

¹⁰⁰Mo(³He,2n γ) **1982KI02**

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

E=10– 18 MeV.

Measured: γ , $\gamma\gamma$, $\sigma(^3\text{He},\gamma)$, $\gamma(\theta)$, Ge(Li).

¹⁰¹Ru Levels

E(level)	J π^\dagger	E(level)	J π^\dagger	E(level)	J π^\dagger	E(level)	J π^\dagger
0 [#]	5/2 ⁺	324.5	1/2 ⁺	958.6 [‡]	15/2 ⁻	1861.9 [@]	15/2 ⁺
127.5	3/2 ⁺	527.6 [‡]	11/2 ⁻	1000.7 [@]	11/2 ⁺	2222.9	(11/2 to 19/2)
306.8 [@]	7/2 ⁺	545.1	7/2 ⁺	1501.0 [#]	13/2 ⁺	2885.0	
311.8	5/2 ⁺	720.1 [#]	9/2 ⁺	1622.3 [‡]	19/2 ⁻	3052.0	(15/2 to 23/2)

[†] From **1982KI02**.

[‡] Band(A): h11/2 neutron coupled to ¹⁰⁰Ru quadrupole excitation.

[#] Band(B): g.s. band $\Delta J=2$.

[@] Band(C): 7/2⁺ band $\Delta J=2$.

$\gamma(^{101}\text{Ru})$

E γ	I γ^\dagger	E _i (level)	J π_i	E _f	J π_f	Mult.	δ	Comments
127.5	95.8	127.5	3/2 ⁺	0	5/2 ⁺			δ : $\delta=+ 0.05$ 7 or - 6.1 +38-16.
179.7	49.6	306.8	7/2 ⁺	127.5	3/2 ⁺			δ : $-0.8<\delta<-1.8$.
184.3	38.8	311.8	5/2 ⁺	127.5	3/2 ⁺			δ : $\delta= 0.0$ 1 or 3.3 +8-5.
197.0	60.7	324.5	1/2 ⁺	127.5	3/2 ⁺			
220.8	100.	527.6	11/2 ⁻	306.8	7/2 ⁺			
238.6	20.5	545.1	7/2 ⁺	306.8	7/2 ⁺			I γ : I γ /I γ (545)=0.050 in β - decay, so 238 γ is a multiplet here.
306.8		306.8	7/2 ⁺	0	5/2 ⁺	M1+E2	-0.03 5	
311.5	16.3	311.8	5/2 ⁺	0	5/2 ⁺			
431.0	84.3	958.6	15/2 ⁻	527.6	11/2 ⁻			
^x 511.0	329.							
545.0	86.5	545.1	7/2 ⁺	0	5/2 ⁺	M1+E2	-0.01 6	
663.7	32.9	1622.3	19/2 ⁻	958.6	15/2 ⁻			
693.8	136.4	1000.7	11/2 ⁺	306.8	7/2 ⁺			E γ : doublet.
720.1	42.0	720.1	9/2 ⁺	0	5/2 ⁺			
780.9	43.9	1501.0	13/2 ⁺	720.1	9/2 ⁺			
861.2	20.	1861.9	15/2 ⁺	1000.7	11/2 ⁺			
1023.1	19.7	2885.0		1861.9	15/2 ⁺			E γ : probably a doublet.
1264.3	23.8	2222.9	(11/2 to 19/2)	958.6	15/2 ⁻			
1429.7	55.5	3052.0	(15/2 to 23/2)	1622.3	19/2 ⁻			

[†] Relative intensity to 220 γ =100.

