

⁹⁴Mo($\alpha,3n\gamma$) **1990Go15**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni		NDS 111, 2555 (2010)	30-Jun-2009

E=40 MeV. Measured γ 's, $\gamma\gamma$ -coin, and $\gamma(\theta)$; HPGe.

⁹⁵Ru Levels

E(level)	J $^{\pi}$ [†]	E(level)	J $^{\pi}$ [†]	E(level)	J $^{\pi}$ [†]
0.0 [@]	5/2 ^{+‡}	2246 ^{&}	11/2 ⁺	2744? ^{&}	(15/2 ⁺) [#]
941 ^{&}	7/2 ⁺	2285 [@]	17/2 ⁺	2961	21/2 ⁺
1352 [@]	9/2 ⁺	2540 [@]	21/2 ⁺	2991? ^{&}	(19/2 ⁺) [#]
2030 [@]	13/2 ⁺	2648	(19/2 ⁺)	3168	23/2 ⁺
				3832 [@]	25/2 ⁺

- [†] From $\gamma(\theta)$ assuming $\Delta\pi$ =no, except as noted.
- [‡] From the Adopted Levels.
- [#] Membership in proposed band based on g7/2 orbital.
- [@] Band(A): positive-parity yrast band.
- [&] Band(B): possible band based on g7/2 orbital.

$\gamma(^{95}\text{Ru})$

E $_{\gamma}$	I $_{\gamma}$	E $_i$ (level)	J $_i^{\pi}$	E $_f$	J $_f^{\pi}$	Mult. [†]
108		2648	(19/2 ⁺)	2540	21/2 ⁺	
207 [‡]	11	3168	23/2 ⁺	2961	21/2 ⁺	D+Q
^x 239						
247 ^{#&}		2991?	(19/2 ⁺)	2744?	(15/2 ⁺)	
255 [@]	108 [@]	2285	17/2 ⁺	2030	13/2 ⁺	Q
255 [@]	108 [@]	2540	21/2 ⁺	2285	17/2 ⁺	Q
^x 291						
^x 298						
313	12	2961	21/2 ⁺	2648	(19/2 ⁺)	D+Q
363	21	2648	(19/2 ⁺)	2285	17/2 ⁺	D+Q
411	3	1352	9/2 ⁺	941	7/2 ⁺	D+Q
^x 488						
498 ^{&}		2744?	(15/2 ⁺)	2246	11/2 ⁺	
664		3832	25/2 ⁺	3168	23/2 ⁺	
678	63	2030	13/2 ⁺	1352	9/2 ⁺	Q
941	13	941	7/2 ⁺	0.0	5/2 ⁺	
1292 [‡]	16	3832	25/2 ⁺	2540	21/2 ⁺	Q
1305		2246	11/2 ⁺	941	7/2 ⁺	
1352	100	1352	9/2 ⁺	0.0	5/2 ⁺	Q

- [†] From $\gamma(\theta)$.
- [‡] Placed as deexciting a 3577, 19/2⁻, state by **1985Ch28** in (⁶Li,p2n γ). However, **1990Go15** note that if the 1292 γ were E1 as suggested by **1985Ch28** a 20% admixture of M2 would be required, and if it fed the 2285 state the relative I $_{\gamma}$ of the 255, 678, and 1352 γ 's in coincidence with the 1292 γ should be equal whereas for the present placement the ratio would be 2:1:1. Although the statistics is poor, the measured ratios are 1.6:1:1.
- [#] 247 γ placed as deexciting the 2493, (13/2⁻), and 313 γ , 3370, (17/2⁻), by **1985Ch28** in (⁶Li,p2n γ).

Continued on next page (footnotes at end of table)

${}^{94}\text{Mo}(\alpha,3n\gamma)$ 1990Go15 (continued)

$\gamma({}^{95}\text{Ru})$ (continued)

@ Multiply placed with undivided intensity.

& Placement of transition in the level scheme is uncertain.

