^{197}Au(n,γ):res:tac 2010Ma18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

2010Ma18: E=1 eV-1 MeV; Measured E_R, Γ_n, Γ_γ, $g\Gamma_n\Gamma_\gamma/\Gamma$ using TAC 4π detector at the neutron time-of-flight facility, n_TOF at CERN. The neutron beam was produced by spallation induced by a 20 GeV/c proton beam impinging on Pb target. Analyzed the resonance energies in the resolved resonance region of the spectrum.
$J^\pi(^{197}$Au g.s.)=$3/2^+$.

^{198}Au Levels

E(level)[†]	J$^\pi$[b]	L	g(Γ_n)(Γ_γ)/Γ (meV)[‡]	Comments
S(n)+0.00491	2^+	0	8.5	Γ_n=0.0152 eV; Γ_γ=0.124 eV E(n)=0.004905 keV.
S(n)+0.03607?				
S(n)+0.04663	1^+	0	0.082 *3*	Γ_n=0.000220 eV *8*; Γ_γ=0.128 eV
S(n)+0.05802	1^+	0	1.60 *2*	Γ_n=0.00443 eV *5*; Γ_γ=0.112 eV
S(n)+0.06023[#]	2^+	0	27.36 *9*	Γ_n=0.0727 eV *4*; Γ_γ=0.110 eV
S(n)+0.07844	1^+	0	5.48 *5*	Γ_n=0.0166 eV *2*; Γ_γ=0.120 eV
S(n)+0.1070	2^+	0	4.63 *5*	Γ_n=0.0079 eV *1*; Γ_γ=0.110 eV
S(n)+0.1222	2^+	0	0.55 *2*	Γ_n=0.00089 eV *3*; Γ_γ=0.128 eV
S(n)+0.1443	1^+	0	3.08 *5*	Γ_n=0.0088 eV *2*; Γ_γ=0.120 eV
S(n)+0.1513[&]	2^+	0	12.2 *2*	Γ_n=0.0227 eV *4*; Γ_γ=0.141 eV *5*
S(n)+0.1629[&]	1^+	0	13.6 *3*	Γ_n=0.046 eV *1*; Γ_γ=0.170 eV *7*
S(n)+0.1650	2^+	0	5.24 *9*	Γ_n=0.0091 eV *2*; Γ_γ=0.109 eV
S(n)+0.1899[#]	1^+	0	13.2 *2*	Γ_n=0.0481 eV *9*; Γ_γ=0.130 eV
S(n)+0.2090[&]	1^+	0	0.32 *3*	Γ_n=0.00087 eV *9*; Γ_γ=0.19 eV *6*
S(n)+0.2404[&]	2^+	0	27.9 *16*	Γ_n=0.082 eV *7*; Γ_γ=0.098 eV *7*
S(n)+0.2554[&]	1^+	0	0.22 *3*	Γ_n=0.00058 eV *9*; Γ_γ=0.12 eV *6*
S(n)+0.2621[&]	1^+	0	24.6 *6*	Γ_n=0.167 eV *8*; Γ_γ=0.108 eV *3*
S(n)+0.2737	2^+	0	3.0 *1*	Γ_n=0.0050 eV *2*; Γ_γ=0.110 eV
S(n)+0.2932[&]	2^+	0	57.9 *7*	Γ_n=0.336 eV *7*; Γ_γ=0.128 eV *2*
S(n)+0.3292[#]	2^+	0	20.2 *4*	Γ_n=0.042 eV *1*; Γ_γ=0.137 eV
S(n)+0.3306[#]	1^+	0	15.3 *4*	Γ_n=0.059 eV *2*; Γ_γ=0.130 eV
S(n)+0.3553	2^+	0	18.13 *4*	Γ_n=0.0378 eV *10*; Γ_γ=0.125 eV
S(n)+0.3709[#]	2^+	0	31.3 *6*	Γ_n=0.101 eV *4*; Γ_γ=0.099 eV
S(n)+0.3754	1^+	0	4.3 *2*	Γ_n=0.0125 eV *6*; Γ_γ=0.125 eV
S(n)+0.3818[#]	2^+	0	25.5 *5*	Γ_n=0.070 eV *2*; Γ_γ=0.097 eV
S(n)+0.4001	2^+	0	3.8 *2*	Γ_n=0.0064 eV *4*; Γ_γ=0.128 eV
S(n)+0.4013	1^+	0	7.9 *3*	Γ_n=0.025 eV *1*; Γ_γ=0.140 eV
S(n)+0.4401[@]	1^+	0	33.1 *6*	Γ_n=0.2814 eV; Γ_γ=0.129 eV *3*
S(n)+0.4508[#]	2^+	0	26.0 *6*	Γ_n=0.67 eV *2*; Γ_γ=0.110 eV
