

$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	11-Jul-2022

Delayed γ rays from 150-ns isomer.

[1988Ch27](#): E=160 MeV. Measured γ , $\gamma\gamma$, $\gamma\gamma(\theta)$ (DCO at $\theta=35^\circ$ and 90°). Decay scheme of the 150-ns isomer in ^{182}Os is established.

[2003Pa39](#): measured $E\gamma$, $I\gamma$, $\gamma\gamma$. Bands observed based on 150-ns isomer. The authors mention that details of this experiment are to be published (ref. 10 in paper).

[1991Br25](#): measurement of static Q of the 25^+ isomer by observation of time-dependent quadrupole interaction pattern of the γ radiation from the isomer implanted in a single crystal.

[1989A119](#): measurement of g factor of the 25^+ isomer by $\gamma(\theta, H, t)$.

[1990Gi07](#): $^{154}\text{Sm}(^{28}\text{Si}, X)$ and $^{166}\text{Er}(^{16}\text{O}, X)$. γ -ray multiplicity for the compound nucleus ^{182}Os is studied in this work.

See [1994Ho10](#) for calculation of yrast states using tilted-axis approach.

All data are from [1988Ch27](#), except those for the bands built on the 7049, 25^+ isomer. Full details of data from [2003Pa39](#) are to be published as stated by the authors.

 ^{182}Os Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0@	0^+		
127.1@ 2	2^+		
400.2@ 3	4^+		
794.0@ 4	6^+		
1277.7@ 4	8^+		
1811.7@ 5	10^+		
1831.6 ^c 11	8^-	0.78 ms 7	%IT=100 $T_{1/2}$: from $\gamma(t)$ (1966Bu08). Deexciting transitions are not reported by 1988Ch27 .
2013.1 ^c 11	9^-		
2112.4& 6	8^+		
2219.2 ^c 11	10^-		
2245.5& 6	9^+		
2345.7@ 5	12^+		
2374.6& 5	10^+		
2448.1 ^c 10	11^-		
2526.1& 5	11^+		
2671.7& 5	12^+		
2699.2 ^c 11	12^-		
2840.3@ 5	14^+		
2869.3& 5	13^+		
2971.1 ^c 11	13^-		
3072.6& 5	14^+		
3290.8 ^g 7	14^+		
3303.6& 6	15^+		
3319.7@ 6	16^+		
3617.2& 5	16^+		
3643.6 9	(13^-)		$K^\pi=13^-$. Configuration= $\nu 7/2[514] \otimes \nu 9/2[624] \otimes \pi 9/2[514] \otimes \pi 1/2[541]$ (1988Ch27).
3840.1& 8	17^+		
3850.9 ^g 7	16^+		
3856.7@ 6	18^+		

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$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ [1988Ch27,2003Pa39](#) (continued) ^{182}Os Levels (continued)

E(level)	J^π	$T_{1/2}$	Comments
3915.3 7	15(+)		
3929.5 ^f 6	15(+)		
3968.9 ^b 7	14(-)		
4157.1 6	16(+)		
4166.0 ^e 6	16+		
4210.5 ^b 7	15(-)		
4274.8 ^{&} 6	18+		
4369.8 ^a 7	16(+)	6 ns 2	$T_{1/2}$: $\gamma\gamma(t)$ (1988Ch27).
4425.3 ^f 6	17(+)		
4437.0 ^d 6	17		
4468.5 ^g 7	18+		
4475.7 ^{&} 9	19+		
4480.0 [@] 6	20+		
4515.8 ^b 7	16(-)		
4682.1 ^a 7	17(+)		
4712.9 ^e 6	18(+)		
4760.8 7	18		
4879.1 ^b 7	17(-)		
5004.8 ^a 7	18(+)		
5023.9 ^{&} 6	20+		
5024.0 ^f 6	19(+)		
5062.9 ^d 6	19		
5142.1 ^g 7	20+		
5180.3 7	18		
5192.0 [@] 6	22+		
5204.7 ^{&} 11	21+		
5332.4 ^a 6	19(+)		
5357.8 ^e 6	20(+)		
5485.5 7	19		
5674.2 ^d 6	21		
5713.2 ^f 6	21(+)		
5777.6 6	20(+)		$K^\pi=20^+$, configuration= $\nu 7/2[503]\otimes\nu 9/2[624]\otimes\nu 7/2[514]\otimes\nu 7/2[633]\otimes\pi 9/2[514]\otimes\pi 1/2[541]$ (1988Ch27).
5809.9 ^{&} 8	22+		
5982.9 6	21(+)		$K^\pi=21^+$, configuration= $\nu 9/2[505]\otimes\nu 9/2[624]\otimes\nu 7/2[514]\otimes\nu 7/2[633]\otimes\pi 9/2[514]\otimes\pi 1/2[541]$ (1988Ch27).
5987.5 [@] 7	24+		
6016.7 ^{&} 12	23+		
6088.3 ^e 6	22(+)		
6281.4 6	22(+)		$K^\pi=22^+$, configuration= $\nu 9/2[505]\otimes\nu 11/2[615]\otimes\nu 7/2[514]\otimes\nu 7/2[633]\otimes\pi 9/2[514]\otimes\pi 1/2[541]$ (1988Ch27).
6322.2 ^d 6	23		
6483.2 ^f 6	23(+)		
6543.4 6	23(+)		$K^\pi=23^+$, configuration= $\nu 9/2[505]\otimes\nu 11/2[615]\otimes\nu 7/2[514]\otimes\nu 7/2[633]\otimes\pi 9/2[514]\otimes\pi 3/2[532]$ (1988Ch27).
6861.6 ^e 6	24(+)		
6900.3 7	24		
7049.1 ^{#h} 6	25(+) [‡]	150 ns 10	$Q=4.2$ 2 (1991Br25); $g=+0.425$ 8 (1989A119)

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$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39 (continued) ^{182}Os Levels (continued)

