

$^{238}\text{U}(\alpha, \text{F})$ 2004Hu02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne and A. Negret		NDS 109, 943 (2008)	1-May-2007

$E(\alpha)=30$ MeV. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ with Rochester 4π , highly segmented heavy-ion detector array CHICO, in coincidence with the Gammasphere detector array.

 ^{106}Mo Levels

E(level)	J^π	E(level)	J^π	E(level)	J^π	E(level)	J^π
0.0 [‡]	0 ⁺	1563.3 [#] 11	6 ⁺	2557.3 [#] 14	9 ⁺	4598 [@] 3	13 ⁺
171.0 [‡] 8	2 ⁺	1657.4 [@] 10	5 ⁺	2878.4 [@] 15	9 ⁺	4751 [#] 3	14 ⁺
521.5 [‡] 10	4 ⁺	1686.6 [‡] 13	8 ⁺	2949.8 [#] 16	10 ⁺	5307 [#] 3	15 ⁺
710.5 [#] 8	2 ⁺	1868.0 [#] 12	7 ⁺	3367.7 [#] 17	11 ⁺	5413 [‡] 3	16 ⁺
885.0 [#] 9	3 ⁺	1910.2 [@] 10	6 ⁺	3368.4 [‡] 19	12 ⁺	5767 [#] 4	16 ⁺
1032.3 [‡] 11	6 ⁺	2194.1 [#] 12	8 ⁺	3683.6 [@] 18	11 ⁺	6392 [#] 4	17 ⁺
1067.9 [#] 9	4 ⁺	2200.0 [@] 12	7 ⁺	3809.6 [#] 19	12 ⁺	6500 [‡] 4	18 ⁺
1306.2 [#] 10	5 ⁺	2470.1 [‡] 16	10 ⁺	4290.0 [#] 20	13 ⁺	6867 [#] 4	18 ⁺
1434.8 [@] 10	4 ⁺	2520.7 [@] 13	8 ⁺	4361.3 [‡] 22	14 ⁺	7661 [‡] 4	20 ⁺

[†] From Adopted Levels.

[‡] Band(A): g.s. band.

[#] Band(B): γ band.

[@] Band(C): 4⁺ band.

 $\gamma(^{106}\text{Mo})$

ΔE : One of the authors (P. Fallon) advised to use the following uncertainties on gamma ray energies: 1 keV for gammas decaying from levels below 4.5 MeV and 2 keV for those from levels above 4.5 MeV.

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
171.0 10	171.0	2 ⁺	0.0	0 ⁺	542.6 [‡] 10	2200.0	7 ⁺	1657.4	5 ⁺
174.5 [†] 10	885.0	3 ⁺	710.5	2 ⁺	546.4 [†] 10	1067.9	4 ⁺	521.5	4 ⁺
222.6 [†] 10	1657.4	5 ⁺	1434.8	4 ⁺	549.8 [†] 10	1434.8	4 ⁺	885.0	3 ⁺
252.8 [†] 10	1910.2	6 ⁺	1657.4	5 ⁺	561.8 [†] 10	1868.0	7 ⁺	1306.2	5 ⁺
289.8 [†] 10	2200.0	7 ⁺	1910.2	6 ⁺	589.5 [†] 10	1657.4	5 ⁺	1067.9	4 ⁺
320.7 [†] 10	2520.7	8 ⁺	2200.0	7 ⁺	604.0 [†] 10	1910.2	6 ⁺	1306.2	5 ⁺
350.5 10	521.5	4 ⁺	171.0	2 ⁺	610.5 [†] 10	2520.7	8 ⁺	1910.2	6 ⁺
357.4 [†] 10	1067.9	4 ⁺	710.5	2 ⁺	630.8 [†] 10	2194.1	8 ⁺	1563.3	6 ⁺
363.5 [†] 10	885.0	3 ⁺	521.5	4 ⁺	654.3 10	1686.6	8 ⁺	1032.3	6 ⁺
421.2 [†] 10	1306.2	5 ⁺	885.0	3 ⁺	678.4 [†] 10	2878.4	9 ⁺	2200.0	7 ⁺
475.4 [†] 10	1910.2	6 ⁺	1434.8	4 ⁺	689.3 [†] 10	2557.3	9 ⁺	1868.0	7 ⁺
495.4 [†] 10	1563.3	6 ⁺	1067.9	4 ⁺	710.5 [†] 10	710.5	2 ⁺	0.0	0 ⁺
507.5 [†] 10	2194.1	8 ⁺	1686.6	8 ⁺	714.0 [†] 10	885.0	3 ⁺	171.0	2 ⁺
510.8 10	1032.3	6 ⁺	521.5	4 ⁺	724.3 [†] 10	1434.8	4 ⁺	710.5	2 ⁺
531.0 [†] 10	1563.3	6 ⁺	1032.3	6 ⁺	755.7 [†] 10	2949.8	10 ⁺	2194.1	8 ⁺
539.5 [†] 10	710.5	2 ⁺	171.0	2 ⁺	772.4 [†] 10	1657.4	5 ⁺	885.0	3 ⁺

