

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

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 151, 1 (2018)	1-Apr-2018

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. Comparisons with shell-model calculations.

 $^{59}\text{Mn}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	Comments
0.0	$5/2^-$	$J^\pi$ : From Adopted Levels.
111.1 1	$7/2^-$	
1047.8 3	$(9/2^-)$	
1299.5 4	$(11/2^-)$	
2919.4 11	$(15/2^-)$	

<sup>†</sup> From  $E_\gamma$ 's.

<sup>‡</sup> Proposed in 2008Va08 based on systematics of odd-even Mn isotopes in this region and/or shell model calculations, except otherwise noted.

 $\gamma(^{59}\text{Mn})$ 

$E_\gamma$	$I_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
111.1 1	100 30	111.1	$7/2^-$	0.0	$5/2^-$
251.6 3	12 4	1299.5	$(11/2^-)$	1047.8	$(9/2^-)$
936.6 3	29 5	1047.8	$(9/2^-)$	111.1	$7/2^-$
1188.9 6	52 12	1299.5	$(11/2^-)$	111.1	$7/2^-$
1619.8 10	30 8	2919.4	$(15/2^-)$	1299.5	$(11/2^-)$

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## Level Scheme

Intensities: Relative  $I_\gamma$ 

## Legend

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