S(n)+0.4771[@]	2^+	0	52.8 *8*	Γ_n=0.2961 eV; Γ_γ=0.118 eV *3*
S(n)+0.4895[#]	1^+	0	15.1 *4*	Γ_n=0.57 eV *2*; Γ_γ=0.138 eV
S(n)+0.4936	2^+	0	13.3 *4*	Γ_n=0.0264 eV *10*; Γ_γ=0.111 eV
S(n)+0.5336	2^+	0	16.2 *2*	Γ_n=0.0325 eV *5*; Γ_γ=0.130 eV
S(n)+0.5481[#]	1^+	0	15.4 *2*	Γ_n=0.061 eV *1*; Γ_γ=0.127 eV
S(n)+0.5612	2^+	0	1.52 *7*	Γ_n=0.0025 eV *1*; Γ_γ=0.128 eV
S(n)+0.5785[@]	2^+	0	56.7 *5*	Γ_n=0.2884 eV; Γ_γ=0.132 eV *2*
S(n)+0.5804[@]	1^+	0	28.9 *4*	Γ_n=0.3068 eV; Γ_γ=0.103 eV *2*
S(n)+0.5863	2^+	0	12.0 *2*	Γ_n=0.0224 eV *4*; Γ_γ=0.134 eV
S(n)+0.6024[@]	2^+	0	47.0 *4*	Γ_n=0.2239 eV; Γ_γ=0.113 eV *1*

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[b]	L	g(Γ_n)(Γ_γ)/Γ (meV)[‡]	Comments
S(n)+0.6169[#]	1$^+$	0	23.5 *3*	Γ_n=0.117 eV *3*; Γ_γ=0.135 eV
S(n)+0.6241[#]	1$^+$	0	13.9 *2*	Γ_n=0.053 eV *1*; Γ_γ=0.121 eV
S(n)+0.6279	2$^+$	0	13.4 *2*	Γ_n=0.0253 eV *4*; Γ_γ=0.138 eV
S(n)+0.6383[@]	2$^+$	0	58.9 *5*	Γ_n=0.464 eV; Γ_γ=0.118 eV *1*
S(n)+0.6584	2$^+$	0	2.8 *1*	Γ_n=0.0047 eV *2*; Γ_γ=0.097 eV
S(n)+0.6856	1$^+$	0	6.12 *15*	Γ_n=0.0187 eV *5*; Γ_γ=0.128 eV
S(n)+0.6953	1$^+$	0	40.3 *5*	Γ_n=0.6667 eV; Γ_γ=0.128 eV *2*
S(n)+0.6985	2$^+$	0	62.2 *6*	Γ_n=0.7361 eV; Γ_γ=0.115 eV *1*
S(n)+0.7152[&]	2$^+$	0	35 *2*	Γ_n=0.106 eV *10*; Γ_γ=0.120 eV *5*
S(n)+0.7380	1$^+$	0	3.90 *14*	Γ_n=0.0113 eV *4*; Γ_γ=0.120 eV
S(n)+0.7595	1$^+$	0	34.2 *4*	Γ_n=0.4267 eV; Γ_γ=0.116 eV *2*
S(n)+0.7733[@]	1$^+$	0	37.6 *4*	Γ_n=0.4746 eV; Γ_γ=0.127 eV *2*
S(n)+0.7838[#]	2$^+$	0	36.8 *4*	Γ_n=0.102 eV *2*; Γ_γ=0.140 eV
S(n)+0.7955[@]	2$^+$	0	45.7 *4*	Γ_n=0.1776 eV; Γ_γ=0.124 eV *2*
S(n)+0.8128	1$^+$	0	7.4 *2*	Γ_n=0.0234 eV *7*; Γ_γ=0.128 eV
S(n)+0.8190[&]	2$^+$	0	50.6 *13*	Γ_n=0.245 eV *15*; Γ_γ=0.121 eV *3*
S(n)+0.8244[@]	2$^+$	0	59.0 *6*	Γ_n=0.4264 eV; Γ_γ=0.121 eV *2*
S(n)+0.8637	2$^+$	0	10.3 *2*	Γ_n=0.0184 eV; Γ_γ=0.160 eV *20*
S(n)+0.8789[@]	2$^+$	0	13.8 *3*	Γ_n=0.0352 eV; Γ_γ=0.059 eV *3*
S(n)+0.9318[&]	2$^+$	0	58 *1*	Γ_n=0.350 eV *20*; Γ_γ=0.127 eV *2*
S(n)+0.9554	2$^+$	0	3.4 *2*	Γ_n=0.0058 eV *3*; Γ_γ=0.128 eV
S(n)+0.9606[#]	2$^+$	0	25.6 *4*	Γ_n=0.056 eV *1*; Γ_γ=0.150 eV
S(n)+0.9836[&]	2$^+$	0	49 *1*	Γ_n=0.300 eV *20*; Γ_γ=0.106 eV *2*
S(n)+0.9878[#]	2$^+$	0	37.3 *6*	Γ_n=0.095 eV *3*; Γ_γ=0.160 eV g(Γ_n)(Γ_γ)/Γ (meV): should be taken with caution.
