

Molecular Nitrogen

$Z = 14$

Molecular Mass : $M_A = 28.0134$

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

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

Table I. Discrete oscillator strength, f_n , for transitions to the valence states ($b^1\Pi_u$, $b^1\Sigma_u^+$), the lowest Rydberg states ($c^1\Pi_u$, $c^1\Sigma_u^+$, $o^1\Pi_u$), and higher energy bands up to the IP ($e^1\Pi_u$, $e^1\Sigma_u^+$, $n = 5$, $^1\Pi_u$) of N_2 .

Energy (eV)	f_n	λ (Å)	Energy (eV)	f_n	λ (Å)
1.2500E+01	2.6264E-03	9.9187E+02	1.4532E+01	1.7888E-02	8.5318E+02
1.2578E+01	1.1684E-02	9.8572E+02	1.4690E+01	4.7047E-03	8.4400E+02
1.2665E+01	2.8125E-02	9.7895E+02	1.4750E+01	9.2750E-03	8.4057E+02
1.2754E+01	5.4388E-02	9.7212E+02	1.4808E+01	3.7534E-03	8.3728E+02
1.2838E+01	8.9027E-02	9.6576E+02	1.2912E+01	6.5659E-02	9.6022E+02
1.2981E+01	6.3384E-03	9.5512E+02	1.3208E+01	6.6176E-02	9.3871E+02
1.3061E+01	5.1700E-03	9.4927E+02	1.3476E+01	1.6027E-02	9.2004E+02
1.3156E+01	2.4506E-02	9.4242E+02	1.3992E+01	2.1714E-03	8.8611E+02
1.3461E+01	4.8184E-03	9.2106E+02	1.2934E+01	2.0163E-01	9.5859E+02
1.3437E+01	1.5200E-02	9.2271E+02	1.3188E+01	1.5200E-03	9.4013E+02
1.3529E+01	5.0046E-03	9.1643E+02	1.3720E+01	1.9646E-02	9.0367E+02
1.3617E+01	1.8715E-03	9.1051E+02	1.3982E+01	5.1286E-02	8.8674E+02
1.3788E+01	2.9986E-03	8.9922E+02	1.4237E+01	6.2040E-04	8.7086E+02
1.3390E+01	2.2334E-03	9.2595E+02	1.4482E+01	1.3959E-02	8.5613E+02
1.3663E+01	1.3235E-02	9.0744E+02	1.3345E+01	2.1817E-02	9.2907E+02
1.3755E+01	2.2748E-03	9.0138E+02	1.3584E+01	2.8642E-02	9.1272E+02
1.3834E+01	6.7624E-03	8.9623E+02	1.3818E+01	2.4402E-02	8.9727E+02
1.3916E+01	3.1330E-02	8.9095E+02	1.4048E+01	6.4108E-03	8.8258E+02
1.4077E+01	3.5259E-02	8.8076E+02	1.4275E+01	1.6027E-03	8.6854E+02
1.4155E+01	4.2291E-02	8.7590E+02	1.4330E+01	1.5820E-02	8.6521E+02
1.4228E+01	6.4728E-02	8.7141E+02	1.4585E+01	7.8687E-03	8.5008E+02
1.4304E+01	3.2881E-02	8.6678E+02	1.4364E+01	1.0754E-02	8.6316E+02
1.4408E+01	3.3708E-03	8.6052E+02	1.4839E+01	1.1684E-02	8.3553E+02
1.4467E+01	1.7164E-02	8.5701E+02			

Table II. Discrete oscillator strength, f_n , for resonances preceding the K-edge.

