

$^{238}\text{U}(^{70}\text{Zn},\text{X}\gamma)$ 2008Va08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alan L. Nichols, Balraj Singh, Jagdish K. Tuli		NDS 113, 973 (2012)	15-Apr-2012

2008Va08: $^{238}\text{U}(^{70}\text{Zn},\text{X}\gamma)$ E=460 MeV beam provided by LNL Tandem-ALPI accelerator. Detected charged particles with PRISMA magnetic spectrometer. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin using CLARA array of 22 clover Ge detectors with Compton-suppression.

Level scheme proposed by the evaluators based on the work of [2010Ch51](#). [2008Va08](#) had proposed that most of the γ rays observed in their work populated high-spin activity of $J^\pi=(3^+,4^+)$ which is possibly the ground state of ^{62}Mn .

 ^{62}Mn Levels

E(level)	J^π	$T_{1/2}$	Comments
0+y	(4 ⁺)	671 ms 5	$J^\pi, T_{1/2}$: from Adopted Levels.
113.3+y	(4)	95 ns 2	$T_{1/2}$: from 2010Da06 (also 1999DaZQ thesis).
222.1+y 8	(5)		
417.9+y 8	(6)		
642.5+y 9	(7)		
1183.4+y 13	(8)		

 $\gamma(^{62}\text{Mn})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
108.8 [†] 8	100 42	222.1+y	(5)	113.3+y	(4)	E_γ : from 2010Da06 , placement from 2010Da06 and 2010Ch51 . E_γ : energy of this γ ray matches 156 γ reported in ^{62}Cr decay (2005Ga01).
113.3		113.3+y	(4)	0+y	(4 ⁺)	
^x 155.4 7	33 14					
195.8 [†] 2	46 9	417.9+y	(6)	222.1+y	(5)	
224.6 [†] 3	54 12	642.5+y	(7)	417.9+y	(6)	
540.9 [†] 10	36 21	1183.4+y	(8)	642.5+y	(7)	

[†] Placement of this γ transition based on the work of [2010Ch51](#).




^x γ ray not placed in level scheme.

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Level Scheme

Intensities: Relative I_γ

Legend

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

