

Carbon Monoxide

$Z = 14$

Molecular Mass : $M_A = 28.0101$

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

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

Table I. Oscillator strength, f_n , for transitions to the $A^1\Pi$, $B^1\Sigma^+$, $C^1\Sigma^+$, and $E^1\Pi$ states.

Energy (eV)	f_n	λ (Å)	Energy (eV)	f_n	λ (Å)
8.0278E+00	1.5465E-02	1.5444E+03	9.6718E+00	3.9139E-04	1.2819E+03
8.2115E+00	3.3506E-02	1.5099E+03	9.8130E+00	1.7183E-04	1.2635E+03
8.3907E+00	3.8375E-02	1.4776E+03	9.9498E+00	8.5914E-05	1.2461E+03
8.5659E+00	3.3125E-02	1.4474E+03	1.0776E+01	7.6654E-03	1.1505E+03
8.7367E+00	2.3101E-02	1.4191E+03	1.1034E+01	1.2601E-03	1.1236E+03
8.9032E+00	1.3842E-02	1.3926E+03	1.1396E+01	1.1236E-01	1.0879E+03
9.0654E+00	7.6845E-03	1.3677E+03	1.1663E+01	3.3984E-03	1.0631E+03
9.2234E+00	3.9520E-03	1.3442E+03	1.1522E+01	6.7395E-02	1.0761E+03
9.3771E+00	1.9283E-03	1.3222E+03	1.1789E+01	3.3697E-03	1.0517E+03
9.5266E+00	9.0687E-04	1.3015E+03			

Table II. Oscillator strength, f_n , for the pre-K-edge resonances of carbon and oxygen atoms.

Energy (eV)	f_n	λ (Å)	Energy (eV)	f_n	λ (Å)
2.8740E+02	1.7000E-01	4.3140E+01	5.3411E+02	7.6001E-02	2.3213E+01

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m .

Energy (eV)	f_n (eV^{-1})	σ_a (Mb)	μ_m ($\text{cm}^2 \text{g}^{-1}$)	λ (Å)
1.2130E+01	1.6158E-01	1.7735E+01	3.8131E+05	1.0221E+03
1.2500E+01	1.3839E-01	1.5190E+01	3.2658E+05	9.9187E+02
1.3000E+01	3.4086E-01	3.7413E+01	8.0437E+05	9.5372E+02
1.3500E+01	4.9921E-01	5.4794E+01	1.1781E+06	9.1840E+02
1.4000E+01	5.0793E-01	5.5751E+01	1.1986E+06	8.8560E+02
1.4013E+01	5.0595E-01	5.5534E+01	1.1940E+06	8.8478E+02
1.4014E+01	3.2179E-01	3.5320E+01	7.5937E+05	8.8470E+02