E(level)	$J^{\pi\dagger}$	Comments
		Q: observation of time dependent quadrupole interaction pattern of γ radiation. g factor from $\gamma(\theta,H,t)$. $K^{\pi}=25^{+}$, configuration= $\nu 9/2[624]\otimes\nu 7/2[633]\otimes\nu 7/2[503]\otimes\nu 7/2[514]\otimes\pi 9/2[514]\otimes\pi 11/2[505]$ (1989A119,1988Ch27). This gives g factor=0.38. $T_{1/2}$: $\gamma\gamma(t)$ (1989A119). Other: 130 ns 20 (1988Ch27).
7485 ^{#i}	26 ⁺ [‡]	
7925 ^{#h}	27 ⁺ [‡]	
8346 ^{#i}	28 ⁺ [‡]	
8699 ^{#h}	29 ⁺ [‡]	
9103 ^{#i}	30 ⁺ [‡]	
9596 ^{#h}	31 ⁺ [‡]	
9939 ^{#i}	32 ⁺ [‡]	
10509 ^{#h}	33 ⁺ [‡]	
10780 ^{#i}	34 ⁺ [‡]	
11307 ^{#h}	35 ⁺ [‡]	
11560 ^{#i}	36 ⁺ [‡]	
12098 ^{#h}	(37 ⁺) [‡]	
12371 ^{#i}	(38 ⁺) [‡]	

[†] From 1988Ch27. The authors assume $\Delta J=2$, quadrupole transitions as E2 and $\Delta J=1$, dipole+quadrupole transitions as M1+E2 in making these assignments. The assignments in Adopted Levels are consistent but many are placed in parentheses there.

[‡] From 2003Pa39.

[#] Uncertainty of 2 keV assigned by the evaluator.

[@] Band(A): $K^{\pi}=0^{+}$, g.s. band.

[&] Band(B): $K^{\pi}=2^{+}$ band.

^a Band(C): $K^{\pi}=16^{+}$ band. Configuration= $\nu 7/2[514]\otimes\nu 9/2[624]\otimes\pi 5/2[402]\otimes\pi 11/2[505]$ or $\nu 9/2[505]\otimes\nu 9/2[624]\otimes\nu 7/2[514]\otimes\nu 7/2[633]$ (1988Ch27).

^b Band(D): $K^{\pi}=14^{-}$ band. Configuration= $\nu 7/2[514]\otimes\nu 9/2[624]\otimes\pi 9/2[514]\otimes\pi 3/2[532]$ (1988Ch27).

^c Band(E): $K^{\pi}=8^{-}$ band. Configuration= $\nu 7/2[514]\otimes\nu 9/2[624]$ (1988Ch27).

^d Band(F): $\Delta J=2$ sequence.

^e Band(G): $\Delta J=2$ sequence.

^f Band(H): $\Delta J=2$ sequence.

^g Band(I): $\Delta J=2$ sequence.

^h Band(J): Band built on $K^{\pi}=25^{+},\alpha=1$. Band from 2003Pa39.

ⁱ Band(j): Band built on $K^{\pi}=25^{+},\alpha=0$. Band from 2003Pa39.

I γ normalization: the level scheme of the isomer decay is incomplete. There is a large intensity imbalance in the excitation region of 2 to 4 MeV.

E_γ [†]	I_γ [‡]	E_i (level)	J_i^π	E_f	J_f^π	Mult.	α^f	$I_{(\gamma+ce)}$	Comments
127.1 2	36 [#]	127.1	2 ⁺	0.0	0 ⁺	E2 [@]	1.69	97	
133.0 5	<1	2245.5	9 ⁺	2112.4	8 ⁺				
148.9 5	<1	7049.1	25 ⁽⁺⁾	6900.3	24				
152.0 5	1	2526.1	11 ⁺	2374.6	10 ⁺				
159.3 2	3	4369.8	16 ⁽⁺⁾	4210.5	15 ⁽⁻⁾	(E1) ^{&b}	0.1183		Mult.: from intensity balance at 4370 level (in $\gamma\gamma$ data), $\alpha(\text{exp})(159\gamma)=0.26$ for mult(312 γ)=E2 and $\alpha(\text{exp})(159\gamma)=0.43$ for mult(312 γ)=M1.
^x 174.5 5	1								
181.5 5	1	2013.1	9 ⁻	1831.6	8 ⁻				
187.5 2	9	7049.1	25 ⁽⁺⁾	6861.6	24 ⁽⁺⁾	(M1+E2) ^{&b}			
^x 191.2 5	1								
198.1 5	2	2869.3	13 ⁺	2671.7	12 ⁺				
205.3 2	11	5982.9	21 ⁽⁺⁾	5777.6	20 ⁽⁺⁾	(M1+E2) ^{&b}			
206.1 5	<1	2219.2	10 ⁻	2013.1	9 ⁻				
^x 212.4 5	1								
^x 214.1 2	3								
229.0 5	<1	2448.1	11 ⁻	2219.2	10 ⁻				
230.0 5	<1	3303.6	15 ⁺	3072.6	14 ⁺				
^x 232.0 2	4								
241.6 2	3	4210.5	15 ⁽⁻⁾	3968.9	14 ⁽⁻⁾				
^x 246.5 2	4								
251.1 5	1	2699.2	12 ⁻	2448.1	11 ⁻				
253 ^e		11560	36 ⁺	11307	35 ⁺				
^x 254.8 5	2								
259.4 5	<1	4425.3	17 ⁽⁺⁾	4166.0	16 ⁺				
262.0 2	19	6543.4	23 ⁽⁺⁾	6281.4	22 ⁽⁺⁾	(M1+E2) ^{&b}	0.26	12	
^x 268.4 5	1								
270 ^e		10780	34 ⁺	10509	33 ⁺				
273 ^{eg}		12371	(38 ⁺)	12098	(37 ⁺)				
273.1 2	83 [#]	400.2	4 ⁺	127.1	2 ⁺	E2 [@]	0.1214	93	
280.6 2	3	2526.1	11 ⁺	2245.5	9 ⁺				
287.8 5	2	4712.9	18 ⁽⁺⁾	4425.3	17 ⁽⁺⁾				
^x 292.0 5	4								
292.0 2	6	5777.6	20 ⁽⁺⁾	5485.5	19				
298.5 2	17	6281.4	22 ⁽⁺⁾	5982.9	21 ⁽⁺⁾	(M1+E2) ^{&b}	0.18	9	
301.2 2	3	5180.3	18	4879.1	17 ⁽⁻⁾				