S(n)+0.9948[#]	2$^+$	0	61.9 *6*	Γ_n=0.410 eV *20*; Γ_γ=0.130 eV
S(n)+1.0391[#]	1$^+$	0	11.7 *4*	Γ_n=0.041 eV *2*; Γ_γ=0.128 eV
S(n)+1.0426[@]	1$^+$	0	35.8 *6*	Γ_n=0.4854 eV; Γ_γ=0.119 eV *2*
S(n)+1.0632	1$^+$	0	3.8 *2*	Γ_n=0.0111 eV *6*; Γ_γ=0.128 eV
S(n)+1.0773[@]	1$^+$	0	34.0 *6*	Γ_n=0.360 eV; Γ_γ=0.121 eV *3*
S(n)+1.0920[@]	2$^+$	0	48.9 *7*	Γ_n=0.37591 eV; Γ_γ=0.099 eV *2*
S(n)+1.1196	2$^+$	0	6.4 *3*	Γ_n=0.0111 eV *5*; Γ_γ=0.128 eV
S(n)+1.1279	2$^+$	0	14.4 *4*	Γ_n=0.0281 eV *10*; Γ_γ=0.128 eV
S(n)+1.1348[&]	2$^+$	0	58 *2*	Γ_n=0.290 eV *20*; Γ_γ=0.136 eV *4*
S(n)+1.1771	2$^+$	0	3.9 *2*	Γ_n=0.0066 eV *4*; Γ_γ=0.128 eV
S(n)+1.1827[@]	2$^+$	0	54.4 *8*	Γ_n=0.2896 eV; Γ_γ=0.124 eV *3*
S(n)+1.2066[@]	2$^+$	0	52.9 *8*	Γ_n=0.3600 eV; Γ_γ=0.110 eV *2*
S(n)+1.2178	2$^+$	0	12.4 *4*	Γ_n=0.0235 eV *10*; Γ_γ=0.128 eV
S(n)+1.2227[#]	1$^+$	0	37.1 *4*	Γ_n=0.56 eV *3*; Γ_γ=0.120 eV
S(n)+1.2446[#]	1$^+$	0	30.4 *6*	Γ_n=0.220 eV *10*; Γ_γ=0.128 eV
S(n)+1.2526	2$^+$	0	19.7 *5*	Γ_n=0.042 eV *1*; Γ_γ=0.128 eV
S(n)+1.2811	1$^+$	0	35.1 *7*	Γ_n=0.4588 eV; Γ_γ=0.117 eV *3*
S(n)+1.2855	2$^+$	0	8.7 *4*	Γ_n=0.0157 eV *7*; Γ_γ=0.128 eV
S(n)+1.3099[@]	2$^+$	0	46.5 *8*	Γ_n=0.2528 eV; Γ_γ=0.105 eV *3*
S(n)+1.3279	1$^+$	0	39.2 *8*	Γ_n=0.704 eV; Γ_γ=0.122 eV *3*
S(n)+1.3352[#]	2$^+$	0	34.1 *7*	Γ_n=0.094 eV *3*; Γ_γ=0.131 eV
S(n)+1.3535[@]	1$^+$	0	54.4 *10*	Γ_n=0.5921 eV; Γ_γ=0.192 eV *5*
S(n)+1.3589	2$^+$	0	11.3 *4*	Γ_n=0.0210 eV *9*; Γ_γ=0.128 eV

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J^{π}[b]	L	g(Γ_n)(Γ_γ)/Γ (meV)[‡]	Comments
S(n)+1.3669[&]	2^+	0	41 *2*	Γ_n=0.160 eV *10*; Γ_γ=0.111 eV *7*
S(n)+1.3949	2^+	0	16.6 *5*	Γ_n=0.0336 eV *13*; Γ_γ=0.128 eV
S(n)+1.4258[@]	1^+	0	31 *1*	Γ_n=0.2613 eV; Γ_γ=0.123 eV *7*
S(n)+1.4281	2^+	0	54 *1*	Γ_n=0.4247 eV; Γ_γ=0.108 eV *3*
S(n)+1.4495[#]	2^+	0	46.2 *7*	Γ_n=0.310 eV *21*; Γ_γ=0.097 eV
S(n)+1.4688	2^+	0	15.3 *5*	Γ_n=0.0303 eV *13*; Γ_γ=0.128 eV
S(n)+1.4738[#]	1^+	0	25.4 *7*	Γ_n=0.144 eV *8*; Γ_γ=0.128 eV
S(n)+1.4895	2^+	0	86 *2*	Γ_n=1.035 eV; Γ_γ=0.159 eV *3*
S(n)+1.5008	1^+	0	8.5 *4*	Γ_n=0.0274 eV *16*; Γ_γ=0.128 eV
S(n)+1.5295[#]	1^+	0	11.9 *5*	Γ_n=0.042 eV *2*; Γ_γ=0.128 eV
S(n)+1.5514[#]	2^+	0	39.7 *9*	Γ_n=0.120 eV *5*; Γ_γ=0.135 eV
S(n)+1.5684	2^+	0	3.3 *3*	Γ_n=0.0055 eV *4*; Γ_γ=0.128 eV
S(n)+1.5778	1^+	0	39.9 *9*	Γ_n=0.4801 eV; Γ_γ=0.137 eV *4*
