

$^{40}\text{Ca}(^{20}\text{Ne},3\text{p}\gamma)$ 1996Re15

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. R. Bhat	NDS 85, 415 (1998)	24-Sep-1998

E= 68 MeV; measured $E\gamma$, $I\gamma$, $\gamma\gamma$ recoil coincidences with OSIRIS γ spectrometer and the recoil-filter detector, DCO ratios.

 ^{57}Co Levels

E(level) [†]	$J^{\pi\ddagger}$	Comments
0.0	$7/2^-$	
1224.0 4	$9/2^-$	$J^\pi=9/2^-$.
1690.1 4	$11/2^-$	$J^\pi=11/2^-$.
2524.5 5	$(13/2)^-$	$J^\pi=(13/2^-)$.
2560.4 4	$(7/2^-,9/2,11/2^-)$	
4036.8 6	$(15/2)$	$J^\pi=(15/2^-)$.
4377.9 5		
4700.2 5		
4801.1 7		
4814.8 6	$(17/2)$	$J^\pi=(17/2^-)$.
4845.7 5		
5435.0 6		
5572.1 8		
5707.7 6		
5756.9 7		
5846.1 6		
5919.3 8	$(19/2)$	$J^\pi=(19/2^-)$.
6442.3 6		
6519.1 7		
6859.6 7		
6976.9 9		
7512.4 7		
7527.8 9		
7782.7 6		
7993.0 9		
8087.4 8		
8409.9 6		
8633.2 7		
8874.6 11		
9280.3 7		
9317.8 8		
10077.4 9		
10294.7 9		
11070.4 10		
11291.8 11		

[†] From a least-squares fit to the $E\gamma$ data.

[‡] From Adopted Levels; J^π assignments by authors are given in comments. These are considered as tentative since the authors state that the DCO measurements do not lead to unambiguous assignments for most levels as the measured DCO ratios are compatible with different spin combinations.

$^{40}\text{Ca}(^{20}\text{Ne},3\text{p}\gamma)$ 1996Re15 (continued) $\gamma(^{57}\text{Co})$

Uncertainty not given by authors; the evaluator has assumed an uncertainty of 0.5 keV.
I γ : not given by authors.

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
115.1 5	4814.8	(17/2)	4700.2	
322.2 5	5756.9		5435.0	
466.1 5	1690.1	11/2 ⁻	1224.0	9/2 ⁻
467.7 5	4845.7		4377.9	
546.0 5	8633.2		8087.4	
589.4 5	5435.0		4845.7	
596.1 5	6442.3		5846.1	
627.2 5	8409.9		7782.7	
647.5 5	9280.3		8633.2	
684.2 5	9317.8		8633.2	
761.8 5	6519.1		5756.9	
771.0 5	5572.1		4801.1	
777.8 5	4814.8	(17/2)	4036.8	(15/2)
797.1 5	10077.4		9280.3	
834.1 5	2524.5	(13/2) ⁻	1690.1	11/2 ⁻
870.1 5	9280.3		8409.9	
870.2 5	2560.4	(7/2 ⁻ ,9/2,11/2 ⁻)	1690.1	11/2 ⁻
897.4 5	8409.9		7512.4	
976.9 5	10294.7		9317.8	
993.0 5	11070.4		10077.4	
997.1 5	11291.8		10294.7	
1007.3 5	5707.7		4700.2	
1056.9 5	5435.0		4377.9	
1057.0 [†] 5	5756.9		4700.2	
1057.5 5	6976.9		5919.3	(19/2)
1070.0 5	7512.4		6442.3	
1104.5 5	5919.3	(19/2)	4814.8	(17/2)
1151.8 5	6859.6		5707.7	
1223.9 5	1224.0	9/2 ⁻	0.0	7/2 ⁻
1336.4 5	2560.4	(7/2 ⁻ ,9/2,11/2 ⁻)	1224.0	9/2 ⁻
1340.0 5	7782.7		6442.3	
1473.9 5	7993.0		6519.1	
1511.7 5	4036.8	(15/2)	2524.5	(13/2) ⁻
1550.1 5	8409.9		6859.6	
1608.4 5	7527.8		5919.3	(19/2)
1690.1 5	1690.1	11/2 ⁻	0.0	7/2 ⁻
1809.4 5	5846.1		4036.8	(15/2)
1897.7 5	8874.6		6976.9	
2113.5 5	8633.2		6519.1	
2175.9 5	4700.2		2524.5	(13/2) ⁻
2240.7 5	4801.1		2560.4	(7/2 ⁻ ,9/2,11/2 ⁻)
2290.3 5	4814.8	(17/2)	2524.5	(13/2) ⁻
2320.9 5	4845.7		2524.5	(13/2) ⁻
2330.6 5	8087.4		5756.9	
2405.2 5	6442.3		4036.8	(15/2)
2560.3 5	2560.4	(7/2 ⁻ ,9/2,11/2 ⁻)	0.0	7/2 ⁻
2687.4 5	4377.9		1690.1	11/2 ⁻
2761.0 5	9280.3		6519.1	
2799.0 5	9317.8		6519.1	
2876.6 5	8633.2		5756.9	
2910.7 5	5435.0		2524.5	(13/2) ⁻

