^{190}Os(n,γ) E=thermal 1991Bo35

History

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

Others: 1977Be15, 1977Ca19, 1999BoZT, 2007Hu17 (E=spectrum).

1991Bo35: Target: 89.9% enriched ^{190}Os. Measured Eγ, Iγ for primary γ rays with a germanium pair spectrometer. Measured Eγ, Iγ for secondary γ rays using a bent crystal spectrometer. γγ coincidence measurements were done for primary and secondary transitions. Measured conversion electrons by a magnetic spectrometer. Deduced conversion coefficients. Also studied average resonance capture with a 97.8% enriched ^{190}Os target. Measured γγ coincidences between primary-primary and primary-secondary γ rays. Detectors: germanium hyperpure. Coincidence resolving time: ≈10 ns.

1977Be15: 99 mg ^{190}Os target (95.46%) was irradiated with thermal neutrons at the Los Alamos Omega West Reactor facility. Ge(Li) detector. Three gamma ray energy ranges were measured with three different arrangements. High energy γ rays (3.3-6 MeV) were measured in the "double escape" or "pair" mode, intermediate energy transitions, in the "anti-Compton" mode and low energy γ rays without coincidence restrictions. The resolutions were 6-7 keV, 3 keV and 0.5-0.9 keV FWHM, respectively. Measured Eγ, partial γ-ray cross sections. Also studied ^{190}Os(p,d) and ^{192}Os(d,t).

1977Ca19: Target: osmium powder enriched to 95.46% in ^{190}Os. At 90° to the beam, the primary γ rays following thermal neutron capture were recorded in a 40 cm^3 Ge(Li) detector. Typical resolution was 6.5 keV FWHM at about 6 MeV. Measured primary Eγ, Iγ.

1999BoZT: Studied ^{191}Os following (n,γ) E=thermal by cascade γ-decay − reported several excited levels in ^{191}Os. In 1999BoZT, it is noted that an article was submitted to the European Physical Journal A: Hadrons and Nuclei. No publication was found. The data from this secondary (unpublished) article are not listed/considered in this dataset.

For ^{190}Os(n,γ) E=th, σ^0_γ [15.4 d]=1.93 b *10* (2018MuZZ, 2012Kr05). 1977Be15 observed 5.4 b, as noted on page 4. Evalutor gets 5.1 b by adding all the primary γ-ray partial cross sections from the capture state. 1991Bo35 reported 21 primary gammas from the capture state, while 39 in 1977Be15, and 34 in 1977Ca19. Scaling Iγ(rel)(5147)=1993 (1991Bo35, 1977Ca19) to 1469 mb (1977Be15), ΣI(γ)(primary) yields 3.6 b and 4.4 b for data reported in 1991Bo35 and 1977Ca19, respectively. In earlier evaluation σ^0_γ [15.4 d]=3.9 6 (1984MuZY).

^{191}Os Levels

E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	9/2−	637.617 *3*	1/2−,3/2−
74.3836 *25*	3/2−	688.819 *5*	5/2−
84.4561 *24*	1/2−	721.431 *3*	3/2−
131.938 *3*	5/2−	748.344 *4*	3/2−
141.9348 *24*	3/2−	762.375 *9*	3/2+,5/2+,7/2+
175.6783 *10*	11/2+	764.6619 *25*	3/2+,(5/2+)
272.7536 *18*	5/2−	794.659 *6*	3/2−
314.266 *3*	5/2−	804.551 *20*	5/2−,7/2−
410.8204 *24*	7/2+	815.429 *6*	3/2−
417.1528 *24*	1/2−,3/2−	823.891 *4*	+
433.590 *3*	1/2−,3/2−	959.015 *16*	1/2−,3/2−
436.966 *3*	1/2−,3/2−	974.541 *11*	
446.926 *4*	7/2−	1077.801 *9*	1/2−,3/2−
462.532 *3*	7/2−	1083.6 *5*	
471.650 *4*	5/2−	1092.739 *9*	1/2−,3/2−
487.610 *3*	3/2−	1108.729 *8*	5/2−
508.1465 *25*	3/2−	1118.001 *19*	5/2−
519.398 *6*	7/2+,9/2+	1143.544 *13*	1/2−,3/2−
574.167 *5*	5/2−	1176.695 *5*	1/2+,3/2+,(5/2+)
611.9588 *23*	1/2−,3/2−	1202.264 *10*	1/2−,3/2−
619.206 *5*	5/2−	1227.90 *11*	
630.716 *11*	5/2−	1280.851 *9*	5/2+

Continued on next page (footnotes at end of table)

^{190}Os(n,γ) E=thermal 1991Bo35 (continued)

^{191}Os Levels (continued)

E(level)†	J^π‡	Comments
1298.436 *18*	$1/2^-,3/2^-$	
(5758.83 *4*)	$1/2^+$	E(level): 5758.73 keV *16*, deduced value in 1991Bo35. Sn=5758.73 *11* in 2021Wa16 – AME. J^π: for s-wave capture.

† Deduced by evaluator from a least-squares-fit to γ-ray energies.

‡ From 1991Bo35, except where otherwise noted.

γ(^{191}Os)

Iγ normalization: From ΣIγ(primary)=100.

E_γ [†]	I_γ [#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	δ [b]	α [c]	Comments
[x]41.489[‡] *5*	≤10					M1[&]		12.83 *18*	α(L)=9.90 *14*; α(M)=2.273 *32* α(N)=0.555 *8*; α(O)=0.0957 *13*; α(P)=0.00711 *10* Mult.: from α(L1)exp≥11, α(L2)exp≥1.7, α(M1)exp≥3.6.
47.486[‡] *5*	≤10	131.938	5/2⁻	84.4561	1/2⁻	E2[&]		126.4 *18*	α(L)=95.4 *13*; α(M)=24.31 *34* α(N)=5.81 *8*; α(O)=0.850 *12*; α(P)=0.000767 *11* Mult.: from α(L2)exp≥5.0, α(L3)exp≥5.1, α(M2)exp≥2.3, α(M3)exp≥1.6.
[x]49.584[‡] *5*	≤10					M1(+E2)[&]		$5.\times10^1$ *5*	α(L)=4.E1 4; α(M)=11 *9* α(N)=2.5 *22*; α(O)=0.37 *32*; α(P)=0.0024 *18* Mult.: from α(L1)exp≥5.1, α(L2)exp≥0.61, α(L3)exp≥0.76.
57.478 *1*	292 *76*	141.9348	3/2⁻	84.4561	1/2⁻	M1+E2	0.077 *18*	5.18 *16*	α(L)=3.99 *12*; α(M)=0.923 *30* α(N)=0.225 *7*; α(O)=0.0385 *11*; α(P)=0.00271 *4* Mult.: from α(L1)exp=3.4 *9*, α(L2)exp=0.43 *11*, α(L3)exp=0.14 *4*, α(M1)exp=0.81 *20*, α(M2)exp=0.13 *3*, α(M3)exp=0.039 *10*.
57.551 *1*	37 *6*	131.938	5/2⁻	74.3836	3/2⁻	M1+E2	0.74 *10*	20.7 *28*	α(L)=15.7 *21*; α(M)=3.9 *6* α(N)=0.94 *13*; α(O)=0.142 *19*; α(P)=0.00189 *15* Mult.: from α(L1)exp=1.9 *3*, α(L2)exp=6.5 *10*, α(L3)exp=6.6 *10*, α(M1)exp=0.80 *14*.
67.550 *2*	65 *19*	141.9348	3/2⁻	74.3836	3/2⁻	M1+E2	0.19 *4*	3.76 *31*	α(L)=2.88 *23*; α(M)=0.68 *6* α(N)=0.165 *14*; α(O)=0.0275 *21*; α(P)=0.001650 *32* Mult.: from α(L1)exp=2.3 *7*, α(L2)exp=0.52 *15*, α(L3)exp=0.33 *10*, α(M1)exp=0.50 *15*, α(M2)exp=0.10 *3*, α(M3)exp=0.098 *29*.
74.379 *9*	5 *1*	74.3836	3/2⁻	0.0	9/2⁻	M3			Mult.: from α(L1)exp=340 *50*, α(L2)exp=73 *10*, α(L3)exp=700 *100*, α(M1)exp=100 *10*, α(M2)exp=26 *4*, α(M3)exp=210 *30*, α(M4)exp=3.7 *6*. Other data: α(M5)exp=3.7 *6*, α(N1)exp=26 *4*, α(N2)exp=6.0 *8*, α(N3)exp=54 *7*, α(N4)exp=1.6 *2*. Adopted multipolarity (M3+E4) in adopted gammas dataset is based on precise conversion electron data measured in ^{191}Os(13.10 h) IT decay.
108.573 *18*	10 *3*	519.398	7/2⁺,9/2⁺	410.8204	7/2⁺	M1		4.44 *6*	α(K)=3.67 *5*; α(L)=0.597 *8*; α(M)=0.1370 *19* α(N)=0.0334 *5*; α(O)=0.00577 *8*; α(P)=0.000429 *6* Mult.: from α(K)exp=3.2 *10*, α(L1)exp=0.56 *17*.
138.068 *3*	96 *23*	410.8204	7/2⁺	272.7536	5/2⁻	E1		0.1708 *24*	α(K)=0.1399 *20*; α(L)=0.02391 *33*; α(M)=0.00549 *8*

From ENSDF

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[@]	δ[b]	α[c]	Comments
									α(N)=0.001320 *18*; α(O)=0.0002158 *30*; α(P)=1.191×10^{-5} *17* E_γ: A comparable 138.5 *3* γ placement from 273 keV level in 1977Be15. Mult.: from α(K)exp=0.056 *17*, α(L1)exp=0.038 *11*.
150.637 *11*	11 *4*	974.541		823.891	+				Mult.: α(K)exp≤0.5 − E1,E2 can be assumed from the limit of conversion coefficient, upper limits of the conversion-electron intensity in 1991Bo35.
157.385 *10*	5 *2*	471.650	5/2⁻	314.266	5/2⁻	M1		1.545 *22*	α(K)=1.277 *18*; α(L)=0.2065 *29*; α(M)=0.0474 *7* α(N)=0.01157 *16*; α(O)=0.001997 *28*; α(P)=0.0001487 *21* Mult.: from α(K)exp=0.97 *40*, α(L1)exp=0.52 *22*.
^{x}160.050 *16*	12 *2*					E1,E2[a]			Mult.: from α(K)exp≤0.25.
172.328 *3*	81 *11*	314.266	5/2⁻	141.9348	3/2⁻	M1+E2	1.04 *11*	0.86 *4*	α(K)=0.60 *4*; α(L)=0.197 *5*; α(M)=0.0480 *14* α(N)=0.01161 *33*; α(O)=0.00184 *4*; α(P)=6.7×10^{-5} *5* Mult.: from α(K)exp=0.54 *8*, α(L1)exp=0.077 *13*, α(L2)exp=0.063 *11*, α(L3)exp=0.033 *12*, α(M1)exp=0.039 *11*, α(M2)exp=0.018 *3*.
^{x}172.884 *21*	21 *7*					E1[a]		0.0960 *13*	α(K)=0.0790 *11*; α(L)=0.01312 *18*; α(M)=0.00301 *4* α(N)=0.000725 *10*; α(O)=0.0001196 *17*; α(P)=6.95×10^{-6} *10* Mult.: from α(K)exp≤0.08.
175.678 *1*	7.5×10^2 *10*	175.6783	11/2⁺	0.0	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)=6.68×10^{-6} *9* E_γ: A comparable 175.5 *3* γ placement from 638 keV level in 1977Be15. Mult.: from α(K)exp=0.053 *7*, α(L1)exp=0.0043 *6*, α(L2)exp=0.0014 *3*, α(L3)exp=0.0029 *4*, α(M1)exp=0.0022 *5*.
178.373 *3*	16 *4*	611.9588	1/2⁻,3/2⁻	433.590	1/2⁻,3/2⁻	M1		1.086 *15*	α(K)=0.898 *13*; α(L)=0.1449 *20*; α(M)=0.0333 *5* α(N)=0.00812 *11*; α(O)=0.001402 *20*; α(P)=0.0001045 *15* Mult.: from α(K)exp=0.72 *18*, α(L1)exp=0.13 *3*.
180.675 *11*	17 *6*	688.819	5/2⁻	508.1465	3/2⁻	M1+E2	1.2 *+13−5*	0.71 *16*	α(K)=0.49 *18*; α(L)=0.169 *14*; α(M)=0.041 *4* α(N)=0.00998 *99*; α(O)=0.00157 *10*; α(P)=5.3×10^{-5} *22* Mult.: from α(K)exp=0.49 *18*, α(L1)exp=0.047 *18*. δ: Using α(K)exp=0.49 *18* only.
182.321 *3*	26 *6*	314.266	5/2⁻	131.938	5/2⁻	M1+E2	1.4 *5*	0.65 *12*	α(K)=0.43 *14*; α(L)=0.166 *10*; α(M)=0.0410 *32*