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
1.4017E+01	2.8797E-01	3.1608E+01	6.7956E+05	8.8450E+02
1.4025E+01	2.3037E-01	2.5286E+01	5.4365E+05	8.8400E+02
1.4070E+01	4.8955E-01	5.3733E+01	1.1553E+06	8.8120E+02
1.4075E+01	3.8396E-01	4.2144E+01	9.0608E+05	8.8090E+02
1.4089E+01	3.8396E-01	4.2144E+01	9.0608E+05	8.8000E+02
1.4116E+01	2.9117E-01	3.1959E+01	6.8711E+05	8.7830E+02
1.4129E+01	3.3596E-01	3.6876E+01	7.9282E+05	8.7750E+02
1.4137E+01	2.1758E-01	2.3881E+01	5.1345E+05	8.7700E+02
1.4153E+01	2.2557E-01	2.4759E+01	5.3232E+05	8.7600E+02
1.4170E+01	1.6158E-01	1.7735E+01	3.8131E+05	8.7500E+02
1.4186E+01	2.0958E-01	2.3003E+01	4.9457E+05	8.7400E+02
1.4194E+01	2.0318E-01	2.2301E+01	4.7947E+05	8.7350E+02
1.4213E+01	2.4797E-01	2.7218E+01	5.8518E+05	8.7230E+02
1.4227E+01	4.3195E-01	4.7411E+01	1.0193E+06	8.7150E+02
1.4240E+01	3.1197E-01	3.4242E+01	7.3619E+05	8.7070E+02
1.4251E+01	3.5836E-01	3.9334E+01	8.4568E+05	8.7000E+02
1.4267E+01	2.2717E-01	2.4935E+01	5.3610E+05	8.6900E+02
1.4289E+01	3.0717E-01	3.3715E+01	7.2486E+05	8.6770E+02
1.4300E+01	3.6476E-01	4.0036E+01	8.6078E+05	8.6700E+02
1.4309E+01	3.5196E-01	3.8632E+01	8.3057E+05	8.6650E+02
1.4325E+01	3.2636E-01	3.5822E+01	7.7017E+05	8.6550E+02
1.4340E+01	2.7517E-01	3.0203E+01	6.4936E+05	8.6460E+02
1.4358E+01	3.0397E-01	3.3364E+01	7.1731E+05	8.6350E+02
1.4367E+01	2.6237E-01	2.8798E+01	6.1916E+05	8.6300E+02
1.4397E+01	2.9437E-01	3.2310E+01	6.9466E+05	8.6120E+02
1.4413E+01	2.2078E-01	2.4233E+01	5.2100E+05	8.6020E+02
1.4417E+01	2.1758E-01	2.3881E+01	5.1345E+05	8.6000E+02
1.4434E+01	1.5998E-01	1.7560E+01	3.7753E+05	8.5900E+02
1.4445E+01	1.7278E-01	1.8965E+01	4.0774E+05	8.5830E+02
1.4450E+01	1.7918E-01	1.9667E+01	4.2284E+05	8.5800E+02
1.4464E+01	2.3197E-01	2.5462E+01	5.4742E+05	8.5720E+02
1.4481E+01	1.7918E-01	1.9667E+01	4.2284E+05	8.5620E+02
1.2994E+01	2.3357E-01	2.5637E+01	5.5120E+05	9.5420E+02
1.4525E+01	2.1758E-01	2.3881E+01	5.1345E+05	8.5360E+02
1.4540E+01	2.2078E-01	2.4233E+01	5.2100E+05	8.5270E+02
1.4547E+01	2.2398E-01	2.4584E+01	5.2855E+05	8.5230E+02

Table II. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
1.4554E+01	2.2398E-01	2.4584E+01	5.2855E+05	8.5190E+02
1.4569E+01	2.4477E-01	2.6866E+01	5.7763E+05	8.5100E+02
1.4604E+01	2.3517E-01	2.5813E+01	5.5497E+05	8.4900E+02
1.4612E+01	2.5597E-01	2.8096E+01	6.0405E+05	8.4850E+02
1.4621E+01	2.6877E-01	2.9500E+01	6.3426E+05	8.4800E+02
1.4641E+01	1.6318E-01	1.7911E+01	3.8508E+05	8.4680E+02
1.4650E+01	1.8878E-01	2.0721E+01	4.4549E+05	8.4630E+02
1.4661E+01	1.8398E-01	2.0194E+01	4.3416E+05	8.4570E+02
1.4673E+01	1.5038E-01	1.6506E+01	3.5488E+05	8.4500E+02
1.4690E+01	2.0958E-01	2.3003E+01	4.9457E+05	8.4400E+02
1.4707E+01	1.2799E-01	1.4048E+01	3.0203E+05	8.4300E+02
1.4739E+01	1.4718E-01	1.6155E+01	3.4733E+05	8.4120E+02
1.4760E+01	1.1519E-01	1.2643E+01	2.7182E+05	8.4000E+02
1.4786E+01	2.0478E-01	2.2477E+01	4.8324E+05	8.3850E+02
1.4827E+01	2.9117E-01	3.1959E+01	6.8711E+05	8.3620E+02
1.4875E+01	1.3758E-01	1.5101E+01	3.2468E+05	8.3350E+02
1.4895E+01	1.8558E-01	2.0369E+01	4.3794E+05	8.3240E+02
1.4923E+01	1.4718E-01	1.6155E+01	3.4733E+05	8.3080E+02
1.4940E+01	1.8238E-01	2.0018E+01	4.3039E+05	8.2990E+02
1.4956E+01	1.3439E-01	1.4750E+01	3.1713E+05	8.2900E+02
1.4978E+01	3.1197E-01	3.4242E+01	7.3619E+05	8.2780E+02
1.4992E+01	2.0478E-01	2.2477E+01	4.8324E+05	8.2700E+02
1.5003E+01	2.3677E-01	2.5989E+01	5.5875E+05	8.2640E+02
1.5021E+01	1.9518E-01	2.1423E+01	4.6059E+05	8.2540E+02
1.5037E+01	2.7837E-01	3.0554E+01	6.5691E+05	8.2450E+02
1.5065E+01	1.1839E-01	1.2994E+01	2.7938E+05	8.2300E+02
1.5092E+01	1.6158E-01	1.7735E+01	3.8131E+05	8.2150E+02
1.5102E+01	1.4558E-01	1.5979E+01	3.4356E+05	8.2100E+02
1.5124E+01	2.1118E-01	2.3179E+01	4.9834E+05	8.1980E+02
1.5148E+01	2.2078E-01	2.4233E+01	5.2100E+05	8.1850E+02
1.5157E+01	4.9594E-01	5.4435E+01	1.1704E+06	8.1800E+02
1.5176E+01	1.9198E-01	2.1072E+01	4.5304E+05	8.1700E+02
1.5187E+01	1.8238E-01	2.0018E+01	4.3039E+05	8.1640E+02
1.5224E+01	3.6796E-01	4.0388E+01	8.6833E+05	8.1440E+02
1.5250E+01	1.1199E-01	1.2292E+01	2.6427E+05	8.1300E+02
1.5288E+01	1.8078E-01	1.9843E+01	4.2661E+05	8.1100E+02