S(n)+1.5924[#]	2^+	0	19.1 *6*	Γ_n=0.040 eV *2*; Γ_γ=0.128 eV
S(n)+1.6141[#]	2^+	0	41.7 *10*	Γ_n=0.150 eV *8*; Γ_γ=0.120 eV
S(n)+1.6340	1^+	0	2.7 *2*	Γ_n=0.0077 eV *7*; Γ_γ=0.119 eV *12*
S(n)+1.6408[#]	1^+	0	23.3 *7*	Γ_n=0.121 eV *7*; Γ_γ=0.128 eV
S(n)+1.6454[#]	2^+	0	34.9 *9*	Γ_n=0.099 eV *4*; Γ_γ=0.128 eV
S(n)+1.6587	1^+	0	1.5 *1*	Γ_n=0.0043 eV *4*; Γ_γ=0.128 eV
S(n)+1.6924[#]	2^+	0	39.3 *10*	Γ_n=0.110 eV *5*; Γ_γ=0.148 eV
S(n)+1.7053[@]	2^+	0	53.9 *12*	Γ_n=0.2704 eV; Γ_γ=0.127 eV *4*
S(n)+1.7205	2^+	0	14.7 *6*	Γ_n=0.029 eV *2*; Γ_γ=0.128 eV
S(n)+1.7335[@]	2^+	0	49.4 *12*	Γ_n=0.3152 eV; Γ_γ=0.106 eV *3*
S(n)+1.7535[@]	2^+	0	56 *2*	Γ_n=0.320 eV; Γ_γ=0.123 eV *6*
S(n)+1.7556	1^+	0	38 *2*	Γ_n=0.5679 eV; Γ_γ=0.125 eV *7*
S(n)+1.8108[#]	1^+	0	19.2 *7*	Γ_n=0.086 eV *5*; Γ_γ=0.128 eV
S(n)+1.8207	2^+	0	7.7 *5*	Γ_n=0.0136 eV *9*; Γ_γ=0.128 eV
S(n)+1.8309[#]	1^+	0	17.6 *7*	Γ_n=0.074 eV *5*; Γ_γ=0.128 eV
S(n)+1.8556	1^+	0	44.4 *14*	Γ_n=1.3864 eV; Γ_γ=0.130 eV *5*
S(n)+1.8596[#]	2^+	0	32.8 *10*	Γ_n=0.089 eV *5*; Γ_γ=0.128 eV
S(n)+1.8826[#]	1^+	0	28.1 *8*	Γ_n=0.144 eV *8*; Γ_γ=0.156 eV
S(n)+1.8922	2^+	0	1.8 *2*	Γ_n=0.0029 eV *3*; Γ_γ=0.128 eV
S(n)+1.9127	1^+	0	42.6 *14*	Γ_n=2.450 eV; Γ_γ=0.119 eV *4*
S(n)+1.9390[#]	1^+	0	35.4 *8*	Γ_n=0.36 eV *3*; Γ_γ=0.128 eV
S(n)+1.9595	2^+	0	72.1 *4*	Γ_n=1.16 eV *7*; Γ_γ=0.128 eV
S(n)+2.0211	1^+	0	4.7 *6*	Γ_n=0.014 eV *2*; Γ_γ=0.128 eV
S(n)+2.0280[#]	1^+	0	35.7 *14*	Γ_n=0.37 eV *6*; Γ_γ=0.128 eV
S(n)+2.0323	1^+	0	35 *2*	Γ_n=0.426 eV; Γ_γ=0.118 eV *8*
S(n)+2.0353[#]	2^+	0	45 *2*	Γ_n=0.165 eV *15*; Γ_γ=0.128 eV
S(n)+2.0586	2^+	0	9.7 *7*	Γ_n=0.0176 eV *15*; Γ_γ=0.128 eV
S(n)+2.0749	2^+	0	56 *2*	Γ_n=1.080 eV; Γ_γ=0.098 eV *3*
S(n)+2.0817[#]	2^+	0	52 *2*	Γ_n=0.242 eV *20*; Γ_γ=0.128 eV
S(n)+2.0884[#]	1^+	0	31.7 *12*	Γ_n=0.25 eV *3*; Γ_γ=0.128 eV
S(n)+2.1117[#]	2^+	0	26.6 *11*	Γ_n=0.064 eV *4*; Γ_γ=0.128 eV
S(n)+2.1307	1^+	0	42.4 *7*	Γ_n=0.98 eV *13*; Γ_γ=0.128 eV
S(n)+2.1474	2^+	0	54.5 *16*	Γ_n=0.4912 eV; Γ_γ=0.106 eV *4*
S(n)+2.1538[#]	1^+	0	28.2 *11*	Γ_n=0.183 eV *18*; Γ_γ=0.128 eV
S(n)+2.1929[#]	1^+	0	34.2 *11*	Γ_n=0.32 eV *4*; Γ_γ=0.128 eV
S(n)+2.2233[#]	1^+	0	13.5 *8*	Γ_n=0.050 eV *4*; Γ_γ=0.128 eV

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[b]	L	g(Γ$_n$)(Γ$_\gamma$)/Γ (meV)[‡]	Comments
S(n)+2.2404[#]	2$^+$	0	28.1 *13*	Γ$_n$=0.069 eV *5*; Γ$_\gamma$=0.128 eV
