

$^{52}\text{Cr}(^{34}\text{S},2\text{p}2\text{n}\gamma)$ 1991Ba12

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne	NDS 157, 260 (2019)		1-Mar-2019

E=130 MeV, establish band structures using proton- $\gamma\gamma$ coincidence technique. Theoretical interpretation based on Woods-Saxon cranking model. See also [1990Ni10](#) and [1990Sa13](#) from the same group.

 ^{82}Sr Levels

E(level) [†]	J ^{π}	E(level) [†]	J ^{π}	E(level) [†]	J ^{π}	E(level) [†]	J ^{π}
0.0	0 ⁺	3565.6	7 ⁻	5913.2	12 ⁻	10259	(19 ⁻)
573.4	2 ⁺	3607.9	7 ⁻	6366.4	13 ⁻	10870	(20 ⁺)
1175.6	2 ⁺	3621.8	8 ⁺	6542.4	14 ⁺	11380	(20 ⁻)
1328.3	4 ⁺	3685.2	(8 ⁺)	6555.8		11798	(21 ⁻)
1688.9	3 ⁺	4247.8		6935.4	(14 ⁺)	11835?	(20 ⁺)
1995.8	4 ⁺	4349.2	10 ⁺	7066	14 ⁻	12756	(22 ⁺)
2229.1	6 ⁺	4366.0	9 ⁻	7544.4	15 ⁻	13004	(22 ⁻)
2525.9	5 ⁺	4387.0	(9 ⁻)	7810.3	16 ⁺	13491	(23 ⁻)
2817.4	5 ⁻	4423.0	(10 ⁺)	7935.5		14831?	(24)
2825.5	4 ⁻	4636.4	(10 ⁺)	8376	16 ⁻	14908	(24 ⁺)
2835.7	6 ⁺	4908.7	10 ⁻	8431.9	(16 ⁺)	15411	(25)
3087.1	6 ⁻	5307.3	11 ⁻	8842.2	17 ⁻	17244?	(26 ⁻)
3242.2	8 ⁺	5333.2		9235	18 ⁺	17618	(27)
3477.9	7 ⁺	5425.9	12 ⁺	9477			
3511.1	(7) ⁻	5567.9	12 ⁺	9840	(18 ⁻)		
3525.2	7 ⁻	5737.4	(12 ⁺)	10059	(18 ⁺)		

[†] From an unweighted fit to the E γ data.

 $\gamma(^{82}\text{Sr})$

E γ	E _i (level)	J ^{π} _i	E _f	J ^{π} _f	Comments
261.6	3087.1	6 ⁻	2825.5	4 ⁻	Placement by the evaluators based on 1994Ta01 . There seems to be an error in the placement of this transition in 1991Ba12 .
269.7 [†]	3087.1	6 ⁻	2817.4	5 ⁻	
379.3	3621.8	8 ⁺	3242.2	8 ⁺	
424	3511.1	(7) ⁻	3087.1	6 ⁻	
438.1 [†]	3525.2	7 ⁻	3087.1	6 ⁻	Placement by the evaluators. Authors show transition to 2825, 4 ⁻ level which seems to be an error.
443	3685.2	(8 ⁺)	3242.2	8 ⁺	
513.2	1688.9	3 ⁺	1175.6	2 ⁺	
520.8	3607.9	7 ⁻	3087.1	6 ⁻	
521.7	4908.7	10 ⁻	4387.0	(9 ⁻)	
573.4	573.4	2 ⁺	0.0	0 ⁺	
602.2	1175.6	2 ⁺	573.4	2 ⁺	
606.8	2835.7	6 ⁺	2229.1	6 ⁺	
667.5	1995.8	4 ⁺	1328.3	4 ⁺	
693.7	3511.1	(7) ⁻	2817.4	5 ⁻	
754.9	1328.3	4 ⁺	573.4	2 ⁺	
758	4366.0	9 ⁻	3607.9	7 ⁻	
786.2	3621.8	8 ⁺	2835.7	6 ⁺	
800.5	4366.0	9 ⁻	3565.6	7 ⁻	
800.9	4423.0	(10 ⁺)	3621.8	8 ⁺	
820.2	1995.8	4 ⁺	1175.6	2 ⁺	

