^{197}Au(n,γ):res:C6D6 2010Ma18

History

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

2010Ma18: E(n)=1 eV-1 MeV; Measured E_R, Γ_n, Γ_γ, $g\Gamma_n\Gamma_\gamma/\Gamma$ using two C_6D_6 liquid scintillator detectors 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^π(^{197}Au g.s.)=3/2$^+$.

^{198}Au Levels

E(level)[†]	J$^\pi$[c]	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	0.084 *2*	Γ_n=0.000223 eV *6*; Γ_γ=0.128 eV
S(n)+0.05802	1$^+$	0	1.57 *2*	Γ_n=0.00434 eV *5*; Γ_γ=0.112 eV
S(n)+0.06023[#]	2$^+$	0	27.63 *12*	Γ_n=0.0739 eV *3*; Γ_γ=0.110 eV
S(n)+0.07844	1$^+$	0	5.81 *6*	Γ_n=0.01779 eV *18*; Γ_γ=0.120 eV
S(n)+0.1070	2$^+$	0	4.82 *6*	Γ_n=0.00829 eV *10*; Γ_γ=0.110 eV
S(n)+0.1222	2$^+$	0	0.53 *1*	Γ_n=0.00086 eV *2*; Γ_γ=0.128 eV
S(n)+0.1443	1$^+$	0	3.25 *5*	Γ_n=0.00935 eV *15*; Γ_γ=0.120 eV
S(n)+0.1513[&]	2$^+$	0	11.8 *6*	Γ_n=0.0216 eV *4*; Γ_γ=0.150 eV *5*
S(n)+0.1629[&]	1$^+$	0	13.1 *8*	Γ_n=0.0425 eV *11*; Γ_γ=0.197 eV *8*
S(n)+0.1650	2$^+$	0	5.02 *8*	Γ_n=0.00867 eV *14*; Γ_γ=0.109 eV
S(n)+0.1899[#]	1$^+$	0	13.5 *2*	Γ_n=0.0498 eV *9*; Γ_γ=0.130 eV
S(n)+0.2090[&]	1$^+$	0	0.32 *7*	Γ_n=0.00086 eV *4*; Γ_γ=0.18 eV *3*
S(n)+0.2404[&]	2$^+$	0	29.0 *10*	Γ_n=0.0866 eV *21*; Γ_γ=0.0996 eV *19*
S(n)+0.2554[&]	1$^+$	0	0.19 *8*	Γ_n=0.00050 eV *5*; Γ_γ=0.13 eV *4*
S(n)+0.2621[&]	1$^+$	0	25.6 *9*	Γ_n=0.152 eV *4*; Γ_γ=0.1240 eV *24*
S(n)+0.2737	2$^+$	0	2.65 *7*	Γ_n=0.00441 eV *12*; Γ_γ=0.110 eV
S(n)+0.2932[&]	2$^+$	0	57.0 *12*	Γ_n=0.348 eV *5*; Γ_γ=0.1236 eV *15*
S(n)+0.3292[#]	2$^+$	0	19.9 *5*	Γ_n=0.0415 eV *10*; Γ_γ=0.137 eV
S(n)+0.3306[#]	1$^+$	0	14.7 *5*	Γ_n=0.0562 eV *18*; Γ_γ=0.130 eV
S(n)+0.3553	2$^+$	0	18.1 *4*	Γ_n=0.0376 eV *9*; Γ_γ=0.125 eV
S(n)+0.3709[#]	2$^+$	0	32.4 *12*	Γ_n=0.109 eV *4*; Γ_γ=0.099 eV
S(n)+0.3754	1$^+$	0	4.21 *14*	Γ_n=0.0123 eV *4*; Γ_γ=0.125 eV
S(n)+0.3818[#]	2$^+$	0	26.2 *9*	Γ_n=0.0739 eV *24*; Γ_γ=0.097 eV
S(n)+0.4001	2$^+$	0	3.63 *14*	Γ_n=0.00608 eV *23*; Γ_γ=0.128 eV
S(n)+0.4013	1$^+$	0	8.2 *3*	Γ_n=0.0258 eV *8*; Γ_γ=0.140 eV
S(n)+0.4401[@]	1$^+$	0	36.6 *8*	Γ_n=0.2814 eV; Γ_γ=0.149 eV *3*
S(n)+0.4508[#]	2$^+$	0	25.2 *8*	Γ_n=0.0637 eV *20*; Γ_γ=0.110 eV
S(n)+0.4771[@]	2$^+$	0	54.9 *10*	Γ_n=0.2961 eV; Γ_γ=0.1249 eV *22*
S(n)+0.4895[#]	1$^+$	0	16.1 *6*	Γ_n=0.0622 eV *21*; Γ_γ=0.138 eV
S(n)+0.4936	2$^+$	0	14.2 *4*	Γ_n=0.0285 eV *8*; Γ_γ=0.111 eV
S(n)+0.5336	2$^+$	0	16.0 *5*	Γ_n=0.0318 eV *10*; Γ_γ=0.130 eV
S(n)+0.5481[#]	1$^+$	0	15.0 *6*	Γ_n=0.0586 eV *22*; Γ_γ=0.127 eV
S(n)+0.5612	2$^+$	0	1.49 *12*	Γ_n=0.00244 eV *19*; Γ_γ=0.128 eV
S(n)+0.5785[@]	2$^+$	0	54.8 *14*	Γ_n=0.2884 eV; Γ_γ=0.126 eV *3*
S(n)+0.5804[@]	1$^+$	0	32.7 *11*	Γ_n=0.3068 eV; Γ_γ=0.122 eV *4*
S(n)+0.5863	2$^+$	0	12.0 *4*	Γ_n=0.0224 eV *8*; Γ_γ=0.134 eV
S(n)+0.6024[@]	2$^+$	0	46.8 *11*	Γ_n=0.2239 eV; Γ_γ=0.113 eV *3*

