^{208}Pb(^{70}Zn,Xγ)   **2015Ch25**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal, E. A. Mccutchan	NDS 136, 1 (2016)	1-Jul-2016

E(^{70}Zn)=440 MeV. Measured Eγ, Iγ, $\gamma\gamma\gamma$ coincidences, $\gamma\gamma(\theta)$ using the Gammasphere array consisting of 100 Compton-suppressed HPGe detectors.

^{70}Ni Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	Comments
0.0[@]	0$^+$		
1259.53[@] 5	2^{+}[#]		
2229.42[@] 6	4^{+}[#]		
2677.80[@] 7	6^{+}[#]		
2860.91[@] 7	8^{+}[#]	232 ns 1	T$_{1/2}$: from the Adopted Levels.
2912.03 11	(5,6$^+$)		J$^\pi$: (5$^-$) proposed in 2015Ch25 based on the decay pattern and shell model calculations.
3592.2 3			J$^\pi$: (6$^-$) proposed in 2015Ch25 based on the decay pattern and shell model calculations.
3758.1 3			J$^\pi$: (7$^-$) proposed in 2015Ch25 based on the decay pattern and shell model calculations.
4871.5 4			
5354.4 4			

† From a least-squares fit to Eγ, by evaluators.
‡ From the Adopted Levels. J^π assignments of 2015Ch25 which differ from the Adopted Levels are indicated in the comments.
# From the deduced multipolarities from $\gamma\gamma(\theta)$.
@ Band(A): Yrast structure based on g.s.

γ(^{70}Ni)

Eγ[†]	Iγ[‡]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[@]
183.11[#] 2		2860.91	8$^+$	2677.80	6$^+$	Q
234.1 1	16.5 17	2912.03	(5,6$^+$)	2677.80	6$^+$	
448.37[#] 3	100 5	2677.80	6$^+$	2229.42	4$^+$	Q
482.9 2	29 6	5354.4		4871.5		
683.1 2	43 4	2912.03	(5,6$^+$)	2229.42	4$^+$	
846 1	24 12	3758.1		2912.03	(5,6$^+$)	
914.4 3	12 4	3592.2		2677.80	6$^+$	
969.88[#] 4		2229.42	4$^+$	1259.53	2$^+$	Q
1080.3 3	24 3	3758.1		2677.80	6$^+$	
1113.4 2	34 5	4871.5		3758.1		
1259.52[#] 5		1259.53	2$^+$	0.0	0$^+$	

† From prompt $\gamma\gamma$ coincidences, unless otherwise noted.
‡ From prompt $\gamma\gamma\gamma$ coincidences.
# Energy measured in delayed spectrum.
@ From $\gamma\gamma(\theta)$. Authors stated that the angular correlation of (970γ)(1260γ)(θ), (448γ)(1260γ)(θ) and (183γ)(1260γ)(θ) are consistent with the theoretical curves for E2-E2 correlations.
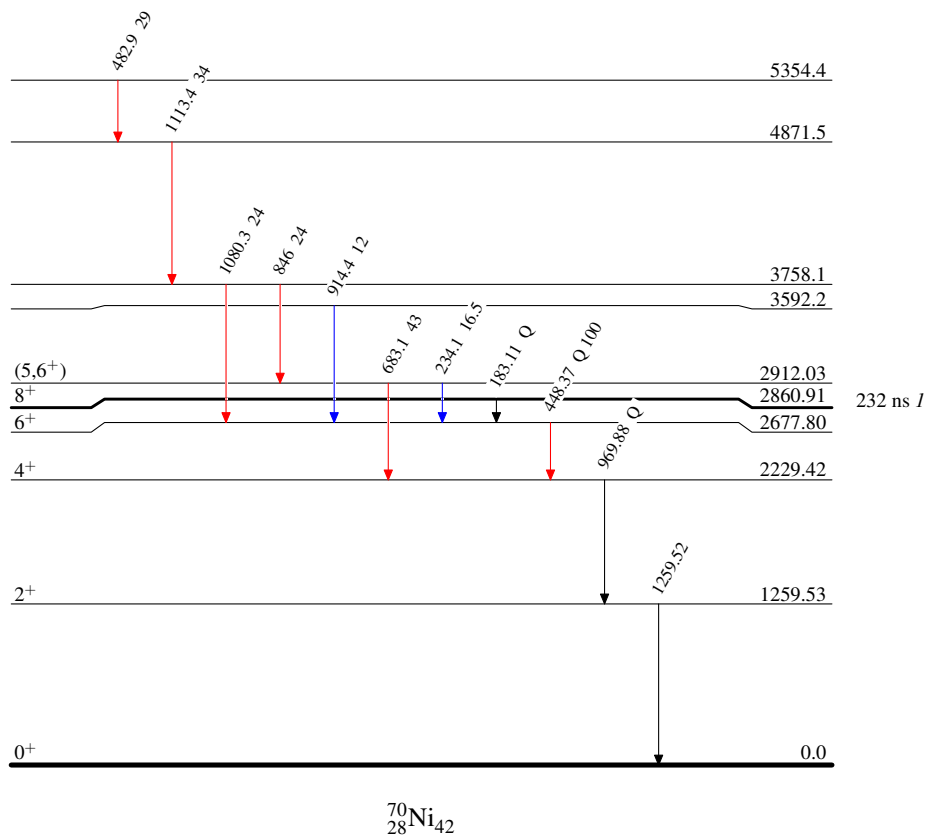
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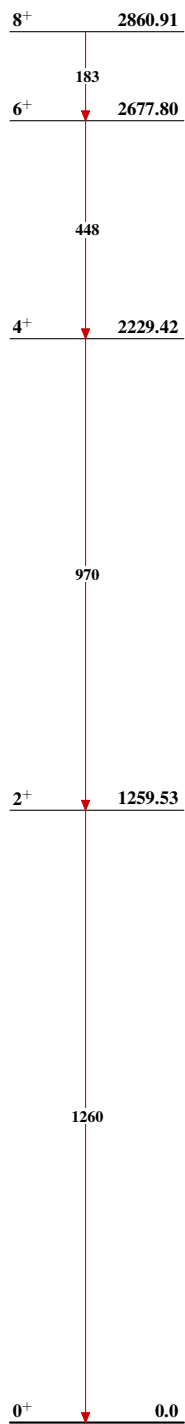Level Scheme

Intensities: Relative I$_\gamma$

Legend

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

$^{70}_{28}$Ni$_{42}$

$\underline{^{208}\text{Pb}(^{70}\text{Zn},X\gamma)}$ **2015Ch25**

Band(A): Yrast structure
based on g.s

8$^+$		**2860.91**
	183	
6$^+$		**2677.80**
	448	
4$^+$		**2229.42**
	970	
2$^+$		**1259.53**
	1260	
0$^+$		**0.0**

$^{70}_{28}$Ni$_{42}$