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[b]	α[c]	Comments
									α(N)=0.0099 *7*; α(O)=0.00155 *8*; α(P)=4.6×10^{-5} *17* Mult.: from α(K)exp=0.42 *9*, α(L1)exp=0.12 *3*, α(L2)exp=0.10 *2*.
^{x}184.649 *2*	34 *5*					E2(+M1)	2.1 *4*	0.54 *4*	α(K)=0.32 *4*; α(L)=0.165 *4*; α(M)=0.0410 *11* α(N)=0.00988 *26*; α(O)=0.001519 *30*; α(P)=3.3×10^{-5} *5* Mult.: from α(K)exp=0.23 *6*, α(L1)exp=0.099 *2 4*, α(L2)exp=0.062 *12*.
189.776 *3*	16 *4*	462.532	7/2$^-$	272.7536	5/2$^-$	M1+E2	0.9 *3*	0.68 *9*	α(K)=0.50 *10*; α(L)=0.136 *6*; α(M)=0.0327 *20* α(N)=0.0079 *5*; α(O)=0.00128 *4*; α(P)=5.7×10^{-5} *13* Mult.: from α(K)exp=0.58 *15*, α(L1)exp=0.063 *16*.
193.879 *2*	63 *8*	508.1465	3/2$^-$	314.266	5/2$^-$	M1		0.860 *12*	α(K)=0.712 *10*; α(L)=0.1147 *16*; α(M)=0.0263 *4* α(N)=0.00642 *9*; α(O)=0.001109 *16*; α(P)=8.27×10^{-5} *12* Mult.: from α(K)exp=0.64 *8*, α(L1)exp=0.10 *1*, α(L2)exp=0.025 *4*, α(M1)exp=0.030 *5*.
194.808 *3*	37 *5*	611.9588	1/2$^-$,3/2$^-$	417.1528	1/2$^-$,3/2$^-$	M1+E2	0.80 *16*	0.66 *5*	α(K)=0.50 *5*; α(L)=0.1225 *29*; α(M)=0.0293 *10* α(N)=0.00711 *22*; α(O)=0.001158 *23*; α(P)=5.6×10^{-5} *6* Mult.: from α(K)exp=0.47 *6*, α(L1)exp=0.075 *11*, α(L2)exp=0.031 *9*.
^{x}198.056 *6*	15 *3*					E1,E2[a]			Mult.: from α(K)exp≤0.13.
198.381 *10*	8 *2*	272.7536	5/2$^-$	74.3836	3/2$^-$	M1+E2	1.6 *4*	0.47 *6*	α(K)=0.31 *6*; α(L)=0.1216 *30*; α(M)=0.0300 *10* α(N)=0.00723 *24*; α(O)=0.001130 *23*; α(P)=3.3×10^{-5} *8* Mult.: from α(K)exp=0.31 *8*.
204.037 *5*	16 *4*	637.617	1/2$^-$,3/2$^-$	433.590	1/2$^-$,3/2$^-$	M1+E2	0.39 *27*	0.69 *8*	α(K)=0.56 *8*; α(L)=0.1012 *27*; α(M)=0.0235 *10* α(N)=0.00573 *23*; α(O)=0.000971 *19*; α(P)=6.4×10^{-5} *10* Mult.: from α(K)exp=0.48 *10*, α(L1)exp=0.10 *2*.
^{x}204.345 *8*	20 *4*					M1		0.743 *10*	α(K)=0.615 *9*; α(L)=0.0990 *14*; α(M)=0.02270 *32* α(N)=0.00554 *8*; α(O)=0.000957 *13*; α(P)=7.136×10^{-5} *99* Mult.: from α(K)exp=0.89 *12*, α(L1)exp=0.13 *2*.
220.467 *7*	25 *3*	637.617	1/2$^-$,3/2$^-$	417.1528	1/2$^-$,3/2$^-$	M1+E2	0.7 *3*	0.48 *7*	α(K)=0.38 *7*; α(L)=0.0807 *12*; α(M)=0.0191 *5* α(N)=0.00464 *11*; α(O)=0.000768 *11*; α(P)=4.3×10^{-5} *9* Mult.: from α(K)exp=0.37 *6*, α(L1)exp=0.083 *12*, α(L2)exp=0.035 *8*.
229.810 *3*	207 *28*	314.266	5/2$^-$	84.4561	1/2$^-$	E2		0.2095 *29*	α(K)=0.1180 *17*; α(L)=0.0693 *10*; α(M)=0.01738 *24* α(N)=0.00418 *6*; α(O)=0.000638 *9*; α(P)=1.132×10^{-5} *16* E_γ: A comparable 229.8 *3* γ unplaced in 1977Be15. Mult.: from α(K)exp=0.12 *2*, α(L1)exp=0.019 *3*, α(L2)exp=0.035 *5*, α(L3)exp=0.018 *3*.
235.140 *4*	558 *67*	410.8204	7/2$^+$	175.6783	11/2$^+$	E2		0.1945 *27*	α(K)=0.1111 *16*; α(L)=0.0632 *9*; α(M)=0.01583 *22* α(N)=0.00381 *5*; α(O)=0.000582 *8*; α(P)=1.070×10^{-5} *15* E_γ: A comparable 235.0 *3* γ placement from 508 keV level in 1977Be15.

$^{191}_{76}Os_{115}$-5

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

E_γ[†]	I_γ[#d]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[@]	δ[b]	α[c]	Comments
									Mult.: from α(K)exp=0.11 *1*, α(L1)exp=0.014 *2*, α(L2)exp=0.029 *4*, α(L3)exp=0.017 *2*, α(M1)exp=0.0039 *5*, α(M2)exp=0.0069 *8*, α(M3)exp=0.0052 *9*.
239.886 *2*	194 *25*	314.266	5/2$^-$	74.3836	3/2$^-$	M1+E2	0.99 *12*	0.331 *19*	α(K)=0.251 *19*; α(L)=0.0609 *9*; α(M)=0.01455 *20* α(N)=0.00353 *5*; α(O)=0.000575 *9*; α(P)=2.81×10^{-5} *23* Mult.: from α(K)exp=0.24 *3*, α(L1)exp=0.038 *5*, α(L2)exp=0.018 *3*, α(L3)exp=0.0082 *22*.
240.194 *4*	36 *5*	748.344	3/2$^-$	508.1465	3/2$^-$	M1		0.475 *7*	α(K)=0.393 *6*; α(L)=0.0631 *9*; α(M)=0.01447 *20* α(N)=0.00353 *5*; α(O)=0.000610 *9*; α(P)=4.55×10^{-5} *6* Mult.: from α(K)exp=0.38 *5*, α(L1)exp=0.062 *20*.
241.893 *5*	27 *4*	688.819	5/2$^-$	446.926	7/2$^-$	M1+E2	0.55 +*28*−*31*	0.40 *5*	α(K)=0.32 *5*; α(L)=0.0606 *13*; α(M)=0.01417 *20* α(N)=0.00345 *5*; α(O)=0.000580 *16*; α(P)=3.7×10^{-5} *6* Mult.: from α(K)exp=0.32 *5*.
[x]242.211 *2*	109 *15*					E2		0.1769 *25*	α(K)=0.1028 *14*; α(L)=0.0561 *8*; α(M)=0.01404 *20* α(N)=0.00338 *5*; α(O)=0.000517 *7*; α(P)=9.96×10^{-6} *14* Mult.: from α(K)exp=0.099 *14*, α(L1)exp=0.020 *4*, α(L2)exp=0.023 *4*, α(L3)exp=0.013 *3*.
[x]250.533 *10*	20 *4*					E1[a]		0.0378 *5*	α(K)=0.0314 *4*; α(L)=0.00501 *7*; α(M)=0.001146 *16* α(N)=0.000277 *4*; α(O)=4.63×10^{-5} *6*; α(P)=2.89×10^{-6} *4* Mult.: from α(K)exp≤0.02.
272.754 *2*	703 *85*	272.7536	5/2$^-$	0.0	9/2$^-$	E2		0.1219 *17*	α(K)=0.0755 *11*; α(L)=0.0352 *5*; α(M)=0.00876 *12* α(N)=0.002110 *30*; α(O)=0.000326 *5*; α(P)=7.46×10^{-6} *10* Mult.: from α(K)exp=0.078 *9*, α(L1)exp=0.010 *1*, α(L2)exp=0.016 *2*, α(L3)exp=0.0098 *13*, α(M1)exp=0.0035 *5*, α(M2)exp=0.0042 *8*, α(M3)exp=0.0023 *6*.
275.219 *1*	513 *64*	417.1528	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1		0.327 *5*	α(K)=0.271 *4*; α(L)=0.0433 *6*; α(M)=0.00993 *14* α(N)=0.002425 *34*; α(O)=0.000419 *6*; α(P)=3.13×10^{-5} *4* Mult.: from α(K)exp=0.28 *4*, α(L1)exp=0.038 *6*, α(L2)exp=0.0027 *5*.
[x]278.940 *18*	15 *2*								
284.468 *10*	16 *2*	721.431	3/2$^-$	436.966	1/2$^-$,3/2$^-$	M1		0.299 *4*	α(K)=0.2476 *35*; α(L)=0.0396 *6*; α(M)=0.00907 *13* α(N)=0.002215 *31*; α(O)=0.000383 *5*; α(P)=2.86×10^{-5} *4* Mult.: from α(K)exp=0.21 *3*, α(L1)exp=0.062 *16*.
287.846 *16*	17 *2*	721.431	3/2$^-$	433.590	1/2$^-$,3/2$^-$	M1		0.289 *4*	α(K)=0.2398 *34*; α(L)=0.0383 *5*; α(M)=0.00878 *12* α(N)=0.002144 *30*; α(O)=0.000370 *5*; α(P)=2.77×10^{-5}

