

APPENDIX E. Electron Mass Stopping Powers, Ranges, Radiation Yields, and Density Corrections^a

Hydrogen

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	5.125E+01	9.702E-04	5.125E+01	1.076E-04	1.029E-05	0.0
0.0125	4.271E+01	9.793E-04	4.271E+01	1.613E-04	1.242E-05	0.0
0.0150	3.682E+01	9.881E-04	3.682E+01	2.245E-04	1.450E-05	0.0
0.0175	3.249E+01	9.964E-04	3.249E+01	2.970E-04	1.654E-05	0.0
0.0200	2.917E+01	1.004E-03	2.917E+01	3.783E-04	1.854E-05	0.0
0.0250	2.439E+01	1.019E-03	2.439E+01	5.667E-04	2.246E-05	0.0
0.0300	2.110E+01	1.034E-03	2.110E+01	7.878E-04	2.628E-05	0.0
0.0350	1.870E+01	1.048E-03	1.870E+01	1.040E-03	3.003E-05	0.0
0.0400	1.687E+01	1.061E-03	1.687E+01	1.322E-03	3.371E-05	0.0
0.0450	1.542E+01	1.074E-03	1.542E+01	1.632E-03	3.733E-05	0.0
0.0500	1.424E+01	1.088E-03	1.424E+01	1.970E-03	4.090E-05	0.0
0.0550	1.327E+01	1.101E-03	1.327E+01	2.334E-03	4.443E-05	0.0
0.0600	1.245E+01	1.113E-03	1.245E+01	2.724E-03	4.791E-05	0.0
0.0700	1.114E+01	1.138E-03	1.114E+01	3.575E-03	5.475E-05	0.0
0.0800	1.015E+01	1.164E-03	1.015E+01	4.517E-03	6.146E-05	0.0
0.0900	9.367E+00	1.190E-03	9.368E+00	5.543E-03	6.806E-05	0.0
0.1000	8.737E+00	1.216E-03	8.738E+00	6.650E-03	7.457E-05	0.0
0.1250	7.590E+00	1.285E-03	7.592E+00	9.732E-03	9.050E-05	0.0
0.1500	6.819E+00	1.357E-03	6.820E+00	1.322E-02	1.061E-04	0.0
0.1750	6.266E+00	1.433E-03	6.267E+00	1.705E-02	1.215E-04	0.0
0.2000	5.851E+00	1.511E-03	5.852E+00	2.118E-02	1.367E-04	0.0
0.2500	5.275E+00	1.677E-03	5.276E+00	3.021E-02	1.670E-04	0.0
0.3000	4.898E+00	1.852E-03	4.899E+00	4.007E-02	1.971E-04	0.0
0.3500	4.635E+00	2.038E-03	4.637E+00	5.057E-02	2.273E-04	0.0
0.4000	4.445E+00	2.232E-03	4.447E+00	6.159E-02	2.577E-04	0.0
0.4500	4.302E+00	2.436E-03	4.305E+00	7.303E-02	2.884E-04	0.0
0.5000	4.193E+00	2.648E-03	4.196E+00	8.480E-02	3.194E-04	0.0
0.5500	4.109E+00	2.869E-03	4.111E+00	9.684E-02	3.508E-04	0.0
0.6000	4.042E+00	3.096E-03	4.045E+00	1.091E-01	3.825E-04	0.0
0.7000	3.945E+00	3.573E-03	3.949E+00	1.341E-01	4.471E-04	0.0
0.8000	3.883E+00	4.076E-03	3.887E+00	1.597E-01	5.133E-04	0.0
0.9000	3.842E+00	4.603E-03	3.847E+00	1.856E-01	5.809E-04	0.0
1.0000	3.816E+00	5.152E-03	3.821E+00	2.117E-01	6.501E-04	0.0
1.2500	3.787E+00	6.614E-03	3.794E+00	2.774E-01	8.289E-04	0.0
1.5000	3.788E+00	8.190E-03	3.796E+00	3.433E-01	1.016E-03	0.0
1.7500	3.802E+00	9.862E-03	3.812E+00	4.090E-01	1.209E-03	0.0
2.0000	3.823E+00	1.162E-02	3.835E+00	4.744E-01	1.409E-03	0.0
2.5000	3.873E+00	1.534E-02	3.888E+00	6.039E-01	1.824E-03	0.0
3.0000	3.924E+00	1.931E-02	3.943E+00	7.316E-01	2.257E-03	0.0
3.5000	3.973E+00	2.348E-02	3.997E+00	8.575E-01	2.703E-03	0.0
4.0000	4.020E+00	2.782E-02	4.047E+00	9.818E-01	3.162E-03	0.0
4.5000	4.063E+00	3.230E-02	4.095E+00	1.105E+00	3.631E-03	0.0
5.0000	4.103E+00	3.693E-02	4.140E+00	1.226E+00	4.108E-03	0.0
5.5000	4.140E+00	4.166E-02	4.182E+00	1.346E+00	4.593E-03	0.0
6.0000	4.175E+00	4.651E-02	4.222E+00	1.465E+00	5.084E-03	0.0
7.0000	4.239E+00	5.647E-02	4.295E+00	1.700E+00	6.083E-03	0.0
8.0000	4.295E+00	6.675E-02	4.361E+00	1.931E+00	7.101E-03	0.0
9.0000	4.345E+00	7.731E-02	4.422E+00	2.159E+00	8.133E-03	0.0
10.0000	4.391E+00	8.809E-02	4.479E+00	2.383E+00	9.177E-03	0.0
12.5000	4.488E+00	1.159E-01	4.604E+00	2.934E+00	1.183E-02	0.0
15.0000	4.569E+00	1.448E-01	4.714E+00	3.470E+00	1.451E-02	0.0
17.5000	4.638E+00	1.744E-01	4.813E+00	3.995E+00	1.722E-02	0.0
20.0000	4.698E+00	2.046E-01	4.903E+00	4.510E+00	1.994E-02	0.0
25.0000	4.799E+00	2.667E-01	5.063E+00	5.513E+00	2.540E-02	0.0
30.0000	4.881E+00	3.305E-01	5.212E+00	6.485E+00	3.084E-02	0.0
35.0000	4.951E+00	3.955E-01	5.347E+00	7.432E+00	3.625E-02	0.0
40.0000	5.010E+00	4.615E-01	5.471E+00	8.357E+00	4.161E-02	1.250E-02
45.0000	5.055E+00	5.283E-01	5.583E+00	9.261E+00	4.693E-02	6.872E-02
50.0000	5.091E+00	5.959E-01	5.684E+00	1.015E+01	5.221E-02	1.504E-01
55.0000	5.120E+00	6.640E-01	5.784E+00	1.102E+01	5.745E-02	2.452E-01
60.0000	5.144E+00	7.326E-01	5.876E+00	1.188E+01	6.264E-02	3.459E-01
70.0000	5.183E+00	8.713E-01	5.054E+00	1.355E+01	7.288E-02	5.514E-01
80.0000	5.213E+00	1.011E+00	6.225E+00	1.518E+01	8.295E-02	7.513E-01
90.0000	5.238E+00	1.153E+00	6.391E+00	1.677E+01	9.277E-02	9.405E-01

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APPENDIX E. (Continued)

Helium

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	2.267E+01	9.885E-04	2.267E+01	2.467E-04	2.412E-05	0.0
0.0125	1.898E+01	9.941E-04	1.898E+01	3.678E-04	2.890E-05	0.0
0.0150	1.642E+01	9.995E-04	1.642E+01	5.098E-04	3.352E-05	0.0
0.0175	1.453E+01	1.005E-03	1.453E+01	6.720E-04	3.802E-05	0.0
0.0200	1.307E+01	1.010E-03	1.307E+01	8.537E-04	4.242E-05	0.0
0.0250	1.097E+01	1.020E-03	1.097E+01	1.273E-03	5.096E-05	0.0
0.0300	9.521E+00	1.029E-03	9.522E+00	1.764E-03	5.923E-05	0.0
0.0350	8.457E+00	1.039E-03	8.458E+00	2.322E-03	6.727E-05	0.0
0.0400	7.642E+00	1.048E-03	7.643E+00	2.945E-03	7.510E-05	0.0
0.0450	6.996E+00	1.057E-03	6.997E+00	3.630E-03	8.277E-05	0.0
0.0500	6.471E+00	1.066E-03	6.472E+00	4.374E-03	9.029E-05	0.0
0.0550	6.035E+00	1.075E-03	6.037E+00	5.174E-03	9.766E-05	0.0
0.0600	5.669E+00	1.084E-03	5.670E+00	6.029E-03	1.049E-04	0.0
0.0700	5.084E+00	1.101E-03	5.085E+00	7.896E-03	1.191E-04	0.0
0.0800	4.638E+00	1.119E-03	4.639E+00	9.958E-03	1.328E-04	0.0
0.0900	4.287E+00	1.138E-03	4.288E+00	1.220E-02	1.462E-04	0.0
0.1000	4.003E+00	1.157E-03	4.004E+00	1.462E-02	1.593E-04	0.0
0.1250	3.486E+00	1.207E-03	3.487E+00	2.134E-02	1.910E-04	0.0
0.1500	3.137E+00	1.260E-03	3.139E+00	2.891E-02	2.215E-04	0.0
0.1750	2.887E+00	1.316E-03	2.889E+00	3.723E-02	2.511E-04	0.0
0.2000	2.700E+00	1.375E-03	2.701E+00	4.619E-02	2.800E-04	0.0
0.2500	2.439E+00	1.499E-03	2.441E+00	6.573E-02	3.363E-04	0.0
0.3000	2.269E+00	1.632E-03	2.270E+00	8.702E-02	3.914E-04	0.0
0.3500	2.150E+00	1.774E-03	2.152E+00	1.097E-01	4.457E-04	0.0
0.4000	2.064E+00	1.924E-03	2.066E+00	1.334E-01	4.997E-04	0.0
0.4500	2.000E+00	2.081E-03	2.002E+00	1.580E-01	5.536E-04	0.0
0.5000	1.952E+00	2.243E-03	1.954E+00	1.833E-01	6.076E-04	0.0
0.5500	1.914E+00	2.416E-03	1.916E+00	2.092E-01	6.619E-04	0.0
0.6000	1.884E+00	2.592E-03	1.887E+00	2.355E-01	7.165E-04	0.0
0.7000	1.842E+00	2.961E-03	1.845E+00	2.891E-01	8.269E-04	0.0
0.8000	1.815E+00	3.350E-03	1.818E+00	3.437E-01	9.389E-04	0.0
0.9000	1.798E+00	3.757E-03	1.801E+00	3.990E-01	1.053E-03	0.0
1.0000	1.787E+00	4.180E-03	1.791E+00	4.547E-01	1.168E-03	0.0
1.2500	1.777E+00	5.306E-03	1.782E+00	5.947E-01	1.465E-03	0.0
1.5000	1.780E+00	6.515E-03	1.787E+00	7.349E-01	1.773E-03	0.0
1.7500	1.789E+00	7.793E-03	1.797E+00	8.744E-01	2.089E-03	0.0
2.0000	1.801E+00	9.132E-03	1.810E+00	1.013E+00	2.414E-03	0.0
2.5000	1.827E+00	1.196E-02	1.839E+00	1.287E+00	3.085E-03	0.0
3.0000	1.854E+00	1.495E-02	1.869E+00	1.557E+00	3.779E-03	0.0
3.5000	1.880E+00	1.809E-02	1.898E+00	1.822E+00	4.491E-03	0.0
4.0000	1.903E+00	2.134E-02	1.925E+00	2.084E+00	5.218E-03	0.0
4.5000	1.925E+00	2.469E-02	1.950E+00	2.342E+00	5.957E-03	0.0
5.0000	1.946E+00	2.813E-02	1.974E+00	2.597E+00	6.706E-03	0.0
5.5000	1.965E+00	3.163E-02	1.997E+00	2.848E+00	7.463E-03	0.0
6.0000	1.983E+00	3.523E-02	2.018E+00	3.098E+00	8.231E-03	0.0
7.0000	2.015E+00	4.260E-02	2.057E+00	3.588E+00	9.781E-03	0.0
8.0000	2.043E+00	5.018E-02	2.093E+00	4.070E+00	1.135E-02	0.0
9.0000	2.069E+00	5.793E-02	2.126E+00	4.544E+00	1.293E-02	0.0
10.0000	2.092E+00	6.584E-02	2.157E+00	5.011E+00	1.453E-02	0.0
12.5000	2.141E+00	8.617E-02	2.227E+00	6.151E+00	1.855E-02	0.0
15.0000	2.182E+00	1.071E-01	2.289E+00	7.258E+00	2.258E-02	0.0
17.5000	2.216E+00	1.286E-01	2.345E+00	8.337E+00	2.662E-02	0.0
20.0000	2.247E+00	1.505E-01	2.397E+00	9.391E+00	3.064E-02	0.0
25.0000	2.297E+00	1.952E-01	2.493E+00	1.144E+01	3.863E-02	0.0
30.0000	2.339E+00	2.410E-01	2.580E+00	1.341E+01	4.651E-02	0.0
35.0000	2.374E+00	2.875E-01	2.662E+00	1.531E+01	5.426E-02	0.0
40.0000	2.405E+00	3.346E-01	2.739E+00	1.717E+01	6.187E-02	0.0
45.0000	2.432E+00	3.822E-01	2.814E+00	1.897E+01	6.933E-02	0.0
50.0000	2.456E+00	4.303E-01	2.886E+00	2.072E+01	7.665E-02	0.0
55.0000	2.478E+00	4.786E-01	2.956E+00	2.243E+01	8.382E-02	0.0
60.0000	2.498E+00	5.272E-01	3.025E+00	2.410E+01	9.085E-02	0.0
70.0000	2.533E+00	6.252E-01	3.158E+00	2.734E+01	1.045E-01	0.0
80.0000	2.564E+00	7.239E-01	3.288E+00	3.044E+01	1.176E-01	0.0
90.0000	2.589E+00	8.231E-01	3.412E+00	3.343E+01	1.301E-01	2.142E-02

APPENDIX E. (Continued)

Carbon (Graphite)

