

⁸⁶Sr(³He,d), (d,n) 1971Ma11,1976Ho11

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)		NDS 129, 1 (2015)	27-Jul-2015

1971Ma11: (³He,d), E(³He)=20 MeV, FWHM=25 keV, $\theta=10^\circ-70^\circ$. DWBA analysis of angular distributions.

1976Ho11: (d,n) E_d=12 MeV, $\theta=5^\circ-55^\circ$, observed ground state and first three excited levels. DWBA analysis of angular distributions.

Data are from **1971Ma11**, unless otherwise noted.

⁸⁷Y Levels

E(level)	J ^π †	L	(2J+1)C ² S‡	Comments
0.0	1/2 ⁻	1	1.15	
380 4	9/2 ⁺	4	7.19	
793 4	5/2 ⁻	3	1.15	
982 4	3/2 ⁻	1	0.54	
1155 4	5/2 ⁺	2	0.32	
1400 [#] 4				E(level): Possibly the (7/2 ⁺ ,9/2 ⁺) 1405 keV level in the Adopted Levels.
1605 4	9/2 ⁺	4	0.53	J ^π : assigned (7/2 ⁺ ,9/2 ⁺) in Adopted Levels for level at 1608.3.
1848 4	3/2 ⁻	1	0.07	J ^π : Assigned 1/2 ⁻ in Adopted Levels. (2J+1)C ² S: The authors give (2J+1)C ² S = 0.07 for 2p _{1/2} .
2085 4	3/2 ⁻	1	0.09	
2203 4	9/2 ⁺	4	0.79	J ^π : assigned 7/2 ⁺ ,9/2 ⁺ in Adopted Levels for level at 2202.15.
2278 4	5/2 ⁻	3	0.14	J ^π : assigned (7/2 ⁻) in Adopted Levels.
2407 4	5/2 ⁺	2	0.03	J ^π : assigned 3/2 ⁺ in Adopted Levels.
2730 4	5/2 ⁻	3	0.16	J ^π : assigned 5/2 ⁻ ,7/2 ⁻ in Adopted Levels.
2907 4	5/2 ⁺	2	0.12	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.
2995 4	5/2 ⁺	2	0.11	
3043 4	5/2 ⁺	2	0.20	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.
3090 4	5/2 ⁺	2	0.25	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.
3120 ^{#@} 4				J ^π : assigned (13/2 ⁻) in Adopted Levels.
3195 4	1/2 ⁺	(0)	(0.04)	
3306 4	5/2 ⁺	2	0.11	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.
3353 4	5/2 ⁺	2	0.16	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.
3406 4	5/2 ⁺	2	0.09	J ^π : assigned 3/2 ⁺ ,5/2 ⁺ in Adopted Levels.

† Assignments are those assumed for extraction of S. Assignments which differ in the Adopted Levels are noted.

‡ Spectroscopic factors were determined from measured absolute cross sections and finite-range nonlocal DWBA calculations (**1971Ma11**). Those of **1976Ho11** are in fair agreement.

Weak level not fitted by any L-value. It is assumed by the authors to be populated by non-direct processes.

@ The value 3150 given in the author's Fig. 4 is a misprint. The correct value of 3120 is given in the text and in the spectrum of Fig. 1. No entry for this level is given in the authors' table.