^{97}Mo(n,γ) E=th 1971He10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh	NDS 164, 1 (2020)	15-Feb-2020

1971He10: thermal neutrons were produced from the Karlsruhe research reactor FR-2. Target was highly-enriched ^{97}Mo metallic powder. γ rays were detected with Ge(Li) and NaI(Tl) detectors. Measured Eγ (in the range 150-2300 and 4900-8700 keV), Iγ, γγ-coin, γγ(θ). Deduced levels, J, π, γ-ray multipolarities, mixing ratios.

Others:

Additional information 1.

1991Is05: measured Eγ, Iγ of 13 primary γ rays.

1972Ga07: measured selected primary and secondary γ rays.

1960Gr36: 24 γ rays reported (see compilation by 1967Ba79).

1992Be54: analysis of σ data at E(n)=reactor energies.

^{98}Mo Levels

J^π(^{97}Mo g.s.)=5/2$^+$ gives J^π=2$^+$, 3$^+$ for capture state.

1984Me04 proposed population of 2574.6, 2619.8 and 3020.4 levels on the basis of results from ^{98}Nb β^- decay (51.1 min), but these levels have not been included here since the γ-ray branching ratios in (n,γ) and ^{98}Nb β^- decay do not agree.

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
0.0	0+	2333.40 *10*	4+	2767.72 *16*	4+	3195.50 *19*	
734.83 *12*	0+	2343.70 *16*	6+	2795.54 *16*	4−	3210.75 *24*	(4+)
787.43 *8*	2+	2417.8?‡ *4*	2+	2962.27 *18*	3−	3211.9?‡ *4*	(4+)
1432.31 *8*	2+	2419.49 *11*	4+	2976.99 *25*	4+	3455.2?‡ *4*	(4+)
1510.04 *9*	4+	2485.35 *13*	3+	3022.1?‡ *4*	4+	3547.8?‡ *5*	(4+)
1758.51 *9*	2+	2506.30 *14*	5+	3045.91 *24*	4+	3598.3?‡ *4*	(4+)
1880.91 *18*		2562.28 *15*	(2−)	3051.5?‡ *3*	4+	3737.9?‡ *3*	
2017.52 *9*	3−	2572.79 *13*	3	3067.25?‡ *25*	(3−)	(8642.56 *9*)	2+,3+
2104.88 *10*	3+	2620.28‡ *21*	3+	3103.17 *24*	(2+,3,4)		
2206.52 *11*	2+	2620.85 *13*	5−	3108.75 *21*	(2+,3,4)		
2223.90 *14*	4+	2700.42 *21*	2+	3155.49 *23*	(4+)		

† From least-squares fit to Eγ data.

‡ Level proposed by 1984Me04 on the basis of ^{98}Nb β^- decay (51.1 min) and/or (n,n′γ) results. Population in (n,γ) is considered tentative by evaluators since confirmatory evidence is lacking. Primary transition is not observed to this level.

From Adopted Levels.

γ(^{98}Mo)

Iγ normalization: from Iγ(absolute) of 6625γ (1960Gr36) measured in Mo(n,γ) E=th. This value is adopted by 1971He10.

1991Is05 point out that the uncertainty in the intensity of the primary transitions is ≈24% due to the uncertainty in σ(n,γ) E=th in ^{97}Mo.

A_2 and A_4 from γγ(θ) are from 1971He10.

Eγ†	Iγ†c	E_i(level)	J^π_i	E_f	J^π_f
152.2 *4*	0.05 *3*	2485.35	3+	2333.40	4+
x155.3 *3*	0.04 *3*				
x158.6# *3*	0.14 *5*				
172.95 *12*	0.42 *5*	2506.30	5+	2333.40	4+

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^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