S(n)+2.2781	2$^+$	0	8.0 *7*	Γ$_n$=0.0142 eV *13*; Γ$_\gamma$=0.128 eV
S(n)+2.2864	2$^+$	0	43.0 *14*	Γ$_n$=0.150 eV *10*; Γ$_\gamma$=0.128 eV
S(n)+2.3319[#]	2$^+$	0	49.7 *16*	Γ$_n$=0.210 eV *20*; Γ$_\gamma$=0.128 eV
S(n)+2.3661[#]	2$^+$	0	53 *2*	Γ$_n$=0.250 eV *25*; Γ$_\gamma$=0.128 eV
S(n)+2.3796	2$^+$	0	2.3 *4*	Γ$_n$=0.0038 eV *8*; Γ$_\gamma$=0.128 eV
S(n)+2.4058[#]	2$^+$	0	33.3 *15*	Γ$_n$=0.091 eV *7*; Γ$_\gamma$=0.128 eV
S(n)+2.4145	1$^+$	0	55 *2*	Γ$_n$=1.066 eV; Γ$_\gamma$=0.170 eV *8*
S(n)+2.4191	2$^+$	0	31.2 *18*	Γ$_n$=1.1198 eV; Γ$_\gamma$=0.052 eV *3*
S(n)+2.4400[#]	1$^+$	0	24.3 *12*	Γ$_n$=0.131 eV *13*; Γ$_\gamma$=0.128 eV
S(n)+2.4691	2$^+$	0	52 *2*	Γ$_n$=0.5281 eV; Γ$_\gamma$=0.098 eV *4*
S(n)+2.4981	2$^+$	0	17.5 *12*	Γ$_n$=0.0358 eV *3*; Γ$_\gamma$=0.128 eV
S(n)+2.5077[#]	2$^+$	0	22.5 *13*	Γ$_n$=0.050 eV *4*; Γ$_\gamma$=0.128 eV
S(n)+2.5351[#]	2$^+$	0	29.4 *14*	Γ$_n$=0.074 eV *6*; Γ$_\gamma$=0.128 eV
S(n)+2.5601	2$^+$	0	9.0 *16*	Γ$_n$=0.016 eV *3*; Γ$_\gamma$=0.128 eV
S(n)+2.5768[#]	1$^+$	0	29.7 *16*	Γ$_n$=0.21 eV *3*; Γ$_\gamma$=0.128 eV
S(n)+2.5813	2$^+$	0	6.0 *10*	Γ$_n$=0.0103 eV *19*; Γ$_\gamma$=0.128 eV
S(n)+2.5976[@]	2$^+$	0	46.8 *18*	Γ$_n$=0.256 eV; Γ$_\gamma$=0.106 eV *6*
S(n)+2.6116[@]	2$^+$	0	45.6 *17*	Γ$_n$=0.272 eV; Γ$_\gamma$=0.100 eV *5*
S(n)+2.6280	2$^+$	0	9.4 *17*	Γ$_n$=0.017 eV *3*; Γ$_\gamma$=0.128 eV
S(n)+2.6323	1$^+$	0	2.8 *5*	Γ$_n$=0.0080 eV *16*; Γ$_\gamma$=0.128 eV
S(n)+2.6526	1$^+$	0		
S(n)+2.6838[#]	2$^+$	0	28.7 *15*	Γ$_n$=0.073 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+2.7082[&]	1$^+$	0	41 *4*	Γ$_n$=0.21 eV *3*; Γ$_\gamma$=0.22 eV *3*
S(n)+2.7224[#]	2$^+$	0	44 *2*	Γ$_n$=0.161 eV *15*; Γ$_\gamma$=0.124 eV
S(n)+2.7472[#]	2$^+$	0	34.4 *16*	Γ$_n$=0.099 eV *9*; Γ$_\gamma$=0.124 eV
S(n)+2.7615[#]	2$^+$	0	33.8 *16*	Γ$_n$=0.096 eV *8*; Γ$_\gamma$=0.124 eV
S(n)+2.7748	1$^+$	0	3.8 *6*	Γ$_n$=0.0111 eV *20*; Γ$_\gamma$=0.124 eV
S(n)+2.7905	1$^+$	0	6.6 *11*	Γ$_n$=0.021 eV *4*; Γ$_\gamma$=0.124 eV
S(n)+2.8054	2$^+$	0	44.6 *19*	Γ$_n$=0.168 eV *17*; Γ$_\gamma$=0.124 eV
S(n)+2.8317	2$^+$	0	30.1 *17*	Γ$_n$=0.303 eV; Γ$_\gamma$=0.057 eV *4*
S(n)+2.8495[#]	2$^+$	0	27.3 *15*	Γ$_n$=0.068 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+2.8643[#]	2$^+$	0	43.5 *18*	Γ$_n$=0.158 eV *15*; Γ$_\gamma$=0.124 eV
S(n)+2.8760[#]	2$^+$	0	36.0 *18*	Γ$_n$=0.107 eV *10*; Γ$_\gamma$=0.124 eV
