^{34}S(t,pγ) 1972Sa09,1971Ol02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, John Cameron and Balraj Singh	NDS 113, 1 (2012)	31-Dec-2011

E(t)=3.1 MeV; measured E(p), Eγ, Iγ, $\gamma(\theta)$, lifetimes from DSA.
1971Ju02: E(t)=3.1 MeV, measured γ linear polarization of 901.5γ and 1284.2γ.

^{36}S Levels

E(level)	J$^\pi$	T$_{1/2}$[†]	Comments
0	0$^+$		
3291.0 *6*	2$^+$	76 fs *21*	
3334	0$^+$	8.8 ns *2*	T$_{1/2}$: internal pair detected by e$^+$ annihilation delay following P detection (1971Ol02).
4192.5 *7*	3$^-$	0.8 ps *+4−3*	
4523.0 *6*	1	0.017 ps *8*	
4575.2 *4*	2$^+$	0.055 ps *10*	
5251.2 *10*	(1,2,3)	0.07 ps *3*	
5391.4 *9*		>0.2 ps	
5509.1 *5*	(2,4)	0.19 ps *4*	
5573.1 *7*	(1,3)	<0.14 ps	
6186.9 *8*	(2,3)	0.055 ps *20*	
6225.2 *10*		<0.02 ps	
6508 *10*	4$^+$		
7120 *20*	(1,2,3$^-$)	<0.2 ps	

[†] From DSA (1972Sa09), unless otherwise stated.

γ(^{36}S)

E$_i$(level)	J$_i^\pi$	E$_\gamma$	I$_\gamma$	E$_f$	J$_f^\pi$	Mult.	δ[†]	Comments
3291.0	2$^+$	3290.8 *6*		0	0$^+$	E2		A$_2$=+0.55 *8*; A$_4$=−1.10 *11*
4192.5	3$^-$	901.5 *4*		3291.0	2$^+$	E1(+M2)	+0.03 *3*	A$_2$=−0.36 *4*; A$_4$=+0.10 *4* POL=+1.8 *+7−4* (1971Ju02).
4523.0	1	1232.1 *4*	33	3291.0	2$^+$			
		4522.2 *15*	100	0	0$^+$	D		A$_2$=−0.09 *6*; A$_4$=−0.07 *7*
4575.2	2$^+$	1284.2		3291.0	2$^+$	M1(+E2)	+0.06 *6*	A$_2$=+0.61 *4*; A$_4$=−0.19 *6* POL=3.5 *+23−11* (1971Ju02).
5251.2	(1,2,3)	680		4575.2	2$^+$			
		1059.6 *4*	43 *11*	4192.5	3$^-$			
		1961.0 *4*	100 *11*	3291.0	2$^+$	D+Q	≥+0.11	A$_2$=−0.43 *10*; A$_4$=−0.08 *10* δ: ≥+0.11 or≤−5 for J=1,≤−0.47 for J=2, −0.09 *9* or −2.4 *5* for J=3.
5391.4		816.2 *4*	18 *9*	4575.2	2$^+$			
		5391	100 *9*	0	0$^+$			
5509.1	(2,4)	1316.8 *4*	52 *12*	4192.5	3$^-$			
		2217.7 *3*	100 *12*	3291.0	2$^+$	D+Q		A$_2$=+0.43 *10*; A$_4$=−0.31 *10* Mult.: +2.4 *5* for J=2, −0.02 *3* for J=4.
5573.1	(1,3)	2281.1 *3*		3291.0	2$^+$			A$_2$=−0.05 *7*; A$_4$=+0.12 *8* Mult.,δ: for J=1, +0.17 *5* for J=3.
6186.9	(2,3)	1994.8 *4*	33 *11*	4192.5	3$^-$	D+Q		Mult.,δ: −0.20 *8* for J=2, +0.28 *9* or<−5.6 for J=3.
		2894.8 *5*	100 *11*	3291.0	2$^+$			A$_2$=−0.05 *7*; A$_4$=+0.12 *8* Mult.,δ: for J=1, +0.17 *5* for J=3.
6225.2		1649.2 *5*	100 *13*	4575.2	2$^+$			
		2933.0 *10*	32 *13*	3291.0	2$^+$			
6508	4$^+$	3221	100	3291.0	2$^+$			

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^{34}S(t,pγ) 1972Sa09,1971Ol02 (continued)

$\gamma(^{36}S)$ (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π
7120	(1,2,3$^-$)	2550	28 *7*	4575.2	2$^+$
		3830	11 *7*	3291.0	2$^+$
		7120	100 *7*	0	0$^+$

† In 1971Ol02 phase convention assumed Rose-Brink, thus reversed here.