From ENSDF

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

γ(^{191}Os) (continued)

E_γ †	I_γ #d	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	δ b	α c	Comments
									4
291.654 2	105 15	433.590	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1		0.279 4	Mult.: from α(K)exp=0.21 3, α(L1)exp=0.078 12. α(K)=0.2314 32; α(L)=0.0370 5; α(M)=0.00847 12 α(N)=0.002068 29; α(O)=0.000357 5; α(P)=2.67×10^{-5} 4 E_γ: A comparable 291.6 3 γ unplaced in 1977Be15.
295.034 3	108 14	436.966	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1		0.271 4	Mult.: from α(K)exp=0.29 5, α(L1)exp=0.042 11, α(L2)exp=0.011 2. α(K)=0.2242 31; α(L)=0.0358 5; α(M)=0.00821 11 α(N)=0.002004 28; α(O)=0.000346 5; α(P)=2.59×10^{-5} 4 E_γ: A comparable 294.9 3 γ unplaced in 1977Be15.
^{x}301.837 5	35 4					M1+E2	0.50 33	0.221 34	Mult.: from α(K)exp=0.26 3, α(L1)exp=0.032 5, α(L2)exp=0.010 2. α(K)=0.180 32; α(L)=0.0317 21; α(M)=0.0074 4 α(N)=0.00179 10; α(O)=0.000305 22; α(P)=2.1×10^{-5} 4
302.67 4	12 2	1118.001	5/2$^-$	815.429	3/2$^-$	M1(+E2)	0.4 5	0.23 5	Mult.: from α(K)exp=0.18 2. α(K)=0.19 5; α(L)=0.0321 30; α(M)=0.0074 6 α(N)=0.00181 14; α(O)=0.000309 32; α(P)=2.2×10^{-5} 6
304.279 3	75 10	721.431	3/2$^-$	417.1528	1/2$^-$,3/2$^-$	M1		0.2489 35	Mult.: from α(K)exp=0.19 5. α(K)=0.2063 29; α(L)=0.0329 5; α(M)=0.00754 11 α(N)=0.001841 26; α(O)=0.000318 4; α(P)=2.380×10^{-5} 33
304.488 7	43 6	823.891	+	519.398	7/2$^+$,9/2$^+$	E2		0.0874 12	Mult.: from α(K)exp=0.27 4, α(L1)exp=0.043 8, α(M1)exp=0.0096 26. α(K)=0.0569 8; α(L)=0.02322 33; α(M)=0.00574 8 α(N)=0.001384 19; α(O)=0.0002152 30; α(P)=5.72×10^{-6} 8
304.951 18	40 15	619.206	5/2$^-$	314.266	5/2$^-$	M1		0.2474 35	Mult.: from α(K)exp=0.061 16. α(K)=0.2050 29; α(L)=0.0327 5; α(M)=0.00750 10 α(N)=0.001830 26; α(O)=0.000316 4; α(P)=2.365×10^{-5} 33
305.020 2	80 16	436.966	1/2$^-$,3/2$^-$	131.938	5/2$^-$	(E2)		0.0870 12	Mult.: from α(K)exp=0.18 6, α(L1)exp=0.075 25. α(K)=0.0566 8; α(L)=0.02307 32; α(M)=0.00570 8 α(N)=0.001375 19; α(O)=0.0002138 30; α(P)=5.70×10^{-6} 8
307.275 8	17 2	815.429	3/2$^-$	508.1465	3/2$^-$	M1+E2	1.3 3	0.144 20	Mult.: from α(K)exp=0.050 15, α(L2)exp=0.027 9, α(L3)exp=0.0037 12. α(K)=0.110 19; α(L)=0.0260 13; α(M)=0.00621 25 α(N)=0.00151 6; α(O)=0.000246 13; α(P)=1.21×10^{-5} 23
^{x}308.501 16	20 3					M1+E2	0.8 4	0.18 4	Mult.: from α(K)exp=0.11 2, α(L1)exp=0.046 12. δ: Using α(K)exp=0.11 2 only. α(K)=0.14 4; α(L)=0.0280 24; α(M)=0.0066 5

^{190}Os(n,γ) E=thermal 1991Bo35 (continued)

γ(^{191}Os) (continued)

E_γ [†]	I_γ [#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	δ [b]	α [c]	Comments
									α(N)=0.00160 *12*; α(O)=0.000267 *26*; α(P)=1.6×10^{-5} *4* Mult.: from α(K)exp=0.13 *2*, α(L1)exp=0.028 *6*.
311.375 *26*	11 *2*	748.344	3/2$^-$	436.966	1/2$^-$,3/2$^-$	M1		0.2338 *33*	α(K)=0.1938 *27*; α(L)=0.0309 *4*; α(M)=0.00708 *10* α(N)=0.001729 *24*; α(O)=0.000299 *4*; α(P)=2.235×10^{-5} *31* Mult.: from α(K)exp=0.22 *4*.
314.082 *12*	16 *3*	1108.729	5/2$^-$	794.659	3/2$^-$	M1		0.2284 *32*	α(K)=0.1893 *27*; α(L)=0.0302 *4*; α(M)=0.00692 *10* α(N)=0.001689 *24*; α(O)=0.000292 *4*; α(P)=2.183×10^{-5} *31* Mult.: from α(K)exp=0.20 *5*, α(L1)exp=0.038 *9*.
^{x}314.307 *14*	12 *3*								
314.750 *17*	11 *3*	748.344	3/2$^-$	433.590	1/2$^-$,3/2$^-$	M1		0.2271 *32*	α(K)=0.1882 *26*; α(L)=0.0300 *4*; α(M)=0.00688 *10* α(N)=0.001679 *24*; α(O)=0.000290 *4*; α(P)=2.170×10^{-5} *30* E_γ: A comparable 315.4 *3* γ unplaced in 1977Be15. Mult.: from α(K)exp=0.25 *7*.
314.988 *3*	53 *7*	446.926	7/2$^-$	131.938	5/2$^-$	M1		0.2266 *32*	α(K)=0.1878 *26*; α(L)=0.0300 *4*; α(M)=0.00686 *10* α(N)=0.001676 *23*; α(O)=0.000290 *4*; α(P)=2.166×10^{-5} *30* E_γ: A comparable 315.4 *3* γ unplaced in 1977Be15. Mult.: from α(K)exp=0.23 *3*, α(L1)exp=0.032 *9*, α(M1)exp=0.018 *6*.
^{x}315.714 *20*	9 *3*					M1+E2	1.0 *6*	0.15 *5*	α(K)=0.12 *5*; α(L)=0.0250 *34*; α(M)=0.0059 *7* α(N)=0.00144 *17*; α(O)=0.00024 *4*; α(P)=1.3×10^{-5} *6* Mult.: from α(K)exp=0.12 *4*.
316.452 *11*	86 *11*	630.716	5/2$^-$	314.266	5/2$^-$	M1+E2	1.0 *2*	0.151 *16*	α(K)=0.119 *15*; α(L)=0.0249 *11*; α(M)=0.00587 *21* α(N)=0.00143 *5*; α(O)=0.000236 *11*; α(P)=1.33×10^{-5} *18* Mult.: from α(K)exp=0.13 *2*, α(L1)exp=0.016 *2*, α(M1)exp=0.0038 *12*.
320.594 *14*	16 *3*	462.532	7/2$^-$	141.9348	3/2$^-$	E2		0.0751 *11*	α(K)=0.0499 *7*; α(L)=0.01920 *27*; α(M)=0.00473 *7* α(N)=0.001142 *16*; α(O)=0.0001782 *25*; α(P)=5.06×10^{-6} *7* Mult.: from α(K)exp=0.049 *12*.
327.833 *10*	19 *3*	815.429	3/2$^-$	487.610	3/2$^-$	M1		0.2035 *28*	α(K)=0.1687 *24*; α(L)=0.0269 *4*; α(M)=0.00615 *9* α(N)=0.001503 *21*; α(O)=0.000260 *4*; α(P)=1.943×10^{-5} *27* Mult.: from α(K)exp=0.20 *3*.
329.713 *8*	49 *6*	471.650	5/2$^-$	141.9348	3/2$^-$	M1(+E2)	0.53 *28*	0.172 *23*	α(K)=0.140 *21*; α(L)=0.0245 *16*; α(M)=0.00567 *33* α(N)=0.00138 *8*; α(O)=0.000235 *17*; α(P)=1.60×10^{-5} *26* Mult.: from α(K)exp=0.14 *2*, α(L1)exp=0.020 *3*.
330.577 *18*	15 *2*	462.532	7/2$^-$	131.938	5/2$^-$	M1+E2	1.1 *+5−3*	0.128 *22*	α(K)=0.100 *20*; α(L)=0.0213 *16*; α(M)=0.00504 *31* α(N)=0.00122 *8*; α(O)=0.000202 *16*; α(P)=1.12×10^{-5} *25* Mult.: from α(K)exp=0.10 *2*.
331.191 *8*	22 *3*	748.344	3/2$^-$	417.1528	1/2$^-$,3/2$^-$	M1(+E2)	0.47 *+24−30*	0.175 *20*	α(K)=0.143 *18*; α(L)=0.0245 *14*; α(M)=0.00566 *29* α(N)=0.00138 *7*; α(O)=0.000236 *15*; α(P)=1.63×10^{-5} *22* Mult.: from α(K)exp=0.12 *2*, α(L1)exp=0.034 *6*.