E_γ[†]	I_γ[†c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[b]	δ[b]	Comments
[x]182.0[#] 4	0.03 2							
[x]195.6 5	0.07 2							
[x]202.8 3	0.02 1							
239.2 2	0.11 3	2572.79	3	2333.40	4^+			
259.01 10	2.77 25	2017.52	3^-	1758.51	2^+			
[x]286.9 3	0.05 2							
[x]298.2[#] 3	0.05 2							
[x]307.0 3	0.03 2							
314.6 3	0.03 2	2419.49	4^+	2104.88	3^+			
[x]319.3 4	0.33 3							
326.21 12	0.30 3	1758.51	2^+	1432.31	2^+			
335.4 2	0.07 2	3103.17	(2^+,3,4)	2767.72	4^+			
[x]340.0 5	0.05 2							
[x]346.8[#] 5	0.04 3							
[x]350.99 12	0.45[a] 5							I_γ: 10% contributed by ^{95}Mo(n,γ).
[x]365.2 4	0.04 3							
380.48 14	0.15 3	2485.35	3^+	2104.88	3^+			
[x]386.3[‡] 8	<0.06							
399.88 15	0.20 3	3195.50		2795.54	4^-			
402.2 2	0.09 3	2419.49	4^+	2017.52	3^-			
[x]411.4 2	0.22 3							
434.5 2	0.16 3	2767.72	4^+	2333.40	4^+			
446.99[&e] 13	0.29 3	3067.25?	(3^-)	2620.85	5^-			
449.1 3	0.07 3	1880.91		1432.31	2^+			
455.1 3	0.06 3	3155.49	(4^+)	2700.42	2^+			
[x]458.7 3	0.08 3							
[x]490.3[‡] 5	<0.10							
493.4 6	0.04 3	2700.42	2^+	2206.52	2^+			
[x]500.5 3	0.10 3							
507.8 2	0.40 5	2017.52	3^-	1510.04	4^+			
545.0 2	0.18 5	2562.28	(2^-)	2017.52	3^-			
555.4 2	0.41 5	2572.79	3	2017.52	3^-			
557.1 4	0.16 10	2976.99	4^+	2419.49	4^+			
[x]569.9 3	0.16 5							
575.0 2	0.17 5	2333.40	4^+	1758.51	2^+			
594.6 3	0.39 15	2104.88	3^+	1510.04	4^+			
603.33 12	0.59 5	2620.85	5^-	2017.52	3^-			
644.89 11	5.8 5	1432.31	2^+	787.43	2^+	M1+E2	+0.58 5	A_2=−0.147 20; A_4=+0.060 35 δ: from (645γ)(787γ)(θ); large mixing ratio suggests M1+E2.
[x]659.1 3	0.19 10							
661.5 5	0.20 10	2419.49	4^+	1758.51	2^+			
672.63 11	1.57 15	2104.88	3^+	1432.31	2^+			
697.6 2	0.34 10	1432.31	2^+	734.83	0^+			
[x]708.2 5	0.12 10							
713.88 15	1.60 20	2223.90	4^+	1510.04	4^+			
722.70 10	19.0 16	1510.04	4^+	787.43	2^+	Q		A_2=+0.075 18; A_4=+0.012 25 δ(O/Q)=−0.04 3 from (723γ)(787γ)(θ).
734.8[e]		734.83	0^+	0.0	0^+	E0		E_γ: from level-energy difference.
787.42 10	62 5	787.43	2^+	0.0	0^+			
791.5 2	1.24 15	2223.90	4^+	1432.31	2^+			
803.6 5	0.11 10	2562.28	(2^-)	1758.51	2^+			
811.5 5	0.17[a] 10	3155.49	(4^+)	2343.70	6^+			I_γ: 20% contributed by ^{95}Mo(n,γ).
814.2 2	0.43 10	2572.79	3	1758.51	2^+			

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^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

