

## Hydrogen Chloride (HCl)

$Z = 18$

Molecular Mass :  $M_A = 36.46094$

$$\sigma_a(\text{Mb}) = 109.76097 \frac{df}{dE} (\text{eV}^{-1})$$

$$\mu_m = \sigma_a \cdot N_A \cdot M_A^{-1}$$

Table I. Integrated oscillator strength,  $f$ , for energy intervals from 9.301 to 12.7458 eV.

Energy (eV)	$f$	$\lambda$ (Å)
9.301 – 9.336	0.0026	1333.0 – 1328.0
9.581 – 9.634	0.1280	1294.1 – 1286.9
9.649 – 9.671	0.0049	1284.9 – 1282.0
9.918 – 9.999	0.0173	1250.1 – 1240.0
10.021 – 10.925	0.0077	1237.2 – 1134.9
10.925 – 11.627	0.1834	1134.9 – 1066.3
11.627 – 12.527	0.3953	1066.3 – 989.74
12.527 – 12.7458	0.1030	989.74 – 972.74

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ .

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
6.7098E+00	2.6177E-03	2.8732E-01	4.7456E+03	1.8478E+03
6.7937E+00	3.2423E-03	3.5588E-01	5.8779E+03	1.8250E+03
6.8880E+00	4.4914E-03	4.9298E-01	8.1425E+03	1.8000E+03
6.9850E+00	6.1355E-03	6.7344E-01	1.1123E+04	1.7750E+03
7.0848E+00	8.2664E-03	9.0733E-01	1.4986E+04	1.7500E+03
7.1875E+00	1.0976E-02	1.2047E+00	1.9898E+04	1.7250E+03
7.2932E+00	1.3915E-02	1.5273E+00	2.5227E+04	1.7000E+03
7.4020E+00	1.7442E-02	1.9145E+00	3.1621E+04	1.6750E+03
7.5142E+00	2.1180E-02	2.3248E+00	3.8398E+04	1.6500E+03
7.6298E+00	2.4799E-02	2.7220E+00	4.4958E+04	1.6250E+03
7.7490E+00	2.7959E-02	3.0688E+00	5.0686E+04	1.6000E+03
7.8720E+00	2.9603E-02	3.2493E+00	5.3667E+04	1.5750E+03
7.9990E+00	2.9869E-02	3.2785E+00	5.4150E+04	1.5500E+03
8.1301E+00	2.9337E-02	3.2200E+00	5.3184E+04	1.5250E+03
8.2656E+00	2.8225E-02	3.0980E+00	5.1169E+04	1.5000E+03
8.4057E+00	2.6315E-02	2.8883E+00	4.7706E+04	1.4750E+03

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
8.5506E+00	2.4000E-02	2.6343E+00	4.3510E+04	1.4500E+03
8.7006E+00	2.1245E-02	2.3318E+00	3.8514E+04	1.4250E+03
8.8560E+00	1.8085E-02	1.9850E+00	3.2786E+04	1.4000E+03
9.0170E+00	1.4264E-02	1.5657E+00	2.5859E+04	1.3750E+03
9.1326E+00	1.1398E-02	1.2511E+00	2.0664E+04	1.3576E+03
9.2004E+00	1.1160E-02	1.2249E+00	2.0231E+04	1.3476E+03
9.2498E+00	1.3640E-02	1.4971E+00	2.4727E+04	1.3404E+03
1.2746E+01	4.9051E-01	5.3839E+01	8.8924E+05	9.7270E+02
1.2757E+01	4.6254E-01	5.0769E+01	8.3854E+05	9.7190E+02
1.2774E+01	4.8895E-01	5.3667E+01	8.8641E+05	9.7060E+02
1.2791E+01	4.6309E-01	5.0830E+01	8.3954E+05	9.6930E+02
1.2795E+01	4.0983E-01	4.4983E+01	7.4297E+05	9.6900E+02
1.2826E+01	4.5943E-01	5.0427E+01	8.3289E+05	9.6670E+02
1.2847E+01	4.4751E-01	4.9119E+01	8.1128E+05	9.6510E+02
1.2855E+01	4.2009E-01	4.6110E+01	7.6158E+05	9.6450E+02
1.2887E+01	5.0811E-01	5.5771E+01	9.2115E+05	9.6210E+02
1.2902E+01	4.7501E-01	5.2138E+01	8.6115E+05	9.6100E+02
1.2961E+01	4.9876E-01	5.4744E+01	9.0419E+05	9.5660E+02
1.2935E+01	4.1441E-01	4.5486E+01	7.5128E+05	9.5850E+02
1.2951E+01	4.0148E-01	4.4067E+01	7.2784E+05	9.5730E+02
1.2968E+01	4.2945E-01	4.7136E+01	7.7854E+05	9.5610E+02
1.3009E+01	3.9323E-01	4.3161E+01	7.1288E+05	9.5310E+02
1.3059E+01	4.0983E-01	4.4983E+01	7.4297E+05	9.4940E+02
1.3142E+01	3.6893E-01	4.0495E+01	6.6884E+05	9.4340E+02
1.3169E+01	3.8388E-01	4.2135E+01	6.9593E+05	9.4150E+02
1.3235E+01	3.4611E-01	3.7989E+01	6.2745E+05	9.3680E+02
1.3256E+01	3.6325E-01	3.9871E+01	6.5853E+05	9.3530E+02
1.3381E+01	3.2649E-01	3.5835E+01	5.9188E+05	9.2660E+02
1.3421E+01	3.1869E-01	3.4980E+01	5.7775E+05	9.2380E+02
1.3437E+01	3.3730E-01	3.7023E+01	6.1149E+05	9.2270E+02
1.3525E+01	3.2804E-01	3.6006E+01	5.9471E+05	9.1670E+02
1.3538E+01	3.0943E-01	3.3964E+01	5.6097E+05	9.1580E+02
1.3577E+01	3.3006E-01	3.6228E+01	5.9836E+05	9.1320E+02
1.3626E+01	2.9183E-01	3.2031E+01	5.2905E+05	9.0990E+02
1.3679E+01	2.9495E-01	3.2374E+01	5.3470E+05	9.0640E+02
1.3718E+01	3.4042E-01	3.7365E+01	6.1715E+05	9.0380E+02