$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ [1988Ch27,2003Pa39](#) (continued)

$\gamma(^{182}\text{Os})$ (continued)

E_γ^\dagger	I_γ^\ddagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α^f	$I_{(\gamma+ce)}$
302.1 2	4	5062.9	19	4760.8	18			
305.0 5	2	4515.8	16 ⁽⁻⁾	4210.5	15 ⁽⁻⁾			
305.0 5	2	5485.5	19	5180.3	18			
311.0 5	<1	5024.0	19 ⁽⁺⁾	4712.9	18 ⁽⁺⁾			
312.3 2	10	4682.1	17 ⁽⁺⁾	4369.8	16 ⁽⁺⁾			
318.2 2	3	6861.6	24 ⁽⁺⁾	6543.4	23 ⁽⁺⁾			
322.8 5	<20 ^d	5004.8	18 ⁽⁺⁾	4682.1	17 ⁽⁺⁾			
323.7 5	<20 ^d	4760.8	18	4437.0	17			
325.3 5	<20 ^d	3968.9	14 ⁽⁻⁾	3643.6	13 ⁽⁻⁾			
327.6 5	<20 ^d	5332.4	19 ⁽⁺⁾	5004.8	18 ⁽⁺⁾			
^x 328.4 5	<20 ^d							
334.0 5	<1	5357.8	20 ⁽⁺⁾	5024.0	19 ⁽⁺⁾			
343 ^e		9939	32 ⁺	9596	31 ⁺			
343.3 2	8	2869.3	13 ⁺	2526.1	11 ⁺			
353 ^e		8699	29 ⁺	8346	28 ⁺			
355.6 5	2	5713.2	21 ⁽⁺⁾	5357.8	20 ⁽⁺⁾			
^x 361.5 2	3							
363.0 5	<1	4879.1	17 ⁽⁻⁾	4515.8	16 ⁽⁻⁾			
^x 367.1 5	2							
^x 373.6 5	2							
375.0 5	<1	6088.3	22 ⁽⁺⁾	5713.2	21 ⁽⁺⁾			
^x 387.0 5	2							
387.5 5	<1	2219.2	10 ⁻	1831.6	8 ⁻			
393.8 2	101 [#]	794.0	6 ⁺	400.2	4 ⁺	E2 [@]	0.0422	105
400.1 5	2	3072.6	14 ⁺	2671.7	12 ⁺			
404 ^e		9103	30 ⁺	8699	29 ⁺			
^x 414.0 5	1							
^x 417.6 5	2							
421 ^e		8346	28 ⁺	7925	27 ⁺			
^x 421.9 5	2							
^x 428.6 5	1							
434.4 2	12	3303.6	15 ⁺	2869.3	13 ⁺			
435.0 5	<1	2448.1	11 ⁻	2013.1	9 ⁻			
436 ^e		7485	26 ⁺	7049.1	25 ⁽⁺⁾			
^x 440.0 2	3							
440 ^e		7925	27 ⁺	7485	26 ⁺			
^x 443.0 5	1							
^x 447.8 5	1							
450.6 5	2	3290.8	14 ⁺	2840.3	14 ⁺			
^x 455.0 5	2							
479.5 2	25	3319.7	16 ⁺	2840.3	14 ⁺			

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$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ [1988Ch27,2003Pa39](#) (continued)

$\gamma(^{182}\text{Os})$ (continued)

