^{87}Rb(d,t) 1972Ho44

History

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

$J^{\pi}(^{87}Rb$ g.s.)=3/2$^-$.

1972Ho44: E=17.5 MeV. Tritons energy determined using a magnetic spectrograph, FWHM≈9 keV. Measured $\sigma(\theta)$ from θ=9°−60°. DWBA analysis.

1969Da15: E=12 MeV. Measured $\sigma(\theta)$. FWHM≈15 keV. Levels reported at 0, 487, 555, 875, 980, 1031, 1093, 1472, 1501. Measured cross sections are quoted by 1969Da15 at 115°, 120° and 125°.

Cross section data

Level	dσ/dΩ (mb/sr) (maximum)	Level	dσ/dΩ (mb/sr) (maximum)
0	0.48(L=0),0.11(L=2)	1304	0.17
489	4.2	1389	1.01
556	1.35	1412	0.14
872	0.29	1438	0.13
977	0.58	1470	1.35
1027	4.34	1500	0.33
1091	0.61	1547	0.058
1105	10(L=3),0.06(L=1)	1668	4.5
1122	0.37	1708	1.12
1156	0.69	1762	0.80
1195	0.20	1892	0.15(L=3),0.12(L=1)
1245	0.048	1919	0.10

^{86}Rb Levels

E(level)†	L	S‡	E(level)†	L	S‡	E(level)†	L	S‡
0	0+2	0.008,0.025	1122 *2*	1	0.006	1470 *2*	1	0.31
489 *2*	1	0.59	1156 *2*	1	0.13	1500 *2*	1	0.077
556 *2*	4	4.6	1195 *2*			1547 *2*	4	0.28
872 *2*	4	1.1	1245 *2*	4	0.21	1668 *2*	1	1.15
977 *2*	4	2.3	1304 *2*	1	0.035	1708 *2*	1	0.29
1027 *2*	1	0.78	1389 *2*	1	0.22	1762 *2*	1	0.22
1091 *2*	4	2.5	1412 *2*	4	0.64	1892 *2*	(3+1)#	0.68,0.034
1105 *2*	3+1	0.33,0.011	1438 *2*			1919 *2*		

† From internal calibration of the spectrograph by use of γ-ray data of 1969Da15; believed to be accurate to 2 keV.

‡ From DWBA calculations if pickup is from $3s_{1/2}$ (for L=0), $2p_{3/2}$ (for L=1), $2d_{5/2}$ (for L=2), $1f_{5/2}$ (for L=3), and $1g_{9/2}$ (for L=4).

Poor DWBA fit. May be doublet.