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
1.3749E+01	3.0008E-01	3.2937E+01	5.4401E+05	9.0180E+02
1.3774E+01	2.8871E-01	3.1689E+01	5.2340E+05	9.0010E+02
1.3822E+01	3.1044E-01	3.4074E+01	5.6279E+05	8.9700E+02
1.3841E+01	2.9696E-01	3.2595E+01	5.3836E+05	8.9580E+02
1.3884E+01	3.6893E-01	4.0495E+01	6.6884E+05	8.9300E+02
1.3936E+01	3.0576E-01	3.3561E+01	5.5432E+05	8.8970E+02
1.4011E+01	3.4253E-01	3.7596E+01	6.2097E+05	8.8490E+02
1.4022E+01	3.9066E-01	4.2880E+01	7.0823E+05	8.8420E+02
1.4043E+01	4.0873E-01	4.4862E+01	7.4097E+05	8.8290E+02
1.4059E+01	3.7150E-01	4.0776E+01	6.7349E+05	8.8190E+02
1.4089E+01	3.6893E-01	4.0495E+01	6.6884E+05	8.8000E+02
1.4113E+01	3.3840E-01	3.7144E+01	6.1349E+05	8.7850E+02
1.4128E+01	3.5289E-01	3.8734E+01	6.3975E+05	8.7760E+02
1.4171E+01	3.7251E-01	4.0887E+01	6.7532E+05	8.7490E+02
1.4191E+01	4.1083E-01	4.5094E+01	7.4480E+05	8.7370E+02
1.4228E+01	4.1285E-01	4.5315E+01	7.4845E+05	8.7140E+02
1.4295E+01	3.7462E-01	4.1119E+01	6.7914E+05	8.6730E+02
1.4333E+01	4.1964E-01	4.6060E+01	7.6075E+05	8.6500E+02
1.4370E+01	4.1909E-01	4.5999E+01	7.5976E+05	8.6280E+02
1.4415E+01	3.8810E-01	4.2598E+01	7.0358E+05	8.6010E+02
1.4423E+01	4.1312E-01	4.5344E+01	7.4894E+05	8.5960E+02
1.4450E+01	4.1414E-01	4.5456E+01	7.5078E+05	8.5800E+02
1.4518E+01	6.0617E-01	6.6534E+01	1.0989E+06	8.5400E+02
1.4562E+01	4.7845E-01	5.2515E+01	8.6738E+05	8.5140E+02
1.4638E+01	4.3629E-01	4.7888E+01	7.9095E+05	8.4700E+02
1.4704E+01	7.0813E-01	7.7725E+01	1.2838E+06	8.4320E+02
1.4753E+01	5.2999E-01	5.8172E+01	9.6082E+05	8.4040E+02
1.4822E+01	4.3629E-01	4.7888E+01	7.9095E+05	8.3650E+02
1.4852E+01	4.7540E-01	5.2180E+01	8.6185E+05	8.3480E+02
1.4884E+01	6.7309E-01	7.3879E+01	1.2202E+06	8.3300E+02
1.4925E+01	5.1146E-01	5.6138E+01	9.2721E+05	8.3070E+02
1.4994E+01	4.0950E-01	4.4947E+01	7.4238E+05	8.2690E+02
1.5050E+01	6.3138E-01	6.9301E+01	1.1446E+06	8.2380E+02
1.5109E+01	4.7020E-01	5.1610E+01	8.5242E+05	8.2060E+02
1.5155E+01	4.3471E-01	4.7714E+01	7.8808E+05	8.1810E+02
1.5181E+01	4.7743E-01	5.2404E+01	8.6553E+05	8.1670E+02