E_γ^\dagger	I_γ^\ddagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	E_γ^\dagger	I_γ^\ddagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.
480.0 5	<1	2699.2	12 ⁻	2219.2	10 ⁻		650.5 2	9	5982.9	21 ⁽⁺⁾	5332.4	19 ⁽⁺⁾	Q ^{ab}
483.7 2	104	1277.7	8 ⁺	794.0	6 ⁺		657.6 2	3	4274.8	18 ⁺	3617.2	16 ⁺	
493 ^e		9596	31 ⁺	9103	30 ⁺		^x 660.8 5	1					
494.5 2	54	2840.3	14 ⁺	2345.7	12 ⁺		668.6 5	<1	4879.1	17 ⁽⁻⁾	4210.5	15 ⁽⁻⁾	
495.8 2	3	4425.3	17 ⁽⁺⁾	3929.5	15 ⁽⁺⁾	Q ^{ab}	673.6 2	4	5142.1	20 ⁺	4468.5	18 ⁺	
505.6 2	35	7049.1	25 ⁽⁺⁾	6543.4	23 ⁽⁺⁾	Q ^{ab}	689.1 2	14	5713.2	21 ⁽⁺⁾	5024.0	19 ⁽⁺⁾	Q ^{ab}
509.9 5	2	4425.3	17 ⁽⁺⁾	3915.3	15 ⁽⁺⁾		^x 693.6 5	2					
^x 512.6 5	1						^x 703.4 2	3					
^x 518.3 5	2						712.0 2	4	5192.0	22 ⁺	4480.0	20 ⁺	
523.0 5	1	2971.1	13 ⁻	2448.1	11 ⁻		726.9 2	29	7049.1	25 ⁽⁺⁾	6322.2	23	
527 ^e		11307	35 ⁺	10780	34 ⁺		727.0 5	<1	3072.6	14 ⁺	2345.7	12 ⁺	
534.0 2	89	1811.7	10 ⁺	1277.7	8 ⁺	Q ^{ab}	729.0 5	<1	5204.7	21 ⁺	4475.7	19 ⁺	
534.0 2	75	2345.7	12 ⁺	1811.7	10 ⁺	Q ^{ab}	730.5 2	10	6088.3	22 ⁽⁺⁾	5357.8	20 ⁽⁺⁾	
536.5 5	<1	3840.1	17 ⁺	3303.6	15 ⁺		749.1 2	5	5023.9	20 ⁺	4274.8	18 ⁺	
537.0 2	17	3856.7	18 ⁺	3319.7	16 ⁺		^x 754.1 5	2					
538 ^{eg}		12098	(37 ⁺)	11560	36 ⁺		^x 755.9 5	<1					
544.6 2	5	3617.2	16 ⁺	3072.6	14 ⁺		757 ^e		9103	30 ⁺	8346	28 ⁺	
546.8 2	12	4712.9	18 ⁽⁺⁾	4166.0	16 ⁺		^x 758.2 5	1					
547.0 5	<1	4515.8	16 ⁽⁻⁾	3968.9	14 ⁽⁻⁾		^x 763.3 5	1					
555.7 2	5	4712.9	18 ⁽⁺⁾	4157.1	16 ⁽⁺⁾		770.2 2	5	6483.2	23 ⁽⁺⁾	5713.2	21 ⁽⁺⁾	
560.2 5	2	3850.9	16 ⁺	3290.8	14 ⁺		773.3 2	9	6861.6	24 ⁽⁺⁾	6088.3	22 ⁽⁺⁾	
566.0 2	8	7049.1	25 ⁽⁺⁾	6483.2	23 ⁽⁺⁾		774 ^e		8699	29 ⁺	7925	27 ⁺	
^x 568.9 2	3						776.9 2	4	3617.2	16 ⁺	2840.3	14 ⁺	
570 ^e		10509	33 ⁺	9939	32 ⁺		^x 777.9 5	<1					
^x 577.9 5	1						^x 779.4 5	<1					
^x 585.6 5	1						780 ^e		11560	36 ⁺	10780	34 ⁺	
^x 590.3 5	2						^x 783.1 5	<1					
598.8 2	13	5024.0	19 ⁽⁺⁾	4425.3	17 ⁽⁺⁾	Q ^{ab}	786.0 5	<1	5809.9	22 ⁺	5023.9	20 ⁺	
^x 602.9 5	2						^x 787.2 5	<1					
611.3 2	10	5674.2	21	5062.9	19		^x 790.8 5	<1					
617.6 2	5	4468.5	18 ⁺	3850.9	16 ⁺		791 ^e		12098	(37 ⁺)	11307	35 ⁺	
623.2 2	7	4480.0	20 ⁺	3856.7	18 ⁺		795.6 5	2	5987.5	24 ⁺	5192.0	22 ⁺	
626.0 2	4	5062.9	19	4437.0	17		^x 797.9 5	2					
^x 630.6 5	1						798 ^e		11307	35 ⁺	10509	33 ⁺	
^x 633.6 2	3						^x 807.7 5	1					
635.0 5	<6 ^c	5004.8	18 ⁽⁺⁾	4369.8	16 ⁽⁺⁾		811 ^e		12371	(38 ⁺)	11560	36 ⁺	
635.5 5	<6 ^c	5777.6	20 ⁽⁺⁾	5142.1	20 ⁺		812.0 5	2	6016.7	23 ⁺	5204.7	21 ⁺	
635.6 5	<6 ^c	4475.7	19 ⁺	3840.1	17 ⁺		812.2 5	2	6900.3	24	6088.3	22 ⁽⁺⁾	
644.9 2	12	5357.8	20 ⁽⁺⁾	4712.9	18 ⁽⁺⁾		^x 818.3 5	1					
648.0 2	14	6322.2	23	5674.2	21		^x 828.2 5	<1					
650.5 5	1	5332.4	19 ⁽⁺⁾	4682.1	17 ⁽⁺⁾		830.1 2	9	6543.4	23 ⁽⁺⁾	5713.2	21 ⁽⁺⁾	Q ^{ab}

$\gamma(^{182}\text{Os})$ (continued)

E_γ †	I_γ ‡	E_i (level)	J_i^π	E_f	J_f^π
$^{x}835.5$ 5	2				
837 ^e		9939	32 ⁺	9103	30 ⁺
841 ^e		10780	34 ⁺	9939	32 ⁺
$^{x}841.8$ 5	1				
$^{x}847.0$ 5	2				
$^{x}852.3$ 5	1				
$^{x}856.9$ 5	2				
859.9 2	7	2671.7	12 ⁺	1811.7	10 ⁺
861 ^e		8346	28 ⁺	7485	26 ⁺
$^{x}863.1$ 5	1				
$^{x}867.8$ 5	1				
$^{x}875.6$ 5	1				
876 ^e		7925	27 ⁺	7049.1	25 ⁽⁺⁾
$^{x}880.9$ 5	1				
$^{x}886.1$ 5	1				
$^{x}891.8$ 5	1				
896 ^e		9596	31 ⁺	8699	29 ⁺
$^{x}897.0$ 5	2				
$^{x}899.9$ 5	<1				
$^{x}903.4$ 5	1				
$^{x}913.6$ 5	1				
914 ^e		10509	33 ⁺	9596	31 ⁺
$^{x}918.3$ 5	<1				
$^{x}921.6$ 5	1				
$^{x}924.8$ 5	1				
$^{x}927.9$ 5	1				
$^{x}933.6$ 5	1				
$^{x}940.1$ 5	1				
$^{x}944.9$ 5	2				
$^{x}950.9$ 5	1				
955.2 5	<1	4274.8	18 ⁺	3319.7	16 ⁺
$^{x}957.6$ 5	1				
$^{x}962.8$ 5	1				
$^{x}966.0$ 5	1				
$^{x}971.4$ 5	1				
$^{x}974.9$ 5	1				
$^{x}981.5$ 5	1				
$^{x}985.8$ 5	1				
$^{x}990.6$ 5	2				
$^{x}994.8$ 5	<1				
$^{x}999.5$ 5	1				
$^{x}1007.0$ 5	<1				
$^{x}1014.9$ 5	1				