E_γ[†]	I_γ[†c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[b]	δ[b]	Comments
823.44 *12*	1.09 *10*	2333.40	4⁺	1510.04	4⁺			
833.61 *13*	0.82 *10*	2343.70	6⁺	1510.04	4⁺			
[x]840.4[‡] *8*	0.08 *10*							
[x]860.8 *2*	0.25 *10*							
866.6 *5*	0.11 *10*	3210.75	(4⁺)	2343.70	6⁺			
[x]883.8 *4*	0.14 *10*							
[x]897.5[‡] *7*	<0.18							
900.9 *2*	0.43 *10*	2333.40	4⁺	1432.31	2⁺			E_γ: placed from a separate level at 2333.1 in Adopted dataset, based on results in (α,2nγ).
909.59 *13*	1.07 *10*	2419.49	4⁺	1510.04	4⁺			
944.7 *2*	0.40 *10*	2962.27	3⁻	2017.52	3⁻			
[x]952.7[‡] *9*	0.09 *10*							
971.01 *11*	2.9 *3*	1758.51	2⁺	787.43	2⁺	M1+E2	−2.15 *15*	A_2=+0.263 *20*; A_4=+0.26 *14* δ: from (971γ)(787γ)(θ); large mixing ratio suggests M1+E2.
974.9 *3*	0.30 *10*	2485.35	3⁺	1510.04	4⁺			
985.5[&e] *4*	0.25 *10*	2417.8?	2⁺	1432.31	2⁺			
987.6 *5*	0.21 *10*	2419.49	4⁺	1432.31	2⁺			
996.1 *2*	0.49 *10*	2506.30	5⁺	1510.04	4⁺			
[x]1017.1 *5*	0.19 *10*							
1023.60 *11*	4.8 *4*	1758.51	2⁺	734.83	0⁺			
1050.8 *4*	0.12 *10*	3155.49	(4⁺)	2104.88	3⁺			
1053.1 *3*	0.37 *10*	2485.35	3⁺	1432.31	2⁺			
[x]1062.2 *3*	0.20 *10*							
[x]1064.4 *3*	0.36 *10*							
1091.2 *2*	0.68[a] *10*	3108.75	(2⁺,3,4)	2017.52	3⁻			I_γ: 50% contributed by ^{96}Mo(n,γ).
1093.2 *2*	0.82 *10*	1880.91		787.43	2⁺			
1110.81 *14*	0.94 *10*	2620.85	5⁻	1510.04	4⁺			
1140.8 *4*	0.22 *10*	2572.79	3	1432.31	2⁺			
[x]1155.8[‡] *8*	0.12 *10*							
1178.1 *5*	0.23 *10*	3195.50		2017.52	3⁻			
1187.6[&] *3*	0.27 *10*	2620.28	3⁺	1432.31	2⁺			
1193.3 *3*	0.35 *10*	3210.75	(4⁺)	2017.52	3⁻			
1230.23 *12*	9.8 *9*	2017.52	3⁻	787.43	2⁺	D(+Q)	0.00 *2*	A_2=−0.074 *15*; A_4=+0.024 *25* δ: from (1230γ)(787γ)(θ).
[x]1241.2 *4*	0.14 *10*							
[x]1249.9 *2*	0.26 *10*							
1254.6[&e] *3*	0.19 *10*	3598.3?	(4⁺)	2343.70	6⁺			
[x]1259.8 *4*	0.17 *10*							
1285.42 *14*	1.36 *15*	2795.54	4⁻	1510.04	4⁺			
1287.2 *3*	0.48 *15*	3045.91	4⁺	1758.51	2⁺			
1317.40 *12*	1.9[a] *3*	2104.88	3⁺	787.43	2⁺			I_γ: 10% contributed by ^{95}Mo(n,γ).
1323.9[&e] *4*	0.21 *10*	3547.8?	(4⁺)	2223.90	4⁺			
[x]1348.4 *6*	0.15 *10*							
[x]1359.7 *5*	0.19 *10*							
1370.1[e] *2*	0.52 *10*	2104.88	3⁺	734.83	0⁺	[M3]		Implied mult=M3 for this transition makes it improbable.
[x]1388.0 *3*	0.27 *10*							
1394.2[&e] *2*	0.44 *10*	3737.9?		2343.70	6⁺			
[x]1406.3[‡] *8*	0.11 *10*							
1419.39 *13*	1.57 *15*	2206.52	2⁺	787.43	2⁺			
1432.31 *11*	4.9 *4*	1432.31	2⁺	0.0	0⁺			
1436.6 *3*	0.46 *10*	2223.90	4⁺	787.43	2⁺			

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^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

E_γ[†]	I_γ[†c]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	Comments
x1447.6[‡] *6*	0.13 *10*						
1452.3 *3*	0.34 *10*	2962.27	3⁻	1510.04	4⁺		
1467.1 *3*	0.36 *10*	2976.99	4⁺	1510.04	4⁺		
x1472.9[‡] *10*	<0.18						
x1508.0 *5*	0.19 *10*						
1512.0[&e] *3*	0.32 *10*	3022.1?	4⁺	1510.04	4⁺		
1541.6[&e] *3*	0.33 *10*	3051.5?	4⁺	1510.04	4⁺		
1545.95 *12*	2.40 *20*	2333.40	4⁺	787.43	2⁺		
x1555.4 *5*	0.16 *10*						
1598.8 *7*	0.16 *10*	3108.75	(2⁺,3,4)	1510.04	4⁺		
x1612.5 *4*	0.28 *10*						
1631.4[d&e] *2*	0.25[d] *10*	2417.8?	2⁺	787.43	2⁺		E_γ: poor fit. Level-energy difference=1630.4. I_γ: total Iγ=0.86 *10*. Intensity division is based on adopted gammas.
1631.4[d&] *2*	0.61[d] *10*	2419.49	4⁺	787.43	2⁺		E_γ: poor fit. Level-energy difference=1632.1.
x1643.2[‡] *8*	0.14 *10*						
x1690.5 *6*	0.20 *10*						
1698.0 *3*	0.50 *10*	2485.35	3⁺	787.43	2⁺		
1701.8[&e] *3*	0.48 *10*	3211.9?	(4⁺)	1510.04	4⁺		
x1739.3 *4*	0.32 *10*						
x1748.0 *6*	0.23 *10*						
1758.9 *5*	0.26 *10*	1758.51	2⁺	0.0	0⁺		
1774.7 *2*	1.40 *15*	2562.28	(2⁻)	787.43	2⁺		A_2=+0.12 *5*; A_4=−0.17 *9* δ: −0.36 *4* for J(2562)=1 from (1775γ+1785γ)(787γ)(θ).
1785.4 *3*	0.69 *15*	2572.79	3	787.43	2⁺		
1833.0[&] *3*	0.55 *10*	2620.28	3⁺	787.43	2⁺		
x1847.9 *7*	0.31 *15*						
x1869.4 *4*	0.37 *10*						
1886.3[&e] *7*	0.22 *10*	2620.28	3⁺	734.83	0⁺	[M3]	E_γ: implied M3 for this transition makes this questionable.
1913.1 *3*	0.50 *10*	2700.42	2⁺	787.43	2⁺		
1945.1[&e] *4*	0.37 *10*	3455.2?	(4⁺)	1510.04	4⁺		
1979.9 *3*	0.64 *15*	2767.72	4⁺	787.43	2⁺		
2017.4 *2*	1.88 *20*	2017.52	3⁻	0.0	0⁺	[E3]	
x2082.3 *2*	0.66 *15*						
x2176.0 *3*	0.40 *10*						
2258.7 *4*	0.21 *10*	3045.91	4⁺	787.43	2⁺		
x2280.5 *3*	0.26 *10*						
x4916.8 *5*	0.10 *2*						
x4927.3 *11*	0.05 *3*						
x4931.3 *5*	0.20 *3*						
x4957.2 *6*	0.07 *2*						
x4981.5 *4*	0.44 *4*						
x4988.4 *6*	0.06 *2*						
x5002.5 *4*	0.13 *2*						
x5017.6 *7*	0.05 *2*						
x5031.9 *4*	0.20 *2*						
x5052.1 *7*	0.05 *2*						
x5080.3 *4*	0.18 *2*						
x5090.6 *4*	0.20 *2*						
x5108.6 *5*	0.085 *10*						
x5125.5 *4*	0.34 *3*						
x5132.2[‡] *8*	0.020 *15*						