γ(^{191}Os) (continued)

E_γ †	I_γ #d	E_i(level)	J^π_i	E_f	J^π_f	Mult. @	δ b	α c	Comments
332.691 *3*	135 *18*	417.1528	1/2⁻,3/2⁻	84.4561	1/2⁻	M1		0.1956 *27*	α(K)=0.1621 *23*; α(L)=0.0258 *4*; α(M)=0.00591 *8* α(N)=0.001444 *20*; α(O)=0.0002495 *35*; α(P)=1.867×10^{-5} *26* Mult.: from α(K)exp=0.16 *2*, α(L1)exp=0.024 *4*, α(M1)exp=0.0044 *12*.
339.206 *2*	72 *9*	611.9588	1/2⁻,3/2⁻	272.7536	5/2⁻	E2		0.0639 *9*	α(K)=0.0433 *6*; α(L)=0.01566 *22*; α(M)=0.00385 *5* α(N)=0.000929 *13*; α(O)=0.0001456 *20*; α(P)=4.42×10^{-6} *6* Mult.: from α(K)exp=0.037 *6*, α(L1)exp=0.010 *2*, α(L2)exp=0.010 *3*, α(L3)exp=0.0091 *20*.
339.706 *4*	105 *14*	471.650	5/2⁻	131.938	5/2⁻	M1+E2	0.7 *3*	0.145 *23*	α(K)=0.117 *21*; α(L)=0.0215 *17*; α(M)=0.00501 *34* α(N)=0.00122 *9*; α(O)=0.000206 *18*; α(P)=1.33×10^{-5} *25* Mult.: from α(K)exp=0.12 *2*, α(L1)exp=0.016 *3*.
342.769 *4*	31 *4*	417.1528	1/2⁻,3/2⁻	74.3836	3/2⁻	E2(+M1)	2.4 *+14−6*	0.080 *10*	α(K)=0.058 *9*; α(L)=0.0164 *8*; α(M)=0.00396 *16* α(N)=0.00096 *4*; α(O)=0.000154 *8*; α(P)=6.2×10^{-6} *11* Mult.: from α(K)exp=0.059 *12*, α(L1)exp=0.0076 *20*.
343.712 *9*	19 *3*	519.398	7/2⁺,9/2⁺	175.6783	11/2⁺	(E2)		0.0615 *9*	α(K)=0.0419 *6*; α(L)=0.01494 *21*; α(M)=0.00367 *5* α(N)=0.000885 *12*; α(O)=0.0001389 *19*; α(P)=4.29×10^{-6} *6* Mult.: E2 or E1 from α(K)exp≤0.047. Level scheme requires E2.
345.674 *2*	104 *15*	487.610	3/2⁻	141.9348	3/2⁻	M1+E2	0.8 *3*	0.131 *22*	α(K)=0.105 *20*; α(L)=0.0199 *17*; α(M)=0.00465 *34* α(N)=0.00113 *8*; α(O)=0.000190 *17*; α(P)=1.19×10^{-5} *24* Mult.: from α(K)exp=0.11 *2*, α(L1)exp=0.015 *3*.
347.512 *4*	43 *6*	764.6619	3/2⁺,(5/2⁺)	417.1528	1/2⁻,3/2⁻	E1		0.01729 *24*	α(K)=0.01439 *20*; α(L)=0.002238 *31*; α(M)=0.000511 *7* α(N)=0.0001236 *17*; α(O)=2.085×10^{-5} *29*; α(P)=1.371×10^{-6} *19* Mult.: from α(K)exp=0.018 *4*.
349.135 *2*	168 *24*	433.590	1/2⁻,3/2⁻	84.4561	1/2⁻	M1		0.1718 *24*	α(K)=0.1424 *20*; α(L)=0.02265 *32*; α(M)=0.00519 *7* α(N)=0.001267 *18*; α(O)=0.0002189 *31*; α(P)=1.639×10^{-5} *23* Mult.: from α(K)exp=0.13 *2*, α(L1)exp=0.019 *3*, α(L2)exp=0.0019 *9*.
352.512 *5*	147 *20*	436.966	1/2⁻,3/2⁻	84.4561	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* E_γ: A comparable 353.7 *3* γ placement from 488 keV level in 1977Be15. Mult.: from α(K)exp=0.065 *9*, α(L2)exp=0.0082 *15*, α(M1)exp=0.0027 *9*.

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[b]	α[c]	Comments
353.841 *1*	391 *62*	764.6619	3/2$^+$,(5/2$^+$)	410.8204	7/2$^+$	E2		0.0567 *8*	α(K)=0.0390 *5*; α(L)=0.01348 *19*; α(M)=0.00330 *5* α(N)=0.000797 *11*; α(O)=0.0001254 *18*; α(P)=4.00×10^{-6} *6* E_γ: A comparable 353.7 *3* γ placement from 488 keV level in 1977Be15. Mult.: from α(K)exp=0.038 *6*, α(L1)exp=0.0034 *7*, α(L2)exp=0.0046 *8*, α(M2)exp=0.0017 *4*.
355.670 *2*	101 *12*	487.610	3/2$^-$	131.938	5/2$^-$	M1+E2	0.5 *4*	0.142 *27*	α(K)=0.116 *24*; α(L)=0.0199 *21*; α(M)=0.0046 *4* α(N)=0.00112 *11*; α(O)=0.000191 *21*; α(P)=1.33×10^{-5} *29* Mult.: from α(K)exp=0.093 *15*, α(L1)exp=0.020 *3*, α(M1)exp=0.0046 *10*.
^{x}358.781 *16*	14 *3*					M1+E2	1.53 *35*	0.086 *13*	α(K)=0.066 *11*; α(L)=0.0153 *10*; α(M)=0.00364 *21* α(N)=0.00088 *5*; α(O)=0.000145 *10*; α(P)=7.3×10^{-6} *14* Mult.: from α(K)exp=0.066 *15*.
359.210 *3*	74 *10*	433.590	1/2$^-$,3/2$^-$	74.3836	3/2$^-$	M1+E2	2.0 *+7−4*	0.075 *9*	α(K)=0.056 *8*; α(L)=0.0144 *7*; α(M)=0.00346 *14* α(N)=0.00084 *4*; α(O)=0.000136 *7*; α(P)=6.1×10^{-6} *9* Mult.: from α(K)exp=0.054 *8*, α(L1)exp=0.013 *4*.
362.588 *2*	111 *16*	436.966	1/2$^-$,3/2$^-$	74.3836	3/2$^-$	M1+E2	1.0 *3*	0.104 *18*	α(K)=0.083 *16*; α(L)=0.0164 *14*; α(M)=0.00385 *29* α(N)=0.00094 *7*; α(O)=0.000156 *14*; α(P)=9.3×10^{-6} *19* Mult.: from α(K)exp=0.086 *12*, α(L1)exp=0.012 *3*, α(L2)exp=0.0059 *15*.
364.864 *3*	115 *16*	637.617	1/2$^-$,3/2$^-$	272.7536	5/2$^-$	E2(+M1)	3.2 *2*	0.0610 *14*	α(K)=0.0442 *12*; α(L)=0.01282 *20*; α(M)=0.00311 *5* α(N)=0.000752 *11*; α(O)=0.0001200 *19*; α(P)=4.69×10^{-6} *14* Mult.: from α(K)exp=0.041 *6*, α(L1)exp=0.0073 *21*, α(L2)exp=0.0039 *8*.
366.210 *1*	362 *50*	508.1465	3/2$^-$	141.9348	3/2$^-$	M1+E2	0.49 *16*	0.132 *10*	α(K)=0.108 *9*; α(L)=0.0184 *9*; α(M)=0.00424 *18* α(N)=0.00103 *4*; α(O)=0.000177 *9*; α(P)=1.23×10^{-5} *11* Mult.: from α(K)exp=0.10 *1*, α(L1)exp=0.015 *2*, α(L2)exp=0.0020 *3*, α(M1)exp=0.0036 *9*.
^{x}370.237 *9*	23 *3*					M1		0.1468 *21*	α(K)=0.1217 *17*; α(L)=0.01933 *27*; α(M)=0.00443 *6* α(N)=0.001081 *15*; α(O)=0.0001868 *26*; α(P)=1.399×10^{-5} *20* Mult.: from α(K)exp=0.12 *2*, α(L1)exp=0.027 *8*.
370.981 *23*	14 *3*	804.551	5/2$^-$,7/2$^-$	433.590	1/2$^-$,3/2$^-$				E_γ: A comparable 371.3 *5* γ placement from 1093 keV level in 1977Be15.
376.208 *9*	23 *5*	508.1465	3/2$^-$	131.938	5/2$^-$	M1+E2	0.8 *+4−3*	0.104 *19*	α(K)=0.084 *17*; α(L)=0.0155 *15*; α(M)=0.00362 *32*

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[b]	α[c]	Comments
									α(N)=0.00088 *8*; α(O)=0.000149 *16*; α(P)=9.5×10^{-6} *20* Mult.: from α(K)exp=0.079 *18*, α(L1)exp=0.014 *4*.
378.47 *4*	15 *3*	815.429	3/2$^-$	436.966	1/2$^-$,3/2$^-$	M1+E2	1.3 *+8−4*	0.081 *17*	α(K)=0.063 *15*; α(L)=0.0135 *14*; α(M)=0.00319 *30* α(N)=0.00077 *7*; α(O)=0.000128 *14*; α(P)=7.1×10^{-6} *18* Mult.: from α(K)exp=0.063 *15*.
386.847 *12*	15 *2*	1202.264	1/2$^-$,3/2$^-$	815.429	3/2$^-$	M1(+E2)	0.2 *5*	0.127 *25*	α(K)=0.105 *22*; α(L)=0.0169 *21*; α(M)=0.0039 *4* α(N)=0.00095 *11*; α(O)=0.000163 *22*; α(P)=1.21×10^{-5} *27* E_γ: A comparable 386.2 *10* γ unplaced in 1977Be15. Mult.: from α(K)exp=0.084 *24*, α(L1)exp=0.043 *11*.
387.200 *7*	22 *3*	471.650	5/2$^-$	84.4561	1/2$^-$	E2		0.0442 *6*	α(K)=0.0312 *4*; α(L)=0.00987 *14*; α(M)=0.002405 *34* α(N)=0.000581 *8*; α(O)=9.21×10^{-5} *13*; α(P)=3.24×10^{-6} *5* Mult.: from α(K)exp=0.025 *7*.
397.273 *5*	72 *8*	471.650	5/2$^-$	74.3836	3/2$^-$	M1+E2	≈3	≈0.0493	α(K)≈0.0365; α(L)≈0.00974; α(M)≈0.002347 α(N)≈0.000568; α(O)≈9.15×10^{-5}; α(P)≈3.91×10^{-6} Mult.: from α(K)exp=0.037 *6*, α(L1)exp=0.018 *5*.
403.157 *2*	185 *19*	487.610	3/2$^-$	84.4561	1/2$^-$	M1+E2	1.03 *14*	0.077 *6*	α(K)=0.062 *5*; α(L)=0.0119 *5*; α(M)=0.00279 *11* α(N)=0.000677 *27*; α(O)=0.000113 *5*; α(P)=6.9×10^{-6} *6* Mult.: from α(K)exp=0.061 *7*, α(L1)exp=0.0088 *10*.
410.811 *13*	13 *2*	410.8204	7/2$^+$	0.0	9/2$^-$				
412.033 *4*	35 *5*	1176.695	1/2$^+$,3/2$^+$,(5/2$^+$)	764.6619	3/2$^+$,(5/2$^+$)	M1+E2	2.2 *+23−7*	0.050 *10*	α(K)=0.038 *9*; α(L)=0.0091 *9*; α(M)=0.00218 *19* α(N)=0.00053 *5*; α(O)=8.6×10^{-5} *9*; α(P)=4.1×10^{-6} *11* Mult.: from α(K)exp=0.038 *8*.
413.070 *3*	112 *12*	823.891	+	410.8204	7/2$^+$	E2		0.0371 *5*	α(K)=0.0267 *4*; α(L)=0.00794 *11*;

$^{191}_{76}$Os$_{115}$-11

γ(^{191}Os) (continued)

