

(HI,xnγ) 1978Li21,1979Gu10,1979Me03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

1979Me03: ²⁸Si(²⁸Si,3pγ), E=65-90 MeV, γ, γγ-coin, σ(E,θ).
 1986Ca13: ³⁰Si(²⁸Si,αpγ), E=80 MeV, γ, γγ-coin, γγ-DCO.
 1979Gu10: ⁴⁰Ca(¹⁶O,3pγ), E=45 MeV, γ, γγ-coin, γ(θ), γγ(θ), σ(E(¹⁶O)), linear polarization.
 1974Br04: ⁴⁰Ca(¹⁶O,3pγ), E=47 MeV, γ(θ) RDM.
 1978Li21: ⁴⁸Ca(¹⁰B,5nγ), E=47.5 MeV, γ, γγ, γ(θ) DSAM.

⁵³Mn Levels

E(level)	Jπ [#]	T _{1/2} [†]	Comments
0.0	7/2 ⁻		
377.7 5	5/2 ⁻		
1441.22 10	11/2 ⁻	0.7 ps 2	
2562.94 14	13/2 ⁻	10.7 [‡] ps 13	T _{1/2} : other: 1.4 ps ≥ (1978Li21).
2692.73 14	15/2 ⁻	2.7 [‡] ps 4	
3438.9 3	15/2 ⁻	0.14 ps 2	T _{1/2} : other: <1.2 ps (1974Br04).
4383.7 3	17/2 ⁻	<87 fs	
4855.6 17			
5614.1 5	(19/2 ⁻)	<49 fs	
6083.6 19			
6533.1 6	21/2 ⁻	0.32 ps 18	
7003.9 6	(23/2 ⁻)	1.29 ps 18	
7964.9 7	(25/2 ⁻)	<0.26 ps	

[†] From 1978Li21 by DSAM, except as noted.

[‡] From 1974Br04 by RDM.

[#] From Adopted Levels.

γ(⁵³Mn)

E _γ [†]	I _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.&	δ [@]	Comments
377.7 5	100	377.7	5/2 ⁻	0.0	7/2 ⁻			E _γ , I _γ : from 1979Me03.
470.8 1	100	7003.9	(23/2 ⁻)	6533.1	21/2 ⁻	M1 [#]		
472 [‡]	100 [‡]	4855.6		4383.7	17/2 ⁻			
746.1 4	100	3438.9	15/2 ⁻	2692.73	15/2 ⁻	M1(+E2)	+0.16 -26+18	
875.8 5	63	3438.9	15/2 ⁻	2562.94	13/2 ⁻			
918.9 4	16 6	6533.1	21/2 ⁻	5614.1	(19/2 ⁻)	D,E2		
944.7 5	100 [‡]	4383.7	17/2 ⁻	3438.9	15/2 ⁻	M1+(E2)	-0.08 2	
960.9 4	100	7964.9	(25/2 ⁻)	7003.9	(23/2 ⁻)	D,E2		
1121.7 1	100	2562.94	13/2 ⁻	1441.22	11/2 ⁻	M1 [#]		
1228 [‡]	100 [‡]	6083.6		4855.6				
1230.3 5	100	5614.1	(19/2 ⁻)	4383.7	17/2 ⁻	D,E2		
1251.5 1	100	2692.73	15/2 ⁻	1441.22	11/2 ⁻	E2 [#]		
(1390)	<12	7003.9	(23/2 ⁻)	5614.1	(19/2 ⁻)	D,E2		
(1432)	<45	7964.9	(25/2 ⁻)	6533.1	21/2 ⁻	D,E2		
1441.2 1	100	1441.22	11/2 ⁻	0.0	7/2 ⁻	E2 [#]		
1691.0 3	50 [‡]	4383.7	17/2 ⁻	2692.73	15/2 ⁻	D,E2		
1821 [‡]	36 [‡]	4383.7	17/2 ⁻	2562.94	13/2 ⁻			

Continued on next page (footnotes at end of table)

(HI,xn γ) 1978Li21,1979Gu10,1979Me03 (continued) $\gamma(^{53}\text{Mn})$ (continued)

<u>E_γ</u> [†]	<u>I_γ</u> [†]	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u> ^{&}
2149.6 7 (2175)	100 6 <16	6533.1 5614.1	21/2 ⁻ (19/2 ⁻)	4383.7 3438.9	17/2 ⁻ 15/2 ⁻	E2 [#] D,E2

[†] From 1978Li21, except as noted.

[‡] From 1986Ca13.

[#] From 1978Li21.

