

$^{43}\text{Ca}(^3\text{He},\text{p})$ 1974Ha55

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

Target $J^\pi=7/2^-$. E=17 MeV. Measured $\sigma(\theta=7^\circ-55^\circ)$; split-pole mag spect. FWHM=45 keV (235 $\mu\text{g}/\text{cm}^2$), 25 keV (112 $\mu\text{g}/\text{cm}^2$).
Also studied systematics of $\sigma(\theta)$ for L(n+p)=0 and 0+2. Others: see 1983Bu21.

 ^{45}Sc Levels

E(level)	$J^\pi^\dagger$	$L^\ddagger$	E(level)	$J^\pi^\dagger$	$L^\ddagger$	E(level)	$J^\pi^\dagger$	$L^\ddagger$
0.0	$5/2^-, 7/2^-, 9/2^-$	0+2	3348 15			4822 15		
376 10	$1/2^-, 3/2^-$	2	3367 15	$5/2^-, 7/2^-, 9/2^-$	0+2	4920 15	$1/2^-, 3/2^-$	2
721 10	$5/2^-, 7/2^-, 9/2^-$	0+2	3473 15	$5/2^-, 7/2^-, 9/2^-$	0+2	4970 15	$5/2^-, 7/2^-, 9/2^-$	0+2
1069 10	$1/2^-, 3/2^-$	2	3581 15	$5/2^-, 7/2^-, 9/2^-$	0+2	5268 15		
1240 10			3636 15		(1,0+2)	5288 15		
1414 10	$5/2^-, 7/2^-, 9/2^-$	0+2	3696 15			5661 15		(1,0+2)
1559 10	$1/2^-, 3/2^-$	2	3730 15			5786 15		(1,0+2)
1665 10			3883 15			5824 15		(1,0+2)
2095 10	$5/2^-, 7/2^-, 9/2^-$	0+2	3938 [#] 15	$5/2^-, 7/2^-, 9/2^-$	0+2	6102 15		
2295 10	$1/2^-, 3/2^-$	2	4034 15	$5/2^-, 7/2^-, 9/2^-$	0+2	6344 15		&
2351 10	$1/2^-, 3/2^-$	2	4078 15	@	(0+2)	6369 15		&
2600 10			4176 15		(1,0+2)	6441 15		
2759 10	$5/2^-, 7/2^-, 9/2^-$	0+2	4240 15			6476 15		
2914 10			4488 15		(1,0+2)	6551 15	$5/2^-, 7/2^-, 9/2^-$	0+2
2950 10			4542 15			6609 15		
2989 10			4601 15			6667 15	$(5/2^-, 7/2^-, 9/2^-)$	(0+2)
3031 15	$(1/2^-, 3/2^-)$	(2)	4660 15		(1,0+2)	6699 15	$7/2^-$	0
3125 15	$5/2^-, 7/2^-, 9/2^-$	0+2	4716 15		(1,0+2)	6751 15	$(5/2^-, 7/2^-, 9/2^-)$	(0+2)
3290 15			4795 15			6820 15	$5/2^-, 7/2^-, 9/2^-$	0+2

[†] From L(n+p) with the assumption that for L(n+p)=2, one nucleon goes into the $f_{7/2}$ shell and the other into the P shell (syst of fp-shell nuclei).

[‡] Based on semiempirical analysis.

[#] Probable doublet.

@ $(5/2 \text{ to } 9/2)^-$ or $(1/2, 3/2)^-$.

& (0+2) for doublet.