

$^{45}\text{Sc}(\text{t},\alpha)$ **1969Ha15**

Type	History		
	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 190,1 (2023)	20-Jun-2023

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

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

Relative yields for all levels are given in table 1 of **1969Ha15**. ^{44}Ca Levels

E(level) [†]	L [‡]	S [‡]	E(level) [†]	L [‡]	S [‡]	E(level) [†]	L [‡]	S [‡]
0	3	0.46	4022 <i>I2</i>			5120? <i>I2</i>		
1158 <i>I2</i>	3	0.15	4099 <i>I2</i>	3	0.16	5235 <i>I2</i>	2	0.16
1887 <i>I2</i>	3	0.07	4310? <i>I2</i>			5306 <i>I2</i>		
2288 <i>I2</i>		<0.03	4363 <i>I2</i>	0(+2)	0.63 [@]	5344 <i>I2</i>		
2659 <i>I2</i>	3	0.16	4400? <i>I2</i>			5404 <i>I2</i>	0	0.41
3052 <i>I2</i>		<0.03	4488 <i>I2</i>			5518 <i>I2</i>		
3307 <i>I2</i>	2(+0)	0.76 [#]	4565 <i>I2</i>	2	0.16	5579 <i>I2</i>	0	0.14
3360 <i>I2</i>	3	0.12	4660 <i>I2</i>			5660 <i>I2</i>	2	0.10
3670? <i>I2</i>			4912 <i>I2</i>	2	0.13	5741 <i>I2</i>		
3716 <i>I2</i>	2	1.1	4991 <i>I2</i>			5810 <i>I2</i>		
3770? <i>I2</i>			5029 <i>I2</i>	0(+2)	0.16 [@]	5891 <i>I2</i>	(2)	0.44
3915 <i>I2</i>	2	0.92	5103 <i>I2</i>	0	0.33			

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