^{197}Au(p,d) 1993Ro12,1969Ya08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong	NDS 108, 1093 (2007)	1-Jan-2006

1993Ro12: E(p)=25 MeV. Split-pole magnetic spectrometer, FWHM=12 keV. Measured angular distribution from 5° to 60°. Estimated S and L from DWBA fits to data.
1969Ya08: E(p)=55.07 MeV. Spectrometer, energy resolution=0.16%. Measured angular distribution from 5° to 50°.
Q(p)=5.6 *5* MeV (1965Is06).

^{196}Au Levels

S(β),L(β) For 1263+1269+1277 levels, L=1, C^2S=0.04.
S(C),L(C) For 1288+1296 levels, L=3, C^2S=0.28.
S(D),L(D) For 1308+1315 levels, L=3, C^2S=0.15 (corrected by evaluators).
S(E),L(E) For 1528+1534 levels, L=(3), C^2S=0.10.

E(level)	J^{π}‡	L#	C^2S@	Comments
0.0	2^-	1	0.51	C^2S: S=0.40 for ν $p_{1/2}$ (1969Ya08).
39 *4*		1	0.03	
82 *4*		6	0.70	
162 *4*	(1^-)	1	1.01	
192 *4*		1	0.10	
209 *4*	(4^-)	3	0.79	E(level): E=190 *20* (1969Ya08). C^2S: S=3.5 for ν $f_{5/2}$ (1969Ya08).
230 *4*	(3^-)	3	0.30	
250† *4*		1+3	0.13+0.33	
284† *4*		(1)+3	0.01+0.10	
305† *4*		1	0.14	
325 *4*		1	0.03	
353† *4*		1+6	0.03+0.27	
360 *20*		6	11.6	C^2S: S=11.6 for ν $i_{13/2}$ (1969Ya08).
377 *4*	(2^-)	1+6	0.36+1.07	
405† *4*	(4^-)	1+3	0.03+0.22	
424† *4*		6	1.65	
460† *4*		1	0.02	
482 *4*		(3)	0.05	
493† *4*		1	0.03	
511 *10*		(6)	0.23	
521 *4*		3	0.11	
543 *4*		1	0.02	
558 *10*		(1)	0.01	
566† *4*		1+3	0.03+0.16	
580 *20*		1		C^2S: S=1.5 for ν $p_{3/2}$ (1969Ya08).
589† *4*		6	0.95	
599 *4*		6	0.19	
623 *8*		3	0.07	
637† *8*		1	0.03	
650 *8*		1	0.02	
655 *8*		3	0.06	
667† *8*		1	0.02	
682† *8*		3	0.14	
691† *8*		3	0.06	

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^{197}Au(p,d) 1993Ro12,1969Ya08 (continued)

^{196}Au Levels (continued)

E(level)	L[#]	C^2S[@]	Comments
706 *8*	1	0.01	
710 *8*	3	0.10	
720 *10*	1	0.02	
735[†] *8*	1	0.03	
750 *8*	3	0.14	
786[†] *8*	1	0.03	
802[†] *10*	3	0.10	
811 *8*	1+6	0.01+0.08	
817 *8*	3	0.07	
839 *8*	6	0.29	
840 *20*	(1)		C^2S: S=0.72 for ν $p_{3/2}$ (1969Ya08).
851[†] *8*	3+6	0.22+0.20	
882[†] *8*	1	0.03	
893[†] *8*	1+6	0.03+0.10	
903 *10*	3	0.10	
938 *8*	3	0.20	
948 *10*	(6)	0.43	
954 *8*	1	0.02	
970 *8*	(3)	0.11	
988[†] *8*	3+6	0.53+0.50	
1000 *20*	3		C^2S: S=1.7 for ν $f_{7/2}$ (1969Ya08).
1018 *8*	1	0.03	
1025 *8*	3	0.10	
1043 *8*	1	0.02	
1086 *8*	3	0.53	
1096 *10*			
1100 *20*	(1)		C^2S: S=(0.96) for ν $p_{3/2}$ (1969Ya08).
1105 *8*	1	0.01	
1112 *8*	3	0.08	
1119 *8*	1	0.05	
1130 *8*	1+6	0.01+0.30	
1141 *8*	3	0.10	
1147 *8*	1	0.02	
1187 *8*	1	0.16	
1205 *8*	3	0.14	
1221 *8*	1	0.05	
1237 *8*			
1246 *8*	1	0.06	
1254 *8*	3	0.10	
1263 *8*	1	0.04	
1269 *8*	1	0.04	
1277 *8*	1	0.04	
1288 *8*	3	0.28	
1296 *8*	3	0.28	
1308 *8*	3	0.15	
1315 *8*	3	0.15	
1320 *20*	3		C^2S: S=2.2 for ν $f_{7/2}$ (1969Ya08).
1327 *8*	1	0.02	
1335 *10*	3	0.09	
1354 *8*	3	0.33	
1384 *8*	3	0.06	
1391 *8*	(1)	0.02	
1399 *8*	(3)	0.07	
1408 *8*	(1)	0.02	

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^{197}Au(p,d) 1993Ro12,1969Ya08 (continued)

^{196}Au Levels (continued)

E(level)	L[#]	C^2S[@]	Comments
1421 *8*	1	0.01	
1462 *8*			
1476 *8*	3	0.14	
1483 *8*	6	0.30	
1495 *8*	1	0.02	
1505 *8*	1	0.03	
1513 *8*	(3)	0.11	
1528 *8*	(3)	0.10	C^2S: S=7.8 for ν $h_{9/2}$ (1969Ya08).
1534 *8*	(3)	0.10	
1555 *8*	3	0.10	
1586 *8*			
1720 *20*	3	&	
1880 *20*	3	*a*	

† Possible unresolved doublet.
‡ J^π values are tentative from similarities with level energies in ^{196}Au and ^{198}Au.
# From DWBA analysis of $\sigma(\theta)$. L=1, 3, and 6 are assumed to be 3p3/2, 2f5/2, and 1i13/2 except for the ground state ($3p_{1/2}$).
@ From comparison of the appropriately normalized average angular distributions with DWBA calculations.
$C^2S=((2J+1)/N)\times(d\sigma/d\Omega(exp)/d\sigma/d\Omega(DWBA))$ with N=2.3.
& S=1.7 for ν f7/2 (1969Ya08).
a S=0.88 for ν f7/2 (1969Ya08).