Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

Q(β^-)=−10570 *SY*; S(n)=1.202×10^4 *16*; S(p)=4.05×10^3 *8*; Q(α)=2190 *27* 2017Wa10
ΔQ(β^-)=200 (2017Wa10).
S(2n)=21580 syst *200*, S(2p)=5742 *17*, Q(εp)=2114 *23* (2017Wa10).
α: Additional information 1.

^{136}Sm Levels

Cross Reference (XREF) Flags

A ^{136}Eu ε decay:mixed source
B (HI,xnγ)

E(level)†	J$^\pi$	T$_{1/2}$‡	XREF	Comments
0.0&	0$^+$	47 s *2*	AB	%ε+%β^+=100 T$_{1/2}$: from 1988Ke03. Others: 40 s *5* (1982No15), 42 s *4* (1982Al07), and 44 s *3* (1981Ki05).
254.92& *16*	2$^+$	88 ps *9*	AB	J$^\pi$: E2 255γ to 0$^+$; member of g.s. rotational band.
686.36& *21*	4$^+$	5.0 ps *5*	AB	J$^\pi$: E2 431γ to 2$^+$, member g.s. rotational band.
712.88c *16*	(2$^+$)		AB	J$^\pi$: 713γ to 0$^+$, assignment to γ-vibrational band.
1170.98c *20*	(4$^+$)		AB	J$^\pi$: 458γ to 2$^+$; band assignment.
1221.4& *3*	6$^+$	1.5 ps *5*	AB	J$^\pi$: E2 535γ to 4$^+$; member g.s. rotational band.
1490.94 *20*	(2$^+$)		A	J$^\pi$: 320γ to 4$^+$, 1491γ to 0$^+$.
1640.96c *23*	(6$^+$)		B	J$^\pi$: (E2) 470γ to (4$^+$); band assignment.
1798.8& *3*	8$^+$	1.0 ps *3*	AB	J$^\pi$: E2 577γ to 6$^+$; member of g.s. rotational band.
2250.2c *3*	(8$^+$)		B	J$^\pi$: (E2) 609γ to (6$^+$); band assignment.
2264.7f *11*	(8$^-$)	15 μs *1*	B	T$_{1/2}$: from beam-γ(t) in (HI,xnγ). J$^\pi$: from intensity pattern, absence of branch to 6$^+$ yrast level and systematics of N=74 nuclei.
2275.4@ *3*	(7$^-$)		B	J$^\pi$: (E1) 1054γ to 6$^+$.
2414.6& *4*	10$^+$	0.9 ps *3*	B	J$^\pi$: E2 615γ to 8$^+$; member of g.s. rotational band.
2678.6f *13*	(9$^-$)		B	J$^\pi$: 414γ to (8$^-$); band assignment.
2738.2@ *4*	(9$^-$)		B	J$^\pi$: (E2) 463γ to (7$^-$); band assignment.
2768.2# *4*	(8$^-$)		B	J$^\pi$: ΔJ=0 969.5γ to 8$^+$, 493γ linking transition to 7$^-$ suggests same parity.
2953.7c *4*	(10$^+$)		B	J$^\pi$: (E2) 703.5γ to (8$^+$); band assignment.
3091.8& *4*	(12$^+$)		B	J$^\pi$: (E2) 677.5γ to 10$^+$; member of g.s. rotational band.
3111.8f *13*	(10$^-$)		B	J$^\pi$: 433γ to (9$^-$), 847γ to (8$^-$); band assignment.
3218.0# *4*	(10$^-$)		B	J$^\pi$: (E2) 450γ to (8$^-$); band assignment.
3290.6@ *4*	(11$^-$)		B	J$^\pi$: (E2) 553γ to (9$^-$); band assignment.
3337.4b *4*	12$^+$		B	J$^\pi$: (E2) 922.5γ to 10$^+$; band assignment.
3556.3f *14*	(11$^-$)		B	J$^\pi$: 444.5γ to (10$^-$), 877.5γ to (9$^-$); band assignment.
3682.6c *4*	(12$^+$)		B	J$^\pi$: (E2) 729γ to (10$^+$).
3828.1& *5*	(14$^+$)		B	J$^\pi$: (E2) 736γ to (12$^+$); member of g.s. rotational band.
3888.6e *9*	(14$^+$)		B	J$^\pi$: 797γ to (12$^+$).
3892.5# *4*	(12$^-$)		B	J$^\pi$: (E2) 674γ to (10$^-$).
3921.3@ *4*	(13$^-$)		B	J$^\pi$: (E2) 631γ to (11$^-$); band assignment.
3991.3b *5*	(14$^+$)		B	J$^\pi$: 899.5γ to (12$^+$); band assignment.

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Adopted Levels, Gammas (continued)

^{136}Sm Levels (continued)