ENERGY MeV	COLLISION MeV cm ² /g	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
		COLLISION	RADIATIVE				
0.0100	2.014E+01	3.150E-03	2.014E+01	2.820E-04	8.665E-05	1.920E-03	
0.0125	1.694E+01	3.161E-03	1.695E+01	4.179E-04	1.036E-04	2.481E-03	
0.0150	1.471E+01	3.168E-03	1.471E+01	5.767E-04	1.199E-04	3.073E-03	
0.0175	1.305E+01	3.172E-03	1.305E+01	7.575E-04	1.355E-04	3.695E-03	
0.0200	1.177E+01	3.176E-03	1.177E+01	9.595E-04	1.506E-04	4.347E-03	
0.0250	9.913E+00	3.184E-03	9.916E+00	1.424E-03	1.796E-04	5.736E-03	
0.0300	8.626E+00	3.194E-03	8.629E+00	1.966E-03	2.073E-04	7.236E-03	
0.0350	7.679E+00	3.204E-03	7.682E+00	2.582E-03	2.340E-04	8.843E-03	
0.0400	6.950E+00	3.215E-03	6.953E+00	3.267E-03	2.597E-04	1.035E-02	
0.0450	6.372E+00	3.228E-03	6.375E+00	4.019E-03	2.847E-04	1.236E-02	
0.0500	5.901E+00	3.241E-03	5.904E+00	4.835E-03	3.090E-04	1.425E-02	
0.0550	5.510E+00	3.255E-03	5.513E+00	5.712E-03	3.327E-04	1.624E-02	
0.0600	5.179E+00	3.270E-03	5.183E+00	6.648E-03	3.558E-04	1.832E-02	
0.0700	4.652E+00	3.303E-03	4.655E+00	8.688E-03	4.008E-04	2.271E-02	
0.0800	4.249E+00	3.337E-03	4.253E+00	1.094E-02	4.441E-04	2.740E-02	
0.0900	3.931E+00	3.375E-03	3.935E+00	1.339E-02	4.860E-04	3.237E-02	
0.1000	3.674E+00	3.414E-03	3.677E+00	1.602E-02	5.268E-04	3.760E-02	
0.1250	3.204E+00	3.523E-03	3.207E+00	2.333E-02	6.243E-04	5.166E-02	
0.1500	2.886E+00	3.640E-03	2.890E+00	3.156E-02	7.168E-04	6.494E-02	
0.1750	2.657E+00	3.764E-03	2.661E+00	4.059E-02	8.055E-04	8.320E-02	
0.2000	2.485E+00	3.896E-03	2.489E+00	5.032E-02	8.911E-04	1.003E-01	
0.2500	2.245E+00	4.179E-03	2.249E+00	7.152E-02	1.055E-03	1.363E-01	
0.3000	2.087E+00	4.489E-03	2.092E+00	9.462E-02	1.213E-03	1.740E-01	
0.3500	1.977E+00	4.820E-03	1.981E+00	1.192E-01	1.367E-03	2.129E-01	
0.4000	1.896E+00	5.173E-03	1.901E+00	1.450E-01	1.518E-03	2.524E-01	
0.4500	1.835E+00	5.545E-03	1.841E+00	1.718E-01	1.668E-03	2.922E-01	
0.5000	1.788E+00	5.935E-03	1.794E+00	1.993E-01	1.817E-03	3.321E-01	
0.5500	1.752E+00	6.340E-03	1.758E+00	2.274E-01	1.966E-03	3.719E-01	
0.6000	1.722E+00	6.759E-03	1.729E+00	2.561E-01	2.115E-03	4.114E-01	
0.7000	1.679E+00	7.637E-03	1.687E+00	3.147E-01	2.416E-03	4.891E-01	
0.8000	1.650E+00	8.559E-03	1.659E+00	3.745E-01	2.719E-03	5.648E-01	
0.9000	1.631E+00	9.523E-03	1.640E+00	4.352E-01	3.026E-03	6.382E-01	
1.0000	1.617E+00	1.053E-02	1.627E+00	4.964E-01	3.337E-03	7.091E-01	
1.2500	1.599E+00	1.318E-02	1.612E+00	6.509E-01	4.133E-03	8.756E-01	
1.5000	1.593E+00	1.602E-02	1.609E+00	8.062E-01	4.954E-03	1.028E+00	
1.7500	1.594E+00	1.901E-02	1.613E+00	9.614E-01	5.799E-03	1.167E+00	
2.0000	1.597E+00	2.213E-02	1.619E+00	1.116E+00	6.665E-03	1.295E+00	
2.5000	1.608E+00	2.870E-02	1.637E+00	1.423E+00	8.450E-03	1.522E+00	
3.0000	1.621E+00	3.561E-02	1.657E+00	1.727E+00	1.029E-02	1.720E+00	
3.5000	1.634E+00	4.281E-02	1.677E+00	2.027E+00	1.218E-02	1.894E+00	
4.0000	1.647E+00	5.026E-02	1.697E+00	2.323E+00	1.410E-02	2.051E+00	
4.5000	1.658E+00	5.792E-02	1.716E+00	2.616E+00	1.606E-02	2.193E+00	
5.0000	1.669E+00	6.576E-02	1.735E+00	2.906E+00	1.803E-02	2.323E+00	
5.5000	1.679E+00	7.378E-02	1.753E+00	3.193E+00	2.003E-02	2.443E+00	
6.0000	1.689E+00	8.193E-02	1.771E+00	3.476E+00	2.204E-02	2.555E+00	
7.0000	1.706E+00	9.865E-02	1.804E+00	4.036E+00	2.610E-02	2.758E+00	
8.0000	1.720E+00	1.158E-01	1.836E+00	4.585E+00	3.020E-02	2.939E+00	
9.0000	1.733E+00	1.334E-01	1.867E+00	5.125E+00	3.432E-02	3.104E+00	
10.0000	1.745E+00	1.513E-01	1.896E+00	5.657E+00	3.845E-02	3.256E+00	
12.5000	1.769E+00	1.971E-01	1.966E+00	6.952E+00	4.877E-02	3.591E+00	
15.0000	1.787E+00	2.444E-01	2.032E+00	8.202E+00	5.903E-02	3.879E+00	
17.5000	1.803E+00	2.927E-01	2.095E+00	9.414E+00	6.918E-02	4.133E+00	
20.0000	1.816E+00	3.417E-01	2.157E+00	1.059E+01	7.917E-02	4.361E+00	
25.0000	1.836E+00	4.417E-01	2.278E+00	1.284E+01	9.861E-02	4.755E+00	
30.0000	1.852E+00	5.435E-01	2.396E+00	1.498E+01	1.173E-01	5.088E+00	
35.0000	1.865E+00	6.466E-01	2.512E+00	1.702E+01	1.351E-01	5.376E+00	
40.0000	1.877E+00	7.508E-01	2.627E+00	1.897E+01	1.522E-01	5.628E+00	
45.0000	1.886E+00	8.559E-01	2.742E+00	2.083E+01	1.685E-01	5.854E+00	
50.0000	1.895E+00	9.617E-01	2.857E+00	2.262E+01	1.841E-01	6.057E+00	
55.0000	1.903E+00	1.068E+00	2.971E+00	2.433E+01	1.991E-01	6.241E+00	
60.0000	1.910E+00	1.175E+00	3.085E+00	2.598E+01	2.133E-01	6.411E+00	
70.0000	1.922E+00	1.391E+00	3.313E+00	2.911E+01	2.401E-01	6.712E+00	
80.0000	1.932E+00	1.608E+00	3.541E+00	3.203E+01	2.648E-01	6.974E+00	
90.0000	1.942E+00	1.826E+00	3.768E+00	3.477E+01	2.875E-01	7.206E+00	

APPENDIX E. (Continued)

Nitrogen

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS.EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.995E+01	3.711E-03	1.996E+01	2.851E-04	1.023E-04	0.0
0.0125	1.679E+01	3.729E-03	1.680E+01	4.223E-04	1.227E-04	0.0
0.0150	1.458E+01	3.740E-03	1.459E+01	5.825E-04	1.421E-04	0.0
0.0175	1.294E+01	3.747E-03	1.295E+01	7.648E-04	1.608E-04	0.0
0.0200	1.168E+01	3.755E-03	1.168E+01	9.684E-04	1.789E-04	0.0
0.0250	9.838E+00	3.762E-03	9.842E+00	1.437E-03	2.135E-04	0.0
0.0300	8.364E+00	3.770E-03	8.368E+00	1.983E-03	2.465E-04	0.0
0.0350	7.626E+00	3.779E-03	7.629E+00	2.693E-03	2.781E-04	0.0
0.0400	6.904E+00	3.790E-03	6.908E+00	3.293E-03	3.086E-04	0.0
0.0450	6.331E+00	3.803E-03	6.335E+00	4.049E-03	3.382E-04	0.0
0.0500	5.863E+00	3.816E-03	5.868E+00	4.870E-03	3.669E-04	0.0
0.0550	5.477E+00	3.831E-03	5.481E+00	5.753E-03	3.949E-04	0.0
0.0600	5.150E+00	3.846E-03	5.154E+00	6.694E-03	4.222E-04	0.0
0.0700	4.628E+00	3.881E-03	4.632E+00	8.745E-03	4.731E-04	0.0
0.0800	4.229E+00	3.920E-03	4.233E+00	1.101E-02	5.260E-04	0.0
0.0900	3.914E+00	3.961E-03	3.918E+00	1.347E-02	5.752E-04	0.0
0.1000	3.660E+00	4.005E-03	3.664E+00	1.611E-02	6.229E-04	0.0
0.1250	3.195E+00	4.127E-03	3.199E+00	2.344E-02	7.368E-04	0.0
0.1500	2.881E+00	4.259E-03	2.885E+00	3.169E-02	8.447E-04	0.0
0.1750	2.655E+00	4.400E-03	2.660E+00	4.073E-02	9.477E-04	0.0
0.2000	2.486E+00	4.550E-03	2.491E+00	5.046E-02	1.047E-03	0.0
0.2500	2.251E+00	4.874E-03	2.256E+00	7.162E-02	1.256E-03	0.0
0.3000	2.097E+00	5.227E-03	2.103E+00	9.462E-02	1.418E-03	0.0
0.3500	1.991E+00	5.606E-03	1.996E+00	1.191E-01	1.593E-03	0.0
0.4000	1.914E+00	6.009E-03	1.920E+00	1.446E-01	1.765E-03	0.0
0.4500	1.857E+00	6.436E-03	1.863E+00	1.711E-01	1.935E-03	0.0
0.5000	1.813E+00	6.882E-03	1.820E+00	1.982E-01	2.103E-03	0.0
0.5500	1.779E+00	7.347E-03	1.787E+00	2.260E-01	2.271E-03	0.0
0.6000	1.753E+00	7.827E-03	1.761E+00	2.542E-01	2.438E-03	0.0
0.7000	1.716E+00	8.831E-03	1.725E+00	3.116E-01	2.773E-03	0.0
0.8000	1.693E+00	9.889E-03	1.703E+00	3.700E-01	3.109E-03	0.0
0.9000	1.679E+00	1.099E-02	1.690E+00	4.289E-01	3.447E-03	0.0
1.0000	1.670E+00	1.214E-02	1.683E+00	4.883E-01	3.788E-03	0.0
1.2500	1.665E+00	1.518E-02	1.680E+00	6.371E-01	4.655E-03	0.0
1.5000	1.670E+00	1.842E-02	1.688E+00	7.856E-01	5.541E-03	0.0
1.7500	1.681E+00	2.184E-02	1.702E+00	9.331E-01	6.444E-03	0.0
2.0000	1.693E+00	2.540E-02	1.719E+00	1.079E+00	7.364E-03	0.0
2.5000	1.721E+00	3.290E-02	1.754E+00	1.367E+00	9.243E-03	0.0
3.0000	1.749E+00	4.078E-02	1.790E+00	1.649E+00	1.116E-02	0.0
3.5000	1.775E+00	4.899E-02	1.824E+00	1.926E+00	1.311E-02	0.0
4.0000	1.799E+00	5.747E-02	1.857E+00	2.198E+00	1.509E-02	0.0
4.5000	1.821E+00	6.620E-02	1.888E+00	2.465E+00	1.708E-02	0.0
5.0000	1.842E+00	7.512E-02	1.917E+00	2.728E+00	1.909E-02	0.0
5.5000	1.861E+00	8.423E-02	1.945E+00	2.987E+00	2.110E-02	0.0
6.0000	1.879E+00	9.352E-02	1.972E+00	3.242E+00	2.312E-02	0.0
7.0000	1.911E+00	1.125E-01	2.024E+00	3.742E+00	2.718E-02	0.0
8.0000	1.940E+00	1.320E-01	2.073E+00	4.231E+00	3.124E-02	0.0
9.0000	1.965E+00	1.520E-01	2.117E+00	4.708E+00	3.530E-02	0.0
10.0000	1.988E+00	1.723E-01	2.161E+00	5.176E+00	3.934E-02	0.0
12.5000	2.038E+00	2.244E-01	2.262E+00	6.306E+00	4.938E-02	0.0
15.0000	2.079E+00	2.780E-01	2.356E+00	7.388E+00	5.926E-02	0.0
17.5000	2.113E+00	3.327E-01	2.446E+00	8.430E+00	6.894E-02	0.0
20.0000	2.144E+00	3.884E-01	2.532E+00	9.434E+00	7.842E-02	0.0
25.0000	2.194E+00	5.016E-01	2.696E+00	1.135E+01	9.672E-02	0.0
30.0000	2.235E+00	6.169E-01	2.852E+00	1.315E+01	1.142E-01	9.661E-03
35.0000	2.266E+00	7.336E-01	3.000E+00	1.486E+01	1.308E-01	6.591E-02
40.0000	2.290E+00	8.515E-01	3.142E+00	1.649E+01	1.467E-01	1.474E-01
45.0000	2.310E+00	9.704E-01	3.281E+00	1.804E+01	1.619E-01	2.393E-01
50.0000	2.327E+00	1.090E+00	3.417E+00	1.954E+01	1.765E-01	3.344E-01
55.0000	2.342E+00	1.211E+00	3.552E+00	2.097E+01	1.904E-01	4.291E-01
60.0000	2.355E+00	1.332E+00	3.686E+00	2.235E+01	2.038E-01	5.217E-01
70.0000	2.377E+00	1.575E+00	3.952E+00	2.497E+01	2.290E-01	6.973E-01
80.0000	2.395E+00	1.821E+00	4.216E+00	2.742E+01	2.523E-01	8.590E-01
90.0000	2.411E+00	2.067E+00	4.478E+00	2.972E+01	2.740E-01	1.008E+00

APPENDIX E. (Continued)