E_γ †	I_γ #d	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	δ b	α c	Comments
									α(M)=0.001928 *27* α(N)=0.000466 *7*; α(O)=7.42×10^{-5} *10*; α(P)=2.79×10^{-6} *4* Mult.: from α(K)exp=0.033 *4*, α(L2)exp=0.0071 *10*.
413.228 *6*	154 *24*	487.610	3/2$^-$	74.3836	3/2$^-$	M1(+E2)	0.3 *3*	0.104 *13*	α(K)=0.086 *12*; α(L)=0.0139 *12*; α(M)=0.00318 *25* α(N)=0.00078 *6*; α(O)=0.000134 *12*; α(P)=9.8×10^{-6} *14* Mult.: from α(K)exp=0.067 *10*, α(L1)exp=0.016 *2*, α(M1)exp=0.0046 *11*.
414.310 *9*	24 *3*	1176.695	1/2$^+$,3/2$^+$,(5/2$^+$)	762.375	3/2$^+$,5/2$^+$,7/2$^+$	M1+E2	1.4 *+8−4*	0.061 *12*	α(K)=0.048 *11*; α(L)=0.0100 *11*; α(M)=0.00237 *23* α(N)=0.00058 *6*; α(O)=9.5×10^{-5} *11*; α(P)=5.3×10^{-6} *13* Mult.: from α(K)exp=0.049 *11*.
423.693 *2*	124 *15*	508.1465	3/2$^-$	84.4561	1/2$^-$	M1		0.1025 *14*	α(K)=0.0851 *12*; α(L)=0.01346 *19*; α(M)=0.00308 *4* α(N)=0.000752 *11*; α(O)=0.0001300 *18*; α(P)=9.76×10^{-6} *14* Mult.: from α(K)exp=0.081 *10*, α(L1)exp=0.019 *5*.
428.340 *19*	18 *3*	1176.695	1/2$^+$,3/2$^+$,(5/2$^+$)	748.344	3/2$^-$				
432.242 *12*	30 *5*	574.167	5/2$^-$	141.9348	3/2$^-$	M1+E2	0.9 *4*	0.068 *16*	α(K)=0.055 *14*; α(L)=0.0101 *15*; α(M)=0.00235 *31* α(N)=0.00057 *8*; α(O)=9.7×10^{-5} *15*; α(P)=6.2×10^{-6} *17* Mult.: from α(K)exp=0.054 *11*.
433.768 *3*	59 *7*	508.1465	3/2$^-$	74.3836	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)=8.7×10^{-5} *8*; α(P)=5.2×10^{-6} *10* Mult.: from α(K)exp=0.045 *7*, α(L1)exp=0.012 *4*.
434.086 *5*	35 *5*	748.344	3/2$^-$	314.266	5/2$^-$	M1		0.0962 *13*	α(K)=0.0798 *11*; α(L)=0.01261 *18*; α(M)=0.00289 *4* α(N)=0.000705 *10*; α(O)=0.0001219 *17*; α(P)=9.15×10^{-6} *13* Mult.: from α(K)exp=0.075 *11*.
442.226 *6*	54 *7*	574.167	5/2$^-$	131.938	5/2$^-$	M1+E2	0.47 *32*	0.081 *12*	α(K)=0.066 *11*; α(L)=0.0110 *12*; α(M)=0.00253 *25*

$^{191}_{76}Os_{115}$-12

γ(^{191}Os) (continued)

E_γ [†]	I_γ [#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	δ [b]	α [c]	Comments
									α(N)=0.00062 6; α(O)=0.000106 12; α(P)=7.6×10^{-6} 13 E_γ: A comparable 442.4 5 γ placement from 442 keV level in 1977Be15. Mult.: from α(K)exp=0.066 8, α(L1)exp=0.0097 17.
446.935 24	13 2	446.926	7/2$^-$	0.0	9/2$^-$	M1+E2	1.2 +7−4	0.054 12	α(K)=0.043 10; α(L)=0.0084 11; α(M)=0.00197 24 α(N)=0.00048 6; α(O)=8.0×10^{-5} 11; α(P)=4.8×10^{-6} 12 Mult.: from α(K)exp=0.043 10.
448.670 10	23 4	721.431	3/2$^-$	272.7536	5/2$^-$	M1+E2	1.3 +6−4	0.052 11	α(K)=0.041 9; α(L)=0.0081 10; α(M)=0.00190 21 α(N)=0.00046 5; α(O)=7.7×10^{-5} 10; α(P)=4.6×10^{-6} 11 Mult.: from α(K)exp=0.041 8.
453.88 3	9 2	1202.264	1/2$^-$,3/2$^-$	748.344	3/2$^-$				
462.536 5	38 5	462.532	7/2$^-$	0.0	9/2$^-$	M1+E2	0.7 4	0.064 13	α(K)=0.052 12; α(L)=0.0090 13; α(M)=0.00207 27 α(N)=0.00051 7; α(O)=8.6×10^{-5} 13; α(P)=5.9×10^{-6} 14 Mult.: from α(K)exp=0.053 8.
^{x}462.954 8	17 3					M1+E2	0.7 5	0.064 16	α(K)=0.052 14; α(L)=0.0089 15; α(M)=0.00207 32 α(N)=0.00050 8; α(O)=8.6×10^{-5} 15; α(P)=5.9×10^{-6} 16 Mult.: from α(K)exp=0.053 10.
470.028 14	12 2	611.9588	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1+E2	0.6 4	0.064 12	α(K)=0.053 11; α(L)=0.0089 12; α(M)=0.00205 25 α(N)=0.00050 6; α(O)=8.6×10^{-5} 12; α(P)=6.0×10^{-6} 13 Mult.: from α(K)exp=0.054 10.
475.58 7	17 2	748.344	3/2$^-$	272.7536	5/2$^-$				
477.266 11	33 4	619.206	5/2$^-$	141.9348	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)=7.9×10^{-5} 9; α(P)=5.4×10^{-6} 10 Mult.: from α(K)exp=0.048 6.
480.034 17	11 2	611.9588	1/2$^-$,3/2$^-$	131.938	5/2$^-$				
480.781 9	18 2	1092.739	1/2$^-$,3/2$^-$	611.9588	1/2$^-$,3/2$^-$	M1+E2	0.7 3	0.058 9	α(K)=0.047 8; α(L)=0.0081 9; α(M)=0.00186 20 α(N)=0.00045 5; α(O)=7.7×10^{-5} 9; α(P)=5.3×10^{-6} 10 E_γ: A comparable 480.5 6 γ has an additional placement from 1202 keV level in 1977Be15. Mult.: from α(K)exp=0.048 7.
486.215 23	14 3	1280.851	5/2$^+$	794.659	3/2$^-$				
487.271 18	12 2	619.206	5/2$^-$	131.938	5/2$^-$	M1+E2	0.8 4	0.053 12	α(K)=0.043 10; α(L)=0.0075 12; α(M)=0.00173 25 α(N)=0.00042 6; α(O)=7.2×10^{-5} 12; α(P)=4.9×10^{-6} 12 Mult.: from α(K)exp=0.042 9.
^{x}488.563 10	24 5					M1+E2	0.83 35	0.052 10	α(K)=0.042 9; α(L)=0.0073 10; α(M)=0.00170 22 α(N)=0.00041 5; α(O)=7.0×10^{-5} 10; α(P)=4.7×10^{-6} 11 Mult.: from α(K)exp=0.042 7.
489.706 13	24 4	574.167	5/2$^-$	84.4561	1/2$^-$	E2		0.02399 34	α(K)=0.01796 25; α(L)=0.00461 6; α(M)=0.001108 16 α(N)=0.000268 4; α(O)=4.33×10^{-5} 6; α(P)=1.903×10^{-6} 27 Mult.: from α(K)exp=0.017 4.

$^{191}_{76}Os_{115}$-13

γ(^{191}Os) (continued)

E_γ [†]	I_γ [#d]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [@]	δ [b]	α [c]	Comments
495.679 *3*	85 *11*	637.617	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1		0.0678 *9*	α(K)=0.0564 *8*; α(L)=0.00887 *12*; α(M)=0.002028 *28* α(N)=0.000495 *7*; α(O)=8.57×10^{-5} *12*; α(P)=6.44×10^{-6} *9* Mult.: from α(K)exp=0.052 *7*, α(L1)exp=0.0067 *14*.
499.778 *6*	144 *16*	574.167	5/2$^-$	74.3836	3/2$^-$	M1+E2	0.7 *2*	0.052 *6*	α(K)=0.043 *5*; α(L)=0.0072 *6*; α(M)=0.00167 *12* α(N)=0.000408 *31*; α(O)=7.0×10^{-5} *6*; α(P)=4.8×10^{-6} *6* E_γ: A comparable 499.8 *4* γ unplaced in 1977Be15. Mult.: from α(K)exp=0.049 *6*, α(L1)exp=0.012 *2*.
518.481 *7*	34 *6*	1280.851	5/2$^+$	762.375	3/2$^+$,5/2$^+$,7/2$^+$	M1+E2	1.5 +*6*−*4*	0.033 *6*	α(K)=0.026 *5*; α(L)=0.0051 *6*; α(M)=0.00120 *13* α(N)=0.000291 *31*; α(O)=4.9×10^{-5} *6*; α(P)=2.9×10^{-6} *6* Mult.: from α(K)exp=0.026 *4*.
527.498 *2*	1.0×10^3 *1*	611.9588	1/2$^-$,3/2$^-$	84.4561	1/2$^-$	M1+E2	0.5 *2*	0.050 *5*	α(K)=0.041 *4*; α(L)=0.0068 *5*; α(M)=0.00155 *11* α(N)=0.000379 *27*; α(O)=6.5×10^{-5} *5*; α(P)=4.7×10^{-6} *5* Mult.: from α(K)exp=0.042 *4*, α(L1)exp=0.0060 *7*.
531.580 *16*	14 *3*	1143.544	1/2$^-$,3/2$^-$	611.9588	1/2$^-$,3/2$^-$				
537.574 *5*	385 *39*	611.9588	1/2$^-$,3/2$^-$	74.3836	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)=5.7×10^{-5} *7*; α(P)=4.0×10^{-6} *7* Mult.: from α(K)exp=0.036 *4*, α(L1)exp=0.0087 *10*. δ: Using α(K)exp=0.036 *4* only.
539.101 *13*	28 *4*	1176.695	1/2$^+$,3/2$^+$,(5/2$^+$)	637.617	1/2$^-$,3/2$^-$				
542.706 *17*	21 *3*	815.429	3/2$^-$	272.7536	5/2$^-$				
544.821 *5*	68 *8*	619.206	5/2$^-$	74.3836	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)=5.1×10^{-5} *6*; α(P)=3.4×10^{-6} *6* E_γ: A comparable 545.3 *5* γ unplaced in 1977Be15.

