^{191}Re β^- decay 1985Ni12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 195,368 (2024)	1-Dec-2023

Parent: ^{191}Re: E=0.0; J$^\pi$=(3/2$^+$,1/2$^+$); T$_{1/2}$=9.8 min *5*; Q(β^-)=2045 *10*; %β^- decay=100

^{191}Re-J$^\pi$: From Adopted Level in ^{191}Re. In 1985Ni12 (Fig. 4) listed it as 1/2$^+$[411],3/2$^+$[402].

^{191}Re was produced by the ^{192}Os(γ,p)^{191}Re reaction with the bremsstrahlung from 50 MeV electron beam at the JAERI, Japan. Sources were obtained by chemical separation from the irradiated natural osmium powder. Ge(Li), LEPS, β-anthracene scintillation counter. Measured Eγ, Iγ, γ-γ coin, β-γ coin, %Iγ(235) by 4$\pi\beta$. Deduced level scheme, β-feeding from Iγ intensity balance at each level.

A poor fit of the proposed γ-ray placements in the level scheme by 1985Ni12 along with the different placements in the adopted dataset indicates that the level/decay scheme has significant problems. There were too many differing cases compared to adopted dataset. Evaluator cross referenced only the consistent levels with other reactions with respect to spin-parity and γ-ray placements. Observational notes are listed in the comments section.

Eβ^-(^{191}Re)=1800 keV *200* (1953At24) − absorption measurement.

^{191}Os Levels

E(level)[†]	J$^\pi$[#]	T$_{1/2}$[@]	Comments
0	9/2$^-$	14.99 d *2*	
74.06 *4*	3/2$^-$	13.10 h *5*	
84.16 *4*	(1/2)$^-$		
137.74[‡] *4*	5/2$^-$		E(level),J$^\pi$: From 1985Ni12, level not reported in other studies and not adopted. See general comments on this dataset.
141.59 *4*	(3/2)$^-$		
175.57 *4*	(11/2)$^+$		
272.92 *4*	5/2$^-$		
326.44[‡] *6*			
410.58 *4*	(7/2)$^+$		J$^\pi$: No assignment in 1985Ni12.
417.21 *4*	1/2$^-$,3/2$^-$		
436.48 *5*	(1/2,3/2)$^-$		J$^\pi$: (1/2$^-$,3/2$^-$) in 1985Ni12.
487.15 *5*	(3/2)$^-$		
507.58 *5*	(3/2)$^-$		
611.79 *4*	1/2$^-$,3/2$^-$		
618.85 *4*	(5/2)$^-$		
639.06[‡] *8*	(1/2,3/2)$^-$		E(level),J$^\pi$: From 1985Ni12, level not reported in other studies and not adopted.
715.71[‡] *5*			E(level): From 1985Ni12, level not reported in other studies and not adopted.
747.04 *5*	(3/2)$^-$		
763.47[‡] *5*			E(level): Appears to be a doublet of 762.374 and 764.6614 in Adopted Levels.
793.97 *5*	(3/2)$^-$		J$^\pi$: (1/2$^-$,3/2$^-$) in 1985Ni12.
823.98 *6*	+		J$^\pi$: No assignment in 1985Ni12.
824.98[‡] *8*			
888.16[‡] *6*			
916.67[‡] *5*			
927.04[‡] *7*			
937.84 *8*			
958.37 *6*	(1/2,3/2)$^-$		J$^\pi$: No assignment in 1985Ni12.
995.77 *6*			
1081.08 *7*			
1116.68 *8*	(5/2)$^-$		E(level): Comparable to 1118.001 excited level in the adopted dataset − however depopulating γ rays of this level are different compared to that of the adopted level.
1120.06[‡] *7*			

Continued on next page (footnotes at end of table)

^{191}Re β^- decay 1985Ni12 (continued)

^{191}Os Levels (continued)

E(level)†	J$^\pi$#
1127.89‡ *10*	
1146.40‡ *6*	
1229.93‡ *8*	
1298.26 *7*	(1/2,3/2)$^-$
1338.83‡ *8*	
1391.49‡ *10*	