Oxygen						
ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	1.937E+01	4.267E-03	1.937E+01	2.950E-04	1.207E-04	0.0
0.0125	1.632E+01	4.298E-03	1.633E+01	4.362E-04	1.449E-04	0.0
0.0150	1.419E+01	4.316E-03	1.419E+01	6.009E-04	1.681E-04	0.0
0.0175	1.260E+01	4.328E-03	1.261E+01	7.882E-04	1.903E-04	0.0
0.0200	1.138E+01	4.336E-03	1.138E+01	9.973E-04	2.118E-04	0.0
0.0250	9.595E+00	4.347E-03	9.600E+00	1.478E-03	2.529E-04	0.0
0.0300	8.359E+00	4.356E-03	8.363E+00	2.037E-03	2.919E-04	0.0
0.0350	7.447E+00	4.365E-03	7.452E+00	2.672E-03	3.293E-04	0.0
0.0400	6.746E+00	4.376E-03	6.750E+00	3.378E-03	3.653E-04	0.0
0.0450	6.189E+00	4.388E-03	6.193E+00	4.153E-03	4.001E-04	0.0
0.0500	5.735E+00	4.402E-03	5.739E+00	4.992E-03	4.339E-04	0.0
0.0550	5.398E+00	4.417E-03	5.362E+00	5.894E-03	4.668E-04	0.0
0.0600	5.039E+00	4.434E-03	5.044E+00	6.856E-03	4.988E-04	0.0
0.0700	4.530E+00	4.471E-03	4.535E+00	8.951E-03	5.608E-04	0.0
0.0800	4.142E+00	4.512E-03	4.146E+00	1.126E-02	6.204E-04	0.0
0.0900	3.835E+00	4.558E-03	3.839E+00	1.377E-02	6.779E-04	0.0
0.1000	3.586E+00	4.607E-03	3.591E+00	1.647E-02	7.337E-04	0.0
0.1250	3.133E+00	4.741E-03	3.137E+00	2.394E-02	8.666E-04	0.0
0.1500	2.826E+00	4.889E-03	2.831E+00	3.235E-02	9.921E-04	0.0
0.1750	2.606E+00	5.048E-03	2.611E+00	4.157E-02	1.112E-03	0.0
0.2000	2.441E+00	5.215E-03	2.446E+00	5.147E-02	1.227E-03	0.0
0.2500	2.211E+00	5.578E-03	2.217E+00	7.302E-02	1.447E-03	0.0
0.3000	2.061E+00	5.975E-03	2.067E+00	9.642E-02	1.656E-03	0.0
0.3500	1.957E+00	6.402E-03	1.963E+00	1.213E-01	1.859E-03	0.0
0.4000	1.882E+00	6.856E-03	1.889E+00	1.473E-01	2.057E-03	0.0
0.4500	1.826E+00	7.335E-03	1.833E+00	1.742E-01	2.253E-03	0.0
0.5000	1.784E+00	7.838E-03	1.791E+00	2.018E-01	2.446E-03	0.0
0.5500	1.751E+00	8.362E-03	1.759E+00	2.299E-01	2.639E-03	0.0
0.6000	1.725E+00	8.904E-03	1.734E+00	2.586E-01	2.831E-03	0.0
0.7000	1.690E+00	1.004E-02	1.700E+00	3.169E-01	3.215E-03	0.0
0.8000	1.667E+00	1.122E-02	1.679E+00	3.761E-01	3.600E-03	0.0
0.9000	1.654E+00	1.247E-02	1.666E+00	4.359E-01	3.987E-03	0.0
1.0000	1.646E+00	1.376E-02	1.659E+00	4.961E-01	4.377E-03	0.0
1.2500	1.641E+00	1.718E-02	1.658E+00	6.469E-01	5.366E-03	0.0
1.5000	1.647E+00	2.084E-02	1.667E+00	7.973E-01	6.376E-03	0.0
1.7500	1.658E+00	2.468E-02	1.682E+00	9.466E-01	7.405E-03	0.0
2.0000	1.671E+00	2.869E-02	1.699E+00	1.094E+00	8.452E-03	0.0
2.5000	1.699E+00	3.711E-02	1.736E+00	1.386E+00	1.059E-02	0.0
3.0000	1.727E+00	4.598E-02	1.773E+00	1.671E+00	1.276E-02	0.0
3.5000	1.753E+00	5.519E-02	1.808E+00	1.950E+00	1.497E-02	0.0
4.0000	1.777E+00	6.471E-02	1.842E+00	2.224E+00	1.720E-02	0.0
4.5000	1.799E+00	7.448E-02	1.874E+00	2.493E+00	1.945E-02	0.0
5.0000	1.820E+00	8.449E-02	1.905E+00	2.758E+00	2.171E-02	0.0
5.5000	1.839E+00	9.470E-02	1.934E+00	3.018E+00	2.398E-02	0.0
6.0000	1.857E+00	1.051E-01	1.962E+00	3.275E+00	2.626E-02	0.0
7.0000	1.889E+00	1.264E-01	2.016E+00	3.777E+00	3.081E-02	0.0
8.0000	1.918E+00	1.482E-01	2.066E+00	4.267E+00	3.536E-02	0.0
9.0000	1.944E+00	1.705E-01	2.114E+00	4.746E+00	3.990E-02	0.0
10.0000	1.967E+00	1.932E-01	2.160E+00	5.214E+00	4.441E-02	0.0
12.5000	2.016E+00	2.514E-01	2.268E+00	6.343E+00	5.558E-02	0.0
15.0000	2.057E+00	3.112E-01	2.368E+00	7.421E+00	6.652E-02	0.0
17.5000	2.092E+00	3.723E-01	2.464E+00	8.456E+00	7.720E-02	0.0
20.0000	2.122E+00	4.343E-01	2.556E+00	9.452E+00	8.762E-02	0.0
25.0000	2.173E+00	5.606E-01	2.733E+00	1.134E+01	1.076E-01	0.0
30.0000	2.214E+00	6.890E-01	2.903E+00	1.312E+01	1.266E-01	2.989E-03
35.0000	2.246E+00	8.189E-01	3.065E+00	1.479E+01	1.446E-01	4.425E-02
40.0000	2.272E+00	9.502E-01	3.222E+00	1.638E+01	1.617E-01	1.129E-01
45.0000	2.292E+00	1.083E+00	3.373E+00	1.790E+01	1.779E-01	1.940E-01
50.0000	2.310E+00	1.216E+00	3.526E+00	1.935E+01	1.934E-01	2.804E-01
55.0000	2.325E+00	1.350E+00	3.675E+00	2.074E+01	2.082E-01	3.682E-01
60.0000	2.338E+00	1.484E+00	3.823E+00	2.207E+01	2.224E-01	4.534E-01
70.0000	2.361E+00	1.755E+00	4.116E+00	2.459E+01	2.488E-01	6.239E-01
80.0000	2.379E+00	2.028E+00	4.407E+00	2.694E+01	2.732E-01	7.819E-01
90.0000	2.395E+00	2.302E+00	4.697E+00	2.914E+01	2.957E-01	9.288E-01

APPENDIX E. (Continued)

Aluminum

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.649E+01	6.559E-03	1.650E+01	3.539E-04	2.132E-04	3.534E-04
0.0125	1.398E+01	6.700E-03	1.398E+01	5.192E-04	2.583E-04	4.937E-04
0.0150	1.220E+01	6.798E-03	1.221E+01	7.111E-04	3.016E-04	6.538E-04
0.0175	1.088E+01	6.871E-03	1.088E+01	9.284E-04	3.435E-04	8.332E-04
0.0200	9.844E+00	6.924E-03	9.851E+00	1.170E-03	3.849E-04	1.031E-03
0.0250	8.338E+00	7.004E-03	8.345E+00	1.724E-03	4.616E-04	1.463E-03
0.0300	7.287E+00	7.059E-03	7.294E+00	2.367E-03	5.353E-04	2.005E-03
0.0350	6.509E+00	7.100E-03	6.516E+00	3.093E-03	6.058E-04	2.593E-03
0.0400	5.909E+00	7.133E-03	5.916E+00	3.900E-03	6.736E-04	3.246E-03
0.0450	5.430E+00	7.162E-03	5.437E+00	4.783E-03	7.390E-04	3.960E-03
0.0500	5.039E+00	7.191E-03	5.046E+00	5.738E-03	8.022E-04	4.732E-03
0.0550	4.714E+00	7.217E-03	4.721E+00	6.763E-03	8.636E-04	5.560E-03
0.0600	4.439E+00	7.243E-03	4.446E+00	7.859E-03	9.232E-04	6.440E-03
0.0700	3.998E+00	7.293E-03	4.005E+00	1.023E-02	1.038E-03	8.351E-03
0.0800	3.661E+00	7.350E-03	3.668E+00	1.284E-02	1.147E-03	1.045E-02
0.0900	3.394E+00	7.411E-03	3.401E+00	1.568E-02	1.252E-03	1.271E-02
0.1000	3.177E+00	7.476E-03	3.185E+00	1.872E-02	1.353E-03	1.513E-02
0.1250	2.781E+00	7.659E-03	2.789E+00	2.714E-02	1.593E-03	2.175E-02
0.1500	2.513E+00	7.865E-03	2.521E+00	3.659E-02	1.816E-03	2.907E-02
0.1750	2.320E+00	8.096E-03	2.328E+00	4.693E-02	2.028E-03	3.694E-02
0.2000	2.174E+00	8.344E-03	2.183E+00	5.804E-02	2.231E-03	4.525E-02
0.2500	1.972E+00	8.888E-03	1.981E+00	8.217E-02	2.616E-03	6.280E-02
0.3000	1.839E+00	9.487E-03	1.849E+00	1.083E-01	2.982E-03	8.116E-02
0.3500	1.747E+00	1.013E-02	1.757E+00	1.361E-01	3.335E-03	9.997E-02
0.4000	1.680E+00	1.082E-02	1.691E+00	1.652E-01	3.678E-03	1.190E-01
0.4500	1.630E+00	1.154E-02	1.642E+00	1.952E-01	4.016E-03	1.380E-01
0.5000	1.592E+00	1.230E-02	1.604E+00	2.260E-01	4.349E-03	1.569E-01
0.5500	1.563E+00	1.309E-02	1.576E+00	2.575E-01	4.680E-03	1.757E-01
0.6000	1.540E+00	1.390E-02	1.554E+00	2.894E-01	5.009E-03	1.943E-01
0.7000	1.507E+00	1.560E-02	1.522E+00	3.545E-01	5.664E-03	2.307E-01
0.8000	1.486E+00	1.739E-02	1.503E+00	4.206E-01	6.319E-03	2.661E-01
0.9000	1.473E+00	1.925E-02	1.492E+00	4.874E-01	6.976E-03	3.005E-01
1.0000	1.465E+00	2.119E-02	1.486E+00	5.546E-01	7.636E-03	3.339E-01
1.2500	1.457E+00	2.630E-02	1.484E+00	7.231E-01	9.306E-03	4.138E-01
1.5000	1.460E+00	3.177E-02	1.491E+00	8.912E-01	1.101E-02	4.898E-01
1.7500	1.466E+00	3.752E-02	1.504E+00	1.058E+00	1.274E-02	5.632E-01
2.0000	1.475E+00	4.350E-02	1.518E+00	1.224E+00	1.449E-02	6.349E-01
2.5000	1.493E+00	5.605E-02	1.549E+00	1.550E+00	1.808E-02	7.757E-01
3.0000	1.510E+00	6.924E-02	1.580E+00	1.869E+00	2.173E-02	9.145E-01
3.5000	1.526E+00	8.292E-02	1.609E+00	2.183E+00	2.544E-02	1.051E+00
4.0000	1.540E+00	9.702E-02	1.637E+00	2.491E+00	2.918E-02	1.183E+00
4.5000	1.552E+00	1.115E-01	1.664E+00	2.794E+00	3.296E-02	1.311E+00
5.0000	1.564E+00	1.263E-01	1.690E+00	3.092E+00	3.675E-02	1.433E+00
5.5000	1.574E+00	1.413E-01	1.715E+00	3.386E+00	4.053E-02	1.550E+00
6.0000	1.583E+00	1.567E-01	1.739E+00	3.675E+00	4.436E-02	1.661E+00
7.0000	1.599E+00	1.879E-01	1.787E+00	4.242E+00	5.197E-02	1.868E+00
8.0000	1.613E+00	2.200E-01	1.833E+00	4.795E+00	5.955E-02	2.053E+00
9.0000	1.625E+00	2.526E-01	1.877E+00	5.334E+00	6.708E-02	2.226E+00
10.0000	1.636E+00	2.858E-01	1.921E+00	5.861E+00	7.454E-02	2.384E+00
12.5000	1.658E+00	3.706E-01	2.029E+00	7.127E+00	9.281E-02	2.727E+00
15.0000	1.676E+00	4.574E-01	2.134E+00	8.328E+00	1.105E-01	3.016E+00
17.5000	1.691E+00	5.459E-01	2.237E+00	9.472E+00	1.275E-01	3.265E+00
20.0000	1.704E+00	6.357E-01	2.340E+00	1.056E+01	1.438E-01	3.484E+00
25.0000	1.726E+00	8.180E-01	2.544E+00	1.261E+01	1.745E-01	3.857E+00
30.0000	1.743E+00	1.003E+00	2.746E+00	1.450E+01	2.027E-01	4.168E+00
35.0000	1.757E+00	1.190E+00	2.947E+00	1.626E+01	2.287E-01	4.435E+00
40.0000	1.769E+00	1.379E+00	3.148E+00	1.790E+01	2.528E-01	4.669E+00
45.0000	1.780E+00	1.569E+00	3.349E+00	1.944E+01	2.751E-01	4.878E+00
50.0000	1.789E+00	1.761E+00	3.550E+00	2.089E+01	2.959E-01	5.068E+00
55.0000	1.797E+00	1.953E+00	3.751E+00	2.226E+01	3.152E-01	5.241E+00
60.0000	1.805E+00	2.147E+00	3.951E+00	2.356E+01	3.333E-01	5.401E+00
70.0000	1.818E+00	2.535E+00	4.353E+00	2.597E+01	3.662E-01	5.687E+00
80.0000	1.829E+00	2.927E+00	4.755E+00	2.817E+01	3.953E-01	5.938E+00
90.0000	1.838E+00	3.320E+00	5.158E+00	3.019E+01	4.214E-01	6.161E+00

APPENDIX E. (Continued)

Silicon

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	1.689E+01	7.255E-03	1.690E+01	3.461E-04	2.289E-04	1.037E-03
0.0125	1.432E+01	7.431E-03	1.433E+01	5.074E-04	2.780E-04	1.332E-03
0.0150	1.251E+01	7.355E-03	1.252E+01	6.946E-04	3.252E-04	1.641E-03
0.0175	1.115E+01	7.648E-03	1.116E+01	9.065E-04	3.709E-04	1.963E-03
0.0200	1.010E+01	7.720E-03	1.011E+01	1.142E-03	4.151E-04	2.296E-03
0.0250	8.356E+00	7.822E-03	8.364E+00	1.682E-03	5.000E-04	3.097E-03
0.0300	7.480E+00	7.892E-03	7.487E+00	2.308E-03	5.807E-04	3.766E-03
0.0350	6.682E+00	7.946E-03	6.690E+00	3.016E-03	6.579E-04	4.572E-03
0.0400	6.067E+00	7.988E-03	6.075E+00	3.802E-03	7.322E-04	5.424E-03
0.0450	5.576E+00	8.026E-03	5.584E+00	4.661E-03	8.038E-04	6.320E-03
0.0500	5.175E+00	8.061E-03	5.183E+00	5.591E-03	8.731E-04	7.257E-03
0.0550	4.842E+00	8.092E-03	4.850E+00	6.590E-03	9.402E-04	8.235E-03
0.0600	4.559E+00	8.123E-03	4.568E+00	7.633E-03	1.006E-03	9.251E-03
0.0700	4.107E+00	8.185E-03	4.116E+00	9.964E-03	1.131E-03	1.139E-02
0.0800	3.761E+00	8.248E-03	3.769E+00	1.251E-02	1.251E-03	1.368E-02
0.0900	3.487E+00	8.317E-03	3.496E+00	1.526E-02	1.366E-03	1.608E-02
0.1000	3.265E+00	8.389E-03	3.274E+00	1.822E-02	1.476E-03	1.861E-02
0.1250	2.859E+00	8.591E-03	2.867E+00	2.642E-02	1.737E-03	2.538E-02
0.1500	2.503E+00	8.821E-03	2.592E+00	3.561E-02	1.981E-03	3.271E-02
0.1750	2.305E+00	9.076E-03	2.394E+00	4.566E-02	2.212E-03	4.050E-02
0.2000	2.236E+00	9.349E-03	2.245E+00	5.646E-02	2.433E-03	4.868E-02
0.2500	2.028E+00	9.951E-03	2.038E+00	7.991E-02	2.852E-03	6.592E-02
0.3000	1.892E+00	1.062E-02	1.903E+00	1.054E-01	3.248E-03	8.402E-02
0.3500	1.797E+00	1.133E-02	1.809E+00	1.323E-01	3.631E-03	1.027E-01
0.4000	1.729E+00	1.209E-02	1.741E+00	1.606E-01	4.003E-03	1.216E-01
0.4500	1.677E+00	1.290E-02	1.690E+00	1.897E-01	4.368E-03	1.407E-01
0.5000	1.638E+00	1.374E-02	1.652E+00	2.197E-01	4.728E-03	1.599E-01
0.5500	1.608E+00	1.461E-02	1.623E+00	2.502E-01	5.085E-03	1.790E-01
0.6000	1.585E+00	1.551E-02	1.600E+00	2.812E-01	5.441E-03	1.980E-01
0.7000	1.551E+00	1.740E-02	1.568E+00	3.444E-01	6.148E-03	2.355E-01
0.8000	1.529E+00	1.938E-02	1.549E+00	4.086E-01	6.855E-03	2.721E-01
0.9000	1.516E+00	2.145E-02	1.537E+00	4.734E-01	7.564E-03	3.077E-01
1.0000	1.507E+00	2.360E-02	1.531E+00	5.386E-01	8.275E-03	3.424E-01
1.2500	1.500E+00	2.927E-02	1.529E+00	7.022E-01	1.007E-02	4.248E-01
1.5000	1.502E+00	3.533E-02	1.538E+00	8.652E-01	1.190E-02	5.020E-01
1.7500	1.509E+00	4.171E-02	1.551E+00	1.027E+00	1.376E-02	5.747E-01
2.0000	1.518E+00	4.833E-02	1.567E+00	1.188E+00	1.565E-02	6.439E-01
2.5000	1.538E+00	6.223E-02	1.600E+00	1.503E+00	1.949E-02	7.743E-01
3.0000	1.558E+00	7.682E-02	1.634E+00	1.812E+00	2.340E-02	8.976E-01
3.5000	1.575E+00	9.197E-02	1.667E+00	2.115E+00	2.736E-02	1.016E+00
4.0000	1.591E+00	1.076E-01	1.699E+00	2.412E+00	3.134E-02	1.131E+00
4.5000	1.605E+00	1.236E-01	1.729E+00	2.704E+00	3.535E-02	1.243E+00
5.0000	1.618E+00	1.399E-01	1.758E+00	2.991E+00	3.937E-02	1.351E+00
5.5000	1.629E+00	1.566E-01	1.786E+00	3.273E+00	4.340E-02	1.456E+00
6.0000	1.639E+00	1.735E-01	1.813E+00	3.551E+00	4.742E-02	1.557E+00
7.0000	1.657E+00	2.081E-01	1.865E+00	4.095E+00	5.546E-02	1.748E+00
8.0000	1.672E+00	2.435E-01	1.916E+00	4.624E+00	6.344E-02	1.925E+00
9.0000	1.685E+00	2.795E-01	1.965E+00	5.139E+00	7.136E-02	2.088E+00
10.0000	1.697E+00	3.161E-01	2.013E+00	5.642E+00	7.919E-02	2.239E+00
12.5000	1.721E+00	4.098E-01	2.130E+00	6.849E+00	9.833E-02	2.574E+00
15.0000	1.740E+00	5.057E-01	2.245E+00	7.992E+00	1.168E-01	2.858E+00
17.5000	1.756E+00	6.033E-01	2.359E+00	9.078E+00	1.345E-01	3.105E+00
20.0000	1.769E+00	7.023E-01	2.472E+00	1.011E+01	1.514E-01	3.323E+00
25.0000	1.791E+00	9.035E-01	2.695E+00	1.205E+01	1.832E-01	3.694E+00
30.0000	1.809E+00	1.108E+00	2.917E+00	1.383E+01	2.123E-01	4.003E+00
35.0000	1.824E+00	1.314E+00	3.139E+00	1.548E+01	2.391E-01	4.268E+00
40.0000	1.837E+00	1.525E+00	3.360E+00	1.702E+01	2.638E-01	4.501E+00
45.0000	1.848E+00	1.733E+00	3.581E+00	1.847E+01	2.865E-01	4.709E+00
50.0000	1.858E+00	1.944E+00	3.802E+00	1.982E+01	3.077E-01	4.897E+00
55.0000	1.866E+00	2.156E+00	4.023E+00	2.110E+01	3.273E-01	5.068E+00
60.0000	1.874E+00	2.369E+00	4.244E+00	2.231E+01	3.457E-01	5.226E+00
70.0000	1.888E+00	2.798E+00	4.686E+00	2.455E+01	3.789E-01	5.509E+00
80.0000	1.900E+00	3.230E+00	5.129E+00	2.659E+01	4.083E-01	5.757E+00
90.0000	1.910E+00	3.663E+00	5.573E+00	2.846E+01	4.344E-01	5.979E+00