Continued on next page (footnotes at end of table)

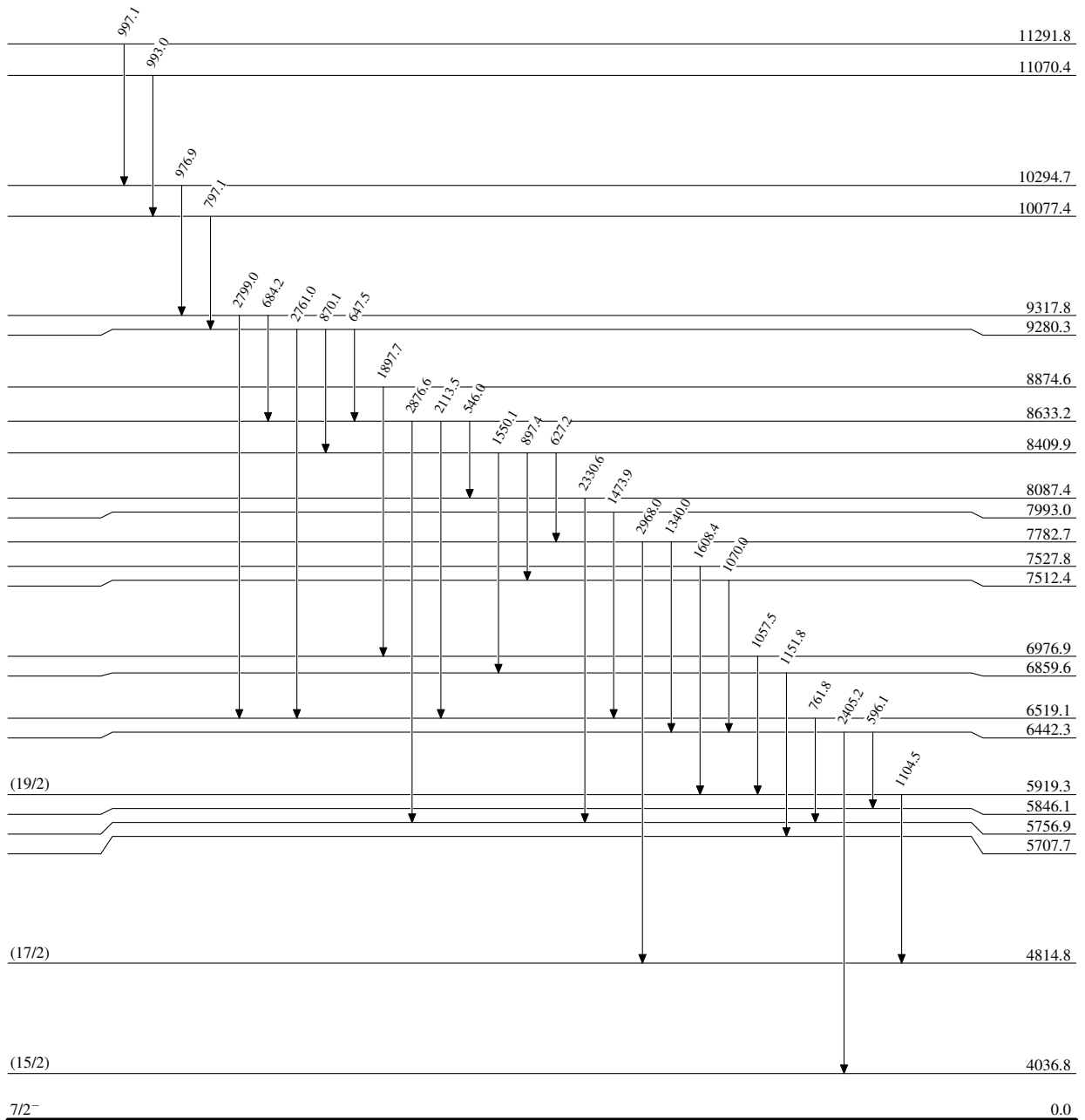
 $^{40}\text{Ca}(^{20}\text{Ne},3\text{p}\gamma)$ **1996Re15** (continued) $\gamma(^{57}\text{Co})$ (continued)

<u>E_γ</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
2968.0 5	7782.7		4814.8	(17/2)
3010.1 5	4700.2		1690.1	11/2 ⁻
3156.0 5	4845.7		1690.1	11/2 ⁻
3183.1 5	5707.7		2524.5	(13/2) ⁻
3321.4 5	5846.1		2524.5	(13/2) ⁻

† Placement of transition in the level scheme is uncertain.