E(level)[†]	Jπ	XREF	Comments
4015.1[f] *15*	(12⁻)	B	Jπ: 459γ to (11⁻), 903γ to (10⁻); band assignment.
4169.2? *16*		B	E(level): the 254γ and 1058γ are observed with equal intensities, thus ordering is not definite. Reverse ordering would result in a level at 3366 keV.
4321.8 *19*		B	Jπ: (11) proposed in (HI,xnγ).
4423.3[g] *16*		B	
4436.6[c] *5*	(14⁺)	B	Jπ: (E2) 754γ to 12⁺; band assignment.
4464.6[f] *16*	(13⁻)	B	Jπ: 449γ to (12⁻), 908γ to (11⁻); band assignment.
4587.9[g] *18*		B	
4598.2[#] *5*	(14⁻)	B	Jπ: (E2) 706γ to (12⁻); band assignment.
4603.1[&] *5*	(16⁺)	B	Jπ: (E2) 775γ to (14⁺); member of g.s. rotational band.
4619.4[@] *5*	(15⁻)	B	Jπ: (E2) 698γ to (13⁻); band assignment.
4735.5[e] *9*	(16⁺)	B	Jπ: 847γ to (14⁺); band assignment.
4837.3[b] *5*	(16⁺)	B	Jπ: (E2) 846γ to (14⁺); band assignment.
4862.0[g] *18*		B	
4928.1[f] *17*	(14⁻)	B	Jπ: 463γ to (13⁻), 913γ to (12⁻); band assignment.
5204.8[g] *19*		B	
5379.0[@] *5*	(17⁻)	B	Jπ: 760γ to (15⁻); band assignment.
5445.8[&] *6*	(18⁺)	B	Jπ: 843γ to (16⁺); band assignment.
5591.8[g] *19*		B	
5635.8[e] *9*	(18⁺)	B	Jπ: 900γ to (16⁺); band assignment.
5795.9[b] *6*	(18⁺)	B	Jπ: 959γ to (16⁺); band assignment.
6001.8[g] *20*		B	
6206.3[@] *6*	(19⁻)	B	Jπ: 827γ to (17⁻); band assignment.
6355.7[&] *6*	(20⁺)	B	Jπ: 910γ to (18⁺); band assignment.
6594.8[e] *14*	(20⁺)	B	Jπ: 959γ to (18⁺); band assignment.
7110.1[@] *6*	(21⁻)	B	Jπ: 904γ to (19⁻); band assignment.
7328.4[&] *6*	(22⁺)	B	Jπ: 973γ to (20⁺); band assignment.
7566.8[e] *17*	(22⁺)	B	Jπ: 972γ to (20⁺); band assignment.
8349.7[&] *7*	(24⁺)	B	Jπ: 1021γ to (22⁺); band assignment.
8609.8[e] *20*	(24⁺)	B	Jπ: 1043γ to (22⁺); band assignment.
5635.8+y[d]	(22⁺)	B	E(level): Probable transition to 5635 level has not yet been identified. Jπ: from strong feeding of 18⁺ member of positive parity sideband and assumption that 4ħ of spin is missing in unobserved linking transitions, deduced from comparison of experimental data and theoretical calculations in this mass region (1998Ob02). Additional information 2.
6523.8+y[d] *10*	(24⁺)	B	Jπ: 888γ to (22⁺); band assignment.
7486.0+y[d] *15*	(26⁺)	B	Jπ: 963γ to (24⁺); band assignment.
8527.0+y[d] *18*	(28⁺)	B	Jπ: 1041γ to (26⁺); band assignment.
9646.0+y[d] *20*	(30⁺)	B	Jπ: 1119γ to (28⁺); band assignment.
10845.0+y[d] *23*	(32⁺)	B	Jπ: 1199γ to (30⁺); band assignment.
12124.0+y[d] *25*	(34⁺)	B	Jπ: 1279γ to (32⁺); band assignment.
13483+y[d] *3*	(36⁺)	B	Jπ: 1359γ to (34⁺); band assignment.
14919+y[d] *3*	(38⁺)	B	Jπ: 1436γ to (36⁺); band assignment.
16422+y[d] *3*	(40⁺)	B	Jπ: 1503γ to (38⁺); band assignment.
17989+y[d] *4*	(42⁺)	B	Jπ: 1567γ to (40⁺); band assignment.
19618+y?[d]	(44⁺)	B	Jπ: 1629γ to (42⁺); band assignment.
u[a]		B	E(level): ≈4000, may feed 2415, 10⁺ level. Additional information 3.

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Adopted Levels, Gammas (continued)

^{136}Sm Levels (continued)

E(level)[†]	XREF	Comments
u+465.8[a] *15*	B	Level may feed 3556, (11$^-$) level.
u+624.8[a] *9*	B	
u+627.1[a] *9*	B	
u+760.1[a] *10*	B	Level may feed 3922 13$^-$ level.
u+946.9[a] *15*	B	
u+1197.5[a] *18*	B	
u+1512.3[a] *20*	B	
u+1888.8[a] *23*	B	
u+2317.8[a] *25*	B	

† From a least-squares fit to Eγ, by evaluator.
‡ From RDM in (HI,xnγ), except where noted. See (HI,xnγ) dataset for additional $T_{1/2}$ measurements.
# Band(A): π=− side band 1 (1993Pa07).
@ Band(B): π=− side band 2 (1993Pa07).
& Band(C): Ground state band.
a Band(D): Possible band (1995Re04).
b Band(E): Possible π=+ band (1993Pa07).
c Band(F): γ-vibrational band (1993Pa07).
d Band(G): Highly deformed band (1998Ob02).
e Band(H): Side band (1998Ob02).
f Band(I): Band based on (8$^-$) isomer (1995Re04).
g Band(J): Possible ΔJ=1, π=+ band (1995Re04). 12$^+$ is proposed for the bandhead J^π by 1995Re04.

Adopted Levels, Gammas (continued)

$\gamma(^{136}Sm)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
254.92	2^+	254.9 *2*	100	0.0	0^+	E2[#]	0.0941	α(K)=0.0714 *11*; α(L)=0.0177 *3*; α(M)=0.00398 *6*; α(N)=0.000883 *13*; α(O)=0.0001197 *18* α(P)=3.72×10^{-6} *6* B(E2)(W.u.)=131 *14*
686.36	4^+	431.4 *2*	100	254.92	2^+	E2[#]	0.0192	α(K)=0.01557 *22*; α(L)=0.00284 *4*; α(M)=0.000624 *9*; α(N)=0.0001396 *20*; α(O)=1.98×10^{-5} *3* α(P)=8.83×10^{-7} *13* B(E2)(W.u.)=179 *18*
712.88	(2^+)	458.0 *2*	100[b] *25*	254.92	2^+			
		712.9 *2*	85[b] *25*	0.0	0^+	[E2]	0.00528	α(K)=0.00442 *7*; α(L)=0.000672 *10*; α(M)=0.0001454 *21*; α(N)=3.28×10^{-5} *5*; α(O)=4.79×10^{-6} *7* α(P)=2.60×10^{-7} *4*
1170.98	(4^+)	458.2 *2*	100 *6*	712.88	(2^+)	(E2)	0.01624	α(K)=0.01324 *19*; α(L)=0.00235 *4*; α(M)=0.000515 *8*; α(N)=0.0001154 *17* α(O)=1.642×10^{-5} *23*; α(P)=7.55×10^{-7} *11*
		484.6 *2*	33.0 *22*	686.36	4^+			
1221.4	6^+	535.0 *2*	100	686.36	4^+	E2[#]	0.01073	α(K)=0.00885 *13*; α(L)=0.001475 *21*; α(M)=0.000322 *5*; α(N)=7.23×10^{-5} *11* α(O)=1.039×10^{-5} *15*; α(P)=5.12×10^{-7} *8* B(E2)(W.u.)=2.0×10^2 *7*
1490.94	(2^+)	320.1[b] *3*	12[b] *3*	1170.98	(4^+)	[E2]	0.0460	α(K)=0.0362 *6*; α(L)=0.00771 *11*; α(M)=0.001715 *25*; α(N)=0.000382 *6*; α(O)=5.28×10^{-5} *8* α(P)=1.97×10^{-6} *3*
		778.0[b] *2*	100[b] *30*	712.88	(2^+)			
		1236.0[b] *4*	18[b] *3*	254.92	2^+			
		1490.9[b] *5*	18[b] *3*	0.0	0^+	[E2]	1.19×10^{-3}	α(K)=0.000953 *14*; α(L)=0.0001272 *18*; α(M)=2.72×10^{-5} *4*; α(N)=6.15×10^{-6} *9* α(O)=9.19×10^{-7} *13*; α(P)=5.68×10^{-8} *8*
1640.96	(6^+)	470.0 *2*	100 *7*	1170.98	(4^+)	(E2)	0.01515	α(K)=0.01238 *18*; α(L)=0.00217 *3*; α(M)=0.000476 *7*; α(N)=0.0001067 *15* α(O)=1.521×10^{-5} *22*; α(P)=7.08×10^{-7} *10*
		954.6 *2*	55 *9*	686.36	4^+	(E2)	0.00274	α(K)=0.00232 *4*; α(L)=0.000331 *5*; α(M)=7.10×10^{-5} *10*; α(N)=1.604×10^{-5} *23*; α(O)=2.37×10^{-6} *4* α(P)=1.380×10^{-7} *20*
1798.8	8^+	577.3 *2*	100	1221.4	6^+	E2[#]	0.00883	α(K)=0.00732 *11*; α(L)=0.001187 *17*; α(M)=0.000258 *4*; α(N)=5.80×10^{-5} *9*; α(O)=8.39×10^{-6} *12* α(P)=4.26×10^{-7} *6* B(E2)(W.u.)=2.1×10^2 *7*
2250.2	(8^+)	609.3 *2*	100 *5*	1640.96	(6^+)	(E2)	0.00771	α(K)=0.00641 *9*; α(L)=0.001021 *15*; α(M)=0.000222 *4*; α(N)=4.99×10^{-5} *7*; α(O)=7.23×10^{-6} *11* α(P)=3.74×10^{-7} *6*

