

⁸⁷Sr(d,³He) 1987Li12,1975Du02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh		NDS 124, 1 (2015)	30-Nov-2014

$J^\pi(^{87}\text{Sr g.s.})=9/2^+$.

1987Li12: E=28 MeV. FWHM=16 keV. Measured $\sigma(\theta)$ using the qddd spectrograph at Princeton. DWBA analysis.

1975Du02: E=28 MeV. Measured $\sigma(\theta)$. FWHM=35 keV. DWBA analysis.

Cross section data (1987Li12)

Level	$d\sigma/d\Omega$ ($\mu\text{b/sr}$) (maximum)	Level	$d\sigma/d\Omega$ ($\mu\text{b/sr}$) (maximum)
0	53	1196	76(L=1), 46(L=3)
556	1900	1248	105(L=1), 79(L=3)
780	140	1414	300
873	460	1441	80
978	720	1549	119
1033	220	1695	22
1092	860	1737	46

⁸⁶Rb Levels

E(level) [†]	L [‡]	C ² S [#]	Comments
0	3	0.32	C ² S: 0.25 (1975Du02).
556 1	1	1.06	L,C ² S: 1+3 (1975Du02) with C ² S=0.85, 1.4.
780 2	3	1.11	C ² S: 1.10 (1975Du02).
873 1	1	0.30	L: 1+3 (1975Du02) with C ² S=0.32, 0.32.
978 1	1	0.49	L: 1+3 (1975Du02) with C ² S=0.50, 0.85.
1033 1	1	0.15	C ² S: 0.15 (1975Du02).
1092 1	1	0.62	L: 1+3 (1975Du02) with C ² S=0.60, 0.75.
1196 [@]	1+3	0.06,0.42	C ² S: 0.15, 0.63 (1975Du02).
1248 1	1+3	0.08,0.75	C ² S: 0.15, 1.50 (1975Du02).
1414 2	1	0.25	
1441 3	1	0.07	
1549 1	3	1.27	C ² S: 1.40 (1975Du02).
1695? 5	(3)	0.25	
1737 4	(1)	0.05	

[†] From 1987Li12. Well known levels at 873, 1093, 1247, and 1412 were used for calibration.

[‡] From DWBA analysis (1987Li12). Several levels are assigned L=1+3 by 1975Du02, whereas only L=1 is assigned by 1987Li12.

[#] From 1987Li12. C²S from DWBA as defined by $\sigma(\text{exp})=2.95 \times C^2S \times \sigma(\text{DWBA}) / (2J+1)$. It is assumed that pickup is from 2p_{3/2} and 1f_{5/2} for L=1 and L=3, respectively.

[@] Rounded-off energy from Adopted Levels. Energy not determined by 1987Li12 because of a close-lying line from a contaminant.