^{2}**H(^{56}Ni,^{56}Cuγ)**   **2017On01**

	History		
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	25-Mar-2022

This dataset adapted from compiled dataset from 2017On01 in the XUNDL database by J. Chen (NSCL/MSU), June 13, 2017.
2017On01: E(^{56}Ni)$\approx$75 MeV/nucleon ions were produced via fragmentation of 160 MeV/nucleon ^{58}Ni primary beam provided by the NSCL cyclotron impinging on a 752 mg/cm^2 ^{9}Be target. Fragments were extracted by the A1900 fragment separator using Bρ-ΔE-Bρ method. Reaction target was 225 mg/cm^2 CD$_2$. Measured Eγ, Iγ, $\gamma\gamma$-coin, (recoils)γ-coin using the GRETINA array consisting of 28 coaxial HPGe detector crystals. Recoils were analyzed with the S800 spectrograph. Deduced levels, J^π, astrophysical reaction rates for ^{55}Ni(p,γ)^{56}Cu reaction.

^{56}Cu Levels

E(level)[†]	J$^{\pi}$[‡]
0	(4$^+$)
166 *1*	(3$^+$)
572 *1*	(5$^+$)
826 *4*	(4$^+$)
1037 *4*	(2$^+$)
1224 *4*	(3$^+$,5$^+$)

[†] From Eγ data.
[‡] Tentative assignments from 2017On01, except for the g.s. which is from the Adopted Levels.

γ(^{56}Cu)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
166 *1*	100	166	(3$^+$)	0	(4$^+$)
572 *1*	122 *8*	572	(5$^+$)	0	(4$^+$)
660 *3*	28 *8*	826	(4$^+$)	166	(3$^+$)
871 *3*	50 *8*	1037	(2$^+$)	166	(3$^+$)
1224 *4*	19 *10*	1224	(3$^+$,5$^+$)	0	(4$^+$)

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Legend

Level Scheme

Intensities: Relative I$_\gamma$

→	I$_\gamma$ < 2%×I$_\gamma^{max}$
→	I$_\gamma$ < 10%×I$_\gamma^{max}$
→	I$_\gamma$ > 10%×I$_\gamma^{max}$

$^{56}_{29}$Cu$_{27}$