S(n)+2.8961	1$^+$	0		
S(n)+2.9108	1$^+$	0	3.2 *6*	Γ$_n$=0.0092 eV *18*; Γ$_\gamma$=0.124 eV
S(n)+2.9268	2$^+$	0	1.8 *3*	Γ$_n$=0.0029 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+2.9571[#]	1$^+$	0	13.5 *12*	Γ$_n$=0.051 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+2.9851[@]	2$^+$	0	37.3 *19*	Γ$_n$=0.214 eV; Γ$_\gamma$=0.083 eV *6*
S(n)+3.0239[@]	2$^+$	0	57 *4*	Γ$_n$=0.470 eV; Γ$_\gamma$=0.113 eV *10*
S(n)+3.0366	2$^+$	0	67 *4*	Γ$_n$=0.730 eV; Γ$_\gamma$=0.126 eV *9*
S(n)+3.0484[@]	1$^+$	0	30 *3*	Γ$_n$=0.303 eV; Γ$_\gamma$=0.110 eV *16*
S(n)+3.0630	2$^+$	0	2.8 *19*	Γ$_n$=0.0046 eV *32*; Γ$_\gamma$=0.124 eV
S(n)+3.0790[@]	1$^+$	0	28 *3*	Γ$_n$=0.502 eV; Γ$_\gamma$=0.087 eV *12*
S(n)+3.0983[#]	1$^+$	0	12.1 *21*	Γ$_n$=0.044 eV *10*; Γ$_\gamma$=0.124 eV
S(n)+3.1335[@]	2$^+$	0	42 *3*	Γ$_n$=0.216 eV; Γ$_\gamma$=0.097 eV *12*
S(n)+3.1609	1$^+$	0	5.9 *23*	Γ$_n$=0.018 eV *8*; Γ$_\gamma$=0.124 eV
S(n)+3.1742[#]	1$^+$	0	19 *3*	Γ$_n$=0.082 eV *24*; Γ$_\gamma$=0.124 eV
S(n)+3.2002	1$^+$	0	3.0 *24*	Γ$_n$=0.009 eV *7*; Γ$_\gamma$=0.124 eV

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[b]	L	g(Γ_n)(Γ_γ)/Γ (meV)[‡]	Comments
S(n)+3.2148	2$^+$	0	51 *4*	Γ_n=0.330 eV; Γ_γ=0.109 eV *10*
S(n)+3.2540[#]	2$^+$	0	35 *3*	Γ_n=0.103 eV *18*; Γ_γ=0.124 eV
S(n)+3.2583[#]	1$^+$	0	25 *4*	Γ_n=0.15 eV *5*; Γ_γ=0.124 eV
S(n)+3.2687[#]	2$^+$	0	23 *4*	Γ_n=0.051 eV *11*; Γ_γ=0.124 eV
S(n)+3.2782[#]	2$^+$	0	31 *4*	Γ_n=0.080 eV *16*; Γ_γ=0.124 eV
S(n)+3.3023	1$^+$	0		
S(n)+3.3100	2$^+$	0		
S(n)+3.3334	2$^+$	0	55 *6*	Γ_n=0.650 eV; Γ_γ=0.101 eV *12*
S(n)+3.3474	2$^+$	0	83 *5*	Γ_n=0.980 eV; Γ_γ=0.153 eV *11*
S(n)+3.3628[@]	2$^+$	0	43 *4*	Γ_n=0.200 eV; Γ_γ=0.105 eV *16*
S(n)+3.3851[@]	2$^+$	0	47 *5*	Γ_n=0.270 eV; Γ_γ=0.105 eV *15*
S(n)+3.3998	2$^+$	0	77 *6*	Γ_n=0.702 eV; Γ_γ=0.149 eV *14*
S(n)+3.4166	1$^+$	0	1.3 *12*	Γ_n=0.0034 eV *34*; Γ_γ=0.124 eV
S(n)+3.4391	1$^+$	0	7.2 *4*	Γ_n=0.023 eV *13*; Γ_γ=0.124 eV
S(n)+3.4696	2$^+$	0	52 *5*	Γ_n=0.460 eV; Γ_γ=0.102 eV *12*
S(n)+3.4893[#]	1$^+$	0	18 *4*	Γ_n=0.076 eV *25*; Γ_γ=0.124 eV
S(n)+3.5119[#]	2$^+$	0	37 *4*	Γ_n=0.113 eV *23*; Γ_γ=0.124 eV
S(n)+3.5189[#]	1$^+$	0	20 *4*	Γ_n=0.09 eV *3*; Γ_γ=0.124 eV
S(n)+3.5403[#]	2$^+$	0	31 *4*	Γ_n=0.083 eV *18*; Γ_γ=0.124 eV
S(n)+3.5487	2$^+$	0	70 *7*	Γ_n=0.980 eV; Γ_γ=0.126 eV *14*
S(n)+3.5656[@]	2$^+$	0	39 *4*	Γ_n=0.236 eV; Γ_γ=0.086 eV *13*