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[c]	L	g(Γ$_n$)(Γ$_\gamma$)/Γ (meV).[‡]	Comments
S(n)+0.6169[#]	1$^+$	0	22.9 *12*	Γ$_n$=0.111 eV *5*; Γ$_\gamma$=0.135 eV
S(n)+0.6241[#]	1$^+$	0	13.9 *6*	Γ$_n$=0.0534 eV *23*; Γ$_\gamma$=0.121 eV
S(n)+0.6279	2$^+$	0	13.1 *5*	Γ$_n$=0.0247 eV *8*; Γ$_\gamma$=0.138 eV
S(n)+0.6383[@]	2$^+$	0	59.0 *13*	Γ$_n$=0.4640 eV; Γ$_\gamma$=0.1185 eV *25*
S(n)+0.6584	2$^+$	0	2.52 *18*	Γ$_n$=0.0042 eV *3*; Γ$_\gamma$=0.097 eV
S(n)+0.6856	1$^+$	0	5.6 *3*	Γ$_n$=0.0168 eV *9*; Γ$_\gamma$=0.128 eV
S(n)+0.6953	1$^+$	0	43.0 *13*	Γ$_n$=0.6667 eV; Γ$_\gamma$=0.139 eV *4*
S(n)+0.6985	2$^+$	0	59.7 *18*	Γ$_n$=0.7361 eV; Γ$_\gamma$=0.110 eV *3*
S(n)+0.7152[&]	2$^+$	0	35 *9*	Γ$_n$=0.111 eV *20*; Γ$_\gamma$=0.112 eV *18*
S(n)+0.7380	1$^+$	0	3.7 *2*	Γ$_n$=0.0106 eV *7*; Γ$_\gamma$=0.120 eV
S(n)+0.7595[@]	1$^+$	0	32.9 *10*	Γ$_n$=0.4267 eV; Γ$_\gamma$=0.110 eV *3*
S(n)+0.7733[@]	1$^+$	0	37.1 *11*	Γ$_n$=0.4746 eV; Γ$_\gamma$=0.125 eV *4*
S(n)+0.7838[#]	2$^+$	0	37.3 *19*	Γ$_n$=0.014 eV *5*; Γ$_\gamma$=0.140 eV
S(n)+0.7955[@]	2$^+$	0	45.4 *17*	Γ$_n$=0.1776 eV; Γ$_\gamma$=0.123 eV *4*
S(n)+0.8128	1$^+$	0	7.1 *4*	Γ$_n$=0.0221 eV *13*; Γ$_\gamma$=0.128 eV
S(n)+0.8190[&]	2$^+$	0	51 *6*	Γ$_n$=0.232 eV *22*; Γ$_\gamma$=0.128 eV *5*
S(n)+0.8244[@]	2$^+$	0	57.2 *17*	Γ$_n$=0.4264 eV; Γ$_\gamma$=0.117 eV *3*
S(n)+0.8637	2$^+$	0	10 *3*	Γ$_n$=0.0184 eV; Γ$_\gamma$=0.107 eV *26*
S(n)+0.8789[@]	2$^+$	0	14.3 *17*	Γ$_n$=0.0352 eV; Γ$_\gamma$=0.066 eV *7*
S(n)+0.9318[&]	2$^+$	0	57 *6*	Γ$_n$=0.340 eV *25*; Γ$_\gamma$=0.124 eV *4*
S(n)+0.9554	2$^+$	0	3.7 *3*	Γ$_n$=0.0063 eV *5*; Γ$_\gamma$=0.128 eV
S(n)+0.9606[#]	2$^+$	0	23.1 *11*	Γ$_n$=0.0492 eV *22*; Γ$_\gamma$=0.150 eV
S(n)+0.9836[&]	2$^+$	0	42 *8*	Γ$_n$=0.25 eV *4*; Γ$_\gamma$=0.094 eV *4*
S(n)+0.9878[#]	2$^+$	0	37.1 *20*	Γ$_n$=0.094 eV *5*; Γ$_\gamma$=0.160 eV
