

## Ethane (C<sub>2</sub>H<sub>6</sub>)

Z = 18

Molecular Mass :  $M_A = 30.06904$

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

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

Table I. 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)
8.1300E+00	3.7676E-03	4.1354E-01	8.2822E+03	1.5250E+03
8.2800E+00	1.1988E-02	1.3158E+00	2.6353E+04	1.4974E+03
8.5200E+00	2.6145E-02	2.8697E+00	5.7474E+04	1.4552E+03
8.6400E+00	3.2082E-02	3.5213E+00	7.0524E+04	1.4350E+03
8.7500E+00	4.5554E-02	5.0001E+00	1.0014E+05	1.4170E+03
8.8500E+00	9.0309E-02	9.9124E+00	1.9852E+05	1.4010E+03
8.9100E+00	8.2774E-02	9.0853E+00	1.8196E+05	1.3915E+03
9.0000E+00	1.5516E-01	1.7030E+01	3.4108E+05	1.3776E+03
9.0500E+00	1.4922E-01	1.6379E+01	3.2803E+05	1.3700E+03
9.1300E+00	2.3805E-01	2.6128E+01	5.2329E+05	1.3580E+03
9.2000E+00	2.2012E-01	2.4161E+01	4.8388E+05	1.3477E+03
9.2700E+00	3.0369E-01	3.3334E+01	6.6760E+05	1.3375E+03
9.3400E+00	2.6899E-01	2.9524E+01	5.9130E+05	1.3275E+03
9.4200E+00	3.2082E-01	3.5213E+01	7.0524E+05	1.3162E+03
9.4900E+00	2.7869E-01	3.0589E+01	6.1263E+05	1.3065E+03
9.5600E+00	3.1043E-01	3.4073E+01	6.8241E+05	1.2969E+03
9.6500E+00	2.6419E-01	2.8998E+01	5.8076E+05	1.2848E+03
9.7200E+00	2.8508E-01	3.1291E+01	6.2669E+05	1.2756E+03
9.8000E+00	2.5072E-01	2.7519E+01	5.5115E+05	1.2651E+03
9.8800E+00	2.6716E-01	2.9324E+01	5.8729E+05	1.2549E+03
9.9400E+00	2.5152E-01	2.7607E+01	5.5290E+05	1.2473E+03
9.9900E+00	2.5814E-01	2.8334E+01	5.6746E+05	1.2411E+03
1.0310E+01	2.6693E-01	2.9299E+01	5.8678E+05	1.2026E+03
1.0580E+01	2.9684E-01	3.2582E+01	6.5254E+05	1.1719E+03
1.0670E+01	3.2162E-01	3.5301E+01	7.0700E+05	1.1620E+03
1.0740E+01	3.1705E-01	3.4800E+01	6.9696E+05	1.1544E+03
1.0810E+01	3.4251E-01	3.7594E+01	7.5293E+05	1.1469E+03
1.0880E+01	3.2265E-01	3.5414E+01	7.0926E+05	1.1396E+03