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
1.5220E+01	5.7939E-01	6.3594E+01	1.0504E+06	8.1460E+02
1.5250E+01	4.6511E-01	5.1051E+01	8.4320E+05	8.1300E+02
1.5288E+01	5.2479E-01	5.7602E+01	9.5139E+05	8.1100E+02
1.5292E+01	5.8142E-01	6.3817E+01	1.0540E+06	8.1080E+02
1.5318E+01	6.0776E-01	6.6708E+01	1.1018E+06	8.0940E+02
1.5328E+01	5.3508E-01	5.8731E+01	9.7004E+05	8.0890E+02
1.5346E+01	5.5260E-01	6.0654E+01	1.0018E+06	8.0790E+02
1.5371E+01	5.8865E-01	6.4611E+01	1.0672E+06	8.0660E+02
1.5396E+01	5.2434E-01	5.7552E+01	9.5057E+05	8.0530E+02
1.5427E+01	4.2081E-01	4.6188E+01	7.6287E+05	8.0370E+02
1.5457E+01	4.2488E-01	4.6635E+01	7.7025E+05	8.0210E+02
1.5498E+01	6.8755E-01	7.5467E+01	1.2465E+06	8.0000E+02
1.5527E+01	6.1442E-01	6.7440E+01	1.1139E+06	7.9850E+02
1.5578E+01	5.9589E-01	6.5405E+01	1.0803E+06	7.9590E+02
1.5611E+01	4.3731E-01	4.7999E+01	7.9279E+05	7.9420E+02
1.5641E+01	4.7280E-01	5.1895E+01	8.5713E+05	7.9270E+02
1.5684E+01	7.0654E-01	7.7551E+01	1.2809E+06	7.9050E+02
1.5718E+01	5.7939E-01	6.3594E+01	1.0504E+06	7.8880E+02
1.5742E+01	6.4121E-01	7.0380E+01	1.1624E+06	7.8760E+02
1.5762E+01	5.2581E-01	5.7713E+01	9.5323E+05	7.8660E+02
1.5782E+01	5.4649E-01	5.9984E+01	9.9073E+05	7.8560E+02
1.5806E+01	4.8263E-01	5.2974E+01	8.7496E+05	7.8440E+02
1.5857E+01	7.1434E-01	7.8407E+01	1.2950E+06	7.8190E+02
1.5910E+01	5.7792E-01	6.3433E+01	1.0477E+06	7.7930E+02
1.5949E+01	4.3731E-01	4.7999E+01	7.9279E+05	7.7740E+02
1.5979E+01	5.2694E-01	5.7837E+01	9.5528E+05	7.7590E+02
1.6002E+01	4.6557E-01	5.1101E+01	8.4402E+05	7.7480E+02
1.6037E+01	7.0406E-01	7.7278E+01	1.2764E+06	7.7310E+02
1.6066E+01	5.4435E-01	5.9748E+01	9.8684E+05	7.7170E+02
1.6121E+01	4.3629E-01	4.7888E+01	7.9095E+05	7.6910E+02
1.6161E+01	5.2897E-01	5.8061E+01	9.5897E+05	7.6720E+02
1.6182E+01	4.9902E-01	5.4773E+01	9.0467E+05	7.6620E+02
1.6224E+01	6.2776E-01	6.8904E+01	1.1381E+06	7.6420E+02
1.6254E+01	5.9589E-01	6.5405E+01	1.0803E+06	7.6280E+02
1.6273E+01	4.3629E-01	4.7888E+01	7.9095E+05	7.6190E+02
1.6286E+01	3.7345E-01	4.0990E+01	6.7702E+05	7.6130E+02