Table II. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
1.5303E+01	1.5358E-01	1.6857E+01	3.6243E+05	8.1020E+02
1.5335E+01	2.1118E-01	2.3179E+01	4.9834E+05	8.0850E+02
1.5362E+01	6.4953E-01	7.1293E+01	1.5328E+06	8.0710E+02
1.5379E+01	2.3997E-01	2.6340E+01	5.6630E+05	8.0620E+02
1.5396E+01	2.9597E-01	3.2486E+01	6.9844E+05	8.0530E+02
1.5408E+01	1.6798E-01	1.8438E+01	3.9641E+05	8.0470E+02
1.5440E+01	1.1839E-01	1.2994E+01	2.7938E+05	8.0300E+02
1.5498E+01	2.1438E-01	2.3530E+01	5.0590E+05	8.0000E+02
1.5504E+01	1.9678E-01	2.1599E+01	4.6437E+05	7.9970E+02
1.5517E+01	2.1438E-01	2.3530E+01	5.0590E+05	7.9900E+02
1.5537E+01	4.8315E-01	5.3031E+01	1.1402E+06	7.9800E+02
1.5551E+01	3.9996E-01	4.3899E+01	9.4383E+05	7.9730E+02
1.5560E+01	4.4795E-01	4.9167E+01	1.0571E+06	7.9680E+02
1.5576E+01	1.4718E-01	1.6155E+01	3.4733E+05	7.9600E+02
1.5584E+01	1.7438E-01	1.9140E+01	4.1151E+05	7.9560E+02
1.5594E+01	1.2159E-01	1.3345E+01	2.8693E+05	7.9510E+02
1.5615E+01	1.7598E-01	1.9316E+01	4.1529E+05	7.9400E+02
1.5631E+01	1.3439E-01	1.4750E+01	3.1713E+05	7.9320E+02
1.5664E+01	3.1996E-01	3.5120E+01	7.5507E+05	7.9150E+02
1.5682E+01	2.0798E-01	2.2828E+01	4.9079E+05	7.9060E+02
1.5714E+01	4.4795E-01	4.9167E+01	1.0571E+06	7.8900E+02
1.5772E+01	1.0719E-01	1.1765E+01	2.5295E+05	7.8610E+02
1.5794E+01	1.8078E-01	1.9843E+01	4.2661E+05	7.8500E+02
1.5806E+01	1.5678E-01	1.7209E+01	3.6998E+05	7.8440E+02
1.5839E+01	3.2316E-01	3.5471E+01	7.6262E+05	7.8280E+02
1.5853E+01	3.1676E-01	3.4768E+01	7.4752E+05	7.8210E+02
1.5861E+01	3.3276E-01	3.6524E+01	7.8527E+05	7.8170E+02
1.5885E+01	1.4238E-01	1.5628E+01	3.3601E+05	7.8050E+02
1.5906E+01	2.6877E-01	2.9500E+01	6.3426E+05	7.7950E+02
1.5936E+01	1.0239E-01	1.1238E+01	2.4162E+05	7.7800E+02
1.5969E+01	1.5998E-01	1.7560E+01	3.7753E+05	7.7640E+02
1.5994E+01	2.6397E-01	2.8974E+01	6.2293E+05	7.7520E+02
1.6006E+01	2.3677E-01	2.5989E+01	5.5875E+05	7.7460E+02
1.6014E+01	2.0158E-01	2.2125E+01	4.7569E+05	7.7420E+02
1.6031E+01	2.4957E-01	2.7393E+01	5.8895E+05	7.7340E+02
1.6037E+01	2.3037E-01	2.5286E+01	5.4365E+05	7.7310E+02

