

$^{40}\text{Ca}(^{28}\text{Si},4\text{pn}\gamma)$ 1996HaZV

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 196,17 (2024)	30-Sep-2023

1996HaZV: E=120 MeV ^{28}Si beam was produced from the tandem accelerator of JAERI. Target was a thick Au-Ca(natural)-Au. γ rays were detected with 10 Compton-suppressed HPGe detectors and a charged particle detector system. Measured E_γ , I_γ , $\gamma\gamma$ -coin. Deduced levels.

 ^{63}Zn Levels

E(level) [†]	J^π [‡]	Comments
0	$3/2^-$	
192	$5/2^-$	
650	$5/2^-$	
1063	$7/2^-$	
1206	$7/2^-$	
1437		
1704	$9/2^+$	
2319		
2586	$13/2^+$	
3481		
3765	$(17/2)^+$	
3892		
4356		
4904		
5077		
5347	$(21/2,17/2)^+$	
5917		
6233		
6487		
6570		E(level): see comments at 6571 level.
6571		E(level): note that 6570 and 6571 as two separate levels in 1996HaZV correspond to a single level in ($^{18}\text{O},\alpha 2n\gamma$) by 2019Gh09 and ($^{16}\text{O},2\text{pn}\gamma$) by 1998Si04.
7928		

[†] From E_γ data in 1996HaZV.

[‡] As given in 1996HaZV.

 $\gamma(^{63}\text{Zn})$

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
192	192	$5/2^-$	0	$3/2^-$	1179	3765	$(17/2)^+$	2586	$13/2^+$
267	1704	$9/2^+$	1437		1185	5077		3892	
316	6233		5917		1206	1206	$7/2^-$	0	$3/2^-$
413	1063	$7/2^-$	650	$5/2^-$	1224	6571		5347	$(21/2,17/2)^+$
497	1704	$9/2^+$	1206	$7/2^-$	1243	1437		192	$5/2^-$
639	1704	$9/2^+$	1063	$7/2^-$	1256	2319		1063	$7/2^-$
650	650	$5/2^-$	0	$3/2^-$	1306	3892		2586	$13/2^+$
653	6570		5917		1312	5077		3765	$(17/2)^+$
871	1063	$7/2^-$	192	$5/2^-$	1357	7928		6571	
875	4356		3481		1410	6487		5077	
882	2586	$13/2^+$	1704	$9/2^+$	1561	5917		4356	
1013	1206	$7/2^-$	192	$5/2^-$	1582	5347	$(21/2,17/2)^+$	3765	$(17/2)^+$
1013	5917		4904		1769	4356		2586	$13/2^+$
1063	1063	$7/2^-$	0	$3/2^-$	1777	3481		1704	$9/2^+$
1139	4904		3765	$(17/2)^+$					

[†] 1996HaZV.

$^{40}\text{Ca}(^{28}\text{Si},4\text{pn}\gamma)$ 1996HaZVLevel Scheme