Energy (eV)	f_n	λ (Å)	Energy (eV)	f_n	λ (Å)
4.0100E+02	2.1000E-01	3.0918E+01	4.0680E+02	6.7000E-03	3.0478E+01
4.0560E+02	2.8000E-03	3.0568E+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 (cm ² g ⁻¹)	λ (Å)
1.4920E+01	2.4322E-02	2.6696E+00	5.7389E+04	8.3099E+02
1.4949E+01	3.2686E-02	3.5876E+00	7.7124E+04	8.2938E+02
1.4974E+01	6.3853E-02	7.0085E+00	1.5066E+05	8.2800E+02
1.4996E+01	1.2771E-01	1.4017E+01	3.0133E+05	8.2678E+02
1.5005E+01	1.6900E-01	1.8550E+01	3.9877E+05	8.2629E+02
1.5014E+01	2.0522E-01	2.2525E+01	4.8422E+05	8.2579E+02
1.5057E+01	8.0238E-02	8.8070E+00	1.8933E+05	8.2343E+02
1.5104E+01	2.1160E-01	2.3226E+01	4.9929E+05	8.2087E+02
1.5115E+01	3.1102E-01	3.4138E+01	7.3387E+05	8.2027E+02
1.5188E+01	9.0185E-02	9.8988E+00	2.1280E+05	8.1633E+02
1.5197E+01	1.1006E-01	1.2080E+01	2.5969E+05	8.1585E+02
1.5230E+01	3.0392E-01	3.3358E+01	7.1711E+05	8.1408E+02
1.5242E+01	3.3373E-01	3.6631E+01	7.8747E+05	8.1344E+02
1.5271E+01	1.4486E-01	1.5900E+01	3.4181E+05	8.1189E+02
1.5295E+01	7.8110E-02	8.5734E+00	1.8431E+05	8.1062E+02
1.5321E+01	1.1858E-01	1.3016E+01	2.7980E+05	8.0924E+02
1.5368E+01	3.4865E-01	3.8269E+01	8.2268E+05	8.0677E+02
1.5373E+01	3.7350E-01	4.0996E+01	8.8130E+05	8.0651E+02
1.5404E+01	1.7823E-01	1.9563E+01	4.2055E+05	8.0488E+02
1.5419E+01	1.4272E-01	1.5665E+01	3.3676E+05	8.0410E+02
1.5458E+01	2.7551E-01	3.0240E+01	6.5008E+05	8.0207E+02
1.5477E+01	3.0817E-01	3.3825E+01	7.2715E+05	8.0109E+02
1.5511E+01	1.4414E-01	1.5821E+01	3.4012E+05	7.9933E+02
1.5514E+01	1.2000E-01	1.3172E+01	2.8316E+05	7.9918E+02
1.5540E+01	9.8699E-02	1.0833E+01	2.3289E+05	7.9784E+02
1.5580E+01	1.7241E-01	1.8924E+01	4.0681E+05	7.9579E+02
1.5601E+01	2.7856E-01	3.0576E+01	6.5729E+05	7.9472E+02
1.5611E+01	2.8285E-01	3.1046E+01	6.6740E+05	7.9421E+02
1.5640E+01	3.9648E-01	4.3518E+01	9.3553E+05	7.9274E+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)
1.5661E+01	4.6595E-01	5.1143E+01	1.0994E+06	7.9167E+02
1.5686E+01	3.6762E-01	4.0351E+01	8.6744E+05	7.9041E+02
1.5709E+01	2.5577E-01	2.8074E+01	6.0351E+05	7.8926E+02
1.5732E+01	1.6101E-01	1.7673E+01	3.7992E+05	7.8810E+02
1.5766E+01	2.3226E-01	2.5493E+01	5.4803E+05	7.8640E+02
1.5787E+01	3.4127E-01	3.7458E+01	8.0525E+05	7.8536E+02
1.5806E+01	5.6070E-01	6.1543E+01	1.3230E+06	7.8441E+02
1.5821E+01	6.3052E-01	6.9207E+01	1.4878E+06	7.8367E+02
