^{94}Mo(n,n′), (n,n′γ) 1976Su04,1974Mc02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 107, 2423 (2006)	1-Jan-2006

1976Su04: E=1.5 MeV to 4.0 MeV. Enriched target. tof. Ge(Li), θ=35° to 90°. Measured Eγ, Iγ, excitation functions, n,γ(θ). Moldauer and coupled-channels calculations.
1974Mc02: E=1.4 MeV to 3.5 MeV. Enriched target. Measured Eγ, excitation functions, n,γ(θ), σ(θ).

^{94}Mo Levels

E(level)[†]	Jπ[‡]	Comments
0	0^+	
871.2 *4*	2^+	
1573.5 *6*	4^+	
1742.6[#] *7*	0^+	J=0 from the strong anisotropy of σ(θ) (1974Mc02). Excitation functions and γ-ray angular distribution restrict J^π to 0^+ or negative parity (1976Su04).
1864.4 *7*	2^+	
2068.1 *6*	2^+	
2295.0 *8*	4^+	
2393.3 *10*	2^+	
2534.7 *7*	3^-	
2566.6 *10*	4^+	
2611.3 *8*	$(5)^-$	
2744.7 *14*	1^+	
2768.2 *11*	4^+	
2805.7 *8*	3^+	
2835.7 *12*	$(4)^-$	
2870.7 *8*	2^+	
2964.9 *11*	3^+	
3011.7 *20*	3^-	
3083.7 *20*	$(3)^+$	
3132.5 *20*	1^+	
3163.2 *20*	$(3)^+$	
3263.8 *17*	1^-	
3308.2 *20*	$(2)^+$	
3402.1 *20*		
3449.1 *20*	$(1,2^+)$	
3519? *3*		

[†] From least-squares fit to Eγ.
[‡] From Adopted Levels, unless indicated otherwise.
[#] E=1740 keV *5* from (n,n′) (1974Mc02).

γ(^{94}Mo)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π
871.2	2^+	871.4[#] *5*	100	0	0^+	2393.3	2^+	1522.3 *10*	86 *3*	871.2	2^+
1573.5	4^+	702.5 *5*	100	871.2	2^+			2392.8 *20*	14 *3*	0	0^+
1742.6	0^+	871.4[#] *5*	100	871.2	2^+	2534.7	3^-	466.7 *8*	22 *4*	2068.1	2^+
1864.4	2^+	993.1 *8*	90 *4*	871.2	2^+			961.5 *10*	31 *4*	1573.5	4^+
		1864.5 *10*	10 *4*	0	0^+			1663.1 *10*	47 *4*	871.2	2^+
2068.1	2^+	1197.2 *8*	86 *3*	871.2	2^+	2566.6	4^+	993.1 *8*	100	1573.5	4^+
		2067.8 *10*	14 *3*	0	0^+	2611.3	$(5)^-$	1037.8 *6*	100	1573.5	4^+
2295.0	4^+	721.5 *5*	100	1573.5	4^+	2744.7	1^+	1876.4 *20*	40 *10*	871.2	2^+

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^{94}Mo(n,n′), (n,n′γ) 1976Su04,1974Mc02 (continued)

γ(^{94}Mo) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π
2744.7	1^+	2741.8 *20*	60 *10*	0	0^+	3083.7	$(3)^+$	2212.5 *20*	100	871.2	2^+
2768.2	4^+	1897.0 *10*	100	871.2	2^+	3132.5	1^+	3132.4 *20*	100	0	0^+
2805.7	3^+	1232.4 *10*	50 *10*	1573.5	4^+	3163.2	$(3)^+$	2292.0 *20*	100	871.2	2^+
		1934.3 *10*	50 *10*	871.2	2^+	3263.8	1^-	2392.8 *20*	40 *10*	871.2	2^+
2835.7	$(4)^-$	1262.2 *10*	100	1573.5	4^+			3263.4 *30*	60 *10*	0	0^+
2870.7	2^+	1006.3 *5*	100	1864.4	2^+	3308.2	$(2)^+$	2437.0 *20*	100	871.2	2^+
2964.9	3^+	1100.3 *30*	60 *10*	1864.4	2^+	3402.1		2530.9 *20*	100	871.2	2^+
		1391.4 *10*	40 *10*	1573.5	4^+	3449.1	$(1,2^+)$	2577.9 *20*	100	871.2	2^+
3011.7	3^-	2140.5 *20*	100	871.2	2^+	3519?		3519.1 *30*	100	0	0^+

† From 1976Su04.
‡ Branching ratios for each level (1976Su04).
# Excitation function clearly shows excitation of two levels.

