^{150}Sm(α,t) 1976St10

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 110, 1 (2009)	20-Nov-2008

E=27 MeV.

Enge split-pole magnetic spectrograph and nuclear emulsions. Cross section data at 60° and 70°. DWBA calculations. Absolute cross sections accurate to 30%. Relative cross sections accurate to 15%.

^{151}Eu Levels

E(level)	L†	S‡	E(level)	L†	S‡	E(level)	L†	S‡	E(level)	L†
0	(2)	2.7	658 *4*	(2)		1154 *4*			1503 *4*	(2)
22 *4*	(4)	2.9	≈702	(2)		1201 *4*	(2)		1566 *4*	(0)
197 *4*	(5)	5.3	≈712	(0,1)	0.49	1223 *4*			1576 *4*	(2)
246 *4*	3#@	0.16	≈724			1233 *4*			1593 *4*	
≈266	(0,1,2)	0.028	≈740			1251 *4*	(0,1)		1649 *4*	(3)
309 *4*	(1,2)	0.37	763 *4*	2#&	0.58	1283 *4*	(0,1)		1674 *4*	(2,3)
335 *4*	(2)	2.1	807 *4*	(1,2,3)		1304 *4*	(4)	0.46	1709 *4*	
≈420			838 *4*	(3,4)		1331 *4*	(5)	0.77	1748 *4*	0#*a*
507 *4*	(4,5)	0.36	886 *4*	(5)	1.9	≈1348			1793 *4*	(2,3)
527 *4*	(0,1)		952 *4*	(3,4)		1406 *4*	(2,3)	0.49	1814 *4*	(4)
551 *4*	(2)		≈1089			1427 *4*	(0)	0.41	1850 *4*	(2,3)
584 *4*	(2,3)		1100 *4*			1458 *4*			1874 *4*	(2)
600 *4*	(4)	0.13	1116 *4*			1488 *4*	(0,1,2)			

† From $\sigma(\alpha,t)(\theta=70)/\sigma(^3He,d)(\theta=30)$. See ^{150}Sm(^{3}He,d) also.

‡ σ(expt)/N×σ(DWBA). N=111.0.

Taken from $\sigma(\theta)$ data in ^{150}Sm(^{3}He,d). The value from the ratio of cross sections for (α,t) and (^{3}He,d) does not agree well.

@ The ratio of cross sections in (α,t) and (^{3}He,d) suggests L=2.

& The ratio of cross sections in (α,t) and (^{3}He,d) suggests L=3.

a The ratio of cross sections in (α,t) and (^{3}He,d) suggests L=2,3.