1.5827E+01	5.9419E-01	6.5218E+01	1.4020E+06	7.8337E+02
1.5851E+01	4.0468E-01	4.4418E+01	9.5487E+05	7.8219E+02
1.5862E+01	3.6549E-01	4.0116E+01	8.6240E+05	7.8164E+02
1.5872E+01	3.5409E-01	3.8866E+01	8.3551E+05	7.8115E+02
1.5879E+01	3.2275E-01	3.5425E+01	7.6154E+05	7.8081E+02
1.5891E+01	2.6503E-01	2.9090E+01	6.2536E+05	7.8022E+02
1.5915E+01	2.1801E-01	2.3929E+01	5.1440E+05	7.7904E+02
1.5924E+01	2.1017E-01	2.3069E+01	4.9592E+05	7.7860E+02
1.5942E+01	2.2727E-01	2.4945E+01	5.3626E+05	7.7772E+02
1.5964E+01	3.5766E-01	3.9257E+01	8.4391E+05	7.7665E+02
1.5973E+01	4.3673E-01	4.7936E+01	1.0305E+06	7.7621E+02
1.5989E+01	4.6167E-01	5.0674E+01	1.0894E+06	7.7543E+02
1.6006E+01	3.2275E-01	3.5425E+01	7.6154E+05	7.7461E+02
1.6024E+01	2.6789E-01	2.9404E+01	6.3210E+05	7.7374E+02
1.6034E+01	3.0172E-01	3.3117E+01	7.1194E+05	7.7326E+02
1.6055E+01	4.1608E-01	4.5669E+01	9.8176E+05	7.7225E+02
1.6072E+01	4.3317E-01	4.7545E+01	1.0221E+06	7.7143E+02
1.6091E+01	3.0636E-01	3.3626E+01	7.2288E+05	7.7052E+02
1.6101E+01	2.5720E-01	2.8230E+01	6.0688E+05	7.7004E+02
1.6113E+01	2.3439E-01	2.5727E+01	5.5307E+05	7.6947E+02
1.6127E+01	2.4366E-01	2.6744E+01	5.7492E+05	7.6880E+02
1.6161E+01	2.2513E-01	2.4711E+01	5.3122E+05	7.6718E+02
1.6180E+01	2.8035E-01	3.0771E+01	6.6150E+05	7.6628E+02
1.6212E+01	3.7261E-01	4.0899E+01	8.7921E+05	7.6477E+02
1.6232E+01	2.9959E-01	3.2883E+01	7.0690E+05	7.6383E+02
1.6255E+01	2.5577E-01	2.8074E+01	6.0351E+05	7.6274E+02
1.6291E+01	2.9424E-01	3.2296E+01	6.9429E+05	7.6106E+02
1.6327E+01	2.3298E-01	2.5572E+01	5.4973E+05	7.5938E+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)
1.6352E+01	2.6574E-01	2.9168E+01	6.2703E+05	7.5822E+02
1.6385E+01	2.6112E-01	2.8660E+01	6.1612E+05	7.5669E+02
1.6400E+01	2.4508E-01	2.6901E+01	5.7829E+05	7.5600E+02
1.6425E+01	3.0350E-01	3.3313E+01	7.1614E+05	7.5485E+02
1.6435E+01	3.3058E-01	3.6285E+01	7.8003E+05	7.5439E+02
1.6476E+01	2.0590E-01	2.2600E+01	4.8584E+05	7.5251E+02
1.6493E+01	2.0162E-01	2.2130E+01	4.7574E+05	7.5174E+02
1.6507E+01	2.0733E-01	2.2757E+01	4.8921E+05	7.5110E+02
1.6536E+01	2.6789E-01	2.9404E+01	6.3210E+05	7.4978E+02
1.6558E+01	2.4757E-01	2.7174E+01	5.8417E+05	7.4879E+02
1.6587E+01	2.4686E-01	2.7096E+01	5.8249E+05	7.4748E+02
1.6613E+01	2.3689E-01	2.6002E+01	5.5897E+05	7.4631E+02
1.6654E+01	2.7002E-01	2.9638E+01	6.3714E+05	7.4447E+02