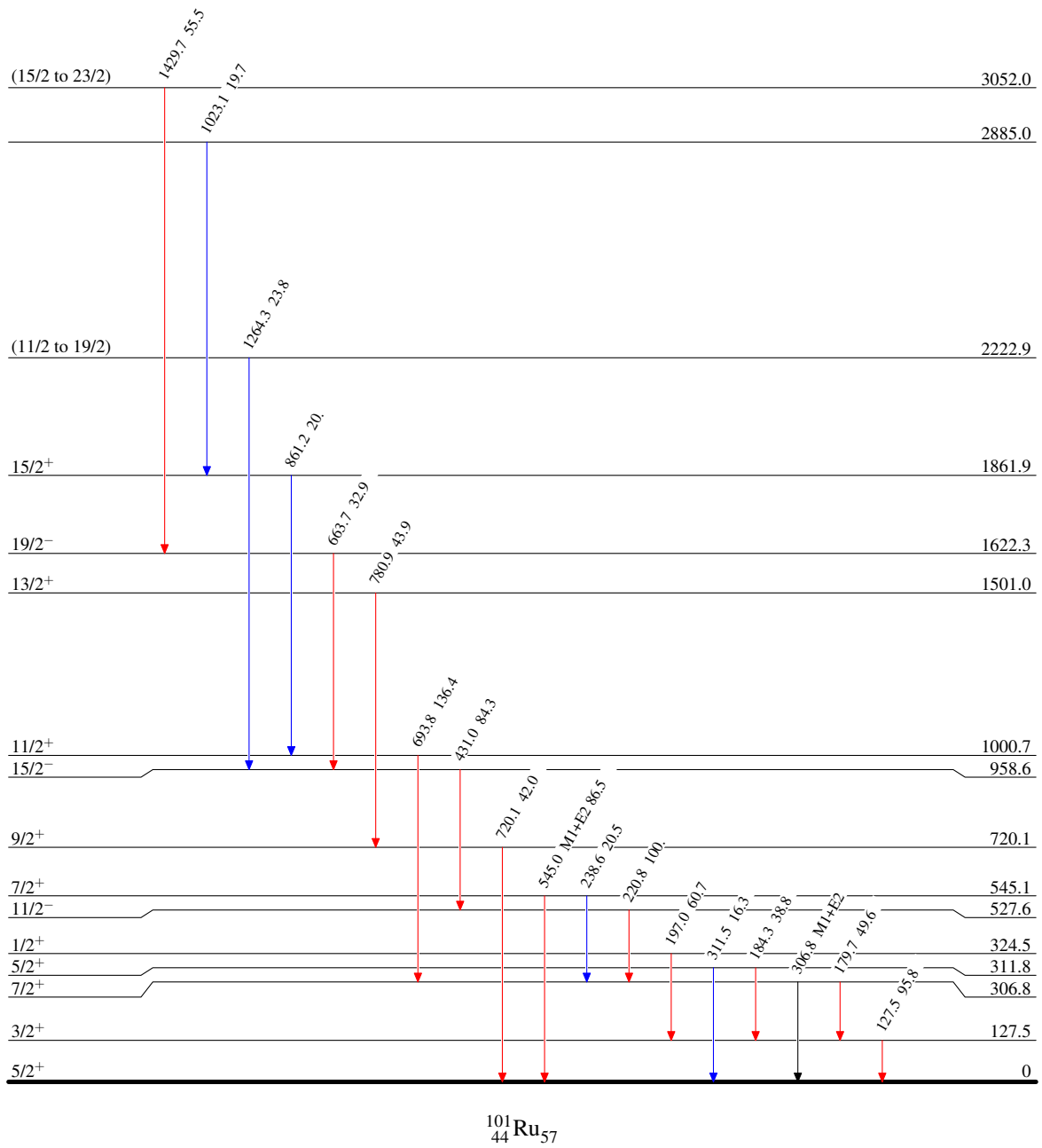
^x γ ray not placed in level scheme.

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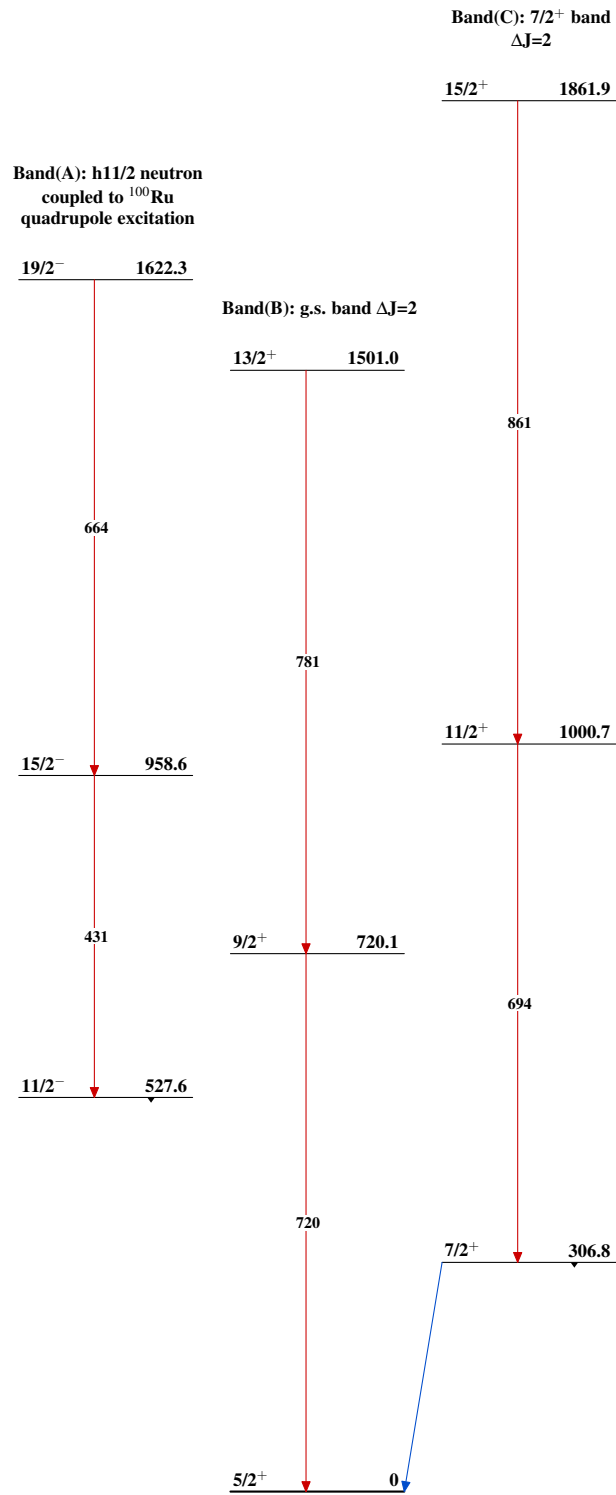
Level Scheme
Intensities: Relative I _{γ}

Legend

- I _{γ} < 2% × I _{γ} ^{max}
- I _{γ} < 10% × I _{γ} ^{max}
- I _{γ} > 10% × I _{γ} ^{max}



¹⁰¹Ru₅₇

$^{100}\text{Mo}(^3\text{He},2n\gamma)$ 1982K102 $^{101}_{44}\text{Ru}_{57}$