S(n)+0.9948[#]	2$^+$	0	59 *6*	Γ$_n$=0.35 eV *3*; Γ$_\gamma$=0.130 eV
S(n)+1.0391[#]	1$^+$	0	12.4 *9*	Γ$_n$=0.045 eV *3*; Γ$_\gamma$=0.128 eV
S(n)+1.0426[@]	1$^+$	0	33.1 *13*	Γ$_n$=0.4854 eV; Γ$_\gamma$=0.108 eV *4*
S(n)+1.0632	1$^+$	0	3.3 *3*	Γ$_n$=0.0095 eV *9*; Γ$_\gamma$=0.128 eV
S(n)+1.0773[@]	1$^+$	0	33.6 *14*	Γ$_n$=0.3600 eV; Γ$_\gamma$=0.119 eV *5*
S(n)+1.0920[@]	2$^+$	0	48.7 *18*	Γ$_n$=0.3759 eV; Γ$_\gamma$=0.098 eV *4*
S(n)+1.1196	2$^+$	0	6.7 *5*	Γ$_n$=0.0117 eV *9*; Γ$_\gamma$=0.128 eV
S(n)+1.1279	2$^+$	0	14.7 *9*	Γ$_n$=0.0288 eV *17*; Γ$_\gamma$=0.128 eV
S(n)+1.1348[&]	2$^+$	0	58 *7*	Γ$_n$=0.35 eV *3*; Γ$_\gamma$=0.127 eV *5*
S(n)+1.1771	2$^+$	0	3.9 *4*	Γ$_n$=0.0066 eV *6*; Γ$_\gamma$=0.128 eV
S(n)+1.1827[@]	2$^+$	0	49.0[b] *19*	Γ$_n$=0.2896 eV; Γ$_\gamma$=0.107 eV *4*
S(n)+1.2066[@]	2$^+$	0	52.3 *22*	Γ$_n$=0.3600 eV; Γ$_\gamma$=0.109 eV *4*
S(n)+1.2178	2$^+$	0	12.9 *8*	Γ$_n$=0.0245 eV *16*; Γ$_\gamma$=0.128 eV
S(n)+1.2227[#]	1$^+$	0	36 *5*	Γ$_n$=0.50 eV *6*; Γ$_\gamma$=0.120 eV
S(n)+1.2446[#]	1$^+$	0	26 *3*	Γ$_n$=0.156 eV *14*; Γ$_\gamma$=0.128 eV
S(n)+1.2526	2$^+$	0	18.5 *11*	Γ$_n$=0.0384 eV *22*; Γ$_\gamma$=0.128 eV
S(n)+1.2811	1$^+$	0	34.6 *16*	Γ$_n$=0.4588 eV; Γ$_\gamma$=0.116 eV *5*
S(n)+1.2855	2$^+$	0	7.4 *6*	Γ$_n$=0.0130 eV *11*; Γ$_\gamma$=0.128 eV
S(n)+1.3099[@]	2$^+$	0	44.8 *20*	Γ$_n$=0.2528 eV; Γ$_\gamma$=0.100 eV *4*
S(n)+1.3279	1$^+$	0	39.7 *17*	Γ$_n$=0.7040 eV; Γ$_\gamma$=0.125 eV *5*
S(n)+1.3352[#]	2$^+$	0	31.2 *20*	Γ$_n$=0.081 eV *5*; Γ$_\gamma$=0.131 eV
S(n)+1.3535[@]	1$^+$	0	56.2 *25*	Γ$_n$=0.5921 eV; Γ$_\gamma$=0.201 eV *9*
S(n)+1.3589	2$^+$	0	10.2 *8*	Γ$_n$=0.0186 eV *14*; Γ$_\gamma$=0.128 eV
S(n)+1.3669[&]	2$^+$	0	38 *15*	Γ$_n$=0.15 eV *5*; Γ$_\gamma$=0.102 eV *15*
S(n)+1.3949	2$^+$	0	16.0 *10*	Γ$_n$=0.0321 eV *20*; Γ$_\gamma$=0.128 eV

