

$^{124}\text{Sn}(^{29}\text{Si},\alpha 4n\gamma):\text{SD}$ 1998Ha02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 110, 507 (2009)	1-Oct-2008

1998Ha02: $^{124}\text{Sn}(^{29}\text{Si},\alpha 4n\gamma)$ E=158 MeV. Measured $E\gamma$, $\gamma\gamma\gamma$, $\gamma\gamma\gamma$ (particle) coin using GAMMASPHERE array of 95 Compton-suppressed HPGE detectors and MICROBALL 95-element charged-particle detector array. See [1998Ha02](#) for possible interpretations of super deformed bands.

^{145}Sm Levels

E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$
x^{\ddagger}	J	$6700.5+x^{\ddagger} 15$	J+12	$15283+x^{\ddagger} 3$	J+24	$5233+y^{\#} 3$	J1+10
$1011.3+x^{\ddagger} 4$	J+2	$7993.8+x^{\ddagger} 16$	J+14	$y^{\#}$	J1	$6439+y^{\#} 3$	J1+12
$2049.9+x^{\ddagger} 6$	J+4	$9342.5+x^{\ddagger} 16$	J+16	$945.1+y^{\#} 8$	J1+2	$7699+y^{\#} 3$	J1+14
$3135.7+x^{\ddagger} 8$	J+6	$10743.7+x^{\ddagger} 18$	J+18	$1939.1+y^{\#} 20$	J1+4	$9017+y^{\#} 3$	J1+16
$4272.7+x^{\ddagger} 10$	J+8	$12199.9+x^{\ddagger} 19$	J+20	$2983.9+y^{\#} 22$	J1+6	$10388+y^{\#} 4$	J1+18
$5460.7+x^{\ddagger} 14$	J+10	$13716+x^{\ddagger} 3$	J+22	$4084.0+y^{\#} 23$	J1+8	$11818+y^{\#} 4$	J1+20

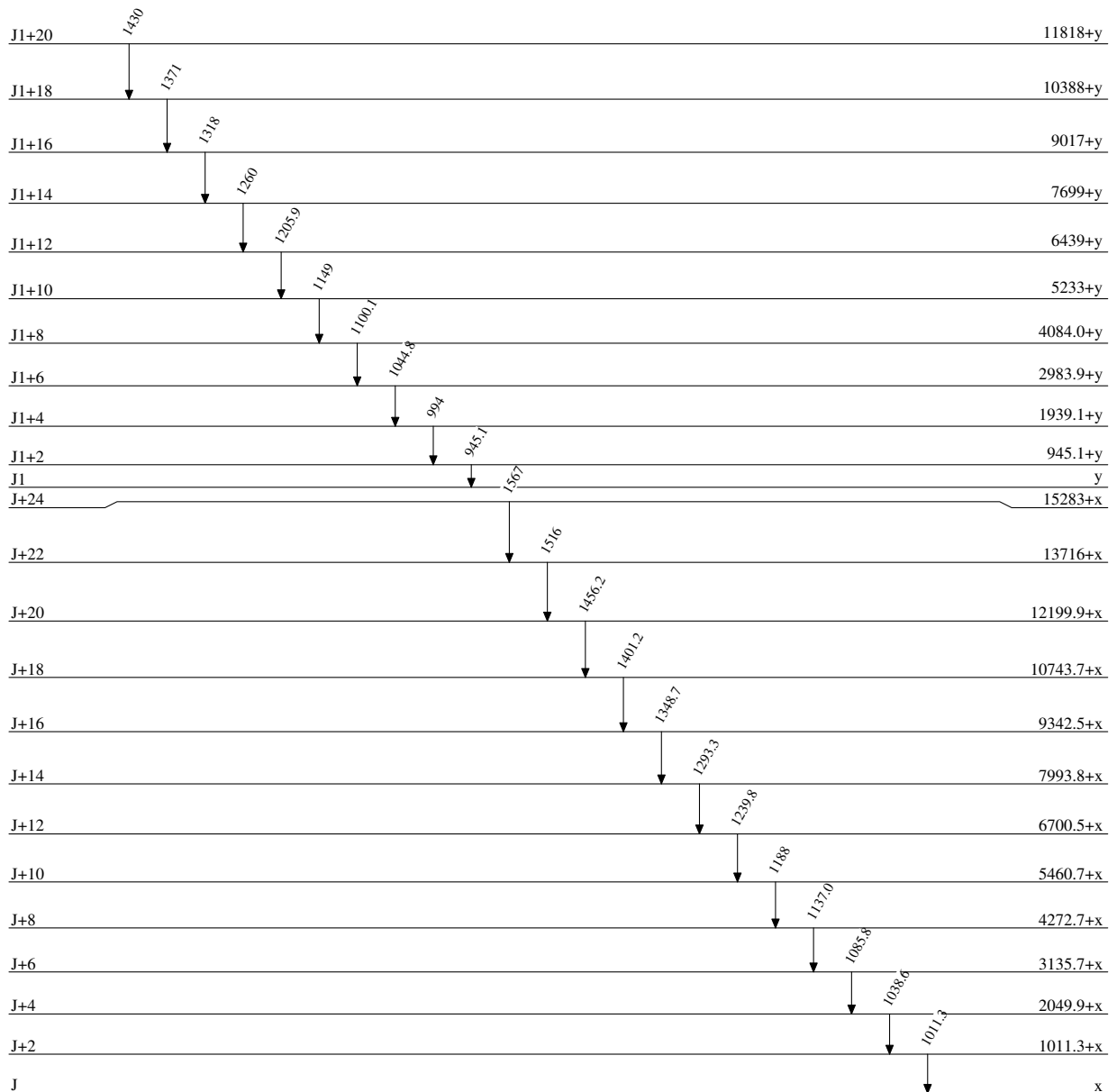
† From assignment to super-deformed bands.
 ‡ Band(A): SD-1 band ([1998Ha02](#)). Intensity <0.5%.
 # Band(B): SD-2 band ([1998Ha02](#)). Intensity <0.25%.

