(HI,xnγ)   **1993Is06,1992OgZW**

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	Jean Blachot	NDS 109, 1383 (2008)	1-Mar-2008

^{54}Fe(^{56}Fe,xpxn) E(^{56}Fe)=210 MeV.

Measured: γ, $\gamma(\theta)$, $\gamma\gamma$, charge particle multiplicity, the Z assignment is made from a Si box. (1993Is06). Preliminary results are in 1992OgZW, same authors.

^{107}Sn Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	Comments
0[a]	5/2$^+$		
151.22[@] 19	7/2$^+$	1 ns	
1221.09[a] 19	9/2$^+$		
1347.84[@] 24	11/2$^+$		
1666.3[&] 3	11/2$^-$	28 ps 11	T$_{1/2}$: The preliminary result of 1992OgZW was T$_{1/2}$=19 ps 6.
1941.37[a] 24	13/2$^+$		
2009.2 4	13/2$^+$		
2065.0[a] 3	15/2$^+$		
2142.6[@] 3	15/2$^+$		
2206.5[@] 3	17/2$^+$	0.25 ns 4	T$_{1/2}$: The preliminary result of 1992OgZW was T$_{1/2}$=0.3 ns 1.
2730.3[&] 4	15/2$^-$		
3097.3[a] 4	19/2$^+$		
3459.0[@] 4	21/2$^+$		
3616.7[&] 6	19/2$^-$		
3824.8[b] 4	21/2$^-$		
4207.3 6	23/2$^+$		
4259.7[b] 4	23/2$^-$		
4551.8[@] 5	25/2$^+$		
4630.5[&] 8	23/2$^-$		
4977.5 8	25/2$^-$		
5194.8[b] 5	27/2$^-$	13 ps 4	
6043.5[b] 7	31/2$^-$		

[†] Level energy from least-squares adjustment.
[‡] As given by the authors from previously known assignments and γ decays.
[#] From recoil-distance method.
[@] Band(A): positive-parity band on the g7/2 neutron orbit.
[&] Band(B): negative-parity band with L=2 character built on the h11/2 neutron orbit.
[a] Band(C): positive-parity band.
[b] Band(D): negative-parity band.

$\gamma(^{107}$Sn$)$

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[†]
55.8 2	6 2	2065.0	15/2$^+$	2009.2	13/2$^+$	(M1)
63.9 2	14 4	2206.5	17/2$^+$	2142.6	15/2$^+$	(M1)
123.7 3	25 8	2065.0	15/2$^+$	1941.37	13/2$^+$	(M1)
141.5 2	30 3	2206.5	17/2$^+$	2065.0	15/2$^+$	(M1)

(HI,xnγ)   **1993Is06,1992OgZW (continued)**

γ(^{107}Sn) (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]
151.2 *2*	100	151.22	$7/2^+$	0	$5/2^+$	(M1)
382.5 *4*	20 *10*	4207.3	$23/2^+$	3824.8	$21/2^-$	E1
435.1 *6*	5 *2*	4259.7	$23/2^-$	3824.8	$21/2^-$	
445.2 *4*	22 *5*	1666.3	$11/2^-$	1221.09	$9/2^+$	E1
594.1 *8*	4 *2*	1941.37	$13/2^+$	1347.84	$11/2^+$	
642.8 *5*	13 *4*	5194.8	$27/2^-$	4551.8	$25/2^+$	(E1)
661.4 *6*	17 *5*	2009.2	$13/2^+$	1347.84	$11/2^+$	(M1)
717.2 *2*	34 *5*	2065.0	$15/2^+$	1347.84	$11/2^+$	E2
720.3 *2*	37 *7*	1941.37	$13/2^+$	1221.09	$9/2^+$	E2
727.5 *2*	40 *4*	3824.8	$21/2^-$	3097.3	$19/2^+$	E1
794.7 *2*	54 *5*	2142.6	$15/2^+$	1347.84	$11/2^+$	E2
800.7 *2*	38 *4*	4259.7	$23/2^-$	3459.0	$21/2^+$	E1
848.7 *5*	23 *7*	6043.5	$31/2^-$	5194.8	$27/2^-$	(E2)
886.4 *4*	18 *6*	3616.7	$19/2^-$	2730.3	$15/2^-$	(E2)
935.2 *2*	38 *6*	5194.8	$27/2^-$	4259.7	$23/2^-$	E2
1013.8 *5*	12 *2*	4630.5	$23/2^-$	3616.7	$19/2^-$	(E2)
1032.3 *2*	49 *3*	3097.3	$19/2^+$	2065.0	$15/2^+$	E2
1064.0 *3*	21 *2*	2730.3	$15/2^-$	1666.3	$11/2^-$	E2
1092.7 *4*	15 *5*	4551.8	$25/2^+$	3459.0	$21/2^+$	(E2)
^{x}1131.9 *5*	15 *6*					(E2)
1153.1 *6*	17 *5*	4977.5	$25/2^-$	3824.8	$21/2^-$	(E2)
1196.6 *2*	111 *10*	1347.84	$11/2^+$	151.22	$7/2^+$	E2
1221.1 *2*	65 *5*	1221.09	$9/2^+$	0	$5/2^+$	E2
1252.4 *2*	63 *5*	3459.0	$21/2^+$	2206.5	$17/2^+$	E2

[†] Based on linear polarization.