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
1.6050E+01	2.9757E-01	3.2661E+01	7.0221E+05	7.7250E+02
1.6068E+01	1.5358E-01	1.6857E+01	3.6243E+05	7.7160E+02
1.6079E+01	1.8238E-01	2.0018E+01	4.3039E+05	7.7110E+02
1.6102E+01	1.0079E-01	1.1063E+01	2.3785E+05	7.7000E+02
1.6148E+01	2.2557E-01	2.4759E+01	5.3232E+05	7.6780E+02
1.6154E+01	2.2398E-01	2.4584E+01	5.2855E+05	7.6750E+02
1.6165E+01	2.3997E-01	2.6340E+01	5.6630E+05	7.6700E+02
1.6175E+01	2.3997E-01	2.6340E+01	5.6630E+05	7.6650E+02
1.6194E+01	1.6638E-01	1.8262E+01	3.9264E+05	7.6560E+02
1.6226E+01	3.6476E-01	4.0036E+01	8.6078E+05	7.6410E+02
1.6233E+01	2.9917E-01	3.2837E+01	7.0599E+05	7.6380E+02
1.6250E+01	2.0798E-01	2.2828E+01	4.9079E+05	7.6300E+02
1.6271E+01	1.2319E-01	1.3521E+01	2.9070E+05	7.6200E+02
1.6299E+01	1.4718E-01	1.6155E+01	3.4733E+05	7.6070E+02
1.6307E+01	1.3758E-01	1.5101E+01	3.2468E+05	7.6030E+02
1.6335E+01	2.3037E-01	2.5286E+01	5.4365E+05	7.5900E+02
1.6346E+01	2.3677E-01	2.5989E+01	5.5875E+05	7.5850E+02
1.6374E+01	2.7837E-01	3.0554E+01	6.5691E+05	7.5720E+02
1.6398E+01	2.4637E-01	2.7042E+01	5.8140E+05	7.5610E+02
1.6417E+01	2.8797E-01	3.1608E+01	6.7956E+05	7.5520E+02
1.6433E+01	1.7118E-01	1.8789E+01	4.0396E+05	7.5450E+02
1.6465E+01	1.7598E-01	1.9316E+01	4.1529E+05	7.5300E+02
1.6487E+01	1.9198E-01	2.1072E+01	4.5304E+05	7.5200E+02
1.6505E+01	1.7598E-01	1.9316E+01	4.1529E+05	7.5120E+02
1.6533E+01	2.4317E-01	2.6691E+01	5.7385E+05	7.4990E+02
1.6542E+01	2.4317E-01	2.6691E+01	5.7385E+05	7.4950E+02
1.6549E+01	2.7197E-01	2.9852E+01	6.4181E+05	7.4920E+02
1.6569E+01	1.8878E-01	2.0721E+01	4.4549E+05	7.4830E+02
1.6593E+01	2.8157E-01	3.0905E+01	6.6446E+05	7.4720E+02
1.6615E+01	1.7118E-01	1.8789E+01	4.0396E+05	7.4620E+02
1.6638E+01	1.8558E-01	2.0369E+01	4.3794E+05	7.4520E+02
1.6653E+01	1.7598E-01	1.9316E+01	4.1529E+05	7.4450E+02
1.6721E+01	2.7517E-01	3.0203E+01	6.4936E+05	7.4150E+02
1.6746E+01	1.8558E-01	2.0369E+01	4.3794E+05	7.4040E+02
1.6766E+01	2.1438E-01	2.3530E+01	5.0590E+05	7.3950E+02
1.6793E+01	1.8398E-01	2.0194E+01	4.3416E+05	7.3830E+02