Table I. 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)
1.0950E+01	3.4628E-01	3.8008E+01	7.6121E+05	1.1323E+03
1.1030E+01	3.2310E-01	3.5464E+01	7.1026E+05	1.1241E+03
1.1100E+01	3.5153E-01	3.8584E+01	7.7276E+05	1.1170E+03
1.1180E+01	3.4171E-01	3.7507E+01	7.5117E+05	1.1090E+03
1.1240E+01	3.9183E-01	4.3008E+01	8.6135E+05	1.1031E+03
1.1330E+01	3.9857E-01	4.3747E+01	8.7616E+05	1.0943E+03
1.1410E+01	4.4127E-01	4.8434E+01	9.7003E+05	1.0866E+03
1.1520E+01	4.6365E-01	5.0890E+01	1.0192E+06	1.0763E+03
1.1949E+01	4.8350E-01	5.3070E+01	1.0629E+06	1.0376E+03
1.2208E+01	5.1718E-01	5.6766E+01	1.1369E+06	1.0156E+03
1.2621E+01	5.0692E-01	5.5640E+01	1.1143E+06	9.8240E+02
1.2819E+01	5.2181E-01	5.7274E+01	1.1471E+06	9.6720E+02
1.3056E+01	6.1332E-01	6.7318E+01	1.3482E+06	9.4960E+02
1.3258E+01	6.7015E-01	7.3556E+01	1.4732E+06	9.3520E+02
1.3655E+01	6.8848E-01	7.5569E+01	1.5135E+06	9.0800E+02
1.3900E+01	7.3315E-01	8.0471E+01	1.6117E+06	8.9200E+02
1.4179E+01	7.4686E-01	8.1976E+01	1.6418E+06	8.7440E+02
1.4511E+01	7.3315E-01	8.0471E+01	1.6117E+06	8.5440E+02
1.5083E+01	7.4341E-01	8.1597E+01	1.6342E+06	8.2200E+02
1.5792E+01	7.3887E-01	8.1099E+01	1.6242E+06	7.8510E+02
1.6441E+01	7.2398E-01	7.9465E+01	1.5915E+06	7.5410E+02
1.7052E+01	6.8385E-01	7.5061E+01	1.5033E+06	7.2710E+02
1.8016E+01	6.5353E-01	7.1733E+01	1.4366E+06	6.8820E+02
1.8619E+01	6.4609E-01	7.0915E+01	1.4203E+06	6.6590E+02
1.9550E+01	5.9571E-01	6.5385E+01	1.3095E+06	6.3420E+02
2.0664E+01	5.4178E-01	5.9467E+01	1.1910E+06	6.0000E+02
2.1500E+01	4.7847E-01	5.2518E+01	1.0518E+06	5.7667E+02
2.2000E+01	4.6503E-01	5.1042E+01	1.0223E+06	5.6356E+02
2.2500E+01	4.3884E-01	4.8168E+01	9.6469E+05	5.5104E+02
2.3000E+01	4.1988E-01	4.6086E+01	9.2301E+05	5.3906E+02
2.3500E+01	4.0413E-01	4.4358E+01	8.8838E+05	5.2759E+02
2.4000E+01	3.8978E-01	4.2783E+01	8.5684E+05	5.1660E+02
2.4500E+01	3.6681E-01	4.0261E+01	8.0633E+05	5.0606E+02
2.5000E+01	3.5356E-01	3.8807E+01	7.7722E+05	4.9594E+02
2.5500E+01	3.3610E-01	3.6891E+01	7.3885E+05	4.8621E+02
2.6000E+01	3.3309E-01	3.6561E+01	7.3223E+05	4.7686E+02

Table I. 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)
2.6500E+01	3.0952E-01	3.3973E+01	6.8040E+05	4.6786E+02
2.7000E+01	2.9126E-01	3.1969E+01	6.4026E+05	4.5920E+02
2.7500E+01	2.8654E-01	3.1451E+01	6.2989E+05	4.5085E+02
2.8000E+01	2.6788E-01	2.9403E+01	5.8887E+05	4.4280E+02
2.8500E+01	2.6186E-01	2.8742E+01	5.7564E+05	4.3503E+02
2.9000E+01	2.4571E-01	2.6969E+01	5.4013E+05	4.2753E+02
2.9500E+01	2.3748E-01	2.6066E+01	5.2204E+05	4.2029E+02
3.0000E+01	2.2203E-01	2.4370E+01	4.8808E+05	4.1328E+02
3.1000E+01	2.0116E-01	2.2080E+01	4.4220E+05	3.9995E+02
3.2000E+01	1.9253E-01	2.1133E+01	4.2324E+05	3.8745E+02
3.3000E+01	1.7327E-01	1.9018E+01	3.8089E+05	3.7571E+02
3.4000E+01	1.6243E-01	1.7829E+01	3.5707E+05	3.6466E+02
3.5000E+01	1.4999E-01	1.6463E+01	3.2972E+05	3.5424E+02
3.6000E+01	1.3986E-01	1.5351E+01	3.0745E+05	3.4440E+02
3.7000E+01	1.3133E-01	1.4415E+01	2.8870E+05	3.3509E+02
3.8000E+01	1.2461E-01	1.3677E+01	2.7392E+05	3.2627E+02
3.9000E+01	1.1458E-01	1.2576E+01	2.5187E+05	3.1791E+02
4.0000E+01	1.0866E-01	1.1926E+01	2.3886E+05	3.0996E+02
4.1000E+01	1.0033E-01	1.1012E+01	2.2055E+05	3.0240E+02
4.2000E+01	9.3106E-02	1.0219E+01	2.0467E+05	2.9520E+02
4.3000E+01	8.7989E-02	9.6578E+00	1.9342E+05	2.8834E+02
4.4000E+01	8.3575E-02	9.1732E+00	1.8372E+05	2.8178E+02
4.5000E+01	7.8458E-02	8.6116E+00	1.7247E+05	2.7552E+02
4.6000E+01	7.6552E-02	8.4024E+00	1.6828E+05	2.6953E+02
4.7000E+01	7.1535E-02	7.8518E+00	1.5725E+05	2.6380E+02
4.8000E+01	6.7622E-02	7.4223E+00	1.4865E+05	2.5830E+02
4.9000E+01	6.2606E-02	6.8717E+00	1.3762E+05	2.5303E+02
5.0000E+01	6.0298E-02	6.6184E+00	1.3255E+05	2.4797E+02
5.1000E+01	5.6285E-02	6.1779E+00	1.2373E+05	2.4311E+02
5.2000E+01	5.4078E-02	5.9356E+00	1.1888E+05	2.3843E+02
5.3000E+01	5.2071E-02	5.7154E+00	1.1447E+05	2.3393E+02
5.4000E+01	4.9663E-02	5.4511E+00	1.0917E+05	2.2960E+02
5.5000E+01	4.5249E-02	4.9665E+00	9.9469E+04	2.2543E+02
5.6000E+01	4.3744E-02	4.8014E+00	9.6160E+04	2.2140E+02
5.7000E+01	4.1737E-02	4.5811E+00	9.1749E+04	2.1752E+02
5.8000E+01	4.0232E-02	4.4159E+00	8.8441E+04	2.1377E+02