$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ [1988Ch27,2003Pa39](#) (continued)

$\gamma(^{182}\text{Os})$ (continued)

E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ	α^f
$^{x1017.3}$ 5	<1							
$^{x1026.5}$ 5	<1							
$^{x1039.1}$ 5	1							
$^{x1045.9}$ 5	1							
$^{x1054.4}$ 5	<1							
$^{x1058.6}$ 5	1							
1061.6 5	2	7049.1	25(+)	5987.5	24+	(M1+E2) ^{&b}	-1.9 +9-12	0.0056 15
$^{x1067.2}$ 5	1							
1075.0 5	2	3915.3	15(+)	2840.3	14+			
$^{x1084.6}$ 5	1							
1089.3 2	5	3929.5	15(+)	2840.3	14+	(M1+E2) ^{&b}	-1.0 +3-6	0.0066 11
1097.0 2	3	2374.6	10+	1277.7	8+			
$^{x1099.6}$ 5	1							
$^{x1111.6}$ 5	1							
1117.3 5	2	4437.0	17	3319.7	16+			
$^{x1124.2}$ 5	2							
$^{x1127.8}$ 5	1							
1130.2 5	1	6322.2	23	5192.0	22+			
$^{x1136.2}$ 5	1							
$^{x1139.4}$ 5	1							
$^{x1141.9}$ 5	1							
1195.5 5	<1	3643.6	(13 ⁻)	2448.1	11 ⁻			
$^{x1211.7}$ 5	1							
$^{x1226.2}$ 5	1							
$^{x1232.8}$ 5	2							
$^{x1254.1}$ 5	1							
$^{x1283.8}$ 5	1							
$^{x1303.2}$ 5	<1							
1316.8 5	1	4157.1	16(+)	2840.3	14+			
1318.4 5	<1	2112.4	8+	794.0	6+			
1325.7 2	4	4166.0	16+	2840.3	14+	Q ^{ab}		
$^{x1342.5}$ 5	<1							
$^{x1359.1}$ 5	1							
$^{x1498.5}$ 5	<1							
1529.5 5	<1	4369.8	16(+)	2840.3	14+			

† 0.5-keV uncertainty assigned (evaluators) for $I_\gamma \leq 2$, based on statement by [1988Ch27](#) that it is 0.5 keV for weak and unresolved lines. Values are from [1988Ch27](#), unless otherwise stated.

‡ Values are from [1988Ch27](#), unless otherwise stated.

From $I(\gamma+ce)$ and α .

$\gamma(^{182}\text{Os})$ (continued)

@ From Adopted Gammas.

& DCO ratio consistent with $\Delta J=1$ transition with a significant $\delta(Q/D)$ value suggest M1+E2.

^a DCO ratio consistent with $\Delta J=2$ (E2) transition.

^b Angular correlation data are displayed in figure 5 of 1988Ch27.

^c $I_{\gamma}(635.0\gamma+635.5\gamma+635.6\gamma)=6$.

^d $I_{\gamma}(322.8\gamma+323.7\gamma+325.3\gamma+327.6\gamma+328.4\gamma)=20$.

^e From 2003Pa39.

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

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

^x γ ray not placed in level scheme.

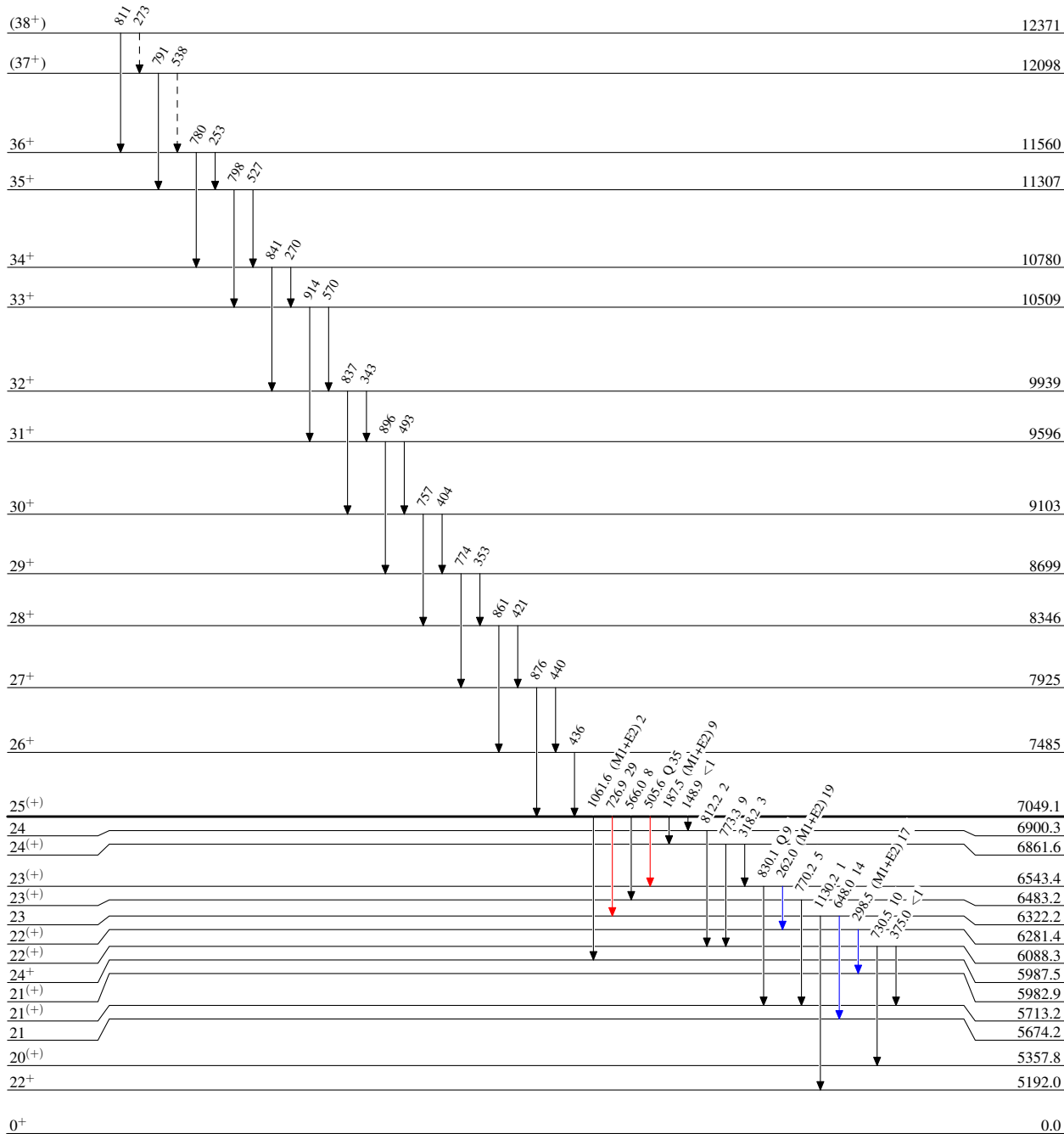
$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39

