^{54}Fe(α,np),(α,npγ) 1976Sa18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huo Junde, Huo Su, Yang Dong	NDS 112, 1513 (2011)	29-Oct-2009

1976Sa18: ^{54}Fe(α,npγ) E=20.4-29.5 MeV, measured Eγ, Iγ, $\gamma(\theta)$, $\sigma(\theta)$, $\gamma\gamma$-coin, DSA with Ge(Li).
See also 1995KoZS.

^{56}Co Levels

E(level)†	J$^\pi$‡	T$_{1/2}$#	Comments
0.0	4$^+$		
158.42 *9*	3$^+$		
576.74 *14*	5$^+$		
829.88 *14*	4$^+$		J$^\pi$: J=4 from $\gamma(\theta)$.
970.26 *12*	2$^+$		
1009.41 *14*	5$^+$		
2282.87 *17*	7$^+$	>1.4 ps	
2372.07 *23*	6$^+$	42 fs *21*	J$^\pi$: J=6 from $\gamma(\theta)$.
3638.34 *20*	8$^+$	55 fs *+28−12*	J$^\pi$: J=8 from $\gamma(\theta)$.
4180.40 *22*	9$^+$	0.41 ps *4*	J$^\pi$: J=9 from $\gamma(\theta)$.
5274.81 *24*	10$^+$	42 fs *+28−14*	J$^\pi$: J=10 from $\gamma(\theta)$.

† From Eγ and scheme by using least-squares fits.
‡ From Adopted Levels.
# From DSA measurement.

γ(^{56}Co)

Unplaced γ from $\gamma\gamma$-coin.

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	δ#	Comments
158.38 *10*	100	158.42	3$^+$	0.0	4$^+$	M1+E2	+0.27 *4*	Additional information 1.
179.5 *2*	2.8 *5*	1009.41	5$^+$	829.88	4$^+$			
252.9 *2*	2 *1*	829.88	4$^+$	576.74	5$^+$			
x285								
432.7 *2*	7.4 *6*	1009.41	5$^+$	576.74	5$^+$			
x480								
542.0 *1*	27 *1*	4180.40	9$^+$	3638.34	8$^+$	M1(+E2)	+0.05 *9*	B(M1)(W.u.)=(0.091 *10*); B(E2)(W.u.)=(1.6 *+56−16*) Additional information 7.
576.64 *19*	100	576.74	5$^+$	0.0	4$^+$	M1+E2	−0.16 *6*	Additional information 2.
671.4 *4*	82 *5*	829.88	4$^+$	158.42	3$^+$	M1(+E2)	−0.09 *12*	Additional information 3.
811.8 *1*	>96	970.26	2$^+$	158.42	3$^+$			
830.1 *2*	16 *3*	829.88	4$^+$	0.0	4$^+$			
970.4 *2*	<4	970.26	2$^+$	0.0	4$^+$			
1009.3 *2*	89.8 *20*	1009.41	5$^+$	0.0	4$^+$			
1094.4 *1*	100	5274.81	10$^+$	4180.40	9$^+$	M1+E2	+0.13 *5*	B(M1)(W.u.)=0.393 *5*; B(E2)(W.u.)=11 *9* Additional information 8.
1355.4 *1*	100	3638.34	8$^+$	2282.87	7$^+$	M1+E2	+0.15 *4*	B(M1)(W.u.)=0.1573 *19*; B(E2)(W.u.)=3.9 *21* Additional information 6.
1362.0 *5*	28 *3*	2372.07	6$^+$	1009.41	5$^+$			
1706.1 *1*	100	2282.87	7$^+$	576.74	5$^+$	E2		B(E2)(W.u.)<2.2

Continued on next page (footnotes at end of table)

^{54}Fe(α,np),(α,npγ) 1976Sa18 (continued)

$\gamma(^{56}Co)$ (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[#]	Comments
								Mult.: from $\gamma(\theta)$ and known J^π. Additional information 4.
1795.4 *2*	72 *6*	2372.07	6^+	576.74	5^+	M1(+E2)	+0.03 *5*	B(M1)(W.u.)=(0.07 *4*); B(E2)(W.u.)=(0.04 *+13−4*) Additional information 5.
1898.0 *3*	73 *3*	4180.40	9^+	2282.87	7^+	E2		B(E2)(W.u.)=3.2 *4*

[†] % photon branching from each level, except as noted.
[‡] From $\gamma(\theta)$ and RUL.
[#] From $\gamma(\theta)$.
[x] γ ray not placed in level scheme.