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[b]	α[c]	Comments
									Mult.: from α(K)exp=0.030 *4*, α(L1)exp=0.0086 *13*. δ: Using α(K)exp=0.036 *4* only.
^{x}546.055 *10*	25 *4*					M1+E2	0.9 *4*	0.037 *9*	α(K)=0.030 *7*; α(L)=0.0053 *9*; α(M)=0.00122 *19* α(N)=0.00030 *5*; α(O)=5.1×10^{-5} *9*; α(P)=3.4×10^{-6} *9* Mult.: from α(K)exp=0.031 *6*.
546.871 *13*	21 *6*	688.819	5/2$^-$	141.9348	3/2$^-$	M1+E2	1.2 *+10−5*	0.032 *9*	α(K)=0.026 *8*; α(L)=0.0048 *9*; α(M)=0.00111 *20* α(N)=0.00027 *5*; α(O)=4.5×10^{-5} *9*; α(P)=2.9×10^{-6} *9* Mult.: from α(K)exp=0.026 *7*.
553.158 *10*	20 *2*	637.617	1/2$^-$,3/2$^-$	84.4561	1/2$^-$	M1(+E2)	0.4 *4*	0.046 *8*	α(K)=0.038 *7*; α(L)=0.0062 *9*; α(M)=0.00141 *19* α(N)=0.00035 *5*; α(O)=5.9×10^{-5} *9*; α(P)=4.4×10^{-6} *9* Mult.: from α(K)exp=0.038 *7*.
556.32 *3*	60 *8*	630.716	5/2$^-$	74.3836	3/2$^-$	M1+E2	0.7 *3*	0.039 *6*	α(K)=0.032 *5*; α(L)=0.0054 *7*; α(M)=0.00125 *14* α(N)=0.000305 *35*; α(O)=5.2×10^{-5} *6*; α(P)=3.7×10^{-6} *6* Mult.: from α(K)exp=0.033 *4*.
556.857 *21*	19 *4*	688.819	5/2$^-$	131.938	5/2$^-$				
563.789 *25*	16 *2*	974.541		410.8204	7/2$^+$				Mult.: α(K)exp≤0.03 − E1,E2 can be assumed from the limit of conversion coefficient, upper limits of the conversion-electron intensity in 1991Bo35.
564.65 *3*	15 *2*	1202.264	1/2$^-$,3/2$^-$	637.617	1/2$^-$,3/2$^-$				
579.494 *5*	53 *8*	721.431	3/2$^-$	141.9348	3/2$^-$	M1+E2	0.7 *4*	0.036 *7*	α(K)=0.029 *6*; α(L)=0.0049 *8*; α(M)=0.00112 *17* α(N)=0.00027 *4*; α(O)=4.7×10^{-5} *7*; α(P)=3.3×10^{-6} *7* Mult.: from α(K)exp=0.029 *5*.
589.39 *6*	12 *2*	721.431	3/2$^-$	131.938	5/2$^-$				
590.190 *8*	25 *4*	1077.801	1/2$^-$,3/2$^-$	487.610	3/2$^-$	M1+E2	1.1 *2*	0.0279 *28*	α(K)=0.0227 *24*; α(L)=0.00399 *30*; α(M)=0.00093 *7* α(N)=0.000225 *16*; α(O)=3.82×10^{-5} *29*; α(P)=2.54×10^{-6} *28* Mult.: from α(K)exp=0.023 *2*.
600.576 *8*	31 *4*	1108.729	5/2$^-$	508.1465	3/2$^-$	M1+E2	1.8 *+10−5*	0.021 *4*	α(K)=0.0168 *31*; α(L)=0.0032 *4*; α(M)=0.00075 *9* α(N)=0.000182 *21*; α(O)=3.0×10^{-5} *4*; α(P)=1.9×10^{-6} *4* Mult.: from α(K)exp=0.017 *3*.
^{x}603.459 *22*	17 *3*								
604.41 *3*	13 *5*	688.819	5/2$^-$	84.4561	1/2$^-$				
614.436 *11*	22 *3*	688.819	5/2$^-$	74.3836	3/2$^-$	M1+E2	0.6 *3*	0.032 *5*	α(K)=0.027 *4*; α(L)=0.0043 *5*; α(M)=0.00100 *11* α(N)=0.000243 *27*; α(O)=4.2×10^{-5} *5*; α(P)=3.0×10^{-6} *5* Mult.: from α(K)exp=0.026 *4*.
622.699 *21*	14 *3*	764.6619	3/2$^+$,(5/2$^+$)	141.9348	3/2$^-$				

$^{191}_{76}Os_{115}$-15

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	δ[b]	α[c]	Comments
636.974 4	100 13	721.431	3/2⁻	84.4561	1/2⁻	M1+E2	1.1 3	0.023 4	α(K)=0.0188 31; α(L)=0.0033 4; α(M)=0.00075 9 α(N)=0.000184 21; α(O)=3.1×10^{-5} 4; α(P)=2.1×10^{-6} 4 Mult.: from α(K)exp=0.019 3.
[x]638.444 14	22 4								
644.77 3	13 3	959.015	1/2⁻,3/2⁻	314.266	5/2⁻				
647.051 17	25 4	721.431	3/2⁻	74.3836	3/2⁻	M1+E2	1.0 3	0.023 4	α(K)=0.0190 32; α(L)=0.0032 4; α(M)=0.00075 9 α(N)=0.000182 22; α(O)=3.1×10^{-5} 4; α(P)=2.1×10^{-6} 4 Mult.: from α(K)exp=0.019 3.
652.728 7	46 7	794.659	3/2⁻	141.9348	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 29; α(O)=3.0×10^{-5} 5; α(P)=2.1×10^{-6} 5 Mult.: from α(K)exp=0.019 4.
655.441 21	29 6	1118.001	5/2⁻	462.532	7/2⁻	M1+E2	0.9 +6−4	0.024 5	α(K)=0.019 4; α(L)=0.0032 6; α(M)=0.00075 13 α(N)=0.000183 31; α(O)=3.1×10^{-5} 6; α(P)=2.2×10^{-6} 5 Mult.: from α(K)exp=0.019 4.
662.67[e] 7	12[e] 3	794.659	3/2⁻	131.938	5/2⁻				
662.67[e] 7	12[e] 3	804.551	5/2⁻,7/2⁻	141.9348	3/2⁻				
663.883 4	138 21	748.344	3/2⁻	84.4561	1/2⁻	M1+E2	1.4 +9−4	0.019 4	α(K)=0.0150 31; α(L)=0.0027 4; α(M)=0.00062 9 α(N)=0.000151 22; α(O)=2.6×10^{-5} 4; α(P)=1.7×10^{-6} 4 Mult.: from α(K)exp=0.015 3.
[x]667.67 3	35 5								
668.52 4	21 3	1176.695	1/2⁺,3/2⁺,(5/2⁺)	508.1465	3/2⁻				
[x]669.513 15	29 5								
673.94 3	39 6	748.344	3/2⁻	74.3836	3/2⁻				
683.49 3	19 4	815.429	3/2⁻	131.938	5/2⁻				
[x]690.73 7	20 3								
694.09 4	21 6	1202.264	1/2⁻,3/2⁻	508.1465	3/2⁻				
[x]695.36 3	20 3								
706.649 17	44 6	1280.851	5/2⁺	574.167	5/2⁻				
710.202 17	33 4	794.659	3/2⁻	84.4561	1/2⁻	M1+E2	0.65 +37−34	0.022 4	α(K)=0.0180 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 Mult.: from α(K)exp=0.018 3.
[x]719.525 13	54 10					M1+E2	1.0 4	0.018 4	α(K)=0.0147 32; α(L)=0.0025 4; α(M)=0.00057 9 α(N)=0.000138 23; α(O)=2.4×10^{-5} 4; α(P)=1.6×10^{-6} 4 Mult.: from α(K)exp=0.015 3.

$^{191}_{76}Os_{115}$-16

γ(^{191}Os) (continued)

E_γ [†]	I_γ [#d]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [@]	δ [b]	α [c]	Comments
720.276 *11*	88 *14*	794.659	3/2$^-$	74.3836	3/2$^-$	E2(+M1)	2.6 *3*	0.012 *14*	α(K)=0.010 *12*; α(L)=0.0018 *16*; α(M)=4.2×10^{-4} *35* α(N)=1.0×10^{-4} *8*; α(O)=1.7×10^{-5} *15*; α(P)=1.0×10^{-6} *14* Mult.: from α(K)exp=0.0095 *15*.
726.397 *20*	31 *6*	1143.544	1/2$^-$,3/2$^-$	417.1528	1/2$^-$,3/2$^-$				
^{x}767.828 *8*	64 *6*					E2(+M1)	1.8 *3*	0.0117 *10*	α(K)=0.0095 *8*; α(L)=0.00168 *11*; α(M)=0.000389 *25* α(N)=9.5×10^{-5} *6*; α(O)=1.60×10^{-5} *11*; α(P)=1.05×10^{-6} *10* Mult.: from α(K)exp=0.0095 *15*.
768.664 *20*	23 *5*	1202.264	1/2$^-$,3/2$^-$	433.590	1/2$^-$,3/2$^-$				
^{x}773.53 *9*	27 *3*								
785.102 *25*	36 *5*	1202.264	1/2$^-$,3/2$^-$	417.1528	1/2$^-$,3/2$^-$				
^{x}787.36 *4*	49 *8*								
793.29 *13*	24 *4*	1280.851	5/2$^+$	487.610	3/2$^-$				
804.47 *4*	27 *4*	804.551	5/2$^-$,7/2$^-$	0.0	9/2$^-$				
817.076 *23*	71 *8*	959.015	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	E2		0.00750 *10*	α(K)=0.00602 *8*; α(L)=0.001133 *16*; α(M)=0.000265 *4* α(N)=6.43×10^{-5} *9*; α(O)=1.075×10^{-5} *15*; α(P)=6.47×10^{-7} *9* Mult.: from α(K)exp=0.0061 *9*.
818.28 *3*	39 *5*	1280.851	5/2$^+$	462.532	7/2$^-$				
826.77 *5*	18 *6*	1298.436	1/2$^-$,3/2$^-$	471.650	5/2$^-$				
^{x}837.08 *3*	39 *5*								
^{x}847.339 *20*	42 *6*					M1(+E2)	0.6 *7*	0.014 *4*	α(K)=0.0119 *31*; α(L)=0.0019 *4*; α(M)=0.00043 *9* α(N)=0.000106 *23*; α(O)=1.8×10^{-5} *4*; α(P)=1.3×10^{-6} *4* Mult.: from α(K)exp=0.012 *3*.
874.54 *3*	64 *7*	959.015	1/2$^-$,3/2$^-$	84.4561	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)=7.8×10^{-5} *27*; α(O)=1.3×10^{-5} *5*; α(P)=9.E−7 *4* Mult.: from α(K)exp=0.0085 *36*.
881.31 *3*	44 *5*	1298.436	1/2$^-$,3/2$^-$	417.1528	1/2$^-$,3/2$^-$				
^{x}889.38 *4*	38 *5*								
^{x}896.38 *4*	33 *5*								
^{x}899.73 *5*	41 *11*								
^{x}916.30 *11*	37 *5*								
^{x}919.92 *7*	28 *5*								
^{x}922.71 *4*	35 *7*								
950.79 *3*	59 *7*	1092.739	1/2$^-$,3/2$^-$	141.9348	3/2$^-$	M1+E2	0.7 *4*	0.0104 *18*	α(K)=0.0086 *15*; α(L)=0.00136 *21*; α(M)=0.00031 *5* α(N)=7.6×10^{-5} *12*; α(O)=1.31×10^{-5} *21*; α(P)=9.6×10^{-7} *18* Mult.: from α(K)exp=0.0086 *13*.
993.28 *6*	42 *7*	1077.801	1/2$^-$,3/2$^-$	84.4561	1/2$^-$				
1003.45 *5*	42 *5*	1077.801	1/2$^-$,3/2$^-$	74.3836	3/2$^-$				
^{x}1030.62 *9*	37 *6*								
^{x}1050.57 *3*	63 *7*								
^{x}1060.11 *5*	56 *13*								

