^{45}Sc(t,α) 1969Ha15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh and John A. Cameron	NDS 112, 2357 (2011)	31-Jul-2011

1969Ha15: E=12.95 MeV triton beam produced from the Aldermaston tandem accelerator. Target prepared by vacuum evaporation of natural scandium. α-particles momentum-analyzed in a multi-angle spectrograph. Measured $\sigma(E_\alpha,\theta)$. Deduced levels, L, spectroscopic factors from DWBA analysis.

Target ^{45}Sc $J^\pi=7/2^-$.

Relative yields for all levels are given in table 1 of 1969Ha15.

^{44}Ca Levels

E(level)[†]	J$^\pi$[‡]	L[@]	S[#@]	E(level)[†]	L[@]	S[#@]	E(level)[†]	L[@]	S[#@]
0	0$^+$	3	0.46	4022 *12*			5120? *12*		
1158 *12*	2$^+$	3	0.15	4099 *12*	3	0.16	5235 *12*	2	0.16
1887 *12*	0$^+$	3	0.07	4310? *12*			5306 *12*		
2288 *12*	4$^+$		<0.03	4363 *12*	0(+2)	0.63[a]	5344 *12*		
2659 *12*	2$^+$	3	0.16	4400? *12*			5404 *12*	0	0.41
3052 *12*	4$^+$		<0.03	4488 *12*			5518 *12*		
3307 *12*	3$^-$	2(+0)	0.76[&]	4565 *12*	2	0.16	5579 *12*	0	0.14
3360 *12*		3	0.12	4660 *12*			5660 *12*	2	0.10
3670? *12*				4912 *12*	2	0.13	5741 *12*		
3716 *12*		2	1.1	4991 *12*			5810 *12*		
3770? *12*				5029 *12*	0(+2)	0.16[a]	5891 *12*	(2)	0.44
3915 *12*		2	0.92	5103 *12*	0	0.33			

[†] From 1969Ha15.
[‡] From Adopted Levels.
[#] Spectroscopic factors in units of particles.
[@] Extracted from the comparison of $\sigma(\theta)$ distributions with the DWBA predictions in 1969Ha15.
[&] For L=2.
[a] For L=0.