1.6673E+01	2.4722E-01	2.7135E+01	5.8333E+05	7.4362E+02
1.6703E+01	1.9093E-01	2.0957E+01	4.5052E+05	7.4229E+02
1.6731E+01	2.0377E-01	2.2366E+01	4.8080E+05	7.4104E+02
1.6764E+01	2.3725E-01	2.6041E+01	5.5981E+05	7.3959E+02
1.6808E+01	2.3511E-01	2.5806E+01	5.5477E+05	7.3765E+02
1.6844E+01	2.1587E-01	2.3694E+01	5.0937E+05	7.3607E+02
1.6889E+01	2.1801E-01	2.3929E+01	5.1440E+05	7.3411E+02
1.6906E+01	1.9236E-01	2.1114E+01	4.5389E+05	7.3337E+02
1.6942E+01	2.0091E-01	2.2052E+01	4.7407E+05	7.3182E+02
1.7000E+01	2.2942E-01	2.5181E+01	5.4132E+05	7.2932E+02
1.7031E+01	2.4935E-01	2.7369E+01	5.8837E+05	7.2799E+02
1.7063E+01	2.9318E-01	3.2180E+01	6.9178E+05	7.2663E+02
1.7075E+01	2.9781E-01	3.2687E+01	7.0269E+05	7.2612E+02
1.7104E+01	3.7689E-01	4.1367E+01	8.8929E+05	7.2488E+02
1.7142E+01	4.3816E-01	4.8093E+01	1.0339E+06	7.2328E+02
1.7169E+01	3.4411E-01	3.7770E+01	8.1196E+05	7.2214E+02
1.7198E+01	2.7715E-01	3.0420E+01	6.5395E+05	7.2092E+02
1.7239E+01	2.6147E-01	2.8699E+01	6.1696E+05	7.1921E+02
1.7269E+01	2.3298E-01	2.5572E+01	5.4973E+05	7.1796E+02
1.7308E+01	1.9165E-01	2.1036E+01	4.5222E+05	7.1634E+02
1.7335E+01	1.8595E-01	2.0410E+01	4.3877E+05	7.1522E+02
1.7364E+01	2.2942E-01	2.5181E+01	5.4132E+05	7.1403E+02
1.7386E+01	2.4508E-01	2.6901E+01	5.7829E+05	7.1313E+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)
1.7425E+01	2.5150E-01	2.7605E+01	5.9343E+05	7.1153E+02
1.7461E+01	2.3725E-01	2.6041E+01	5.5981E+05	7.1006E+02
1.7533E+01	2.3511E-01	2.5806E+01	5.5477E+05	7.0715E+02
1.7579E+01	2.3796E-01	2.6118E+01	5.6148E+05	7.0530E+02
1.7596E+01	2.3582E-01	2.5884E+01	5.5644E+05	7.0462E+02
1.7625E+01	2.2335E-01	2.4515E+01	5.2701E+05	7.0346E+02
1.7704E+01	2.2371E-01	2.4554E+01	5.2785E+05	7.0032E+02
1.7731E+01	2.1587E-01	2.3694E+01	5.0937E+05	6.9925E+02
1.7745E+01	2.2443E-01	2.4633E+01	5.2955E+05	6.9870E+02
1.7772E+01	2.2443E-01	2.4633E+01	5.2955E+05	6.9764E+02
1.7803E+01	2.4935E-01	2.7369E+01	5.8837E+05	6.9642E+02
1.7837E+01	3.3557E-01	3.6832E+01	7.9180E+05	6.9510E+02
1.7849E+01	3.5552E-01	3.9022E+01	8.3887E+05	6.9463E+02
1.7866E+01	3.5053E-01	3.8474E+01	8.2710E+05	6.9397E+02
1.7897E+01	2.5933E-01	2.8465E+01	6.1192E+05	6.9277E+02
1.7922E+01	2.4722E-01	2.7135E+01	5.8333E+05	6.9180E+02
1.7958E+01	2.0661E-01	2.2678E+01	4.8751E+05	6.9041E+02
1.8000E+01	2.2942E-01	2.5181E+01	5.4132E+05	6.8880E+02