From ENSDF

$^{136}_{62}Sm_{74}$-4

Adopted Levels, Gammas (continued)

γ(^{136}Sm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
2250.2	(8$^+$)	1028.8 *2*	50 *7*	1221.4	6$^+$			
2264.7	(8$^-$)	465.9	100	1798.8	8$^+$	[E1]		B(E1)(W.u.)=1.69×10^{-10} *12*
2275.4	(7$^-$)	1054.1 *2*	100	1221.4	6$^+$	(E1)	9.35×10^{-4}	α(K)=0.000804 *12*; α(L)=0.0001032 *15*; α(M)=2.19×10^{-5} *3*; α(N)=4.96×10^{-6} *7* α(O)=7.43×10^{-7} *11*; α(P)=4.66×10^{-8} *7* Mult.: stretched D from R(DCO) and γ(θ) in (HI,xnγ); assumed (E1) based on systematics of negative parity bands in this mass region.
2414.6	10$^+$	615.4 *2*	100	1798.8	8$^+$	E2[#]	0.00752	α(K)=0.00626 *9*; α(L)=0.000994 *14*; α(M)=0.000216 *3*; α(N)=4.85×10^{-5} *7*; α(O)=7.04×10^{-6} *10* α(P)=3.66×10^{-7} *6* B(E2)(W.u.)=1.7×10^2 *6*
2678.6	(9$^-$)	413.8	100	2264.7	(8$^-$)	D		
2738.2	(9$^-$)	462.9 *2*	45.1 *20*	2275.4	(7$^-$)	(E2)	0.01579	α(K)=0.01289 *19*; α(L)=0.00228 *4*; α(M)=0.000499 *7*; α(N)=0.0001118 *16* α(O)=1.592×10^{-5} *23*; α(P)=7.36×10^{-7} *11*
		939.4 *2*	100 *4*	1798.8	8$^+$	(E1)[@]	1.16×10^{-3}	α(K)=0.000998 *14*; α(L)=0.0001286 *18*; α(M)=2.73×10^{-5} *4*; α(N)=6.18×10^{-6} *9* α(O)=9.25×10^{-7} *13*; α(P)=5.77×10^{-8} *8*
2768.2	(8$^-$)	492.9 *2*	10 *6*	2275.4	(7$^-$)	(M1)[&]	0.0223	α(K)=0.0190 *3*; α(L)=0.00259 *4*; α(M)=0.000555 *8*; α(N)=0.0001258 *18*; α(O)=1.89×10^{-5} *3* α(P)=1.192×10^{-6} *17*
		969.5 *2*	100 *13*	1798.8	8$^+$	(E1)	1.09×10^{-3}	α(K)=0.000940 *14*; α(L)=0.0001210 *17*; α(M)=2.57×10^{-5} *4*; α(N)=5.81×10^{-6} *9* α(O)=8.70×10^{-7} *13*; α(P)=5.44×10^{-8} *8* Mult.: R(DCO) in (HI,xnγ) consistent with stretched Q or pure non-stretched D. Observed decay of π=− side band 1 into π=− side band 2 supports the latter.
2953.7	(10$^+$)	703.5 *2*	100	2250.2	(8$^+$)	(E2)	0.00544	α(K)=0.00456 *7*; α(L)=0.000696 *10*; α(M)=0.0001506 *22*; α(N)=3.39×10^{-5} *5*; α(O)=4.95×10^{-6} *7* α(P)=2.68×10^{-7} *4*
3091.8	(12$^+$)	677.5 *2*	100	2414.6	10$^+$	(E2)	0.00595	α(K)=0.00498 *7*; α(L)=0.000768 *11*; α(M)=0.0001663 *24*; α(N)=3.74×10^{-5} *6*; α(O)=5.46×10^{-6} *8* α(P)=2.92×10^{-7} *4*
3111.8	(10$^-$)	433.2	100 *21*	2678.6	(9$^-$)			
		847.1	42 *13*	2264.7	(8$^-$)			
3218.0	(10$^-$)	450.1 *2*	100 *5*	2768.2	(8$^-$)	(E2)	0.01706	α(K)=0.01389 *20*; α(L)=0.00248 *4*; α(M)=0.000545 *8*; α(N)=0.0001220 *18* α(O)=1.735×10^{-5} *25*; α(P)=7.91×10^{-7} *12*
		479.6 *2*	28 *5*	2738.2	(9$^-$)	(M1)[&]	0.0239	α(K)=0.0204 *3*; α(L)=0.00278 *4*; α(M)=0.000595 *9*; α(N)=0.0001350 *19*; α(O)=2.03×10^{-5} *3* α(P)=1.278×10^{-6} *18*
3290.6	(11$^-$)	552.8 *2*	100 *3*	2738.2	(9$^-$)	(E2)	0.00986	α(K)=0.00815 *12*; α(L)=0.001342 *19*; α(M)=0.000293 *5*; α(N)=6.57×10^{-5} *10* α(O)=9.47×10^{-6} *14*; α(P)=4.73×10^{-7} *7*