Table I. 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)
5.9000E+01	3.7022E-02	4.0635E+00	8.1383E+04	2.1014E+02
6.0000E+01	3.5316E-02	3.8763E+00	7.7634E+04	2.0664E+02
6.2000E+01	3.2407E-02	3.5570E+00	7.1238E+04	1.9997E+02
6.4000E+01	2.9999E-02	3.2927E+00	6.5945E+04	1.9373E+02
6.6000E+01	2.7791E-02	3.0504E+00	6.1093E+04	1.8785E+02
6.8000E+01	2.5383E-02	2.7861E+00	5.5799E+04	1.8233E+02
7.0000E+01	2.3577E-02	2.5879E+00	5.1830E+04	1.7712E+02
7.2000E+01	2.2073E-02	2.4227E+00	4.8521E+04	1.7220E+02
7.4000E+01	2.0166E-02	2.2135E+00	4.4331E+04	1.6755E+02
7.6000E+01	1.8762E-02	2.0593E+00	4.1243E+04	1.6314E+02
7.8000E+01	1.7357E-02	1.9051E+00	3.8155E+04	1.5895E+02
8.0000E+01	1.6354E-02	1.7950E+00	3.5950E+04	1.5498E+02
8.2000E+01	1.5250E-02	1.6739E+00	3.3524E+04	1.5120E+02
8.4000E+01	1.3846E-02	1.5197E+00	3.0436E+04	1.4760E+02
8.6000E+01	1.3344E-02	1.4646E+00	2.9333E+04	1.4417E+02
8.8000E+01	1.2642E-02	1.3875E+00	2.7789E+04	1.4089E+02
9.0000E+01	1.1839E-02	1.2995E+00	2.6025E+04	1.3776E+02
9.2000E+01	1.1036E-02	1.2114E+00	2.4261E+04	1.3477E+02
9.4000E+01	1.0635E-02	1.1673E+00	2.3378E+04	1.3190E+02
9.6000E+01	1.0234E-02	1.1233E+00	2.2496E+04	1.2915E+02
9.8000E+01	9.6317E-03	1.0572E+00	2.1173E+04	1.2651E+02
1.0000E+02	9.1300E-03	1.0021E+00	2.0070E+04	1.2398E+02
1.0200E+02	8.9294E-03	9.8009E-01	1.9629E+04	1.2155E+02
1.0400E+02	8.4277E-03	9.2503E-01	1.8526E+04	1.1922E+02
1.0600E+02	8.1267E-03	8.9200E-01	1.7865E+04	1.1697E+02
1.0800E+02	7.8257E-03	8.5896E-01	1.7203E+04	1.1480E+02
1.1000E+02	7.6251E-03	8.3693E-01	1.6762E+04	1.1271E+02
1.1200E+02	7.1234E-03	7.8187E-01	1.5659E+04	1.1070E+02
1.1400E+02	6.9228E-03	7.5985E-01	1.5218E+04	1.0876E+02
1.1600E+02	6.7221E-03	7.3782E-01	1.4777E+04	1.0688E+02
1.1800E+02	6.6218E-03	7.2681E-01	1.4556E+04	1.0507E+02
1.2000E+02	6.3208E-03	6.9377E-01	1.3895E+04	1.0332E+02
1.2200E+02	6.0198E-03	6.6074E-01	1.3233E+04	1.0163E+02
1.2400E+02	5.9195E-03	6.4973E-01	1.3013E+04	9.9987E+01
1.2600E+02	5.6185E-03	6.1669E-01	1.2351E+04	9.8400E+01
1.2800E+02	5.4178E-03	5.9466E-01	1.1910E+04	9.6863E+01

