

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

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 108,2035 (2007)	30-Mar-2007

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.

Band-crossing phenomenon studied using cranked-shell model.

 ^{104}Mo Levels

E(level)	J^π	E(level)	J^π	E(level)	J^π	E(level)	J^π
0.0 [†]	0 ⁺	1724.2 [‡]	6 ⁺	2866.8 [#]	(9 ⁻)	5059.6 [†]	16 ⁺
191.9 [†]	2 ⁺	1823.4 [@]	5 ⁺	3004.1 [‡]	10 ⁺	5063.2 [‡]	15 ⁺
560.4 [†]	4 ⁺	1883.8 [#]	(5 ⁻)	3253.3 [†]	12 ⁺	5269.2 [#]	(15 ⁻)
811.5 [‡]	2 ⁺	2036.4 [‡]	7 ⁺	3395.2 [‡]	11 ⁺	5588.5 [‡]	16 ⁺
1028.0 [‡]	3 ⁺	2083.8 [@]	6 ⁺	3556.1 [#]	(11 ⁻)	6021.1 ^{?‡}	17 ⁺
1079.5 [†]	6 ⁺	2305.0 [#]	(7 ⁻)	3764.9 [‡]	12 ⁺	6111.1 [†]	18 ⁺
1214.6 [‡]	4 ⁺	2325.9 [‡]	8 ⁺	4114.6 [†]	14 ⁺	6284.7 [#]	(17 ⁻)
1475.4 [‡]	5 ⁺	2372.8 [@]	7 ⁺	4183.1 [‡]	13 ⁺	6624.2 [‡]	18 ⁺
1583.0 [@]	4 ⁺	2454.2 [†]	10 ⁺	4359.9 [#]	(13 ⁻)	7283.1 [†]	20 ⁺
1721.0 [†]	8 ⁺	2682.3 [‡]	9 ⁺	4624.6 [‡]	14 ⁺		

[†] Band(A): g.s. band.

[‡] Band(B): γ band.

[#] Band(C): (5⁻) band.

[@] Band(D): 4⁺ band.

 $\gamma(^{104}\text{Mo})$

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
191.9	191.9	2 ⁺	0.0	0 ⁺	561.0 [†]	2036.4	7 ⁺	1475.4	5 ⁺
240.4 [†]	1823.4	5 ⁺	1583.0	4 ⁺	561.8	2866.8	(9 ⁻)	2305.0	(7 ⁻)
260.4 [†]	2083.8	6 ⁺	1823.4	5 ⁺	584.0 [†]	2305.0	(7 ⁻)	1721.0	8 ⁺
289.0 [†]	2372.8	7 ⁺	2083.8	6 ⁺	601.7 [†]	2325.9	8 ⁺	1724.2	6 ⁺
368.4 [†]	1583.0	4 ⁺	1214.6	4 ⁺	604.9 [†]	2325.9	8 ⁺	1721.0	8 ⁺
368.5	560.4	4 ⁺	191.9	2 ⁺	608.8 [†]	1823.4	5 ⁺	1214.6	4 ⁺
395.9 [†]	1475.4	5 ⁺	1079.5	6 ⁺	619.6 [†]	811.5	2 ⁺	191.9	2 ⁺
403.1 [†]	1214.6	4 ⁺	811.5	2 ⁺	641.5	1721.0	8 ⁺	1079.5	6 ⁺
412.6 [†]	2866.8	(9 ⁻)	2454.2	10 ⁺	644.7 [†]	1724.2	6 ⁺	1079.5	6 ⁺
421.2	2305.0	(7 ⁻)	1883.8	(5 ⁻)	645.9 [†]	2682.3	9 ⁺	2036.4	7 ⁺
447.4 [†]	1475.4	5 ⁺	1028.0	3 ⁺	654.2 [†]	1214.6	4 ⁺	560.4	4 ⁺
467.6 [†]	1028.0	3 ⁺	560.4	4 ⁺	678.2 [†]	3004.1	10 ⁺	2325.9	8 ⁺
500.8 [†]	2083.8	6 ⁺	1583.0	4 ⁺	689.3	3556.1	(11 ⁻)	2866.8	(9 ⁻)
509.6 [†]	1724.2	6 ⁺	1214.6	4 ⁺	712.9 [†]	3395.2	11 ⁺	2682.3	9 ⁺
519.1	1079.5	6 ⁺	560.4	4 ⁺	733.2	2454.2	10 ⁺	1721.0	8 ⁺
549.4 [†]	2372.8	7 ⁺	1823.4	5 ⁺	760.8 [†]	3764.9	12 ⁺	3004.1	10 ⁺
549.9 [†]	3004.1	10 ⁺	2454.2	10 ⁺	771.5 [†]	1583.0	4 ⁺	811.5	2 ⁺
555.0 [†]	1583.0	4 ⁺	1028.0	3 ⁺	787.9 [†]	4183.1	13 ⁺	3395.2	11 ⁺