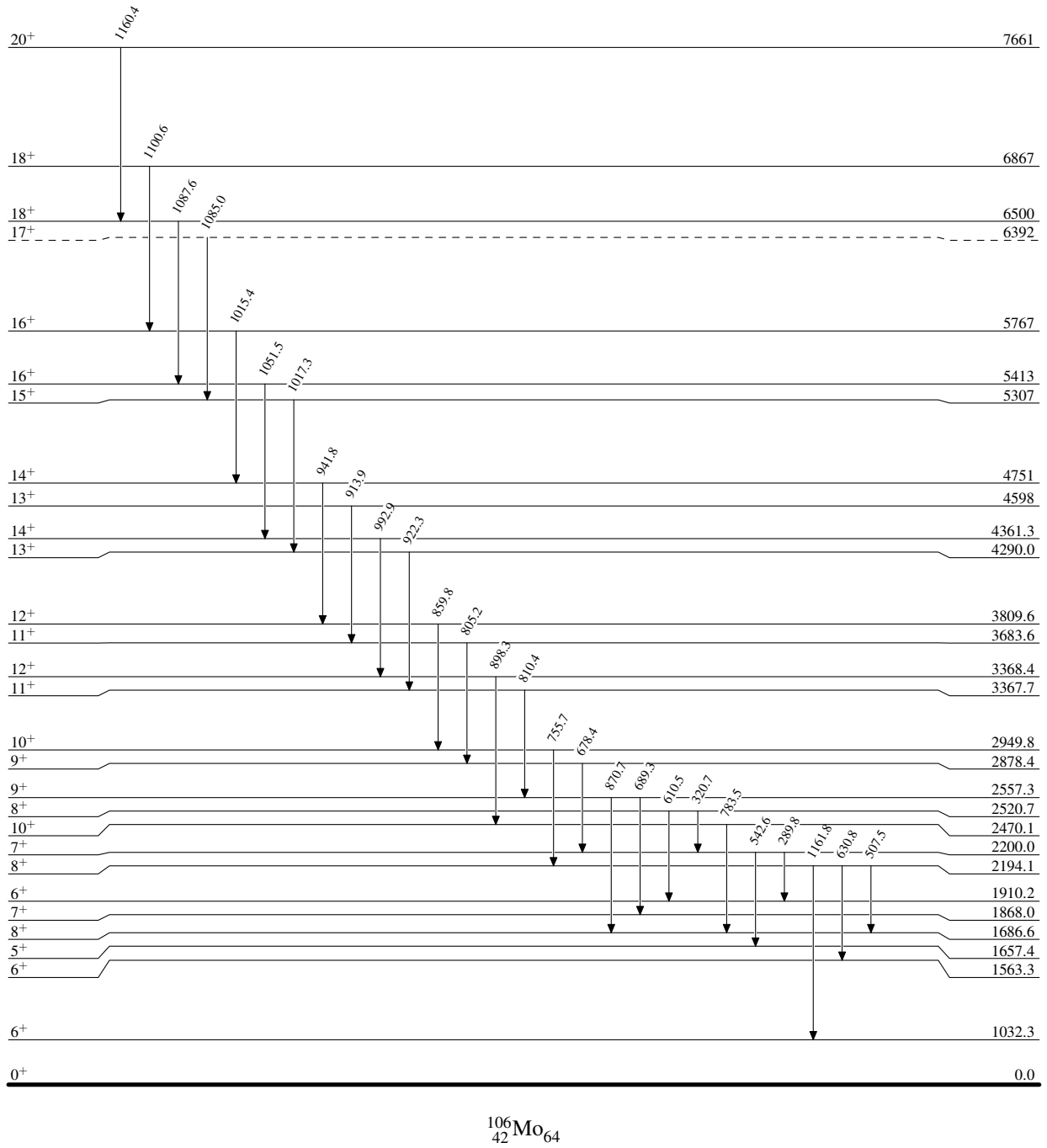
Continued on next page (footnotes at end of table)

$^{238}\text{U}(\alpha, \text{F})$ **2004Hu02 (continued)** $\gamma(^{106}\text{Mo})$ (continued)

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
783.5 $10^\dagger$	2470.1	10^+	1686.6	8^+	941.8 $20^\dagger$	4751	14^+	3809.6	12^+
784.7 $10^\dagger$	1306.2	5^+	521.5	4^+	992.9 $10^\dagger$	4361.3	14^+	3368.4	12^+
805.2 $10^\dagger$	3683.6	11^+	2878.4	9^+	1015.4 $20^\dagger$	5767	16^+	4751	14^+
810.4 $10^\dagger$	3367.7	11^+	2557.3	9^+	1017.3 $20^\dagger$	5307	15^+	4290.0	13^+
835.7 $10^\dagger$	1868.0	7^+	1032.3	6^+	1041.8 $10^\dagger$	1563.3	6^+	521.5	4^+
842.3 $10^\dagger$	1910.2	6^+	1067.9	4^+	1051.5 $20^\dagger$	5413	16^+	4361.3	14^+
859.8 $10^\dagger$	3809.6	12^+	2949.8	10^+	1085.0 $20^\dagger$	6392?	17^+	5307	15^+
870.7 $10^\dagger$	2557.3	9^+	1686.6	8^+	1087.6 $20^\dagger$	6500	18^+	5413	16^+
896.9 $10^\dagger$	1067.9	4^+	171.0	2^+	1100.6 $20^\dagger$	6867	18^+	5767	16^+
898.3 $10^\dagger$	3368.4	12^+	2470.1	10^+	1160.4 $20^\dagger$	7661	20^+	6500	18^+
913.9 $20^\dagger$	4598	13^+	3683.6	11^+	1161.8 $10^\dagger$	2194.1	8^+	1032.3	6^+
922.3 $10^\dagger$	4290.0	13^+	3367.7	11^+					

