^{122}Sn(γ,γ') 1999Br12,2000Br05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108, 455 (2007)	30-Sep-2006

2000Br05,1999Br12: 4.1 MeV electrons bremsstrahlung; semi, $\gamma(\theta)$ θ=90°, 127°, 150°; two Compton polarimeters at 90°, 95° for lin pol measurements; deduced E, J^π; discussed 2-phonon, $(2_1+\otimes 3_1)_{1-}$ state.

^{122}Sn Levels

E(level)‡	J^π@	$T_{1/2}$†	$\Gamma^2_{\gamma 0}/\Gamma_\gamma$ (eV)&	Comments
0.0	0^+			
1140.8 *8*	2^+	0.62 ps *12*	0.00073 *10*	$\Gamma(\gamma_0)/\Gamma$=1.00.
2153.8# *1*	2^+			
2415.5 *8*	2^+	0.19 ps *5*	0.00050 *6*	$\Gamma(\gamma_0)/\Gamma$=0.46 *3*.
2879.8# *1*	$1^+,2^+$			
3127.6 *7*	2^+	0.080 ps *7*	0.0057 *5*	$\Gamma(\gamma_0)/\Gamma$=1.00.
3358.5 *8*	1^-	0.0048 ps *4*	0.095 *7*	$\Gamma(\gamma_0)/\Gamma$=1.00.
3582.5 *8*	2^+	0.014 ps *5*	0.00289 *18*	$\Gamma(\gamma_0)/\Gamma$=0.30 *3*.
3751.5 *11*	2^+	0.39 ps *4*	0.0012 *3*	$\Gamma(\gamma_0)/\Gamma$=1.00.
3759.2 *12*	$1,2^+$			$g\Gamma^2_{\gamma 0}/\Gamma_\gamma$=0.0088 eV *18*, $\Gamma(\gamma_0)/\Gamma$=0.34 14.
3819.7 *16*	2^+	0.14 ps *5*	0.00076 *24*	$\Gamma(\gamma_0)/\Gamma$=0.48 *4*.
3871.0 *9*	$1,2^+$		0.0027 *6*	$g\Gamma^2_{\gamma 0}/\Gamma_\gamma$=0.0082 eV *19*, $\Gamma(\gamma_0)/\Gamma$=1.00.
3929.9 *11*	$1,2^+$			$g\Gamma^2_{\gamma 0}/\Gamma_\gamma$=0.0076 eV *24*, $\Gamma(\gamma_0)/\Gamma$=0.81 *9*.

† Calculated from $\Gamma_{\gamma 0}$ in 2000Br05 and branching ratios in adopted gammas.
‡ From 2000Br05, except noted otherwise.
# Not directly observed, but added from Adopted Levels to complete the decay chain to g.s..
@ From Adopted Levels.
& From 2000Br05.

$\gamma(^{122}$Sn)

E_γ†	E_i(level)	J^π_i	E_f	J^π_f	Mult.‡	Comments
261.8 *1*	2415.5	2^+	2153.8	2^+		
878.7 *2*	3759.2	$1,2^+$	2879.8	$1^+,2^+$		
1013.3 *1*	2153.8	2^+	1140.8	2^+	M1+E2	
1140.5 *1*	1140.8	2^+	0.0	0^+	E2	
1275.0 *1*	2415.5	2^+	1140.8	2^+	M1+E2	
1404.3 *3*	3819.7	2^+	2415.5	2^+		
1739.3 *1*	2879.8	$1^+,2^+$	1140.8	2^+	M1+E2	
2153.7 *1*	2153.8	2^+	0.0	0^+	E2	
2415.5 *1*	2415.5	2^+	0.0	0^+	E2	
2441.8 *4*	3582.5	2^+	1140.8	2^+		
2789.7 *7*	3929.9	$1,2^+$	1140.8	2^+		
2879.6 *3*	2879.8	$1^+,2^+$	0.0	0^+		
3128.6 *7*	3127.6	2^+	0.0	0^+	E2	
3358.5 *1*	3358.5	1^-	0.0	0^+	E1	Mult.: From angular correlation and linear polarization (azymuthal asymmetry ratio=−0.07 *3* from fig. 2 in 1999Br12).
3582.3 *2*	3582.5	2^+	0.0	0^+	E2	
3751.2 *6*	3751.5	2^+	0.0	0^+	E2	
3758.6 *7*	3759.2	$1,2^+$	0.0	0^+		
3819.7 *3*	3819.7	2^+	0.0	0^+	E2	