From ENSDF

$^{136}_{62}Sm_{74}$-5

Adopted Levels, Gammas (continued)

γ(^{136}Sm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
3290.6	(11$^-$)	875.7 *2*	40 *3*	2414.6	10$^+$	(E1)[@]	1.33×10^{-3}	α(K)=0.001142 *16*; α(L)=0.0001475 *21*; α(M)=3.14×10^{-5} *5*; α(N)=7.09×10^{-6} *10* α(O)=1.060×10^{-6} *15*; α(P)=6.60×10^{-8} *10*
3337.4	12$^+$	246.0 *2*	30.0 *17*	3091.8	(12$^+$)	(M1+E2)[a]	0.121 *16*	α(K)=0.098 *19*; α(L)=0.0183 *21*; α(M)=0.0040 *6*; α(N)=0.00090 *11*; α(O)=0.000128 *10* α(P)=5.8×10^{-6} *17*
		922.5 *2*	100 *7*	2414.6	10$^+$	(E2)	0.00295	α(K)=0.00250 *4*; α(L)=0.000358 *5*; α(M)=7.69×10^{-5} *11*; α(N)=1.737×10^{-5} *25*; α(O)=2.57×10^{-6} *4* α(P)=1.483×10^{-7} *21*
3556.3	(11$^-$)	444.5	100 *30*	3111.8	(10$^-$)			
		877.5	70 *23*	2678.6	(9$^-$)			
3682.6	(12$^+$)	728.9 *2*	100	2953.7	(10$^+$)	(E2)	0.00501	α(K)=0.00420 *6*; α(L)=0.000635 *9*; α(M)=0.0001373 *20*; α(N)=3.09×10^{-5} *5*; α(O)=4.53×10^{-6} *7* α(P)=2.48×10^{-7} *4*
3828.1	(14$^+$)	736.3 *2*	100	3091.8	(12$^+$)	(E2)	0.00489	α(K)=0.00411 *6*; α(L)=0.000619 *9*; α(M)=0.0001338 *19*; α(N)=3.01×10^{-5} *5*; α(O)=4.41×10^{-6} *7* α(P)=2.42×10^{-7} *4*
3888.6	(14$^+$)	797	100	3091.8	(12$^+$)	(E2)	0.00408	α(K)=0.00344 *5*; α(L)=0.000508 *8*; α(M)=0.0001095 *16*; α(N)=2.47×10^{-5} *4*; α(O)=3.63×10^{-6} *5* α(P)=2.03×10^{-7} *3*
3892.5	(12$^-$)	674.5 *2*	100	3218.0	(10$^-$)	(E2)	0.00602	α(K)=0.00503 *7*; α(L)=0.000777 *11*; α(M)=0.0001682 *24*; α(N)=3.79×10^{-5} *6*; α(O)=5.52×10^{-6} *8* α(P)=2.95×10^{-7} *5*
3921.3	(13$^-$)	630.7 *2*	100	3290.6	(11$^-$)	(E2)	0.00708	α(K)=0.00590 *9*; α(L)=0.000929 *13*; α(M)=0.000202 *3*; α(N)=4.54×10^{-5} *7*; α(O)=6.59×10^{-6} *10* α(P)=3.45×10^{-7} *5*
3991.3	(14$^+$)	899.5 *2*	100	3091.8	(12$^+$)			
4015.1	(12$^-$)	458.9	100 *31*	3556.3	(11$^-$)			
		903.2	88 *31*	3111.8	(10$^-$)			
4169.2?		1057.7[c]	100	3111.8	(10$^-$)			
4423.3		101.5	20 *6*	4321.8				
		254.4[c]	100 *41*	4169.2?				
		866.8	100 *41*	3556.3	(11$^-$)			
4436.6	(14$^+$)	754.0 *2*	100	3682.6	(12$^+$)	(E2)	0.00463	α(K)=0.00389 *6*; α(L)=0.000583 *9*; α(M)=0.0001259 *18*; α(N)=2.84×10^{-5} *4*; α(O)=4.16×10^{-6} *6* α(P)=2.30×10^{-7} *4*
4464.6	(13$^-$)	449.3	63 *31*	4015.1	(12$^-$)			
		908.4	100 *31*	3556.3	(11$^-$)			
4587.9		164.4	100	4423.3		D		
4598.2	(14$^-$)	705.7 *2*	100	3892.5	(12$^-$)	(E2)	0.00540	α(K)=0.00453 *7*; α(L)=0.000690 *10*; α(M)=0.0001493 *21*; α(N)=3.36×10^{-5} *5*; α(O)=4.91×10^{-6} *7* α(P)=2.66×10^{-7} *4*

From ENSDF

$^{136}_{62}Sm_{74}$-6

Adopted Levels, Gammas (continued)

γ(^{136}Sm) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
4603.1	(16$^+$)	775.0 *2*	100	3828.1	(14$^+$)	(E2)	0.00435	α(K)=0.00366 *6*; α(L)=0.000544 *8*; α(M)=0.0001174 *17*; α(N)=2.65×10^{-5} *4*; α(O)=3.88×10^{-6} *6* α(P)=2.16×10^{-7} *3*
4619.4	(15$^-$)	698.0 *2*	100	3921.3	(13$^-$)	(E2)	0.00555	α(K)=0.00464 *7*; α(L)=0.000710 *10*; α(M)=0.0001537 *22*; α(N)=3.46×10^{-5} *5*; α(O)=5.05×10^{-6} *7* α(P)=2.73×10^{-7} *4*
4735.5	(16$^+$)	847		3888.6	(14$^+$)			
		907		3828.1	(14$^+$)			
4837.3	(16$^+$)	846.0 *2*	100	3991.3	(14$^+$)	(E2)	0.00357	α(K)=0.00301 *5*; α(L)=0.000439 *7*; α(M)=9.46×10^{-5} *14*; α(N)=2.13×10^{-5} *3*; α(O)=3.14×10^{-6} *5* α(P)=1.784×10^{-7} *25*
4862.0		274.0	100 *44*	4587.9				
		438.8	<6	4423.3				
4928.1	(14$^-$)	463.4	89 *56*	4464.6	(13$^-$)			
		913.1	100 *67*	4015.1	(12$^-$)			
5204.8		342.8	100 *43*	4862.0		D		
		617.0	<14	4587.9				
5379.0	(17$^-$)	759.6 *2*	100	4619.4	(15$^-$)			
5445.8	(18$^+$)	842.7 *2*	100	4603.1	(16$^+$)			
5591.8		387.0	100 *38*	5204.8				
		729.8	<25	4862.0				
5635.8	(18$^+$)	900		4735.5	(16$^+$)			
		1033		4603.1	(16$^+$)			
5795.9	(18$^+$)	958.6 *2*	100	4837.3	(16$^+$)			
6001.8		410.0	100 *60*	5591.8				
		797.0	<25	5204.8				
6206.3	(19$^-$)	827.3 *2*	100	5379.0	(17$^-$)			
6355.7	(20$^+$)	909.9 *2*	100	5445.8	(18$^+$)			
6594.8	(20$^+$)	959		5635.8	(18$^+$)			
		1149[c]		5445.8	(18$^+$)			
7110.1	(21$^-$)	903.8 *2*	100	6206.3	(19$^-$)			
7328.4	(22$^+$)	972.7 *2*	100	6355.7	(20$^+$)			
7566.8	(22$^+$)	972	100	6594.8	(20$^+$)			
8349.7	(24$^+$)	1021.3 *2*	100	7328.4	(22$^+$)			
8609.8	(24$^+$)	1043	100	7566.8	(22$^+$)			
6523.8+y	(24$^+$)	888	100	5635.8+y	(22$^+$)			
7486.0+y	(26$^+$)	963	100	6523.8+y	(24$^+$)			
8527.0+y	(28$^+$)	1041	100	7486.0+y	(26$^+$)			
9646.0+y	(30$^+$)	1119	100	8527.0+y	(28$^+$)			
10845.0+y	(32$^+$)	1199	100	9646.0+y	(30$^+$)			
12124.0+y	(34$^+$)	1279	100	10845.0+y	(32$^+$)			
13483+y	(36$^+$)	1359	100	12124.0+y	(34$^+$)			
14919+y	(38$^+$)	1436	100	13483+y	(36$^+$)			