Table I. 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)
1.3000E+02	5.2171E-03	5.7264E-01	1.1469E+04	9.5372E+01
1.3200E+02	5.3175E-03	5.8365E-01	1.1689E+04	9.3927E+01
1.3400E+02	5.1168E-03	5.6163E-01	1.1248E+04	9.2526E+01
1.3600E+02	4.7155E-03	5.1758E-01	1.0366E+04	9.1165E+01
1.3800E+02	4.7155E-03	5.1758E-01	1.0366E+04	8.9844E+01
1.4000E+02	4.5148E-03	4.9555E-01	9.9248E+03	8.8560E+01
1.4200E+02	4.4145E-03	4.8454E-01	9.7042E+03	8.7313E+01
1.4400E+02	4.2139E-03	4.6252E-01	9.2631E+03	8.6100E+01
1.4600E+02	4.2139E-03	4.6252E-01	9.2631E+03	8.4921E+01
1.4800E+02	4.1135E-03	4.5150E-01	9.0426E+03	8.3773E+01
1.5000E+02	4.0132E-03	4.4049E-01	8.8220E+03	8.2656E+01
1.7500E+02	2.7672E-03	3.0373E-01	6.0830E+03	7.0848E+01
2.0000E+02	1.9748E-03	2.1676E-01	4.3412E+03	6.1992E+01
2.2500E+02	1.4283E-03	1.5677E-01	3.1397E+03	5.5104E+01
2.5000E+02	1.0423E-03	1.1440E-01	2.2912E+03	4.9594E+01
2.7500E+02	7.6506E-04	8.3974E-02	1.6818E+03	4.5085E+01
2.8000E+02	7.1950E-04	7.8973E-02	1.5816E+03	4.4280E+01
2.8618E+02	1.0941E-03	1.2009E-01	2.4050E+03	4.3324E+01
2.8638E+02	2.2763E-03	2.4984E-01	5.0038E+03	4.3294E+01
2.8670E+02	9.7735E-03	1.0727E+00	2.1485E+04	4.3245E+01
2.8698E+02	1.6678E-02	1.8306E+00	3.6664E+04	4.3202E+01
2.8723E+02	1.7366E-02	1.9061E+00	3.8175E+04	4.3166E+01
2.8739E+02	1.8253E-02	2.0035E+00	4.0125E+04	4.3142E+01
2.8763E+02	3.3250E-02	3.6496E+00	7.3093E+04	4.3106E+01
2.8771E+02	4.8744E-02	5.3501E+00	1.0715E+05	4.3094E+01
2.8775E+02	5.6341E-02	6.1840E+00	1.2385E+05	4.3088E+01
2.8799E+02	5.9398E-02	6.5196E+00	1.3057E+05	4.3051E+01
2.8811E+02	5.3673E-02	5.8912E+00	1.1799E+05	4.3033E+01
2.8819E+02	5.2686E-02	5.7829E+00	1.1582E+05	4.3021E+01
2.8827E+02	4.9922E-02	5.4795E+00	1.0974E+05	4.3009E+01
2.8847E+02	3.7782E-02	4.1470E+00	8.3055E+04	4.2979E+01
2.8860E+02	3.2748E-02	3.5944E+00	7.1989E+04	4.2961E+01
2.8872E+02	2.8108E-02	3.0852E+00	6.1789E+04	4.2943E+01
2.8892E+02	2.7515E-02	3.0200E+00	6.0484E+04	4.2913E+01
2.8912E+02	2.8598E-02	3.1390E+00	6.2866E+04	4.2883E+01
2.8940E+02	3.1950E-02	3.5069E+00	7.0235E+04	4.2842E+01