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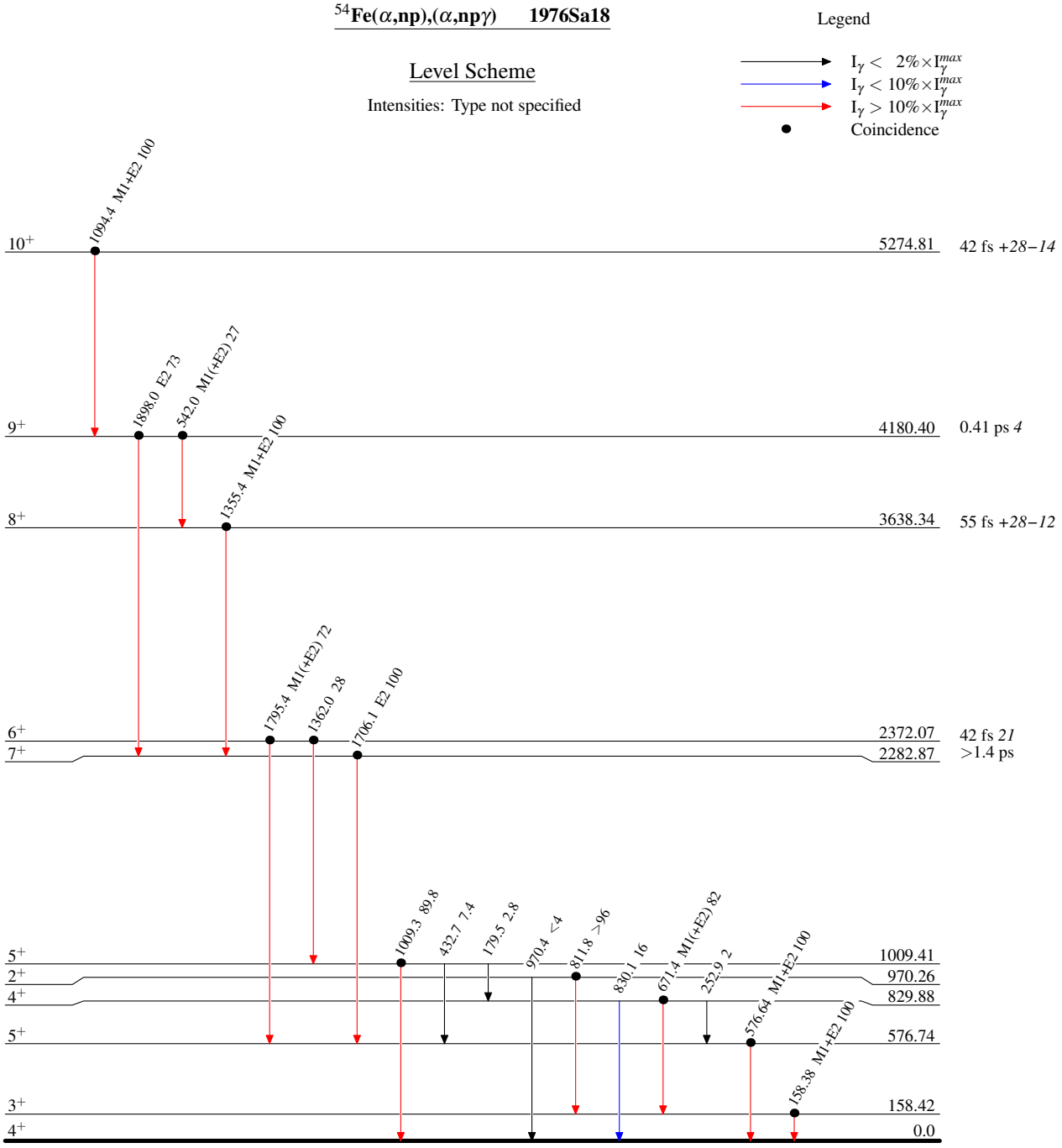
Level Scheme

Intensities: Type not specified



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