† From a least-squares fit to Eγ. χ^2=51.3, cf. χ^2_{crit}=1.6. It was a poor fit, where 37 γ out of 78 differ by 3 or more sigma from the calculated values. This is perhaps an indication of questionable placement for some of the γ rays in the level scheme. Different placement of any γ rays compared to the Adopted Levels are noted.
‡ Reported only in 1985Ni12 (^{191}Re β- Decay).
# From Adopted Levels, except where otherwise noted.
@ From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†‡	Log *ft*	Comments
(654 *10*)	1391.49	0.039 *9*	7.50 *11*	av Eβ=202.8 *36*
(706 *10*)	1338.83	0.022 *7*	7.87 *15*	av Eβ=221.7 *37*
(747 *10*)	1298.26	0.042 *7*	7.67 *8*	av Eβ=236.5 *37*
(815 *10*)	1229.93	0.079 *13*	7.53 *8*	av Eβ=261.7 *38*
(899 *10*)	1146.40	0.23 *3*	7.21 *7*	av Eβ=293.2 *39*
(917 *10*)	1127.89	0.089 *16*	7.66 *9*	av Eβ=300.2 *39*
(925 *10*)	1120.06	0.013 *4*	8.50 *14*	av Eβ=303.2 *39*
(928 *10*)	1116.68	0.138 *20*	7.48 *7*	av Eβ=304.6 *39*
(964 *10*)	1081.08	0.173 *21*	7.44 *6*	av Eβ=318.2 *39*
(1049 *10*)	995.77	0.54 *6*	7.08 *6*	av Eβ=351.2 *40*
(1087 *10*)	958.37	0.36 *5*	7.31 *7*	av Eβ=365.9 *40*
(1107 *10*)	937.84	0.25 *3*	7.50 *6*	av Eβ=373.9 *40*
(1118 *10*)	927.04	0.146 *21*	7.75 *7*	av Eβ=378.1 *40*
(1128 *10*)	916.67	0.117 *22*	7.86 *9*	av Eβ=382.3 *40*
(1157 *10*)	888.16	0.115 *16*	7.91 *7*	av Eβ=393.7 *40*
(1221 *10*)	823.98	0.47 *6*	7.38 *7*	av Eβ=419.2 *41*
(1251 *10*)	793.97	0.93 *10*	7.12 *6*	av Eβ=431.3 *41*
(1282 *10*)	763.47	0.54 *6*	7.40 *6*	av Eβ=443.6 *41*
(1298 *10*)	747.04	0.59 *7*	7.38 *6*	av Eβ=450.3 *41*
(1329 *10*)	715.71	0.033 *18*	8.67 *24*	av Eβ=463.2 *41*
(1406 *10*)	639.06	0.119 *13*	8.20 *6*	av Eβ=494.2 *41*
(1426 *10*)	618.85	0.67 *8*	7.47 *6*	av Eβ=502.4 *41*
(1433 *10*)	611.79	0.82 *9*	7.39 *6*	av Eβ=505.4 *42*
(1558 *10*)	487.15	0.29 *4*	7.98 *7*	av Eβ=556.8 *42*
(1609 *10*)	436.48	0.82 *9*	7.58 *6*	av Eβ=577.9 *42*
(1719 *10*)	326.44	0.08 *3*	8.70 *17*	av Eβ=624.3 *43*
(1903 *10*)	141.59	26 *3*	6.36 *6*	av Eβ=702.3 *43*
(1907 *10*)	137.74	22 *3*	6.44 *7*	av Eβ=704.1 *43*
(1961 *10*)	84.16	22 *3*	6.48 *7*	av Eβ=726.8 *43*
(1971 *10*)	74.06	22 *3*	6.49 *7*	av Eβ=731.1 *43*

† From γ-ray intensity balance. β-feeding to g.s, 1st, and 2nd excited states are not known. In 1985Ni12, a feeding of 63 has been proposed in Fig. 4. The deduced value for this dataset was 66, equally divided by evaluator for three levels, uncertainty assumed to be that for the beta feeding at 141.59 keV level.
‡ Absolute intensity per 100 decays.

γ(^{191}Os)

Iγ normalization: From %Iγ(235)=0.55 *6* and Iγ(235)(rel)=13.81 *55* in 1985Ni12.