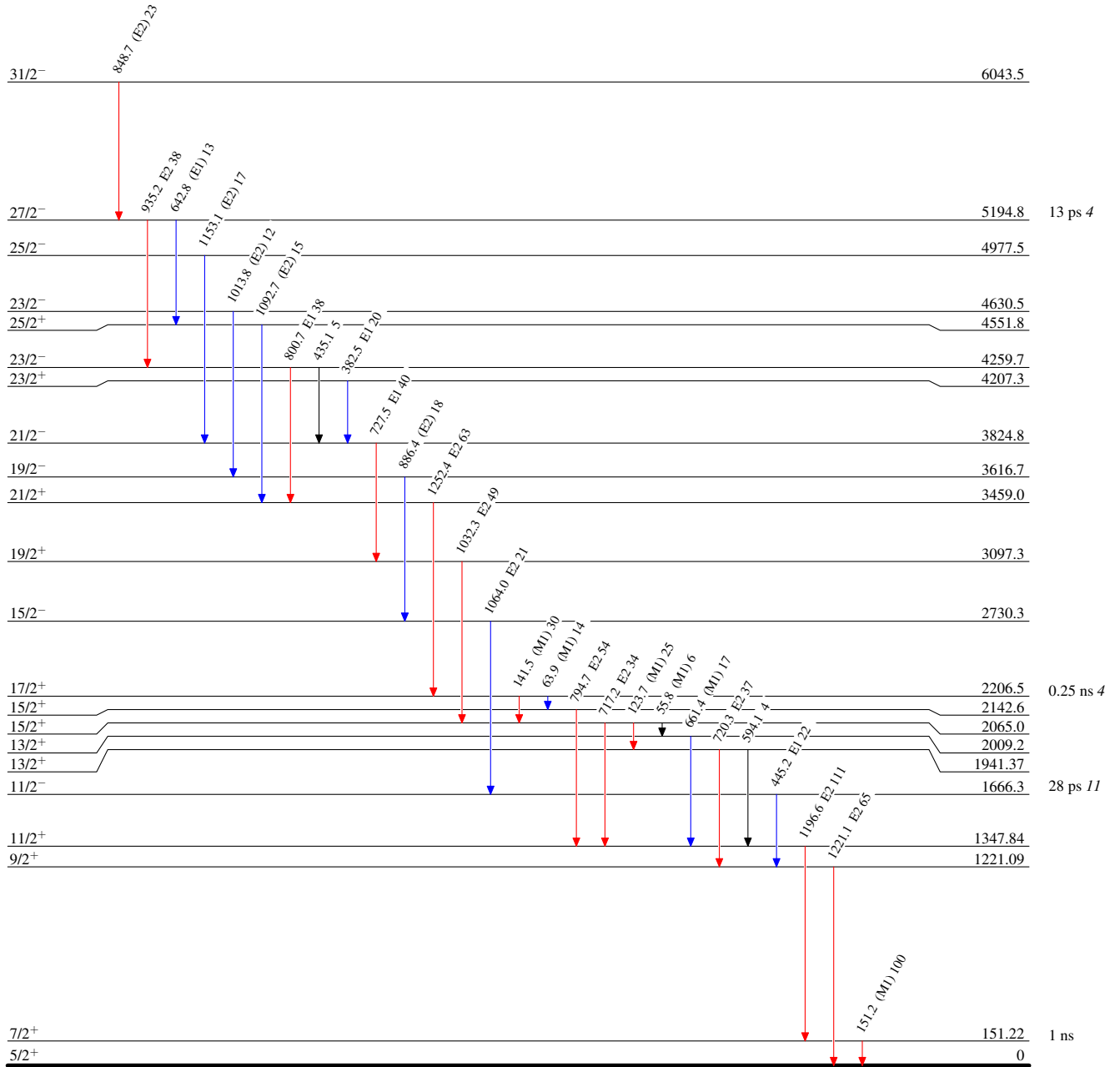^{x} γ ray not placed in level scheme.

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Legend

Level Scheme

Intensities: Type not specified

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

$^{107}_{50}Sn_{57}$

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Band(D): Negative-parity
band

$31/2^-$ 6043.5

849

$27/2^-$ 5194.8

935

Band(B): Negative-parity
band with L=2 character
built on the h11/2
neutron orbit

$23/2^-$ 4259.7

435

$23/2^-$ 4630.5

Band(A): Positive-parity
band on the g7/2 neutron
orbit

$21/2^-$ 3824.8

$25/2^+$ 4551.8

1014

1093

$19/2^-$ 3616.7

$21/2^+$ 3459.0

886

Band(C): Positive-parity
band

$19/2^+$ 3097.3

1252

$15/2^-$ 2730.3

1032

$17/2^+$ 2206.5
$15/2^+$ 64   2142.6

1064

$15/2^+$ 124   2065.0
$13/2^+$ 1941.37

795

720

$11/2^-$ 1666.3

$9/2^+$ 1221.09

$11/2^+$ 1347.84

1221

1197

$7/2^+$ 151.22

$5/2^+$ 0

$^{107}_{50}Sn_{57}$