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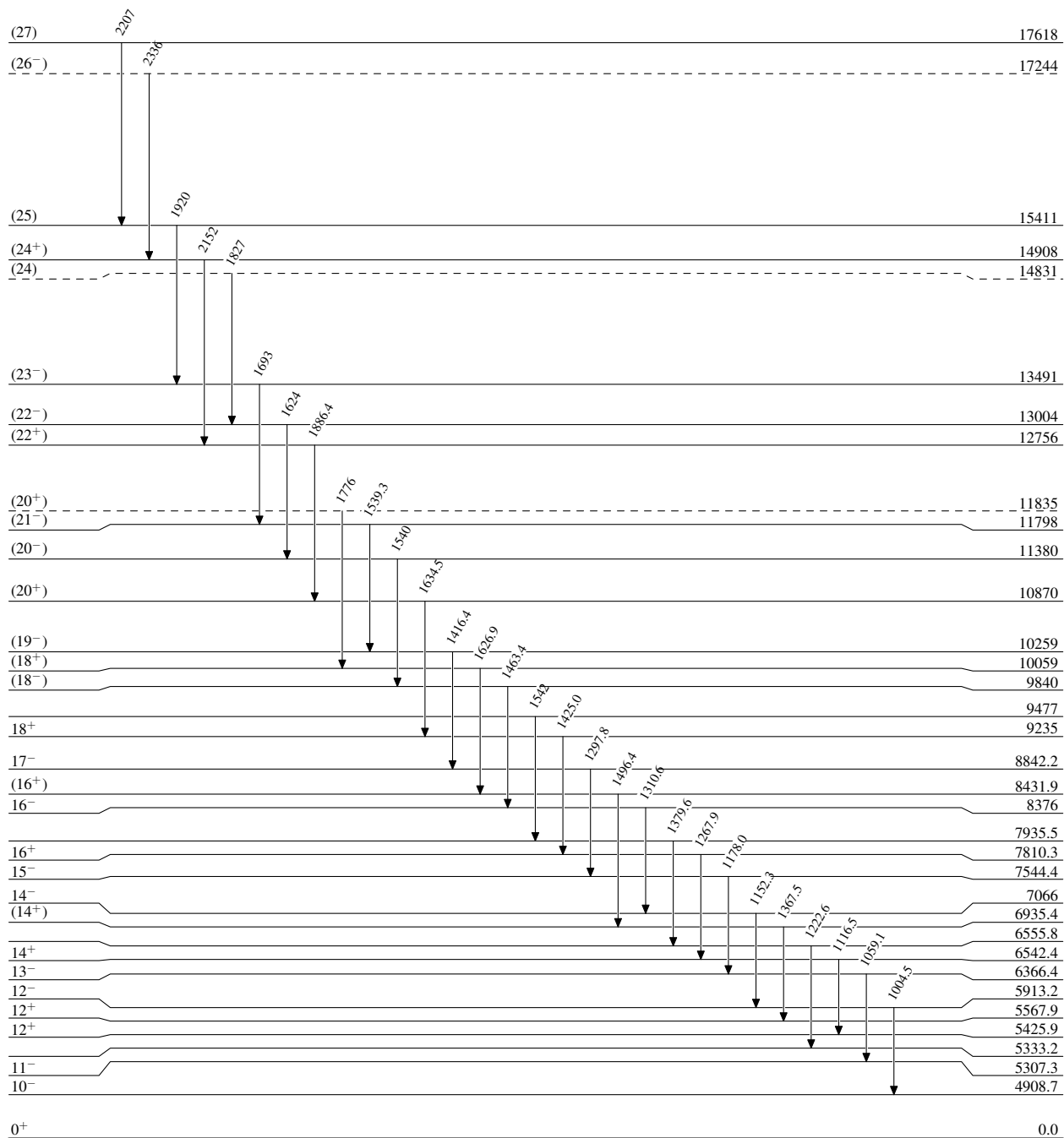
$^{52}\text{Cr}(^{34}\text{S}, 2\text{p}2\text{n}\gamma)$ 1991Ba12 (continued) $\gamma(^{82}\text{Sr})$ (continued)

