^{100}Mo(γ,γ') 2008Ru04,2008RuZW,1973Mo30

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 172,1 (2021)	31-Jan-2021

2008Ru04, 2008RuZW, 2006RuZW: E=2-15 MeV bremsstrahlung γ-rays produced when 13.2 MeV electrons bombarded a Nb target, at the superconducting electron accelerator ELBE of the Forschungszentrum Dresden-Rossendorf. Measured Eγ, Iγ, angular distributions using four HPGe detectors with BGO . Compton-suppression Enriched target. Earlier experiments by this group are described in 2006Ru06, 2006Ru11 and 2005Ru14. Deduced dipole strength distribution. See also 2010Er01, 2009Ru05, 2008Wa07 and 2007Sc39 for discussion of magnetic dipole strengths.

2006Ru06 (also 2005Ru14): E=3.2-3.8 MeV bremsstrahlung beam with end-point energy of 3.8 MeV. Measured Eγ, Iγ, $\gamma(\theta)$, absolute photon scattering cross sections using three large Ge detectors positioned at 90°, 127° and 150° relative to the incident beam. The detector at 127° was equipped with BGO anti-Compton shield.

2006Ru11: bremsstrahlung beam with end-point energy of 9.5 MeV. Measured quasi-continuum γ radiation using four large Compton- suppressed Ge detectors positioned at 90° and 127° relative to the incident beam. The dipole strength distribution follows a Porter-Thomas distribution. Enhancements at $\approx$ 6.5 and 9 MeV are associated with pygmy dipole resonances.

1973Mo30: Eγ=7637 keV, 5187 keV (from Cu(n,γ)); 6517 keV (from V(n,γ)); 6418 keV (from Ti(n,γ) E(n)=thermal). Natural molybdenum target. Measured γ, $\gamma(\theta)$, partial and total radiative widths. 1979Mo19, 1974Wo05 and 1971Mo26 are from the same group.

Others: 1981Sc10, 1994BeZZ.

1994BeZZ: Eγ=6109 and 5957 from Br(n,γ) E=thermal used to excite similar energy states in ^{100}Mo, cross sections for (γ,γ') are given copper and vanadium.

Unless otherwise specified, all the data given here are from the latest study by the Dresden group published in 2008Ru04, and private communication 2008RuZW received July 21, 2008 by the evaluators from the first author (G. Rusev) of 2008Ru04. This communication contains the details of the γ-ray data. Their earlier data in 2006Ru06, in the 2236 to 3659 energy region, are listed under comments. Exceptions are: data for 6418, 6517 and 7637 keV are from 1973Mo30, and a tentative level at 6109 is from 1994BeZZ.

^{100}Mo Levels

Units of Γ are labeled as MeV in column #8, table I of 2006Ru06, which is a misprint, it should be in milli-eV.

E(level)[†]	J$^\pi$[@]	Γ_0^2/Γ	I$_s$ (eVb)[&]	Comments
0.0	0$^+$			
535.6	2$^+$			
694.8 *3*	0$^+$			
1064.07 *10*	2$^+$	26×10^{-3} eV *2*	267 *17*	
1462 *2*	2$^+$			
1974? *4*	(1,2$^+$)			
2033 *3*	0$^+$			
2040 *3*	(2)$^+$			
2632.4 *3*	(1)	100×10^{-4} eV *11*	16.6 *19*	E(level): evaluators assume that 2633.3 *1* in 2006Ru06 and 2632.4 *3* in 2008RuZW are the same levels. Integrated σ=1.5 eVb *3* (2006Ru06). T$_{1/2}$=0.51 ps *10* from Γ=0.00090 eV *18* (2006Ru06). B(E1)(↑)=0.14×10^{-5} *3*, B(M1)(↑)=0.013 *3* (2006Ru06).
2901.1 *1*	(1)	289×10^{-4} eV *19*	40 *3*	T$_{1/2}$=0.32 ps *4* from Γ=0.00143 eV *17* (2006Ru06). B(E1)(↑)=0.17×10^{-5} *2*, B(M1)(↑)=0.0152 *18* (2006Ru06). Integrated σ=2.0 eVb *2* (2006Ru06).
2905.8 *1*	(1)	266×10^{-4} eV *18*	36 *3*	T$_{1/2}$=0.37 ps *4* from Γ=0.00125 eV *13* (2006Ru06). B(E1)(↑)=0.15×10^{-5} *2*, B(M1)(↑)=0.0132 *14* (2006Ru06). Integrated σ=1.70 eVb *18* (2006Ru06).
3066.3 *2*	(1)	110×10^{-4} eV *18*	14 *2*	T$_{1/2}$=0.207 ps *19* from Γ=0.0022 eV *2* (2006Ru06). B(E1)(↑)=0.22×10^{-5} *2*, B(M1)(↑)=0.0202 *19* (2006Ru06).

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^{100}Mo(γ,γ') 2008Ru04,2008RuZW,1973Mo30 (continued)

^{100}Mo Levels (continued)

E(level)[†]	J$^{\pi}$[@]	Γ_0^2/Γ	I$_s$ (eVb)[&]	Comments
				Integrated σ=2.8 eVb *3* (2006Ru06). J$^{\pi}$: 1$^+$ in 2005Ru14.
3198.4 *4*	(1)	7.6×10^{-3} eV *17*	9 *2*	T$_{1/2}$=0.23 ps *4* from Γ=0.0020 eV *3* (2006Ru06). B(E1)(↑)=0.17×10^{-5} *2*, B(M1)(↑)=0.0157 *20* (2006Ru06). Integrated σ=2.2 eVb *3* (2006Ru06).
3242.8 *1*	1	29×10^{-3} eV *2*	32 *2*	T$_{1/2}$=0.138 ps *17* from Γ=0.0033 eV *4* (2006Ru06). B(E1)(↑)=0.28×10^{-5} *3*, B(M1)(↑)=0.025 *3* (2006Ru06). Integrated σ=3.6 eVb *4* (2006Ru06).
3290.16 *10*	(1$^+$)[#]	30×10^{-3} eV *2*	32 *2*	T$_{1/2}$=43 fs *6* from Γ=0.0107 eV *15* (2006Ru06). E(level): this state decays to g.s. and the first excited 0$^+$ state which indicates that two coexisting configurations are mixed in the 0$^+$ states (2006Ru06). B(M1)(2595γ,1$^+$ to excited 0$^+$)/B(M1)(3290γ,1$^+$ to g.s.)=0.45 *13* (2006Ru06). Integrated σ=7.6 eVb *6* (2006Ru06).
3342.1 *1*	1			E(level),J$^{\pi}$: level from 2006Ru06 only. T$_{1/2}$=0.175 ps *20* from Γ=0.0026 eV *3* (2006Ru06). B(E1)(↑)=0.20×10^{-5} *2*, B(M1)(↑)=0.018 *2* (2006Ru06). Integrated σ=2.7 eVb *3* (2006Ru06).
3483.97 *10*	(1$^+$)[#]	58×10^{-3} eV *3*	55 *3*	T$_{1/2}$=8.3 fs *8* from Γ=0.055 eV *5* (2006Ru06). Integrated σ=43 eVb *3* (2006Ru06).
3570.8 *1*	(1)	36×10^{-3} eV *2*	33 *2*	T$_{1/2}$=18.9 fs *15* from Γ=0.0242 eV *19* (2006Ru06). B(E1)(↑)=1.52×10^{-5} *12*, B(M1)(↑)=0.138 *11* (2006Ru06). Integrated σ=21.9 eVb *16* (2006Ru06).
3599.9 *2*	1			E(level),J$^{\pi}$: level from 2006Ru06 only. T$_{1/2}$=0.18 ps *3* from Γ=0.0025 eV *4* (2006Ru06). B(E1)(↑)=0.16×10^{-5} *2*, B(M1)(↑)=0.014 *2* (2006Ru06). Integrated σ=2.3 eVb *4* (2006Ru06).
3615.6 *2*	1	180×10^{-4} eV *17*	15.9 *15*	T$_{1/2}$=56 fs *6* from Γ=0.0082 eV *8* (2006Ru06). B(E1)(↑)=0.50×10^{-5} *5*, B(M1)(↑)=0.045 *5* (2006Ru06). Integrated σ=7.3 eVb *7* (2006Ru06).
3627.3 *3*	(1)	158×10^{-4} eV *17*	13.8 *15*	T$_{1/2}$=32 fs *3* from Γ=0.0144 eV *14* (2006Ru06). B(E1)(↑)=0.86×10^{-5} *8*, B(M1)(↑)=0.078 *8* (2006Ru06). Integrated σ=12.6 eVb *12* (2006Ru06).
3659.09 *22*	1$^{(+)}$[#]	25×10^{-3} eV *3*	22 *3*	T$_{1/2}$=18 fs *3* from Γ=0.025 eV *4* (2006Ru06). Integrated σ=20.7 eVb *19* (2006Ru06).
3887.98 *10*	1	28×10^{-3} eV *2*	21.2 *15*	
3896.68 *10*	(1)	61×10^{-3} eV *3*	46 *3*	
3925.98 *10*	(1)	34×10^{-3} eV *2*	25.0 *17*	
4081.59 *10*	1	37×10^{-3} eV *3*	25.2 *17*	
4156.5 *3*	1	39×10^{-3} eV *5*	26 *3*	
4217.60 *10*	1	50×10^{-3} eV *3*	32 *2*	
4232.10 *20*	(1)	36×10^{-3} eV *2*	22.9 *16*	
4329.90 *20*	1	36×10^{-3} eV *3*	21.8 *18*	
4516.81 *10*	1	72×10^{-3} eV *4*	41 *2*	
4565.51 *10*	1	89×10^{-3} eV *5*	50 *3*	
4583.11 *10*	1	93×10^{-3} eV *5*	51 *3*	
4594.91 *10*	1	67×10^{-3} eV *5*	36 *3*	
4689.02 *10*	1	64×10^{-3} eV *4*	34 *2*	
4730.32 *20*	1	60×10^{-3} eV *5*	31 *2*	
4989.63 *20*	1	74×10^{-3} eV *13*	34 *6*	
5007.33 *20*	1	47×10^{-3} eV *4*	21.6 *18*	