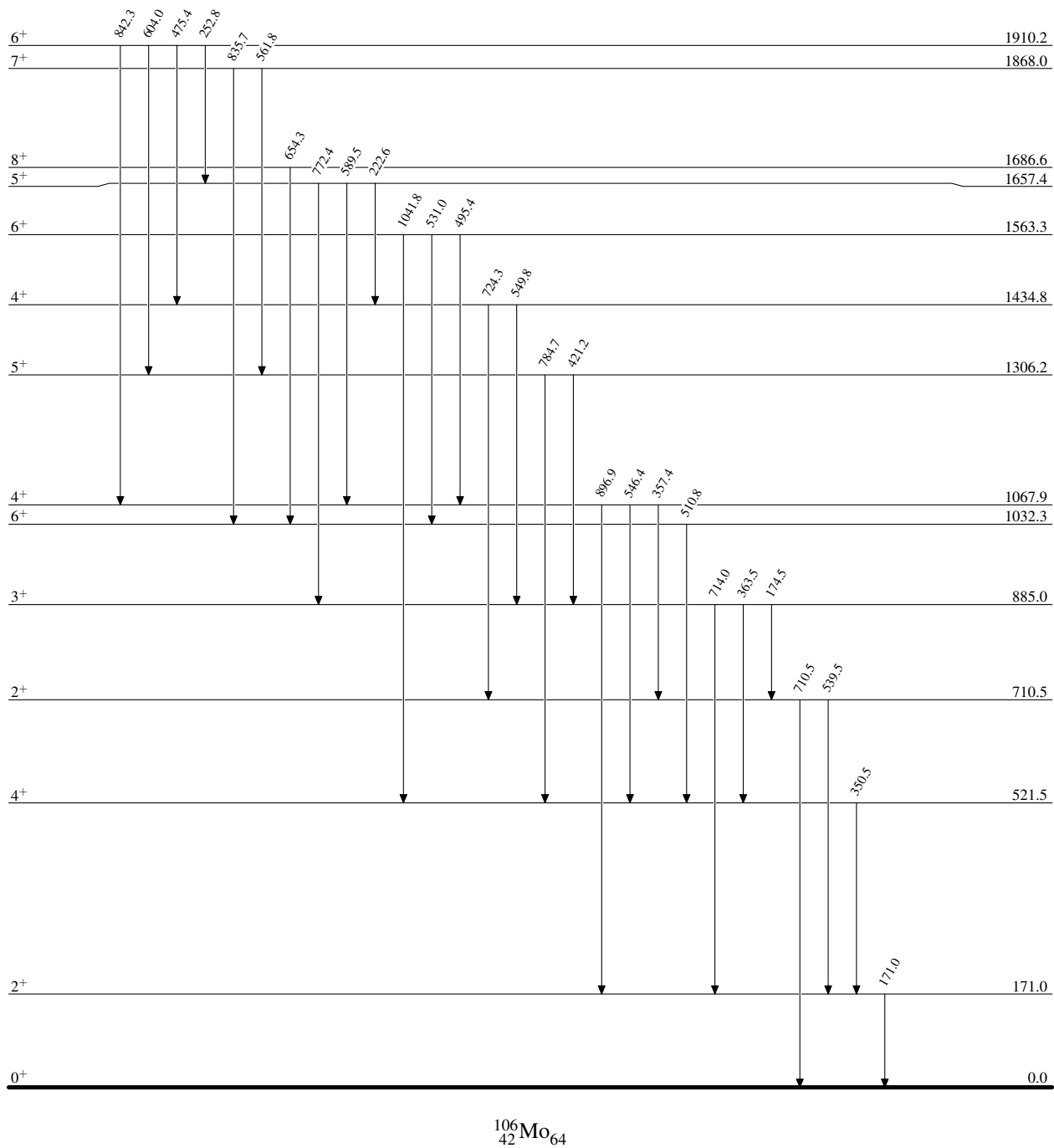
† From level-energy difference; value not quoted by [2004Hu02](#).

‡ One of the authors (P. Fallon) advised to use the following uncertainties on gamma ray energies: 1 keV for gammas decaying from levels below 4.5 MeV and 2 keV for those from levels above 4.5 MeV.

$^{238}\text{U}(\alpha, \text{F})$ 2004Hu02Level Scheme

$^{238}\text{U}(\alpha, \text{F})$ 2004Hu02

Level Scheme (continued)



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