$^{191}_{76}$Os$_{115}$-17

γ(^{191}Os) (continued)

E_γ[†]	I_γ[#d]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[@]	α[c]	Comments
[x]1069.01 *4*	69 *8*							
[x]1089.54 *5*	59 *8*							
[x]1102.680 *21*	149 *20*							
[x]1111.65 *4*	69 *12*							
1156.46 *3*	121 *14*	1298.436	$1/2^-,3/2^-$	141.9348	$3/2^-$	E2(+M1)	0.0058 *20*	α(K)=0.0048 *17*; α(L)=7.5×10^{-4} *24*; α(M)=1.7×10^{-4} *5* α(N)=4.2×10^{-5} *13*; α(O)=7.2×10^{-6} *24*; α(P)=5.3×10^{-7} *20*; α(IPF)=1.8×10^{-6} *4* Mult.: from α(K)exp=0.0034 *6*.
1214.01 *5*	101 *18*	1298.436	$1/2^-,3/2^-$	84.4561	$1/2^-$			
[x]1221.25 *8*	58 *17*							
[x]1233.42 *6*	92 *15*							
[x]1255.20 *4*	145 *19*							
[x]1257.40 *5*	128 *15*							
[x]1259.50 *5*	134 *15*							
[x]1263.83 *8*	137 *18*							
[x]1265.70 *6*	134 *15*							
[x]1267.67 *6*	118 *15*							
[x]1268.07 *8*	125 *16*							
4460.31 *10*	115 *1*	(5758.83)	$1/2^+$	1298.436	$1/2^-,3/2^-$			
4530.87 *10*	85 *1*	(5758.83)	$1/2^+$	1227.90				
4556.49 *10*	170 *2*	(5758.83)	$1/2^+$	1202.264	$1/2^-,3/2^-$			
4582.5 *5*	9 *1*	(5758.83)	$1/2^+$	1176.695	$1/2^+,3/2^+,(5/2^+)$			
4615.8 *5*	42 *1*	(5758.83)	$1/2^+$	1143.544	$1/2^-,3/2^-$			
4665.8 *5*	52 *2*	(5758.83)	$1/2^+$	1092.739	$1/2^-,3/2^-$			
4675.2 *5*	14 *1*	(5758.83)	$1/2^+$	1083.6				
4680.5 *5*	18 *1*	(5758.83)	$1/2^+$	1077.801	$1/2^-,3/2^-$			
4964.3 *5*	25 *1*	(5758.83)	$1/2^+$	794.659	$3/2^-$			
4993.4 *5*	22 *1*	(5758.83)	$1/2^+$	764.6619	$3/2^+,(5/2^+)$			
5010.41 *10*	181 *2*	(5758.83)	$1/2^+$	748.344	$3/2^-$			
5037.34 *10*	183 *2*	(5758.83)	$1/2^+$	721.431	$3/2^-$			
5120.7 *5*	45 *1*	(5758.83)	$1/2^+$	637.617	$1/2^-,3/2^-$			
5146.79 *10*	1993 *20*	(5758.83)	$1/2^+$	611.9588	$1/2^-,3/2^-$			
5250.66 *10*	112 *2*	(5758.83)	$1/2^+$	508.1465	$3/2^-$			
5271.03 *10*	369 *4*	(5758.83)	$1/2^+$	487.610	$3/2^-$			
5322.8 *5*	13 *1*	(5758.83)	$1/2^+$	436.966	$1/2^-,3/2^-$			
5341.60 *10*	398 *4*	(5758.83)	$1/2^+$	417.1528	$1/2^-,3/2^-$			
5617.1 *5*	36 *1*	(5758.83)	$1/2^+$	141.9348	$3/2^-$			
5674.35 *10*	151 *2*	(5758.83)	$1/2^+$	84.4561	$1/2^-$			
5684.35 *10*	850 *8*	(5758.83)	$1/2^+$	74.3836	$3/2^-$			

γ(^{191}Os) (continued)

[†] From 1991Bo35. Primary gamma-ray energy (Eγ>4 MeV) uncertainties were assigned by the evaluator as 0.1 and 0.5 keV for strong and weak transitions, respectively. In 1991Bo35, ΔEγ are reported within 0.02 to 0.1 keV. A number of primary gammas in 1977Be15 and 1977Ca19 are not reported in 1991Bo35. Those primary gammas are not listed in this dataset.

[‡] From conversion-electron data only (1991Bo35).

[#] From 1991Bo35, relative to Iγ(527.5)=1000.

[@] From 1991Bo35, based on experimental conversion coefficients and subshell ratios.

[&] From 1991Bo35, based on subshell ratios and limits on conversion coefficients obtained from upper limits on γ-ray intensities and transition intensity balances.

[a] From limits on conversion coefficients obtained from upper limits on conversion-electron intensities in 1991Bo35.

[b] Deduced by evaluator from conversion electron data (1991Bo35), listed in comments, using the BriccMixing code.

[c] Additional information 1.

[d] For intensity per 100 neutron captures, multiply by 0.2048 *10*.

[e] Multiply placed with undivided intensity.

[x] γ ray not placed in level scheme.

$^{191}_{76}Os_{115}$-19

^{190}Os(n,γ) E=thermal 1991Bo35

Level Scheme

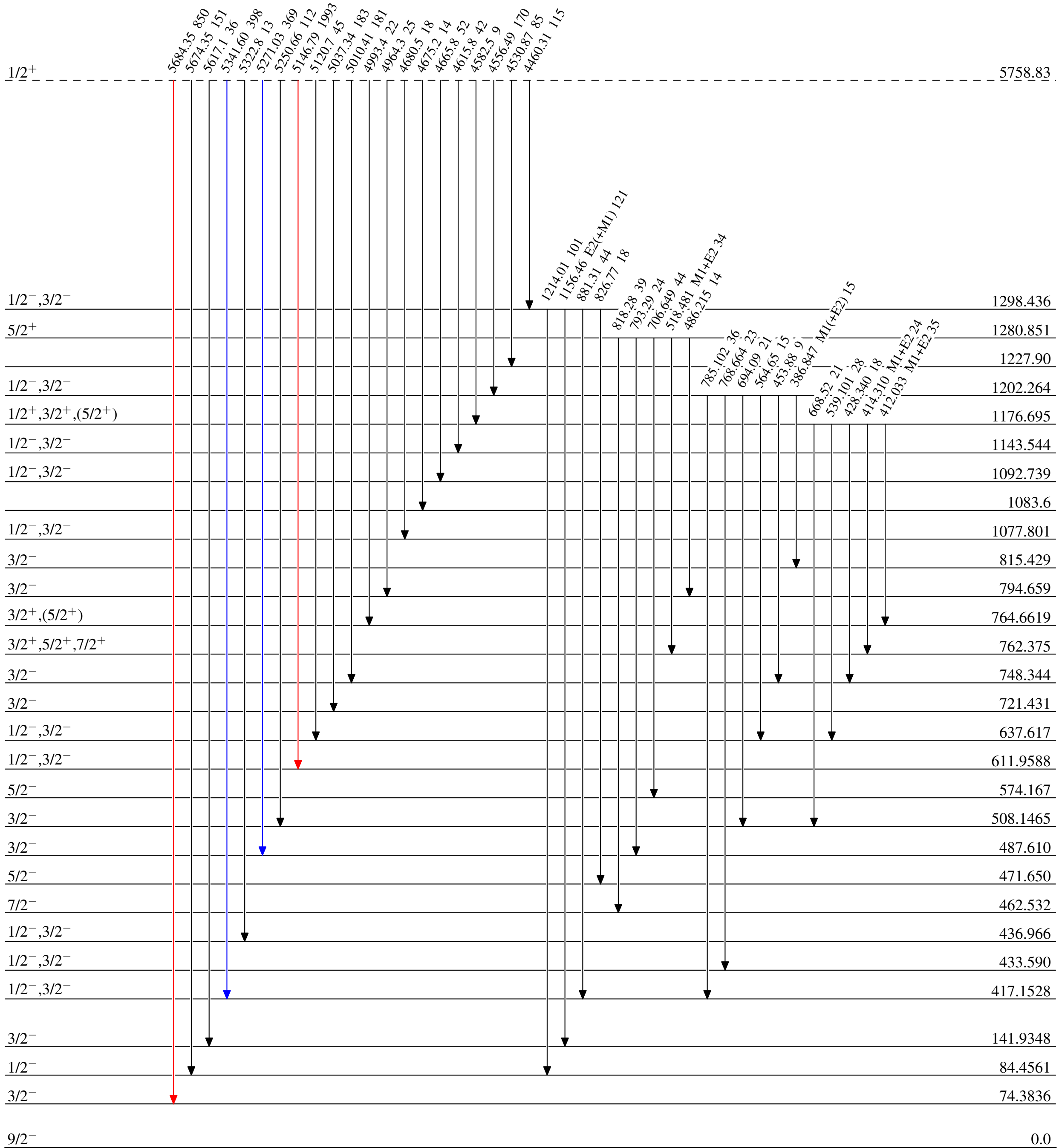
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