[@] From 1979Gu10.

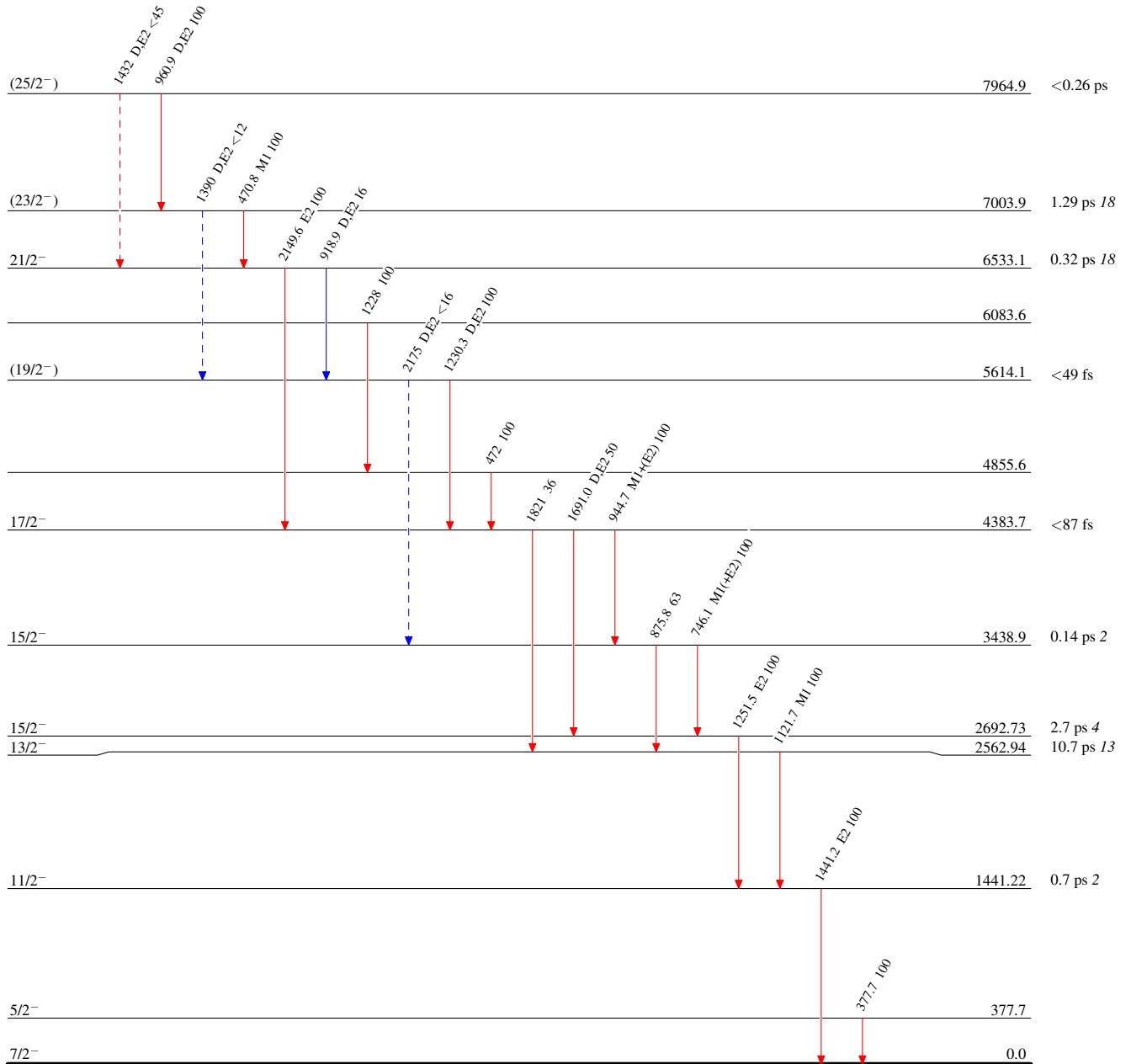
[&] From $\gamma(\theta)$ and comparison to RUL, except as noted.

(HI,xn γ) 1978Li21,1979Gu10,1979Me03

Legend

Level SchemeIntensities: Relative I_γ

- ▶ $I_\gamma < 2\% \times I_\gamma^{\max}$
- ▶ $I_\gamma < 10\% \times I_\gamma^{\max}$
- ▶ $I_\gamma > 10\% \times I_\gamma^{\max}$
- - - -▶ γ Decay (Uncertain)

 $^{53}_{25}\text{Mn}_{28}$