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^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

Eγ[†]	Iγ[†c]	Ei(level)	J^π_i	Ef	J^π_f	Mult.[b]	Comments
^{x}5146.2[‡] *10*	0.03 *2*						
^{x}5165.8[‡] *11*	0.04 *2*						
^{x}5170.0 *4*	0.23 *2*						
^{x}5212.8 *4*	0.11 *1*						
^{x}5222.3 *4*	0.11 *1*						
^{x}5231.7 *7*	0.045 *10*						
^{x}5248.5 *6*	0.060[a] *15*						Iγ: 50% contributed by ^{95}Mo(n,γ).
^{x}5255.1 *4*	0.43 *4*						
^{x}5262.3 *6*	0.055 *10*						
^{x}5283.7[‡] *8*	0.035 *15*						
^{x}5302.0 *4*	0.20 *3*						
^{x}5316.1 *4*	0.140 *15*						
^{x}5333.7 *8*	0.035 *10*						
^{x}5356.8 *5*	0.07 *1*						
^{x}5370.9 *4*	0.11 *1*						
^{x}5385.2 *5*	0.065 *10*						
^{x}5405.3 *5*	0.10 *1*						
^{x}5411.0[‡] *10*	0.03 *1*						
^{x}5426.9 *10*	0.045 *20*						
5431.5 *4*	0.25 *2*	(8642.56)	$2^+,3^+$	3210.75	(4^+)		
5446.4 *4*	0.24 *2*	(8642.56)	$2^+,3^+$	3195.50			
^{x}5476.4 *5*	0.075 *10*						
5487.0 *5*	0.10 *2*	(8642.56)	$2^+,3^+$	3155.49	(4^+)		
^{x}5493.3[‡] *10*	0.035 *20*						
^{x}5497.9 *7*	0.065 *20*						
^{x}5520.6[‡] *9*	0.03 *1*						
^{x}5527.1 *9*	0.035 *10*						
5533.4 *8*	0.33 *5*	(8642.56)	$2^+,3^+$	3108.75	$(2^+,3,4)$		
5538.8 *6*	0.20 *2*	(8642.56)	$2^+,3^+$	3103.17	$(2^+,3,4)$		
^{x}5551.7 *7*	0.035 *10*						
5592.1[e] *7*	0.055 *20*	(8642.56)	$2^+,3^+$	3051.5?	4^+		
5596.3 *6*	0.15 *2*	(8642.56)	$2^+,3^+$	3045.91	4^+		
^{x}5618.6 *7*	0.035 *10*						
^{x}5652.8 *11*	0.030 *15*						
^{x}5661.2[‡] *16*	0.04 *3*						
5665.0 *7*	0.10 *3*	(8642.56)	$2^+,3^+$	2976.99	4^+		
5680.0 *6*	0.99 *8*	(8642.56)	$2^+,3^+$	2962.27	3^-	(E1)	Mult.: from radiation strength.
^{x}5686.5 *7*	0.065 *15*						
^{x}5697.0[‡] *15*	0.025 *15*						
^{x}5725.8 *8*	0.025 *10*						
^{x}5778.8 *7*	0.035 *10*						
^{x}5794.5[‡] *9*	0.02 *1*						
^{x}5817.2 *10*	0.03 *1*						
^{x}5841.8 *7*	0.045 *10*						
5874.72[@] *22*	1.25[@] *14*	(8642.56)	$2^+,3^+$	2767.72	4^+		Other: 5874.5 *6*, Iγ=0.58 *5* (1971He10).
^{x}5893.2 *8*	0.04 *1*						
5941.9[@] *4*	0.42[@] *9*	(8642.56)	$2^+,3^+$	2700.42	2^+		Other: 5941.9 *8*, Iγ=0.075 *20* (1971He10).
6021.9 *7*	0.08 *1*	(8642.56)	$2^+,3^+$	2620.28	3^+		
6069.4 *6*	0.39 *3*	(8642.56)	$2^+,3^+$	2572.79	3		
6080.6[@] *5*	0.17 *2*	(8642.56)	$2^+,3^+$	2562.28	(2^-)		Eγ: other: 6080.0 *6* (1971He10). Iγ: weighted average of 0.17 *2* (1971He10) and 0.20 *5* (1991Is05).
^{x}6102.2[‡] *10*	0.03 *1*						