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
1.6816E+01	2.0798E-01	2.2828E+01	4.9079E+05	7.3730E+02
1.6892E+01	2.6077E-01	2.8622E+01	6.1538E+05	7.3400E+02
1.6910E+01	2.7197E-01	2.9852E+01	6.4181E+05	7.3320E+02
1.6926E+01	2.3357E-01	2.5637E+01	5.5120E+05	7.3250E+02
1.6938E+01	2.4157E-01	2.6515E+01	5.7008E+05	7.3200E+02
1.6979E+01	1.8558E-01	2.0369E+01	4.3794E+05	7.3020E+02
1.6996E+01	2.2078E-01	2.4233E+01	5.2100E+05	7.2950E+02
1.7042E+01	2.4317E-01	2.6691E+01	5.7385E+05	7.2750E+02
1.7054E+01	2.3037E-01	2.5286E+01	5.4365E+05	7.2700E+02
1.7080E+01	4.9275E-01	5.4084E+01	1.1628E+06	7.2590E+02
1.7125E+01	2.5917E-01	2.8447E+01	6.1160E+05	7.2400E+02
1.7149E+01	2.2717E-01	2.4935E+01	5.3610E+05	7.2300E+02
1.7196E+01	2.8157E-01	3.0905E+01	6.6446E+05	7.2100E+02
1.7244E+01	2.1598E-01	2.3706E+01	5.0967E+05	7.1900E+02
1.7292E+01	2.0158E-01	2.2125E+01	4.7569E+05	7.1700E+02
1.7304E+01	2.6557E-01	2.9149E+01	6.2671E+05	7.1650E+02
1.7377E+01	2.0318E-01	2.2301E+01	4.7947E+05	7.1350E+02
1.7414E+01	2.3037E-01	2.5286E+01	5.4365E+05	7.1200E+02
1.7463E+01	1.9358E-01	2.1247E+01	4.5682E+05	7.1000E+02
1.7512E+01	2.0318E-01	2.2301E+01	4.7947E+05	7.0800E+02
1.7549E+01	1.8718E-01	2.0545E+01	4.4171E+05	7.0650E+02
1.7586E+01	2.1758E-01	2.3881E+01	5.1345E+05	7.0500E+02
1.7712E+01	1.9518E-01	2.1423E+01	4.6059E+05	7.0000E+02
1.7712E+01	2.4137E-01	2.6493E+01	5.6961E+05	7.0000E+02
1.8000E+01	2.3671E-01	2.5982E+01	5.5861E+05	6.8880E+02
1.8500E+01	2.1206E-01	2.3276E+01	5.0044E+05	6.7018E+02
1.9000E+01	2.0678E-01	2.2696E+01	4.8796E+05	6.5255E+02
1.9500E+01	2.0508E-01	2.2510E+01	4.8395E+05	6.3582E+02
2.0000E+01	1.9929E-01	2.1874E+01	4.7030E+05	6.1992E+02
2.0500E+01	2.0258E-01	2.2236E+01	4.7807E+05	6.0480E+02
2.0680E+01	2.0215E-01	2.2189E+01	4.7705E+05	5.9954E+02
2.0680E+01	2.0133E-01	2.2098E+01	4.7510E+05	5.9954E+02
2.1000E+01	2.0056E-01	2.2014E+01	4.7329E+05	5.9040E+02
2.1500E+01	2.0026E-01	2.1981E+01	4.7259E+05	5.7667E+02
2.2000E+01	2.0096E-01	2.2057E+01	4.7423E+05	5.6356E+02
2.2500E+01	1.9629E-01	2.1545E+01	4.6321E+05	5.5104E+02