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J^{π}[c]	L	g(Γ_n)(Γ_γ)/Γ (meV).[‡]	Comments
S(n)+1.4258[@]	1^+	0	32 *3*	Γ_n=0.2613 eV; Γ_γ=0.125 eV *11*
S(n)+1.4281	2^+	0	52 *3*	Γ_n=0.4247 eV; Γ_γ=0.102 eV *6*
S(n)+1.4495[#]	2^+	0	46 *8*	Γ_n=0.30 eV *4*; Γ_γ=0.097 eV
S(n)+1.4688	2^+	0	14.1 *10*	Γ_n=0.0275 eV *20*; Γ_γ=0.128 eV
S(n)+1.4738[#]	1^+	0	27 *4*	Γ_n=0.160 eV *19*; Γ_γ=0.128 eV
S(n)+1.4895	2^+	0	72 *7*	Γ_n=0.82 eV *6*; Γ_γ=0.134 eV
S(n)+1.5008	1^+	0	8.7 *10*	Γ_n=0.028 eV *3*; Γ_γ=0.128 eV
S(n)+1.5295[#]	1^+	0	13.1 *12*	Γ_n=0.048 eV *4*; Γ_γ=0.128 eV
S(n)+1.5514[#]	2^+	0	37 *3*	Γ_n=0.105 eV *8*; Γ_γ=0.135 eV
S(n)+1.5684	2^+	0	3.2 *5*	Γ_n=0.0053 eV *8*; Γ_γ=0.128 eV
S(n)+1.5778	1^+	0	34.1 *19*	Γ_n=0.4801 eV; Γ_γ=0.112 eV *6*
S(n)+1.5924[#]	2^+	0	18.4 *15*	Γ_n=0.38 eV *3*; Γ_γ=0.128 eV
S(n)+1.6141[#]	2^+	0	39 *4*	Γ_n=0.132 eV *13*; Γ_γ=0.120 eV
S(n)+1.6340	1^+	0	2.8 *24*	Γ_n=0.008 eV *4*; Γ_γ=0.12 eV *6*
S(n)+1.6408[#]	1^+	0	22 *3*	Γ_n=0.106 eV *12*; Γ_γ=0.128 eV
S(n)+1.6454[#]	2^+	0	33 *3*	Γ_n=0.089 eV *7*; Γ_γ=0.128 eV
S(n)+1.6587	1^+	0	1.6 *8*	Γ_n=0.0043 eV *21*; Γ_γ=0.128 eV
S(n)+1.6924[#]	2^+	0	38 *3*	Γ_n=0.102 eV *8*; Γ_γ=0.148 eV
S(n)+1.7053[@]	2^+	0	48 *3*	Γ_n=0.2704 eV; Γ_γ=0.106 eV *6*
S(n)+1.7205	2^+	0	13.4 *12*	Γ_n=0.0257 eV *23*; Γ_γ=0.128 eV
S(n)+1.7335[@]	2^+	0	45.4 *25*	Γ_n=0.3152 eV; Γ_γ=0.094 eV *5*
S(n)+1.7535[@]	2^+	0	55 *4*	Γ_n=0.3200 eV; Γ_γ=0.121 eV *9*
S(n)+1.7556	1^+	0	34 *4*	Γ_n=0.5679 eV; Γ_γ=0.109 eV *11*
S(n)+1.8108[#]	1^+	0	17.4 *20*	Γ_n=0.073 eV *8*; Γ_γ=0.128 eV
S(n)+1.8207	2^+	0	7.8 *9*	Γ_n=0.0138 eV *16*; Γ_γ=0.128 eV
S(n)+1.8309[#]	1^+	0	16.4 *19*	Γ_n=0.066 eV *7*; Γ_γ=0.128 eV
S(n)+1.8556	1^+	0	44 *3*	Γ_n=1.3864 eV; Γ_γ=0.128 eV *8*
S(n)+1.8596[#]	2^+	0	29 *3*	Γ_n=0.074 eV *7*; Γ_γ=0.128 eV
S(n)+1.8826[#]	1^+	0	24 *3*	Γ_n=0.108 eV *12*; Γ_γ=0.156 eV
S(n)+1.8922	2^+	0	1.8 *9*	Γ_n=0.0029 eV *14*; Γ_γ=0.128 eV
S(n)+1.9127	1^+	0	41.9 *25*	Γ_n=2.4502 eV; Γ_γ=0.117 eV *7*
S(n)+1.9390[#]	1^+	0	37 *10*	Γ_n=0.41 eV *9*; Γ_γ=0.128 eV
S(n)+1.9595	2^+	0	70 *11*	Γ_n=0.87 eV *10*; Γ_γ=0.128 eV
S(n)+2.0211	1^+	0	6.1 *9*	Γ_n=0.019 eV *3*; Γ_γ=0.128 eV
S(n)+2.0280[#]	1^+	0	37 *14*	Γ_n=0.44 eV *13*; Γ_γ=0.128 eV
S(n)+2.0323	1^+	0	31 *3*	Γ_n=0.4260 eV; Γ_γ=0.101 eV *10*
S(n)+2.0353[#]	2^+	0	44 *7*	Γ_n=0.157 eV *22*; Γ_γ=0.128 eV
S(n)+2.0586	2^+	0	10.5 *13*	Γ_n=0.0193 eV *24*; Γ_γ=0.128 eV
S(n)+2.0749	2^+	0	56 *3*	Γ_n=1.0802 eV; Γ_γ=0.098 eV *6*
S(n)+2.0817[#]	2^+	0	65 *18*	Γ_n=0.57 eV *12*; Γ_γ=0.128 eV
S(n)+2.0884[#]	1^+	0	32 *8*	Γ_n=0.25 eV *5*; Γ_γ=0.128 eV
S(n)+2.1117[#]	2^+	0	25.3 *25*	Γ_n=0.059 eV *6*; Γ_γ=0.128 eV
S(n)+2.1307	1^+	0	44 *9*	Γ_n=1.33 eV *20*; Γ_γ=0.128 eV
S(n)+2.1474	2^+	0	55 *3*	Γ_n=0.4912 eV; Γ_γ=0.107 eV *6*
S(n)+2.1538[#]	1^+	0	26 *4*	Γ_n=0.153 eV *22*; Γ_γ=0.128 eV
S(n)+2.1929[#]	1^+	0	34 *7*	Γ_n=0.32 eV *5*; Γ_γ=0.128 eV
S(n)+2.2233[#]	1^+	0	13.8 *20*	Γ_n=0.052 eV *7*; Γ_γ=0.128 eV
S(n)+2.2404[#]	2^+	0	32 *4*	Γ_n=0.087 eV *9*; Γ_γ=0.128 eV
S(n)+2.2781	2^+	0	8.8 *13*	Γ_n=0.0157 eV *22*; Γ_γ=0.128 eV