E_γ	I_γ[@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[‡]	δ[‡]	α[#]	Comments
47.55 *3*	1.80 *26*	763.47		715.71					E_γ: Comparable 47.486γ placed from 131.9 keV level in adopted dataset.
57.49 *2*	100	141.59	(3/2)$^-$	84.16	(1/2)$^-$	M1+E2	0.077 *18*	5.18 *16*	α(L)=3.99 *12*; α(M)=0.922 *30* α(N)=0.225 *7*; α(O)=0.0385 *11*; α(P)=0.00271 *4*
67.51 *3*	19.30 *85*	141.59	(3/2)$^-$	74.06	3/2$^-$	M1+E2	0.19 *4*	3.76 *31*	α(L)=2.89 *23*; α(M)=0.68 *6* α(N)=0.165 *14*; α(O)=0.0275 *21*; α(P)=0.001652 *32*
111.12[†] *5*	0.64 *9*	618.85	(5/2)$^-$	507.58	(3/2)$^-$				
123.09[†] *6*	0.73 *10*	916.67		793.97	(3/2)$^-$				
124.62[†] *5*	0.67 *9*	611.79	1/2$^-$,3/2$^-$	487.15	(3/2)$^-$				
131.97[†] *5*	4.56 *38*	272.92	5/2$^-$	141.59	(3/2)$^-$				
137.83 *5*	2.72 *28*	137.74	5/2$^-$	0	9/2$^-$				E_γ: Comparable 137.068γ placed from 410.8 keV level in adopted dataset.
172.31 *5*	2.72 *25*	888.16		715.71					E_γ: Comparable 172.328γ placed from 314.3 keV level in adopted dataset.
175.66 *5*	16.23 *75*	175.57	(11/2)$^+$	0	9/2$^-$	E1		0.0922 *13*	α(K)=0.0759 *11*; α(L)=0.01258 *18*; α(M)=0.00288 *4* α(N)=0.000695 *10*; α(O)=0.0001147 *16*; α(P)=6.69×10^{-6} *9*
180.80[†] *10*	0.47 *12*	927.04		747.04	(3/2)$^-$				
182.24 *5*	2.62 *27*	618.85	(5/2)$^-$	436.48	(1/2,3/2)$^-$				E_γ: Comparable 182.321γ placed from 314.3 keV level in adopted dataset.
193.95 *5*	1.65 *21*	611.79	1/2$^-$,3/2$^-$	417.21	1/2$^-$,3/2$^-$	M1+E2	0.80 *16*	0.67 *5*	α(K)=0.51 *5*; α(L)=0.1244 *31*; α(M)=0.0298 *10* α(N)=0.00722 *23*; α(O)=0.001175 *24*; α(P)=5.7×10^{-5} *7*
202.10[†] *5*	0.55 *10*	618.85	(5/2)$^-$	417.21	1/2$^-$,3/2$^-$				
229.73 *4*	5.77 *41*	1146.40		916.67					E_γ: Comparable 229.810γ placed from 314.3 keV level in adopted dataset.
235.19 *3*	13.81 *55*	410.58	(7/2)$^+$	175.57	(11/2)$^+$				
239.89 *5*	6.91 *45*	747.04	(3/2)$^-$	507.58	(3/2)$^-$				E_γ: Comparable 239.886γ placed from 314.3 keV level in adopted dataset.
242.25 *5*	10.09 *50*	326.44		84.16	(1/2)$^-$				E_γ: Comparable 242.211γ is unplaced in ^{190}Os(n,γ) E=thermal.
272.81[&] *5*	11.54[&]	272.92	5/2$^-$	0	9/2$^-$				I_γ: From Fig. 1. In Table I – 13.84 *61* from γ-γ coincidence measurements.
272.81[&] *5*	2.30[&]	410.58	(7/2)$^+$	137.74	5/2$^-$	E2		0.1218 *17*	α(K)=0.0754 *11*; α(L)=0.0352 *5*; α(M)=0.00875 *12* α(N)=0.002109 *30*; α(O)=0.000325 *5*; α(P)=7.46×10^{-6} *10* E_γ: Multiply placed. Comparable 272.754γ from this level is not in the adopted dataset.