From ENSDF

$^{136}_{62}Sm_{74}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{136}Sm)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
16422+y	(40^+)	1503	100	14919+y	(38^+)	
17989+y	(42^+)	1567	100	16422+y	(40^+)	
19618+y?	(44^+)	1629[c]	100	17989+y	(42^+)	
u+624.8		624.9	100	u		
u+627.1		627.0	100	u		
u+760.1		132.9	70 *26*	u+627.1		D+Q
		135.3	100 *30*	u+624.8		D+Q
u+760.1		294.3	43 *22*	u+465.8		
u+946.9		186.8	100	u+760.1		D+Q
u+1197.5		250.6	100	u+946.9		D+Q
u+1512.3		314.8	100	u+1197.5		D+Q
u+1888.8		376.5	100	u+1512.3		D+Q
u+2317.8		429.0	100	u+1888.8		

[†] From (HI,xnγ), except where noted.
[‡] From R(DCO) and $\gamma(\theta)$ in (HI,xnγ), except where noted. Stretched Q transitions are assumed as E2.
[#] Stretched Q from R(DCO) and $\gamma(\theta)$ in (HI,xnγ), E2 from RUL.
[@] Stretched D from R(DCO) and $\gamma(\theta)$ in (HI,xnγ), $\Delta\pi$=yes from level scheme.
[&] Stretched D from R(DCO) and $\gamma(\theta)$ in (HI,xnγ), $\Delta\pi$=no from level scheme.
[a] D+Q from R(DCO) and $\gamma(\theta)$ in (HI,xnγ), $\Delta\pi$=no from level scheme.
[b] From ^{136}Eu ε decay.
[c] Placement of transition in the level scheme is uncertain.