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J^{π}[c]	L	g(Γ_n)(Γ_γ)/Γ (meV).[‡]	Comments
S(n)+2.2864	2^+	0	48 *7*	Γ_n=0.191 eV *24*; Γ_γ=0.128 eV
S(n)+2.3319[#]	2^+	0	49 *8*	Γ_n=0.20 eV *3*; Γ_γ=0.128 eV
S(n)+2.3661[#]	2^+	0	61 *16*	Γ_n=0.40 eV *9*; Γ_γ=0.128 eV
S(n)+2.3796	2^+	0	2.3 *7*	Γ_n=0.0038 eV *12*; Γ_γ=0.128 eV
S(n)+2.4058[#]	2^+	0	35 *5*	Γ_n=0.100 eV *12*; Γ_γ=0.128 eV
S(n)+2.4145	1^+	0	53 *4*	Γ_n=1.0663 eV; Γ_γ=0.164 eV *12*
S(n)+2.4191	2^+	0	29 *3*	Γ_n=1.1198 eV; Γ_γ=0.048 eV *5*
S(n)+2.4400[#]	1^+	0	23 *4*	Γ_n=0.116 eV *19*; Γ_γ=0.128 eV
S(n)+2.4691	2^+	0	52 *4*	Γ_n=0.5281 eV; Γ_γ=0.099 eV *7*
S(n)+2.4981	2^+	0	18.0 *22*	Γ_n=0.037 eV *5*; Γ_γ=0.128 eV
S(n)+2.5077[#]	2^+	0	22 *3*	Γ_n=0.049 eV *6*; Γ_γ=0.128 eV
S(n)+2.5351[#]	2^+	0	32 *4*	Γ_n=0.084 eV *10*; Γ_γ=0.128 eV
S(n)+2.5601	2^+	0	9.2 *15*	Γ_n=0.017 eV *3*; Γ_γ=0.128 eV
S(n)+2.5768[#]	1^+	0	29 *7*	Γ_n=0.20 eV *4*; Γ_γ=0.128 eV
S(n)+2.5813	2^+	0	6.3 *13*	Γ_n=0.0109 eV *22*; Γ_γ=0.128 eV
S(n)+2.5976[@]	2^+	0	45 *4*	Γ_n=0.2560 eV; Γ_γ=0.101 eV *8*
S(n)+2.6116[@]	2^+	0	44 *4*	Γ_n=0.2720 eV; Γ_γ=0.095 eV *8*
S(n)+2.6280	2^+	0	9.5 *15*	Γ_n=0.017 eV *3*; Γ_γ=0.128 eV
S(n)+2.6323	1^+	0	2.8 *9*	Γ_n=0.0080 eV *24*; Γ_γ=0.128 eV
S(n)+2.6526	1^+	0		
S(n)+2.6838[#]	2^+	0	28 *4*	Γ_n=0.070 eV *8*; Γ_γ=0.124 eV
S(n)+2.7082[&]	1^+	0	40 *23*	Γ_n=0.21 eV *7*; Γ_γ=0.22 eV *8*
S(n)+2.7224[#]	2^+	0	43 *8*	Γ_n=0.151 eV *24*; Γ_γ=0.124 eV
S(n)+2.7472[#]	2^+	0	32 *5*	Γ_n=0.086 eV *11*; Γ_γ=0.124 eV
S(n)+2.7615[#]	2^+	0	32 *5*	Γ_n=0.089 eV *12*; Γ_γ=0.124 eV
S(n)+2.7748	1^+	0	4.0 *11*	Γ_n=0.012 eV *3*; Γ_γ=0.124 eV
S(n)+2.7905	1^+	0	6.7 *16*	Γ_n=0.021 eV *5*; Γ_γ=0.124 eV
S(n)+2.8054	2^+	0	43 *7*	Γ_n=0.154 eV *23*; Γ_γ=0.124 eV
S(n)+2.8317	2^+	0	35 *3*	Γ_n=0.3030 eV; Γ_γ=0.068 eV *7*
S(n)+2.8495[#]	2^+	0	24 *3*	Γ_n=0.056 eV *7*; Γ_γ=0.124 eV
S(n)+2.8643[#]	2^+	0	39 *6*	Γ_n=0.122 eV *17*; Γ_γ=0.124 eV
S(n)+2.8760[#]	2^+	0	39 *7*	Γ_n=0.124 eV *19*; Γ_γ=0.124 eV
S(n)+2.8961	1^+	0		
S(n)+2.9108	1^+	0	3.1 *9*	Γ_n=0.0088 eV *27*; Γ_γ=0.124 eV
S(n)+2.9268	2^+	0	1.8 *7*	Γ_n=0.0029 eV *11*; Γ_γ=0.124 eV
S(n)+2.9571[#]	1^+	0	12.9 *24*	Γ_n=0.048 eV *9*; Γ_γ=0.124 eV
S(n)+2.9851[@]	2^+	0	38 *4*	Γ_n=0.2140 eV; Γ_γ=0.084 eV *9*
S(n)+3.0239[#]	2^+	0	62 *24*	Γ_n=0.49 eV *15*; Γ_γ=0.124 eV
S(n)+3.0366	2^+	0	69 *19*	Γ_n=0.99 eV *20*; Γ_γ=0.124 eV
S(n)+3.0484[#]	1^+	0	28 *7*	Γ_n=0.19 eV *4*; Γ_γ=0.124 eV
S(n)+3.0630	2^+	0	2.2 *8*	Γ_n=0.0036 eV *13*; Γ_γ=0.124 eV
S(n)+3.0790[#]	1^+	0	24 *6*	Γ_n=0.13 eV *3*; Γ_γ=0.124 eV
S(n)+3.0983[#]	1^+	0	12.3 *24*	Γ_n=0.045 eV *9*; Γ_γ=0.124 eV
S(n)+3.1335[#]	2^+	0	50 *12*	Γ_n=0.22 eV *4*; Γ_γ=0.124 eV
S(n)+3.1609	1^+	0	5.0 *15*	Γ_n=0.015 eV *4*; Γ_γ=0.124 eV
S(n)+3.1742[#]	1^+	0	15 *3*	Γ_n=0.059 eV *11*; Γ_γ=0.124 eV
S(n)+3.2002	1^+	0	3.6 *12*	Γ_n=0.010 eV *4*; Γ_γ=0.124 eV
S(n)+3.2148	2^+	0	82 *19*	Γ_n=1.52 eV *26*; Γ_γ=0.144 eV
S(n)+3.2540[#]	2^+	0	31 *6*	Γ_n=0.084 eV *14*; Γ_γ=0.124 eV