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
837	2525.9	5 ⁺	1688.9	3 ⁺	1296	3525.2	7 ⁻	2229.1	6 ⁺
840.0	2835.7	6 ⁺	1995.8	4 ⁺	1297.8	8842.2	17 ⁻	7544.4	15 ⁻
840.6	4366.0	9 ⁻	3525.2	7 ⁻	1310.6	8376	16 ⁻	7066	14 ⁻
875.9	4387.0	(9 ⁻)	3511.1	(7 ⁻)	1336.7	3565.6	7 ⁻	2229.1	6 ⁺
900.7	2229.1	6 ⁺	1328.3	4 ⁺	1367.5	6935.4	(14 ⁺)	5567.9	12 ⁺
941.3	5307.3	11 ⁻	4366.0	9 ⁻	1379.6	7935.5		6555.8	
951.2	4636.4	(10 ⁺)	3685.2	(8 ⁺)	1392.5	3621.8	8 ⁺	2229.1	6 ⁺
952	3477.9	7 ⁺	2525.9	5 ⁺	1416.4	10259	(19 ⁻)	8842.2	17 ⁻
1002.9	5425.9	12 ⁺	4423.0	(10 ⁺)	1425.0	9235	18 ⁺	7810.3	16 ⁺
1004.5	5913.2	12 ⁻	4908.7	10 ⁻	1463.4	9840	(18 ⁻)	8376	16 ⁻
1005.6	4247.8		3242.2	8 ⁺	1489.0	2817.4	5 ⁻	1328.3	4 ⁺
1013.2	3242.2	8 ⁺	2229.1	6 ⁺	1496.4	8431.9	(16 ⁺)	6935.4	(14 ⁺)
1059.1	6366.4	13 ⁻	5307.3	11 ⁻	1539.3	11798	(21 ⁻)	10259	(19 ⁻)
1085.4	5333.2		4247.8		1540	11380	(20 ⁻)	9840	(18 ⁻)
1101	5737.4	(12 ⁺)	4636.4	(10 ⁺)	1542	9477		7935.5	
1107.0	4349.2	10 ⁺	3242.2	8 ⁺	1624	13004	(22 ⁻)	11380	(20 ⁻)
1115.6	1688.9	3 ⁺	573.4	2 ⁺	1626.9	10059	(18 ⁺)	8431.9	(16 ⁺)
1116.5	6542.4	14 ⁺	5425.9	12 ⁺	1634.5	10870	(20 ⁺)	9235	18 ⁺
1152.3	7066	14 ⁻	5913.2	12 ⁻	1693	13491	(23 ⁻)	11798	(21 ⁻)
1175.6	1175.6	2 ⁺	0.0	0 ⁺	1776	11835?	(20 ⁺)	10059	(18 ⁺)
1178.0	7544.4	15 ⁻	6366.4	13 ⁻	1827	14831?	(24)	13004	(22 ⁻)
1181	4423.0	(10 ⁺)	3242.2	8 ⁺	1886.4	12756	(22 ⁺)	10870	(20 ⁺)
1218.7	5567.9	12 ⁺	4349.2	10 ⁺	1920	15411	(25)	13491	(23 ⁻)
1222.6	6555.8		5333.2		2152	14908	(24 ⁺)	12756	(22 ⁺)
1267.9	7810.3	16 ⁺	6542.4	14 ⁺	2207	17618	(27)	15411	(25)
1282 [†]	3511.1	(7 ⁻)	2229.1	6 ⁺	2336	17244?	(26 ⁻)	14908	(24 ⁺)

[†] From E(level) of connecting levels. Transition indicated but E_γ not given in 1991Ba12.

