

$^{152}\text{Sm}(d,^3\text{He})$ 1981Le21,1979Do06

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

E=50 MeV. System resolutions of 45 and 270 keV in 1981Le21 and 1979Do06, respectively, do not permit resolution of level structure.

 ^{151}Pm Levels

E(level)	L [†]	S [‡]	Comments
85 10	4	2.5 [@]	
320 10	2,5	0.58,2.7	L: composite of 324(5/2 ⁺) and 345(11/2 ⁻) levels.
430 10	2,4	0.41,0.82	L: L=2 inconsistent with 426(1/2 ⁺) component in the 426(1/2 ⁺), 427(7/2 ⁺) composite level.
520 10	2	0.24 [@]	E(level): assignment doubtful since level is composite, including 508(5/2 ⁺), 524(3/2 ⁺), 532(7/2 ⁻) and 540(3/2 ⁻).
560 10	4	1.7 [@]	E(level): probably a composite of 549, 576 levels.
810 [#] 40	2,4	0.18,1.1	S: for J=L-1/2. For J=L+1/2, one gets S=0.15 and 0.5 for L=2 and L=4, respectively. E(level): from 1979Do06. Composite peak may include 782(7/2 ⁺), 810, 840, 852(5/2 ⁺).
870 10	2	0.54 [@]	
1370 [#] 60	2	1.3,1.0	
1630 20	2,0	0.14,0.06	S: if assumed components have J ^π =3/2 ⁺ ,1/2 ⁺ , respectively.
2030 [#] 80	4	1.4,0.6	S: values for J=L-1/2 and L+1/2, respectively.
2700 [#] 80	4	(17),(7.6)	S: values for L-1/2 and L+1/2, respectively.

[†] From $\sigma(\theta)$ at 7 angles and DWBA, angular distributions fitted allowing incoherent combinations of $\sigma(\text{theory})$ for different L values where unresolved levels are involved.

[‡] $\sigma(\text{exp})/N \sigma(\text{DWBA})$ with N=2.95. Definition yields S values twice those presented in the $^{152}\text{Sm}(\text{pol } t, \alpha)$ data set. Two S values are given when level has been analyzed as a multiplet, or, when J is unknown.

[#] Reported only by 1979Do06.

[@] For J=L+1/2.