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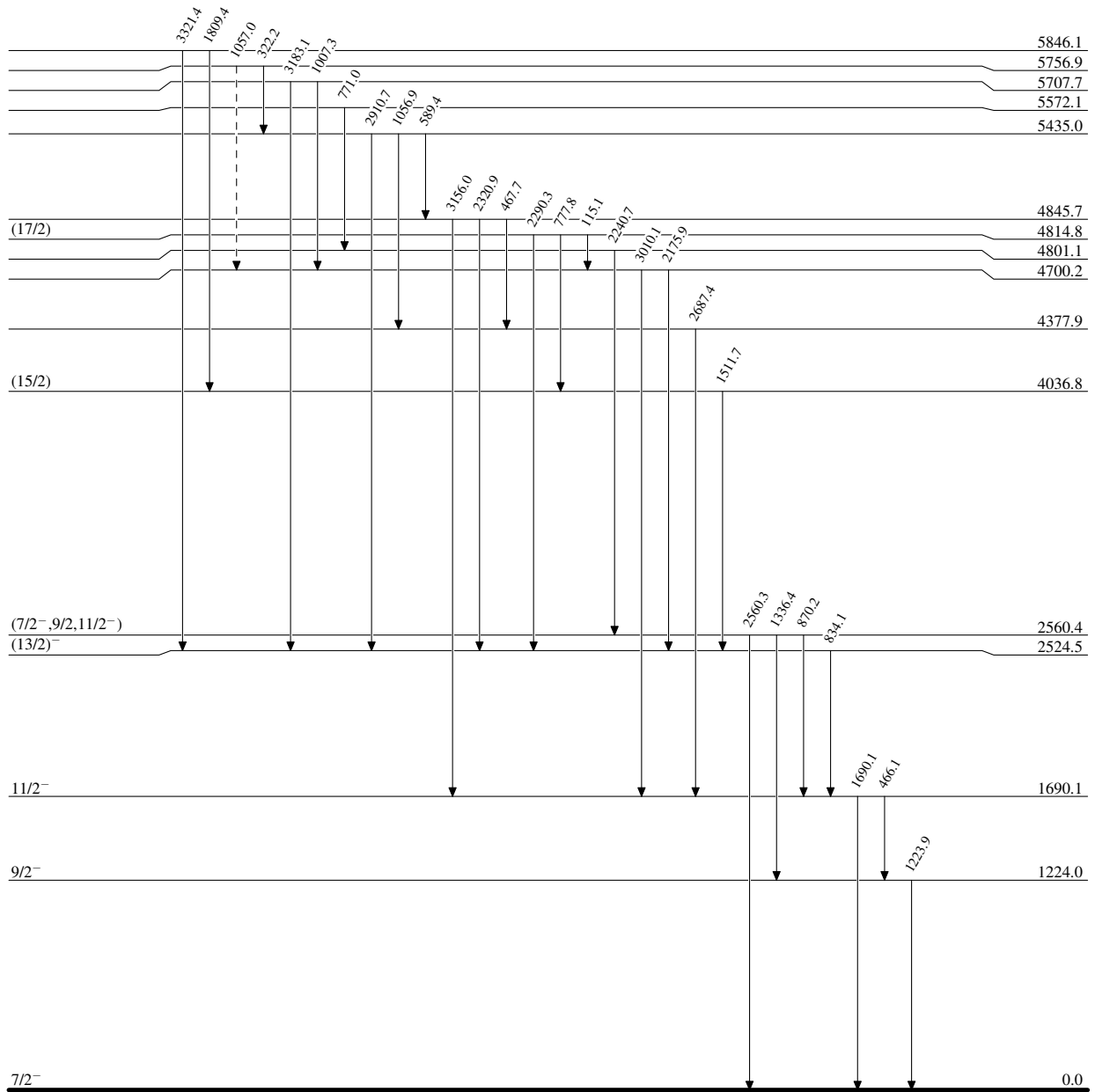
Level Scheme

 $^{57}_{27}\text{Co}_{30}$

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Legend

Level Scheme (continued)

-----► γ Decay (Uncertain) $^{57}_{27}\text{Co}_{30}$