

$^{94}\text{Mo}(^{12}\text{C},3n\gamma)$ 1980Me09

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 2081 (2009)	1-Mar-2009

1980Me09: $^{94}\text{Mo}(^{12}\text{C},3n\gamma)$, $E(^{12}\text{C})=44\text{--}65$ MeV. Measured: $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin, $\gamma(\theta)$, linear polarization, $(^{12}\text{C})(\gamma)(t)$. Enriched target.

 ^{103}Cd Levels

From $(^{12}\text{C})(\gamma)(t)$ measurements, no evidence was found for isomers with $T_{1/2}=10\text{--}100$ ns.

E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)
0.0	(5/2) ⁺	1364.7 6		2452.5 4	(19/2) ⁺	3001.3 2I
188.10 20	(7/2) ⁺	1829.9 3	(15/2) ⁺	2571.3 4		4027.0? 2I
908.20 23	(11/2) ⁺	2183.7 8	(17/2) ⁺	2831.3 2I		

[†] Based on $\gamma(\theta)$, and and linear polarization.

 $\gamma(^{103}\text{Cd})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	Comments
118.8 1	39 2	2571.3		2452.5	(19/2) ⁺		
170.3 2		3001.3		2831.3			$J_i-J_f=\pm 1$ or ∓ 1 from $\gamma(\theta)$.
188.1 2	100	188.10	(7/2) ⁺	0.0	(5/2) ⁺	M1	$A_2=-0.18$ 8; $A_4=-0.05$ 4; Pol= -0.26 7.
260 2	22 5	2831.3		2571.3			
456.5 5	6 2	1364.7		908.20	(11/2) ⁺		
622.6 2	53 5	2452.5	(19/2) ⁺	1829.9	(15/2) ⁺	E2	$A_2=+0.28$ 2; $A_4=-0.06$ 3; Pol= $+0.49$ 8.
720.1 1	91 5	908.20	(11/2) ⁺	188.10	(7/2) ⁺	E2	$A_2=+0.27$ 2; $A_4=-0.07$ 2; Pol= $+0.49$ 7.
819.0 5	4 2	2183.7	(17/2) ⁺	1364.7			
921.7 2	67 5	1829.9	(15/2) ⁺	908.20	(11/2) ⁺	E2	$A_2=+0.28$ 2; $A_4=-0.09$ 2; Pol= $+0.40$ 8.
1026.1 2	8 3	4027.0?		3001.3		(M1)	$A_2=-0.27$ 8; $A_4=+0.01$ 10; Pol= -0.15 30.
1195.4 2	17 3	4027.0?		2831.3			$A_2=+0.34$ 4; $A_4=-0.21$ 6; Pol= $+0.2$ 2.
							$J_i-J_f=0,-2$ from $\gamma(\theta)$ and linear polarization.

[†] From $\gamma(\theta)$ and linear polarization in $^{94}\text{Mo}(^{12}\text{C},3n\gamma)$ (1980Me09). Stretched quadrupole transitions are assumed E2 Linear polarization coefficient p for a given γ is defined as $p=[I\gamma(0^\circ)-I\gamma(90^\circ)]/[I\gamma(0^\circ)+I\gamma(90^\circ)]$. No information for which values of p a transition is considered electric or magnetic is given.

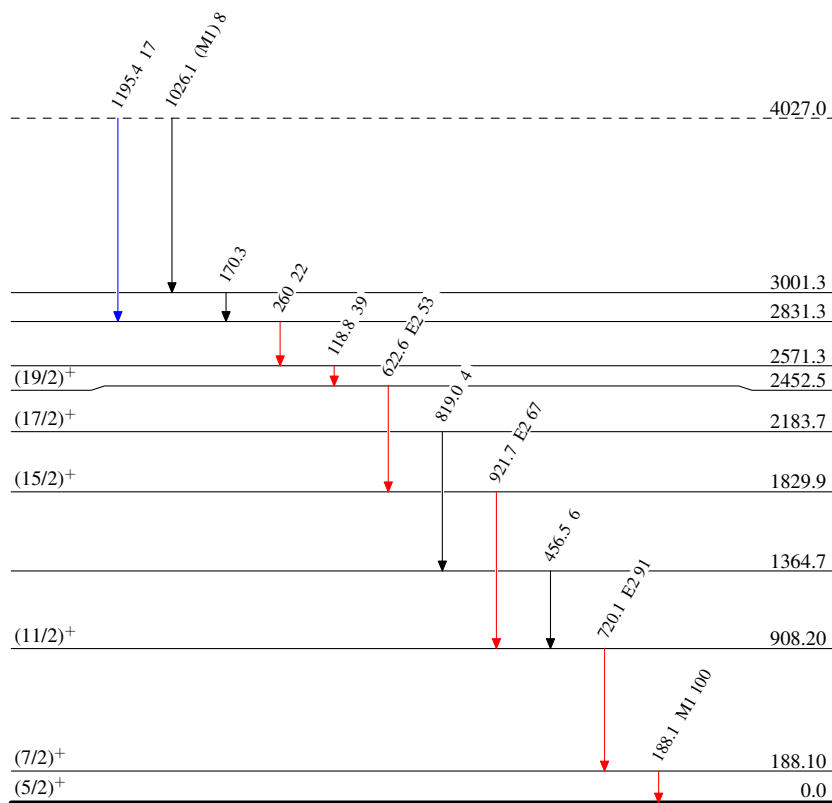
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Level Scheme

Intensities: Type not specified

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$

 $^{103}_{48}\text{Cd}_{55}$