γ(^{191}Os) (continued)

E_γ	I_γ[@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	α[#]	Comments
									I_γ: From Fig. 1. In Table I – 13.84 *61* from γ-γ coincidence measurements.
275.30 *5*	17.45 *72*	417.21	1/2$^-$,3/2$^-$	141.59	(3/2)$^-$				
291.70 *5*	2.54 *32*	1116.68	(5/2)$^-$	824.98					E_γ: Comparable 291.654γ placed from 433.6 keV level in adopted dataset.
294.92 *5*	8.47 *40*	436.48	(1/2,3/2)$^-$	141.59	(3/2)$^-$	M1		0.271 *4*	α(K)=0.2245 *31*; α(L)=0.0358 *5*; α(M)=0.00821 *12* α(N)=0.002006 *28*; α(O)=0.000347 *5*; α(P)=2.59×10^{-5} *4*
302.91[†] *7*	2.22 *32*	1127.89		824.98					
304.77[&†] *7*	3.31[&]	715.71		410.58	(7/2)$^+$				E_γ: Possible doublet of 304.488γ (from 519.4) and 304.951 (from 619.2). I_γ: From Fig. 1. In Table I – 9.92 *47* from γ-γ coincidence measurements.
304.77[&†] *7*	6.61[&]	916.67		611.79	1/2$^-$,3/2$^-$				E_γ: Possible doublet of 304.488γ (from 519.4) and 304.951 (from 619.2). I_γ: From Fig. 1. In Table I – 9.92 *47* from γ-γ coincidence measurements.
314.86 *7*	3.20 *33*	927.04		611.79	1/2$^-$,3/2$^-$				E_γ: A comparable 314.988γ placed from 446.9 keV level in adopted dataset.
316.75 *7*	0.81 *11*	823.98	+	507.58	(3/2)$^-$				E_γ: Closer 316.452γ placed from 630.7 keV level in adopted dataset.
329.59 *5*	9.40 *45*	747.04	(3/2)$^-$	417.21	1/2$^-$,3/2$^-$				E_γ: Comparable 329.713γ placed from 471.6 keV level in adopted dataset.
332.52 *6*	4.64 *32*	417.21	1/2$^-$,3/2$^-$	84.16	(1/2)$^-$	M1		0.1958 *27*	α(K)=0.1623 *23*; α(L)=0.0258 *4*; α(M)=0.00592 *8* α(N)=0.001446 *20*; α(O)=0.0002499 *35*; α(P)=1.870×10^{-5} *26*
339.61 *6*	22.96 *62*	611.79	1/2$^-$,3/2$^-$	272.92	5/2$^-$	E2		0.0636 *9*	α(K)=0.0431 *6*; α(L)=0.01559 *22*; α(M)=0.00383 *5* α(N)=0.000925 *13*; α(O)=0.0001450 *20*; α(P)=4.41×10^{-6} *6*
345.75 *7*	2.47 *31*	763.47		417.21	1/2$^-$,3/2$^-$				E_γ: Comparable 345.674γ placed from 487.6 keV level in adopted dataset and 349.674γ (349.13γ (1985Ni12)) from this level instead.
349.13 *8*	0.79 *11*	487.15	(3/2)$^-$	137.74	5/2$^-$				E_γ: Comparable 349.135γ placed from 433.6 keV level in adopted dataset and 345.674γ (345.75γ (1985Ni12)) from this level instead.
352.40 *6*	7.07 *41*	436.48	(1/2,3/2)$^-$	84.16	(1/2)$^-$	M1+E2	1.7 *+6−4*	0.086 *13*	α(K)=0.065 *11*; α(L)=0.0158 *10*; α(M)=0.00379 *20* α(N)=0.00092 *5*; α(O)=0.000149 *10*; α(P)=7.1×10^{-6} *14*
353.74 *5*	9.14 *41*	763.47		410.58	(7/2)$^+$				
^{x}355.31 *8*	3.00 *42*								E_γ: Closer 355.670γ placed from 487.6 keV level in adopted dataset.
362.37 *7*	4.56 *33*	436.48	(1/2,3/2)$^-$	74.06	3/2$^-$	M1+E2	1.0 *3*	0.104 *18*	α(K)=0.083 *16*; α(L)=0.0164 *14*; α(M)=0.00386 *29* α(N)=0.00094 *7*; α(O)=0.000157 *14*; α(P)=9.3×10^{-6} *19*

γ(^{191}Os) (continued)