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[c]	L	g(Γ$_n$)(Γ$_\gamma$)/Γ (meV).[‡]	Comments
S(n)+3.2583[#]	1$^+$	0	25 *7*	Γ$_n$=0.14 eV *4*; Γ$_\gamma$=0.124 eV
S(n)+3.2687[#]	2$^+$	0	22 *4*	Γ$_n$=0.049 eV *8*; Γ$_\gamma$=0.124 eV
S(n)+3.2782[#]	2$^+$	0	30 *5*	Γ$_n$=0.076 eV *11*; Γ$_\gamma$=0.124 eV
S(n)+3.3023	1$^+$	0		
S(n)+3.3100	2$^+$	0		
S(n)+3.3334[#]	2$^+$	0	52 *14*	Γ$_n$=0.25 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+3.3474	2$^+$	0	69 *24*	Γ$_n$=0.53 eV *14*; Γ$_\gamma$=0.140 eV
S(n)+3.3628[#]	2$^+$	0	39 *7*	Γ$_n$=0.128 eV *21*; Γ$_\gamma$=0.124 eV
S(n)+3.3851[#]	2$^+$	0	52 *16*	Γ$_n$=0.25 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+3.3998	2$^+$	0	66 *19*	Γ$_n$=0.54 eV *12*; Γ$_\gamma$=0.131 eV
S(n)+3.4166	1$^+$	0	2.0 *9*	Γ$_n$=0.0054 eV *24*; Γ$_\gamma$=0.124 eV
S(n)+3.4391	1$^+$	0	6.3 *17*	Γ$_n$=0.019 eV *5*; Γ$_\gamma$=0.124 eV
S(n)+3.4696	2$^+$	0	43 *4*	Γ$_n$=0.4600 eV; Γ$_\gamma$=0.081 eV *8*
S(n)+3.4893[#]	1$^+$	0	18 *4*	Γ$_n$=0.078 eV *16*; Γ$_\gamma$=0.124 eV
S(n)+3.5119[#]	2$^+$	0	40 *8*	Γ$_n$=0.135 eV *24*; Γ$_\gamma$=0.124 eV
S(n)+3.5189[#]	1$^+$	0	21 *5*	Γ$_n$=0.098 eV *22*; Γ$_\gamma$=0.124 eV
S(n)+3.5403[#]	2$^+$	0	32 *6*	Γ$_n$=0.089 eV *16*; Γ$_\gamma$=0.124 eV
S(n)+3.5487	2$^+$	0	77 *7*	Γ$_n$=0.9800 eV; Γ$_\gamma$=0.142 eV *12*
S(n)+3.5656[@]	2$^+$	0	31 *4*	Γ$_n$=0.2360 eV; Γ$_\gamma$=0.064 eV *8*
S(n)+3.5939	2$^+$	0	87 *22*	Γ$_n$=0.42 eV *9*; Γ$_\gamma$=0.210 eV
S(n)+3.6377[#]	2$^+$	0	44 *10*	Γ$_n$=0.17 eV *3*; Γ$_\gamma$=0.124 eV
S(n)+3.6521	2$^+$	0	1.8 *8*	Γ$_n$=0.0029 eV *13*; Γ$_\gamma$=0.124 eV
S(n)+3.6711[#]	1$^+$	0	15 *4*	Γ$_n$=0.061 eV *13*; Γ$_\gamma$=0.124 eV
S(n)+3.6904[#]	2$^+$	0	22 *4*	Γ$_n$=0.048 eV *9*; Γ$_\gamma$=0.124 eV