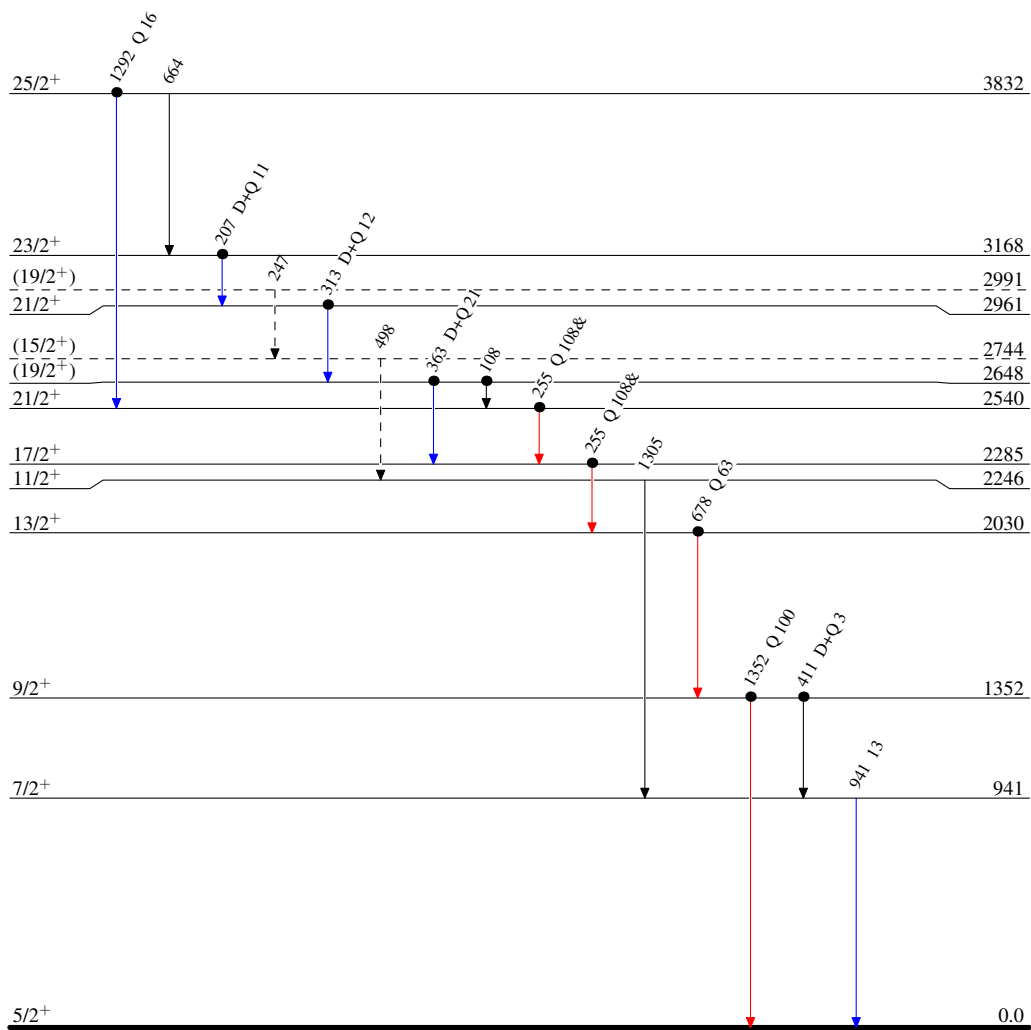
^x γ ray not placed in level scheme.

${}^{94}\text{Mo}(\alpha,3n\gamma)$ 1990Go15

Legend

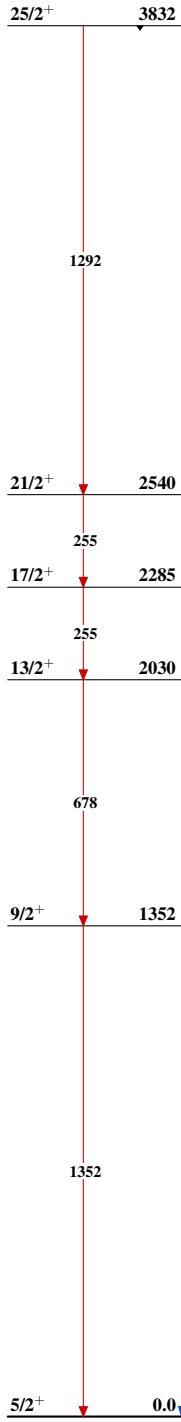
Level Scheme
 Intensities: Relative I_γ
 & Multiply placed: undivided intensity given

- ▶ $I_\gamma < 2\% \times I_\gamma^{max}$
- ▶ $I_\gamma < 10\% \times I_\gamma^{max}$
- ▶ $I_\gamma > 10\% \times I_\gamma^{max}$
- - - - -▶ γ Decay (Uncertain)
- Coincidence

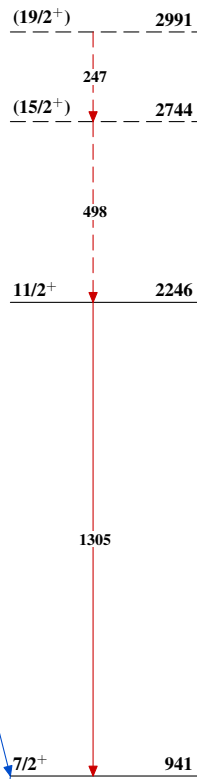
 ${}^{95}\text{Ru}_{51}$

$^{94}\text{Mo}(\alpha,3n\gamma)$ 1990Go15

Band(A): Positive-parity yrast band



Band(B): Possible band based on $g_{7/2}$ orbital



$^{95}_{44}\text{Ru}_{51}$