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
1.6312E+01	4.2386E-01	4.6523E+01	7.6841E+05	7.6010E+02
1.6340E+01	5.2118E-01	5.7205E+01	9.4483E+05	7.5880E+02
1.6368E+01	4.6557E-01	5.1101E+01	8.4402E+05	7.5750E+02
1.6387E+01	4.9337E-01	5.4153E+01	8.9443E+05	7.5660E+02
1.6402E+01	5.6605E-01	6.2130E+01	1.0262E+06	7.5590E+02
1.6428E+01	4.1357E-01	4.5394E+01	7.4976E+05	7.5470E+02
1.6470E+01	3.6316E-01	3.9861E+01	6.5837E+05	7.5280E+02
1.6514E+01	4.6918E-01	5.1498E+01	8.5058E+05	7.5080E+02
1.6531E+01	4.4454E-01	4.8793E+01	8.0591E+05	7.5000E+02
1.6560E+01	4.9902E-01	5.4773E+01	9.0467E+05	7.4870E+02
1.6593E+01	3.9402E-01	4.3248E+01	7.1431E+05	7.4720E+02
1.6631E+01	3.9605E-01	4.3471E+01	7.1800E+05	7.4550E+02
1.6660E+01	4.5788E-01	5.0257E+01	8.3008E+05	7.4420E+02
1.6718E+01	4.3007E-01	4.7205E+01	7.7968E+05	7.4160E+02
1.6727E+01	4.0227E-01	4.4153E+01	7.2927E+05	7.4120E+02
1.6768E+01	3.9402E-01	4.3248E+01	7.1431E+05	7.3940E+02
1.6784E+01	4.2804E-01	4.6982E+01	7.7599E+05	7.3870E+02
1.6855E+01	4.3369E-01	4.7602E+01	7.8623E+05	7.3560E+02
1.6871E+01	4.0329E-01	4.4265E+01	7.3111E+05	7.3490E+02
1.6901E+01	4.2702E-01	4.6870E+01	7.7414E+05	7.3360E+02
1.6954E+01	4.3833E-01	4.8111E+01	7.9464E+05	7.3130E+02
1.6970E+01	4.1877E-01	4.5965E+01	7.5919E+05	7.3060E+02
1.7000E+01	4.0441E-01	4.4389E+01	7.3316E+05	7.2932E+02
1.7500E+01	3.9443E-01	4.3293E+01	7.1506E+05	7.0848E+02
1.8000E+01	3.8919E-01	4.2717E+01	7.0555E+05	6.8880E+02
1.8500E+01	3.8174E-01	4.1900E+01	6.9205E+05	6.7018E+02
1.9000E+01	3.6973E-01	4.0581E+01	6.7027E+05	6.5255E+02
1.9500E+01	3.6067E-01	3.9588E+01	6.5386E+05	6.3582E+02
2.0000E+01	3.4688E-01	3.8074E+01	6.2886E+05	6.1992E+02
2.0500E+01	3.3301E-01	3.6551E+01	6.0371E+05	6.0480E+02
2.1000E+01	3.1981E-01	3.5103E+01	5.7978E+05	5.9040E+02
2.1500E+01	3.0602E-01	3.3589E+01	5.5478E+05	5.7667E+02
2.2000E+01	2.9274E-01	3.2131E+01	5.3070E+05	5.6356E+02
2.2500E+01	2.7878E-01	3.0599E+01	5.0539E+05	5.5104E+02
2.3000E+01	2.6059E-01	2.8602E+01	4.7241E+05	5.3906E+02
2.3500E+01	2.4874E-01	2.7302E+01	4.5094E+05	5.2759E+02