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^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

E_γ[†]	I_γ[†c]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[b]	Comments
^{x}6116.0 *7*	0.06 *1*						
^{x}6132.88[@] *23*	0.65[@] *6*						Other: 6134.1 *5*, Iγ=0.13 *1* (1971He10). I_γ: 0.13 *1* (1971He10).
6156.7 *7*	0.04 *1*	(8642.56)	2$^+$,3$^+$	2485.35	3$^+$		
^{x}6174.2[‡] *10*	0.025 *10*						
^{x}6186.5[‡] *15*	0.025 *15*						
^{x}6218.9 *10*	0.05 *2*						
6222.92[@] *12*	0.58[@] *7*	(8642.56)	2$^+$,3$^+$	2419.49	4$^+$		Other: 6222.7 *5*, Iγ=0.41 *3* (1971He10).
^{x}6270.4 *9*	0.04 *1*						
6308.4 *5*	0.055 *10*	(8642.56)	2$^+$,3$^+$	2333.40	4$^+$		
^{x}6338.5[@] *4*	0.30[@] *7*						I_γ: other: 0.025 *10* (1971He10).
^{x}6380.8 *13*	0.030 *15*						
^{x}6392.6 *7*	0.075 *15*						
6418.5 *7*	0.045 *10*	(8642.56)	2$^+$,3$^+$	2223.90	4$^+$		
^{x}6430.7 *11*	0.035 *15*						
6435.93[@] *8*	0.36 *3*	(8642.56)	2$^+$,3$^+$	2206.52	2$^+$		E_γ: other: 6435.6 *6* (1971He10). I_γ: weighted average of 0.37 *3* (1971He10) and 0.34 *4* (1991Is05).
^{x}6443.3[‡] *20*	0.015 *10*						
^{x}6451.7 *7*	0.055 *10*						
^{x}6514.9 *10*	0.025 *10*						
6537.4[@] *4*	0.19[@] *8*	(8642.56)	2$^+$,3$^+$	2104.88	3$^+$		Other: 6536.9 *7*, Iγ=0.065 *10* (1971He10).
6624.80[@] *2*	10.5[@] *6*	(8642.56)	2$^+$,3$^+$	2017.52	3$^-$	(E1)	Other: 6624.6 *6*, Iγ=10.0 (1971He10). Mult.: from radiation strength (1971He10). I_γ: absolute intensity=10.0 (1960Gr36). (6625γ)(2017γ)(θ) gives J^π(2017)=3,4.
^{x}6740.1[‡] *14*	0.02 *1*						
6760.7 *7*	0.055 *10*	(8642.56)	2$^+$,3$^+$	1880.91			
^{x}6878.9[‡] *23*	0.020 *15*						
6883.48[@] *16*	0.23 *4*	(8642.56)	2$^+$,3$^+$	1758.51	2$^+$		E_γ: other: 6883.5 *6* (1971He10). I_γ: weighted average of 0.25 *2* (1971He10) and 0.17 *3* (1991Is05).
7132.3[@] *4*	0.16[@] *2*	(8642.56)	2$^+$,3$^+$	1510.04	4$^+$		Other: 7132.5 *6*, Iγ=0.32 *5* (1971He10).
7210.5 *6*	0.10 *1*	(8642.56)	2$^+$,3$^+$	1432.31	2$^+$		E_γ: weighted average of 7208.8 *11* (1971He10) and 7210.7 *4* (1991Is05). I_γ: other: 0.10 *3* (1991Is05).
7854.1[@] *3*	0.10[@] *1*	(8642.56)	2$^+$,3$^+$	787.43	2$^+$		E_γ: weighted average of 7854.6 *6* (1971He10) and 7853.9 *4* (1991Is05). I_γ: other: 0.11 *5* (1991Is05).
7907.4 *8*	0.025 *10*	(8642.56)	2$^+$,3$^+$	734.83	0$^+$		