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^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

^{100}Mo Levels (continued)

E(level)[†]	J^{π}[@]	Γ_0^2/Γ	I_s (eVb)[&]
5034.54 *20*	1	69×10^{-3} eV *11*	32 *5*
5062.9 *3*	(2)	165×10^{-4} eV *18*	12.3 *13*
5071.24 *20*	(1)	31×10^{-3} eV *3*	13.9 *12*
5101.3 *6*	1	12×10^{-3} eV *2*	5.4 *10*
5109.3 *9*	(1)	8×10^{-3} eV *2*	3.6 *10*
5136.04 *10*	(1)	61×10^{-3} eV *4*	26.5 *17*
5158.3 *3*	1	41×10^{-3} eV *4*	17.7 *16*
5169.6 *3*	1	32×10^{-3} eV *3*	13.8 *13*
5181.8 *3*	1	46×10^{-3} eV *4*	19.6 *16*
5187 *2*	1		
5190.4 *5*	1	28×10^{-3} eV *3*	11.8 *13*
5204.6 *4*	(1)	26×10^{-3} eV *3*	11.1 *13*
5216.0 *8*	(1)	17×10^{-3} eV *3*	7.0 *13*
5271.2 *6*	1	23×10^{-3} eV *3*	9.4 *14*
5277.6 *3*	1	35×10^{-3} eV *4*	14.4 *14*
5310.5 *4*	1	32×10^{-3} eV *3*	13.1 *13*
5335.65 *20*	1	58×10^{-3} eV *4*	23.4 *17*
5347.85 *10*	1	84×10^{-3} eV *5*	34 *2*
5359.8 *3*	1	44×10^{-3} eV *4*	17.6 *15*
5369.6 *6*	1	24×10^{-3} eV *3*	9.6 *13*
5382.5 *10*	1	19×10^{-3} eV *4*	7.5 *16*
5390.3 *6*	1	33×10^{-3} eV *4*	13.2 *16*
5402.26 *10*	1	94×10^{-3} eV *6*	37 *2*
5412.6 *8*	1	18×10^{-3} eV *3*	7.0 *13*
5435.5 *6*	1	23×10^{-3} eV *3*	9.0 *13*
5442.9 *6*	1	30×10^{-3} eV *4*	11.8 *15*
5449.6 *6*	(1)	22×10^{-3} eV *4*	8.5 *14*
5502.7 *4*	1	32×10^{-3} eV *4*	12.3 *13*
5519.4 *4*	1	44×10^{-3} eV *4*	16.7 *15*
5532.2 *5*	1	34×10^{-3} eV *4*	12.8 *13*
5547.9 *3*	1	50×10^{-3} eV *4*	18.8 *15*
5554.4 *11*	1	15×10^{-3} eV *4*	5.6 *13*
5584.9 *4*	1	28×10^{-3} eV *3*	10.4 *12*
5596.8 *7*	1	21×10^{-3} eV *4*	7.8 *13*
5604.7 *12*	1	17×10^{-3} eV *4*	6.1 *13*
5612.67 *10*	1	41×10^{-3} eV *7*	15 *3*
5618.6 *3*	1	80×10^{-3} eV *9*	29 *3*
5656.5 *5*	(2)	14×10^{-3} eV *2*	8.2 *12*
5670.67 *10*	1	71×10^{-3} eV *5*	25.3 *18*
5680.9 *7*	(1)	24×10^{-3} eV *5*	8.7 *17*
5686.5 *5*	1	51×10^{-3} eV *5*	18.2 *18*
5715.9 *3*	1	34×10^{-3} eV *4*	12.0 *12*
5725.3 *3*	1	44×10^{-3} eV *4*	15.3 *14*
5732.9 *3*	1	50×10^{-3} eV *4*	17.6 *15*
5742.6 *7*	1	17×10^{-3} eV *3*	5.9 *11*
5764.0 *15*	(1)	14×10^{-3} eV *5*	4.9 *17*
5770.4 *4*	1	43×10^{-3} eV *6*	15 *2*
5798.2 *3*	1	37×10^{-3} eV *4*	12.6 *12*
5808.98 *10*	1	99×10^{-3} eV *6*	34 *2*

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$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30 (continued)

^{100}Mo Levels (continued)

E(level)[†]	J^π[@]	Γ_0^2/Γ	I_s (eVb)[&]	Comments
5826.5 *6*	(2)	15×10^{-3} eV *3*	8.5 *14*	
5840.7 *6*	1	29×10^{-3} eV *4*	9.9 *14*	
5879.39 *20*	1	68×10^{-3} eV *6*	22.8 *18*	
5901.0 *6*	1	25×10^{-3} eV *4*	8.1 *12*	
5947.79 *20*	1	64×10^{-3} eV *5*	20.9 *15*	
5957.2 *6*	1	28×10^{-3} eV *5*	9.2 *15*	
5964.0 *6*	1	29×10^{-3} eV *5*	9.3 *15*	
5972.99 *20*	1	49×10^{-3} eV *4*	15.6 *13*	
5988.9 *4*	1	36×10^{-3} eV *4*	11.4 *13*	
6009.6 *4*	1	82×10^{-3} eV *9*	26 *3*	
6019.5 *11*	(1)	26×10^{-3} eV *6*	8.2 *17*	
6035.5 *8*	1	23×10^{-3} eV *4*	7.3 *12*	
6061.3 *9*	(2)	13×10^{-3} eV *3*	6.9 *17*	
6065.9 *7*	1	43×10^{-3} eV *6*	13.4 *19*	
6082.9 *3*	1	67×10^{-3} eV *7*	21 *2*	
6089.3 *4*	1	60×10^{-3} eV *6*	18.5 *19*	
6109?				E(level): level from 1994BeZZ only.
6122.5 *5*	1	37×10^{-3} eV *5*	11.4 *13*	
6133.6 *7*	1	30×10^{-3} eV *4*	9.2 *13*	
6147.1 *9*	1	19×10^{-3} eV *4*	5.8 *12*	
6174.0 *5*	1	34×10^{-3} eV *4*	10.3 *13*	
6194.51 *10*	(1)	124×10^{-3} eV *8*	37 *2*	
6249.4 *5*	1	38×10^{-3} eV *5*	11.2 *13*	
6257.61 *20*	1	94×10^{-3} eV *7*	27.7 *19*	
6270.5 *8*	1	23×10^{-3} eV *4*	6.8 *13*	
6278.71 *10*	1	114×10^{-3} eV *7*	33 *2*	
6293.1 *4*	1	40×10^{-3} eV *4*	11.5 *12*	
6310.3 *15*	(1)	16×10^{-3} eV *5*	4.7 *13*	
6321.2 *9*	1	64×10^{-3} eV *12*	18 *3*	
6327.6 *9*	1	70×10^{-3} eV *12*	20 *3*	
6337.5 *4*	1	70×10^{-3} eV *7*	20.1 *19*	
6354.32 *20*	1	96×10^{-3} eV *7*	27 *2*	
6365.6 *19*	(1)	17×10^{-3} eV *5*	4.7 *15*	
6375.6 *5*	1	57×10^{-3} eV *6*	16.1 *16*	
6402.0 *8*	1	20×10^{-3} eV *4*	5.6 *11*	
6414.3 *4*	1	68×10^{-3} eV *8*	19 *2*	
6418 *2*	1^-[‡]			$T_{1/2}$=9 fs *6* from Γ=0.050 eV *35*. Γ(g.s.)/Γ(total)≤0.85 *13* (1974Wo05), ≤0.88 (1981Sc10).
6421.4 *6*	1	68×10^{-3} eV *7*	19 *2*	
6426.6 *9*	(1)	38×10^{-3} eV *7*	10.7 *18*	
6434.1 *5*	1	36×10^{-3} eV *5*	10.1 *14*	
6459.0 *6*	1	36×10^{-3} eV *5*	9.9 *13*	
6473.5 *6*	1	58×10^{-3} eV *7*	16 *2*	
6483.2 *20*	(1)	19×10^{-3} eV *6*	5.3 *17*	
6497.6 *6*	1	39×10^{-3} eV *5*	10.6 *14*	
6517 *2*	1^-[‡]			$T_{1/2}$=2.5 fs *14* from Γ=0.18 eV *10*.
6519.1 *5*	1	53×10^{-3} eV *7*	14.4 *17*	
6526.6 *3*	1	96×10^{-3} eV *8*	26 *2*	
6570.2 *4*	1	42×10^{-3} eV *5*	11.1 *12*	