E_γ	I_γ [@]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [‡]	δ [‡]	α [#]	Comments
366.13[&] *7*	2.86[&]	507.58	(3/2)$^-$	141.59	(3/2)$^-$				I_γ: From Fig. 1. In Table I – 5.84 *32* from γ-γ coincidence measurements.
366.13[&] *7*	2.98[&]	639.06	(1/2,3/2)$^-$	272.92	5/2$^-$				E_γ: Placement of comparable 366.210γ from this level is absent in adopted dataset for this multiply placed 366.13γ in this dataset. I_γ: From Fig. 1. In Table I – 5.84 *32* from γ-γ coincidence measurements.
377.35[†] *8*	2.56 *24*	793.97	(3/2)$^-$	417.21	1/2$^-$,3/2$^-$				E_γ: Possible doublet of 376.208γ (from 508.1) and 378.47γ (from 815.4) in adopted dataset.
403.19 *7*	5.69 *33*	487.15	(3/2)$^-$	84.16	(1/2)$^-$	M1+E2	1.03 *14*	0.077 *6*	α(K)=0.062 *5*; α(L)=0.0119 *5*; α(M)=0.00278 *11* α(N)=0.000677 *27*; α(O)=0.000113 *5*; α(P)=6.9$\times10^{-6}$ *6*
413.22 *5*	10.63 *51*	823.98	+	410.58	(7/2)$^+$	E2		0.0371 *5*	α(K)=0.0267 *4*; α(L)=0.00793 *11*; α(M)=0.001926 *27* α(N)=0.000466 *7*; α(O)=7.41$\times10^{-5}$ *10*; α(P)=2.79$\times10^{-6}$ *4*
423.81 *7*	2.86 *21*	507.58	(3/2)$^-$	84.16	(1/2)$^-$	M1		0.1025 *14*	α(K)=0.0850 *12*; α(L)=0.01345 *19*; α(M)=0.00308 *4* α(N)=0.000751 *11*; α(O)=0.0001299 *18*; α(P)=9.75$\times10^{-6}$ *14*
434.03 *8*	1.94 *18*	507.58	(3/2)$^-$	74.06	3/2$^-$	M1+E2	1.2 *3*	0.059 *9*	α(K)=0.047 *8*; α(L)=0.0092 *8*; α(M)=0.00215 *18* α(N)=0.00052 *4*; α(O)=8.7$\times10^{-5}$ *8*; α(P)=5.2$\times10^{-6}$ *10*
443.20[†] *10*	0.69 *8*	618.85	(5/2)$^-$	175.57	(11/2)$^+$				
462.69[†] *8*	0.91 *10*	1081.08		618.85	(5/2)$^-$				E_γ: Possible doublet of 462.536γ (from 462.5) and 462.954 (unplaced in (n,γ) E=Thermal).
477.36 *7*	5.18 *31*	618.85	(5/2)$^-$	141.59	(3/2)$^-$	M1+E2	0.70 *30*	0.059 *9*	α(K)=0.048 *8*; α(L)=0.0082 *9*; α(M)=0.00190 *20* α(N)=0.00046 *5*; α(O)=7.9$\times10^{-5}$ *9*; α(P)=5.4$\times10^{-6}$ *10*
487.10 *8*	1.07 *21*	487.15	(3/2)$^-$	0	9/2$^-$				E_γ: Comparable 487.271γ placed from 619.2 keV level in adopted dataset.
[x]495.44 *8*	0.38 *5*								E_γ: Closer 495.679γ is placed from 637.6 keV level in adopted dataset.
499.48[†] *8*	0.72 *9*	916.67		417.21	1/2$^-$,3/2$^-$				
[x]499.70 *10*	0.47 *11*								E_γ: Comparable 499.70γ placed from 574.2 keV level in adopted dataset.
527.26 *7*	6.18 *32*	937.84		410.58	(7/2)$^+$				E_γ: Closer 527.498γ placed from 611.9 keV level in adopted dataset.
537.40 *8*	2.34 *21*	611.79	1/2$^-$,3/2$^-$	74.06	3/2$^-$	M1+E2	0.7 *3*	0.043 *7*	α(K)=0.035 *6*; α(L)=0.0060 *7*; α(M)=0.00137 *15* α(N)=0.00033 *4*; α(O)=5.7$\times10^{-5}$ *7*; α(P)=4.0$\times10^{-6}$ *7*
539.07 *8*	2.19 *20*	715.71		175.57	(11/2)$^+$				E_γ: Comparable 539.101γ placed from 1176.7 keV level in adopted dataset.
544.58 *8*	6.95 *39*	618.85	(5/2)$^-$	74.06	3/2$^-$	M1+E2	0.9 *3*	0.038 *6*	α(K)=0.031 *5*; α(L)=0.0053 *7*; α(M)=0.00123 *14* α(N)=0.000300 *35*; α(O)=5.1$\times10^{-5}$ *6*; α(P)=3.5$\times10^{-6}$ *6*
552.07[†] *8*	2.14 *21*	824.98		272.92	5/2$^-$				
583.10[†] *10*	0.15 *8*	1298.26	(1/2,3/2)$^-$	715.71					