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
2.4000E+01	2.3605E-01	2.5909E+01	4.2793E+05	5.1660E+02
2.4500E+01	2.2590E-01	2.4795E+01	4.0953E+05	5.0606E+02
2.5000E+01	2.1405E-01	2.3495E+01	3.8805E+05	4.9594E+02
2.5500E+01	2.0094E-01	2.2055E+01	3.6428E+05	4.8621E+02
2.6000E+01	1.8698E-01	2.0523E+01	3.3897E+05	4.7686E+02
2.6500E+01	1.7471E-01	1.9176E+01	3.1673E+05	4.6786E+02
2.7000E+01	1.6413E-01	1.8016E+01	2.9756E+05	4.5920E+02
2.7500E+01	1.5314E-01	1.6808E+01	2.7762E+05	4.5085E+02
2.8000E+01	1.4214E-01	1.5601E+01	2.5768E+05	4.4280E+02
2.8500E+01	1.3114E-01	1.4394E+01	2.3774E+05	4.3503E+02
2.9000E+01	1.2099E-01	1.3280E+01	2.1933E+05	4.2753E+02
2.9500E+01	1.0956E-01	1.2026E+01	1.9863E+05	4.2029E+02
3.0000E+01	1.0068E-01	1.1051E+01	1.8252E+05	4.1328E+02
3.1000E+01	8.4606E-02	9.2864E+00	1.5338E+05	3.9995E+02
3.2000E+01	6.7684E-02	7.4291E+00	1.2270E+05	3.8745E+02
3.3000E+01	5.5840E-02	6.1290E+00	1.0123E+05	3.7571E+02
3.4000E+01	4.5687E-02	5.0146E+00	8.2825E+04	3.6466E+02
3.5000E+01	3.8072E-02	4.1789E+00	6.9021E+04	3.5424E+02
3.6000E+01	3.0458E-02	3.3431E+00	5.5217E+04	3.4440E+02
3.7000E+01	3.4688E-02	3.8074E+00	6.2886E+04	3.3509E+02
3.8000E+01	2.5994E-02	2.8531E+00	4.7124E+04	3.2627E+02
4.0000E+01	2.3714E-02	2.6028E+00	4.2990E+04	3.0996E+02
4.2500E+01	2.1889E-02	2.4026E+00	3.9683E+04	2.9173E+02
4.5000E+01	2.0065E-02	2.2024E+00	3.6376E+04	2.7552E+02
4.7500E+01	1.8515E-02	2.0322E+00	3.3565E+04	2.6102E+02
5.0000E+01	1.7512E-02	1.9221E+00	3.1747E+04	2.4797E+02
5.5000E+01	1.5687E-02	1.7219E+00	2.8440E+04	2.2543E+02
6.0000E+01	1.4593E-02	1.6017E+00	2.6455E+04	2.0664E+02
6.5000E+01	1.3681E-02	1.5016E+00	2.4802E+04	1.9074E+02
7.0000E+01	1.3042E-02	1.4316E+00	2.3645E+04	1.7712E+02
7.5000E+01	1.2313E-02	1.3515E+00	2.2322E+04	1.6531E+02
8.0000E+01	1.1583E-02	1.2714E+00	2.0999E+04	1.5498E+02
8.5000E+01	1.0945E-02	1.2013E+00	1.9842E+04	1.4586E+02
9.0000E+01	1.0580E-02	1.1613E+00	1.9180E+04	1.3776E+02
9.1500E+01	1.0534E-02	1.1563E+00	1.9098E+04	1.3550E+02
1.0000E+02	9.6455E-03	1.0587E+00	1.7486E+04	1.2398E+02

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
1.2500E+02	7.3515E-03	8.0691E-01	1.3327E+04	9.9187E+01
1.5000E+02	5.6393E-03	6.1898E-01	1.0224E+04	8.2656E+01
1.7500E+02	4.4096E-03	4.8400E-01	7.9941E+03	7.0848E+01
1.9800E+02	3.9102E-03	4.2919E-01	7.0888E+03	6.2618E+01
1.9853E+02	4.0605E-03	4.4569E-01	7.3613E+03	6.2451E+01
1.9902E+02	4.5115E-03	4.9519E-01	8.1788E+03	6.2297E+01
1.9949E+02	5.3540E-03	5.8766E-01	9.7063E+03	6.2151E+01
2.0000E+02	6.6772E-03	7.3290E-01	1.2105E+04	6.1992E+01
2.0034E+02	8.0607E-03	8.8475E-01	1.4613E+04	6.1887E+01
2.0063E+02	9.5352E-03	1.0466E+00	1.7286E+04	6.1797E+01
2.0094E+02	1.0738E-02	1.1786E+00	1.9466E+04	6.1702E+01
2.0127E+02	1.1370E-02	1.2479E+00	2.0612E+04	6.1601E+01
2.0157E+02	1.1309E-02	1.2413E+00	2.0503E+04	6.1509E+01
2.0200E+02	1.0828E-02	1.1885E+00	1.9630E+04	6.1378E+01
2.0236E+02	1.0377E-02	1.1390E+00	1.8812E+04	6.1269E+01
2.0274E+02	1.0016E-02	1.0993E+00	1.8158E+04	6.1154E+01
2.0317E+02	9.5946E-03	1.0531E+00	1.7394E+04	6.1025E+01
2.0359E+02	9.4146E-03	1.0334E+00	1.7068E+04	6.0899E+01
2.0384E+02	9.6549E-03	1.0597E+00	1.7503E+04	6.0824E+01
2.0400E+02	1.0437E-02	1.1456E+00	1.8921E+04	6.0777E+01
2.0409E+02	1.4919E-02	1.6375E+00	2.7046E+04	6.0750E+01
2.0423E+02	1.8919E-02	2.0766E+00	3.4298E+04	6.0708E+01
2.0436E+02	1.5144E-02	1.6623E+00	2.7455E+04	6.0669E+01
2.0443E+02	1.1430E-02	1.2546E+00	2.0721E+04	6.0649E+01
2.0445E+02	8.2111E-03	9.0125E-01	1.4886E+04	6.0643E+01
2.0458E+02	7.6395E-03	8.3852E-01	1.3850E+04	6.0604E+01
2.0468E+02	8.1211E-03	8.9138E-01	1.4723E+04	6.0575E+01
2.0482E+02	1.0122E-02	1.1110E+00	1.8349E+04	6.0533E+01
2.0483E+02	1.2031E-02	1.3206E+00	2.1811E+04	6.0530E+01
2.0493E+02	1.4137E-02	1.5517E+00	2.5628E+04	6.0501E+01
2.0502E+02	1.2663E-02	1.3899E+00	2.2957E+04	6.0474E+01
2.0513E+02	1.0136E-02	1.1126E+00	1.8376E+04	6.0442E+01
2.0523E+02	7.7304E-03	8.4850E-01	1.4014E+04	6.0412E+01
2.0531E+02	6.4063E-03	7.0316E-01	1.1614E+04	6.0389E+01
2.0537E+02	7.1282E-03	7.8240E-01	1.2923E+04	6.0371E+01
2.0543E+02	9.5046E-03	1.0432E+00	1.7231E+04	6.0353E+01