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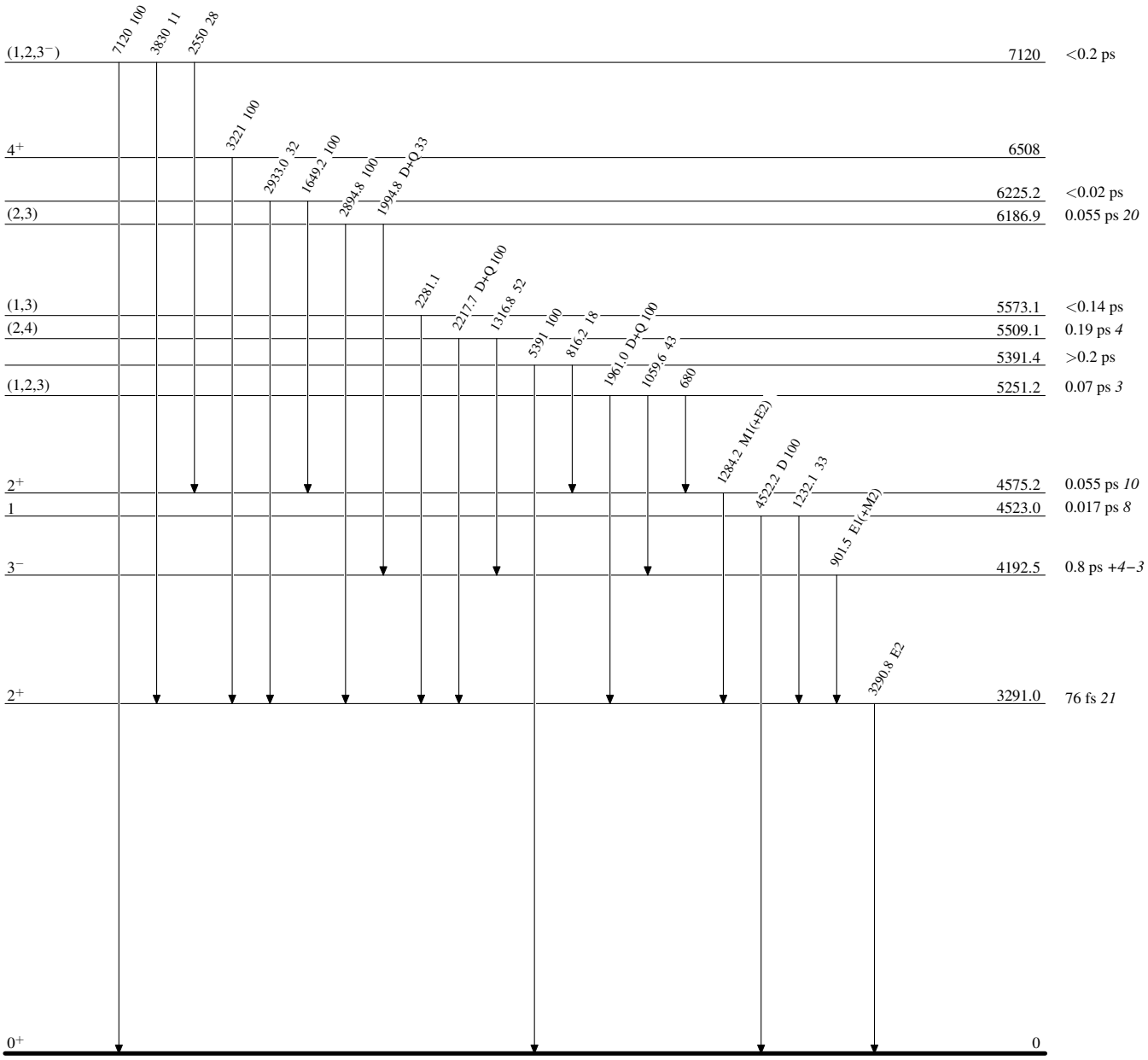
Level Scheme

Intensities: Relative photon branching from each level



$^{36}_{16}S_{20}$