

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

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 109, 1383 (2008)	1-Mar-2008

E=30 MeV. Measured E_γ , I_γ , $\gamma\gamma$ with Rochester 4π , highly segmented heavy-ion detector array CHICO, in coincidence with the GAMMASPHERE detector array.

^{107}Mo Levels

E(level)	J^π †	E(level)	J^π †	E(level)	J^π †	E(level)	J^π †
0.0 ^a	(7/2 ⁻)	581.3 [#]	(11/2 ⁻)	1588.4 [@]	(19/2 ⁺)	3069.4 [#]	(27/2 ⁻)
66.3 [‡]	(5/2 ⁻)	730.2 [‡]	(13/2 ⁻)	1797.8 ^a	(23/2 ⁻)	3213.8 [@]	(27/2 ⁺)
151.9 ^a	(11/2 ⁻)	837.3 ^{&}	(13/2 ⁺)	1974.2 [‡]	(21/2 ⁻)	3504.8 ^a	(31/2 ⁻)
165.0 [@]	(7/2 ⁺)	968.8 [@]	(15/2 ⁺)	2101.2 ^{&}	(21/2 ⁺)	3689.5 [‡]	(29/2 ⁻)
319.9 [‡]	(9/2 ⁻)	986.8 [#]	(15/2 ⁻)	2241.6 [#]	(23/2 ⁻)	4012.2 [#]	(31/2 ⁻)
348.1 [#]	(7/2 ⁻)	1118.4 ^a	(19/2 ⁻)	2338.4 [@]	(23/2 ⁺)	4195.7 [@]	(31/2 ⁺)
458.1 ^{&}	(9/2 ⁺)	1286.4 [‡]	(17/2 ⁻)	2596.8 ^a	(27/2 ⁻)	4510.7 ^a	(35/2 ⁻)
491.5 [@]	(11/2 ⁺)	1391.1 ^{&}	(17/2 ⁺)	2780.4 [‡]	(25/2 ⁻)	4685.2 [‡]	(33/2 ⁻)
567.0 ^a	(15/2 ⁻)	1544.2 [#]	(19/2 ⁻)	2944.3 ^{&}	(25/2 ⁺)	5053.4 [#]	(35/2 ⁻)

- † Not adopted.
- ‡ Band(A): $\nu 5/2[532]$, $\alpha=+1/2$.
- # Band(a): $\nu 5/2[532]$, $\alpha=-1/2$.
- @ Band(B): $\nu 5/2[413]$, $\alpha=+1/2$.
- & Band(b): $\nu 5/2[413]$, $\alpha=-1/2$.
- ^a Band(C): $\nu h_{11/2}$ decoupled band.

$\gamma(^{107}\text{Mo})$

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
66.3 [†]	66.3	(5/2 ⁻)	0.0	(7/2 ⁻)	379.2	837.3	(13/2 ⁺)	458.1	(9/2 ⁺)
98.7 [†]	165.0	(7/2 ⁺)	66.3	(5/2 ⁻)	404.3 [†]	1391.1	(17/2 ⁺)	986.8	(15/2 ⁻)
110.0 [†]	458.1	(9/2 ⁺)	348.1	(7/2 ⁻)	405.5	986.8	(15/2 ⁻)	581.3	(11/2 ⁻)
123.2 [†]	581.3	(11/2 ⁻)	458.1	(9/2 ⁺)	410.3	730.2	(13/2 ⁻)	319.9	(9/2 ⁻)
149.5 [†]	986.8	(15/2 ⁻)	837.3	(13/2 ⁺)	415.1	567.0	(15/2 ⁻)	151.9	(11/2 ⁻)
151.9	151.9	(11/2 ⁻)	0.0	(7/2 ⁻)	477.3	968.8	(15/2 ⁺)	491.5	(11/2 ⁺)
153.1 [†]	1544.2	(19/2 ⁻)	1391.1	(17/2 ⁺)	551.4	1118.4	(19/2 ⁻)	567.0	(15/2 ⁻)
154.9 [†]	319.9	(9/2 ⁻)	165.0	(7/2 ⁺)	553.8	1391.1	(17/2 ⁺)	837.3	(13/2 ⁺)
165.0 [†]	165.0	(7/2 ⁺)	0.0	(7/2 ⁻)	556.2	1286.4	(17/2 ⁻)	730.2	(13/2 ⁻)
171.6 [†]	491.5	(11/2 ⁺)	319.9	(9/2 ⁻)	557.0 [†]	2101.2	(21/2 ⁺)	1544.2	(19/2 ⁻)
233.2	581.3	(11/2 ⁻)	348.1	(7/2 ⁻)	557.4	1544.2	(19/2 ⁻)	986.8	(15/2 ⁻)
238.6 [†]	968.8	(15/2 ⁺)	730.2	(13/2 ⁻)	619.6	1588.4	(19/2 ⁺)	968.8	(15/2 ⁺)
238.7 [†]	730.2	(13/2 ⁻)	491.5	(11/2 ⁺)	679.4	1797.8	(23/2 ⁻)	1118.4	(19/2 ⁻)
253.6	319.9	(9/2 ⁻)	66.3	(5/2 ⁻)	687.8	1974.2	(21/2 ⁻)	1286.4	(17/2 ⁻)
256.0 [†]	837.3	(13/2 ⁺)	581.3	(11/2 ⁻)	697.4	2241.6	(23/2 ⁻)	1544.2	(19/2 ⁻)
306.2 [†]	458.1	(9/2 ⁺)	151.9	(11/2 ⁻)	710.1	2101.2	(21/2 ⁺)	1391.1	(17/2 ⁺)
326.5	491.5	(11/2 ⁺)	165.0	(7/2 ⁺)	750.0	2338.4	(23/2 ⁺)	1588.4	(19/2 ⁺)
348.1 [†]	348.1	(7/2 ⁻)	0.0	(7/2 ⁻)	799.0	2596.8	(27/2 ⁻)	1797.8	(23/2 ⁻)