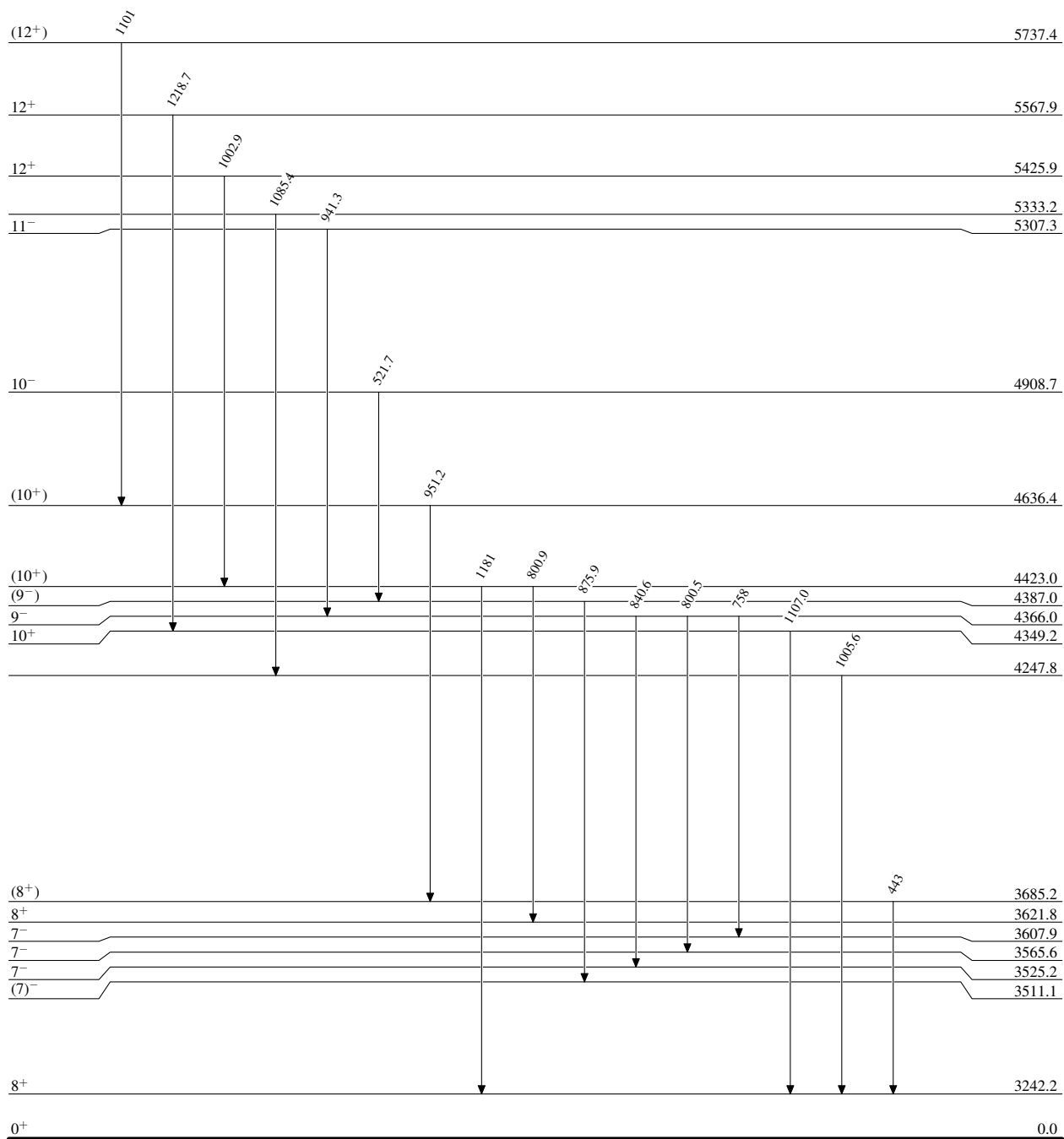
$^{52}\text{Cr}(^{34}\text{S}, 2\text{p}2\text{n}\gamma) \quad 1991\text{Ba12}$