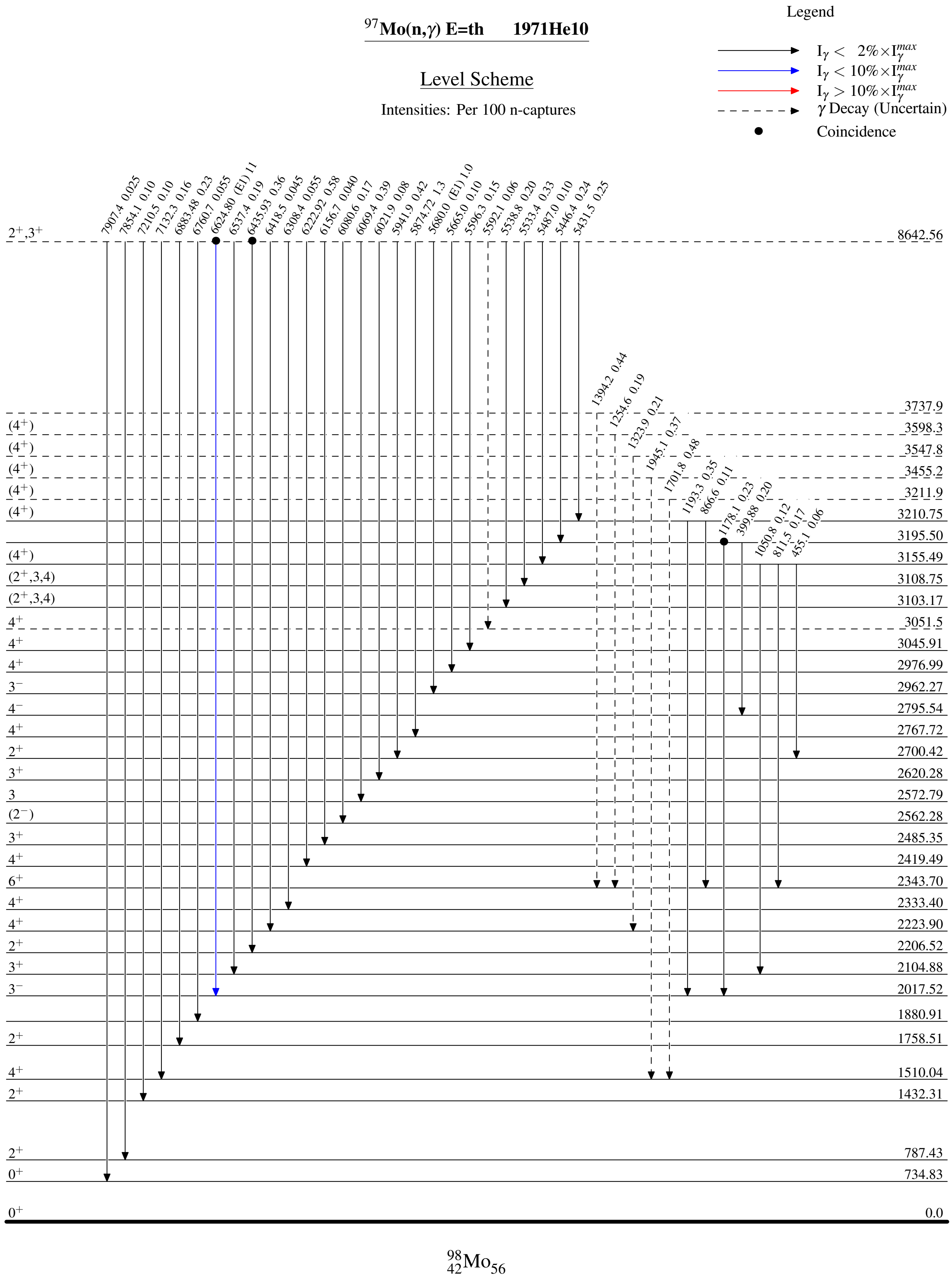
[†] From 1971He10, unless otherwise stated.
[‡] Uncertain γ ray.
[#] Doublet.
[@] From 1991Is05.
[&] Placement suggested by 1984Me04 on the basis of ^{98}Nb β^- decay (51.1 min) and/or (n,n′γ).
[a] An estimate of contribution from an impurity is given by 1971He10. It is assumed here that the authors have corrected the intensity for this impurity, although it is not clearly stated in their paper.
[b] From 1971He10 based on $\gamma\gamma(\theta)$, unless otherwise stated.

Continued on next page (footnotes at end of table)

^{97}Mo(n,γ) E=th 1971He10 (continued)

γ(^{98}Mo) (continued)

[c] For intensity per 100 neutron captures, multiply by 1.0 *3*.
[d] Multiply placed with intensity suitably divided.
[e] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.