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^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

^{100}Mo Levels (continued)

E(level)[†]	J^{π}[@]	Γ_0^2/Γ	I_s (eVb)[&]
6597.0 *4*	(2)	27×10^{-3} eV *3*	11.9 *14*
6622.3 *4*	(1)	65×10^{-3} eV *7*	17.1 *17*
6628.3 *5*	(2)	37×10^{-3} eV *4*	16.1 *18*
6641.0 *3*	1	58×10^{-3} eV *6*	15.1 *14*
6658.2 *4*	1	84×10^{-3} eV *7*	21.9 *19*
6669.14 *20*	1	180×10^{-3} eV *11*	47 *3*
6685.3 *4*	1	80×10^{-3} eV *7*	20.7 *16*
6764.1 *8*	1	46×10^{-3} eV *8*	12 *2*
6772.7 *8*	1	57×10^{-3} eV *8*	14 *2*
6790.6 *10*	1	81×10^{-3} eV *13*	20 *3*
6797.5 *9*	(1)	67×10^{-3} eV *14*	17 *3*
6807.9 *10*	(2)	14×10^{-3} eV *3*	5.9 *14*
6829.5 *3*	(1)	103×10^{-3} eV *8*	25.4 *19*
6844.6 *11*	(2)	28×10^{-3} eV *5*	12 *2*
6851.3 *15*	1	30×10^{-3} eV *9*	7 *2*
6870.0 *8*	(1)	20×10^{-3} eV *5*	4.8 *11*
6886.5 *8*	1	26×10^{-3} eV *5*	6.3 *12*
6893.2 *4*	1	51×10^{-3} eV *6*	12.4 *14*
6906.1 *6*	1	39×10^{-3} eV *6*	9.3 *14*
6912.9 *11*	(1)	50×10^{-3} eV *11*	12 *3*
6919.5 *13*	1	55×10^{-3} eV *12*	13 *3*
6924.9 *10*	(1)	48×10^{-3} eV *13*	11 *3*
6934.2 *12*	(1)	26×10^{-3} eV *7*	6.1 *16*
6949.9 *11*	1	24×10^{-3} eV *7*	5.8 *16*
6957.7 *11*	(2)	16×10^{-3} eV *4*	6.3 *14*
6974.2 *8*	1	37×10^{-3} eV *8*	8.7 *19*
6981.1 *12*	(2)	20×10^{-3} eV *5*	8 *2*
6994.5 *5*	(2)	43×10^{-3} eV *5*	17 *2*
7001.2 *5*	1	48×10^{-3} eV *7*	11.2 *15*
7018.3 *6*	1	35×10^{-3} eV *5*	8.2 *12*
7032.1 *5*	1	45×10^{-3} eV *7*	10.6 *16*
7037.8 *10*	(1)	23×10^{-3} eV *6*	5.2 *14*
7060.2 *11*	1	15×10^{-3} eV *5*	3.6 *10*
7068.1 *3*	1	51×10^{-3} eV *6*	11.7 *13*
7095.4 *5*	1	29×10^{-3} eV *5*	6.6 *11*
7103.5 *7*	(1)	22×10^{-3} eV *5*	5.1 *10*
7115.3 *3*	1	44×10^{-3} eV *5*	9.9 *12*
7136.6 *5*	1	28×10^{-3} eV *5*	6.4 *11*
7171.7 *7*	(1)	32×10^{-3} eV *6*	7.1 *12*
7181.5 *9*	(1)	24×10^{-3} eV *5*	5.4 *12*
7194.4 *3*	1	69×10^{-3} eV *7*	15.3 *15*
7204.0 *7*	1	33×10^{-3} eV *6*	7.3 *12*
7219.4 *9*	(2)	28×10^{-3} eV *6*	10 *2*
7225.4 *13*	(1)	23×10^{-3} eV *7*	5.0 *15*
7299.6 *5*	1	47×10^{-3} eV *6*	10.2 *13*
7312.3 *3*	1	90×10^{-3} eV *7*	19.3 *15*
7330.8 *3*	1	73×10^{-3} eV *7*	15.6 *14*
7357.7 *6*	1	51×10^{-3} eV *7*	10.9 *14*
7380.3 *7*	(1)	43×10^{-3} eV *6*	9.0 *13*

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$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30 (continued)

^{100}Mo Levels (continued)

E(level)[†]	J^{π}[@]	Γ_0^2/Γ	I_s (eVb)[&]	Comments
7403.3 *8*	1	44×10^{-3} eV *7*	9.3 *13*	
7450.6 *10*	1	38×10^{-3} eV *7*	7.8 *14*	
7471.0 *4*	1	84×10^{-3} eV *8*	17.3 *16*	
7487.2 *7*	1	125×10^{-3} eV *17*	26 *4*	
7494.8 *11*	(1)	98×10^{-3} eV *14*	20 *3*	
7503.5 *12*	(2)	31×10^{-3} eV *7*	11 *2*	
7526.1 *6*	1	66×10^{-3} eV *8*	13.6 *15*	
7546.3 *20*	1	24×10^{-3} eV *8*	4.9 *15*	
7559.1 *15*	(1)	31×10^{-3} eV *8*	6.2 *15*	
7577.2 *9*	1	44×10^{-3} eV *7*	8.8 *14*	
7606.9 *4*	1	91×10^{-3} eV *8*	18.0 *16*	
7637 *2*	1^-[‡]			$T_{1/2}$=3.3 fs *9* from Γ=0.14 eV *4* (2006Ru06). Γ(g.s.)/Γ(total)≤0.28 *4* (1974Wo05).
7744.5 *8*	1	59×10^{-3} eV *8*	11.3 *14*	
7758.4 *10*	(1)	46×10^{-3} eV *7*	8.9 *14*	
7771.5 *12*	1	37×10^{-3} eV *7*	7.0 *13*	
7796.9 *14*	1	26×10^{-3} eV *6*	4.9 *12*	
7831.2 *8*	1	44×10^{-3} eV *7*	8.3 *12*	
7863.1 *7*	(1)	64×10^{-3} eV *8*	12.0 *15*	
7875.4 *6*	1	107×10^{-3} eV *10*	19.9 *19*	
7887.2 *10*	1	67×10^{-3} eV *9*	12.4 *16*	
7935.7 *10*	1	38×10^{-3} eV *6*	7.0 *11*	
7955.7 *6*	1	61×10^{-3} eV *7*	11.1 *13*	
7988.0 *7*	1	66×10^{-3} eV *8*	12.0 *13*	
8002.0 *6*	1	66×10^{-3} eV *8*	11.9 *13*	
8033.5 *8*	1	57×10^{-3} eV *8*	10.2 *13*	
8052.2 *6*	1	96×10^{-3} eV *10*	17.0 *18*	
8063.7 *9*	1	65×10^{-3} eV *10*	11.6 *16*	
8083.3 *16*	1	38×10^{-3} eV *8*	6.7 *14*	
8095.9 *11*	1	68×10^{-3} eV *11*	12 *2*	
8108.1 *12*	1	50×10^{-3} eV *11*	8.7 *18*	
8127.7 *10*	1	44×10^{-3} eV *7*	7.7 *12*	
8194.4 *9*	1	53×10^{-3} eV *8*	9.2 *13*	
8208.8 *6*	1	115×10^{-3} eV *11*	19.6 *18*	
8218.2 *6*	(1)	100×10^{-3} eV *11*	17.0 *18*	
8238.6 *9*	1	45×10^{-3} eV *7*	7.6 *11*	
8257.1 *14*	1	36×10^{-3} eV *8*	6.0 *13*	
8269.6 *6*	1	95×10^{-3} eV *10*	15.9 *16*	
8283.6 *6*	1	102×10^{-3} eV *11*	17.1 *17*	
8294.5 *13*	(1)	41×10^{-3} eV *10*	6.9 *16*	

[†] All the levels above 2.5 MeV are from 2008RuZW (also 2006Ru06), except that 5187, 6418, 6517 and 7637 levels are from 1973Mo30, and a tentative 6109 level from 1994BeZZ.
[‡] Parity from $\gamma(\theta$,pol).
[#] Parity assigned by 2006Ru06 based on Alaga Rule.
[@] From $\gamma(\theta)$ for levels above 2040. Others are from the Adopted Levels.
[&] Integrated cross section from 2008RuZW, and some also from 2006Ru06.