1.8118E+01	2.4224E-01	2.6588E+01	5.7158E+05	6.8431E+02
1.8151E+01	2.8855E-01	3.1671E+01	6.8084E+05	6.8307E+02
1.8176E+01	3.0778E-01	3.3782E+01	7.2622E+05	6.8213E+02
1.8233E+01	2.2549E-01	2.4750E+01	5.3205E+05	6.8000E+02
1.8280E+01	2.2799E-01	2.5024E+01	5.3795E+05	6.7825E+02
1.8312E+01	2.4009E-01	2.6353E+01	5.6652E+05	6.7707E+02
1.8352E+01	2.8355E-01	3.1123E+01	6.6907E+05	6.7559E+02
1.8408E+01	2.2799E-01	2.5024E+01	5.3795E+05	6.7353E+02
1.8424E+01	2.3582E-01	2.5884E+01	5.5644E+05	6.7295E+02
1.8462E+01	2.6361E-01	2.8934E+01	6.2200E+05	6.7156E+02
1.8480E+01	2.4722E-01	2.7135E+01	5.8333E+05	6.7091E+02
1.8504E+01	2.4366E-01	2.6744E+01	5.7492E+05	6.7004E+02
1.8616E+01	2.4152E-01	2.6509E+01	5.6988E+05	6.6601E+02
1.8786E+01	2.4722E-01	2.7135E+01	5.8333E+05	6.5998E+02
2.0000E+01	2.1498E-01	2.3597E+01	5.0726E+05	6.1992E+02
2.2500E+01	2.2011E-01	2.4160E+01	5.1937E+05	5.5104E+02
2.5000E+01	2.1331E-01	2.3413E+01	5.0333E+05	4.9594E+02
2.7500E+01	1.9970E-01	2.1919E+01	4.7120E+05	4.5085E+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)
3.0000E+01	1.8327E-01	2.0116E+01	4.3243E+05	4.1328E+02
3.5000E+01	1.5020E-01	1.6487E+01	3.5442E+05	3.5424E+02
4.0000E+01	1.2188E-01	1.3377E+01	2.8758E+05	3.0996E+02
4.5000E+01	9.9266E-02	1.0896E+01	2.3423E+05	2.7552E+02
5.0000E+01	8.1570E-02	8.9532E+00	1.9247E+05	2.4797E+02
6.0000E+01	5.6850E-02	6.2399E+00	1.3414E+05	2.0664E+02
7.0000E+01	4.1263E-02	4.5290E+00	9.7362E+04	1.7712E+02
8.0000E+01	3.1019E-02	3.4047E+00	7.3192E+04	1.5498E+02
9.0000E+01	2.4015E-02	2.6360E+00	5.6666E+04	1.3776E+02
1.0000E+02	1.9057E-02	2.0917E+00	4.4966E+04	1.2398E+02
1.2500E+02	1.1352E-02	1.2460E+00	2.6786E+04	9.9187E+01
1.5000E+02	7.5088E-03	8.2418E-01	1.7718E+04	8.2656E+01
1.7500E+02	5.1918E-03	5.6986E-01	1.2250E+04	7.0848E+01
2.0000E+02	3.7064E-03	4.0682E-01	8.7456E+03	6.1992E+01
2.2500E+02	2.7561E-03	3.0251E-01	6.5031E+03	5.5104E+01
2.5000E+02	2.1088E-03	2.3146E-01	4.9759E+03	4.9594E+01
2.7500E+02	1.6408E-03	1.8009E-01	3.8715E+03	4.5085E+01
3.0000E+02	1.2909E-03	1.4169E-01	3.0460E+03	4.1328E+01
3.5000E+02	8.1727E-04	8.9704E-02	1.9284E+03	3.5424E+01
4.0000E+02	5.2729E-04	5.7876E-02	1.2442E+03	3.0996E+01
4.0740E+02	2.0239E-03	2.2214E-01	4.7755E+03	3.0433E+01
4.0777E+02	3.1765E-03	3.4866E-01	7.4952E+03	3.0405E+01
4.0794E+02	5.5997E-03	6.1463E-01	1.3213E+04	3.0393E+01