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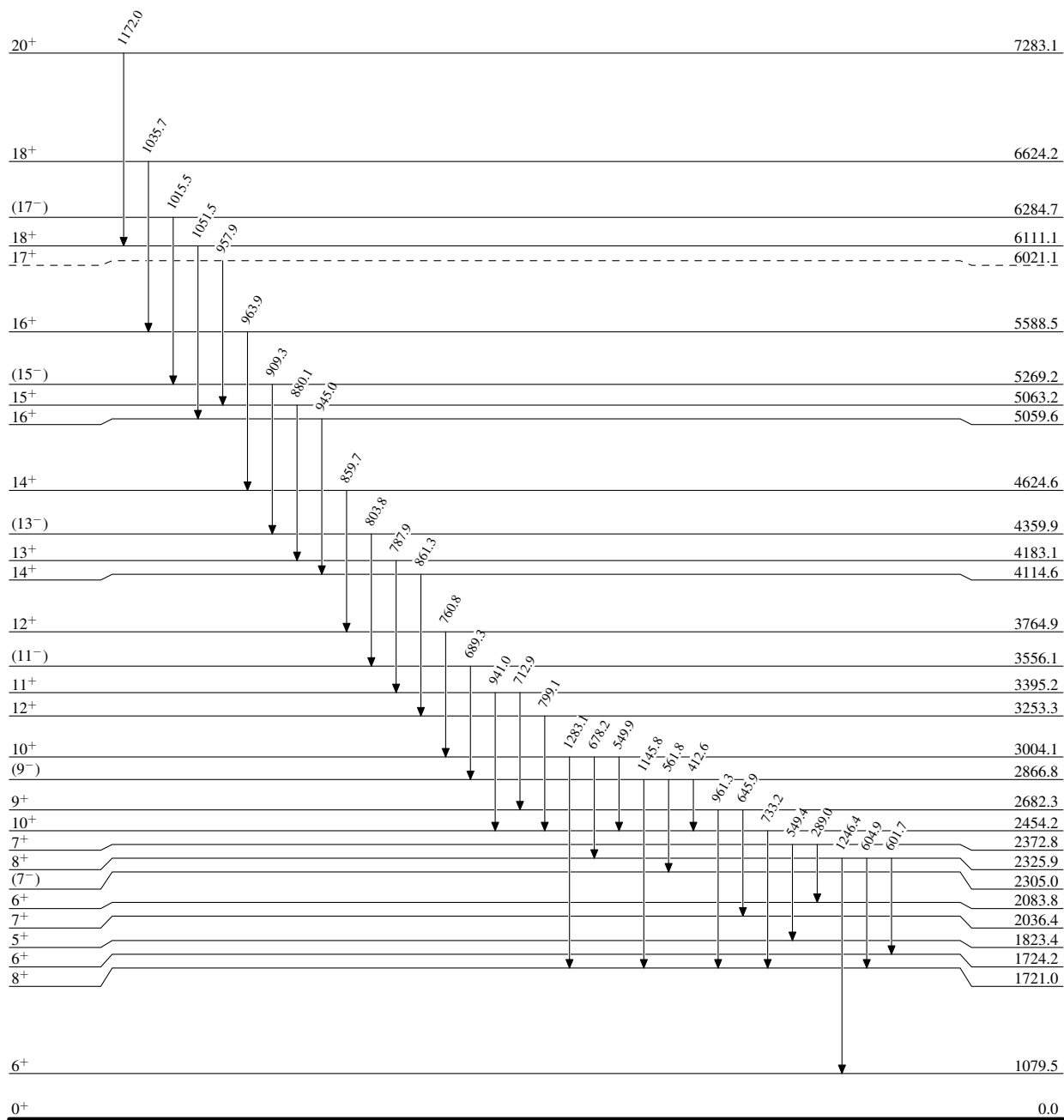
$^{238}\text{U}(\alpha, \text{F}\gamma)$ **2004Hu02 (continued)** $\gamma(^{104}\text{Mo})$ (continued)

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
795.4 [†]	1823.4	5 ⁺	1028.0	3 ⁺	957.9 [†]	6021.1?	17 ⁺	5063.2	15 ⁺
799.1	3253.3	12 ⁺	2454.2	10 ⁺	961.3 [†]	2682.3	9 ⁺	1721.0	8 ⁺
803.8	4359.9	(13 ⁻)	3556.1	(11 ⁻)	963.9 [†]	5588.5	16 ⁺	4624.6	14 ⁺
804.3 [†]	1883.8	(5 ⁻)	1079.5	6 ⁺	1015.5	6284.7	(17 ⁻)	5269.2	(15 ⁻)
811.5 [†]	811.5	2 ⁺	0.0	0 ⁺	1022.7 [†]	1214.6	4 ⁺	191.9	2 ⁺
836.1 [†]	1028.0	3 ⁺	191.9	2 ⁺	1035.7 [†]	6624.2	18 ⁺	5588.5	16 ⁺
859.7 [†]	4624.6	14 ⁺	3764.9	12 ⁺	1051.5	6111.1	18 ⁺	5059.6	16 ⁺
861.3	4114.6	14 ⁺	3253.3	12 ⁺	1145.8 [†]	2866.8	(9 ⁻)	1721.0	8 ⁺
880.1 [†]	5063.2	15 ⁺	4183.1	13 ⁺	1163.8 [†]	1724.2	6 ⁺	560.4	4 ⁺
909.3	5269.2	(15 ⁻)	4359.9	(13 ⁻)	1172.0	7283.1	20 ⁺	6111.1	18 ⁺
915.0 [†]	1475.4	5 ⁺	560.4	4 ⁺	1225.5 [†]	2305.0	(7 ⁻)	1079.5	6 ⁺
941.0 [†]	3395.2	11 ⁺	2454.2	10 ⁺	1246.4 [†]	2325.9	8 ⁺	1079.5	6 ⁺
945.0	5059.6	16 ⁺	4114.6	14 ⁺	1283.1 [†]	3004.1	10 ⁺	1721.0	8 ⁺
956.9 [†]	2036.4	7 ⁺	1079.5	6 ⁺	1323.4 [†]	1883.8	(5 ⁻)	560.4	4 ⁺

