^{150}Sm(^{3}He,d) 1976St10

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

E=24 MeV.
Enge split-pole magnetic spectrograph and nuclear emulsions. $\sigma(\theta)$ data from 6° to 60° (lab system). DWBA calculations.
Absolute cross sections accurate to 30%. Relative cross sections accurate to 15%.
Other: 1974ShZB.

^{151}Eu Levels

E(level)	L[@]	S[‡]	E(level)	L[@]	S[‡]	E(level)	L[@]	S[‡]	E(level)	L[@]	S[‡]
0	2[†]	2.1	659 *4*	(2)	0.046	1202 *4*	(2)	0.15	≈1581	(2)	0.11
≈20	(4)	2.5	≈701	(2)	0.11	1227 *4*			1599 *4*		
196 *4*	(5)	7.6	715 *4*	(0,1)[†]	0.43	1249 *4*	(0,1)[†]	0.13	≈1648	(3)	
244 *4*	3[†]	0.35	≈730			1283 *4*	(0,1)	0.082	1669 *4*	(2,3)	0.10
262 *4*	(0,1,2)	0.037	764 *4*	2[†]	0.53	1304 *4*	(4)	0.61	1691 *4*		
310 *4*	(1,2)	0.47	806 *4*	(1,2,3)		≈1329	(5)	0.64	1715 *4*		
334 *4*	2[†]	2.2	839 *4*	(3,4)		1342 *4*			1749 *4*	0[†]	0.14
≈414			887 *4*	(5)	2.8	≈1405	(2,3)	0.27	1796 *4*	(2,3)	0.18
505 *4*	(4,5)	0.35	912 *4*			1423 *4*	0[†]	0.29	≈1813	(4)	0.40
525 *4*	(0,1)	0.041	950 *4*	(3,4)		≈1449			1849 *4*	(2,3)	0.15
548 *4*	(2)	0.073	1016?[#]			≈1486	(0,1,2)		1877 *4*	(2)	0.20
586 *4*	(2)	0.059	≈1088			≈1501	(2)	0.15			
≈603	(4)	0.13	1102 *4*			1527 *4*					
≈640			1149 *4*			1565 *4*	(0)[†]	0.22			

[†] From $\sigma(\theta)$.
[‡] σ(expt)/N×σ(DWBA). N=6.0.
[#] From 1974ShZB only.
[@] From $\sigma(\alpha,t)(\theta=70)/\sigma(^{3}He,d)(\theta=30)$, unless otherwise stated. See ^{150}Sm(α,t) also. For various L transfers, the active orbitals are $s_{1/2}$, $d_{3/2}$, $d_{5/2}$, $g_{7/2}$ and $h_{11/2}$. At lower excitation energies $d_{5/2}$ orbital is favored over the $d_{3/2}$. Above 750, L=2 states probably correspond to $d_{3/2}$.