^{97}Mo(n,γ) E=th 1971He10
Level Scheme
Intensities: Per 100 n-captures
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence
2+,3+ 8642.56
3737.9
(4+) 3598.3
(4+) 3547.8
(4+) 3455.2
(4+) 3211.9
(4+) 3210.75
3195.50
(4+) 3155.49
(2+,3,4) 3108.75
(2+,3,4) 3103.17
4+ 3051.5
4+ 3045.91
4+ 2976.99
3− 2962.27
4− 2795.54
4+ 2767.72
2+ 2700.42
3+ 2620.28
3 2572.79
(2−) 2562.28
3+ 2485.35
4+ 2419.49
6+ 2343.70
4+ 2333.40
4+ 2223.90
2+ 2206.52
3+ 2104.88
3− 2017.52
1880.91
2+ 1758.51
4+ 1510.04
2+ 1432.31
2+ 787.43
0+ 734.83
0+ 0.0
7907.4 0.025
7854.1 0.10
7210.5 0.10
7132.3 0.16
6883.48 0.23
6760.7 0.055
6624.80 (E1) 11
6537.4 0.19
6435.93 0.36
6418.5 0.045
6308.4 0.055
6222.92 0.58
6156.7 0.040
6080.6 0.17
6069.4 0.39
6021.9 0.08
5941.9 0.42
5874.72 1.3
5680.0 (E1) 1.0
5665.0 0.10
5596.3 0.15
5592.1 0.06
5538.8 0.20
5533.4 0.33
5487.0 0.10
5446.4 0.24
5431.5 0.25
1394.2 0.44
1254.6 0.19
1323.9 0.21
1945.1 0.37
1701.8 0.48
1193.3 0.35
866.6 0.11
1178.1 0.23
399.88 0.20
1050.8 0.12
811.5 0.17
455.1 0.06
$^{98}_{42}Mo_{56}$

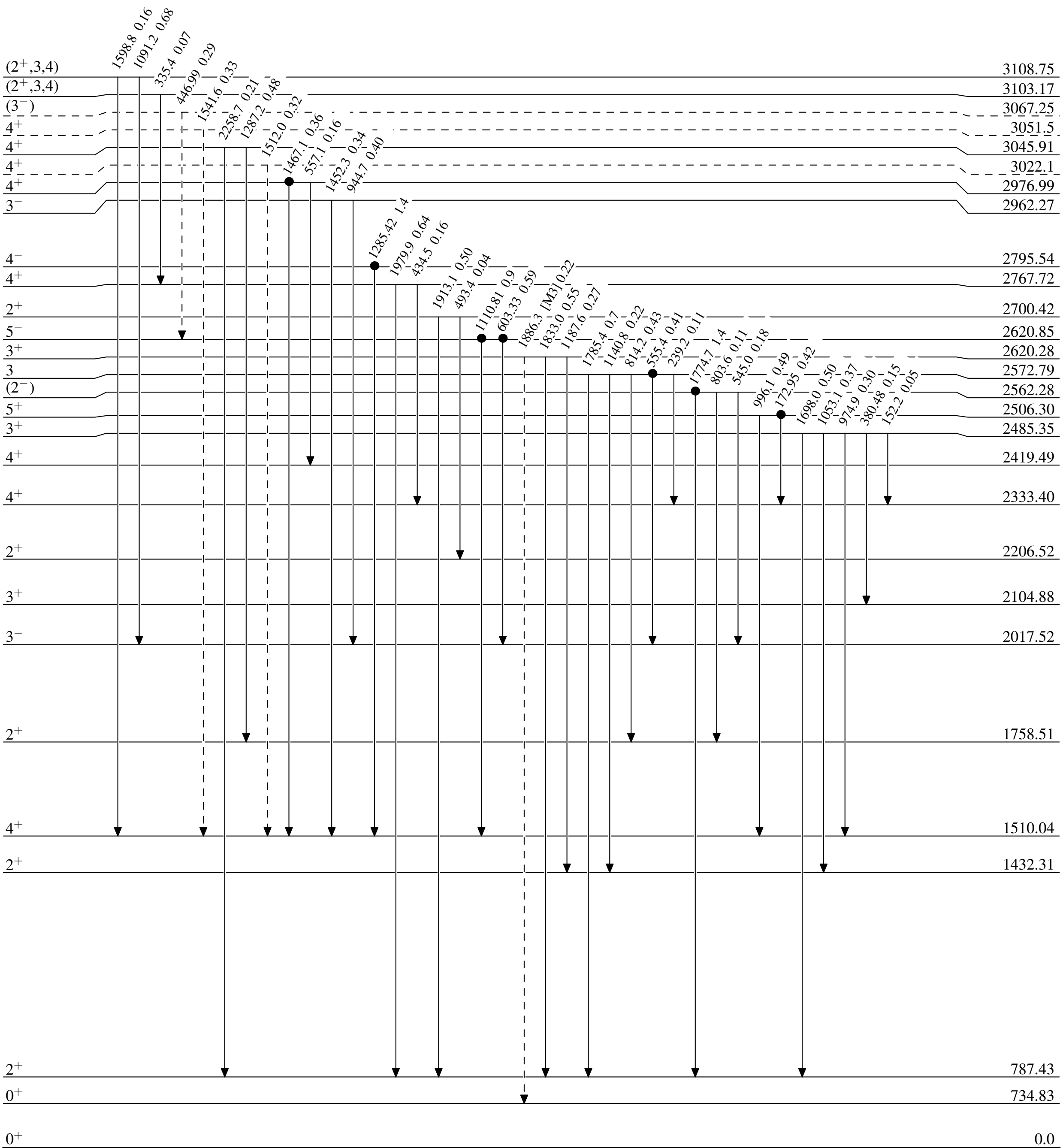
^{97}Mo(n,γ) E=th 1971He10

Level Scheme (continued)