γ(^{191}Os) (continued)

E_γ	I_γ [@]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[‡]	δ[‡]	α[#]	Comments
618.93[†] 8	0.45 11	618.85	(5/2)$^-$	0	9/2$^-$				
644.45 8	0.98 18	1391.49		747.04	(3/2)$^-$				E_γ: Closer 644.77γ placed from 959.0 keV level in adopted dataset.
652.41 8	7.30 38	793.97	(3/2)$^-$	141.59	(3/2)$^-$	M1+E2	1.0 4	0.023 5	α(K)=0.019 4; α(L)=0.0032 5; α(M)=0.00073 12 α(N)=0.000178 30; α(O)=3.0×10^{-5} 5; α(P)=2.1×10^{-6} 5
663.41 8	3.42 24	1081.08		417.21	1/2$^-$,3/2$^-$				E_γ: Closer 663.883γ placed from 748.3 keV level in adopted dataset.
669.25 8	8.14 42	995.77		326.44					E_γ: Closer 669.513γ is unplaced in ^{190}Os(n,γ) E=thermal.
684.04[†] 8	0.26 9	1120.06		436.48	(1/2,3/2)$^-$				
709.86 8	4.29 31	793.97	(3/2)$^-$	84.16	(1/2)$^-$	M1+E2	0.65 +37−34	0.022 4	α(K)=0.0181 30; α(L)=0.0029 4; α(M)=0.00067 9 α(N)=0.000163 22; α(O)=2.8×10^{-5} 4; α(P)=2.0×10^{-6} 4
719.94 8	9.48 43	793.97	(3/2)$^-$	74.06	3/2$^-$	E2(+M1)	2.6 3	0.0119 5	α(K)=0.0096 4; α(L)=0.00179 6; α(M)=0.000417 13 α(N)=0.0001014 33; α(O)=1.70×10^{-5} 6; α(P)=1.04×10^{-6} 5
816.76 8	4.78 31	958.37	(1/2,3/2)$^-$	141.59	(3/2)$^-$				
843.74[†] 8	0.92 8	1116.68	(5/2)$^-$	272.92	5/2$^-$				
853.87[†] 8	2.69 28	995.77		141.59	(3/2)$^-$				
858.63[†] 8	0.23 8	995.77		137.74	5/2$^-$				
[x]868.72[†] 8	0.16 7								
874.12 8	4.16 34	958.37	(1/2,3/2)$^-$	84.16	(1/2)$^-$	M1+E2	1.2 8	0.010 4	α(K)=0.008 4; α(L)=0.0014 5; α(M)=3.2×10^{-4} 11 α(N)=7.9×10^{-5} 27; α(O)=1.3×10^{-5} 5; α(P)=9.E−7 4
880.80 8	0.18 5	1298.26	(1/2,3/2)$^-$	417.21	1/2$^-$,3/2$^-$				
884.42[†] 8	0.16 5	958.37	(1/2,3/2)$^-$	74.06	3/2$^-$				
888.52[†] 8	0.16 6	888.16		0	9/2$^-$				
911.38[†] 8	2.40 28	995.77		84.16	(1/2)$^-$				
916.10 8	0.65 8	916.67		0	9/2$^-$				E_γ: A comparable 916.30γ is unplaced in ^{190}Os(n,γ) E=thermal.
[x]950.35 8	0.46 10								E_γ: A comparable 950.79γ placed from 1092.7 keV level in adopted dataset.
[x]999.85[†] 8	0.21 10								
1035.31[†] 9	0.07 3	1120.06		84.16	(1/2)$^-$				
1146.03[†] 9	0.21 10	1229.93		84.16	(1/2)$^-$				
1155.61[†] 9	1.76 21	1229.93		74.06	3/2$^-$				
1213.94 10	0.72 10	1298.26	(1/2,3/2)$^-$	84.16	(1/2)$^-$				

$^{191}_{76}Os_{115}$-6

$\gamma(^{191}Os)$ (continued)

E_γ	I_γ [@]	E_i(level)	J^π_i	E_f	J^π_f	Comments
1254.23[†] *10*	0.25 *10*	1338.83		84.16	$(1/2)^-$	
1265.20 *10*	0.30 *11*	1338.83		74.06	$3/2^-$	E_γ: Closer 1265.70γ is unplaced in (n,γ) E=Thermal.