APPENDIX E. (Continued)

Copper

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.318E+01	1.213E-02	1.319E+01	4.601E-04	4.701E-04	1.244E-03
0.0125	1.127E+01	1.277E-02	1.128E+01	6.658E-04	5.814E-04	1.585E-03
0.0150	9.904E+00	1.327E-02	9.917E+00	9.028E-04	6.904E-04	1.938E-03
0.0175	8.874E+00	1.366E-02	8.887E+00	1.170E-03	7.972E-04	2.304E-03
0.0200	8.066E+00	1.399E-02	8.080E+00	1.465E-03	9.019E-04	2.683E-03
0.0250	6.877E+00	1.449E-02	6.892E+00	2.138E-03	1.105E-03	3.481E-03
0.0300	6.040E+00	1.488E-02	6.055E+00	2.914E-03	1.301E-03	4.334E-03
0.0350	5.416E+00	1.518E-02	5.431E+00	3.788E-03	1.491E-03	5.247E-03
0.0400	4.931E+00	1.543E-02	4.947E+00	4.754E-03	1.674E-03	6.220E-03
0.0450	4.544E+00	1.564E-02	4.560E+00	5.808E-03	1.852E-03	7.259E-03
0.0500	4.226E+00	1.583E-02	4.242E+00	6.946E-03	2.025E-03	8.365E-03
0.0550	3.961E+00	1.600E-02	3.977E+00	8.164E-03	2.194E-03	9.542E-03
0.0600	3.736E+00	1.615E-02	3.753E+00	9.459E-03	2.358E-03	1.080E-02
0.0700	3.375E+00	1.641E-02	3.392E+00	1.227E-02	2.674E-03	1.354E-02
0.0800	3.098E+00	1.665E-02	3.114E+00	1.535E-02	2.977E-03	1.664E-02
0.0900	2.877E+00	1.688E-02	2.894E+00	1.868E-02	3.267E-03	2.013E-02
0.1000	2.698E+00	1.710E-02	2.715E+00	2.225E-02	3.547E-03	2.404E-02
0.1250	2.370E+00	1.763E-02	2.387E+00	3.211E-02	4.208E-03	3.583E-02
0.1500	2.146E+00	1.816E-02	2.164E+00	4.314E-02	4.822E-03	5.053E-02
0.1750	1.984E+00	1.870E-02	2.002E+00	5.517E-02	5.401E-03	6.758E-02
0.2000	1.861E+00	1.926E-02	1.881E+00	6.807E-02	5.950E-03	8.595E-02
0.2500	1.691E+00	2.045E-02	1.711E+00	9.603E-02	6.981E-03	1.236E-01
0.3000	1.579E+00	2.172E-02	1.601E+00	1.263E-01	7.945E-03	1.603E-01
0.3500	1.501E+00	2.307E-02	1.524E+00	1.584E-01	8.860E-03	1.958E-01
0.4000	1.444E+00	2.450E-02	1.469E+00	1.918E-01	9.741E-03	2.302E-01
0.4500	1.402E+00	2.600E-02	1.428E+00	2.263E-01	1.060E-02	2.635E-01
0.5000	1.370E+00	2.757E-02	1.398E+00	2.617E-01	1.143E-02	2.958E-01
0.5500	1.345E+00	2.919E-02	1.375E+00	2.978E-01	1.226E-02	3.273E-01
0.6000	1.326E+00	3.087E-02	1.357E+00	3.345E-01	1.307E-02	3.581E-01
0.7000	1.298E+00	3.437E-02	1.333E+00	4.089E-01	1.467E-02	4.173E-01
0.8000	1.281E+00	3.803E-02	1.319E+00	4.843E-01	1.625E-02	4.739E-01
0.9000	1.270E+00	4.185E-02	1.312E+00	5.604E-01	1.782E-02	5.280E-01
1.0000	1.263E+00	4.580E-02	1.309E+00	6.367E-01	1.938E-02	5.799E-01
1.2500	1.257E+00	5.623E-02	1.313E+00	8.276E-01	2.328E-02	7.011E-01
1.5000	1.259E+00	6.733E-02	1.327E+00	1.017E+00	2.720E-02	8.121E-01
1.7500	1.265E+00	7.896E-02	1.344E+00	1.204E+00	3.113E-02	9.149E-01
2.0000	1.273E+00	9.103E-02	1.364E+00	1.389E+00	3.509E-02	1.011E+00
2.5000	1.289E+00	1.162E-01	1.405E+00	1.750E+00	4.302E-02	1.186E+00
3.0000	1.305E+00	1.425E-01	1.448E+00	2.101E+00	5.095E-02	1.343E+00
3.5000	1.320E+00	1.697E-01	1.490E+00	2.441E+00	5.885E-02	1.486E+00
4.0000	1.334E+00	1.976E-01	1.531E+00	2.772E+00	6.668E-02	1.617E+00
4.5000	1.346E+00	2.261E-01	1.573E+00	3.094E+00	7.443E-02	1.738E+00
5.0000	1.358E+00	2.552E-01	1.613E+00	3.408E+00	8.209E-02	1.850E+00
5.5000	1.368E+00	2.847E-01	1.653E+00	3.715E+00	8.965E-02	1.954E+00
6.0000	1.378E+00	3.146E-01	1.693E+00	4.013E+00	9.710E-02	2.052E+00
7.0000	1.396E+00	3.756E-01	1.771E+00	4.591E+00	1.117E-01	2.229E+00
8.0000	1.411E+00	4.378E-01	1.849E+00	5.143E+00	1.258E-01	2.388E+00
9.0000	1.424E+00	5.009E-01	1.925E+00	5.673E+00	1.394E-01	2.532E+00
10.0000	1.436E+00	5.650E-01	2.001E+00	6.183E+00	1.526E-01	2.664E+00
12.5000	1.462E+00	7.282E-01	2.190E+00	7.376E+00	1.837E-01	2.951E+00
15.0000	1.482E+00	8.949E-01	2.377E+00	8.472E+00	2.122E-01	3.194E+00
17.5000	1.499E+00	1.064E+00	2.563E+00	9.484E+00	2.385E-01	3.407E+00
20.0000	1.513E+00	1.236E+00	2.749E+00	1.043E+01	2.628E-01	3.597E+00
25.0000	1.537E+00	1.583E+00	3.120E+00	1.213E+01	3.061E-01	3.927E+00
30.0000	1.555E+00	1.936E+00	3.491E+00	1.365E+01	3.437E-01	4.209E+00
35.0000	1.570E+00	2.291E+00	3.861E+00	1.501E+01	3.767E-01	4.456E+00
40.0000	1.582E+00	2.650E+00	4.233E+00	1.624E+01	4.059E-01	4.676E+00
45.0000	1.593E+00	3.012E+00	4.605E+00	1.738E+01	4.320E-01	4.874E+00
50.0000	1.603E+00	3.375E+00	4.978E+00	1.842E+01	4.554E-01	5.054E+00
55.0000	1.611E+00	3.740E+00	5.351E+00	1.939E+01	4.766E-01	5.219E+00
60.0000	1.619E+00	4.107E+00	5.723E+00	2.029E+01	4.959E-01	5.372E+00
70.0000	1.632E+00	4.844E+00	6.476E+00	2.193E+01	5.298E-01	5.646E+00
80.0000	1.643E+00	5.586E+00	7.229E+00	2.339E+01	5.587E-01	5.886E+00
90.0000	1.653E+00	6.330E+00	7.983E+00	2.471E+01	5.836E-01	6.100E+00

APPENDIX E. (Continued)

Tin						
ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.075E+01	1.645E-02	1.077E+01	5.861E-04	7.576E-04	6.966E-04
0.0125	9.263E+00	1.769E-02	9.281E+00	8.371E-04	9.496E-04	8.851E-04
0.0150	8.186E+00	1.869E-02	8.205E+00	1.124E-03	1.140E-03	1.079E-03
0.0175	7.366E+00	1.951E-02	7.386E+00	1.446E-03	1.329E-03	1.279E-03
0.0200	6.719E+00	2.021E-02	6.740E+00	1.801E-03	1.515E-03	1.484E-03
0.0250	5.759E+00	2.134E-02	5.781E+00	2.605E-03	1.882E-03	1.910E-03
0.0300	5.078E+00	2.224E-02	5.100E+00	3.528E-03	2.239E-03	2.358E-03
0.0350	4.567E+00	2.299E-02	4.590E+00	4.564E-03	2.589E-03	2.827E-03
0.0400	4.169E+00	2.364E-02	4.193E+00	5.705E-03	2.931E-03	3.316E-03
0.0450	3.850E+00	2.422E-02	3.874E+00	6.947E-03	3.266E-03	3.826E-03
0.0500	3.587E+00	2.473E-02	3.612E+00	8.285E-03	3.595E-03	4.355E-03
0.0550	3.367E+00	2.520E-02	3.393E+00	9.714E-03	3.917E-03	4.904E-03
0.0600	3.181E+00	2.564E-02	3.206E+00	1.123E-02	4.233E-03	5.473E-03
0.0700	2.880E+00	2.642E-02	2.907E+00	1.451E-02	4.849E-03	6.667E-03
0.0800	2.649E+00	2.713E-02	2.676E+00	1.810E-02	5.445E-03	7.935E-03
0.0900	2.465E+00	2.778E-02	2.492E+00	2.198E-02	6.023E-03	9.276E-03
0.1000	2.315E+00	2.838E-02	2.343E+00	2.612E-02	6.584E-03	1.069E-02
0.1250	2.039E+00	2.975E-02	2.069E+00	3.752E-02	7.920E-03	1.451E-02
0.1500	1.852E+00	3.100E-02	1.883E+00	5.021E-02	9.172E-03	1.875E-02
0.1750	1.717E+00	3.216E-02	1.749E+00	6.401E-02	1.035E-02	2.358E-02
0.2000	1.615E+00	3.328E-02	1.648E+00	7.876E-02	1.147E-02	2.838E-02
0.2500	1.473E+00	3.550E-02	1.508E+00	1.106E-01	1.356E-02	3.942E-02
0.3000	1.380E+00	3.776E-02	1.418E+00	1.448E-01	1.548E-02	5.166E-02
0.3500	1.316E+00	4.010E-02	1.356E+00	1.809E-01	1.729E-02	6.492E-02
0.4000	1.269E+00	4.252E-02	1.312E+00	2.185E-01	1.900E-02	7.898E-02
0.4500	1.235E+00	4.505E-02	1.280E+00	2.571E-01	2.065E-02	9.366E-02
0.5000	1.209E+00	4.766E-02	1.257E+00	2.965E-01	2.224E-02	1.088E-01
0.5500	1.189E+00	5.035E-02	1.239E+00	3.366E-01	2.379E-02	1.243E-01
0.6000	1.174E+00	5.311E-02	1.227E+00	3.772E-01	2.530E-02	1.399E-01
0.7000	1.152E+00	5.881E-02	1.211E+00	4.593E-01	2.825E-02	1.717E-01
0.8000	1.140E+00	6.472E-02	1.204E+00	5.421E-01	3.111E-02	2.036E-01
0.9000	1.132E+00	7.083E-02	1.203E+00	6.252E-01	3.391E-02	2.354E-01
1.0000	1.128E+00	7.712E-02	1.205E+00	7.083E-01	3.666E-02	2.669E-01
1.2500	1.127E+00	9.354E-02	1.220E+00	9.146E-01	4.340E-02	3.436E-01
1.5000	1.132E+00	1.108E-01	1.243E+00	1.118E+00	4.998E-02	4.168E-01
1.7500	1.140E+00	1.287E-01	1.269E+00	1.317E+00	5.646E-02	4.863E-01
2.0000	1.149E+00	1.472E-01	1.297E+00	1.512E+00	6.284E-02	5.525E-01
2.5000	1.168E+00	1.855E-01	1.354E+00	1.889E+00	7.534E-02	6.753E-01
3.0000	1.186E+00	2.251E-01	1.412E+00	2.251E+00	8.750E-02	7.874E-01
3.5000	1.203E+00	2.659E-01	1.469E+00	2.598E+00	9.933E-02	8.904E-01
4.0000	1.218E+00	3.075E-01	1.526E+00	2.932E+00	1.108E-01	9.857E-01
4.5000	1.232E+00	3.499E-01	1.582E+00	3.254E+00	1.220E-01	1.075E+00
5.0000	1.244E+00	3.930E-01	1.637E+00	3.564E+00	1.329E-01	1.158E+00
5.5000	1.256E+00	4.366E-01	1.692E+00	3.865E+00	1.434E-01	1.236E+00
6.0000	1.266E+00	4.808E-01	1.747E+00	4.155E+00	1.537E-01	1.311E+00
7.0000	1.285E+00	5.706E-01	1.856E+00	4.711E+00	1.734E-01	1.449E+00
8.0000	1.301E+00	6.620E-01	1.963E+00	5.234E+00	1.920E-01	1.576E+00
9.0000	1.315E+00	7.547E-01	2.070E+00	5.730E+00	2.097E-01	1.695E+00
10.0000	1.328E+00	8.486E-01	2.176E+00	6.202E+00	2.265E-01	1.805E+00
12.5000	1.353E+00	1.087E+00	2.441E+00	7.286E+00	2.649E-01	2.057E+00
15.0000	1.374E+00	1.331E+00	2.705E+00	8.258E+00	2.990E-01	2.279E+00
17.5000	1.390E+00	1.578E+00	2.969E+00	9.140E+00	3.295E-01	2.478E+00
20.0000	1.404E+00	1.829E+00	3.233E+00	9.947E+00	3.570E-01	2.658E+00
25.0000	1.426E+00	2.338E+00	3.764E+00	1.138E+01	4.045E-01	2.974E+00
30.0000	1.444E+00	2.854E+00	4.298E+00	1.262E+01	4.443E-01	3.244E+00
35.0000	1.459E+00	3.376E+00	4.834E+00	1.372E+01	4.782E-01	3.480E+00
40.0000	1.471E+00	3.902E+00	5.373E+00	1.470E+01	5.075E-01	3.689E+00
45.0000	1.481E+00	4.433E+00	5.914E+00	1.559E+01	5.332E-01	3.878E+00
50.0000	1.491E+00	4.966E+00	6.457E+00	1.639E+01	5.558E-01	4.049E+00
55.0000	1.499E+00	5.503E+00	7.002E+00	1.714E+01	5.760E-01	4.206E+00
60.0000	1.506E+00	6.041E+00	7.547E+00	1.783E+01	5.941E-01	4.351E+00
70.0000	1.519E+00	7.124E+00	8.643E+00	1.906E+01	6.253E-01	4.612E+00
80.0000	1.530E+00	8.213E+00	9.743E+00	2.015E+01	6.514E-01	4.843E+00
90.0000	1.540E+00	9.307E+00	1.085E+01	2.112E+01	6.736E-01	5.050E+00

