^{84}Sr(d,t) 1970Be24

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 125, 201 (2015)	31-Dec-2014

E(d)=20.65 MeV. Measured $\sigma(\theta)$ for θ=16° to 100° using a Si(Li) detector telescope (FWHM=90-100 keV); DWBA analysis.

^{83}Sr Levels

Authors state that the lowest state populated in the (d,t) reaction is not necessarily the ground state. Given the L=4 assignment, the lowest populated state most likely corresponds to the $9/2^+$, 35.5-keV level (see Adopted Levels). The evaluator has indicated this offset in the energy scale as x, however, its not clear that the offset is linear, and in fact, the correspondence suggested by higher energy levels suggests that it is not. Probable correspondence between energy levels observed in other reactions is indicated in the comments. Given the uncertainty in the offset, these should be taken as tentative.

E(level)[†]	J^π[‡]	L[‡]	S[#]	Comments
x	$(9/2^+)$	4	6.10	E(level): possible correspondence with E=35.5−keV level in Adopted Levels.
x+250 *3*	$(1/2^-)$	1	0.96	E(level): possible correspondence with E=259−keV level in Adopted Levels.
x+470 *5*	$(5/2^-)$	3	3.66	E(level): possible correspondence with E=490−keV level in Adopted Levels.
x+680 *7*	$(3/2^-)$	1	1.34	E(level): possible correspondence with E=681−keV level in Adopted Levels.
x+960 *10*	$(3/2^-)$	(1)	0.87	E(level): no likely corresponding level in Adopted Levels.
x+1230 *12*				E(level): possible correspondence with E=1233- or 1239-keV level in Adopted Levels.
x+1410 *14*				E(level): possible correspondence with E=1434−keV level in Adopted Levels.
x+1750 *18*				E(level): possible correspondence with E=1753−keV level in Adopted Levels.

[†] Authors quote a general uncertainty of 1%, which is 0.6% from statistical uncertainty and the rest from energy calibration uncertainty. Energies are obtained from an average of spectra at several angles.

[‡] From a DWBA analysis of the angular dependence of the measured cross sections.

[#] From $d\sigma/d\Omega_{exp}=CSd\sigma/d\Omega_{DWBA}$, with C=3.33 to account for the internal structure of the triton.