

<sup>45</sup>Sc(<sup>3</sup>He,d) 1982Ha11,1971Br11,1968Br07

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 91, 1 (2000)	15-Jul-2000

E=16 MeV (1982Ha11); E=15 MeV (1971Br11,1968Br07).

Measured:  $\sigma(E,\theta)$ ; DWBA analysis.

Others: 1968Ba13, 1968Oh02.

Information on levels up to 9864 from 1982Ha11, except as noted; information on levels above 9864 from 1971Br11, 1968Br07.

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

<sup>46</sup>Ti Levels

E(level) <sup>†</sup>	L <sup>‡@</sup>	C <sup>2</sup> S <sup>‡</sup>	Comments
0.0	3	0.26	
890	1+3	0.082+0.29	
2011	1+3	0.078+0.28	
2960	3	0.29	
3060	2	0.054	
3234	1+3	0.012+0.15	
3298	3	0.54	
3441	2	0.11	
3573	3	0.22	
3726	1	0.024	
3842	1+3	0.021+0.12	
3930	1+3	0.037+0.28	
4031	1	0.034	
4136	1+3	0.01+0.037	
4199	3	0.12	
4394 15	1	0.004 <sup>@</sup>	E(level): from 1968Br07.
4526	3	1.04	
4617	1+3	0.02+0.067	
4719	1+3	0.025+0.28	
4845	1+3	0.008+0.06	
4966	1+3	0.01+0.05 <sup>@</sup>	
5036	0	0.028	
5094	1	0.033	
5167	1+3	0.01+0.075	
5317	1	0.25	
5379	1+3	0.019+0.31	
5554	1+3	0.045+0.21	
5618	1+3	0.005+0.12	
5811	0	0.030	
5897	1+3	0.006+0.03	
5980	1+3	0.012+0.65	
6021	1	0.015	
6094	0	0.03 <sup>@</sup>	
6140	1+3	0.01+0.08 <sup>@</sup>	
6217	0	0.01 <sup>@</sup>	
6251			
6337	2	0.10	
6424	1	0.070	
6550	1	0.059	
6616	1	0.046	
6742	1+3	0.052+0.25	
6851	1+3	0.012+0.04	
6899	1	0.030	

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$^{45}\text{Sc}(^3\text{He,d})$  [1982Ha11](#),[1971Br11](#),[1968Br07](#) (continued)

$^{46}\text{Ti}$  Levels (continued)

E(level) <sup>†</sup>	L <sup>‡@</sup>	C <sup>2S'</sup> ‡	Comments
6974	1+3	0.02+0.14 <sup>@</sup>	
7041	1+3	0.031+0.18	
7101	1	0.032	
7147	1	0.032	
7201	1	0.044	
7288	1+3	0.007+0.12	
7347	1	0.066	
7429	1	0.063	
7558	1	0.052	
7584	1	0.096	
7611	1	0.040	
7712	1	0.38	
7780	1	0.066	
7849	1	0.045	
7917	1	0.094	
7979	1	0.029	
8038			
8088	1	0.052	
8182	1	0.063	
8228	1	0.054	
8293	1	0.042	
8346	1	0.044	
8384	1+3	0.024+0.18	
8467	1+3	0.044+0.17	
8530	1	0.12	
8574	1+3	0.033+0.06	
8621	1	0.083	
8662	1	0.028	
8701	1	0.026	
8761	1	0.16	
8808	1	0.10	
8860	1	0.21	
8940	1	0.10	
8984	1	0.13	
9070	1	0.055	
9111	1+3	0.10+0.18	
9141			
9176 <sup>#</sup>	3	0.28	
9205	1	0.064	Assignment as analog state by <a href="#">1971Br11</a> not confirmed by <a href="#">1982Ha11</a> .
9253	1	0.082	
9304	1	0.066	
9345	1	0.030	
9385	1	0.041	
9426 <sup>#</sup>	3	0.29	
9474 <sup>#</sup>	1	0.085	
9519	2	0.20	
9572 <sup>#</sup>	3	0.28	
9618	1	0.040	
9649	1	0.049	
9682			
9718	2	0.058	
9761			
9790			
9847 25			E(level): observed by <a href="#">1968Br07</a> .
9864			

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${}^{45}\text{Sc}({}^3\text{He,d})$  **1982Ha11,1971Br11,1968Br07 (continued)** ${}^{46}\text{Ti}$  Levels (continued)

<u>E(level)<sup>†</sup></u>	<u>L<sup>‡@</sup></u>	<u>C<sup>2</sup>S'<sup>‡</sup></u>	<u>E(level)<sup>†</sup></u>	<u>L<sup>‡@</sup></u>	<u>C<sup>2</sup>S'<sup>‡</sup></u>	<u>E(level)<sup>†</sup></u>
9978 <sup>#</sup> 25	3	0.25	10526 25	3	0.17	10980 25
10042 25			10602 25			11051 25
10212 25			10670 25			11110 25
10256 25			10730 25			11167 25
10321 25			10782 25	3	0.17	11299 25
10374 25			10858 25			11416 25
10441 25			10935 25	1	0.07	

<sup>†</sup>  $\Delta E$  not given by 1982Ha11.

<sup>‡</sup> Based on analysis of angular distributions.

<sup>#</sup> Identified as T=2 analog state (1982Ha11).

<sup>@</sup> From 1971Br11, 1968Br07.