Legend

Level Scheme

Intensities: Relative I_γ

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



$^{182}_{76}\text{Os}_{106}$

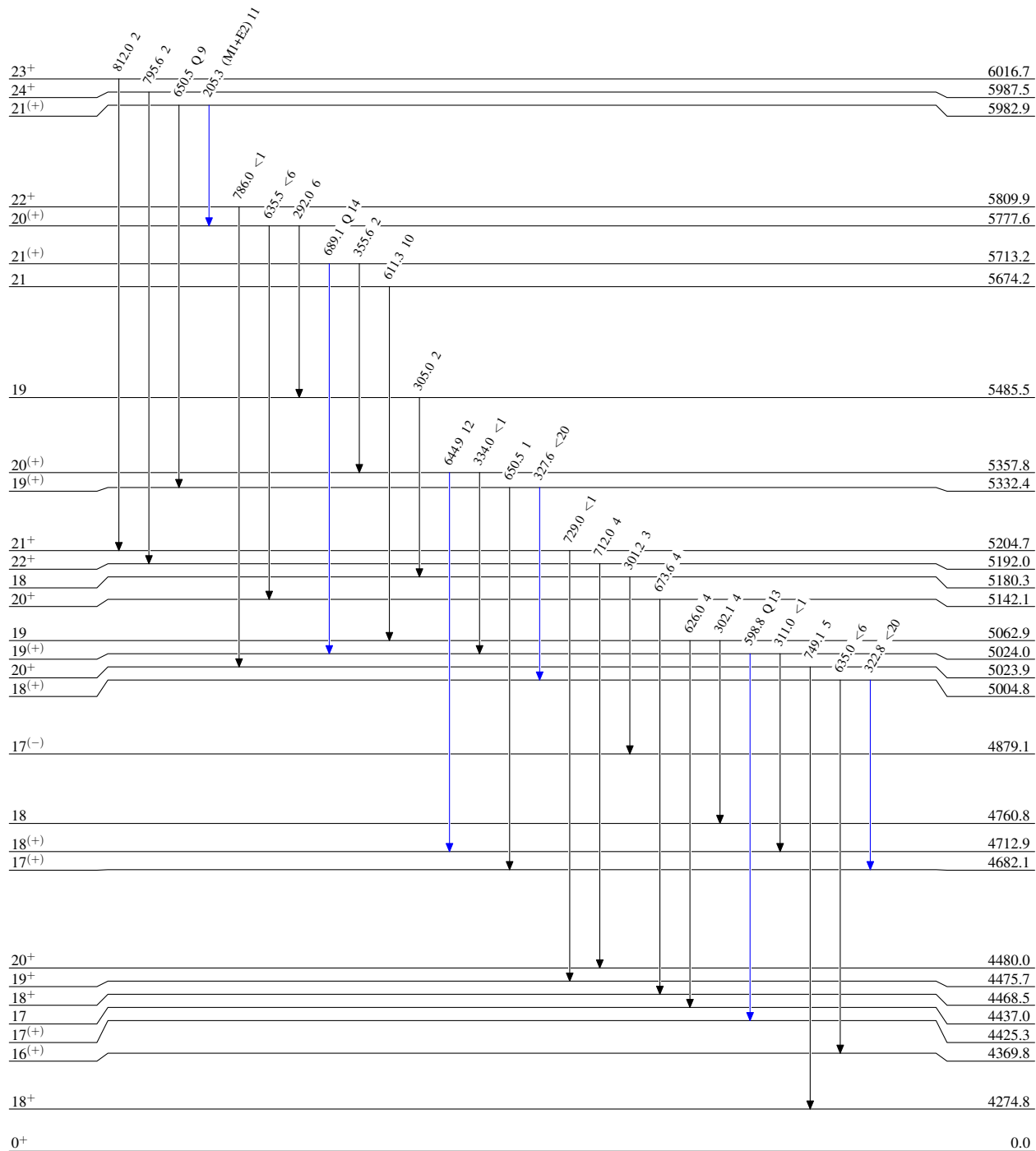
$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