S(n)+3.5939	2$^+$	0	101 *6*	Γ_n=1.650 eV; Γ_γ=0.178 eV *12*
S(n)+3.6377[@]	2$^+$	0	50 *5*	Γ_n=0.450 eV; Γ_γ=0.097 eV *12*
S(n)+3.6521	2$^+$	0	3.6 *18*	Γ_n=0.006 eV *3*; Γ_γ=0.124 eV
S(n)+3.6711[#]	1$^+$	0	17 *4*	Γ_n=0.069 eV *28*; Γ_γ=0.124 eV
S(n)+3.6904[#]	2$^+$	0	29 *4*	Γ_n=0.073 eV *18*; Γ_γ=0.124 eV
S(n)+3.6957	1$^+$	0	4.9 *22*	Γ_n=0.015 eV *7*; Γ_γ=0.124 eV
S(n)+3.7085[#]	1$^+$	0	13 *4*	Γ_n=0.047 eV *21*; Γ_γ=0.124 eV
S(n)+3.7276[@]	2$^+$	0	48 *6*	Γ_n=0.413 eV; Γ_γ=0.095 eV *13*
S(n)+3.7439	1$^+$	0	8 *4*	Γ_n=0.024 eV *15*; Γ_γ=0.124 eV
S(n)+3.7597	1$^+$	0	11 *3*	Γ_n=0.040 eV *16*; Γ_γ=0.124 eV
S(n)+3.7624	2$^+$	0	7 *4*	Γ_n=0.013 eV *8*; Γ_γ=0.124 eV
S(n)+3.7894	1$^+$	0	1.5 *12*	Γ_n=0.0041 eV *35*; Γ_γ=0.124 eV
S(n)+3.8070[@]	2$^+$	0	35 *5*	Γ_n=0.217 eV; Γ_γ=0.074 eV *14*
S(n)+3.8413	2$^+$	0	58 *5*	Γ_n=0.525 eV; Γ_γ=0.114 eV *12*
S(n)+3.8631	1$^+$	0	10 *4*	Γ_n=0.032 eV *17*; Γ_γ=0.124 eV
S(n)+3.8716[@]	2$^+$	0	50 *7*	Γ_n=0.384 eV; Γ_γ=0.100 eV *17*
S(n)+3.8877	2$^+$	0	55 *6*	Γ_n=0.600 eV; Γ_γ=0.104 eV *13*
S(n)+3.9139	2$^+$	0	82 *7*	Γ_n=0.925 eV; Γ_γ=0.154 eV *15*
S(n)+3.9398	2$^+$	0	85 *7*	Γ_n=1.092 eV; Γ_γ=0.154 eV *15*
S(n)+3.9644[@]	2$^+$	0	37 *6*	Γ_n=0.268 eV; Γ_γ=0.076 eV *16*
S(n)+3.9819	2$^+$	0	51 *7*	Γ_n=1.270 eV; Γ_γ=0.087 eV *13*
S(n)+3.9869[#]	1$^+$	0	15 *4*	Γ_n=0.058 eV *25*; Γ_γ=0.124 eV
S(n)+3.9993[#]	2$^+$	0	16 *11*	Γ_n=0.032 eV *28*; Γ_γ=0.124 eV
S(n)+4.0366	2$^+$	0	62 *9*	Γ_n=0.918 eV; Γ_γ=0.110 eV *18*
S(n)+4.0467	1$^+$	0		
S(n)+4.0729	1$^+$	0	8 *3*	Γ_n=0.024 eV *13*; Γ_γ=0.124 eV
S(n)+4.0859	2$^+$	0	82 *8*	Γ_n=0.997 eV; Γ_γ=0.150 eV *17*
S(n)+4.1268	2$^+$	0	90 *7*	Γ_n=0.846 eV; Γ_γ=0.174 eV *16*
S(n)+4.1373[@]	1$^+$	0	19 *6*	Γ_n=0.291 eV; Γ_γ=0.060 eV *22*

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[b]	L	g(Γ_n)(Γ_γ)/Γ (meV)[‡]	Comments
S(n)+4.1641[#]	2$^+$	0	30 *5*	Γ_n=0.078 eV *22*; Γ_γ=0.124 eV
S(n)+4.1709[#]	2$^+$	0	29 *6*	Γ_n=0.075 eV *24*; Γ_γ=0.124 eV
S(n)+4.2329	2$^+$	0	20 *5*	Γ_n=0.042 eV *14*; Γ_γ=0.124 eV
S(n)+4.2481	2$^+$	0	42 *5*	Γ_n=0.465 eV; Γ_γ=0.078 eV *12*
S(n)+4.2734[#]	1$^+$	0	15 *4*	Γ_n=0.062 eV *25*; Γ_γ=0.124 eV
S(n)+4.2889[#]	2$^+$	0	24 *6*	Γ_n=0.054 eV *19*; Γ_γ=0.124 eV
S(n)+4.3006	2$^+$	0	45 *7*	Γ_n=0.470 eV; Γ_γ=0.085 eV *16*
S(n)+4.3154	2$^+$	0	41 *7*	Γ_n=0.350 eV; Γ_γ=0.082 eV *18*
S(n)+4.3323[#]	2$^+$	0	44 *6*	Γ_n=0.16 eV *5*; Γ_γ=0.124 eV