$\gamma(^{145}\text{Sm})$

E_{γ}	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}	E_{γ}	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}
945.1 8	945.1+y	J1+2	y	J1	1239.8 4	6700.5+x	J+12	5460.7+x	J+10
994 2	1939.1+y	J1+4	945.1+y	J1+2	1260 1	7699+y	J1+14	6439+y	J1+12
1011.3 4	1011.3+x	J+2	x	J	1293.3 5	7993.8+x	J+14	6700.5+x	J+12
1038.6 4	2049.9+x	J+4	1011.3+x	J+2	1318 1	9017+y	J1+16	7699+y	J1+14
1044.8 8	2983.9+y	J1+6	1939.1+y	J1+4	1348.7 5	9342.5+x	J+16	7993.8+x	J+14
1085.8 5	3135.7+x	J+6	2049.9+x	J+4	1371 2	10388+y	J1+18	9017+y	J1+16
1100.1 8	4084.0+y	J1+8	2983.9+y	J1+6	1401.2 6	10743.7+x	J+18	9342.5+x	J+16
1137.0 6	4272.7+x	J+8	3135.7+x	J+6	1430 2	11818+y	J1+20	10388+y	J1+18
1149 2	5233+y	J1+10	4084.0+y	J1+8	1456.2 7	12199.9+x	J+20	10743.7+x	J+18
1188 1	5460.7+x	J+10	4272.7+x	J+8	1516 2	13716+x	J+22	12199.9+x	J+20
1205.9 8	6439+y	J1+12	5233+y	J1+10	1567 1	15283+x	J+24	13716+x	J+22

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Level Scheme

 $^{145}_{62}\text{Sm}_{83}$

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		Band(B): SD-2 band (1998Ha02)	
	J1+20	11818+y	
		↓ 1430	
	J1+18	10388+y	
		↓ 1371	
	J1+16	9017+y	
		↓ 1318	
	J1+14	7699+y	
		↓ 1260	
	J1+12	6439+y	
		↓ 1206	
	J1+10	5233+y	
		↓ 1149	
	J1+8	4084.0+y	
		↓ 1100	
	J1+6	2983.9+y	
		↓ 1045	
	J1+4	1939.1+y	
		↓ 994	
	J1+2	945.1+y	
		↓ 945	
	J1	y	
		↓	
Band(A): SD-1 band (1998Ha02)			
J+24	15283+x		
		↓ 1567	
J+22	13716+x		
		↓ 1516	
J+20	12199.9+x		
		↓ 1456	
J+18	10743.7+x		
		↓ 1401	
J+16	9342.5+x		
		↓ 1349	
J+14	7993.8+x		
		↓ 1293	
J+12	6700.5+x		
		↓ 1240	
J+10	5460.7+x		
		↓ 1188	
J+8	4272.7+x		
		↓ 1137	
J+6	3135.7+x		
		↓ 1086	
J+4	2049.9+x		
		↓ 1039	
J+2	1011.3+x		
		↓ 1011	
J	x		