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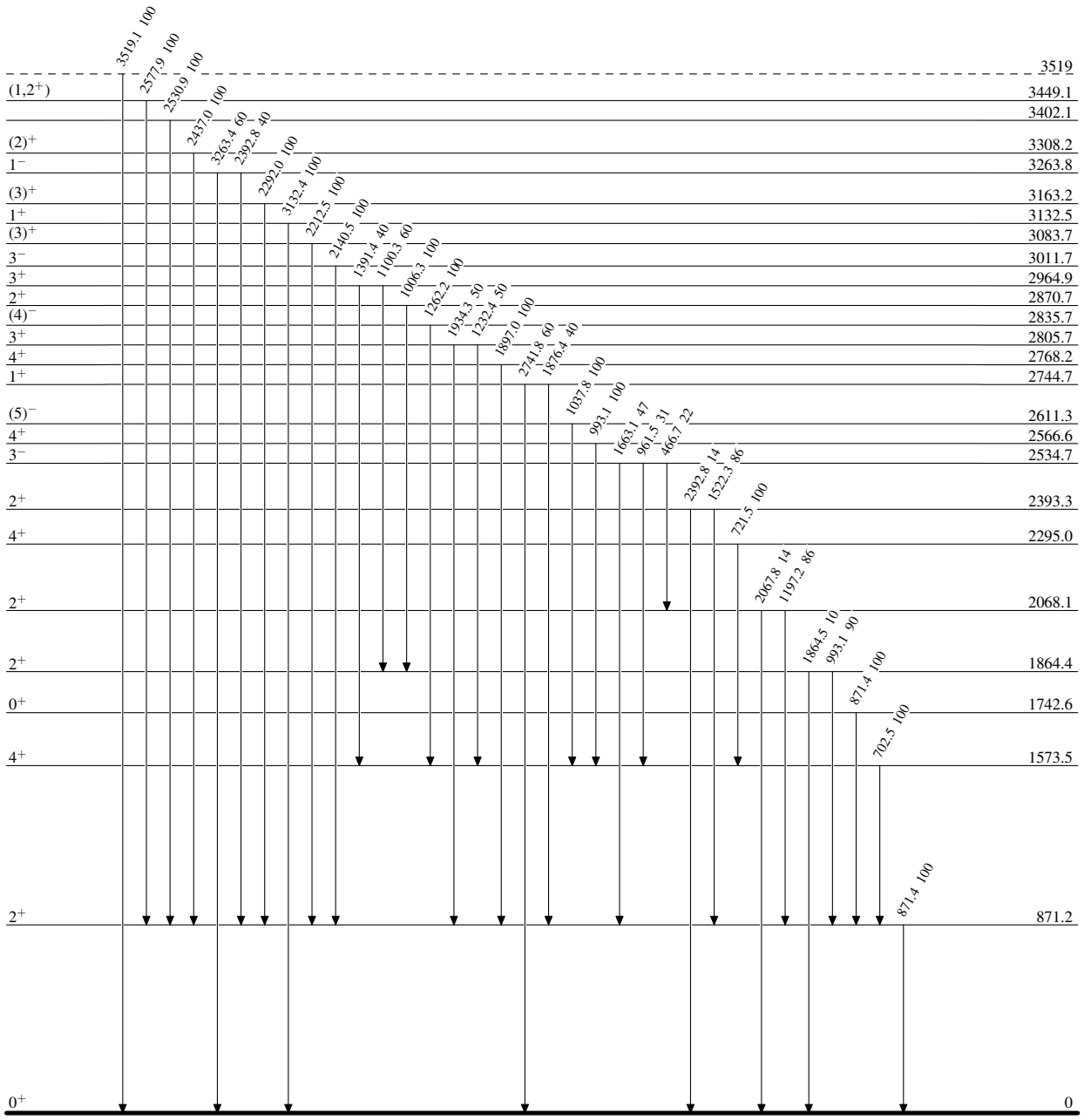
Level Scheme

Intensities: % photon branching from each level



$^{94}_{42}Mo_{52}$