^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo)

E_i(level)	J^π_i	E_γ†	I_γ‡	E_f	J^π_f	Mult.#	Comments
535.6	2^+	535.6		0.0	0^+		E_γ: rounded value from the Adopted dataset.
1064.07	2^+	1064.1 *1*		0.0	0^+		Mult.: (D) in 2008RuZW seems incorrect in view of established E2 in the Adopted dataset.
2632.4	(1)	2632.4 *3*		0.0	0^+	(D)	E_γ: 2633.2 in 2006Ru06. Iγ(90°)/Iγ(127°)=0.6 *3* (2006Ru06).
2901.1	(1)	2901.0 *1*		0.0	0^+	(D)	E_γ: 2901.2 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=1.22 *12*. Additional information 1.
2905.8	(1)	2905.7 *1*		0.0	0^+	(D)	E_γ: 2906.3 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=1.19 *12*. Additional information 2.
3066.3	(1)	3066.2 *2*		0.0	0^+	(D)	E_γ: 3065.9 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.62 *9* (2006Ru06).
3198.4	(1)	3198.3 *4*		0.0	0^+	(D)	E_γ: 3199.0 *2* (2006Ru06). Iγ(90°)/Iγ(127°)=0.66 *17* (2006Ru06).
3242.8	1	3242.7 *1*		0.0	0^+	D	E_γ: 3242.5 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.91 *12*. Additional information 3.
3290.16	(1^+)	2595.3& *3*	15 *4*	694.8	0^+	(D)	E_γ: 2595.2 *1* (2006Ru06). B(E1)(↓)=0.09×10^{-5} *3*, B(M1)(↓)=0.008 *3* (2006Ru06). Iγ(90°)/Iγ(127°)=0.74 *20* (2006Ru06). I_s=20 eVb *2*. Γ_0^2/Γ=11.4 meV *12*.
		2755.4 *3*	15 *3*	535.6	2^+	(D)	E_γ: 2754.7 *2* (2006Ru06). Placement from 2006Ru06. Γ_0^2/Γ(meV)=3.3 *9*. I_s(eVb)=4.9 *14*. B(E1)(↓)=0.07×10^{-5} *3*, B(M1)(↓)=0.007 *2* (2006Ru06). Iγ(90°)/Iγ(127°)=0.79 *19* (2006Ru06).
		3290.1 *1*	70 *4*	0.0	0^+	D	E_γ: 3290.1 *1* (2006Ru06). B(E1)(↓)=0.20×10^{-5} *4*, B(M1)(↓)=0.018 *4* (2006Ru06). Iγ(90°)/Iγ(127°)=0.72 *7* (2006Ru06). Iγ(90°)/Iγ(127°)=1.08 *12*.
3342.1	1	3342.0 *1*	100	0.0	0^+		Iγ(90°)/Iγ(127°)=0.69 *13* (2006Ru06).
3483.97	(1^+)	2419.8 *1*	9 *1*	1064.07	2^+		E_γ: γ from 2006Ru06 only. B(E1)(↓)=0.34×10^{-5} *7*, B(M1)(↓)=0.031 *6* (2006Ru06). Iγ(90°)/Iγ(127°)=0.62 *12* (2006Ru06).
		2948.2 *1*	10 *1*	535.6	2^+		E_γ: γ from 2006Ru06 only. B(E1)(↓)=0.21×10^{-5} *4*, B(M1)(↓)=0.018 *3* (2006Ru06). Iγ(90°)/Iγ(127°)=0.72 *13* (2006Ru06).
		3483.9 *1*	80.9 *16*	0.0	0^+	(D)	E_γ: 3483.4 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.94 *7*. B(E1)(↓)=1.02×10^{-5} *12*, B(M1)(↓)=0.091 *10* (2006Ru06). Additional information 4.
3570.8	(1)	3570.7 *1*		0.0	0^+	(D)	E_γ: 3570.3 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.96 *10*. Additional information 5.
3599.9	1	3599.8 *2*		0.0	0^+		Iγ(90°)/Iγ(127°)=1.0 *4* (2006Ru06).
3615.6	1	3615.5 *2*		0.0	0^+	D	E_γ: 3614.7 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.67 *14*. Additional information 6.
3627.3	(1)	3627.2 *3*		0.0	0^+	(D)	E_γ: 3627.8 *1* (2006Ru06). Iγ(90°)/Iγ(127°)=0.36 *12*. Additional information 7.
3659.09	$1^{(+)}$	2595.3& *3*	17 *4*	1064.07	2^+	D	E_γ: 2595.2 *1* (2006Ru06). I_s=20 eVb *2*. Γ_0^2/Γ=11.4 meV *12*.

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^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	Comments
							B(E1)(↓)=0.23×10^{-5} *9*, B(M1)(↓)=0.020 *8* (2006Ru06). Iγ(90°)/Iγ(127°)=0.74 *20* (2006Ru06).
3659.09	1$^{(+)}$	3658.7 *3*	83 *4*	0.0	0$^+$	D	E_γ: 3658.7 *1* (2006Ru06). B(E1)(↓)=0.41×10^{-5} *8*, B(M1)(↓)=0.036 *7* (2006Ru06). Iγ(90°)/Iγ(127°)=0.8 *2*. Additional information 8.
3887.98	1	3887.9 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.91 *12*.
3896.68	(1)	3896.6 *1*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=0.89 *7*.
3925.98	(1)	3925.9 *1*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=1.12 *13*.
4081.59	1	4081.5 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.78 *10*.
4156.5	1	4156.4 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.61 *13*.
4217.60	1	4217.5 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.91 *9*.
4232.10	(1)	4232.0 *2*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=0.99 *12*.
4329.90	1	4329.8 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.92 *13*.
4516.81	1	4516.7 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.77 *6*.
4565.51	1	4565.4 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.71 *6*.
4583.11	1	4583.0 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.72 *6*.
4594.91	1	4594.8 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.73 *8*.
4689.02	1	4688.9 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.86 *9*.
4730.32	1	4730.2 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.89 *12*.
4989.63	1	4989.5 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)= 0.6 *2*.
5007.33	1	5007.2 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.7 *3*.
5034.54	1	5034.4 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)= 0.8 *3*.
5062.9	(2)	5062.8 *3*		0.0	0$^+$	(Q)	Iγ(90°)/Iγ(127°)=1.8 *4*.
5071.24	(1)	5071.1 *2*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=1.4 *2*.
5101.3	1	5101.2 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.7 *4*.
5109.3	(1)	5109.2 *9*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=0.6 *6*.
5136.04	(1)	5135.9 *1*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=1.04 *11*.
5158.3	1	5158.2 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.71 *12*.
5169.6	1	5169.5 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.65 *14*.
5181.8	1	5181.7 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.68 *11*.
5187	1	4651 *2*	84 *13*	535.6	2$^+$		A_2=0.00 *10*
		5187 *2*	100 *15*	0.0	0$^+$	D	A_2=+0.59 *26*
5190.4	1	5190.3 *5*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.70 *18*.
5204.6	(1)	5204.5 *4*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=0.31 *16*.
5216.0	(1)	5215.9 *8*		0.0	0$^+$	(D)	
5271.2	1	5271.1 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.7 *3*.
5277.6	1	5277.5 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=1.0 *2*.
5310.5	1	5310.3 *4*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.65 *16*.
5335.65	1	5335.5 *2*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.67 *9*.
5347.85	1	5347.7 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.87 *8*.
5359.8	1	5359.6 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.60 *12*.
5369.6	1	5369.4 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.5 *2*.
5382.5	1	5382.3 *10*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.5 *4*.
5390.3	1	5390.1 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=1.1 *3*.
5402.26	1	5402.1 *1*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.75 *8*.
5412.6	1	5412.4 *8*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.4 *3*.
5435.5	1	5435.3 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.9 *3*.
5442.9	1	5442.7 *6*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=1.0 *3*.
5449.6	(1)	5449.4 *6*		0.0	0$^+$	(D)	Iγ(90°)/Iγ(127°)=1.3 *4*.
5502.7	1	5502.5 *4*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=1.0 *2*.
5519.4	1	5519.2 *4*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.76 *13*.
5532.2	1	5532.0 *5*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.81 *17*.
5547.9	1	5547.7 *3*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.85 *13*.
5554.4	1	5554.2 *11*		0.0	0$^+$	D	Iγ(90°)/Iγ(127°)=0.4 *3*.