4.0799E+02	7.6871E-03	8.4375E-01	1.8138E+04	3.0389E+01
4.0819E+02	8.1954E-03	8.9953E-01	1.9338E+04	3.0374E+01
4.0859E+02	8.3224E-03	9.1348E-01	1.9637E+04	3.0344E+01
4.0915E+02	7.7416E-03	8.4973E-01	1.8267E+04	3.0303E+01
4.0964E+02	8.7762E-03	9.6329E-01	2.0708E+04	3.0267E+01
4.1000E+02	9.2482E-03	1.0151E+00	2.1822E+04	3.0240E+01
4.1009E+02	9.1302E-03	1.0021E+00	2.1543E+04	3.0233E+01
4.1169E+02	9.5295E-03	1.0460E+00	2.2486E+04	3.0116E+01
4.1194E+02	1.0464E-02	1.1486E+00	2.4691E+04	3.0098E+01
4.1230E+02	1.1345E-02	1.2452E+00	2.6769E+04	3.0071E+01
4.1259E+02	1.2098E-02	1.3279E+00	2.8546E+04	3.0050E+01
4.1319E+02	1.4040E-02	1.5411E+00	3.3129E+04	3.0007E+01
4.1375E+02	1.5910E-02	1.7463E+00	3.7540E+04	2.9966E+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)
4.1418E+02	1.7189E-02	1.8867E+00	4.0560E+04	2.9935E+01
4.1442E+02	1.7571E-02	1.9286E+00	4.1459E+04	2.9918E+01
4.1485E+02	1.7852E-02	1.9594E+00	4.2123E+04	2.9887E+01
4.1532E+02	1.7525E-02	1.9236E+00	4.1352E+04	2.9853E+01
4.1583E+02	1.6863E-02	1.8509E+00	3.9789E+04	2.9816E+01
4.1625E+02	1.6536E-02	1.8150E+00	3.9018E+04	2.9786E+01
4.1677E+02	1.7371E-02	1.9067E+00	4.0988E+04	2.9749E+01
4.1715E+02	1.8151E-02	1.9923E+00	4.2830E+04	2.9722E+01
4.1766E+02	1.9340E-02	2.1228E+00	4.5635E+04	2.9685E+01
4.1809E+02	2.0248E-02	2.2224E+00	4.7776E+04	2.9655E+01
4.1862E+02	2.0420E-02	2.2414E+00	4.8183E+04	2.9617E+01
4.1902E+02	2.0139E-02	2.2105E+00	4.7520E+04	2.9589E+01
4.1947E+02	1.9259E-02	2.1139E+00	4.5442E+04	2.9557E+01
4.2000E+02	1.8406E-02	2.0202E+00	4.3429E+04	2.9520E+01
4.2060E+02	1.7598E-02	1.9316E+00	4.1523E+04	2.9478E+01
4.2132E+02	1.6845E-02	1.8489E+00	3.9746E+04	2.9428E+01
4.2217E+02	1.6236E-02	1.7821E+00	3.8311E+04	2.9368E+01
4.2306E+02	1.5683E-02	1.7214E+00	3.7005E+04	2.9307E+01
4.2411E+02	1.5129E-02	1.6606E+00	3.5699E+04	2.9234E+01
4.2520E+02	1.4548E-02	1.5968E+00	3.4328E+04	2.9159E+01
4.2619E+02	1.4167E-02	1.5550E+00	3.3429E+04	2.9091E+01
4.2722E+02	1.3713E-02	1.5052E+00	3.2358E+04	2.9021E+01
4.2809E+02	1.3441E-02	1.4753E+00	3.1715E+04	2.8962E+01
4.2896E+02	1.3160E-02	1.4444E+00	3.1052E+04	2.8903E+01
4.3000E+02	1.2860E-02	1.4116E+00	3.0345E+04	2.8834E+01
4.5000E+02	1.0498E-02	1.1523E+00	2.4771E+04	2.7552E+01
5.0000E+02	8.2333E-03	9.0369E-01	1.9427E+04	2.4797E+01
6.0000E+02	5.2941E-03	5.8108E-01	1.2492E+04	2.0664E+01