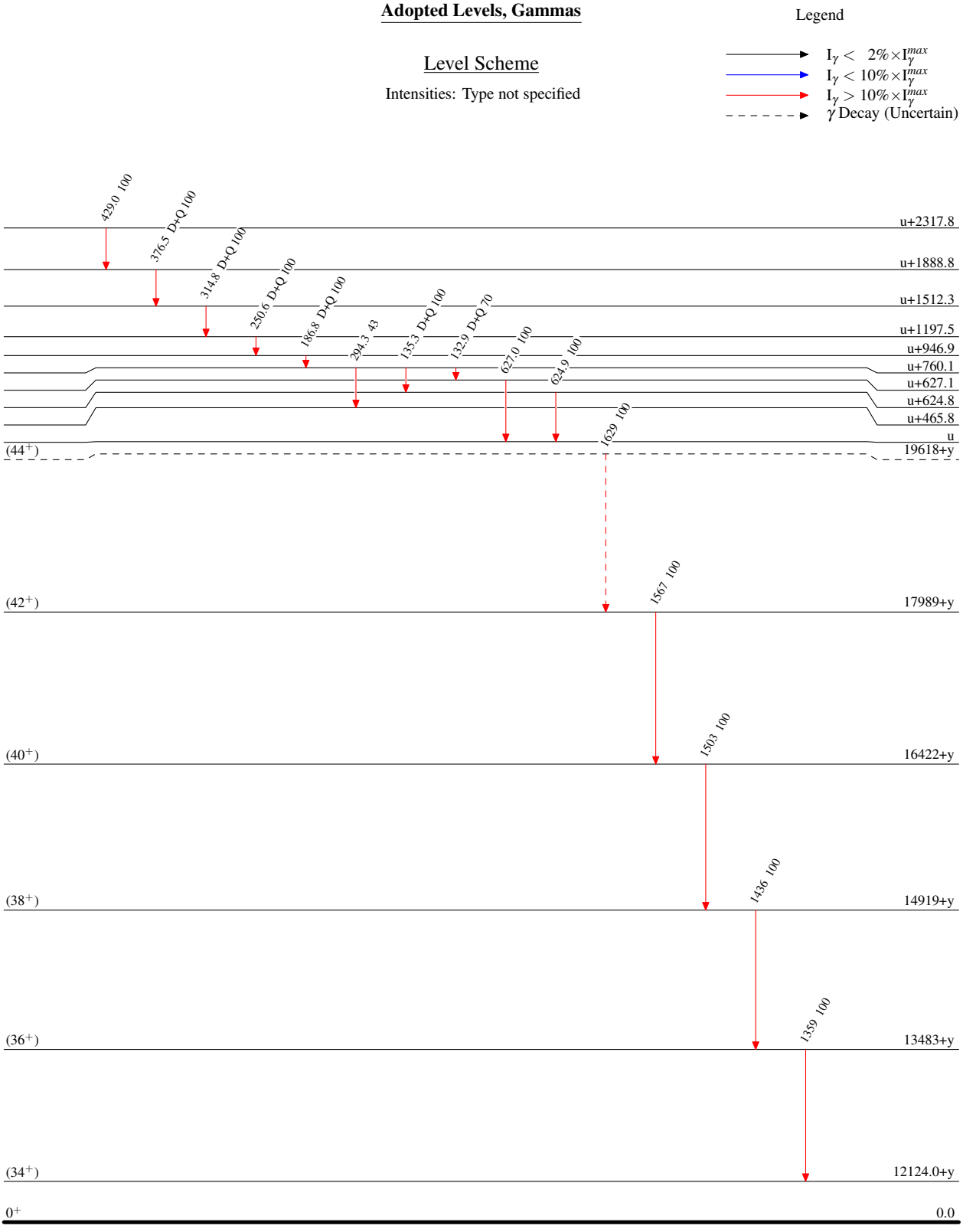
From ENSDF

$^{136}_{62}Sm_{74}$-8

Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

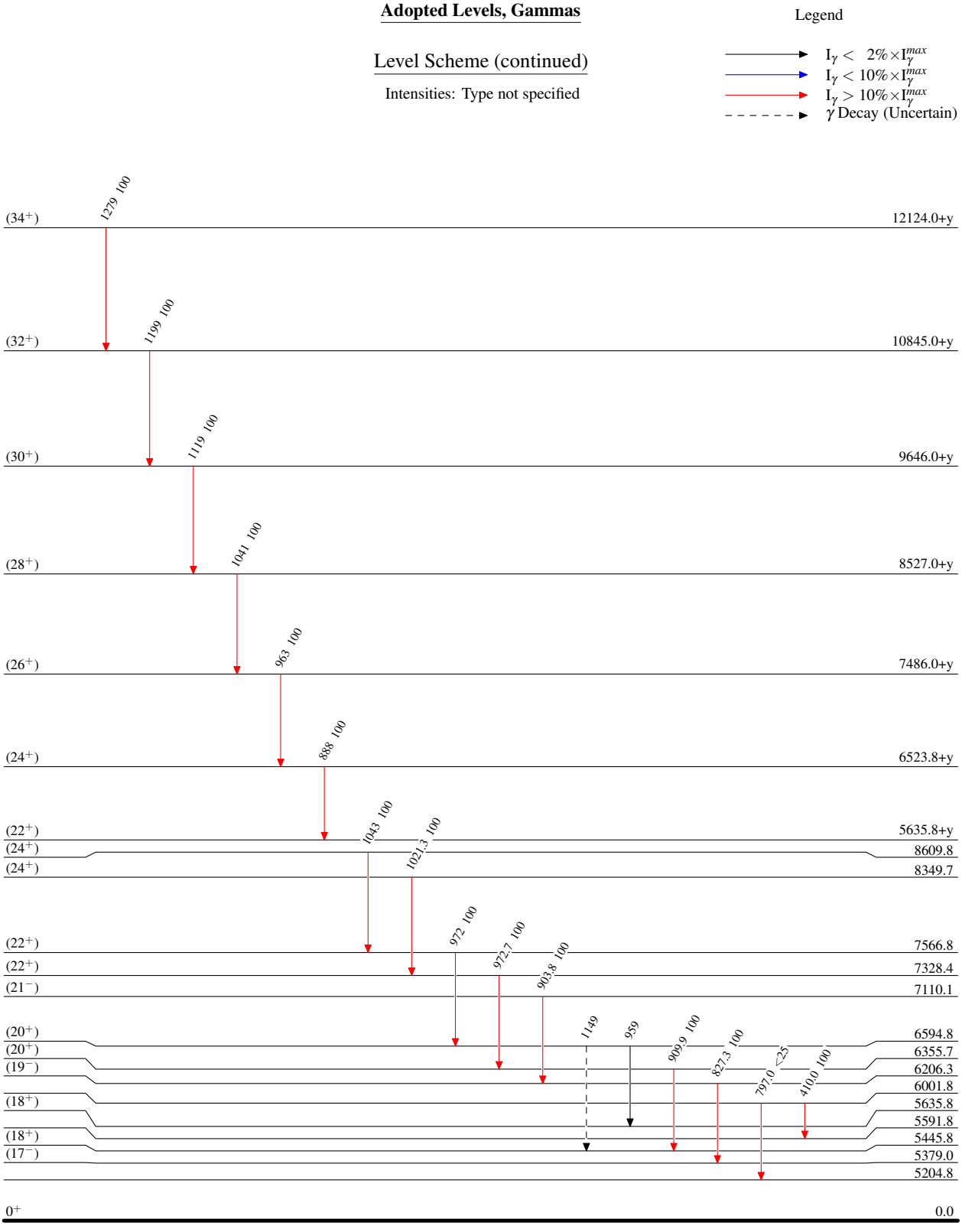


$^{136}_{62}Sm_{74}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

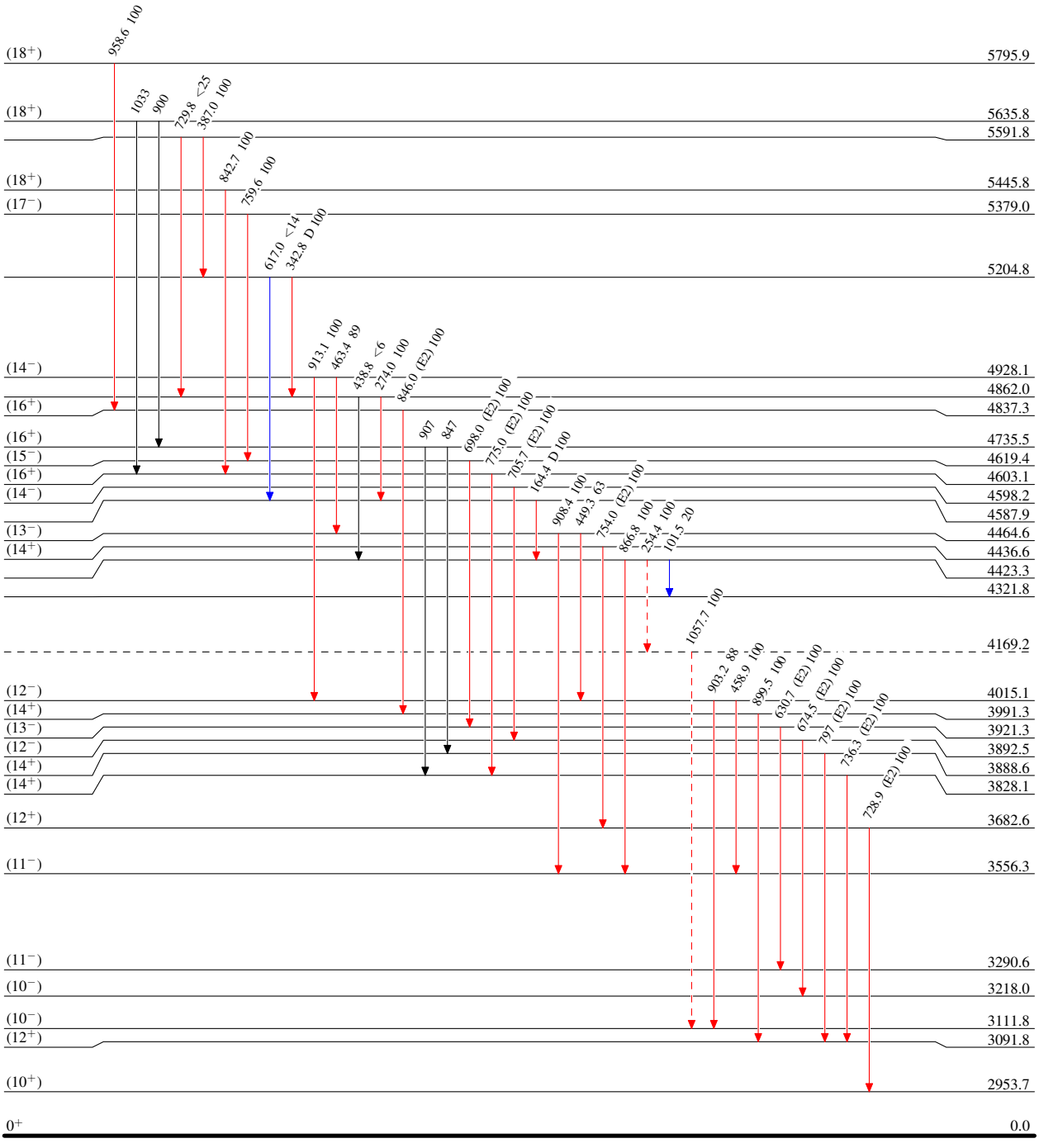


$^{136}_{62}Sm_{74}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

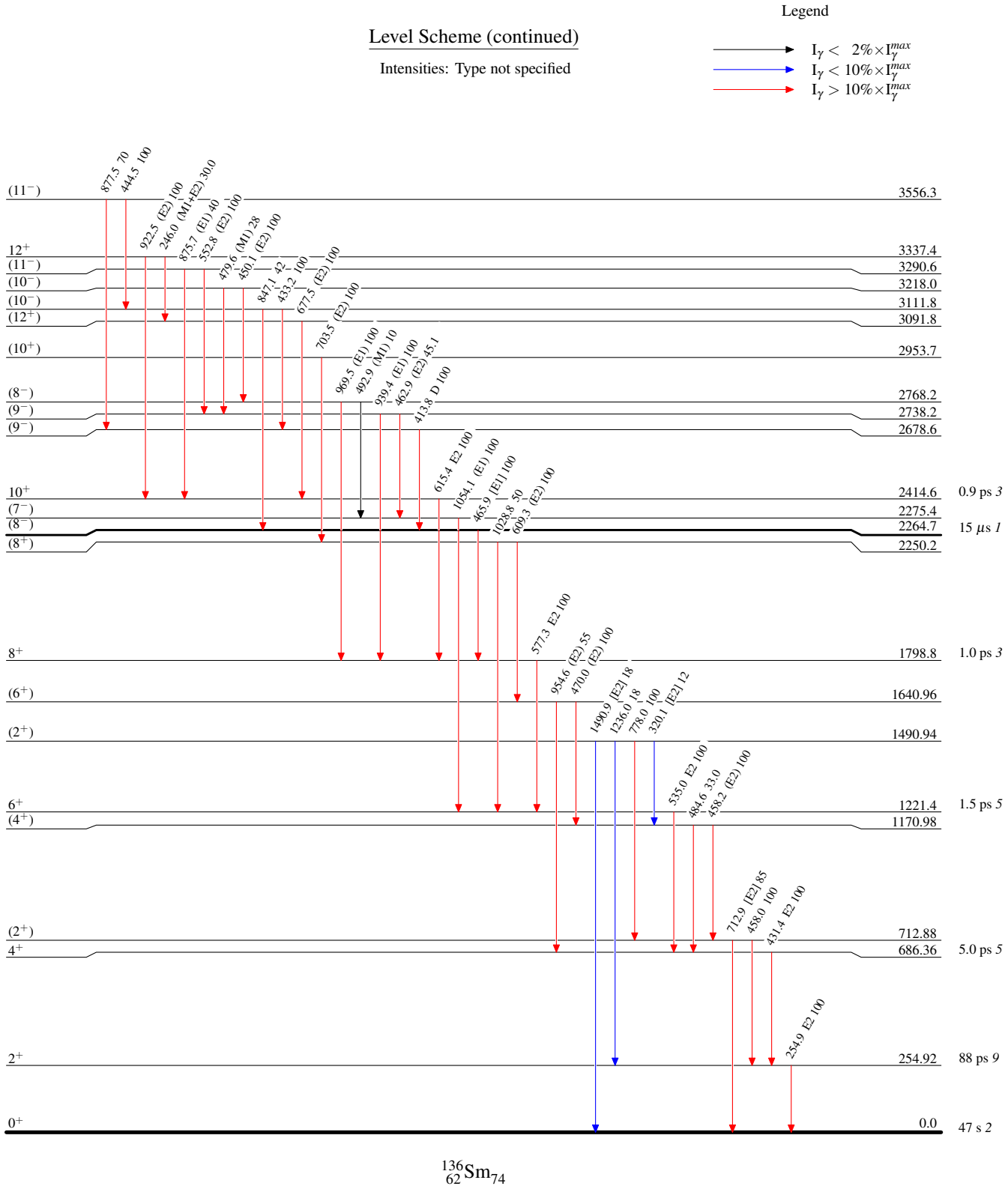