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^{100}Mo(γ,γ') 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[‡]	E_f	J^π_f	Mult.[#]	Comments
5584.9	1	5584.7 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.1 *3*.
5596.8	1	5596.6 *7*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.1 *3*.
5604.7	1	5604.5 *12*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.5 *3*.
5612.67	1	5612.5 *1*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.0 *4*.
5618.6	1	5618.4 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.84 *18*.
5656.5	(2)	5656.3 *5*		0.0	0^+	(Q)	Iγ(90°)/Iγ(127°)=1.9 *6*.
5670.67	1	5670.5 *1*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.75 *9*.
5680.9	(1)	5680.7 *7*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=1.5 *6*.
5686.5	1	5686.3 *5*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.62 *12*.
5715.9	1	5715.7 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.89 *18*.
5725.3	1	5725.1 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.82 *14*.
5732.9	1	5732.7 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.82 *13*.
5742.6	1	5742.4 *7*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.9 *4*.
5764.0	(1)	5763.8 *15*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=0.3 *11*.
5770.4	1	5770.2 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.5 *4*.
5798.2	1	5798.0 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.82 *17*.
5808.98	1	5808.8 *1*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.78 *7*.
5826.5	(2)	5826.3 *6*		0.0	0^+	(Q)	Iγ(90°)/Iγ(127°)=1.5 *5*.
5840.7	1	5840.5 *6*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.92 *28*.
5879.39	1	5879.2 *2*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.89 *19*.
5901.0	1	5900.8 *6*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.8 *3*.
5947.79	1	5947.6 *2*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.92 *11*.
5957.2	1	5957.0 *6*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.8 *3*.
5964.0	1	5963.8 *6*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.9 *3*.
5972.99	1	5972.8 *2*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.77 *13*.
5988.9	1	5988.7 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.1 *2*.
6009.6	1	6009.4 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.88 *19*.
6019.5	(1)	6019.3 *11*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=1.2 *5*.
6035.5	1	6035.3 *8*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.0 *3*.
6061.3	(2)	6061.1 *9*		0.0	0^+	(Q)	Iγ(90°)/Iγ(127°)=4 *3*.
6065.9	1	6065.7 *7*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.9 *3*.
6082.9	1	6082.7 *3*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.90 *15*.
6089.3	1	6089.1 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.65 *13*.
6122.5	1	6122.3 *5*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.58 *17*.
6133.6	1	6133.4 *7*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.43 *18*.
6147.1	1	6146.9 *9*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.7 *3*.
6174.0	1	6173.8 *5*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.71 *19*.
6194.51	(1)	6194.3 *1*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)= 0.58 *5*.
6249.4	1	6249.2 *5*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.69 *18*.
6257.61	1	6257.4 *2*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.84 *9*.
6270.5	1	6270.3 *8*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.7 *3*.
6278.71	1	6278.5 *1*		0.0	0^+	D	Iγ(90°)/Iγ(127°)= 0.79 *7*.
6293.1	1	6292.9 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.77 *17*.
6310.3	(1)	6310.1 *15*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=0.9 *6*.
6321.2	1	6321.0 *9*		0.0	0^+	D	Iγ(90°)/Iγ(127°)= 0.8 *3*.
6327.6	1	6327.4 *9*		0.0	0^+	D	Iγ(90°)/Iγ(127°)= 1.1 *3*.
6337.5	1	6337.3 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.9 *2*.
6354.32	1	6354.1 *2*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.82 *10*.
6365.6	(1)	6365.4 *19*		0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=0.8 *6*.
6375.6	1	6375.4 *5*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=1.05 *19*.
6402.0	1	6401.8 *8*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.8 *4*.
6414.3	1	6414.1 *4*		0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.46 *15*.
6418	1^-	3788[a] *4*	7 *2*	2632.4	(1)		
		4385 *4*	19 *4*	2033	0^+		A_2=+0.57 *9*
		4444[a] *4*	6 *2*	1974?	$(1,2^+)$		

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^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ	Comments
6418	1⁻	5355 *4*	11 *3*	1064.07	2⁺	(E1+M2)[@]	+0.21 *12*	A_2=+0.19 *8*
		5723 *4*	0.8 *4*	694.8	0⁺			
		5883 *4*	1.2 *6*	535.6	2⁺			
		6418 *4*	100 *15*	0.0	0⁺	E1[@]		A_2=+0.51 *2*
6421.4	1	6421.2 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.70 *19*.
6426.6	(1)	6426.4 *9*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)=1.2 *5*.
6434.1	1	6433.9 *5*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=1.1 *3*.
6459.0	1	6458.8 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=1.1 *3*.
6473.5	1	6473.3 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.49 *14*.
6483.2	(1)	6483 *2*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)=1.1 *7*.
6497.6	1	6497.4 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.9 *2*.
6517	1⁻	3445[a] *3*	18 *3*	3066.3	(1)			
		4477 *3*	23 *5*	2040	(2)⁺			A_2=+0.07 *15*
		5055 *3*	28 *5*	1462	2⁺			A_2=+0.06 *8*
		5455 *3*	8 *2*	1064.07	2⁺			
		5823 *3*	10 *2*	694.8	0⁺			A_2=+0.41 *26*
		5982 *3*	32 *5*	535.6	2⁺			A_2=+0.03 *4*
		6517 *3*	100 *15*	0.0	0⁺	E1[@]		A_2=+0.50 *1*
6519.1	1	6518.9 *5*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.75 *17*.
6526.6	1	6526.4 *3*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=1.01 *14*.
6570.2	1	6570.0 *4*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=1.0 *2*.
6597.0	(2)	6596.8 *4*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=1.8 *4*.
6622.3	(1)	6622.1 *4*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)=0.47 *12*.
6628.3	(2)	6628.1 *5*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=1.7 *4*.
6641.0	1	6640.8 *3*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.93 *16*.
6658.2	1	6658.0 *4*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.80 *13*.
6669.14	1	6668.9 *2*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.70 *6*.
6685.3	1	6685.1 *4*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.93 *13*.
6764.1	1	6763.9 *8*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.9 *4*.
6772.7	1	6772.5 *8*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.9 *3*.
6790.6	1	6790.4 *10*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)= 0.9 *3*.
6797.5	(1)	6797.3 *9*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)= 1.3 *10*.
6807.9	(2)	6807.7 *10*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=2.5 *22*.
6829.5	(1)	6829.2 *3*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)= 1.07 *14*.
6844.6	(2)	6844.3 *11*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=1.6 *6*.
6851.3	1	6851.0 *15*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.6 *4*.
6870.0	(1)	6869.7 *8*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)=1.4 *6*.
6886.5	1	6886.2 *8*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.9 *4*.
6893.2	1	6892.9 *4*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.56 *15*.
6906.1	1	6905.8 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.7 *2*.
6912.9	(1)	6912.6 *11*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)= 1.0 *8*.
6919.5	1	6919.2 *13*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)= 0.6 *3*.
6924.9	(1)	6924.6 *10*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)= 1.4 *10*.
6934.2	(1)	6933.9 *12*		0.0	0⁺	(D)		
6949.9	1	6949.6 *11*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.6 *4*.
6957.7	(2)	6957.4 *11*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=1.7 *9*.
6974.2	1	6973.9 *8*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.7 *4*.
6981.1	(2)	6980.8 *12*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=2.2 *13*.
6994.5	(2)	6994.2 *5*		0.0	0⁺	(Q)		Iγ(90°)/Iγ(127°)=1.7 *4*.
7001.2	1	7000.9 *5*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.5 *3*.
7018.3	1	7018.0 *6*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.9 *3*.
7032.1	1	7031.8 *5*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.6 *3*.
7037.8	(1)	7037.5 *10*		0.0	0⁺	(D)		Iγ(90°)/Iγ(127°)=1.0 *6*.
7060.2	1	7059.9 *11*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.6 *4*.
7068.1	1	7067.8 *3*		0.0	0⁺	D		Iγ(90°)/Iγ(127°)=0.88 *19*.

Continued on next page (footnotes at end of table)

^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo) (continued)

E$_i$(level)	J_i^π	E$_\gamma$[†]	I$_\gamma$[‡]	E$_f$	J_f^π	Mult.[#]	δ	Comments
7095.4	1	7095.1 *5*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.6 *3*.
7103.5	(1)	7103.2 *7*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.1 *4*.
7115.3	1	7115.0 *3*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *2*.
7136.6	1	7136.3 *5*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *3*.
7171.7	(1)	7171.4 *7*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.4 *5*.
7181.5	(1)	7181.2 *9*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.0 *5*.
7194.4	1	7194.1 *3*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.97 *19*.
7204.0	1	7203.7 *7*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.5 *3*.
7219.4	(2)	7219.1 *9*		0.0	0$^+$	(Q)		Iγ(90°)/Iγ(127°)=1.5 *7*.
7225.4	(1)	7225.1 *13*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=0.7 *8*.
7299.6	1	7299.3 *5*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.56 *17*.
7312.3	1	7312.0 *3*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.67 *10*.
7330.8	1	7330.5 *3*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.58 *11*.
7357.7	1	7357.4 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.70 *19*.
7380.3	(1)	7380.0 *7*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.3 *4*.
7403.3	1	7403.0 *8*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.7 *2*.
7450.6	1	7450.3 *10*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.6 *2*.
7471.0	1	7470.7 *4*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=1.01 *17*.
7487.2	1	7486.9 *7*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.47 *17*.
7494.8	(1)	7494.5 *11*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)= 1.3 *3*.
7503.5	(2)	7503.2 *12*		0.0	0$^+$	(Q)		Iγ(90°)/Iγ(127°)=1.9 *8*.
7526.1	1	7525.8 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.9 *2*.
7546.3	1	7546 *2*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *5*.
7559.1	(1)	7558.8 *15*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.1 *6*.
7577.2	1	7576.9 *9*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *3*.
7606.9	1	7606.6 *4*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.56 *10*.
7637	1$^-$	4569[a] *4*	4 *1*	3066.3	(1)			
		5007[a] *2*	6 *2*	2632.4	(1)			
		5597 *4*	5 *1*	2040	(2)$^+$			A$_2$=+0.28 *15* A$_2$ for (5597γ+5604γ)(θ).
		5604 *4*	5 *1*	2033	0$^+$			
		6176 *2*	4 *1*	1462	2$^+$			
		6574 *2*	15 *3*	1064.07	2$^+$			A$_2$=+0.06 *2*
		7102 *2*	101 *15*	535.6	2$^+$	(E1+M2)[@]	−0.06 *2*	A$_2$=+0.013 *16*
		7637 *2*	100 *15*	0.0	0$^+$	E1[@]		A$_2$=+0.49 *5*
7744.5	1	7744.2 *8*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *2*.
7758.4	(1)	7758.1 *10*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=1.4 *4*.
7771.5	1	7771.2 *12*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.9 *4*.
7796.9	1	7796.6 *14*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.6 *4*.
7831.2	1	7830.9 *8*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.7 *2*.
7863.1	(1)	7862.8 *7*		0.0	0$^+$	(D)		Iγ(90°)/Iγ(127°)=0.44 *13*.
7875.4	1	7875.1 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.56 *12*.
7887.2	1	7886.9 *10*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.8 *2*.
7935.7	1	7935.4 *10*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.7 *3*.
7955.7	1	7955.4 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.66 *16*.
7988.0	1	7987.7 *7*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.65 *16*.
8002.0	1	8001.7 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.51 *13*.
8033.5	1	8033.2 *8*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.61 *16*.
8052.2	1	8051.9 *6*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)= 0.67 *13*.
8063.7	1	8063.4 *9*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)= 0.8 *2*.
8083.3	1	8082.9 *16*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.5 *2*.
8095.9	1	8095.5 *11*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)= 0.55 *18*.
8108.1	1	8107.7 *12*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)= 0.6 *3*.
8127.7	1	8127.3 *10*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.7 *2*.
8194.4	1	8194.0 *9*		0.0	0$^+$	D		Iγ(90°)/Iγ(127°)=0.9 *3*.

