^{106}Cd(^{14}N,2pnγ) 1985Pi02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

E(^{14}N)=62 MeV.
Also from ^{112}Sn(^{12}C,αp2n), E=86 MeV.
Enriched targets.
Measured γ, $\gamma\gamma$, $\gamma(\theta)$, γ(t),Ge(Li) detectors.

^{117}I Levels

M: From previous A_2 and A_4 measurements (1982Ga21) and band systematics.

E(level)	J$^\pi$[†]	Comments
0	5/2$^+$	
59	7/2$^+$	
354[#]	9/2$^+$	
619	9/2$^+$	
654[#]	11/2$^+$	
663	9/2$^+$	Since the 663-keV transition has no delayed component ($T_{1/2}$>10 ns), it does not decay directly from the 11/2$^-$ bandhead. An unobserved E1 transition (x) between the 11/2$^-$ bandhead and the 663-keV 9/2$^+$ level is suggested by 1985Pi02.
663+x[‡]	11/2$^-$	
972[#]	13/2$^+$	
1000+x[‡]	15/2$^-$	
1318[#]	15/2$^+$	
1470+x[‡]	19/2$^-$	
1686[#]	17/2$^+$	
2073+x[‡]	23/2$^-$	
2078[#]	19/2$^+$	
2489[#]	(21/2$^+$)	
2805+x[‡]	27/2$^-$	
3647+x[‡]	31/2$^-$	
4589+x[‡]	(35/2$^-$)	

[†] From previous A_2 and A_4 measurements (1982Ga21) and band systematics.
[‡] Band(A): 11/2$^-$ band (1h$_{11/2}$).
[#] Band(B): 9/2$^+$ band (1g9/2).

γ(^{117}I)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]	Comments
59		59	7/2$^+$	0	5/2$^+$		
295		354	9/2$^+$	59	7/2$^+$	M1+(E2)	Mult.: A_2/A_0=−0.14 *6*.
300	100	654	11/2$^+$	354	9/2$^+$	M1+E2	
318		972	13/2$^+$	654	11/2$^+$	M1+E2	
337	100	1000+x	15/2$^-$	663+x	11/2$^-$	E2	
346		1318	15/2$^+$	972	13/2$^+$	M1+E2	
354		354	9/2$^+$	0	5/2$^+$		
368		1686	17/2$^+$	1318	15/2$^+$		

Continued on next page (footnotes at end of table)

^{106}Cd(^{14}N,2pnγ) 1985Pi02 (continued)

$\gamma(^{117}I)$ (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	Comments
392		2078	$19/2^+$	1686	$17/2^+$	M1+E2	
411	100	2489	$(21/2^+)$	2078	$19/2^+$		
470	100	1470+x	$19/2^-$	1000+x	$15/2^-$	E2	
603	100	2073+x	$23/2^-$	1470+x	$19/2^-$		
604		663	$9/2^+$	59	$7/2^+$		
618		972	$13/2^+$	354	$9/2^+$		
619	100	619	$9/2^+$	0	$5/2^+$		
663		663	$9/2^+$	0	$5/2^+$	(E2)	Mult.: A_2/A_0=0.16 *9*.
664		1318	$15/2^+$	654	$11/2^+$	(E2)	
714		1686	$17/2^+$	972	$13/2^+$		
732	100	2805+x	$27/2^-$	2073+x	$23/2^-$		
760		2078	$19/2^+$	1318	$15/2^+$		
842	100	3647+x	$31/2^-$	2805+x	$27/2^-$		
942	100	4589+x	$(35/2^-)$	3647+x	$31/2^-$		

† From $\gamma(\theta)$ and (1985Pi02,1982Ga21).

