^{150}Nd(^{3}He,d) 1979St06,1972Bu22

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

E(^{3}He)=25 and 24 MeV for 1979St06 and 1972Bu22, respectively.
Metallic targets 30 and 40 μg/cm^{2} (96% ^{150}Nd) in 1979St06 and 1972Bu22, respectively. Other from the same laboratory: 1970Bu21.
$\sigma(\theta)$ measured at 2 angles by 1972Bu22 and 6 to 8 angles by 1979St06. Uncertainties of 20% in absolute cross sections.

^{151}Pm Levels

E(level)[#]	L[‡]	S[†@]	Comments
0.0	2	0.031	
86 *2*	4,(5)	0.56[&]	
110 *5*		<0.009	S: for J=5/2^{-}.
175 *2*	3	0.018	
197[b] *2*	(4,5)	0.026	S: for L=4 and J=L+1/2 (1972Bu22).
257 *2*	2	0.026[&]	E(level): unresolved from 261 L=5 level strongly populated in (t,α).
325 *2*	2	0.80	
345 *2*	5	1.44	
426 *2*	0+(4,5)	0.026	L: 426.46 (J$^{\pi}$=1/2^{+}) and 427.16 (J$^{\pi}$=7/2^{+}) unresolved. Evidence for L=4 component at large θ.
507 *2*	2	0.033	
533 *2*	(3)	0.14	
554 *2*			
577?[a] *3*			
640 *2*	5,(4)	0.28	
719 *2*		<0.04	S: assuming L=4, required if this is the 7/2 member of the 1/2[420] band.
780 *2*	4,(5)	0.44[&]	
851 *2*	0	0.07	
875 *2*	2	0.30[&]	
914 *2*	2	0.25	
958 *2*	2	0.20	
989 *2*	2	0.035	
1036 *2*	(4)	≈0.10[&]	
1125[a] *3*			
1182 *2*	2	0.037	
1204 *4*	5,(4)	0.57	E(level): part of unresolved triplet.
1221 *2*	0	0.024	
1258 *2*	2	0.046	
1297 *2*	2	0.035	
1331 *2*	(2)	0.022	
1393 *2*	(1)	0.017[&]	
1422 *2*	(3)	0.095	
1444[a] *2*			
1489 *2*	0	0.050	L: some indication of L=2 component in 1979St06.
1531?[a] *2*			
1558 *2*	0	0.087	
1584[a] *2*	(2)	0.051	
1617 *2*	2	0.097	
1673 *2*	(2)	0.076	
1711 *2*	0	0.063	
1734 *2*	2	0.024	
1765[a] *2*			
1794[a] *2*	(1)	0.020	
1874[a] *2*			

Continued on next page (footnotes at end of table)

^{150}Nd(^{3}He,d) 1979St06,1972Bu22 (continued)

^{151}Pm Levels (continued)

E(level)[#]	L[‡]	S[†@]
1915[a] 2	(2)	0.043
1938[a] 2		

† σ(exp)/2N×σ(theory) with N=4.42. σ(theory) from DWBA. Uncertainty may be 30-50%. Values are from 1979St06 unless otherwise stated.
‡ From $\sigma(\theta)$ of 1979St06. 1972Bu22 obtain L values from $\sigma(^3\text{He,d})/\sigma(\text{t},\alpha)$ ratio.
# From mean of 1979St06 and 1972Bu22 when possible. Otherwise from 1979St06.
@ For J=L+1/2, unless stated otherwise. For high lying levels, values are given for either L+1/2 or L-1/2. For these levels the two values are not different by more than 10%.
& For J=L−1/2.
a Reported only by 1979St06.
b Level from 1972Bu22 only.