

$^{173}\text{Yb}(^{24}\text{Mg}, \text{F}\gamma)$ 2002Fo03

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni		NDS 107, 2423 (2006)	1-Jan-2006

E=134.5 MeV. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$, $\gamma(\text{Mo fragments})$ coin using Gammasphere array with 92 Compton-suppressed HPGe detectors.

 ^{94}Zr Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]
0.0 [‡]	0 ⁺	3142.0 [‡] 3	(6 ⁺)	4369.7 10		6006.5 6
918.7 [‡] 2	2 ⁺	3442.2 4	(7 ⁻)	4478.9 [‡] 5	(10 ⁺)	6371.4 8
1469.3 3	(4 ⁺)	3594.6 6		4812.0 6		7054.7 9
2329.5 [‡] 3	4 ⁺	3631.2 [‡] 4	(8 ⁺)	5490.5 6		7791.5 10
2604.8 4	5 ⁻	4224.0 7		5804.1 6		8980.3 12

[†] From least-squares fit to $E\gamma$'s, assigning 0.2 keV uncertainty for $I\gamma > 20$, 0.4 keV for $I\gamma = 5-20$ and 0.7 keV for $I\gamma < 5$, based on a general comment by 2002Fo03.

[‡] Band(A): γ cascade based on g.s..

[#] From γ -decay patterns, systematics of Z=38 nuclei and shell-model calculations. In agreement with Adopted Levels, except for the J^π of the 1469.3 (4⁺) level that has been considered as 4⁺.

 $\gamma(^{94}\text{Zr})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
145.7 7	1.9 3	4369.7		4224.0		782.0 7	2.1 4	4224.0		3442.2 (7 ⁻)	
152.3 4	6.6 15	3594.6		3442.2 (7 ⁻)		812.5 2	39 8	3142.0 (6 ⁺)		2329.5 4 ⁺	
202.3 4	8.5 20	6006.5		5804.1		837.4 2	28 5	3442.2 (7 ⁻)		2604.8 5 ⁻	
313.6 4	8.8 20	5804.1		5490.5		847.7 2	35 6	4478.9 (10 ⁺)		3631.2 (8 ⁺)	
333.1 4	10 3	4812.0		4478.9 (10 ⁺)		860 [†] 1	<1.0	2329.5 4 ⁺		1469.3 (4 ⁺)	
364.9 4	11 3	6371.4		6006.5		918.7 2	100	918.7 2 ⁺		0.0 0 ⁺	
489.2 2	56 9	3631.2 (8 ⁺)		3142.0 (6 ⁺)		1011.6 4	10 3	5490.5		4478.9 (10 ⁺)	
537.2 4	7.0 20	3142.0 (6 ⁺)		2604.8 5 ⁻		1135.5 2	29 5	2604.8 5 ⁻		1469.3 (4 ⁺)	
550.6 2	58 8	1469.3 (4 ⁺)		918.7 2 ⁺		1188.8 [†] 7	<1.5	8980.3		7791.5	
629.3 7	1.7 3	4224.0		3594.6		1194.4 4	8.0 20	6006.5		4812.0	
683.3 4	5.8 10	7054.7		6371.4		1410.8 2	35 5	2329.5 4 ⁺		918.7 2 ⁺	
736.8 4	5.4 10	7791.5		7054.7		1672.9 7	1.5 3	3142.0 (6 ⁺)		1469.3 (4 ⁺)	

[†] Placement of transition in the level scheme is uncertain.

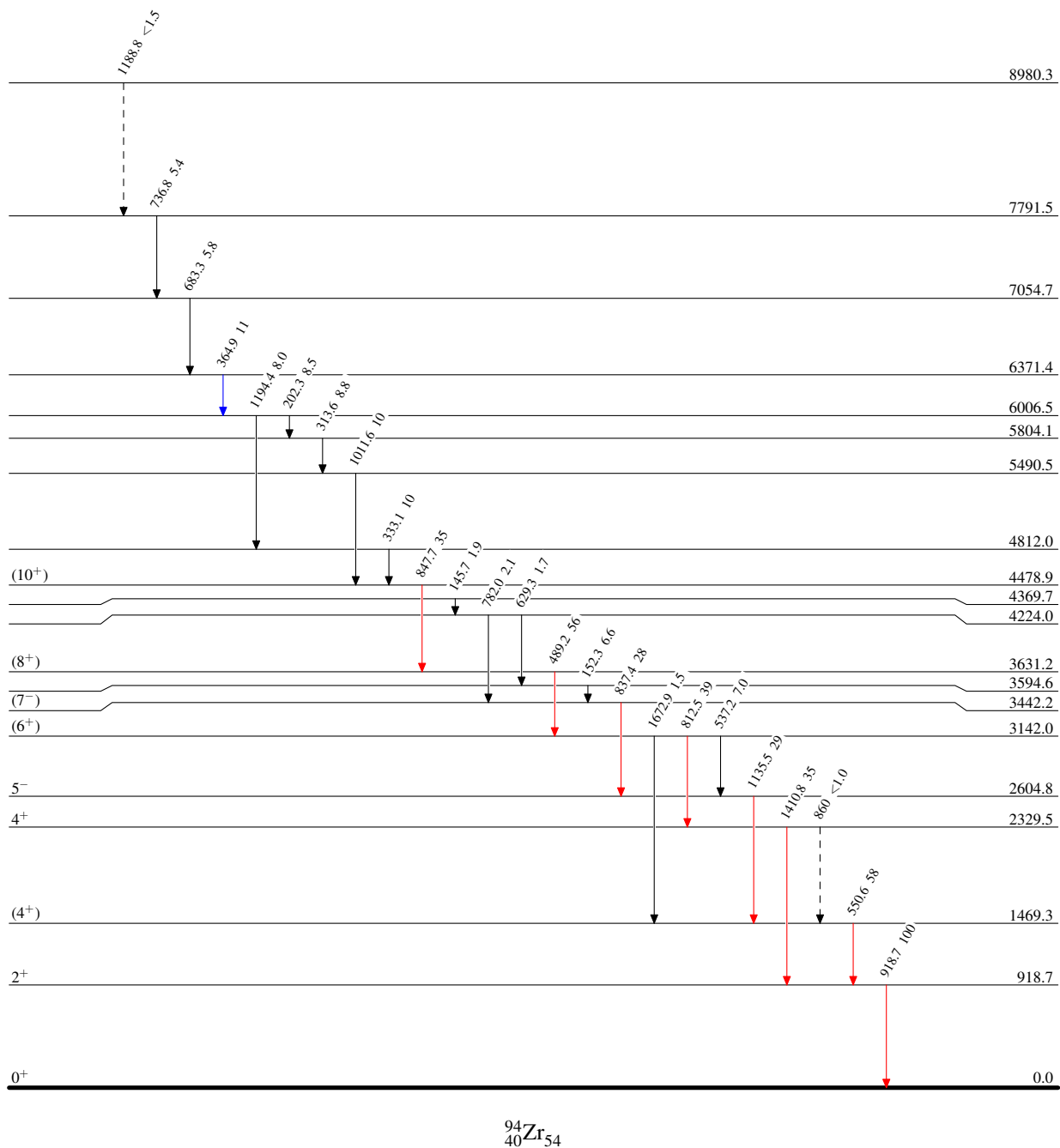
$^{173}\text{Yb}(^{24}\text{Mg},\text{F}\gamma)$ 2002Fo03

Legend

Level Scheme

Intensities: Relative I_γ

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

 $^{94}_{40}\text{Zr}_{54}$

$^{173}\text{Yb}(^{24}\text{Mg},\text{F}\gamma)$ 2002Fo03

