^{96}Mo(pol t,p),(t,p) 1981Fl06,1988Ch29

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh	NDS 164, 1 (2020)	15-Feb-2020

Includes (t,pce) for 735 level.

1981Fl06 (also 1980Fl03 and 1980Br10): (pol t,p) E=17 MeV polarized triton beam was produced from the Los Alamos Scientific Laboratory (LASL) tandem Van de Graaff facility. Target was 180-220 μg/cm^2 97.01% enriched ^{98}Mo. Reaction products were momentum analyzed with a Q3D spectrometer (FWHM=15 keV). Measured $\sigma(\theta)$ and Ay(θ) (15° to 60°). Deduced levels, J, π, L-transfers, enhancement factor from DWBA analysis. Comparisons with available data. Relative uncertainties are ≈8%.

1988Ch29: (t,p) E=12 MeV triton beam was produced from the tandem Van de Graaff at AWRE, Aldermaston. Target was ≈100 μg/cm^2. Reaction products were momentum-analyzed with a multiangle spectrograph consisting of 24 broad-range magnetic spectrographs of the Browne-Buecher type (FWHM≈15 keV). Measured $\sigma(\theta)$ from 5° to 87.5°. Deduced levels, J, π, L-transfers from DWBA analysis. Comparisons with available data.

Others:

1984De17: (t,pce) E=16 MeV. ce line for 735 level.

1985Wa21: theoretical analysis, IBA model.

^{98}Mo Levels

E(level)†	L†	S‡	Comments
0	0#	1.65	dσ/dΩ=0.55 mb/sr at 27.5° (1988Ch29), 0.230 mb/sr at 35° (1980Fl03).
735 *5*	0	0.02	E(level): ce line reported by 1984De17. dσ/dΩ=0.055 mb/sr at 27.5° (1988Ch29), 0.0038 mb/sr at 35° (1980Fl03).
787 *5*	2#	0.52	dσ/dΩ=0.094 mb/sr at 27.5° (1988Ch29), 0.250 mb/sr at 15° (1980Fl03).
1432 *5*	2		dσ/dΩ=0.099 mb/sr at 27.5° (1988Ch29).
1510 *5*	(4)		L: 1988Ch29 give L=2. dσ/dΩ=0.005 mb/sr at 27.5° (1988Ch29).
1745 *10*	2		E(level),L: level reported by 1988Ch29. dσ/dΩ=0.006 mb/sr at 27.5° (1988Ch29).
1965 *5*	0	0.05	dσ/dΩ=0.014 mb/sr at 27.5° (1988Ch29), 0.0065 mb/sr at 35° (1980Fl03).
2018 *5*	3	0.59	dσ/dΩ=0.089 mb/sr at 27.5° (1988Ch29).
2207 *5*	2	0.20	dσ/dΩ=0.050 mb/sr at 27.5° (1988Ch29).
2224 *5*	4	0.12	dσ/dΩ=0.013 mb/sr at 27.5° (1988Ch29).
2336 *5*	2(+6)	0.37	E(level): doublet dominated by L=2. S: for L=2. dσ/dΩ=0.106 mb/sr at 27.5° (1988Ch29).
2419 *5*	2	0.05	dσ/dΩ=0.015 mb/sr at 27.5° (1988Ch29).
2530 *5*	2	0.15	dσ/dΩ=0.044 mb/sr at 27.5° (1988Ch29).
2573 *8*	4	0.32	dσ/dΩ=0.049 mb/sr at 27.5° (1988Ch29).
2617 *8*	0#	0.16	dσ/dΩ=0.044 mb/sr at 27.5° (1988Ch29), 0.022 mb/sr at 35° (1980Fl03).
2695 *10*	2		dσ/dΩ=0.013 mb/sr at 27.5° (1988Ch29).
2727 *10*	2		dσ/dΩ=0.021 mb/sr at 27.5° (1988Ch29).
2791 *10*			dσ/dΩ=0.028 mb/sr at 27.5° (1988Ch29).
2826 *10*	6		dσ/dΩ=0.005 mb/sr at 27.5° (1988Ch29).
2851 *10*	0		dσ/dΩ=0.042 mb/sr at 27.5° (1988Ch29).
2898 *10*	2		dσ/dΩ=0.050 mb/sr at 27.5° (1988Ch29). E(level): unresolved doublet.
2969 *10*	4		dσ/dΩ=0.068 mb/sr at 27.5° (1988Ch29).
3013 *10*	4		dσ/dΩ=0.031 mb/sr at 27.5° (1988Ch29).
3044 *10*	4		dσ/dΩ=0.029 mb/sr at 27.5° (1988Ch29).
3093 *10*	2		dσ/dΩ=0.010 mb/sr at 27.5° (1988Ch29).
3200 *10*	3		dσ/dΩ=0.021 mb/sr at 27.5° (1988Ch29).
3259 *10*	0		dσ/dΩ=0.022 mb/sr at 27.5° (1988Ch29).
3294 *10*	2		dσ/dΩ=0.060 mb/sr at 27.5° (1988Ch29).

Continued on next page (footnotes at end of table)

^{96}Mo(pol t,p),(t,p) 1981Fl06,1988Ch29 (continued)

^{98}Mo Levels (continued)

† From 1981Fl06 for level up to 2617. Above this, levels are reported in 1988Ch29 only. L assignment is from DWBA analysis of measured cross sections (1981Fl06, 1988Ch29).
‡ Enhancement factor (ε) (1981Fl06) defined as σ(exp)=9.7ε×N×σ(DWBA) with N=22.
# Ay(θ) measured for this level (1980Fl03, also 1980Br10).