Table I. 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)
2.8960E+02	3.4218E-02	3.7558E+00	7.5220E+04	4.2812E+01
2.8984E+02	3.6387E-02	3.9938E+00	7.9987E+04	4.2776E+01
2.9017E+02	3.8456E-02	4.2210E+00	8.4537E+04	4.2729E+01
2.9057E+02	3.9932E-02	4.3830E+00	8.7781E+04	4.2669E+01
2.9089E+02	4.0323E-02	4.4259E+00	8.8641E+04	4.2622E+01
2.9129E+02	4.0418E-02	4.4363E+00	8.8850E+04	4.2563E+01
2.9158E+02	3.9725E-02	4.3602E+00	8.7326E+04	4.2522E+01
2.9182E+02	3.8143E-02	4.1867E+00	8.3849E+04	4.2487E+01
2.9206E+02	3.6661E-02	4.0239E+00	8.0590E+04	4.2452E+01
2.9238E+02	3.5869E-02	3.9370E+00	7.8849E+04	4.2405E+01
2.9246E+02	3.4980E-02	3.8394E+00	7.6894E+04	4.2393E+01
2.9295E+02	3.3395E-02	3.6655E+00	7.3412E+04	4.2323E+01
2.9339E+02	3.1812E-02	3.4917E+00	6.9931E+04	4.2259E+01
2.9411E+02	3.0324E-02	3.3284E+00	6.6661E+04	4.2155E+01
2.9472E+02	2.9431E-02	3.2303E+00	6.4696E+04	4.2069E+01
2.9552E+02	2.8140E-02	3.0887E+00	6.1859E+04	4.1954E+01
2.9657E+02	2.6650E-02	2.9251E+00	5.8583E+04	4.1806E+01
2.9770E+02	2.5355E-02	2.7830E+00	5.5737E+04	4.1648E+01
2.9883E+02	2.4850E-02	2.7276E+00	5.4628E+04	4.1490E+01
3.0012E+02	2.3950E-02	2.6288E+00	5.2648E+04	4.1312E+01
3.0060E+02	2.3452E-02	2.5741E+00	5.1554E+04	4.1246E+01
3.0132E+02	2.3148E-02	2.5408E+00	5.0886E+04	4.1146E+01
3.0257E+02	2.2051E-02	2.4203E+00	4.8474E+04	4.0977E+01
3.0330E+02	2.1353E-02	2.3437E+00	4.6939E+04	4.0879E+01
3.0390E+02	2.1051E-02	2.3105E+00	4.6275E+04	4.0797E+01
3.0451E+02	2.1045E-02	2.3099E+00	4.6262E+04	4.0717E+01
3.0547E+02	1.9950E-02	2.1897E+00	4.3855E+04	4.0588E+01
3.0608E+02	1.9154E-02	2.1023E+00	4.2105E+04	4.0508E+01
3.0692E+02	1.8751E-02	2.0581E+00	4.1219E+04	4.0396E+01
3.0757E+02	1.8548E-02	2.0358E+00	4.0773E+04	4.0311E+01
3.0829E+02	1.8047E-02	1.9809E+00	3.9672E+04	4.0216E+01
3.0914E+02	1.7940E-02	1.9691E+00	3.9436E+04	4.0106E+01
3.1015E+02	1.7141E-02	1.8814E+00	3.7680E+04	3.9976E+01
3.1127E+02	1.6340E-02	1.7935E+00	3.5919E+04	3.9831E+01
3.1196E+02	1.6234E-02	1.7819E+00	3.5688E+04	3.9744E+01
3.1280E+02	1.5733E-02	1.7269E+00	3.4585E+04	3.9636E+01