S(n)+3.6957	1$^+$	0	10 *3*	Γ$_n$=0.035 eV *9*; Γ$_\gamma$=0.124 eV
S(n)+3.7085[#]	1$^+$	0	14 *3*	Γ$_n$=0.055 eV *12*; Γ$_\gamma$=0.124 eV
S(n)+3.7276[#]	2$^+$	0	53 *18*	Γ$_n$=0.27 eV *7*; Γ$_\gamma$=0.124 eV
S(n)+3.7439	1$^+$	0	8.7 *22*	Γ$_n$=0.029 eV *7*; Γ$_\gamma$=0.124 eV
S(n)+3.7597	1$^+$	0	8 *3*	Γ$_n$=0.025 eV *8*; Γ$_\gamma$=0.124 eV
S(n)+3.7624	2$^+$	0	10 *3*	Γ$_n$=0.018 eV *5*; Γ$_\gamma$=0.124 eV
S(n)+3.7894	1$^+$	0	1.2 *6*	Γ$_n$=0.0033 eV *16*; Γ$_\gamma$=0.124 eV
S(n)+3.8070[#]	2$^+$	0	40 *8*	Γ$_n$=0.129 eV *24*; Γ$_\gamma$=0.124 eV
S(n)+3.8413[#]	2$^+$	0	49 *14*	Γ$_n$=0.21 eV *5*; Γ$_\gamma$=0.124 eV
S(n)+3.8631	1$^+$	0	6.2 *20*	Γ$_n$=0.019 eV *6*; Γ$_\gamma$=0.124 eV
S(n)+3.8716[#]	2$^+$	0	48 *13*	Γ$_n$=0.20 eV *5*; Γ$_\gamma$=0.124 eV
S(n)+3.8877[#]	2$^+$	0	57 *20*	Γ$_n$=0.34 eV *10*; Γ$_\gamma$=0.124 eV
S(n)+3.9139	2$^+$	0	77 *31*	Γ$_n$=0.86 eV *26*; Γ$_\gamma$=0.144 eV
S(n)+3.9398	2$^+$	0	84 *31*	Γ$_n$=1.1 eV *3*; Γ$_\gamma$=0.153 eV
S(n)+3.9644[#]	2$^+$	0	41 *9*	Γ$_n$=0.14 eV *3*; Γ$_\gamma$=0.124 eV
S(n)+3.9819	2$^+$	0	89 *19*	Γ$_n$=3.8 eV *6*; Γ$_\gamma$=0.148 eV
S(n)+3.9869[#]	1$^+$	0	12 *4*	Γ$_n$=0.042 eV *15*; Γ$_\gamma$=0.124 eV
S(n)+3.9993[#]	2$^+$	0	23 *5*	Γ$_n$=0.053 eV *10*; Γ$_\gamma$=0.124 eV
S(n)+4.0366	2$^+$	0	66 *31*	Γ$_n$=0.74 eV *26*; Γ$_\gamma$=0.123 eV
S(n)+4.0467	1$^+$	0		
S(n)+4.0729	1$^+$	0	12 *4*	Γ$_n$=0.043 eV *12*; Γ$_\gamma$=0.124 eV
S(n)+4.0859	2$^+$	0	76 *35*	Γ$_n$=0.86 eV *30*; Γ$_\gamma$=0.141 eV
S(n)+4.1268	2$^+$	0	96 *28*	Γ$_n$=2.2 eV *5*; Γ$_\gamma$=0.165 eV
S(n)+4.1373[#]	1$^+$	0	13 *3*	Γ$_n$=0.046 eV *12*; Γ$_\gamma$=0.124 eV
S(n)+4.1641[#]	2$^+$	0	32 *7*	Γ$_n$=0.087 eV *18*; Γ$_\gamma$=0.124 eV