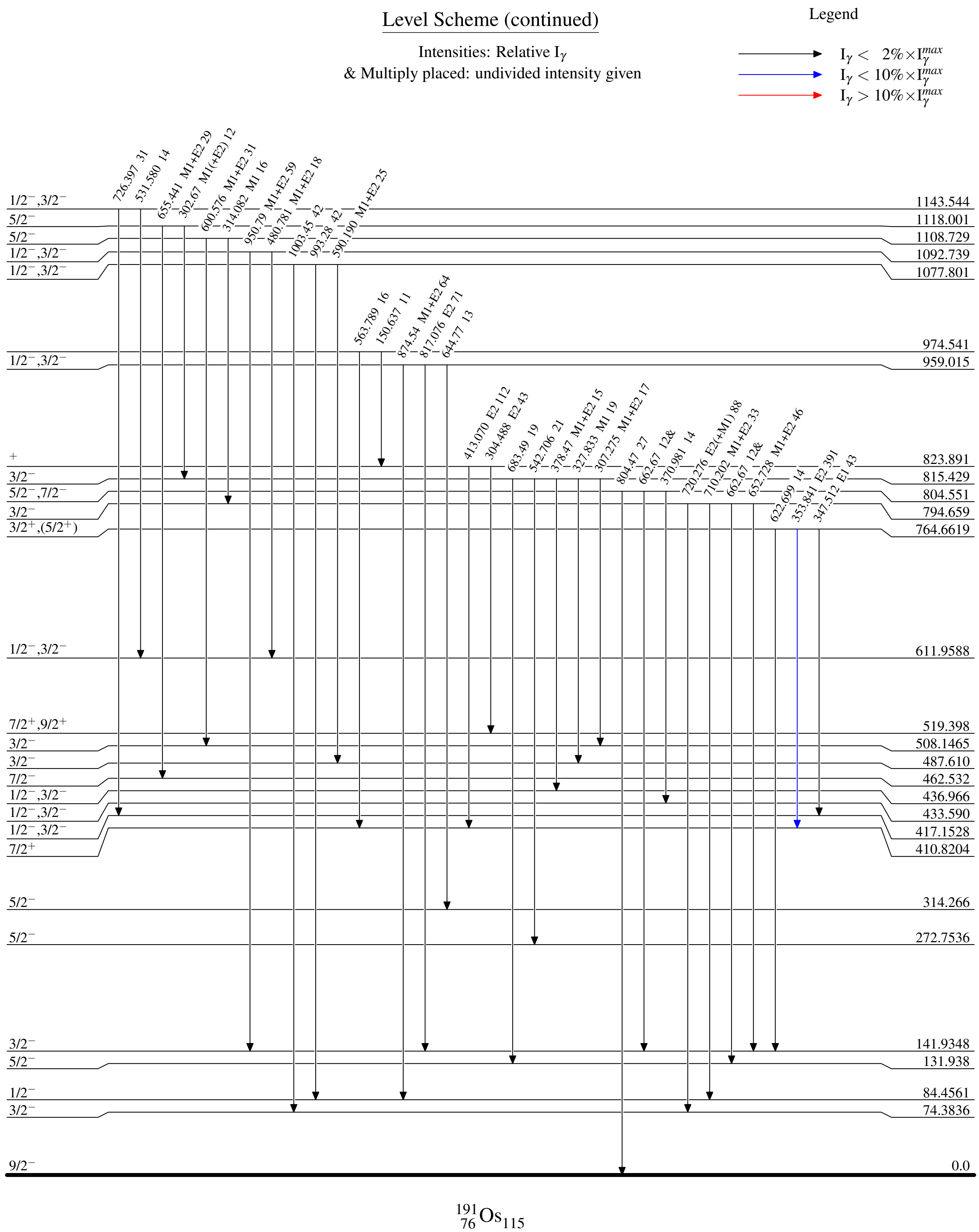
$^{191}_{76}Os_{115}$

^{190}Os(n,γ) E=thermal 1991Bo35

Level Scheme (continued)

Intensities: Relative I_γ

& Multiply placed: undivided intensity given



^{190}Os(n,γ) E=thermal 1991Bo35

Level Scheme (continued)

Intensities: Relative I_γ

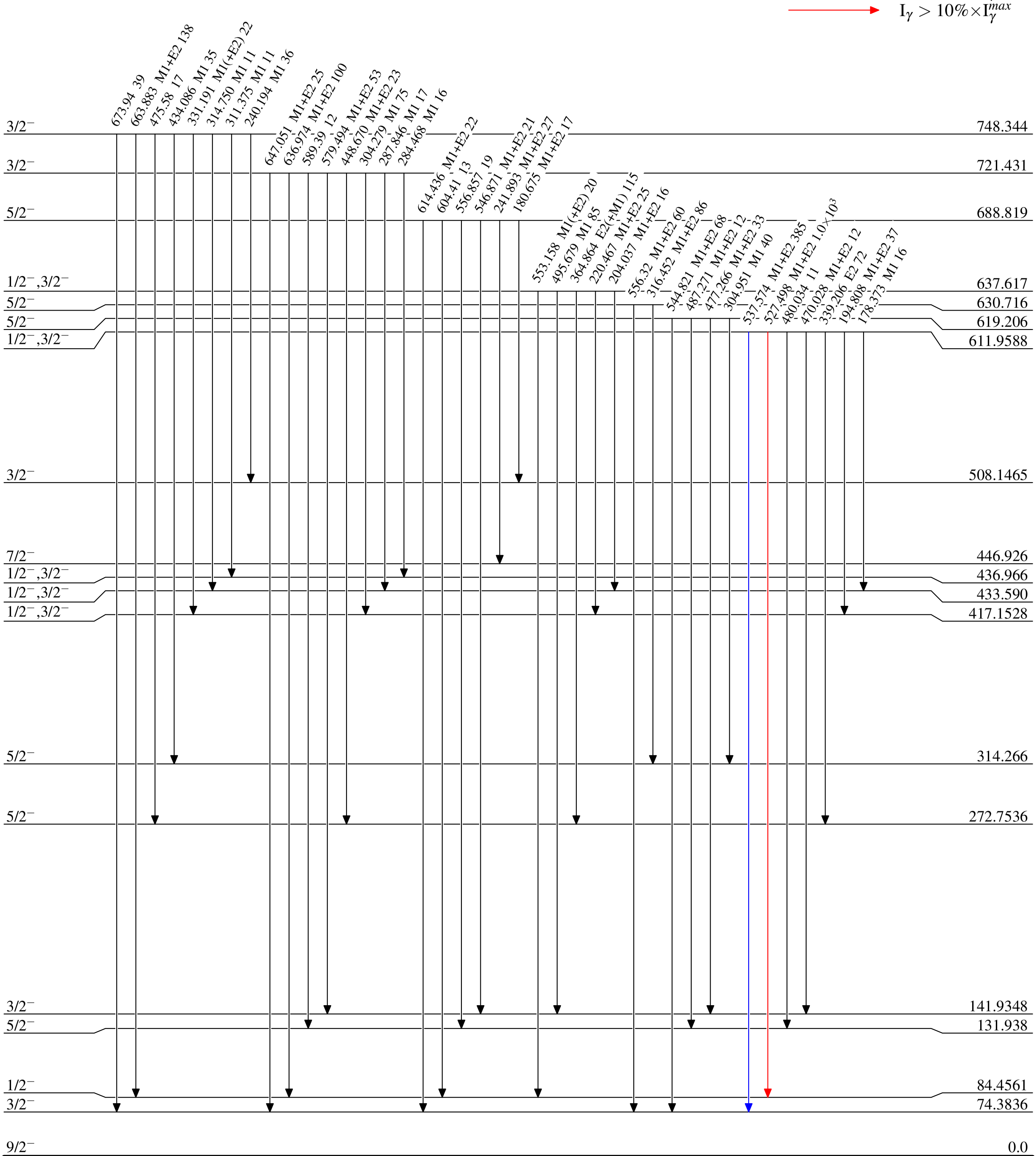
& Multiply placed: undivided intensity given

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

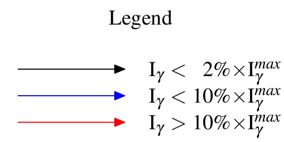


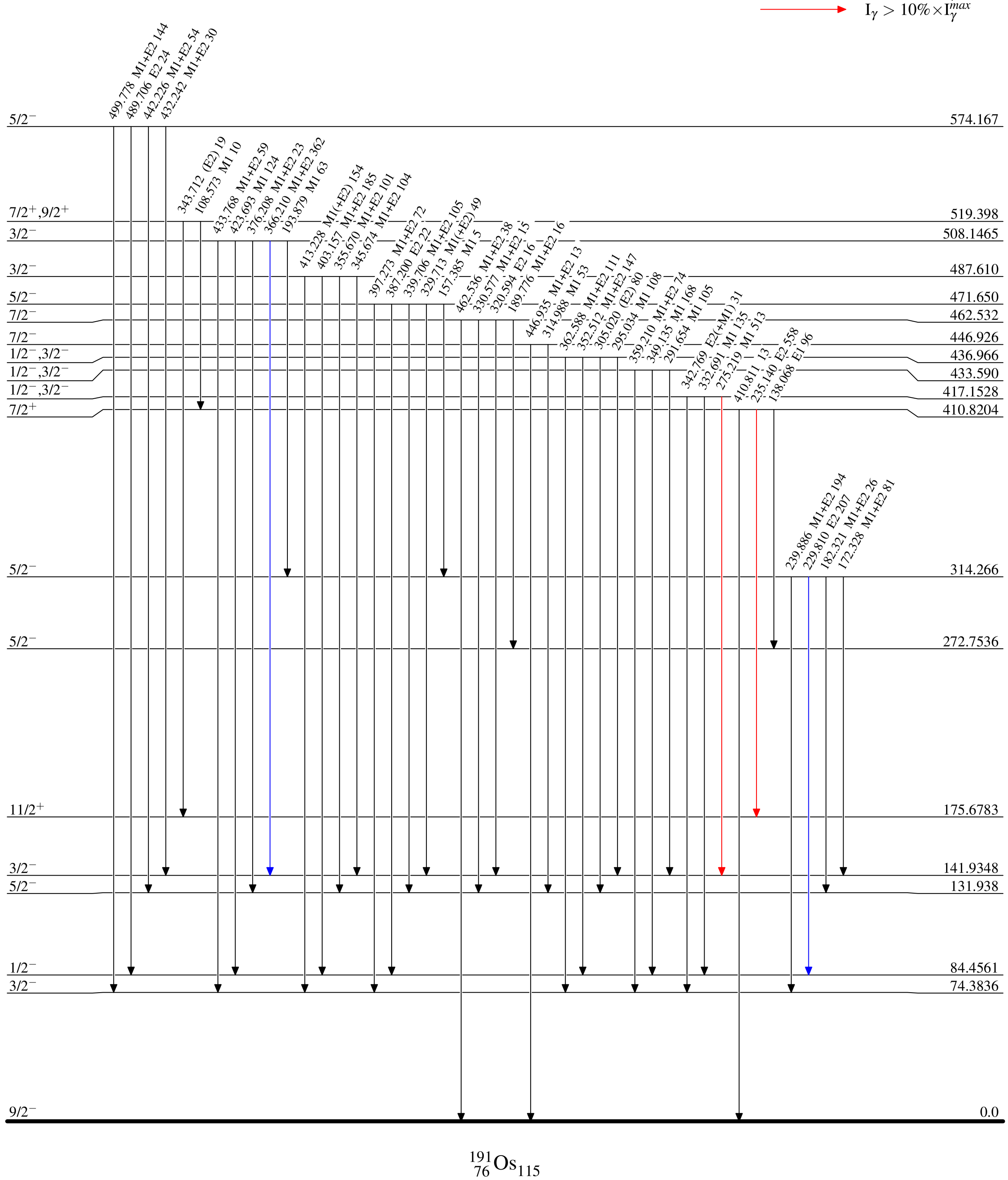
$^{191}_{76}Os_{115}$

^{190}Os(n,γ) E=thermal 1991Bo35

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given



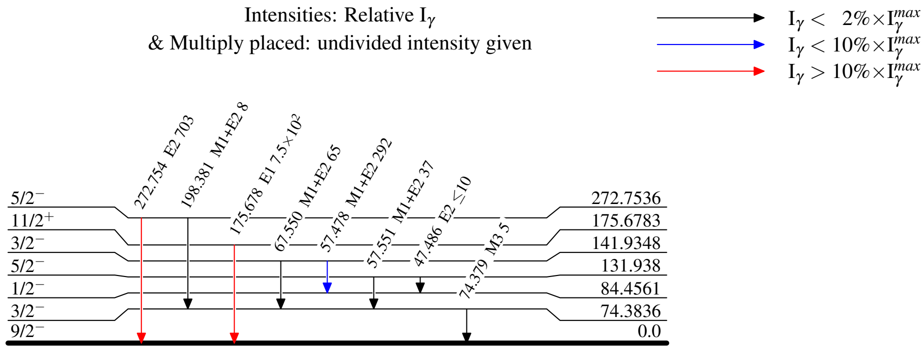


^{190}Os(n,γ) E=thermal 1991Bo35

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend



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