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^{100}Mo(γ,γ′) 2008Ru04,2008RuZW,1973Mo30 (continued)

γ(^{100}Mo) (continued)

E_i(level)	J^π_i	E_γ[†]	E_f	J^π_f	Mult.[#]	Comments
8208.8	1	8208.4 *6*	0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.80 *13*.
8218.2	(1)	8217.8 *6*	0.0	0^+	(D)	Iγ(90°)/Iγ(127°)=0.48 *10*.
8238.6	1	8238.2 *9*	0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.58 *19*.
8257.1	1	8256.7 *14*	0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.7 *3*.
8269.6	1	8269.2 *6*	0.0	0^+	D	Iγ(90°)/Iγ(127°)= 0.91 *17*.
8283.6	1	8283.2 *6*	0.0	0^+	D	Iγ(90°)/Iγ(127°)=0.84 *16*.
8294.5	(1)	8294.1 *13*	0.0	0^+	(D)	Iγ(90°)/Iγ(127°)= 1.2 *7*.

[†] All the γ rays from levels above 2.5 MeV are from 2008RuZW (also 2006Ru06), except those from 5187, 6418, 6517 and 7637 levels, which are from 1973Mo30.
[‡] Photon branchings from 2006Ru06.
[#] From γ(θ) data.
[@] From γ(lin pol) measurement.
[&] Multiply placed.
[a] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

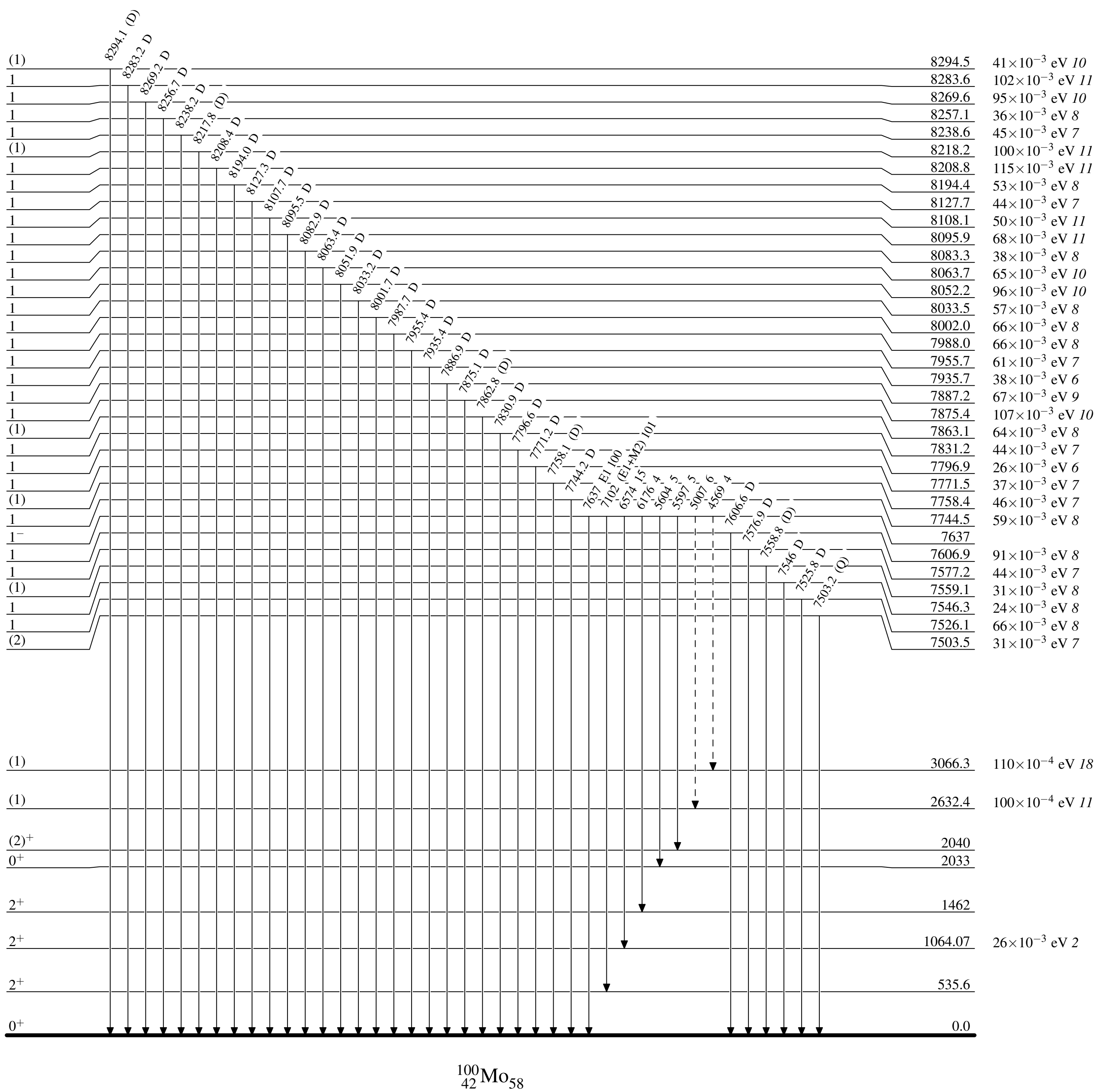
$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Legend