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
2.3000E+01	1.9678E-01	2.1599E+01	4.6438E+05	5.3906E+02
2.3500E+01	1.9470E-01	2.1370E+01	4.5946E+05	5.2759E+02
2.4000E+01	1.9360E-01	2.1250E+01	4.5688E+05	5.1660E+02
2.4500E+01	1.9112E-01	2.0977E+01	4.5101E+05	5.0606E+02
2.5000E+01	1.8913E-01	2.0759E+01	4.4632E+05	4.9594E+02
2.5500E+01	1.8953E-01	2.0803E+01	4.4726E+05	4.8621E+02
2.6000E+01	1.9241E-01	2.1119E+01	4.5406E+05	4.7686E+02
2.6500E+01	1.8983E-01	2.0836E+01	4.4796E+05	4.6786E+02
2.6840E+01	1.8726E-01	2.0554E+01	4.4191E+05	4.6194E+02
2.7500E+01	1.7929E-01	1.9679E+01	4.2310E+05	4.5085E+02
3.0000E+01	1.5426E-01	1.6932E+01	3.6403E+05	4.1328E+02
3.5000E+01	1.2893E-01	1.4152E+01	3.0426E+05	3.5424E+02
4.0000E+01	1.1138E-01	1.2225E+01	2.6284E+05	3.0996E+02
4.5000E+01	9.6007E-02	1.0538E+01	2.2656E+05	2.7552E+02
5.0000E+01	8.2467E-02	9.0517E+00	1.9461E+05	2.4797E+02
6.0000E+01	6.0933E-02	6.6881E+00	1.4379E+05	2.0664E+02
7.0000E+01	4.5679E-02	5.0138E+00	1.0780E+05	1.7712E+02
8.0000E+01	3.4937E-02	3.8347E+00	8.2446E+04	1.5498E+02
9.0000E+01	2.7273E-02	2.9935E+00	6.4359E+04	1.3776E+02
1.0000E+02	2.1699E-02	2.3817E+00	5.1207E+04	1.2398E+02
1.2500E+02	1.2803E-02	1.4053E+00	3.0213E+04	9.9187E+01
1.5000E+02	8.7021E-03	9.5515E-01	2.0536E+04	8.2656E+01
1.7500E+02	6.1732E-03	6.7758E-01	1.4568E+04	7.0848E+01
2.0000E+02	4.4602E-03	4.8956E-01	1.0526E+04	6.1992E+01
2.2500E+02	3.2643E-03	3.5830E-01	7.7033E+03	5.5104E+01
2.5000E+02	2.4144E-03	2.6501E-01	5.6977E+03	4.9594E+01
2.7500E+02	1.8013E-03	1.9772E-01	4.2509E+03	4.5085E+01
2.9250E+02	3.7194E-03	4.0824E-01	8.7771E+03	4.2388E+01
2.9300E+02	5.1234E-03	5.6235E-01	1.2090E+04	4.2315E+01
2.9350E+02	1.2209E-02	1.3400E+00	2.8811E+04	4.2243E+01
2.9400E+02	7.2341E-03	7.9403E-01	1.7071E+04	4.2171E+01
2.9450E+02	5.1141E-03	5.6133E-01	1.2069E+04	4.2100E+01
2.9500E+02	8.2756E-03	9.0833E-01	1.9529E+04	4.2029E+01
2.9600E+02	7.1784E-03	7.8790E-01	1.6940E+04	4.1887E+01
2.9700E+02	6.9831E-03	7.6647E-01	1.6479E+04	4.1746E+01
2.9800E+02	7.2063E-03	7.9096E-01	1.7006E+04	4.1605E+01

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
2.9900E+02	8.9172E-03	9.7876E-01	2.1043E+04	4.1466E+01
3.0000E+02	1.0661E-02	1.1701E+00	2.5157E+04	4.1328E+01
3.0100E+02	1.3250E-02	1.4544E+00	3.1268E+04	4.1191E+01
3.0200E+02	1.1539E-02	1.2666E+00	2.7231E+04	4.1054E+01
3.0300E+02	1.2460E-02	1.3676E+00	2.9403E+04	4.0919E+01
3.0350E+02	1.3278E-02	1.4574E+00	3.1334E+04	4.0851E+01
3.0400E+02	1.3492E-02	1.4809E+00	3.1839E+04	4.0784E+01
3.0500E+02	1.3706E-02	1.5044E+00	3.2344E+04	4.0651E+01
3.0550E+02	1.3585E-02	1.4911E+00	3.2058E+04	4.0584E+01
3.0600E+02	1.3111E-02	1.4390E+00	3.0939E+04	4.0518E+01
3.0700E+02	1.2655E-02	1.3890E+00	2.9864E+04	4.0386E+01
3.0800E+02	1.1837E-02	1.2992E+00	2.7933E+04	4.0255E+01
3.1000E+02	1.0842E-02	1.1900E+00	2.5585E+04	3.9995E+01
3.1200E+02	9.8470E-03	1.0808E+00	2.3237E+04	3.9739E+01
3.1500E+02	9.0845E-03	9.9713E-01	2.1438E+04	3.9360E+01
3.2000E+02	8.2105E-03	9.0119E-01	1.9375E+04	3.8745E+01
3.2500E+02	7.6805E-03	8.4302E-01	1.8125E+04	3.8149E+01
3.3000E+02	7.0947E-03	7.7872E-01	1.6742E+04	3.7571E+01
3.3500E+02	6.5647E-03	7.2054E-01	1.5492E+04	3.7010E+01
3.4000E+02	6.0533E-03	6.6441E-01	1.4285E+04	3.6466E+01
3.4500E+02	5.7557E-03	6.3175E-01	1.3583E+04	3.5937E+01
3.5000E+02	5.4117E-03	5.9399E-01	1.2771E+04	3.5424E+01
4.0000E+02	4.9206E-03	5.4009E-01	1.1612E+04	3.0996E+01
4.5000E+02	3.6698E-03	4.0280E-01	8.6602E+03	2.7552E+01
5.0000E+02	2.8107E-03	3.0851E-01	6.6329E+03	2.4797E+01
5.3950E+02	3.9388E-03	4.3233E-01	9.2950E+03	2.2981E+01
5.4000E+02	4.1654E-03	4.5720E-01	9.8298E+03	2.2960E+01
5.4100E+02	4.8776E-03	5.3538E-01	1.1511E+04	2.2918E+01
5.4200E+02	5.5035E-03	6.0407E-01	1.2988E+04	2.2875E+01
5.4300E+02	5.9352E-03	6.5145E-01	1.4006E+04	2.2833E+01
5.4400E+02	6.3237E-03	6.9409E-01	1.4923E+04	2.2791E+01
5.4500E+02	6.8201E-03	7.4858E-01	1.6094E+04	2.2749E+01
5.4600E+02	7.4244E-03	8.1491E-01	1.7520E+04	2.2708E+01
5.4700E+02	7.9639E-03	8.7413E-01	1.8794E+04	2.2666E+01
5.4800E+02	8.6330E-03	9.4757E-01	2.0373E+04	2.2625E+01
5.4900E+02	9.5179E-03	1.0447E+00	2.2461E+04	2.2584E+01