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
2.0547E+02	1.2363E-02	1.3569E+00	2.2412E+04	6.0342E+01
2.0553E+02	1.3235E-02	1.4527E+00	2.3993E+04	6.0324E+01
2.0560E+02	1.7626E-02	1.9346E+00	3.1953E+04	6.0304E+01
2.0567E+02	2.3220E-02	2.5486E+00	4.2095E+04	6.0283E+01
2.0573E+02	2.8169E-02	3.0918E+00	5.1066E+04	6.0265E+01
2.0579E+02	2.8966E-02	3.1793E+00	5.2511E+04	6.0248E+01
2.0590E+02	2.4513E-02	2.6906E+00	4.4440E+04	6.0216E+01
2.0595E+02	2.0964E-02	2.3011E+00	3.8006E+04	6.0201E+01
2.0600E+02	1.9340E-02	2.1228E+00	3.5062E+04	6.0186E+01
2.0605E+02	1.8468E-02	2.0271E+00	3.3481E+04	6.0172E+01
2.0611E+02	1.5821E-02	1.7365E+00	2.8681E+04	6.0154E+01
2.0623E+02	1.2543E-02	1.3767E+00	2.2738E+04	6.0119E+01
2.0635E+02	1.4227E-02	1.5615E+00	2.5791E+04	6.0084E+01
2.0643E+02	1.6618E-02	1.8240E+00	3.0126E+04	6.0061E+01
2.0649E+02	1.9957E-02	2.1904E+00	3.6179E+04	6.0044E+01
2.0660E+02	2.3882E-02	2.6213E+00	4.3295E+04	6.0012E+01
2.0669E+02	2.2183E-02	2.4348E+00	4.0215E+04	5.9986E+01
2.0677E+02	2.0273E-02	2.2252E+00	3.6753E+04	5.9962E+01
2.0682E+02	1.8543E-02	2.0353E+00	3.3617E+04	5.9948E+01
2.0703E+02	2.0845E-02	2.2879E+00	3.7789E+04	5.9887E+01
2.0719E+02	2.3762E-02	2.6081E+00	4.3078E+04	5.9841E+01
2.0732E+02	2.6559E-02	2.9151E+00	4.8148E+04	5.9803E+01
2.0739E+02	2.7641E-02	3.0340E+00	5.0111E+04	5.9783E+01
2.0749E+02	2.7762E-02	3.0472E+00	5.0330E+04	5.9754E+01
2.0757E+02	2.7476E-02	3.0158E+00	4.9811E+04	5.9731E+01
2.0765E+02	2.6258E-02	2.8821E+00	4.7603E+04	5.9708E+01
2.0774E+02	2.4544E-02	2.6940E+00	4.4496E+04	5.9682E+01
2.0782E+02	2.2589E-02	2.4794E+00	4.0951E+04	5.9659E+01
2.0793E+02	2.2197E-02	2.4364E+00	4.0241E+04	5.9628E+01
2.0800E+02	2.2258E-02	2.4430E+00	4.0351E+04	5.9608E+01
2.1000E+02	2.8323E-02	3.1087E+00	5.1346E+04	5.9040E+01
2.1250E+02	3.0193E-02	3.3140E+00	5.4737E+04	5.8345E+01
2.1500E+02	3.1542E-02	3.4621E+00	5.7182E+04	5.7667E+01
2.1750E+02	3.2293E-02	3.5445E+00	5.8543E+04	5.7004E+01
2.2000E+02	3.2636E-02	3.5822E+00	5.9166E+04	5.6356E+01
2.2250E+02	3.2420E-02	3.5584E+00	5.8774E+04	5.5723E+01



Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
2.2500E+02	3.1987E-02	3.5110E+00	5.7989E+04	5.5104E+01
2.2750E+02	3.1287E-02	3.4341E+00	5.6721E+04	5.4499E+01
2.3000E+02	3.0766E-02	3.3769E+00	5.5775E+04	5.3906E+01
2.3200E+02	3.0550E-02	3.3531E+00	5.5383E+04	5.3441E+01
2.5000E+02	3.0388E-02	3.3354E+00	5.5090E+04	4.9594E+01
2.7500E+02	2.7156E-02	2.9807E+00	4.9232E+04	4.5085E+01
3.0000E+02	2.3912E-02	2.6246E+00	4.3351E+04	4.1328E+01
3.5000E+02	1.8278E-02	2.0063E+00	3.3137E+04	3.5424E+01
4.0000E+02	1.4003E-02	1.5370E+00	2.5386E+04	3.0996E+01
4.5000E+02	1.0855E-02	1.1915E+00	1.9679E+04	2.7552E+01
5.0000E+02	8.5374E-03	9.3707E-01	1.5477E+04	2.4797E+01
6.0000E+02	5.5115E-03	6.0494E-01	9.9917E+03	2.0664E+01
7.0000E+02	3.7425E-03	4.1078E-01	6.7847E+03	1.7712E+01
8.0000E+02	2.6499E-03	2.9086E-01	4.8040E+03	1.5498E+01
9.0000E+02	1.9836E-03	2.1772E-01	3.5961E+03	1.3776E+01
1.0000E+03	1.5121E-03	1.6596E-01	2.7412E+03	1.2398E+01
1.2500E+03	8.4489E-04	9.2736E-02	1.5317E+03	9.9187E+00
1.5000E+03	5.2161E-04	5.7252E-02	9.4561E+02	8.2656E+00
1.7500E+03	3.4557E-04	3.7931E-02	6.2649E+02	7.0848E+00
2.0000E+03	2.4136E-04	2.6492E-02	4.3757E+02	6.1992E+00
2.2500E+03	1.7564E-04	1.9279E-02	3.1842E+02	5.5104E+00
2.5000E+03	1.3208E-04	1.4497E-02	2.3945E+02	4.9594E+00
2.7500E+03	1.0202E-04	1.1198E-02	1.8496E+02	4.5085E+00
2.8200E+03	9.5305E-05	1.0461E-02	1.7278E+02	4.3966E+00
2.8217E+03	1.7365E-04	1.9060E-02	3.1480E+02	4.3940E+00
2.8220E+03	2.9826E-04	3.2738E-02	5.4072E+02	4.3934E+00
2.8223E+03	5.4760E-04	6.0106E-02	9.9275E+02	4.3931E+00
2.8228E+03	1.4245E-03	1.5636E-01	2.5825E+03	4.3923E+00
2.8231E+03	2.5464E-03	2.7950E-01	4.6164E+03	4.3917E+00
2.8234E+03	3.3700E-03	3.6990E-01	6.1095E+03	4.3913E+00
2.8238E+03	3.8909E-03	4.2706E-01	7.0537E+03	4.3906E+00
2.8240E+03	3.8463E-03	4.2218E-01	6.9730E+03	4.3903E+00
2.8242E+03	3.4412E-03	3.7771E-01	6.2385E+03	4.3900E+00
2.8246E+03	2.7000E-03	2.9636E-01	4.8948E+03	4.3895E+00
2.8251E+03	1.3979E-03	1.5343E-01	2.5342E+03	4.3887E+00
2.8254E+03	7.7458E-04	8.5019E-02	1.4042E+03	4.3882E+00