6 ns 2

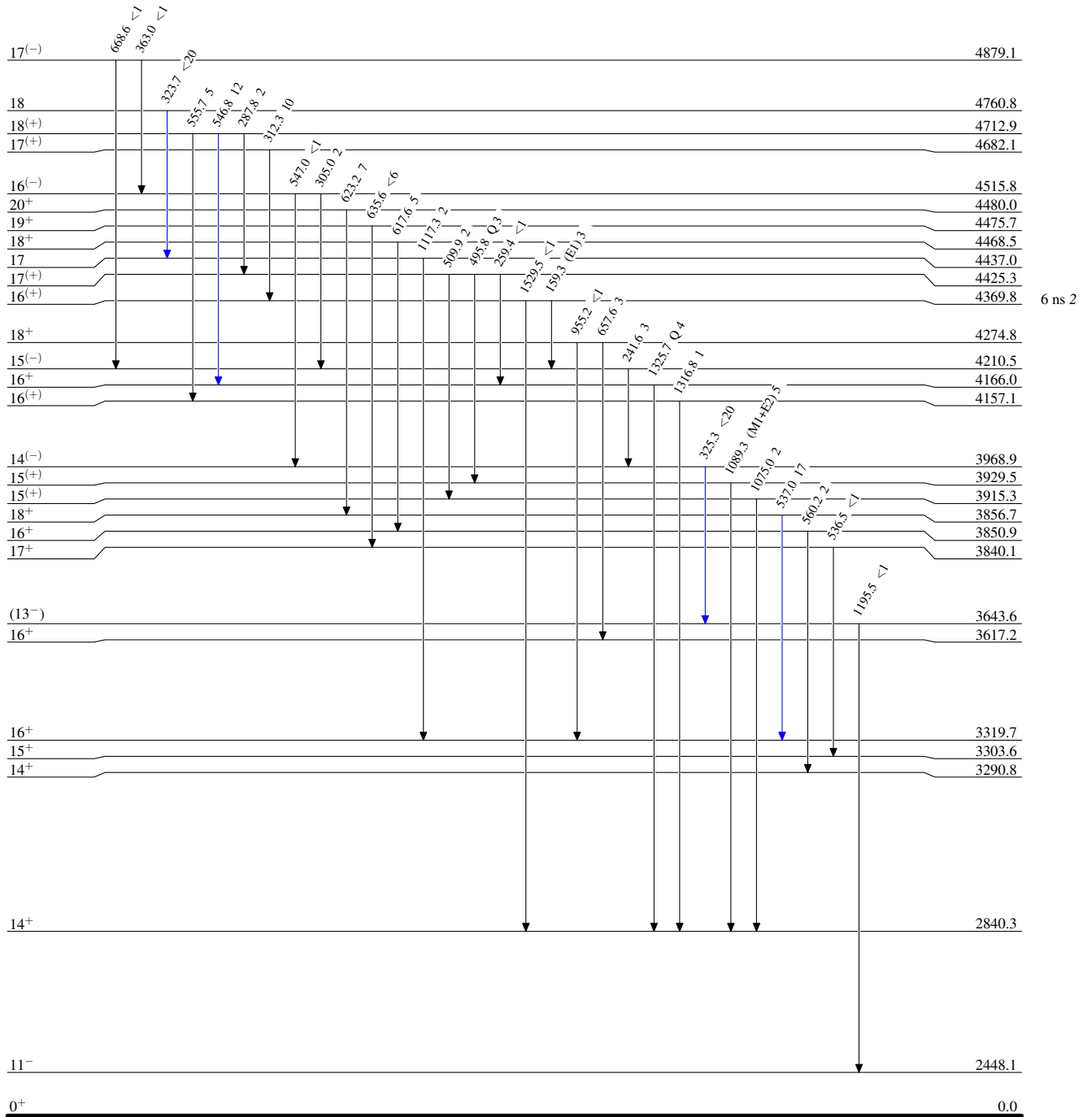
$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- \longrightarrow $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- \longrightarrow $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- \longrightarrow $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



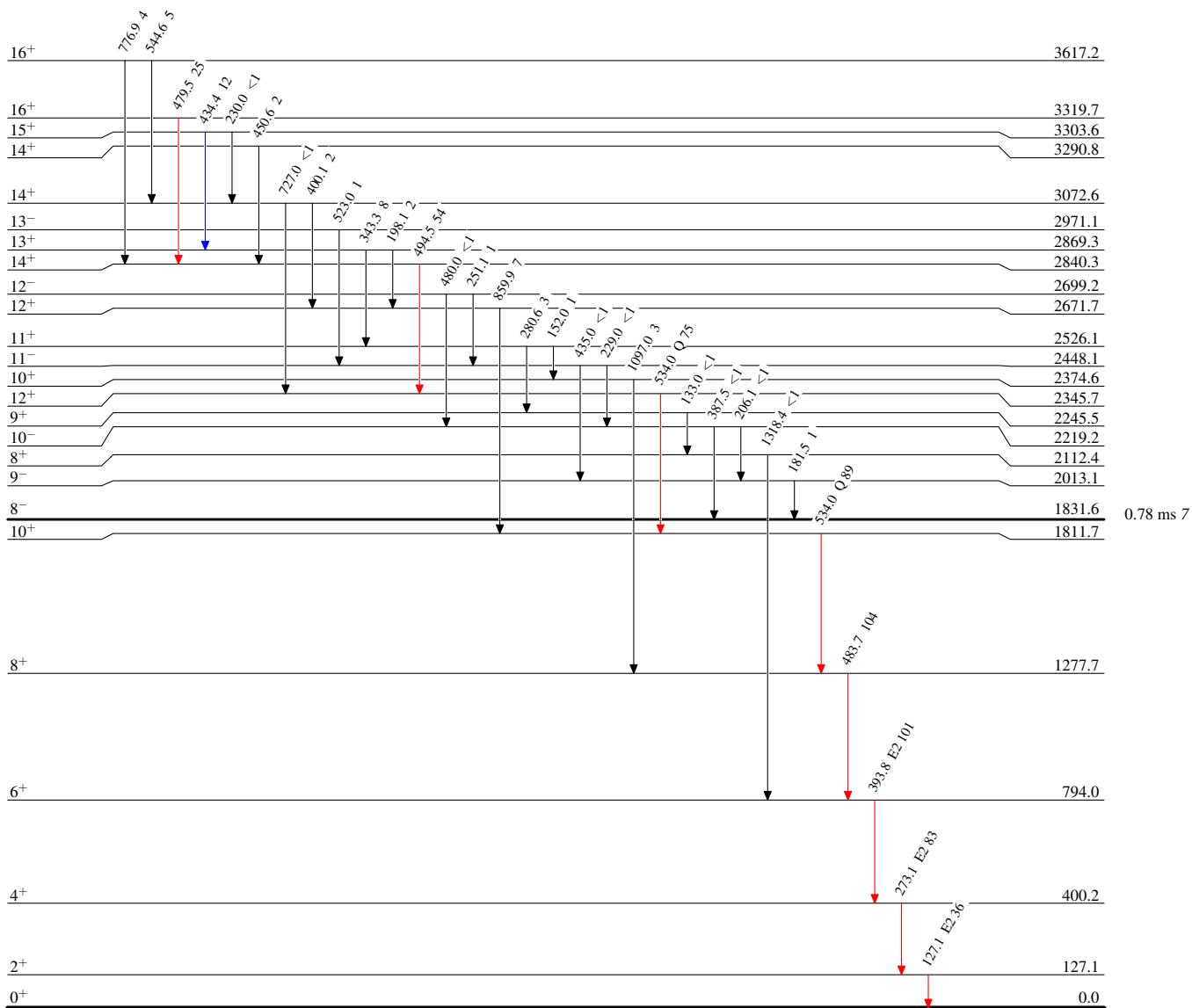
$^{150}\text{Nd}(^{36}\text{S},4n\gamma):\text{delayed } \gamma$ 1988Ch27,2003Pa39