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
5.5000E+02	1.0273E-02	1.1276E+00	2.4243E+04	2.2543E+01
5.5100E+02	1.0273E-02	1.1276E+00	2.4243E+04	2.2502E+01
5.5200E+02	9.7337E-03	1.0684E+00	2.2970E+04	2.2461E+01
5.5300E+02	9.1294E-03	1.0021E+00	2.1544E+04	2.2420E+01
5.5400E+02	8.8488E-03	9.7126E-01	2.0882E+04	2.2380E+01
5.5500E+02	8.6330E-03	9.4757E-01	2.0373E+04	2.2339E+01
5.5600E+02	8.3740E-03	9.1914E-01	1.9761E+04	2.2299E+01
5.5700E+02	8.2014E-03	9.0019E-01	1.9354E+04	2.2259E+01
5.5800E+02	8.0503E-03	8.8361E-01	1.8997E+04	2.2219E+01
5.5900E+02	7.9208E-03	8.6939E-01	1.8692E+04	2.2180E+01
5.6000E+02	7.8129E-03	8.5755E-01	1.8437E+04	2.2140E+01
5.6100E+02	7.7481E-03	8.5044E-01	1.8284E+04	2.2101E+01
5.6200E+02	7.7050E-03	8.4570E-01	1.8183E+04	2.2061E+01
5.6300E+02	7.6618E-03	8.4097E-01	1.8081E+04	2.2022E+01
5.6400E+02	7.6186E-03	8.3623E-01	1.7979E+04	2.1983E+01
5.6500E+02	7.5755E-03	8.3149E-01	1.7877E+04	2.1944E+01
5.6600E+02	7.5539E-03	8.2912E-01	1.7826E+04	2.1905E+01
5.6700E+02	7.5107E-03	8.2438E-01	1.7724E+04	2.1867E+01
5.6800E+02	7.4675E-03	8.1965E-01	1.7622E+04	2.1828E+01
5.6900E+02	7.4114E-03	8.1349E-01	1.7490E+04	2.1790E+01
5.7000E+02	7.3467E-03	8.0638E-01	1.7337E+04	2.1752E+01
5.7100E+02	7.2776E-03	7.9880E-01	1.7174E+04	2.1714E+01
5.7200E+02	7.1870E-03	7.8885E-01	1.6960E+04	2.1676E+01
5.7300E+02	7.0791E-03	7.7700E-01	1.6706E+04	2.1638E+01
5.7600E+02	6.9064E-03	7.5805E-01	1.6298E+04	2.1525E+01
5.7900E+02	6.7337E-03	7.3910E-01	1.5891E+04	2.1414E+01
5.8200E+02	6.6258E-03	7.2726E-01	1.5636E+04	2.1303E+01
5.8500E+02	6.5179E-03	7.1541E-01	1.5381E+04	2.1194E+01
5.8800E+02	6.3884E-03	7.0120E-01	1.5076E+04	2.1086E+01
5.9100E+02	6.2373E-03	6.8462E-01	1.4719E+04	2.0979E+01
5.9400E+02	6.1079E-03	6.7040E-01	1.4414E+04	2.0873E+01
5.9700E+02	6.0345E-03	6.6235E-01	1.4240E+04	2.0768E+01
5.9800E+02	5.9986E-03	6.5842E-01	1.4156E+04	2.0733E+01
6.0000E+02	5.6248E-03	6.1738E-01	1.3274E+04	2.0664E+01
7.0000E+02	3.8378E-03	4.2124E-01	9.0567E+03	1.7712E+01
8.0000E+02	2.7310E-03	2.9976E-01	6.4448E+03	1.5498E+01

