^{238}U(^{70}Zn,Xγ) 2012Re11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 178,41 (2021).	12-Nov-2021

2012Re11: ^{70}Zn beam at E=460 MeV delivered by the Laboratori Nazionali di Legnaro (LNL) Tandem-ALPI accelerator complex. Target was 400 μg/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 Eγ, Iγ, γ(θ), (^{64}Ni)γ coin. Deduced levels.

^{64}Ni Levels

E(level)†	Jπ‡
0.0	0^+
1345.12 *20*	2^+
2609.1 *3*	4^+
3849.0 *5*	5^-

† From Eγ data.
‡ From the Adopted Levels.

γ(^{64}Ni)

R_θ=Iγ(θ≥150°)/Iγ(θ=100°) (2012Re11).

E_γ	I_γ	E_i(level)	J^π_i	E_f	J^π_f	Mult.	Comments
1239.9 *3*	37 *2*	3849.0	5^-	2609.1	4^+	D	R_θ=0.94 *13*.
1264.0 *2*	54 *3*	2609.1	4^+	1345.12	2^+	Q	R_θ=1.19 *13*.
1345.1 *2*	100 *3*	1345.12	2^+	0.0	0^+	Q	R_θ=1.21 *10*.

^{238}U(^{70}Zn,Xγ) 2012Re11

Level Scheme

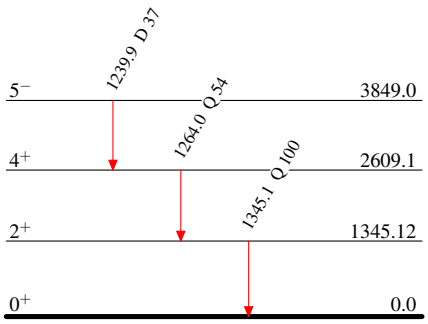
Intensities: Relative I_γ

Legend

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

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

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



$^{64}_{28}Ni_{36}$