

$^{238}\text{U}(\alpha, \text{F}\gamma)$ 2006Wu01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113, 1315 (2012)	1-Aug-2011

2006Wu01: $E_\alpha=30$ MeV. Target : $\approx 300 \mu\text{g}/\text{cm}^2$ ^{238}U with a $\approx 30 \mu\text{g}/\text{cm}^2$ carbon backing. Fission fragments were detected by highly segmented heavy-ion detector array, CHICO, in coincidence with γ -rays detected using Gammasphere at LBNL. Measured: E_γ , p-p- γ - γ - γ (two fission fragments and at least 3 γ 's).

 ^{110}Ru Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0 [#]	0 ⁺	12.04 s 17	$T_{1/2}$: From Adopted Levels.
240.73 [#] 9	2 ⁺		
612.87 [@] 9	2 ⁺		E(level): 621.9 keV level quoted in figure 6 of 2006Wu01 is a misprint.
663.7 [#] 10	4 ⁺		
859.94 [@] 13	3 ⁺		
1083.9 [@] 10	4 ⁺		
1239.7 [#] 15	6 ⁺		
1374.9 [@] 10	5 ⁺		
1683.9 [@] 15	6 ⁺		
1944.7 [#] 18	8 ⁺		
2019.9 [@] 15	7 ⁺		
2396.9 [@] 18	8 ⁺		
2759.7 [#] 20	10 ⁺		
2775.9 [@] 18	9 ⁺		
3254.9 [@] 20	10 ⁺		
3625.9 [@] 20	11 ⁺		
3647.7 [#] 23	12 ⁺		
4152.9 [@] 23	12 ⁺		
4352.7 [#] 25	14 ⁺		
4555.9 [@] 23	13 ⁺		
5123.9 [@] 25	14 ⁺		
5153 [#] 3	16 ⁺		
5544.0 [@] 25	15 ⁺		
6053 [#] 3	18 ⁺		
7056 [#] 3	20 ⁺		
8162 [#] 4	22 ⁺		

[†] From a least-square fit to E_γ . $\Delta E_\gamma=1$ keV, as quoted by 2006Wu01.

[‡] From 2006Wu01.

[#] Band(A): g.s. band.

[@] Band(B): γ band.

$^{238}\text{U}(\alpha, \text{F}\gamma)$ **2006Wu01 (continued)** $\gamma(^{110}\text{Ru})$