Table III. Oscillator-strength density, df/dE , photoabsorption cross section, σ_a , and mass absorption coefficient, μ_m . (Continued)

Energy (eV)	f_n (eV ⁻¹)	σ_a (Mb)	μ_m (cm ² g ⁻¹)	λ (Å)
9.0000E+02	2.0100E-03	2.2062E-01	4.7434E+03	1.3776E+01
1.0000E+03	1.5209E-03	1.6694E-01	3.5892E+03	1.2398E+01
1.2500E+03	8.3205E-04	9.1327E-02	1.9635E+03	9.9187E+00
1.5000E+03	5.0690E-04	5.5637E-02	1.1962E+03	8.2656E+00
1.7500E+03	3.2886E-04	3.6096E-02	7.7606E+02	7.0848E+00
2.0000E+03	2.2541E-04	2.4741E-02	5.3194E+02	6.1992E+00
2.2500E+03	1.6108E-04	1.7681E-02	3.8014E+02	5.5104E+00
2.5000E+03	1.1897E-04	1.3058E-02	2.8075E+02	4.9594E+00
2.7500E+03	9.0249E-05	9.9058E-03	2.1297E+02	4.5085E+00
3.0000E+03	6.9998E-05	7.6831E-03	1.6519E+02	4.1328E+00
3.5000E+03	4.4424E-05	4.8760E-03	1.0483E+02	3.5424E+00
4.0000E+03	2.9740E-05	3.2643E-03	7.0182E+01	3.0996E+00
4.5000E+03	2.0808E-05	2.2839E-03	4.9103E+01	2.7552E+00
5.0000E+03	1.5065E-05	1.6536E-03	3.5552E+01	2.4797E+00
6.0000E+03	8.5697E-06	9.4062E-04	2.0223E+01	2.0664E+00
7.0000E+03	5.3000E-06	5.8173E-04	1.2507E+01	1.7712E+00
8.0000E+03	3.4893E-06	3.8299E-04	8.2342E+00	1.5498E+00
9.0000E+03	2.4110E-06	2.6463E-04	5.6895E+00	1.3776E+00
1.0000E+04	1.6515E-06	1.8127E-04	3.8973E+00	1.2398E+00
1.2500E+04	8.0790E-07	8.8675E-05	1.9065E+00	9.9187E-01
1.5000E+04	4.5038E-07	4.9435E-05	1.0628E+00	8.2656E-01
1.7500E+04	2.7483E-07	3.0166E-05	6.4856E-01	7.0848E-01
2.0000E+04	1.7916E-07	1.9665E-05	4.2279E-01	6.1992E-01
2.2500E+04	1.2282E-07	1.3481E-05	2.8985E-01	5.5104E-01
2.5000E+04	8.7654E-08	9.6210E-06	2.0685E-01	4.9594E-01
2.7500E+04	6.4435E-08	7.0724E-06	1.5206E-01	4.5085E-01
3.0000E+04	4.8412E-08	5.3137E-06	1.1424E-01	4.1328E-01
3.5000E+04	2.9194E-08	3.2044E-06	6.8894E-02	3.5424E-01
4.0000E+04	1.8834E-08	2.0673E-06	4.4446E-02	3.0996E-01
4.5000E+04	1.2796E-08	1.4045E-06	3.0197E-02	2.7552E-01
5.0000E+04	9.0556E-09	9.9395E-07	2.1370E-02	2.4797E-01
6.0000E+04	4.9777E-09	5.4636E-07	1.1747E-02	2.0664E-01
7.0000E+04	3.0015E-09	3.2944E-07	7.0830E-03	1.7712E-01
8.0000E+04	1.9361E-09	2.1250E-07	4.5688E-03	1.5498E-01
9.0000E+04	1.3145E-09	1.4428E-07	3.1019E-03	1.3776E-01
1.0000E+05	9.2901E-10	1.0197E-07	2.1923E-03	1.2398E-01

When photon energy, E , is higher than 10^5 eV, the photoabsorption cross section of atoms, σ_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 χ is given by

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

where $E_K = 296.2$ and 543.9 eV for carbon and oxygen atoms, respectively.