Level Scheme



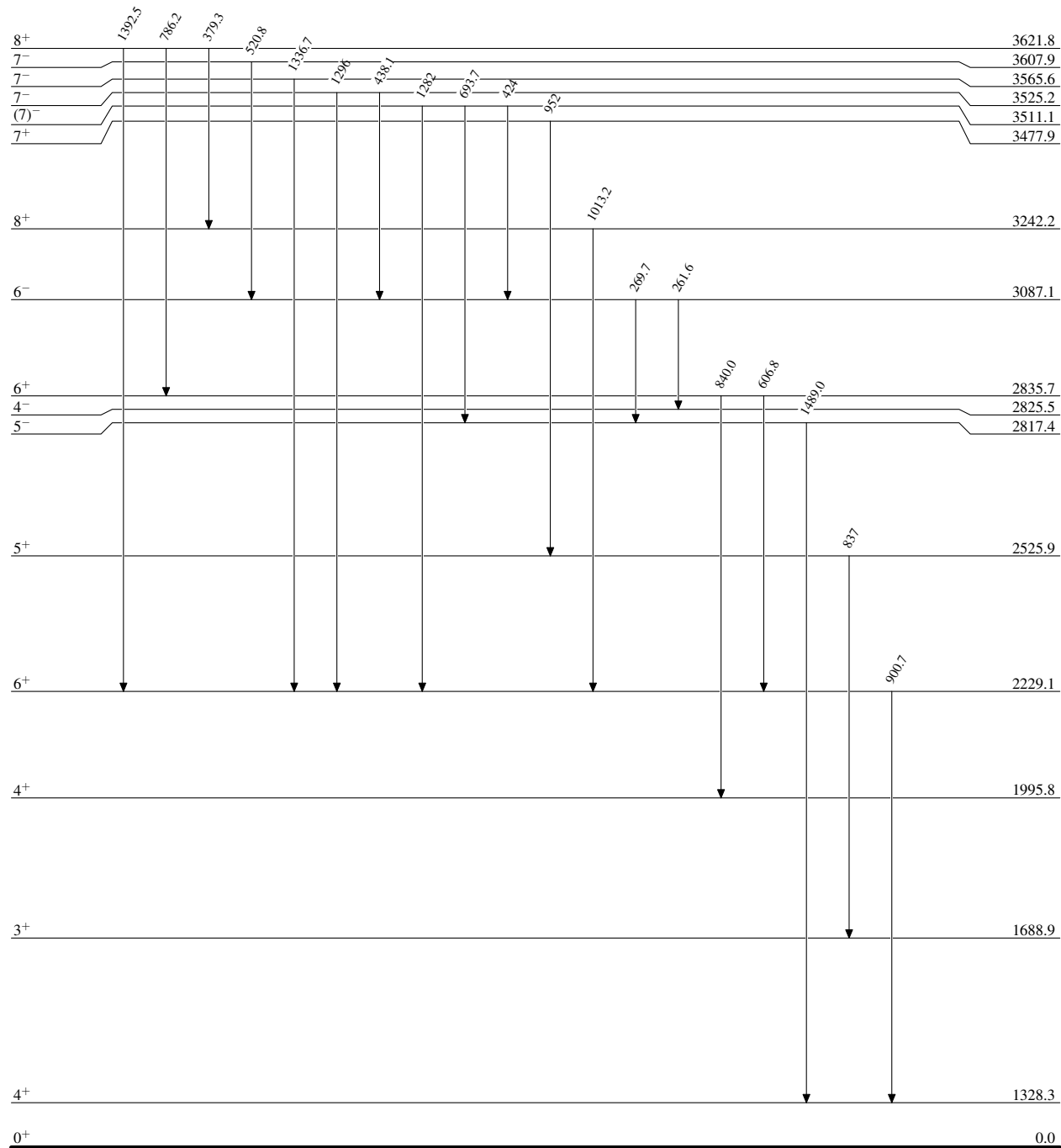
$^{52}\text{Cr}(^{34}\text{S}, 2\text{p}2\text{n}\gamma)$ 1991Ba12

Level Scheme (continued)

 $^{82}_{38}\text{Sr}_{44}$

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Level Scheme (continued)



$^{52}\text{Cr}(^{34}\text{S},2\text{p}2\text{n}\gamma)$ 1991Ba12

Level Scheme (continued)