APPENDIX E. (Continued)

Tungsten

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS.EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	8.974E+00	1.977E-02	8.993E+00	7.489E-04	1.076E-03	9.911E-04
0.0125	7.806E+00	2.165E-02	7.828E+00	1.048E-03	1.357E-03	1.263E-03
0.0150	6.945E+00	2.320E-02	6.968E+00	1.387E-03	1.639E-03	1.544E-03
0.0175	6.281E+00	2.450E-02	6.306E+00	1.765E-03	1.920E-03	1.834E-03
0.0200	5.753E+00	2.563E-02	5.779E+00	2.179E-03	2.200E-03	2.133E-03
0.0250	4.961E+00	2.752E-02	4.989E+00	3.114E-03	2.756E-03	2.758E-03
0.0300	4.394E+00	2.908E-02	4.423E+00	4.181E-03	3.304E-03	3.417E-03
0.0350	3.966E+00	3.042E-02	3.996E+00	5.372E-03	3.846E-03	4.109E-03
0.0400	3.631E+00	3.160E-02	3.662E+00	6.681E-03	4.381E-03	4.834E-03
0.0450	3.360E+00	3.267E-02	3.393E+00	8.101E-03	4.908E-03	5.591E-03
0.0500	3.137E+00	3.364E-02	3.171E+00	9.627E-03	5.430E-03	6.378E-03
0.0550	2.950E+00	3.454E-02	2.985E+00	1.125E-02	5.944E-03	7.195E-03
0.0600	2.791E+00	3.539E-02	2.826E+00	1.298E-02	6.453E-03	8.041E-03
0.0700	2.533E+00	3.694E-02	2.570E+00	1.669E-02	7.453E-03	9.817E-03
0.0800	2.335E+00	3.834E-02	2.373E+00	2.075E-02	8.430E-03	1.170E-02
0.0900	2.176E+00	3.964E-02	2.216E+00	2.511E-02	9.385E-03	1.369E-02
0.1000	2.047E+00	4.084E-02	2.088E+00	2.977E-02	1.032E-02	1.577E-02
0.1250	1.808E+00	4.355E-02	1.852E+00	4.253E-02	1.257E-02	2.139E-02
0.1500	1.646E+00	4.595E-02	1.692E+00	5.668E-02	1.470E-02	2.755E-02
0.1750	1.528E+00	4.814E-02	1.576E+00	7.202E-02	1.673E-02	3.420E-02
0.2000	1.439E+00	5.021E-02	1.490E+00	8.835E-02	1.865E-02	4.131E-02
0.2500	1.315E+00	5.414E-02	1.378E+00	1.235E-01	2.226E-02	5.677E-02
0.3000	1.234E+00	5.797E-02	1.292E+00	1.611E-01	2.558E-02	7.370E-02
0.3500	1.178E+00	6.179E-02	1.240E+00	2.007E-01	2.870E-02	9.188E-02
0.4000	1.138E+00	6.565E-02	1.203E+00	2.416E-01	3.164E-02	1.111E-01
0.4500	1.108E+00	6.956E-02	1.177E+00	2.836E-01	3.443E-02	1.310E-01
0.5000	1.085E+00	7.353E-02	1.159E+00	3.265E-01	3.712E-02	1.515E-01
0.5500	1.068E+00	7.755E-02	1.146E+00	3.699E-01	3.971E-02	1.723E-01
0.6000	1.055E+00	8.162E-02	1.136E+00	4.137E-01	4.221E-02	1.932E-01
0.7000	1.036E+00	8.993E-02	1.126E+00	5.022E-01	4.702E-02	2.352E-01
0.8000	1.025E+00	9.841E-02	1.124E+00	5.911E-01	5.161E-02	2.768E-01
0.9000	1.019E+00	1.071E-01	1.126E+00	6.800E-01	5.602E-02	3.176E-01
1.0000	1.016E+00	1.159E-01	1.132E+00	7.686E-01	6.030E-02	3.575E-01
1.2500	1.016E+00	1.387E-01	1.154E+00	9.875E-01	7.051E-02	4.528E-01
1.5000	1.021E+00	1.624E-01	1.183E+00	1.201E+00	8.022E-02	5.416E-01
1.7500	1.029E+00	1.868E-01	1.215E+00	1.410E+00	8.955E-02	6.242E-01
2.0000	1.037E+00	2.117E-01	1.249E+00	1.613E+00	9.856E-02	7.015E-01
2.5000	1.055E+00	2.630E-01	1.318E+00	2.003E+00	1.158E-01	8.425E-01
3.0000	1.072E+00	3.158E-01	1.388E+00	2.372E+00	1.321E-01	9.684E-01
3.5000	1.087E+00	3.698E-01	1.457E+00	2.724E+00	1.476E-01	1.083E+00
4.0000	1.101E+00	4.248E-01	1.526E+00	3.059E+00	1.625E-01	1.188E+00
4.5000	1.114E+00	4.806E-01	1.595E+00	3.380E+00	1.766E-01	1.286E+00
5.0000	1.126E+00	5.372E-01	1.663E+00	3.687E+00	1.902E-01	1.378E+00
5.5000	1.136E+00	5.945E-01	1.731E+00	3.981E+00	2.032E-01	1.463E+00
5.0000	1.146E+00	6.523E-01	1.798E+00	4.265E+00	2.157E-01	1.544E+00
7.0000	1.163E+00	7.697E-01	1.933E+00	4.801E+00	2.393E-01	1.694E+00
8.0000	1.178E+00	8.890E-01	2.067E+00	5.301E+00	2.612E-01	1.830E+00
9.0000	1.191E+00	1.010E+00	2.201E+00	5.770E+00	2.816E-01	1.955E+00
10.0000	1.203E+00	1.132E+00	2.335E+00	6.211E+00	3.006E-01	2.070E+00
12.5000	1.227E+00	1.443E+00	2.670E+00	7.212E+00	3.432E-01	2.324E+00
15.0000	1.247E+00	1.759E+00	3.006E+00	8.094E+00	3.800E-01	2.544E+00
17.5000	1.263E+00	2.081E+00	3.343E+00	8.882E+00	4.120E-01	2.737E+00
20.0000	1.277E+00	2.406E+00	3.682E+00	9.594E+00	4.403E-01	2.910E+00
25.0000	1.299E+00	3.065E+00	4.364E+00	1.084E+01	4.881E-01	3.212E+00
30.0000	1.316E+00	3.735E+00	5.051E+00	1.190E+01	5.270E-01	3.471E+00
35.0000	1.331E+00	4.412E+00	5.743E+00	1.283E+01	5.595E-01	3.698E+00
40.0000	1.343E+00	5.096E+00	6.439E+00	1.365E+01	5.871E-01	3.901E+00
45.0000	1.353E+00	5.784E+00	7.138E+00	1.439E+01	6.109E-01	4.084E+00
50.0000	1.362E+00	6.477E+00	7.840E+00	1.506E+01	6.316E-01	4.252E+00
55.0000	1.371E+00	7.174E+00	8.544E+00	1.567E+01	6.500E-01	4.405E+00
60.0000	1.378E+00	7.873E+00	9.251E+00	1.623E+01	6.662E-01	4.548E+00
70.0000	1.391E+00	9.280E+00	1.067E+01	1.724E+01	6.940E-01	4.804E+00
80.0000	1.401E+00	1.070E+01	1.210E+01	1.812E+01	7.169E-01	5.031E+00
90.0000	1.411E+00	1.212E+01	1.353E+01	1.890E+01	7.362E-01	5.233E+00

APPENDIX E. (Continued)

Lead

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	8.428E+00	2.045E-02	8.448E+00	8.253E-04	1.191E-03	4.841E-04
0.0125	7.357E+00	2.251E-02	7.379E+00	1.143E-03	1.500E-03	6.147E-04
0.0150	6.561E+00	2.421E-02	6.585E+00	1.502E-03	1.810E-03	7.491E-04
0.0175	5.946E+00	2.566E-02	5.971E+00	1.901E-03	2.121E-03	8.872E-04
0.0200	5.453E+00	2.693E-02	5.480E+00	2.339E-03	2.432E-03	1.029E-03
0.0250	4.714E+00	2.908E-02	4.743E+00	3.323E-03	3.051E-03	1.324E-03
0.0300	4.182E+00	3.086E-02	4.213E+00	4.444E-03	3.664E-03	1.633E-03
0.0350	3.779E+00	3.240E-02	3.812E+00	5.694E-03	4.271E-03	1.956E-03
0.0400	3.463E+00	3.376E-02	3.497E+00	7.066E-03	4.872E-03	2.294E-03
0.0450	3.208E+00	3.500E-02	3.243E+00	8.552E-03	5.467E-03	2.646E-03
0.0500	2.997E+00	3.613E-02	3.034E+00	1.015E-02	6.055E-03	3.011E-03
0.0550	2.821E+00	3.718E-02	2.858E+00	1.185E-02	6.638E-03	3.390E-03
0.0600	2.670E+00	3.817E-02	2.708E+00	1.365E-02	7.214E-03	3.783E-03
0.0700	2.426E+00	3.996E-02	2.466E+00	1.752E-02	8.349E-03	4.608E-03
0.0800	2.237E+00	4.162E-02	2.279E+00	2.175E-02	9.461E-03	5.485E-03
0.0900	2.087E+00	4.313E-02	2.130E+00	2.629E-02	1.055E-02	6.413E-03
0.1000	1.964E+00	4.454E-02	2.008E+00	3.113E-02	1.162E-02	7.392E-03
0.1250	1.738E+00	4.772E-02	1.785E+00	4.438E-02	1.419E-02	1.005E-02
0.1500	1.583E+00	5.054E-02	1.633E+00	5.905E-02	1.664E-02	1.300E-02
0.1750	1.471E+00	5.312E-02	1.524E+00	7.492E-02	1.896E-02	1.623E-02
0.2000	1.387E+00	5.555E-02	1.442E+00	9.180E-02	2.118E-02	1.971E-02
0.2500	1.269E+00	6.015E-02	1.329E+00	1.280E-01	2.533E-02	2.736E-02
0.3000	1.193E+00	6.460E-02	1.257E+00	1.668E-01	2.917E-02	3.579E-02
0.3500	1.140E+00	6.900E-02	1.209E+00	2.074E-01	3.276E-02	4.484E-02
0.4000	1.102E+00	7.340E-02	1.175E+00	2.494E-01	3.614E-02	5.437E-02
0.4500	1.074E+00	7.781E-02	1.152E+00	2.924E-01	3.935E-02	6.426E-02
0.5000	1.053E+00	8.228E-02	1.135E+00	3.361E-01	4.241E-02	7.442E-02
0.5500	1.037E+00	8.677E-02	1.124E+00	3.804E-01	4.536E-02	8.479E-02
0.6000	1.026E+00	9.132E-02	1.117E+00	4.250E-01	4.820E-02	9.529E-02
0.7000	1.009E+00	1.005E-01	1.110E+00	5.149E-01	5.363E-02	1.166E-01
0.8000	1.000E+00	1.098E-01	1.110E+00	6.050E-01	5.877E-02	1.380E-01
0.9000	9.957E-01	1.193E-01	1.115E+00	6.949E-01	6.369E-02	1.595E-01
1.0000	9.939E-01	1.290E-01	1.123E+00	7.843E-01	6.842E-02	1.809E-01
1.2500	9.966E-01	1.537E-01	1.150E+00	1.004E+00	7.960E-02	2.337E-01
1.5000	1.004E+00	1.792E-01	1.183E+00	1.219E+00	9.009E-02	2.854E-01
1.7500	1.014E+00	2.053E-01	1.219E+00	1.427E+00	1.001E-01	3.360E-01
2.0000	1.024E+00	2.319E-01	1.256E+00	1.629E+00	1.096E-01	3.855E-01
2.5000	1.044E+00	2.866E-01	1.331E+00	2.016E+00	1.277E-01	4.817E-01
3.0000	1.063E+00	3.427E-01	1.406E+00	2.381E+00	1.447E-01	5.743E-01
3.5000	1.080E+00	3.999E-01	1.480E+00	2.728E+00	1.608E-01	6.631E-01
4.0000	1.095E+00	4.582E-01	1.553E+00	3.057E+00	1.761E-01	7.479E-01
4.5000	1.108E+00	5.174E-01	1.626E+00	3.372E+00	1.906E-01	8.289E-01
5.0000	1.120E+00	5.773E-01	1.698E+00	3.673E+00	2.045E-01	9.061E-01
5.5000	1.132E+00	6.379E-01	1.769E+00	3.962E+00	2.177E-01	9.798E-01
6.0000	1.142E+00	6.991E-01	1.841E+00	4.239E+00	2.304E-01	1.050E+00
7.0000	1.160E+00	8.233E-01	1.983E+00	4.762E+00	2.543E-01	1.182E+00
8.0000	1.175E+00	9.495E-01	2.125E+00	5.249E+00	2.765E-01	1.304E+00
9.0000	1.189E+00	1.077E+00	2.266E+00	5.705E+00	2.970E-01	1.417E+00
10.0000	1.201E+00	1.206E+00	2.407E+00	6.133E+00	3.162E-01	1.523E+00
12.5000	1.226E+00	1.535E+00	2.761E+00	7.102E+00	3.589E-01	1.759E+00
15.0000	1.246E+00	1.870E+00	3.116E+00	7.954E+00	3.955E-01	1.964E+00
17.5000	1.262E+00	2.210E+00	3.472E+00	8.713E+00	4.274E-01	2.147E+00
20.0000	1.277E+00	2.554E+00	3.830E+00	9.399E+00	4.555E-01	2.310E+00
25.0000	1.299E+00	3.252E+00	4.551E+00	1.059E+01	5.028E-01	2.596E+00
30.0000	1.318E+00	3.961E+00	5.278E+00	1.161E+01	5.412E-01	2.841E+00
35.0000	1.332E+00	4.678E+00	6.011E+00	1.250E+01	5.731E-01	3.055E+00
40.0000	1.345E+00	5.402E+00	6.747E+00	1.329E+01	6.002E-01	3.247E+00
45.0000	1.356E+00	6.132E+00	7.488E+00	1.399E+01	6.235E-01	3.420E+00
50.0000	1.365E+00	6.865E+00	8.231E+00	1.463E+01	6.439E-01	3.579E+00
55.0000	1.374E+00	7.603E+00	8.977E+00	1.521E+01	6.618E-01	3.725E+00
60.0000	1.381E+00	8.345E+00	9.726E+00	1.574E+01	6.777E-01	3.861E+00
70.0000	1.395E+00	9.836E+00	1.123E+01	1.670E+01	7.048E-01	4.107E+00
80.0000	1.406E+00	1.134E+01	1.274E+01	1.753E+01	7.270E-01	4.326E+00
90.0000	1.415E+00	1.284E+01	1.426E+01	1.828E+01	7.457E-01	4.521E+00

