

$^{238}\text{U}(^{70}\text{Zn},\text{X}\gamma)$     **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  $\gamma$  rays observed in their work populated high-spin activity of  $J^\pi=(3^+, 4^+)$  which is possibly the ground state of  $^{62}\text{Mn}$ .

 $^{62}\text{Mn}$  Levels

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

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

| $E_\gamma$            | $I_\gamma$ | $E_i(\text{level})$ | $J_i^\pi$ | $E_f$   | $J_f^\pi$         | Comments   |
|-----------------------|------------|---------------------|-----------|---------|-------------------|--|
| 108.8 <sup>†</sup> 8  | 100 42     | 222.1+y             | (5)       | 113.3+y | (4)               |  |
| 113.3                 |            | 113.3+y             | (4)       | 0+y     | (4 <sup>+</sup> ) | $E_\gamma$ : from <a href="#">2010Da06</a> , placement from <a href="#">2010Da06</a> and <a href="#">2010Ch51</a> .            |
| <sup>x</sup> 155.4 7  | 33 14      |                     |           |         |                   | $E_\gamma$ : energy of this $\gamma$ ray matches 156 $\gamma$ reported in $^{62}\text{Cr}$ decay ( <a href="#">2005Ga01</a> ). |
| 195.8 <sup>†</sup> 2  | 46 9       | 417.9+y             | (6)       | 222.1+y | (5)               |  |
| 224.6 <sup>†</sup> 3  | 54 12      | 642.5+y             | (7)       | 417.9+y | (6)               |  |
| 540.9 <sup>†</sup> 10 | 36 21      | 1183.4+y            | (8)       | 642.5+y | (7)               |  |

<sup>†</sup> Placement of this  $\gamma$  transition based on the work of [2010Ch51](#).

<sup>x</sup>  $\gamma$  ray not placed in level scheme.

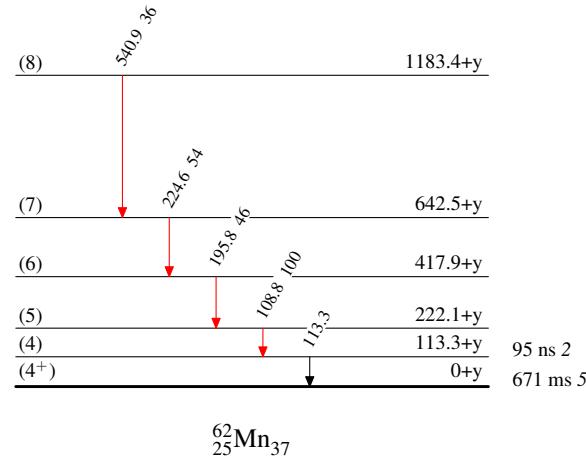
$^{238}\text{U}(^{70}\text{Zn},\text{X}\gamma)$  2008Va08

## Legend

## Level Scheme

Intensities: Relative  $I_\gamma$ 

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

 $^{62}_{25}\text{Mn}_{37}$