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
2.8257E+03	6.3211E-04	6.9381E-02	1.1460E+03	4.3877E+00
2.8259E+03	4.9857E-04	5.4724E-02	9.0386E+02	4.3875E+00
2.8261E+03	4.9857E-04	5.4724E-02	9.0386E+02	4.3871E+00
2.8264E+03	6.2771E-04	6.8898E-02	1.1380E+03	4.3866E+00
2.8268E+03	1.0640E-03	1.1679E-01	1.9290E+03	4.3861E+00
2.8272E+03	1.9855E-03	2.1793E-01	3.5995E+03	4.3854E+00
2.8276E+03	2.8625E-03	3.1419E-01	5.1894E+03	4.3848E+00
2.8276E+03	3.5302E-03	3.8748E-01	6.3999E+03	4.3848E+00
2.8279E+03	3.5970E-03	3.9481E-01	6.5210E+03	4.3844E+00
2.8281E+03	2.5553E-03	2.8048E-01	4.6325E+03	4.3840E+00
2.8285E+03	1.4112E-03	1.5490E-01	2.5584E+03	4.3834E+00
2.8286E+03	1.3512E-03	1.4830E-01	2.4495E+03	4.3832E+00
2.8289E+03	1.5759E-03	1.7298E-01	2.8570E+03	4.3828E+00
2.8293E+03	1.9320E-03	2.1206E-01	3.5026E+03	4.3822E+00
2.8295E+03	1.8297E-03	2.0083E-01	3.3170E+03	4.3818E+00
2.8300E+03	1.7985E-03	1.9741E-01	3.2605E+03	4.3811E+00
2.8331E+03	1.6294E-03	1.7884E-01	2.9539E+03	4.3762E+00
2.8361E+03	1.4691E-03	1.6125E-01	2.6632E+03	4.3717E+00
2.8381E+03	1.4380E-03	1.5783E-01	2.6069E+03	4.3685E+00
2.8400E+03	1.2999E-03	1.4268E-01	2.3566E+03	4.3656E+00
2.8430E+03	1.1219E-03	1.2314E-01	2.0338E+03	4.3610E+00
2.8444E+03	1.1308E-03	1.2412E-01	2.0500E+03	4.3589E+00
2.8472E+03	9.4823E-04	1.0408E-01	1.7190E+03	4.3545E+00
2.8550E+03	9.0374E-04	9.9196E-02	1.6384E+03	4.3427E+00
3.0000E+03	7.9941E-04	8.7744E-02	1.4492E+03	4.1328E+00
3.5000E+03	5.4014E-04	5.9286E-02	9.7922E+02	3.5424E+00
4.0000E+03	3.8061E-04	4.1776E-02	6.9001E+02	3.0996E+00
4.5000E+03	2.7771E-04	3.0482E-02	5.0346E+02	2.7552E+00
5.0000E+03	2.0859E-04	2.2895E-02	3.7815E+02	2.4797E+00
6.0000E+03	1.2613E-04	1.3845E-02	2.2867E+02	2.0664E+00
7.0000E+03	8.1926E-05	8.9923E-03	1.4852E+02	1.7712E+00
8.0000E+03	5.6165E-05	6.1648E-03	1.0182E+02	1.5498E+00
9.0000E+03	4.0163E-05	4.4083E-03	7.2811E+01	1.3776E+00
1.0000E+04	2.9739E-05	3.2642E-03	5.3914E+01	1.2398E+00
1.2500E+04	1.5545E-05	1.7062E-03	2.8181E+01	9.9187E-01
1.5000E+04	9.0109E-06	9.8905E-04	1.6336E+01	8.2656E-01

Table II. Oscillator-strength density,  $df/dE$ , photoabsorption cross section,  $\sigma_a$ , and mass absorption coefficient,  $\mu_m$ . (Continued)

Energy (eV)	$f_n$ (eV <sup>-1</sup> )	$\sigma_a$ (Mb)	$\mu_m$ (cm <sup>2</sup> g <sup>-1</sup> )	$\lambda$ (Å)
1.7500E+04	5.6818E-06	6.2364E-04	1.0301E+01	7.0848E-01
2.0000E+04	3.8111E-06	4.1830E-04	6.9090E+00	6.1992E-01
2.2500E+04	2.6798E-06	2.9413E-04	4.8581E+00	5.5104E-01
2.5000E+04	1.9558E-06	2.1467E-04	3.5456E+00	4.9594E-01
2.7500E+04	1.4651E-06	1.6081E-04	2.6560E+00	4.5085E-01
3.0000E+04	1.1183E-06	1.2275E-04	2.0273E+00	4.1328E-01
3.5000E+04	6.9225E-07	7.5983E-05	1.2550E+00	3.5424E-01
4.0000E+04	4.5701E-07	5.0161E-05	8.2850E-01	3.0996E-01
4.5000E+04	3.1687E-07	3.4779E-05	5.7444E-01	2.7552E-01
5.0000E+04	2.2836E-07	2.5065E-05	4.1399E-01	2.4797E-01
6.0000E+04	1.2946E-07	1.4209E-05	2.3469E-01	2.0664E-01
7.0000E+04	7.9586E-08	8.7355E-06	1.4428E-01	1.7712E-01
8.0000E+04	5.2138E-08	5.7227E-06	9.4520E-02	1.5498E-01
9.0000E+04	3.5895E-08	3.9399E-06	6.5074E-02	1.3776E-01
1.0000E+05	2.5715E-08	2.8225E-06	4.6618E-02	1.2398E-01

When photon energy,  $E$ , is higher than  $10^5$  eV, the photoabsorption cross section of atoms,  $\sigma_a$ , in Mb is given by

$$\sigma_a = 680 (Z - 0.3)^6 \left( \frac{Ry}{E} \right)^4 \frac{\exp[-4\chi \arctan(\chi^{-1})]}{1 - \exp(-2\pi\chi)} .$$

Here  $E$  is photon energy in eV and  $\chi$  is given by

$$\chi = \sqrt{\frac{E_K}{E - E_K}} ,$$

where  $E_K = 13.6$  and  $2830.2$  eV for hydrogen and chlorine atoms, respectively.