Intensities: Per 100 n-captures

Legend

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



$^{98}_{42}Mo_{56}$

^{97}Mo(n,γ) E=th 1971He10

Level Scheme (continued)

Intensities: Per 100 n-captures

@ Multiply placed: intensity suitably divided

Legend

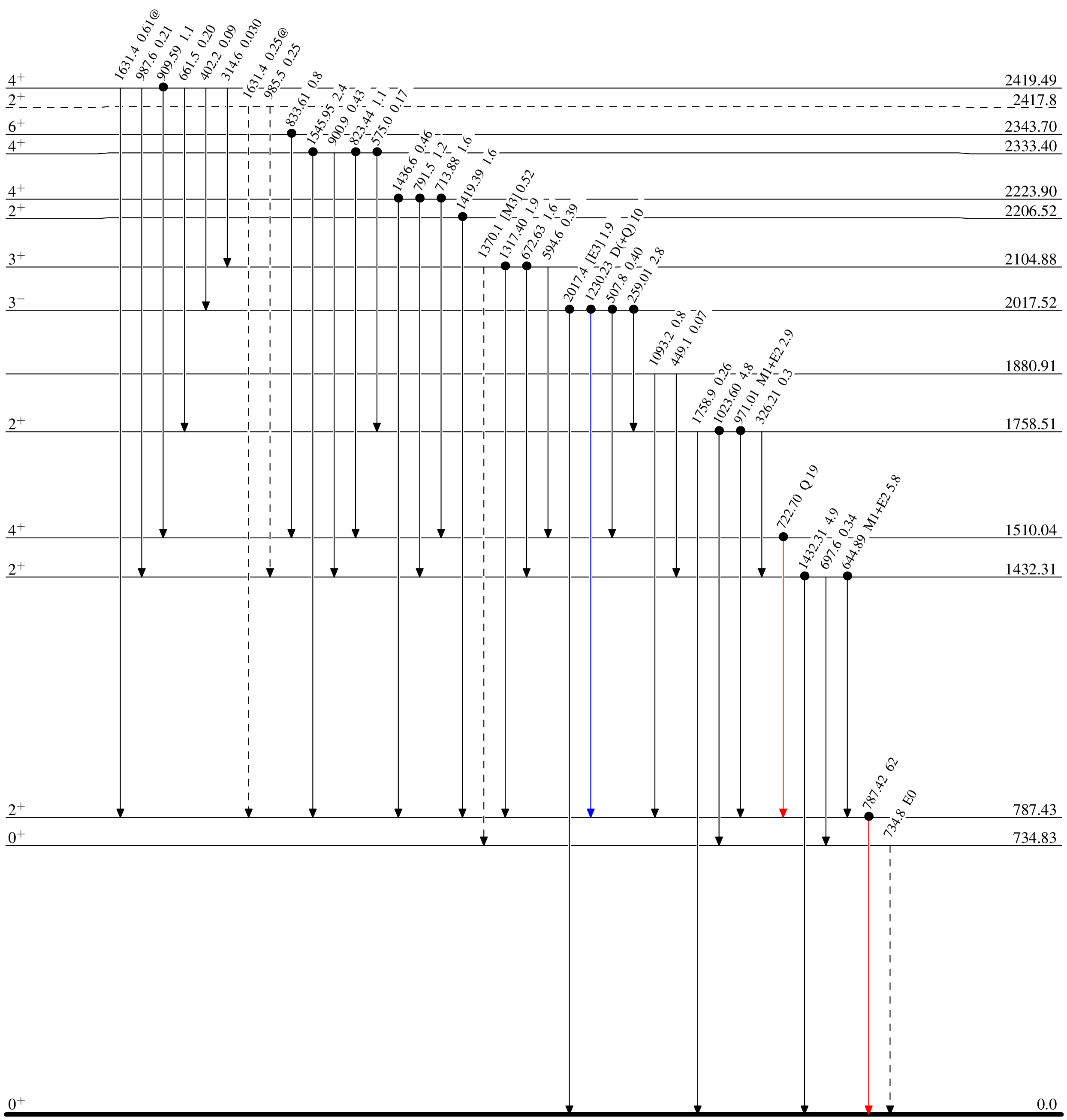
$I_\gamma < 2\% \times I_\gamma^{max}$

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

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

γ Decay (Uncertain)

Coincidence



$^{98}_{42}Mo_{56}$