[†] Reported only in 1985Ni12 (^{191}Re β- Decay). Not adopted.

[‡] From Adopted Gammas, for consistent placement and spin-parity assignments compared to that in the adopted dataset. See general comments on this dataset.

[#] Additional information 1.

[@] For absolute intensity per 100 decays, multiply by 0.0399 *41*.

[&] Multiply placed with intensity suitably divided.

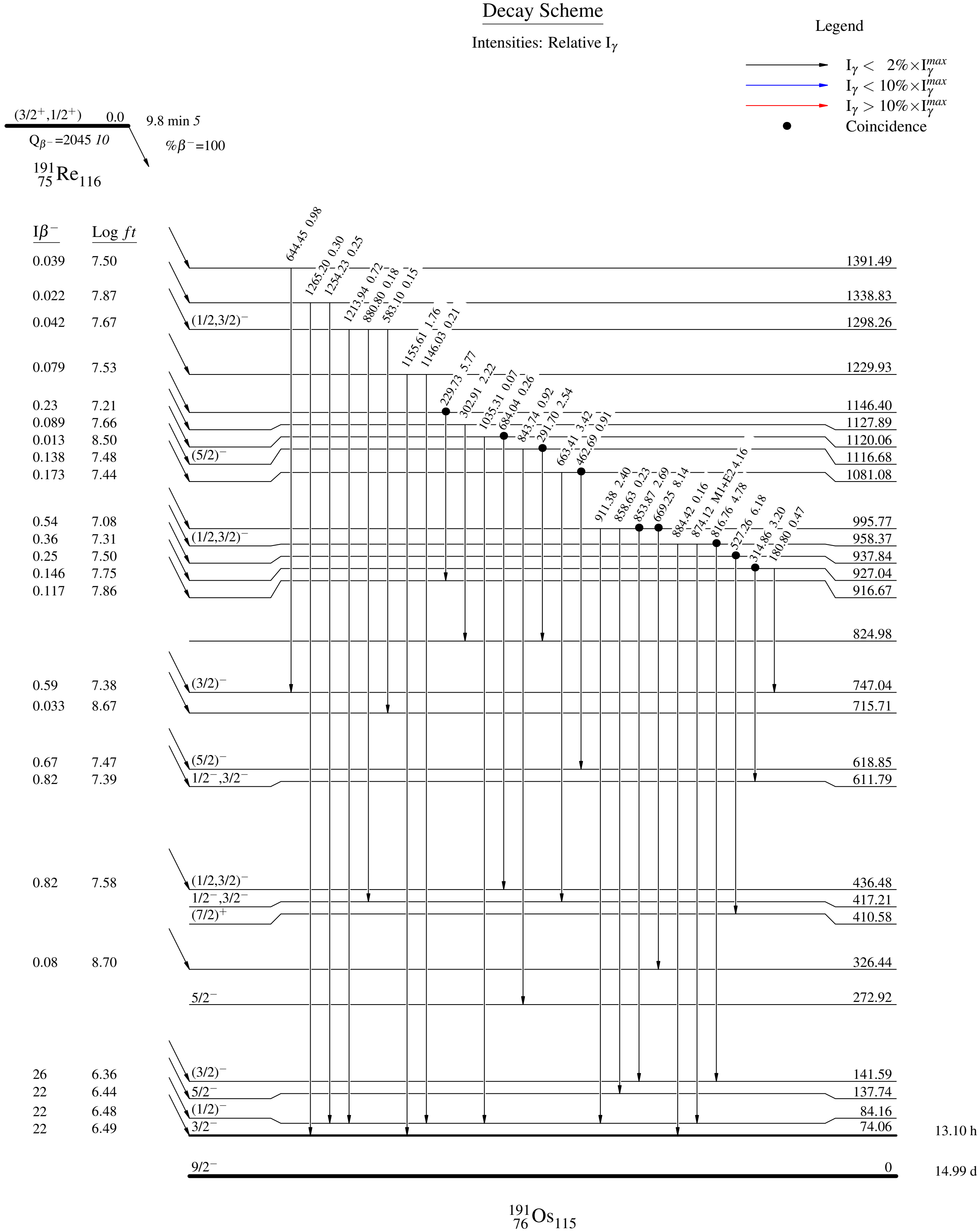
[x] γ ray not placed in level scheme.