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

E(level)[†]	J$^{\pi}$[c]	L	g(Γ_n)(Γ_γ)/Γ (meV).[‡]	Comments
S(n)+4.1709[&]	2$^+$	0	36 *22*	Γ_n=0.17 eV *7*; Γ_γ=0.088 eV *25*
S(n)+4.2329	2$^+$	0	15 *4*	Γ_n=0.031 eV *7*; Γ_γ=0.124 eV
S(n)+4.2481	2$^+$	0	59 *24*	Γ_n=0.39 eV *13*; Γ_γ=0.124 eV
S(n)+4.2734[#]	1$^+$	0	12 *3*	Γ_n=0.041 eV *11*; Γ_γ=0.124 eV
S(n)+4.2889[#]	2$^+$	0	32 *7*	Γ_n=0.085 eV *17*; Γ_γ=0.124 eV
S(n)+4.3006	2$^+$	0	61 *30*	Γ_n=0.46 eV *18*; Γ_γ=0.124 eV
S(n)+4.3154	2$^+$	0	74 *21*	Γ_n=2.9 eV *6*; Γ_γ=0.124 eV
S(n)+4.3323[#]	2$^+$	0	37 *9*	Γ_n=0.115 eV *25*; Γ_γ=0.124 eV
S(n)+4.3556	1$^+$	0	7 *6*	Γ_n=0.16 eV *8*; Γ_γ=0.023 eV *8*
S(n)+4.3644[#]	2$^+$	0	40 *9*	Γ_n=0.13 eV *3*; Γ_γ=0.124 eV
S(n)+4.3886	1$^+$	0	33 *12*	Γ_n=0.30 eV *9*; Γ_γ=0.124 eV
S(n)+4.4222	2$^+$	0	45 *6*	Γ_n=0.4550 eV; Γ_γ=0.086 eV *11*
S(n)+4.4358	2$^+$	0	17 *4*	Γ_n=0.035 eV *8*; Γ_γ=0.124 eV
S(n)+4.4552[#]	1$^+$	0	15 *4*	Γ_n=0.061 eV *16*; Γ_γ=0.124 eV
S(n)+4.5212[#]	2$^+$	0	50 *16*	Γ_n=0.22 eV *6*; Γ_γ=0.124 eV
S(n)+4.5357[#]	1$^+$	0	36 *20*	Γ_n=0.42 eV *18*; Γ_γ=0.124 eV
S(n)+4.5417[#]	2$^+$	0	31 *8*	Γ_n=0.081 eV *19*; Γ_γ=0.124 eV
S(n)+4.5518[#]	1$^+$	0	14 *4*	Γ_n=0.052 eV *15*; Γ_γ=0.124 eV
S(n)+4.5726	2$^+$	0	65 *34*	Γ_n=0.65 eV *26*; Γ_γ=0.124 eV
S(n)+4.5898[#]	2$^+$	0	23 *5*	Γ_n=0.051 eV *11*; Γ_γ=0.124 eV
S(n)+4.6109	1$^+$	0	7.5 *25*	Γ_n=0.024 eV *8*; Γ_γ=0.124 eV
S(n)+4.6266	2$^+$	0	1.4 *7*	Γ_n=0.0022 eV *12*; Γ_γ=0.124 eV
S(n)+4.6656	2$^+$	0	79 *32*	Γ_n=1.6 eV *5*; Γ_γ=0.138 eV
S(n)+4.6840[#]	2$^+$	0	44 *13*	Γ_n=0.17 eV *4*; Γ_γ=0.124 eV
S(n)+4.6959[#]	1$^+$	0	20 *6*	Γ_n=0.090 eV *26*; Γ_γ=0.124 eV
S(n)+4.7135[#]	1$^+$	0	28 *10*	Γ_n=0.19 eV *6*; Γ_γ=0.124 eV
S(n)+4.7324[#]	2$^+$	0	30 *8*	Γ_n=0.078 eV *19*; Γ_γ=0.124 eV
S(n)+4.7662[#]	2$^+$	0	20 *5*	Γ_n=0.044 eV *10*; Γ_γ=0.124 eV
S(n)+4.7804[#]	2$^+$	0	47 *15*	Γ_n=0.19 eV *5*; Γ_γ=0.124 eV
S(n)+4.7893[#]	2$^+$	0	43 *13*	Γ_n=0.16 eV *4*; Γ_γ=0.124 eV
S(n)+4.8008[#]	1$^+$	0	15 *5*	Γ_n=0.060 eV *18*; Γ_γ=0.124 eV
S(n)+4.8288[&]	2$^+$	0	38[b] *24*	Γ_n=0.26 eV *12*; Γ_γ=0.079 eV *16*
S(n)+4.8691?			36[a] *8*	
S(n)+4.8804?			42[a] *7*	
S(n)+4.8922?			69[a] *19*	
S(n)+4.9157?			67[a] *20*	
S(n)+4.9440?			65[a] *18*	
S(n)+5.0004?			41[a] *12*	
S(n)+5.0122?			31[a] *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.

[&] Γ_n and Γ_γ parameters should be taken with caution.

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^{197}Au(n,γ):res:C6D6 2010Ma18 (continued)

^{198}Au Levels (continued)

[a] Average value from TAC and C_6D_6 detectors.
[b] Value should be treated with caution.
[c] From L-value for neutron resonances.