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Level Scheme

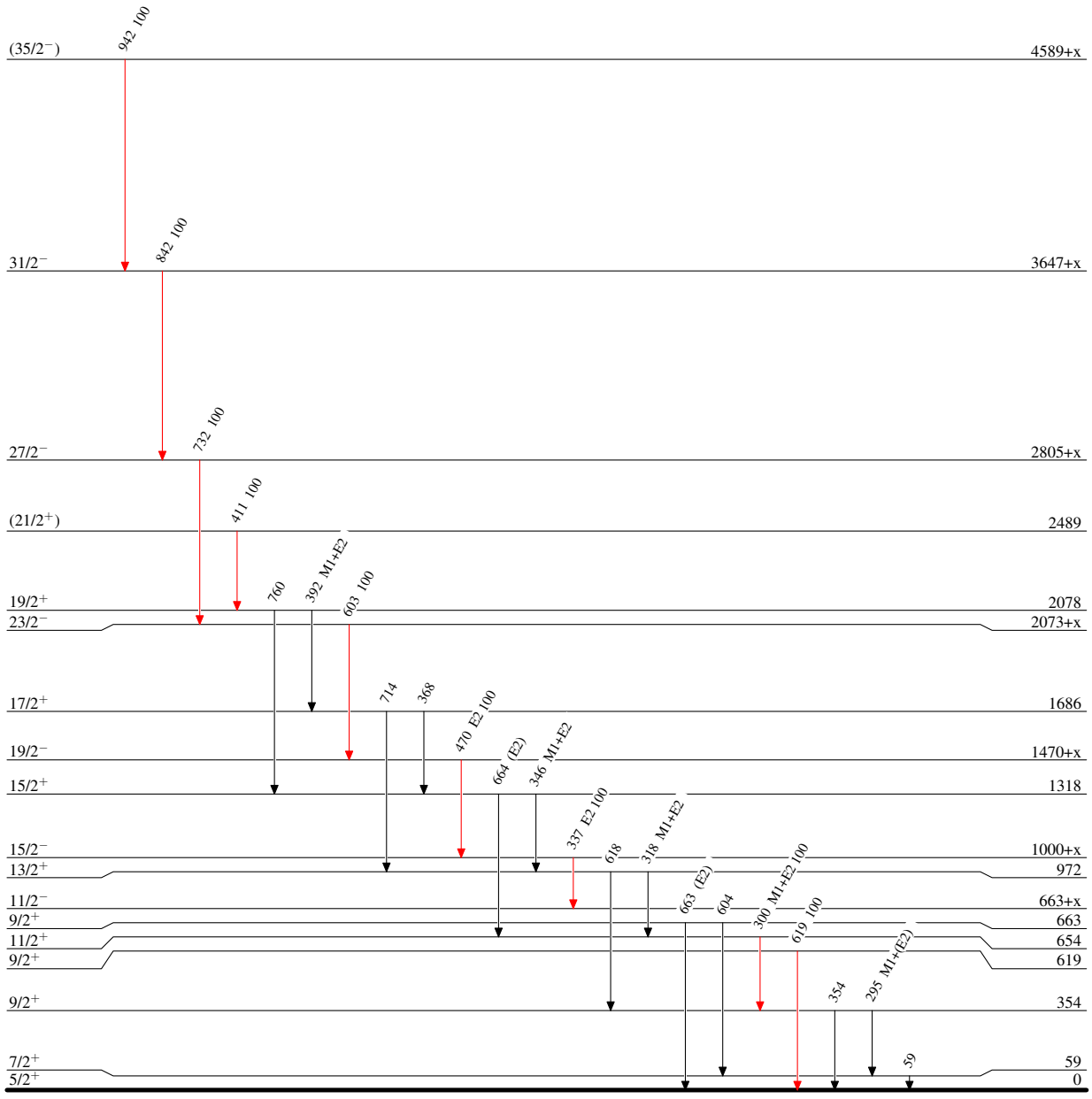
Intensities: Relative I_γ

Legend

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

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

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



$^{117}_{53}I_{64}$

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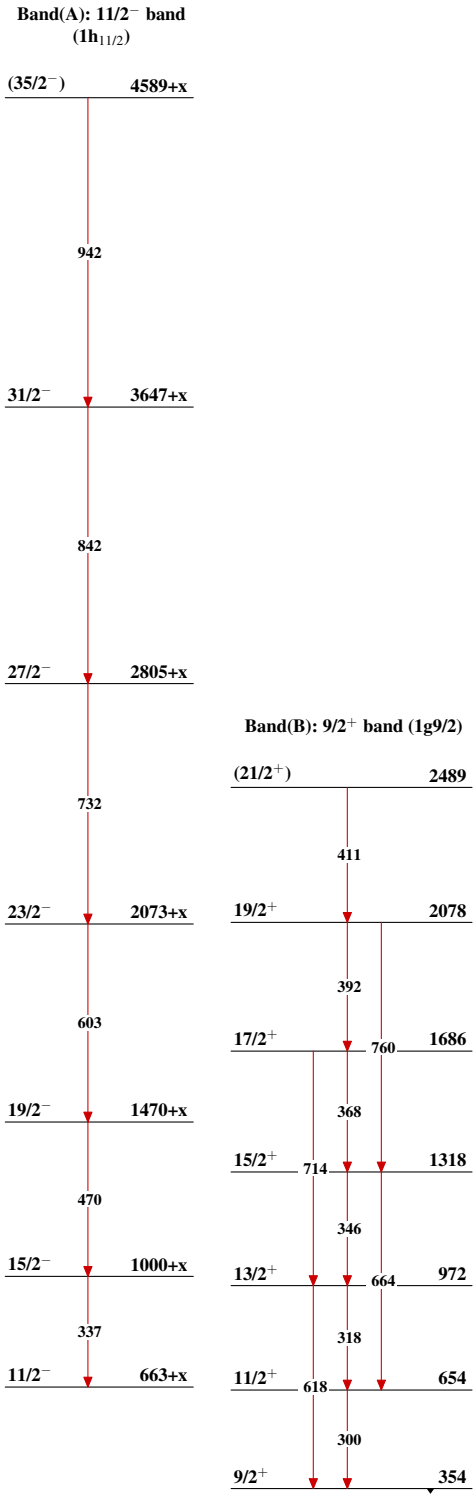

$^{117}_{53}I_{64}$