Legend

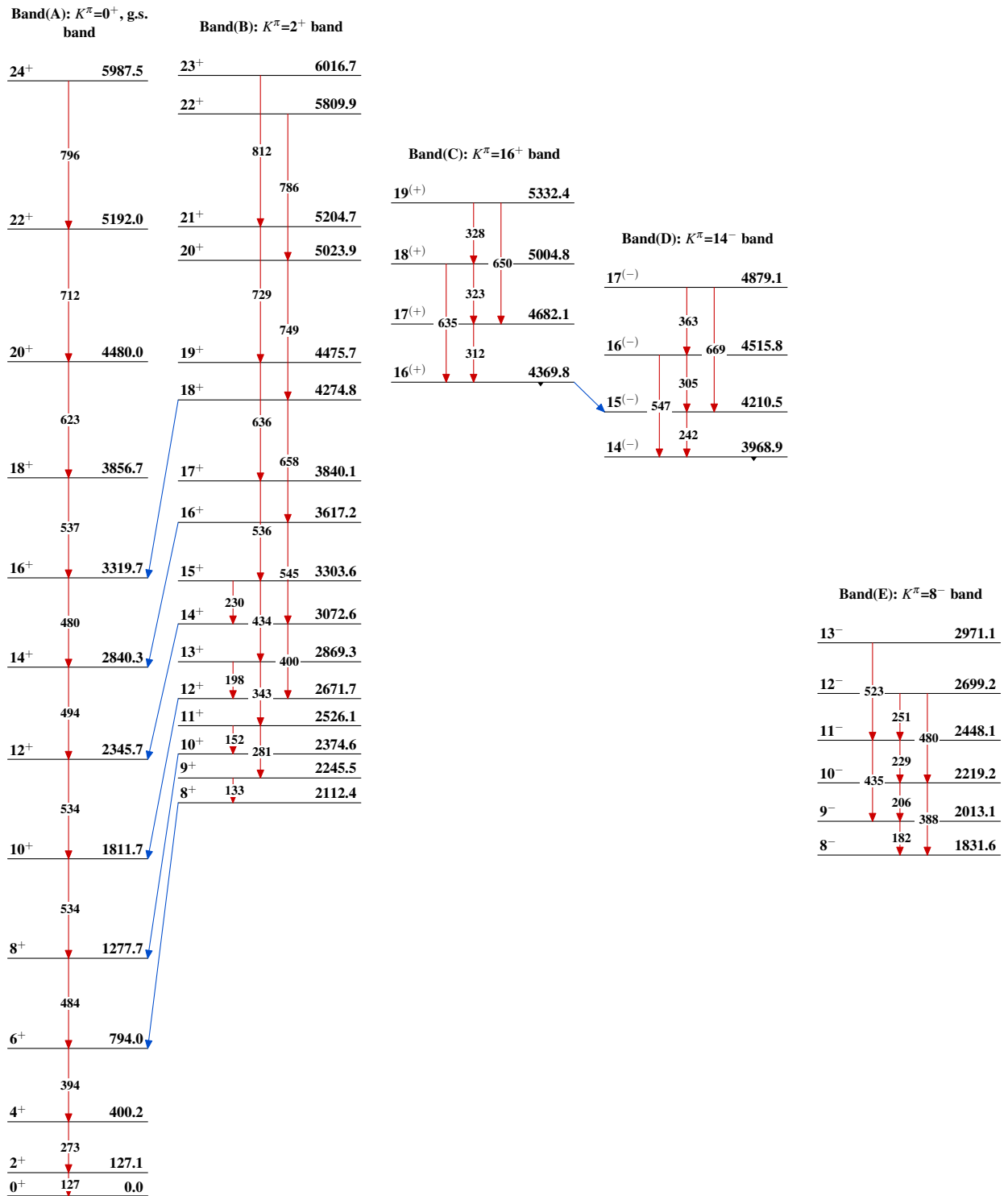
Level Scheme (continued)

Intensities: Relative I_γ

- \rightarrow $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- \rightarrow $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- \rightarrow $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



$^{182}_{76}\text{Os}_{106}$

$^{150}\text{Nd}(^{36}\text{S},4n\gamma):$ delayed γ 1988Ch27,2003Pa39

$^{150}\text{Nd}(^{36}\text{S},4n\gamma)$:delayed γ 1988Ch27,2003Pa39 (continued)