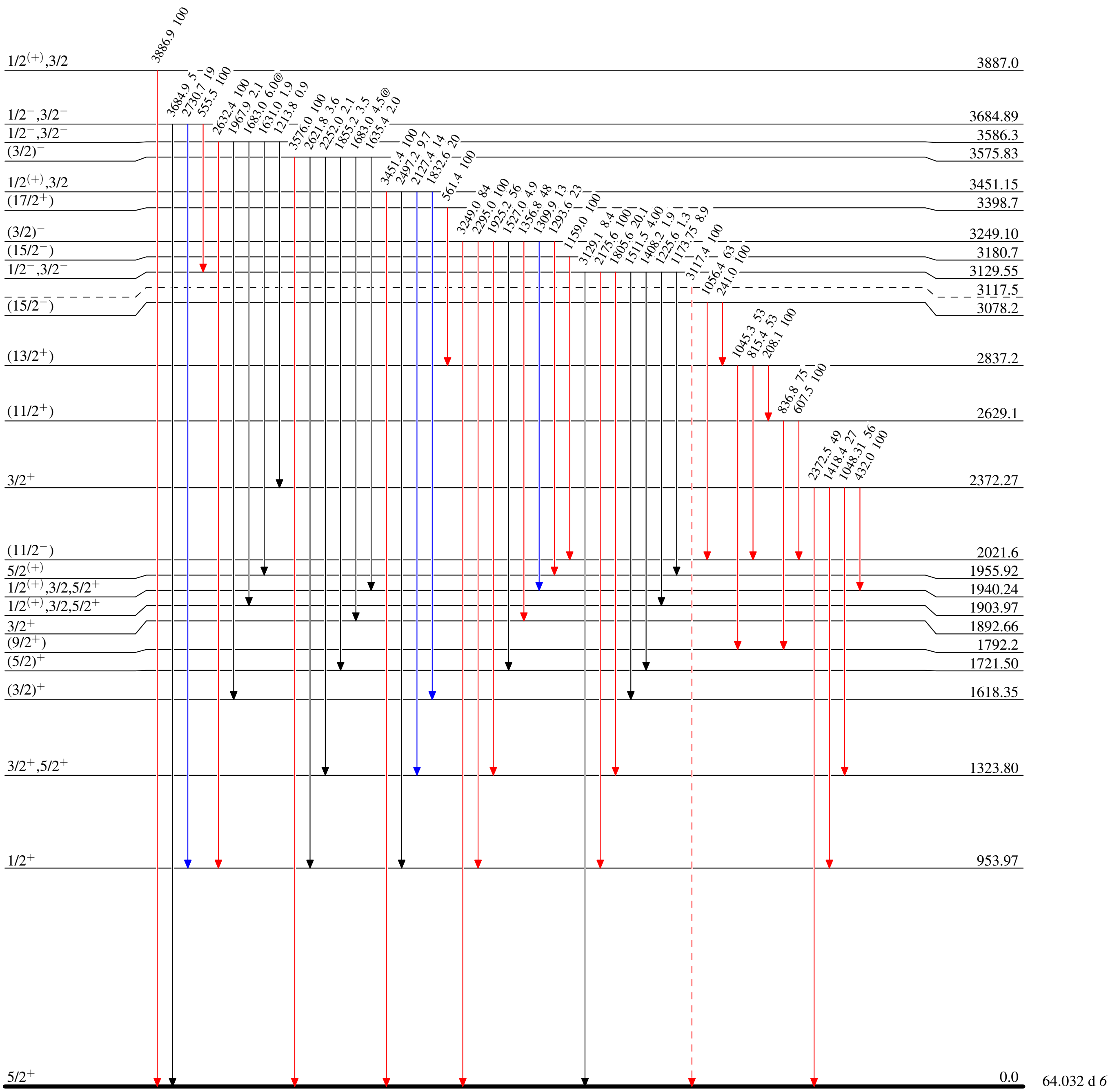
Adopted Levels, Gammas

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

Level Scheme (continued)

Intensities: Type not specified
@ Multiply placed: intensity suitably divided



$^{95}_{40}Zr_{55}$

Adopted Levels, Gammas