7.0000E+02	3.5861E-03	3.9362E-01	8.4617E+03	1.7712E+01
8.0000E+02	2.5357E-03	2.7832E-01	5.9831E+03	1.5498E+01
9.0000E+02	1.8571E-03	2.0384E-01	4.3819E+03	1.3776E+01
1.0000E+03	1.4003E-03	1.5370E-01	3.3041E+03	1.2398E+01
1.2500E+03	7.6302E-04	8.3750E-02	1.8004E+03	9.9187E+00
1.5000E+03	4.5851E-04	5.0326E-02	1.0819E+03	8.2656E+00
1.7500E+03	2.9567E-04	3.2453E-02	6.9765E+02	7.0848E+00
2.0000E+03	2.0120E-04	2.2084E-02	4.7475E+02	6.1992E+00

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)
2.2500E+03	1.4276E-04	1.5669E-02	3.3684E+02	5.5104E+00
2.5000E+03	1.0473E-04	1.1495E-02	2.4711E+02	4.9594E+00
2.7500E+03	7.8953E-05	8.6659E-03	1.8629E+02	4.5085E+00
3.0000E+03	6.0890E-05	6.6833E-03	1.4367E+02	4.1328E+00
3.5000E+03	3.8258E-05	4.1993E-03	9.0273E+01	3.5424E+00
4.0000E+03	2.5545E-05	2.8039E-03	6.0276E+01	3.0996E+00
4.5000E+03	1.7806E-05	1.9544E-03	4.2015E+01	2.7552E+00
5.0000E+03	1.2868E-05	1.4124E-03	3.0364E+01	2.4797E+00
6.0000E+03	7.3066E-06	8.0198E-04	1.7240E+01	2.0664E+00
7.0000E+03	4.5098E-06	4.9501E-04	1.0641E+01	1.7712E+00
8.0000E+03	2.9599E-06	3.2488E-04	6.9841E+00	1.5498E+00
9.0000E+03	2.0361E-06	2.2348E-04	4.8042E+00	1.3776E+00
1.0000E+04	1.4282E-06	1.5676E-04	3.3700E+00	1.2398E+00
1.2500E+04	6.9673E-07	7.6474E-05	1.6440E+00	9.9187E-01
1.5000E+04	3.8754E-07	4.2537E-05	9.1442E-01	8.2656E-01
1.7500E+04	2.3597E-07	2.5901E-05	5.5680E-01	7.0848E-01
2.0000E+04	1.5357E-07	1.6856E-05	3.6235E-01	6.1992E-01
2.2500E+04	1.0513E-07	1.1539E-05	2.4806E-01	5.5104E-01
2.5000E+04	7.4931E-08	8.2245E-06	1.7680E-01	4.9594E-01
2.7500E+04	5.4996E-08	6.0364E-06	1.2977E-01	4.5085E-01
3.0000E+04	4.1300E-08	4.5331E-06	9.7449E-02	4.1328E-01
3.5000E+04	2.4858E-08	2.7284E-06	5.8654E-02	3.5424E-01
4.0000E+04	1.6014E-08	1.7577E-06	3.7786E-02	3.0996E-01
4.5000E+04	1.0866E-08	1.1926E-06	2.5638E-02	2.7552E-01
5.0000E+04	7.6807E-09	8.4304E-07	1.8123E-02	2.4797E-01
6.0000E+04	4.2140E-09	4.6253E-07	9.9432E-03	2.0664E-01
7.0000E+04	2.5366E-09	2.7842E-07	5.9854E-03	1.7712E-01
8.0000E+04	1.6339E-09	1.7934E-07	3.8553E-03	1.5498E-01
9.0000E+04	1.1081E-09	1.2163E-07	2.6146E-03	1.3776E-01
1.0000E+05	7.8276E-10	8.5917E-08	1.8470E-03	1.2398E-01

When photon energy, E , is higher than 10^5 eV, the photoabsorption cross section, 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 $E_K = 409.9$ eV.