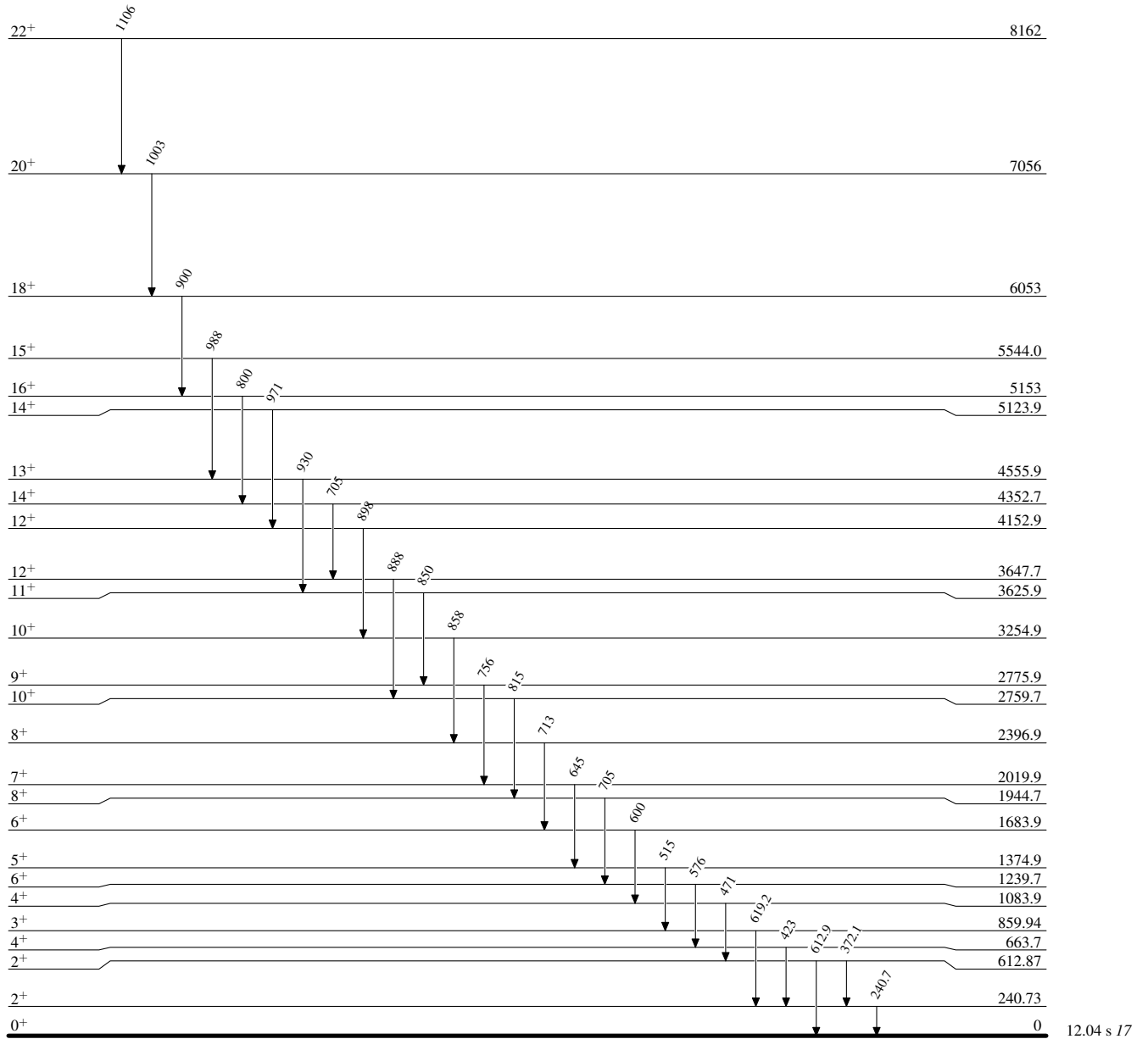
E_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π
240.7 \ddagger <i>l</i>	240.73	2 ⁺	0	0 ⁺	756 <i>l</i>	2775.9	9 ⁺	2019.9	7 ⁺
372.1 \ddagger <i>l</i>	612.87	2 ⁺	240.73	2 ⁺	800 <i>l</i>	5153	16 ⁺	4352.7	14 ⁺
423 <i>l</i>	663.7	4 ⁺	240.73	2 ⁺	815 <i>l</i>	2759.7	10 ⁺	1944.7	8 ⁺
471 <i>l</i>	1083.9	4 ⁺	612.87	2 ⁺	850 <i>l</i>	3625.9	11 ⁺	2775.9	9 ⁺
515 <i>l</i>	1374.9	5 ⁺	859.94	3 ⁺	858 <i>l</i>	3254.9	10 ⁺	2396.9	8 ⁺
576 <i>l</i>	1239.7	6 ⁺	663.7	4 ⁺	888 <i>l</i>	3647.7	12 ⁺	2759.7	10 ⁺
600 <i>l</i>	1683.9	6 ⁺	1083.9	4 ⁺	898 <i>l</i>	4152.9	12 ⁺	3254.9	10 ⁺
612.9 \ddagger <i>l</i>	612.87	2 ⁺	0	0 ⁺	900 <i>l</i>	6053	18 ⁺	5153	16 ⁺
619.2 \ddagger <i>l</i>	859.94	3 ⁺	240.73	2 ⁺	930 <i>l</i>	4555.9	13 ⁺	3625.9	11 ⁺
645 <i>l</i>	2019.9	7 ⁺	1374.9	5 ⁺	971 <i>l</i>	5123.9	14 ⁺	4152.9	12 ⁺
705 <i>l</i>	1944.7	8 ⁺	1239.7	6 ⁺	988 <i>l</i>	5544.0	15 ⁺	4555.9	13 ⁺
705 <i>l</i>	4352.7	14 ⁺	3647.7	12 ⁺	1003 <i>l</i>	7056	20 ⁺	6053	18 ⁺
713 <i>l</i>	2396.9	8 ⁺	1683.9	6 ⁺	1106 <i>l</i>	8162	22 ⁺	7056	20 ⁺

\dagger From 2006Wu01, unless otherwise stated.

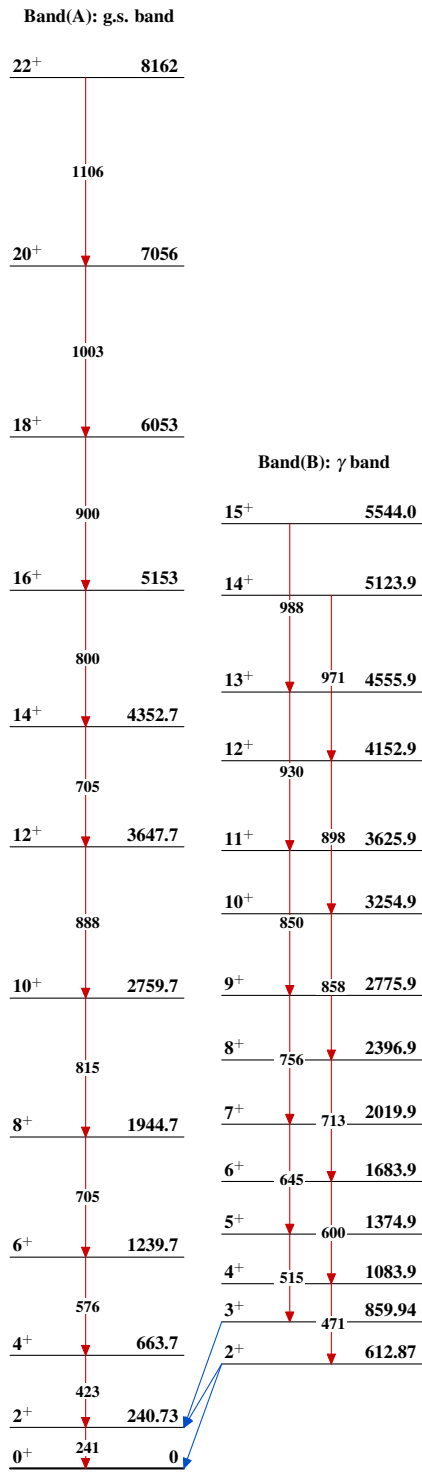
\ddagger From adopted gammas.

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Level Scheme

 $^{110}_{44}\text{Ru}_{66}$

12.04 s 17

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