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

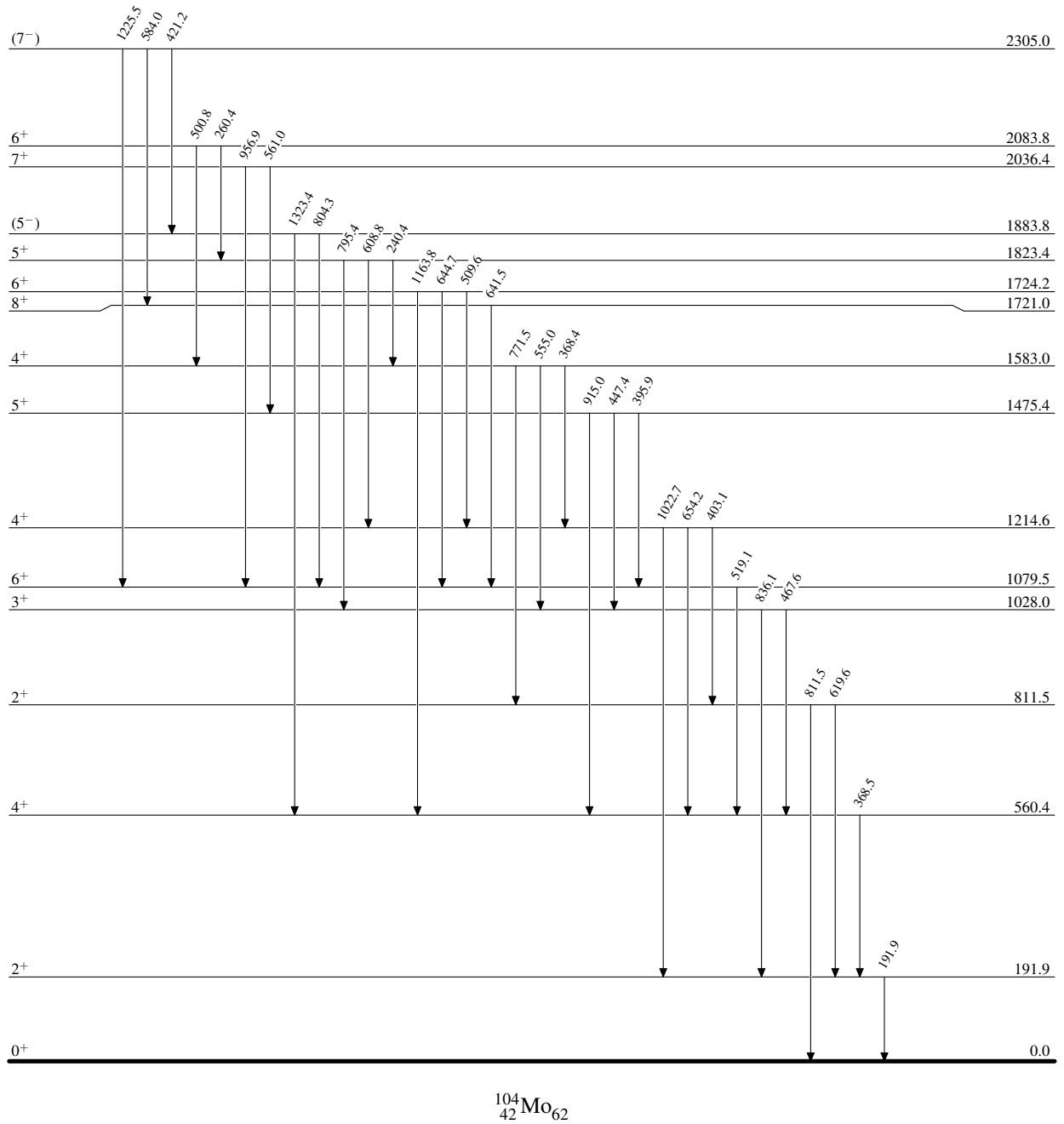
$^{238}\text{U}(\alpha, \text{F}\gamma)$ 2004Hu02

Level Scheme

 $^{104}_{42}\text{Mo}_{62}$

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Level Scheme (continued)

 $^{104}_{42}\text{Mo}_{62}$

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