APPENDIX E. (Continued)

Air (Dry)

ENERGY MeV	STOPPING POWER COLLISION		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.975E+01	3.897E-03	1.976E+01	2.883E-04	1.082E-04	0.0
0.0125	1.663E+01	3.921E-03	1.663E+01	4.269E-04	1.299E-04	0.0
0.0150	1.445E+01	3.937E-03	1.445E+01	5.886E-04	1.506E-04	0.0
0.0175	1.283E+01	3.946E-03	1.283E+01	7.726E-04	1.706E-04	0.0
0.0200	1.157E+01	3.954E-03	1.158E+01	9.781E-04	1.898E-04	0.0
0.0250	9.753E+00	3.966E-03	9.757E+00	1.451E-03	2.267E-04	0.0
0.0300	8.492E+00	3.976E-03	8.496E+00	2.001E-03	2.618E-04	0.0
0.0350	7.563E+00	3.986E-03	7.567E+00	2.626E-03	2.955E-04	0.0
0.0400	6.848E+00	3.998E-03	6.852E+00	3.322E-03	3.280E-04	0.0
0.0450	6.281E+00	4.011E-03	6.285E+00	4.085E-03	3.594E-04	0.0
0.0500	5.819E+00	4.025E-03	5.823E+00	4.912E-03	3.900E-04	0.0
0.0550	5.435E+00	4.040E-03	5.439E+00	5.801E-03	4.197E-04	0.0
0.0600	5.111E+00	4.057E-03	5.115E+00	6.750E-03	4.488E-04	0.0
0.0700	4.593E+00	4.093E-03	4.597E+00	8.817E-03	5.049E-04	0.0
0.0800	4.198E+00	4.133E-03	4.202E+00	1.110E-02	5.590E-04	0.0
0.0900	3.886E+00	4.175E-03	3.890E+00	1.357E-02	6.112E-04	0.0
0.1000	3.633E+00	4.222E-03	3.637E+00	1.623E-02	6.618E-04	0.0
0.1250	3.172E+00	4.348E-03	3.177E+00	2.362E-02	7.826E-04	0.0
0.1500	2.861E+00	4.485E-03	2.865E+00	3.193E-02	8.968E-04	0.0
0.1750	2.637E+00	4.633E-03	2.642E+00	4.103E-02	1.006E-03	0.0
0.2000	2.470E+00	4.789E-03	2.474E+00	5.082E-02	1.111E-03	0.0
0.2500	2.236E+00	5.126E-03	2.242E+00	7.212E-02	1.311E-03	0.0
0.3000	2.084E+00	5.495E-03	2.089E+00	9.527E-02	1.502E-03	0.0
0.3500	1.978E+00	5.890E-03	1.984E+00	1.199E-01	1.688E-03	0.0
0.4000	1.902E+00	6.311E-03	1.908E+00	1.456E-01	1.869E-03	0.0
0.4500	1.845E+00	6.757E-03	1.852E+00	1.722E-01	2.048E-03	0.0
0.5000	1.802E+00	7.223E-03	1.809E+00	1.995E-01	2.225E-03	0.0
0.5500	1.769E+00	7.708E-03	1.776E+00	2.274E-01	2.401E-03	0.0
0.6000	1.743E+00	8.210E-03	1.751E+00	2.558E-01	2.577E-03	0.0
0.7000	1.706E+00	9.258E-03	1.715E+00	3.135E-01	2.929E-03	0.0
0.8000	1.683E+00	1.036E-02	1.694E+00	3.722E-01	3.283E-03	0.0
0.9000	1.669E+00	1.151E-02	1.681E+00	4.315E-01	3.638E-03	0.0
1.0000	1.661E+00	1.271E-02	1.674E+00	4.912E-01	3.997E-03	0.0
1.2500	1.655E+00	1.588E-02	1.671E+00	6.408E-01	4.906E-03	0.0
1.5000	1.661E+00	1.927E-02	1.680E+00	7.900E-01	5.836E-03	0.0
1.7500	1.672E+00	2.284E-02	1.694E+00	9.382E-01	6.784E-03	0.0
2.0000	1.684E+00	2.656E-02	1.711E+00	1.085E+00	7.748E-03	0.0
2.5000	1.712E+00	3.437E-02	1.747E+00	1.374E+00	9.716E-03	0.0
3.0000	1.740E+00	4.260E-02	1.783E+00	1.658E+00	1.173E-02	0.0
3.5000	1.766E+00	5.115E-02	1.817E+00	1.935E+00	1.377E-02	0.0
4.0000	1.790E+00	5.999E-02	1.850E+00	2.208E+00	1.583E-02	0.0
4.5000	1.812E+00	6.908E-02	1.882E+00	2.476E+00	1.792E-02	0.0
5.0000	1.833E+00	7.838E-02	1.911E+00	2.740E+00	2.001E-02	0.0
5.5000	1.852E+00	8.787E-02	1.940E+00	2.999E+00	2.211E-02	0.0
6.0000	1.870E+00	9.754E-02	1.968E+00	3.253E+00	2.422E-02	0.0
7.0000	1.902E+00	1.173E-01	2.020E+00	3.737E+00	2.845E-02	0.0
8.0000	1.931E+00	1.378E-01	2.068E+00	4.246E+00	3.269E-02	0.0
9.0000	1.956E+00	1.584E-01	2.115E+00	4.724E+00	3.692E-02	0.0
10.0000	1.979E+00	1.795E-01	2.159E+00	5.192E+00	4.113E-02	0.0
12.5000	2.029E+00	2.337E-01	2.262E+00	6.323E+00	5.156E-02	0.0
15.0000	2.069E+00	2.895E-01	2.359E+00	7.405E+00	6.181E-02	0.0
17.5000	2.104E+00	3.464E-01	2.451E+00	8.444E+00	7.185E-02	0.0
20.0000	2.134E+00	4.042E-01	2.539E+00	9.446E+00	8.167E-02	0.0
25.0000	2.185E+00	5.219E-01	2.707E+00	1.135E+01	1.006E-01	0.0
30.0000	2.226E+00	6.417E-01	2.868E+00	1.315E+01	1.186E-01	7.636E-03
35.0000	2.257E+00	7.630E-01	3.020E+00	1.485E+01	1.357E-01	5.984E-02
40.0000	2.282E+00	8.855E-01	3.167E+00	1.646E+01	1.520E-01	1.378E-01
45.0000	2.302E+00	1.009E+00	3.311E+00	1.801E+01	1.676E-01	2.266E-01
50.0000	2.319E+00	1.133E+00	3.452E+00	1.948E+01	1.825E-01	3.192E-01
55.0000	2.334E+00	1.258E+00	3.592E+00	2.090E+01	1.968E-01	4.120E-01
60.0000	2.347E+00	1.384E+00	3.731E+00	2.227E+01	2.104E-01	5.029E-01
70.0000	2.369E+00	1.637E+00	4.006E+00	2.486E+01	2.361E-01	6.762E-01
80.0000	2.387E+00	1.892E+00	4.279E+00	2.727E+01	2.598E-01	8.365E-01
90.0000	2.403E+00	2.148E+00	4.551E+00	2.954E+01	2.818E-01	9.842E-01

APPENDIX E. (Continued)

Water (Liquid)

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	2.256E+01	3.898E-03	2.257E+01	2.515E-04	9.408E-05	0.0
0.0125	1.897E+01	3.927E-03	1.898E+01	3.728E-04	1.133E-04	0.0
0.0150	1.647E+01	3.944E-03	1.647E+01	5.147E-04	1.316E-04	0.0
0.0175	1.461E+01	3.955E-03	1.461E+01	6.761E-04	1.492E-04	0.0
0.0200	1.317E+01	3.963E-03	1.318E+01	8.564E-04	1.663E-04	0.0
0.0250	1.109E+01	3.974E-03	1.110E+01	1.272E-03	1.990E-04	0.0
0.0300	9.653E+00	3.984E-03	9.657E+00	1.756E-03	2.301E-04	0.0
0.0350	8.592E+00	3.994E-03	8.596E+00	2.306E-03	2.599E-04	0.0
0.0400	7.777E+00	4.005E-03	7.781E+00	2.919E-03	2.886E-04	0.0
0.0450	7.130E+00	4.018E-03	7.134E+00	3.591E-03	3.165E-04	0.0
0.0500	6.603E+00	4.031E-03	6.607E+00	4.320E-03	3.435E-04	0.0
0.0550	6.166E+00	4.046E-03	6.170E+00	5.103E-03	3.698E-04	0.0
0.0600	5.797E+00	4.062E-03	5.801E+00	5.940E-03	3.955E-04	0.0
0.0700	5.207E+00	4.098E-03	5.211E+00	7.762E-03	4.452E-04	0.0
0.0800	4.757E+00	4.138E-03	4.762E+00	9.773E-03	4.931E-04	0.0
0.0900	4.402E+00	4.181E-03	4.407E+00	1.196E-02	5.393E-04	0.0
0.1000	4.115E+00	4.228E-03	4.120E+00	1.431E-02	5.841E-04	0.0
0.1250	3.591E+00	4.355E-03	3.596E+00	2.083E-02	6.912E-04	0.0
0.1500	3.238E+00	4.494E-03	3.242E+00	2.817E-02	7.926E-04	0.0
0.1750	2.984E+00	4.643E-03	2.988E+00	3.622E-02	8.894E-04	0.0
0.2000	2.793E+00	4.801E-03	2.798E+00	4.487E-02	9.826E-04	0.0
0.2500	2.528E+00	5.141E-03	2.533E+00	6.372E-02	1.161E-03	0.0
0.3000	2.355E+00	5.514E-03	2.360E+00	8.421E-02	1.331E-03	0.0
0.3500	2.235E+00	5.913E-03	2.241E+00	1.060E-01	1.496E-03	0.0
0.4000	2.148E+00	6.339E-03	2.154E+00	1.288E-01	1.658E-03	0.0
0.4500	2.083E+00	6.787E-03	2.090E+00	1.523E-01	1.818E-03	0.0
0.5000	2.034E+00	7.257E-03	2.041E+00	1.766E-01	1.976E-03	0.0
0.5500	1.995E+00	7.747E-03	2.003E+00	2.013E-01	2.134E-03	1.103E-02
0.6000	1.963E+00	8.254E-03	1.972E+00	2.265E-01	2.292E-03	2.938E-02
0.7000	1.917E+00	9.312E-03	1.926E+00	2.778E-01	2.608E-03	7.435E-02
0.8000	1.884E+00	1.043E-02	1.896E+00	3.302E-01	2.928E-03	1.267E-01
0.9000	1.864E+00	1.159E-02	1.876E+00	3.832E-01	3.251E-03	1.835E-01
1.0000	1.849E+00	1.280E-02	1.862E+00	4.367E-01	3.579E-03	2.428E-01
1.2500	1.829E+00	1.600E-02	1.845E+00	5.717E-01	4.416E-03	3.944E-01
1.5000	1.822E+00	1.942E-02	1.841E+00	7.075E-01	5.281E-03	5.437E-01
1.7500	1.821E+00	2.303E-02	1.844E+00	8.432E-01	6.171E-03	6.866E-01
2.0000	1.824E+00	2.678E-02	1.850E+00	9.785E-01	7.085E-03	8.218E-01
2.5000	1.834E+00	3.468E-02	1.868E+00	1.247E+00	8.969E-03	1.069E+00
3.0000	1.846E+00	4.299E-02	1.889E+00	1.514E+00	1.092E-02	1.288E+00
3.5000	1.858E+00	5.164E-02	1.910E+00	1.777E+00	1.291E-02	1.484E+00
4.0000	1.870E+00	6.058E-02	1.931E+00	2.037E+00	1.495E-02	1.660E+00
4.5000	1.882E+00	6.976E-02	1.951E+00	2.293E+00	1.702E-02	1.821E+00
5.0000	1.892E+00	7.917E-02	1.971E+00	2.550E+00	1.911E-02	1.967E+00
5.5000	1.902E+00	8.876E-02	1.991E+00	2.802E+00	2.123E-02	2.102E+00
6.0000	1.911E+00	9.854E-02	2.010E+00	3.052E+00	2.336E-02	2.227E+00
7.0000	1.928E+00	1.185E-01	2.047E+00	3.545E+00	2.766E-02	2.453E+00
8.0000	1.943E+00	1.391E-01	2.082E+00	4.030E+00	3.200E-02	2.652E+00
9.0000	1.956E+00	1.601E-01	2.116E+00	4.506E+00	3.636E-02	2.831E+00
10.0000	1.968E+00	1.814E-01	2.149E+00	4.975E+00	4.072E-02	2.992E+00
12.5000	1.993E+00	2.362E-01	2.230E+00	6.117E+00	5.163E-02	3.341E+00
15.0000	2.014E+00	2.926E-01	2.306E+00	7.219E+00	6.243E-02	3.633E+00
17.5000	2.031E+00	3.501E-01	2.381E+00	8.286E+00	7.309E-02	3.885E+00
20.0000	2.046E+00	4.086E-01	2.454E+00	9.320E+00	8.355E-02	4.107E+00
25.0000	2.070E+00	5.277E-01	2.598E+00	1.130E+01	1.039E-01	4.487E+00
30.0000	2.089E+00	6.489E-01	2.738E+00	1.317E+01	1.233E-01	4.806E+00
35.0000	2.105E+00	7.716E-01	2.876E+00	1.496E+01	1.418E-01	5.082E+00
40.0000	2.118E+00	8.955E-01	3.013E+00	1.665E+01	1.594E-01	5.326E+00
45.0000	2.129E+00	1.021E+00	3.150E+00	1.828E+01	1.762E-01	5.544E+00
50.0000	2.139E+00	1.146E+00	3.286E+00	1.983E+01	1.923E-01	5.741E+00
55.0000	2.148E+00	1.273E+00	3.421E+00	2.132E+01	2.076E-01	5.921E+00
60.0000	2.156E+00	1.400E+00	3.556E+00	2.276E+01	2.222E-01	6.087E+00
70.0000	2.170E+00	1.656E+00	3.827E+00	2.547E+01	2.496E-01	6.383E+00
80.0000	2.182E+00	1.914E+00	4.096E+00	2.799E+01	2.747E-01	6.641E+00
90.0000	2.193E+00	2.173E+00	4.366E+00	3.035E+01	2.978E-01	6.871E+00