$^{136}_{62}Sm_{74}$

Adopted Levels, Gammas

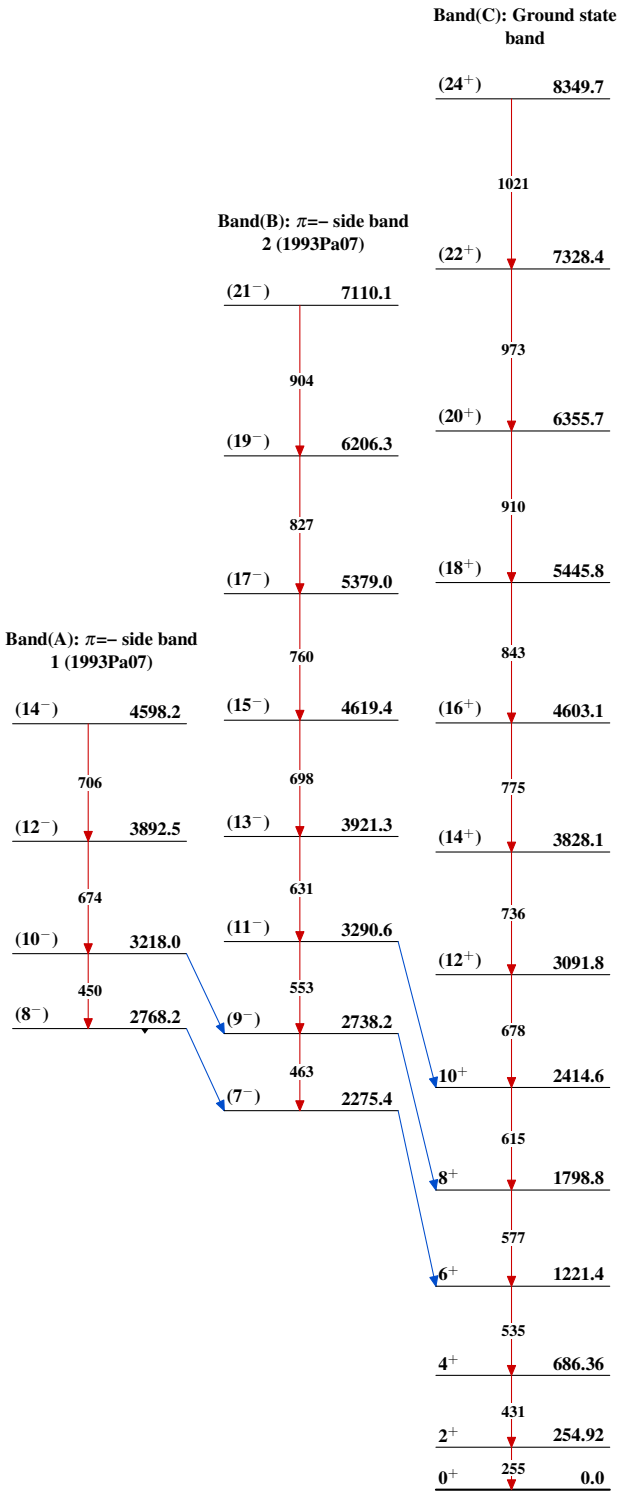
Level Scheme (continued)

Intensities: Type not specified



$^{136}_{62}Sm_{74}$

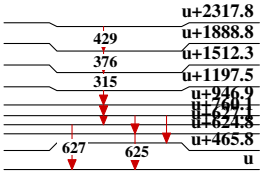
Adopted Levels, Gammas



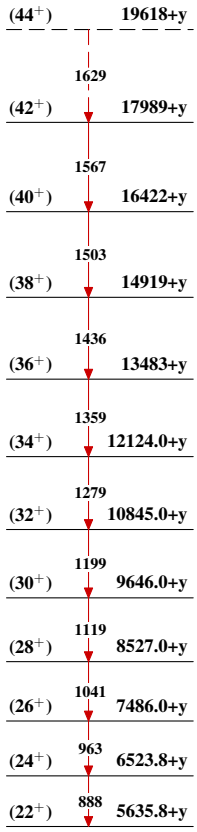
$^{136}_{62}Sm_{74}$

Adopted Levels, Gammas (continued)

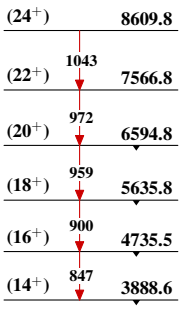