Continued on next page (footnotes at end of table)

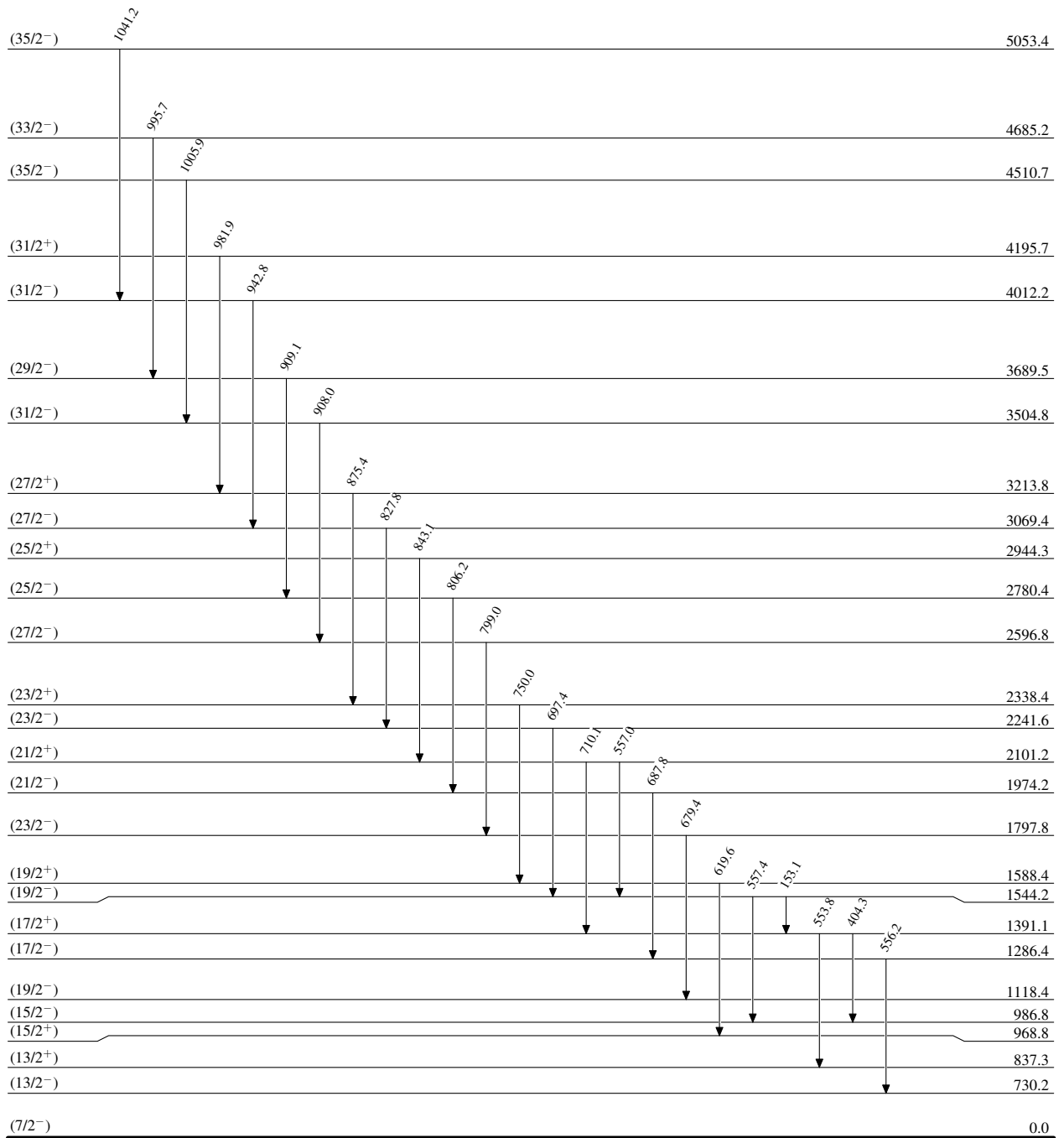
$^{238}\text{U}(\alpha, \text{F}\gamma)$ **2004Hu02 (continued)** $\gamma(^{107}\text{Mo})$ (continued)

