

$^{91}\text{Zr}(n,\gamma)$ E=292 eV 2011Ho20

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 2187 (2012)	15-Sep-2012

Spallation neutrons from 3 GeV double-bunched and pulsed proton beam striking Hg target were moderated in liquid hydrogen; disk chopper to exclude n from previous pulse; Pb filter in flight path to suppress γ flash; rotary collimator system provided 7 mm diameter pulsed beam at target; tof, 21.5 min flight path; 88.5% enriched ^{91}Zr metal plate for target; two cluster Ge detectors; NaCl crystal for E_γ calibration and detector efficiency determination; observed resonances at 181, 240, 292, 681 and 893 eV; measured E_γ , I_γ gated on 292 eV resonance tof region.

Level scheme created by evaluator consistent with Adopted Levels, Gammas.

 ^{92}Zr LevelsE(level)[†]

0.0
935.3
1497.1
2067.6
2340.3
3041.1

[†] From least-squares fit to E_γ , assigning equal weight to all E_γ data.

 $\gamma(^{92}\text{Zr})$

<u>E_γ</u>	<u>I_γ[†]</u>	<u>$E_i(\text{level})$</u>	<u>E_f</u>
561.8 5	40 3	1497.1	935.3
935.3 5	100	935.3	0.0
1132.3 4	7.9 20	2067.6	935.3
1405.0 5	11.6 18	2340.3	935.3
2105.8 4	5.8 18	3041.1	935.3

[†] Intensity relative to $I(935\gamma)=100$.

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Level Scheme

Intensities: Relative I_γ

Legend

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