Band(D): Possible band (1995Re04)



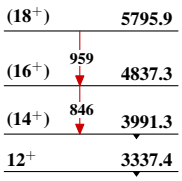
Band(G): Highly deformed band (1998Ob02)



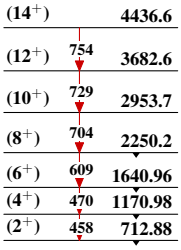
Band(H): Side band (1998Ob02)



Band(E): Possible π=+ band (1993Pa07)

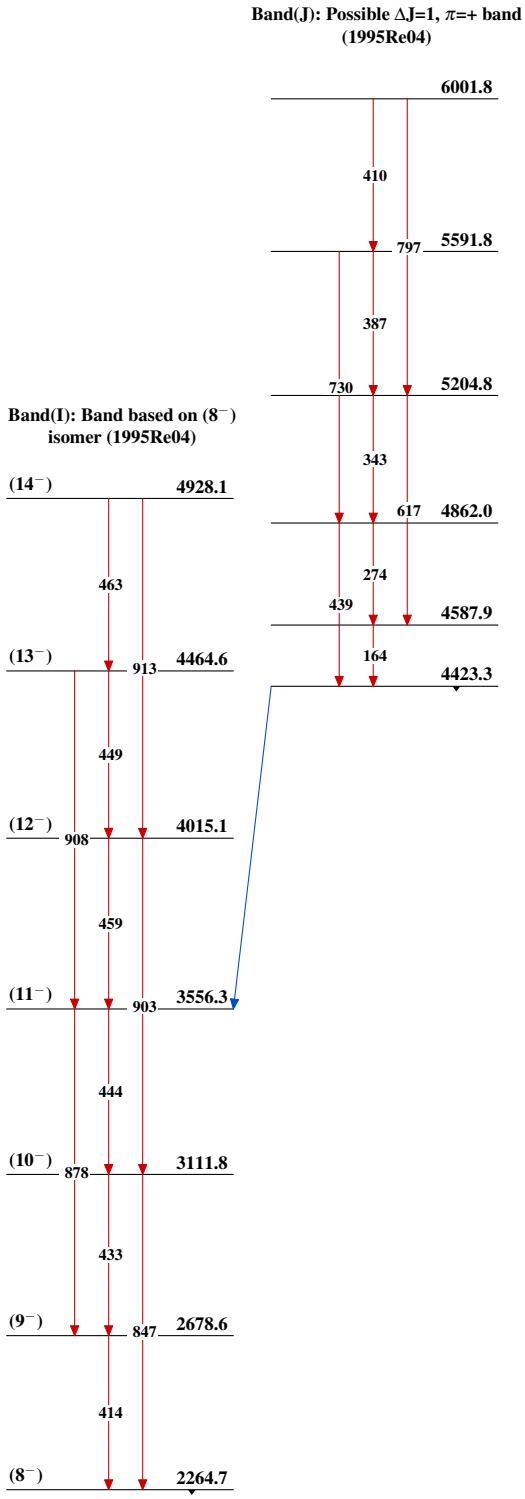


Band(F): γ-vibrational band (1993Pa07)



$^{136}_{62}Sm_{74}$

Adopted Levels, Gammas (continued)



$^{136}_{62}Sm_{74}$