Level Scheme

Intensities: % photon branching from each level

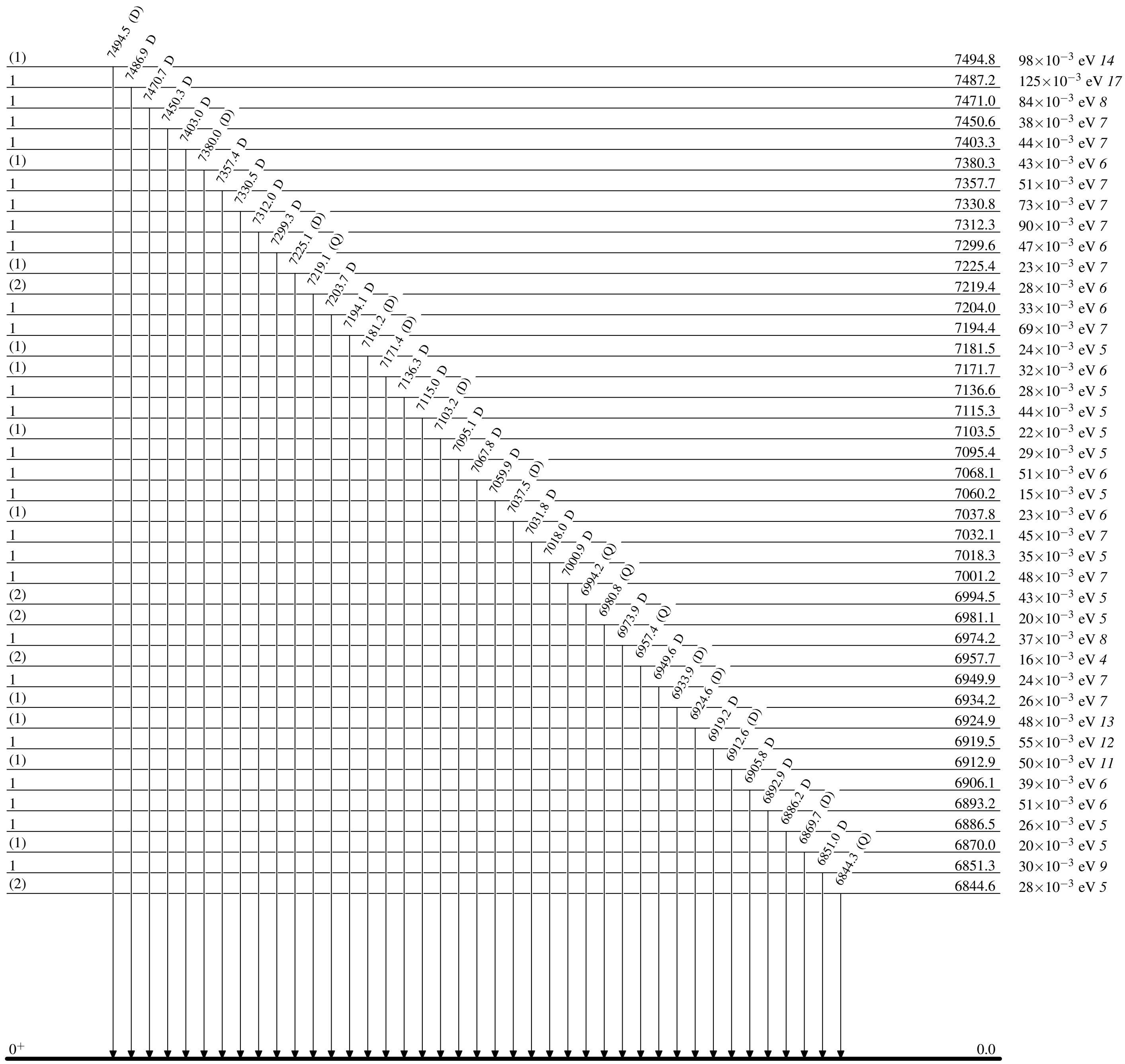
- - - - - ► γ Decay (Uncertain)



$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Level Scheme (continued)

Intensities: % photon branching from each level

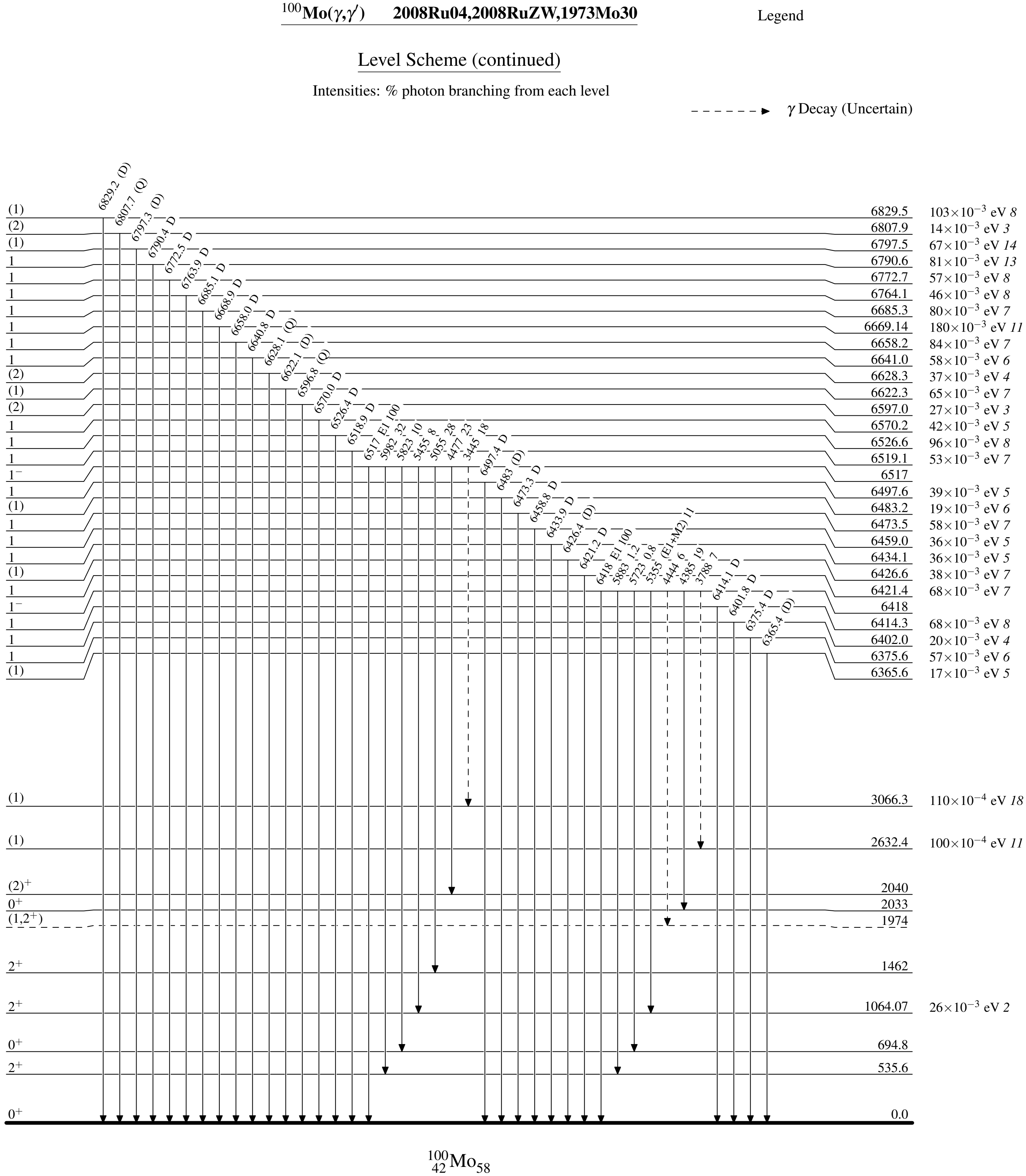


$^{100}_{42}Mo_{58}$

$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Level Scheme (continued)

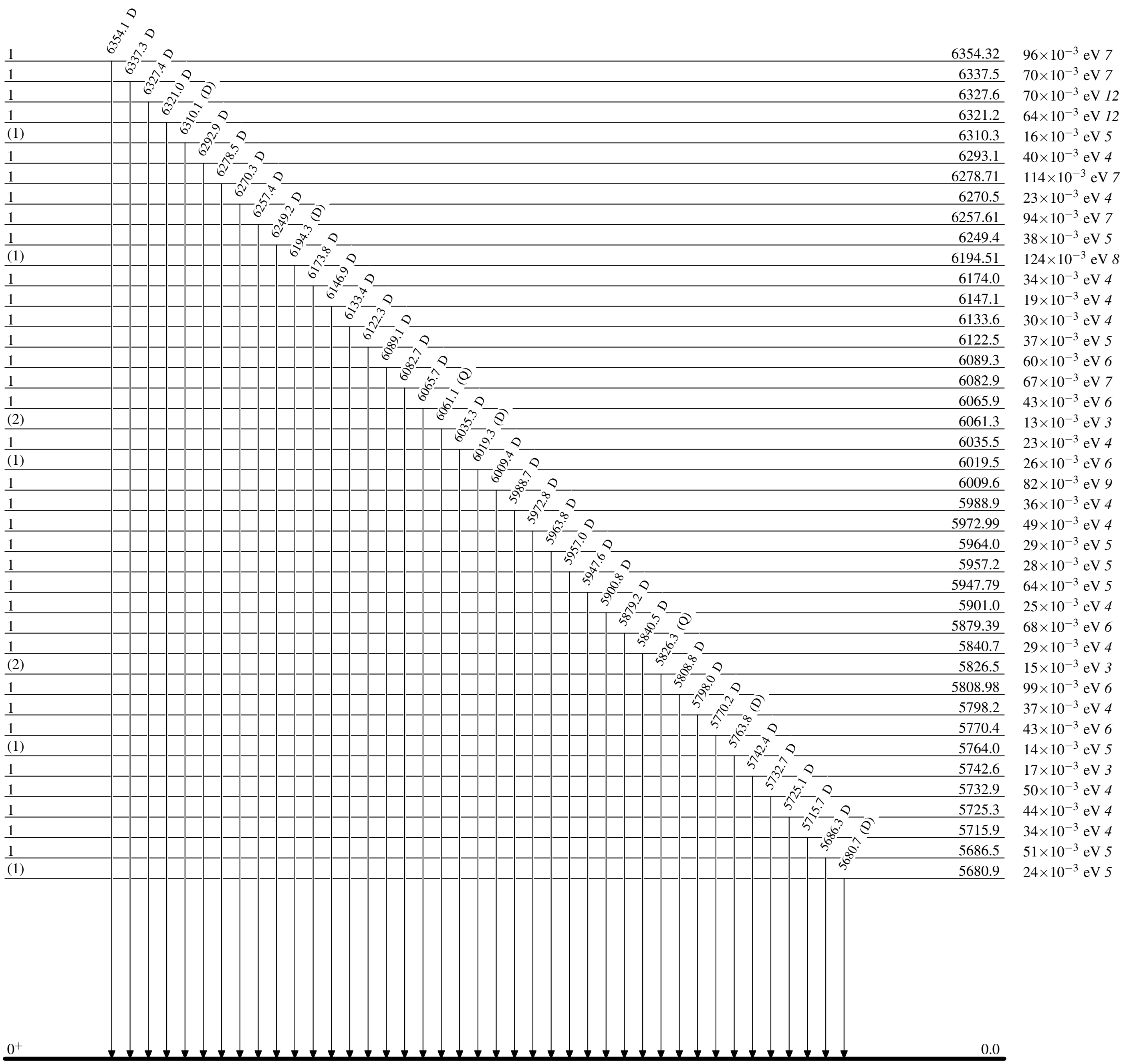
Intensities: % photon branching from each level



