

$^{238}\text{U}(^{70}\text{Zn},\text{x}\gamma)$ **2012Re11**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Huang Xiaolong, and Wang Xianghan		NDS 204,1 (2025)	30-Jun-2023

M multinucleon transfer reactions.

2012Re11: ^{70}Zn beam at E=460 MeV delivered by the LNL-Legnaro Tandem-ALPI accelerator complex. Target=400 $\mu\text{g}/\text{cm}^2$ ^{238}U . Gamma rays detected in coincidence with nuclei by the CLARA-PRISMA setup: a large-acceptance magnetic spectrometer and 22 Compton-suppressed Ge clover detectors. Measured $E\gamma$, $I\gamma$, $\gamma(\theta)$, ($^{62}\text{Ni}\gamma$) coin.

 ^{62}Fe Levels

E(level) [†]	J [‡]
0.0	0 ⁺
877.81 20	2 ⁺
2176.8 3	4 ⁺
3015.5 5	(5 ⁻)
3387.4 5	6 ⁺

[†] From $E\gamma$ data.

[‡] From the Adopted Levels.

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

$$R_\theta = I\gamma(150^\circ)/I\gamma(100^\circ).$$

E _{γ}	I _{γ}	E _i (level)	J _{i} ^{π}	E _{f}	J _{f} ^{π}	Mult. [†]	Comments
838.7 3	34 3	3015.5	(5 ⁻)	2176.8	4 ⁺	D	$R_\theta = 0.75$ 20.
877.8 2	100 4	877.81	2 ⁺	0.0	0 ⁺	Q	$R_\theta = 1.13$ 12.
1210.6 4	32 3	3387.4	6 ⁺	2176.8	4 ⁺	Q	$R_\theta = 1.58$ 35.
1299.0 2	83 5	2176.8	4 ⁺	877.81	2 ⁺	Q	$R_\theta = 1.77$ 23.

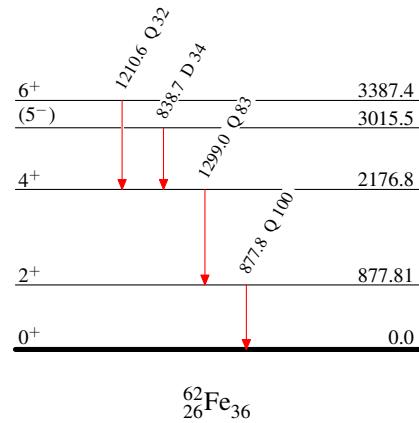
[†] From $\gamma(\theta)$ data.

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Legend

Level SchemeIntensities: Relative I_γ

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

 $^{62}_{26}\text{Fe}_{36}$