S(n)+4.3556	1$^+$	0	20 *7*	Γ_n=0.18 eV *9*; Γ_γ=0.079 eV *33*
S(n)+4.3644[#]	2$^+$	0	34 *7*	Γ_n=0.09 eV *3*; Γ_γ=0.124 eV
S(n)+4.3886	1$^+$	0	21 *6*	Γ_n=0.334 eV; Γ_γ=0.066 eV *24*
S(n)+4.4222	2$^+$	0	58 *8*	Γ_n=0.455 eV; Γ_γ=0.118 eV *21*
S(n)+4.4358[#]	2$^+$	0	33 *10*	Γ_n=0.09 eV *4*; Γ_γ=0.12 eV *5*
S(n)+4.4552[#]	1$^+$	0	17 *5*	Γ_n=0.07 eV *3*; Γ_γ=0.124 eV
S(n)+4.5212[@]	2$^+$	0	52 *7*	Γ_n=0.440 eV; Γ_γ=0.103 eV *16*
S(n)+4.5357[@]	1$^+$	0	35 *7*	Γ_n=0.415 eV; Γ_γ=0.12 eV *3*
S(n)+4.5417[#]	2$^+$	0	31 *6*	Γ_n=0.082 eV *28*; Γ_γ=0.124 eV
S(n)+4.5518[#]	1$^+$	0	20 *4*	Γ_n=0.09 eV *3*; Γ_γ=0.124 eV
S(n)+4.5726	2$^+$	0	41 *9*	Γ_n=0.484 eV; Γ_γ=0.075 eV *19*
S(n)+4.5898[#]	2$^+$	0	27 *6*	Γ_n=0.067 eV *22*; Γ_γ=0.124 eV
S(n)+4.6109	1$^+$	0	11 *5*	Γ_n=0.037 eV *20*; Γ_γ=0.124 eV
S(n)+4.6266	2$^+$	0	3.0 *18*	Γ_n=0.005 eV *3*; Γ_γ=0.124 eV
S(n)+4.6656	2$^+$	0	54 *8*	Γ_n=0.970 eV; Γ_γ=0.094 eV *16*
S(n)+4.6840[#]	2$^+$	0	42 *6*	Γ_n=0.15 eV *5*; Γ_γ=0.124 eV
S(n)+4.6959[#]	1$^+$	0	15 *5*	Γ_n=0.06 eV *3*; Γ_γ=0.124 eV
S(n)+4.7135[#]	1$^+$	0	23 *6*	Γ_n=0.12 eV *6*; Γ_γ=0.124 eV
S(n)+4.7324[#]	2$^+$	0	24 *6*	Γ_n=0.055 eV *19*; Γ_γ=0.124 eV
S(n)+4.7662[#]	2$^+$	0	28 *7*	Γ_n=0.068 eV *27*; Γ_γ=0.124 eV
S(n)+4.7804[@]	2$^+$	0	35 *9*	Γ_n=0.283 eV; Γ_γ=0.069 eV *22*
S(n)+4.7893[#]	2$^+$	0	39 *7*	Γ_n=0.123 eV *44*; Γ_γ=0.124 eV
S(n)+4.8008[#]	1$^+$	0	11 *4*	Γ_n=0.039 eV *18*; Γ_γ=0.124 eV
S(n)+4.8288[#]	2$^+$	0	41 *9*	Γ_n=0.25 eV *13*; Γ_γ=0.088 eV *22*
S(n)+4.8691?[a]			36 *8*	
S(n)+4.8804?[a]			42 *7*	
S(n)+4.8922?[a]			69 *19*	
S(n)+4.9157?[a]			67 *20*	
S(n)+4.9440?[a]			65 *18*	
S(n)+5.0004?[a]			41 *12*	
S(n)+5.0122?[a]			31 *6*	

[†] S(n)=6512.34 *9* (2012Wa38). Neutron energies are in the lab system. The absolute excitation energies can be obtained as follows: S(n)+E(n) in c.m. system, where S(n)=6512.34 *9*, E(n) in c.m. system=(197/198)(E(n) in lab system).
[‡] g=statistical weight factor; g=3/8 for J=1 and 5/8 for J=2 resonances.
[#] Γ_n parameter should be taken with caution.
[@] Γ_γ parameter should be taken with caution.

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^{197}Au(n,γ):res:tac 2010Ma18 (continued)

^{198}Au Levels (continued)

& Γ_n and Γ_γ parameters should be taken with caution.
[a] Average value from TAC and C_6D_6 data.
[b] From L-value In neutron resonances.