APPENDIX E. (Continued)

A-150 Tissue-Equivalent Plastic

ENERGY MeV	STOPPING POWER			TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	RADIATIVE				
0.0100	2.294E+01	3.156E-03	2.295E+01	2.463E-04	7.529E-05	0.0	
0.0125	1.927E+01	3.174E-03	1.927E+01	3.657E-04	9.048E-05	0.0	
0.0150	1.671E+01	3.188E-03	1.671E+01	5.054E-04	1.050E-04	0.0	
0.0175	1.482E+01	3.197E-03	1.482E+01	6.646E-04	1.191E-04	0.0	
0.0200	1.335E+01	3.205E-03	1.336E+01	8.426E-04	1.327E-04	0.0	
0.0250	1.124E+01	3.219E-03	1.124E+01	1.253E-03	1.588E-04	0.0	
0.0300	9.769E+00	3.232E-03	9.772E+00	1.731E-03	1.838E-04	0.0	
0.0350	8.691E+00	3.245E-03	8.694E+00	2.275E-03	2.079E-04	0.0	
0.0400	7.863E+00	3.258E-03	7.866E+00	2.880E-03	2.311E-04	0.0	
0.0450	7.206E+00	3.273E-03	7.209E+00	3.545E-03	2.537E-04	0.0	
0.0500	6.671E+00	3.287E-03	6.675E+00	4.267E-03	2.756E-04	0.0	
0.0550	6.228E+00	3.302E-03	6.231E+00	5.043E-03	2.971E-04	0.0	
0.0600	5.853E+00	3.319E-03	5.857E+00	5.871E-03	3.180E-04	0.0	
0.0700	5.256E+00	3.352E-03	5.259E+00	7.677E-03	3.586E-04	0.0	
0.0800	4.800E+00	3.388E-03	4.803E+00	9.669E-03	3.977E-04	0.0	
0.0900	4.441E+00	3.427E-03	4.444E+00	1.184E-02	4.356E-04	0.0	
0.1000	4.150E+00	3.467E-03	4.153E+00	1.417E-02	4.723E-04	0.0	
0.1250	3.620E+00	3.578E-03	3.623E+00	2.064E-02	5.602E-04	0.0	
0.1500	3.262E+00	3.697E-03	3.265E+00	2.792E-02	6.436E-04	0.0	
0.1750	3.005E+00	3.824E-03	3.009E+00	3.592E-02	7.234E-04	0.0	
0.2000	2.812E+00	3.959E-03	2.816E+00	4.452E-02	8.003E-04	0.0	
0.2500	2.544E+00	4.247E-03	2.548E+00	6.325E-02	9.476E-04	0.0	
0.3000	2.369E+00	4.563E-03	2.373E+00	8.362E-02	1.089E-03	0.0	
0.3500	2.247E+00	4.901E-03	2.252E+00	1.053E-01	1.226E-03	0.0	
0.4000	2.156E+00	5.260E-03	2.161E+00	1.280E-01	1.361E-03	2.969E-02	
0.4500	2.086E+00	5.639E-03	2.092E+00	1.515E-01	1.495E-03	6.264E-02	
0.5000	2.033E+00	6.036E-03	2.039E+00	1.757E-01	1.628E-03	9.751E-02	
0.5500	1.991E+00	6.448E-03	1.997E+00	2.005E-01	1.761E-03	1.337E-01	
0.6000	1.957E+00	6.875E-03	1.964E+00	2.258E-01	1.895E-03	1.708E-01	
0.7000	1.908E+00	7.768E-03	1.915E+00	2.774E-01	2.164E-03	2.464E-01	
0.8000	1.874E+00	8.706E-03	1.883E+00	3.300E-01	2.436E-03	3.223E-01	
0.9000	1.851E+00	9.687E-03	1.860E+00	3.835E-01	2.711E-03	3.975E-01	
1.0000	1.834E+00	1.071E-02	1.845E+00	4.375E-01	2.990E-03	4.712E-01	
1.2500	1.812E+00	1.341E-02	1.825E+00	5.739E-01	3.706E-03	6.472E-01	
1.5000	1.803E+00	1.630E-02	1.819E+00	7.111E-01	4.447E-03	8.100E-01	
1.7500	1.802E+00	1.934E-02	1.821E+00	8.485E-01	5.209E-03	9.601E-01	
2.0000	1.804E+00	2.252E-02	1.827E+00	9.856E-01	5.992E-03	1.099E+00	
2.5000	1.814E+00	2.920E-02	1.843E+00	1.258E+00	7.609E-03	1.346E+00	
3.0000	1.827E+00	3.623E-02	1.863E+00	1.528E+00	9.281E-03	1.561E+00	
3.5000	1.839E+00	4.358E-02	1.883E+00	1.795E+00	1.100E-02	1.751E+00	
4.0000	1.852E+00	5.116E-02	1.903E+00	2.059E+00	1.275E-02	1.922E+00	
4.5000	1.863E+00	5.896E-02	1.922E+00	2.320E+00	1.453E-02	2.077E+00	
5.0000	1.874E+00	6.695E-02	1.941E+00	2.579E+00	1.633E-02	2.218E+00	
5.5000	1.884E+00	7.511E-02	1.959E+00	2.836E+00	1.816E-02	2.349E+00	
6.0000	1.894E+00	8.341E-02	1.977E+00	3.090E+00	2.000E-02	2.470E+00	
7.0000	1.911E+00	1.004E-01	2.011E+00	3.591E+00	2.372E-02	2.691E+00	
8.0000	1.926E+00	1.179E-01	2.044E+00	4.084E+00	2.748E-02	2.887E+00	
9.0000	1.939E+00	1.358E-01	2.075E+00	4.570E+00	3.127E-02	3.064E+00	
10.0000	1.951E+00	1.540E-01	2.105E+00	5.048E+00	3.508E-02	3.227E+00	
12.5000	1.975E+00	2.007E-01	2.176E+00	6.216E+00	4.461E-02	3.582E+00	
15.0000	1.995E+00	2.486E-01	2.243E+00	7.348E+00	5.411E-02	3.885E+00	
17.5000	2.010E+00	2.979E-01	2.308E+00	8.446E+00	6.352E-02	4.150E+00	
20.0000	2.024E+00	3.478E-01	2.372E+00	9.515E+00	7.282E-02	4.385E+00	
25.0000	2.046E+00	4.496E-01	2.495E+00	1.157E+01	9.097E-02	4.788E+00	
30.0000	2.063E+00	5.532E-01	2.616E+00	1.353E+01	1.085E-01	5.126E+00	
35.0000	2.077E+00	6.582E-01	2.735E+00	1.540E+01	1.253E-01	5.417E+00	
40.0000	2.089E+00	7.643E-01	2.854E+00	1.718E+01	1.414E-01	5.671E+00	
45.0000	2.100E+00	8.714E-01	2.971E+00	1.890E+01	1.569E-01	5.897E+00	
50.0000	2.109E+00	9.792E-01	3.089E+00	2.055E+01	1.717E-01	6.101E+00	
55.0000	2.118E+00	1.088E+00	3.205E+00	2.214E+01	1.850E-01	6.286E+00	
60.0000	2.125E+00	1.197E+00	3.322E+00	2.367E+01	1.996E-01	6.456E+00	
70.0000	2.139E+00	1.416E+00	3.555E+00	2.658E+01	2.254E-01	6.758E+00	
80.0000	2.151E+00	1.638E+00	3.788E+00	2.931E+01	2.491E-01	7.020E+00	
90.0000	2.161E+00	1.860E+00	4.021E+00	3.187E+01	2.712E-01	7.253E+00	

APPENDIX E. (Continued)

Skeletal Muscle (ICRP)

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DEMS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	2.231E+01	3.835E-03	2.231E+01	2.543E-04	9.366E-05	0.0
0.0125	1.876E+01	3.863E-03	1.877E+01	3.771E-04	1.127E-04	0.0
0.0150	1.628E+01	3.880E-03	1.629E+01	5.205E-04	1.310E-04	0.0
0.0175	1.445E+01	3.892E-03	1.445E+01	6.838E-04	1.485E-04	0.0
0.0200	1.303E+01	3.901E-03	1.303E+01	8.662E-04	1.655E-04	0.0
0.0250	1.097E+01	3.913E-03	1.098E+01	1.286E-03	1.980E-04	0.0
0.0300	9.547E+00	3.924E-03	9.551E+00	1.776E-03	2.290E-04	0.0
0.0350	8.498E+00	3.934E-03	8.502E+00	2.332E-03	2.587E-04	0.0
0.0400	7.692E+00	3.946E-03	7.696E+00	2.951E-03	2.874E-04	0.0
0.0450	7.052E+00	3.959E-03	7.056E+00	3.631E-03	3.151E-04	0.0
0.0500	6.531E+00	3.973E-03	6.535E+00	4.368E-03	3.421E-04	0.0
0.0550	6.099E+00	3.988E-03	6.102E+00	5.160E-03	3.683E-04	0.0
0.0600	5.733E+00	4.004E-03	5.737E+00	6.006E-03	3.939E-04	0.0
0.0700	5.151E+00	4.040E-03	5.155E+00	7.848E-03	4.435E-04	0.0
0.0800	4.706E+00	4.079E-03	4.710E+00	9.881E-03	4.912E-04	0.0
0.0900	4.355E+00	4.122E-03	4.359E+00	1.209E-02	5.373E-04	0.0
0.1000	4.071E+00	4.168E-03	4.075E+00	1.447E-02	5.821E-04	0.0
0.1250	3.552E+00	4.294E-03	3.557E+00	2.106E-02	6.889E-04	0.0
0.1500	3.203E+00	4.431E-03	3.207E+00	2.848E-02	7.899E-04	0.0
0.1750	2.951E+00	4.579E-03	2.956E+00	3.662E-02	8.865E-04	0.0
0.2000	2.763E+00	4.734E-03	2.768E+00	4.537E-02	9.795E-04	0.0
0.2500	2.501E+00	5.070E-03	2.506E+00	6.442E-02	1.157E-03	0.0
0.3000	2.329E+00	5.438E-03	2.335E+00	8.513E-02	1.327E-03	0.0
0.3500	2.211E+00	5.832E-03	2.216E+00	1.071E-01	1.492E-03	0.0
0.4000	2.125E+00	6.252E-03	2.131E+00	1.302E-01	1.653E-03	0.0
0.4500	2.061E+00	6.694E-03	2.068E+00	1.540E-01	1.812E-03	0.0
0.5000	2.012E+00	7.158E-03	2.019E+00	1.785E-01	1.970E-03	2.181E-03
0.5500	1.972E+00	7.642E-03	1.980E+00	2.035E-01	2.128E-03	2.071E-02
0.6000	1.941E+00	8.141E-03	1.949E+00	2.290E-01	2.285E-03	4.241E-02
0.7000	1.895E+00	9.186E-03	1.904E+00	2.809E-01	2.602E-03	9.262E-02
0.8000	1.863E+00	1.028E-02	1.874E+00	3.339E-01	2.921E-03	1.488E-01
0.9000	1.842E+00	1.143E-02	1.853E+00	3.876E-01	3.244E-03	2.084E-01
1.0000	1.827E+00	1.262E-02	1.839E+00	4.418E-01	3.571E-03	2.697E-01
1.2500	1.806E+00	1.578E-02	1.822E+00	5.784E-01	4.408E-03	4.245E-01
1.5000	1.799E+00	1.916E-02	1.818E+00	7.158E-01	5.272E-03	5.750E-01
1.7500	1.799E+00	2.271E-02	1.821E+00	8.532E-01	6.162E-03	7.181E-01
2.0000	1.801E+00	2.642E-02	1.828E+00	9.903E-01	7.074E-03	8.529E-01
2.5000	1.812E+00	3.421E-02	1.846E+00	1.263E+00	8.956E-03	1.098E+00
3.0000	1.824E+00	4.241E-02	1.866E+00	1.532E+00	1.090E-02	1.316E+00
3.5000	1.836E+00	5.095E-02	1.887E+00	1.798E+00	1.289E-02	1.509E+00
4.0000	1.848E+00	5.977E-02	1.908E+00	2.062E+00	1.493E-02	1.683E+00
4.5000	1.860E+00	6.883E-02	1.928E+00	2.323E+00	1.699E-02	1.842E+00
5.0000	1.870E+00	7.811E-02	1.948E+00	2.580E+00	1.908E-02	1.986E+00
5.5000	1.880E+00	8.758E-02	1.968E+00	2.836E+00	2.119E-02	2.120E+00
6.0000	1.889E+00	9.722E-02	1.987E+00	3.089E+00	2.332E-02	2.243E+00
7.0000	1.906E+00	1.170E-01	2.023E+00	3.587E+00	2.761E-02	2.466E+00
8.0000	1.921E+00	1.372E-01	2.058E+00	4.077E+00	3.194E-02	2.664E+00
9.0000	1.934E+00	1.579E-01	2.092E+00	4.559E+00	3.629E-02	2.840E+00
10.0000	1.946E+00	1.790E-01	2.125E+00	5.033E+00	4.065E-02	3.001E+00
12.5000	1.971E+00	2.331E-01	2.205E+00	6.188E+00	5.152E-02	3.348E+00
15.0000	1.992E+00	2.887E-01	2.281E+00	7.303E+00	6.231E-02	3.640E+00
17.5000	2.009E+00	3.455E-01	2.354E+00	8.382E+00	7.294E-02	3.892E+00
20.0000	2.023E+00	4.032E-01	2.427E+00	9.428E+00	8.339E-02	4.115E+00
25.0000	2.047E+00	5.208E-01	2.568E+00	1.143E+01	1.037E-01	4.497E+00
30.0000	2.066E+00	6.403E-01	2.706E+00	1.333E+01	1.230E-01	4.818E+00
35.0000	2.081E+00	7.615E-01	2.842E+00	1.513E+01	1.415E-01	5.096E+00
40.0000	2.094E+00	8.838E-01	2.978E+00	1.685E+01	1.592E-01	5.341E+00
45.0000	2.105E+00	1.007E+00	3.112E+00	1.849E+01	1.760E-01	5.560E+00
50.0000	2.115E+00	1.131E+00	3.247E+00	2.006E+01	1.920E-01	5.758E+00
55.0000	2.124E+00	1.256E+00	3.380E+00	2.157E+01	2.073E-01	5.938E+00
60.0000	2.132E+00	1.382E+00	3.514E+00	2.302E+01	2.219E-01	6.105E+00
70.0000	2.146E+00	1.635E+00	3.780E+00	2.577E+01	2.492E-01	6.401E+00
80.0000	2.158E+00	1.889E+00	4.047E+00	2.832E+01	2.743E-01	6.660E+00
90.0000	2.168E+00	2.145E+00	4.313E+00	3.071E+01	2.974E-01	6.890E+00

APPENDIX E. (Continued)

Adipose Tissue (ICRP)

