^{198}Pt(α,t) 1978Mu08,1980AtZZ

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 108, 79 (2007)	15-Oct-2006

1978Mu08 (also 1977MuZD thesis): E=35.1 MeV; magnetic spectrometer, angular distributions measured from 8° to 60°. The authors report 14 groups up to 3570 including four groups above 2863.
Additional information 1.
1980AtZZ: E=30 MeV, magnetic spectrometer, triton spectra measured At 45° and 60°. Relative cross sections accurate to 10% and absolute cross sections to 20%. Ratios of cross sections for (^{3}He,d) and (α,t) used to estimate L transfer. The spectrum shown by 1980AtZZ shows almost all the groups that are present in their (^{3}He,d) spectrum. A total of 29 groups are reported up to 2863 keV.
See also ^{198}Pt(^{3}He,d) data set for L assignments, spectroscopic factors and possible configurations.

^{199}Au Levels

E(level)[†]	L[@]	$\sigma(\alpha,t)/\sigma(^3He,d)$[‡]	Comments
0	(2)	0.91	dσ/dΩ(20°)=73 μb/sr 9 (1977MuZD). $\sigma(\alpha,t)(45°)/\sigma(^3He,d)(30°)$=10 (1980AtZZ).
79	0	0.16	Additional information 2. dσ/dΩ(20°)=23 μb/sr 5 (1977MuZD).
319	(2)	1.13	Additional information 3. dσ/dΩ(20°)=26 μb/sr 5 (1977MuZD).
543	(2+5)	2.0	Additional information 4. E(level): doublet: 5/2[543] and 11/2[549] states. dσ/dΩ(20°)=210 μb/sr 15 (1977MuZD). $\sigma(\alpha,t)(60°)/\sigma(^3He,d)(30°)$=10 (1980AtZZ).
733[a]		2.2[#]	
787[a]		10[#]	
815	0	0.34	Additional information 5. dσ/dΩ(20°)=73 μb/sr 15 (1977MuZD). $\sigma(\alpha,t)(45°)/\sigma(^3He,d)(30°)$=3.2 (1980AtZZ).
1159[a]			
1183[a]		1.7[#]	
1245[a]		6.2[#]	
1314		3.2[#]	E(level): 1335 In 1978Mu08 probably the same level As 1314 In 1980AtZZ. $\sigma(\alpha,t)(20°)/\sigma(^3He,d)(20°)$=0.8 (1978Mu08).
1542		1.4[#]	E(level): see comment for 1563 level.
1563		1.7[#]	E(level): 1580 In 1978Mu08 probably the same level As 1542+1563 In 1980AtZZ. $\sigma(\alpha,t)(20°)/\sigma(^3He,d)(20°)$=0.8 (1978Mu08).
1696[a]		2.8[#]	
1729[a]			
1803[a]			
1861	(5)	14[#]	E(level): 1910 In 1978Mu08 corresponds to 1861 (and possibly 1890 also) In 1980AtZZ. dσ/dΩ(20°)=581 μb/sr 24 (1977MuZD). $\sigma(\alpha,t)/\sigma(^3He,d)$=5.0 (1978Mu08).
1890			E(level): see comment for 1861 level.
2112[a]		3.0[#]	
2221[a]		2.6[#]	
2324[a]		5.0[#]	
2374		2.2[#]	E(level): 2390 In 1978Mu08 probably the same level As 2374 In 1980AtZZ.
2412[a]			
2484[a]			

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^{198}Pt(α,t) 1978Mu08,1980AtZZ (continued)

^{199}Au Levels (continued)

E(level)[†]	L[@]	$\sigma(\alpha,t)/\sigma(^3He,d)$[‡]	Comments
2512	(3)	1.19	E(level): 2540 In 1978Mu08 probably the same level As 2512 In 1980AtZZ. L: for 2540+2650 (1977MuZD). $d\sigma/d\Omega(20°)$=157 μb/sr 44 (1977MuZD) for 2540+2650.
2592			E(level): 2650 In 1978Mu08 possibly the same level As 2592 In 1980AtZZ.
2734		2.4[#]	
2795		2.9[#]	E(level): 2940 In 1978Mu08 probably the same level As 2795 In 1980AtZZ.
2863		2.6[#]	
3130[&]	(3)	0.64	$d\sigma/d\Omega(20°)$=128 μb/sr 35 (1977MuZD).
3400[&]	(6)	5.6	$d\sigma/d\Omega(20°)$=128 μb/sr 33 (1977MuZD).
3570[&]			

[†] From 1980AtZZ. The values from 1978Mu08 agree up to about 1300 keV with those from 1980AtZZ. Above 1300, the values in 1978Mu08 are consistently higher than those in 1980AtZZ, for example 1861 in 1980AtZZ is 1910 in 1978Mu08. At the far end the difference may be as much as 100 keV. The values from 1980AtZZ are adopted here for two reasons: 1. the resolution seems somewhat better in 1980AtZZ and a larger number of groups is seen; 2. 1980AtZZ state that they measured energies at two different facilities (McMaster and Rochester) and essentially obtained the same energies.

[‡] From 1978Mu08 At 20°, unless otherwise stated. Corresponding values from 1980AtZZ are listed under comments.

[#] From 1980AtZZ; ratio for (α,t) At 45°, (^{3}He,d) At 30°.

[@] From $\sigma(\theta)$ and DWBA (1977MuZD). In (α,t), except for L=0, other distributions are not very sensitive to different L values, thus these are considered (by the evaluator) As tentative.

[&] From 1978Mu08 only. Due to possible calibration problems in 1978Mu08, the quoted energy may be too high by as much as 100 keV.

[a] From 1980AtZZ only.