Table I. 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)
3.1421E+02	1.5226E-02	1.6712E+00	3.3470E+04	3.9459E+01
3.1538E+02	1.4918E-02	1.6374E+00	3.2793E+04	3.9312E+01
3.1607E+02	1.4220E-02	1.5609E+00	3.1260E+04	3.9227E+01
3.1728E+02	1.4307E-02	1.5703E+00	3.1450E+04	3.9078E+01
3.1820E+02	1.3607E-02	1.4935E+00	2.9911E+04	3.8964E+01
3.1909E+02	1.3697E-02	1.5034E+00	3.0109E+04	3.8856E+01
3.2000E+02	1.3491E-02	1.4807E+00	2.9656E+04	3.8745E+01
3.5000E+02	1.1806E-02	1.2959E+00	2.5953E+04	3.5424E+01
4.0000E+02	8.6318E-03	9.4743E-01	1.8975E+04	3.0996E+01
4.5000E+02	6.4894E-03	7.1228E-01	1.4265E+04	2.7552E+01
5.0000E+02	4.9967E-03	5.4844E-01	1.0984E+04	2.4797E+01
6.0000E+02	3.1422E-03	3.4489E-01	6.9073E+03	2.0664E+01
7.0000E+02	2.1032E-03	2.3085E-01	4.6234E+03	1.7712E+01
8.0000E+02	1.4774E-03	1.6217E-01	3.2478E+03	1.5498E+01
9.0000E+02	1.0784E-03	1.1837E-01	2.3706E+03	1.3776E+01
1.0000E+03	8.1199E-04	8.9125E-02	1.7850E+03	1.2398E+01
1.2500E+03	4.4306E-04	4.8631E-02	9.7396E+02	9.9187E+00
1.5000E+03	2.6926E-04	2.9554E-02	5.9190E+02	8.2656E+00
1.7500E+03	1.6280E-04	1.7869E-02	3.5787E+02	7.0848E+00
2.0000E+03	1.1002E-04	1.2076E-02	2.4186E+02	6.1992E+00
2.2500E+03	7.7649E-05	8.5228E-03	1.7069E+02	5.5104E+00
2.5000E+03	5.6732E-05	6.2270E-03	1.2471E+02	4.9594E+00
2.7500E+03	4.2640E-05	4.6802E-03	9.3735E+01	4.5085E+00
3.0000E+03	3.2812E-05	3.6015E-03	7.2130E+01	4.1328E+00
3.5000E+03	2.0565E-05	2.2573E-03	4.5208E+01	3.5424E+00
4.0000E+03	1.3677E-05	1.5012E-03	3.0065E+01	3.0996E+00
4.5000E+03	9.5193E-06	1.0449E-03	2.0926E+01	2.7552E+00
5.0000E+03	6.8687E-06	7.5392E-04	1.5099E+01	2.4797E+00
6.0000E+03	3.8840E-06	4.2631E-04	8.5380E+00	2.0664E+00
7.0000E+03	2.3838E-06	2.6165E-04	5.2403E+00	1.7712E+00
8.0000E+03	1.5535E-06	1.7051E-04	3.4149E+00	1.5498E+00
9.0000E+03	1.0596E-06	1.1630E-04	2.3292E+00	1.3776E+00
1.0000E+04	7.1204E-07	7.8154E-05	1.5653E+00	1.2398E+00
1.2500E+04	3.4480E-07	3.7846E-05	7.5796E-01	9.9187E-01
1.5000E+04	1.9066E-07	2.0928E-05	4.1913E-01	8.2656E-01
1.7500E+04	1.1553E-07	1.2681E-05	2.5396E-01	7.0848E-01

Table I. 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)
2.0000E+04	7.4862E-08	8.2170E-06	1.6457E-01	6.1992E-01
2.2500E+04	5.1055E-08	5.6038E-06	1.1223E-01	5.5104E-01
2.5000E+04	3.6253E-08	3.9792E-06	7.9694E-02	4.9594E-01
2.7500E+04	2.6544E-08	2.9135E-06	5.8350E-02	4.5085E-01
3.0000E+04	1.9906E-08	2.1849E-06	4.3758E-02	4.1328E-01
3.5000E+04	1.1948E-08	1.3115E-06	2.6266E-02	3.5424E-01
4.0000E+04	7.6790E-09	8.4286E-07	1.6880E-02	3.0996E-01
4.5000E+04	5.1993E-09	5.7068E-07	1.1429E-02	2.7552E-01
5.0000E+04	3.6683E-09	4.0264E-07	8.0639E-03	2.4797E-01
6.0000E+04	2.0060E-09	2.2018E-07	4.4098E-03	2.0664E-01
7.0000E+04	1.2042E-09	1.3217E-07	2.6471E-03	1.7712E-01
8.0000E+04	7.7416E-10	8.4973E-08	1.7018E-03	1.5498E-01
9.0000E+04	5.2476E-10	5.7598E-08	1.1536E-03	1.3776E-01
1.0000E+05	3.7094E-10	4.0715E-08	8.1543E-04	1.2398E-01

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

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

Here  $Z_c$  denotes the atomic number of constituent atoms and  $E$  is photon energy in eV.

The quantity  $\chi$  is given by

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

where  $E_K = 13.6$  and  $290.7$  eV for hydrogen and carbon atoms, respectively.