$^{191}_{76}Os_{115}$-7

^{191}Re β^- decay 1985Ni12

Decay Scheme

Intensities: Relative I_γ

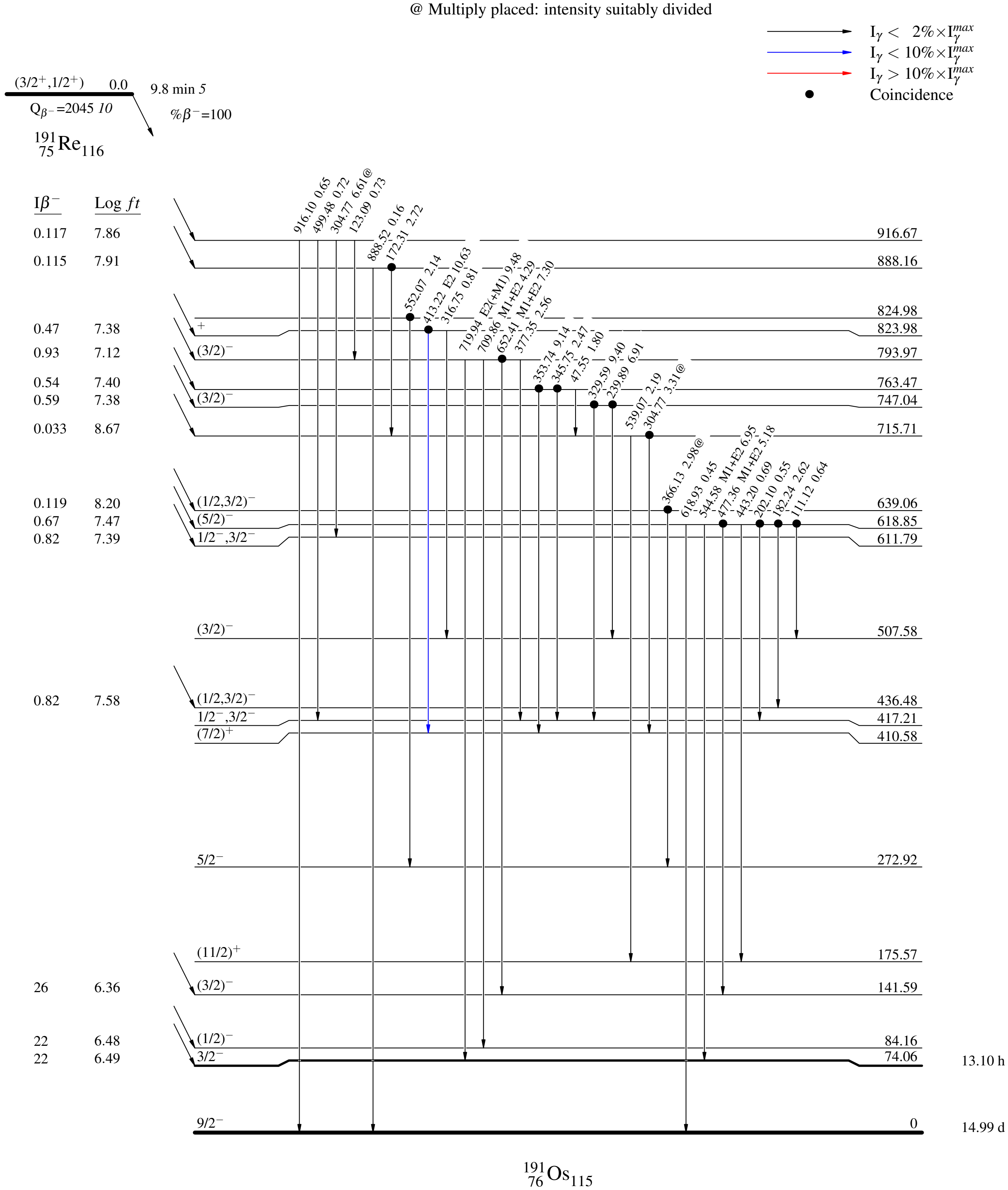


^{191}Re β^- decay 1985Ni12

Decay Scheme (continued)

Intensities: Relative I_γ

@ Multiply placed: intensity suitably divided



$^{191}Re\ \beta^-$ decay 1985Ni12

Decay Scheme (continued)

Intensities: Relative I_γ

@ Multiply placed: intensity suitably divided