$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Level Scheme (continued)

Intensities: % photon branching from each level

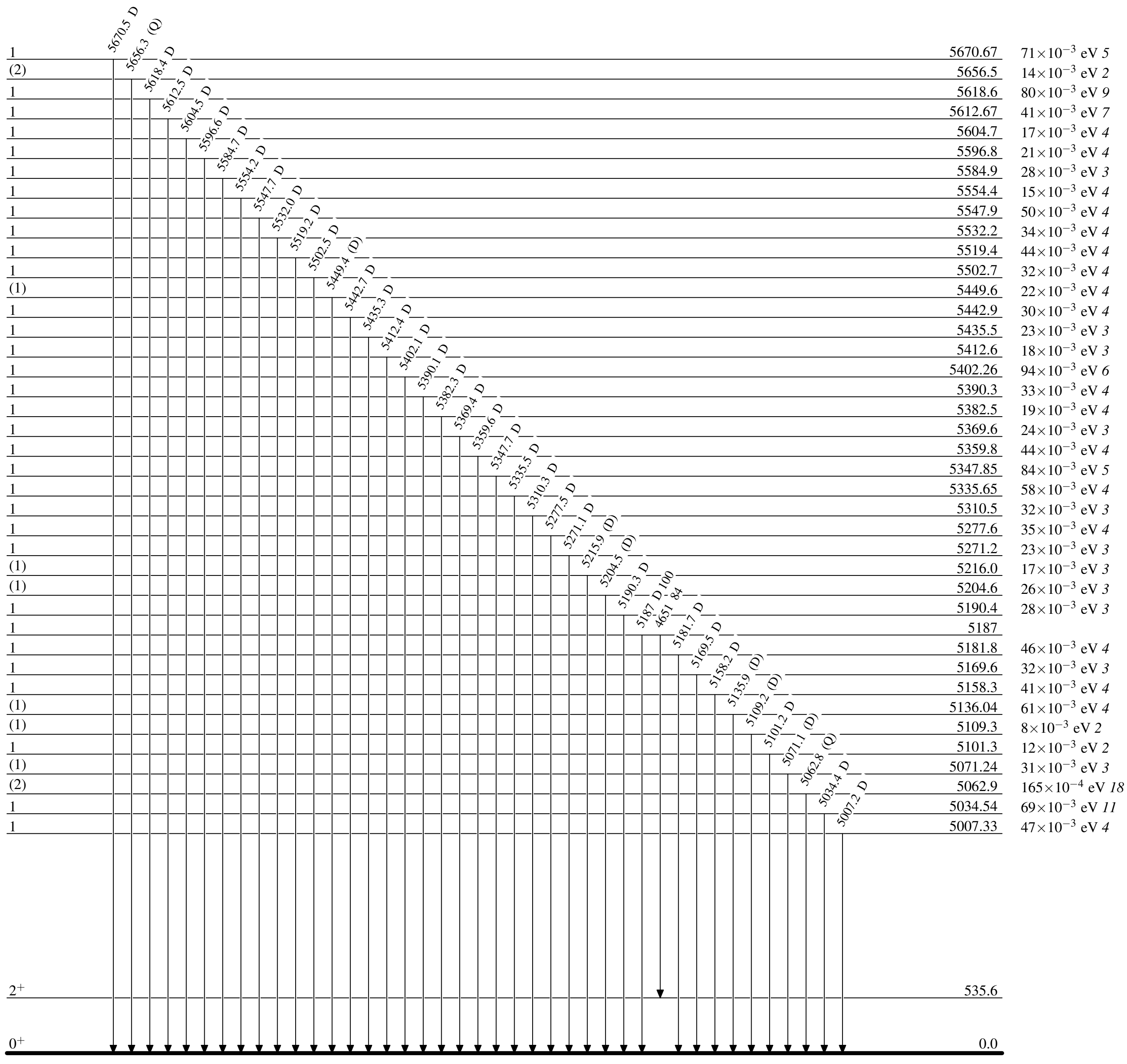


$^{100}_{42}Mo_{58}$

$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Level Scheme (continued)

Intensities: % photon branching from each level

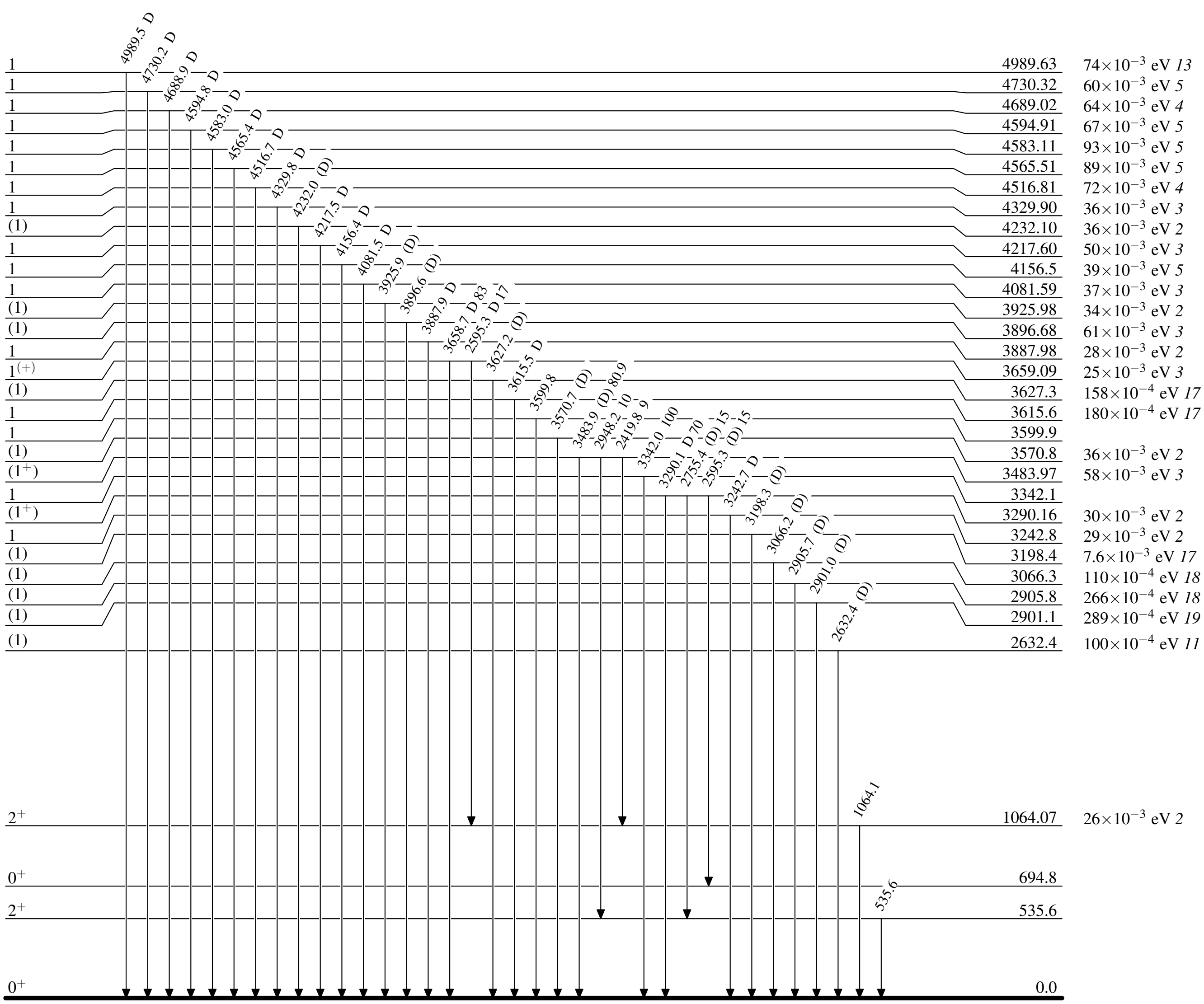


$^{100}_{42}Mo_{58}$

$^{100}Mo(\gamma,\gamma')$ 2008Ru04,2008RuZW,1973Mo30

Level Scheme (continued)

Intensities: % photon branching from each level



$^{100}_{42}Mo_{58}$