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
806.2	2780.4	(25/2 ⁻)	1974.2	(21/2 ⁻)	942.8	4012.2	(31/2 ⁻)	3069.4	(27/2 ⁻)
827.8	3069.4	(27/2 ⁻)	2241.6	(23/2 ⁻)	981.9	4195.7	(31/2 ⁺)	3213.8	(27/2 ⁺)
843.1	2944.3	(25/2 ⁺)	2101.2	(21/2 ⁺)	995.7	4685.2	(33/2 ⁻)	3689.5	(29/2 ⁻)
875.4	3213.8	(27/2 ⁺)	2338.4	(23/2 ⁺)	1005.9	4510.7	(35/2 ⁻)	3504.8	(31/2 ⁻)
908.0	3504.8	(31/2 ⁻)	2596.8	(27/2 ⁻)	1041.2	5053.4	(35/2 ⁻)	4012.2	(31/2 ⁻)
909.1	3689.5	(29/2 ⁻)	2780.4	(25/2 ⁻)					

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

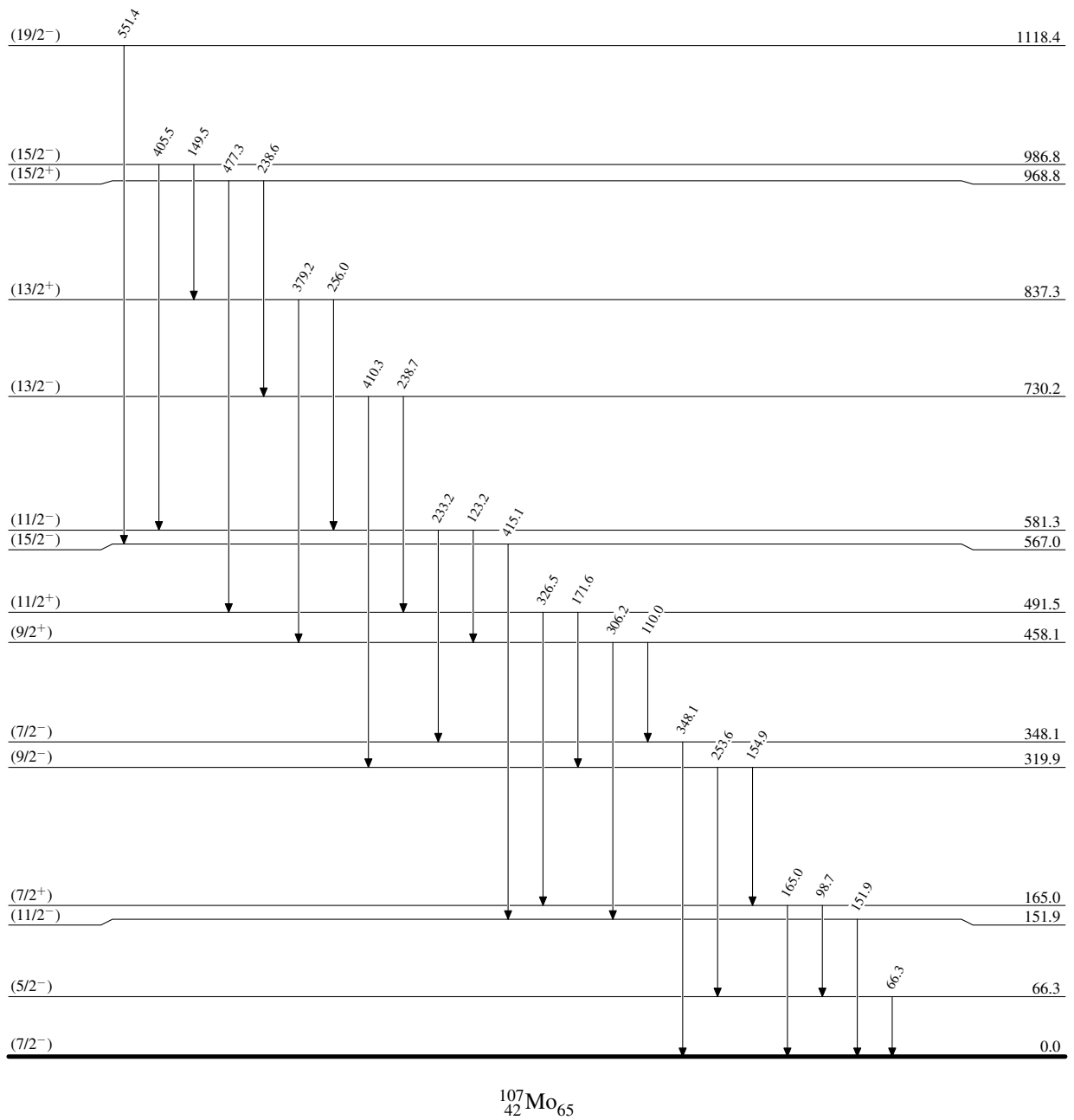
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Level Scheme

 $^{107}_{42}\text{Mo}_{65}$

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Level Scheme (continued)



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