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^{122}Sn(γ,γ') 1999Br12,2000Br05 (continued)

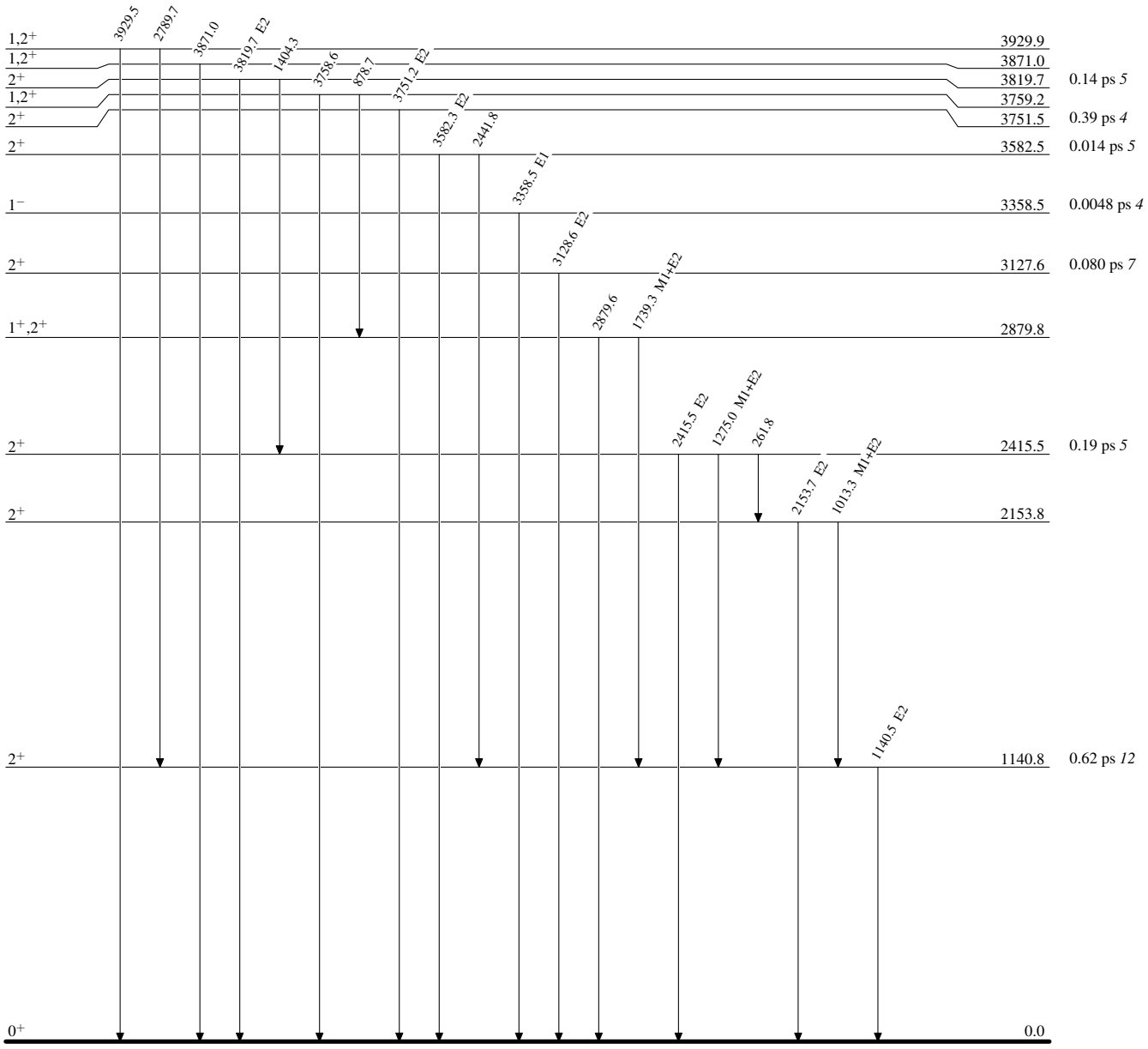
$\gamma(^{122}Sn)$ (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π
3871.0 *9*	3871.0	$1,2^+$	0.0	0^+
3929.5 *7*	3929.9	$1,2^+$	0.0	0^+

† Rounded values from adopted gammas.
‡ From adopted gammas.

^{122}Sn(γ,γ′) 1999Br12,2000Br05

Level Scheme



$^{122}_{50}Sn_{72}$