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	2.347E+01	3.168E-03	2.347E+01	2.406E-04	7.396E-05	0.0
0.0125	1.971E+01	3.184E-03	1.971E+01	3.574E-04	8.884E-05	0.0
0.0150	1.709E+01	3.194E-03	1.709E+01	4.940E-04	1.031E-04	0.0
0.0175	1.515E+01	3.201E-03	1.515E+01	6.497E-04	1.168E-04	0.0
0.0200	1.365E+01	3.207E-03	1.365E+01	8.237E-04	1.301E-04	0.0
0.0250	1.148E+01	3.217E-03	1.148E+01	1.225E-03	1.556E-04	0.0
0.0300	9.984E+00	3.227E-03	9.987E+00	1.693E-03	1.800E-04	0.0
0.0350	8.881E+00	3.238E-03	8.884E+00	2.223E-03	2.034E-04	0.0
0.0400	8.034E+00	3.249E-03	8.037E+00	2.818E-03	2.260E-04	0.0
0.0450	7.362E+00	3.262E-03	7.363E+00	3.468E-03	2.480E-04	0.0
0.0500	6.816E+00	3.275E-03	6.819E+00	4.173E-03	2.693E-04	0.0
0.0550	6.362E+00	3.290E-03	6.363E+00	4.934E-03	2.902E-04	0.0
0.0600	5.979E+00	3.305E-03	5.983E+00	5.743E-03	3.106E-04	0.0
0.0700	5.369E+00	3.338E-03	5.372E+00	7.313E-03	3.501E-04	0.0
0.0800	4.903E+00	3.373E-03	4.906E+00	9.464E-03	3.881E-04	0.0
0.0900	4.535E+00	3.411E-03	4.539E+00	1.159E-02	4.250E-04	0.0
0.1000	4.238E+00	3.452E-03	4.241E+00	1.387E-02	4.608E-04	0.0
0.1250	3.696E+00	3.562E-03	3.700E+00	2.020E-02	5.464E-04	0.0
0.1500	3.330E+00	3.681E-03	3.334E+00	2.734E-02	6.277E-04	0.0
0.1750	3.068E+00	3.808E-03	3.071E+00	3.517E-02	7.055E-04	0.0
0.2000	2.871E+00	3.943E-03	2.875E+00	4.359E-02	7.806E-04	0.0
0.2500	2.597E+00	4.232E-03	2.601E+00	6.194E-02	9.244E-04	0.0
0.3000	2.418E+00	4.547E-03	2.422E+00	8.190E-02	1.062E-03	0.0
0.3500	2.294E+00	4.885E-03	2.299E+00	1.031E-01	1.196E-03	0.0
0.4000	2.204E+00	5.244E-03	2.209E+00	1.253E-01	1.328E-03	0.0
0.4500	2.135E+00	5.623E-03	2.141E+00	1.483E-01	1.458E-03	1.471E-02
0.5000	2.081E+00	6.020E-03	2.087E+00	1.720E-01	1.588E-03	4.184E-02
0.5500	2.039E+00	6.433E-03	2.045E+00	1.962E-01	1.718E-03	7.141E-02
0.6000	2.005E+00	6.860E-03	2.011E+00	2.209E-01	1.848E-03	1.028E-01
0.7000	1.954E+00	7.753E-03	1.962E+00	2.712E-01	2.109E-03	1.691E-01
0.8000	1.921E+00	8.692E-03	1.929E+00	3.227E-01	2.374E-03	2.381E-01
0.9000	1.897E+00	9.674E-03	1.907E+00	3.748E-01	2.642E-03	3.080E-01
1.0000	1.880E+00	1.070E-02	1.891E+00	4.275E-01	2.915E-03	3.776E-01
1.2500	1.858E+00	1.340E-02	1.871E+00	5.605E-01	3.612E-03	5.471E-01
1.5000	1.849E+00	1.629E-02	1.865E+00	6.944E-01	4.334E-03	7.067E-01
1.7500	1.848E+00	1.934E-02	1.867E+00	8.284E-01	5.078E-03	8.554E-01
2.0000	1.850E+00	2.252E-02	1.873E+00	9.621E-01	5.842E-03	9.936E-01
2.5000	1.860E+00	2.921E-02	1.889E+00	1.228E+00	7.421E-03	1.242E+00
3.0000	1.872E+00	3.626E-02	1.908E+00	1.491E+00	9.055E-03	1.459E+00
3.5000	1.883E+00	4.360E-02	1.928E+00	1.752E+00	1.073E-02	1.652E+00
4.0000	1.897E+00	5.120E-02	1.948E+00	2.010E+00	1.245E-02	1.825E+00
4.5000	1.909E+00	5.901E-02	1.968E+00	2.265E+00	1.419E-02	1.981E+00
5.0000	1.920E+00	6.701E-02	1.987E+00	2.518E+00	1.596E-02	2.125E+00
5.5000	1.930E+00	7.518E-02	2.005E+00	2.769E+00	1.774E-02	2.257E+00
6.0000	1.939E+00	8.350E-02	2.023E+00	3.017E+00	1.955E-02	2.379E+00
7.0000	1.956E+00	1.005E-01	2.057E+00	3.507E+00	2.319E-02	2.601E+00
8.0000	1.972E+00	1.181E-01	2.090E+00	3.990E+00	2.688E-02	2.798E+00
9.0000	1.985E+00	1.360E-01	2.121E+00	4.465E+00	3.059E-02	2.976E+00
10.0000	1.997E+00	1.542E-01	2.151E+00	4.933E+00	3.432E-02	3.137E+00
12.5000	2.022E+00	2.010E-01	2.223E+00	6.076E+00	4.368E-02	3.491E+00
15.0000	2.042E+00	2.492E-01	2.291E+00	7.183E+00	5.300E-02	3.790E+00
17.5000	2.059E+00	2.984E-01	2.357E+00	8.259E+00	6.225E-02	4.050E+00
20.0000	2.073E+00	3.485E-01	2.421E+00	9.305E+00	7.138E-02	4.282E+00
25.0000	2.095E+00	4.505E-01	2.546E+00	1.132E+01	8.923E-02	4.679E+00
30.0000	2.113E+00	5.544E-01	2.668E+00	1.324E+01	1.065E-01	5.012E+00
35.0000	2.128E+00	6.597E-01	2.788E+00	1.507E+01	1.230E-01	5.299E+00
40.0000	2.141E+00	7.661E-01	2.907E+00	1.683E+01	1.389E-01	5.551E+00
45.0000	2.152E+00	8.734E-01	3.025E+00	1.851E+01	1.542E-01	5.776E+00
50.0000	2.161E+00	9.815E-01	3.143E+00	2.013E+01	1.688E-01	5.979E+00
55.0000	2.170E+00	1.090E+00	3.260E+00	2.170E+01	1.829E-01	6.163E+00
60.0000	2.178E+00	1.200E+00	3.377E+00	2.320E+01	1.964E-01	6.332E+00
70.0000	2.192E+00	1.420E+00	3.611E+00	2.607E+01	2.218E-01	6.632E+00
80.0000	2.203E+00	1.642E+00	3.845E+00	2.875E+01	2.454E-01	6.894E+00
90.0000	2.214E+00	1.865E+00	4.079E+00	3.127E+01	2.673E-01	7.126E+00

APPENDIX E. (Continued)

Cortical Bone (ICRP)

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.971E+01	5.461E-03	1.972E+01	2.909E-04	1.468E-04	0.0
0.0125	1.663E+01	5.579E-03	1.664E+01	4.295E-04	1.787E-04	0.0
0.0150	1.447E+01	5.644E-03	1.447E+01	5.911E-04	2.095E-04	0.0
0.0175	1.286E+01	5.728E-03	1.287E+01	7.747E-04	2.393E-04	0.0
0.0200	1.161E+01	5.778E-03	1.162E+01	9.795E-04	2.683E-04	0.0
0.0250	9.804E+00	5.853E-03	9.810E+00	1.450E-03	3.242E-04	0.0
0.0300	8.546E+00	5.907E-03	8.552E+00	1.997E-03	3.775E-04	0.0
0.0350	7.618E+00	5.951E-03	7.624E+00	2.618E-03	4.287E-04	0.0
0.0400	6.903E+00	5.989E-03	6.909E+00	3.308E-03	4.781E-04	0.0
0.0450	6.335E+00	6.022E-03	6.341E+00	4.064E-03	5.259E-04	0.0
0.0500	5.872E+00	6.054E-03	5.879E+00	4.844E-03	5.723E-04	0.0
0.0550	5.488E+00	6.084E-03	5.494E+00	5.764E-03	6.175E-04	0.0
0.0600	5.163E+00	6.113E-03	5.169E+00	6.703E-03	6.614E-04	0.0
0.0700	4.643E+00	6.171E-03	4.649E+00	8.748E-03	7.463E-04	0.0
0.0800	4.246E+00	6.230E-03	4.252E+00	1.100E-02	8.276E-04	0.0
0.0900	3.932E+00	6.292E-03	3.939E+00	1.345E-02	9.059E-04	0.0
0.1000	3.678E+00	6.356E-03	3.685E+00	1.607E-02	9.814E-04	0.0
0.1250	3.215E+00	6.530E-03	3.221E+00	2.336E-02	1.161E-03	0.0
0.1500	2.901E+00	6.719E-03	2.908E+00	3.155E-02	1.329E-03	0.0
0.1750	2.676E+00	6.923E-03	2.683E+00	4.051E-02	1.489E-03	0.0
0.2000	2.507E+00	7.140E-03	2.514E+00	5.015E-02	1.641E-03	0.0
0.2500	2.272E+00	7.612E-03	2.280E+00	7.111E-02	1.931E-03	0.0
0.3000	2.119E+00	8.129E-03	2.127E+00	9.386E-02	2.206E-03	0.0
0.3500	2.011E+00	8.685E-03	2.020E+00	1.180E-01	2.471E-03	8.920E-03
0.4000	1.931E+00	9.276E-03	1.941E+00	1.433E-01	2.730E-03	3.411E-02
0.4500	1.871E+00	9.901E-03	1.881E+00	1.695E-01	2.984E-03	6.200E-02
0.5000	1.825E+00	1.055E-02	1.836E+00	1.964E-01	3.236E-03	9.146E-02
0.5500	1.789E+00	1.124E-02	1.800E+00	2.239E-01	3.487E-03	1.219E-01
0.6000	1.760E+00	1.194E-02	1.772E+00	2.519E-01	3.737E-03	1.531E-01
0.7000	1.718E+00	1.341E-02	1.732E+00	3.090E-01	4.237E-03	2.166E-01
0.8000	1.690E+00	1.495E-02	1.705E+00	3.673E-01	4.749E-03	2.806E-01
0.9000	1.671E+00	1.657E-02	1.688E+00	4.262E-01	5.245E-03	3.442E-01
1.0000	1.658E+00	1.824E-02	1.677E+00	4.857E-01	5.755E-03	4.069E-01
1.2500	1.642E+00	2.267E-02	1.665E+00	6.334E-01	7.052E-03	5.580E-01
1.5000	1.637E+00	2.740E-02	1.665E+00	7.857E-01	8.382E-03	6.994E-01
1.7500	1.639E+00	3.237E-02	1.671E+00	9.356E-01	9.743E-03	8.310E-01
2.0000	1.643E+00	3.755E-02	1.681E+00	1.085E+00	1.113E-02	9.534E-01
2.5000	1.656E+00	4.840E-02	1.704E+00	1.380E+00	1.398E-02	1.174E+00
3.0000	1.670E+00	5.981E-02	1.730E+00	1.671E+00	1.689E-02	1.368E+00
3.5000	1.684E+00	7.165E-02	1.755E+00	1.958E+00	1.987E-02	1.541E+00
4.0000	1.697E+00	8.386E-02	1.781E+00	2.241E+00	2.288E-02	1.697E+00
4.5000	1.709E+00	9.638E-02	1.805E+00	2.520E+00	2.592E-02	1.839E+00
5.0000	1.720E+00	1.092E-01	1.829E+00	2.795E+00	2.898E-02	1.970E+00
5.5000	1.731E+00	1.222E-01	1.853E+00	3.067E+00	3.206E-02	2.091E+00
6.0000	1.740E+00	1.355E-01	1.876E+00	3.335E+00	3.514E-02	2.203E+00
7.0000	1.758E+00	1.626E-01	1.921E+00	3.862E+00	4.133E-02	2.408E+00
8.0000	1.773E+00	1.904E-01	1.964E+00	4.377E+00	4.752E-02	2.591E+00
9.0000	1.787E+00	2.188E-01	2.006E+00	4.880E+00	5.369E-02	2.757E+00
10.0000	1.799E+00	2.476E-01	2.046E+00	5.374E+00	5.983E-02	2.908E+00
12.5000	1.824E+00	3.214E-01	2.145E+00	6.567E+00	7.497E-02	3.241E+00
15.0000	1.844E+00	3.971E-01	2.241E+00	7.707E+00	8.974E-02	3.525E+00
17.5000	1.860E+00	4.742E-01	2.335E+00	8.800E+00	1.041E-01	3.773E+00
20.0000	1.874E+00	5.525E-01	2.427E+00	9.850E+00	1.180E-01	3.994E+00
25.0000	1.897E+00	7.117E-01	2.609E+00	1.184E+01	1.446E-01	4.375E+00
30.0000	1.915E+00	8.735E-01	2.788E+00	1.369E+01	1.694E-01	4.696E+00
35.0000	1.929E+00	1.037E+00	2.966E+00	1.543E+01	1.926E-01	4.973E+00
40.0000	1.942E+00	1.202E+00	3.144E+00	1.707E+01	2.143E-01	5.217E+00
45.0000	1.952E+00	1.369E+00	3.321E+00	1.861E+01	2.347E-01	5.434E+00
50.0000	1.962E+00	1.537E+00	3.498E+00	2.008E+01	2.538E-01	5.631E+00
55.0000	1.970E+00	1.705E+00	3.676E+00	2.147E+01	2.718E-01	5.810E+00
60.0000	1.978E+00	1.875E+00	3.853E+00	2.280E+01	2.888E-01	5.974E+00
70.0000	1.992E+00	2.215E+00	4.207E+00	2.529E+01	3.199E-01	6.267E+00
80.0000	2.003E+00	2.558E+00	4.561E+00	2.757E+01	3.480E-01	6.523E+00
90.0000	2.013E+00	2.903E+00	4.916E+00	2.968E+01	3.733E-01	6.749E+00

APPENDIX E. (Continued)

Polystyrene

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	2.223E+01	2.982E-03	2.224E+01	2.346E-04	7.406E-05	0.0
0.0125	1.868E+01	2.992E-03	1.869E+01	3.777E-04	8.869E-05	0.0
0.0150	1.621E+01	2.999E-03	1.621E+01	5.218E-04	1.027E-04	0.0
0.0175	1.437E+01	3.004E-03	1.438E+01	6.859E-04	1.162E-04	0.0
0.0200	1.296E+01	3.008E-03	1.296E+01	8.694E-04	1.292E-04	0.0
0.0250	1.091E+01	3.017E-03	1.091E+01	1.292E-03	1.543E-04	0.0
0.0300	9.485E+00	3.027E-03	9.488E+00	1.785E-03	1.782E-04	0.0
0.0350	8.440E+00	3.037E-03	8.443E+00	2.345E-03	2.013E-04	0.0
0.0400	7.637E+00	3.048E-03	7.640E+00	2.968E-03	2.235E-04	0.0
0.0450	7.000E+00	3.061E-03	7.003E+00	3.653E-03	2.452E-04	0.0
0.0500	6.481E+00	3.074E-03	6.484E+00	4.395E-03	2.662E-04	0.0
0.0550	6.051E+00	3.088E-03	6.054E+00	5.194E-03	2.867E-04	0.0
0.0600	5.688E+00	3.103E-03	5.691E+00	6.047E-03	3.068E-04	0.0
0.0700	5.188E+00	3.135E-03	5.111E+00	7.905E-03	3.458E-04	0.0
0.0800	4.666E+00	3.169E-03	4.669E+00	9.955E-03	3.834E-04	0.0
0.0900	4.317E+00	3.206E-03	4.320E+00	1.218E-02	4.197E-04	0.0
0.1000	4.034E+00	3.244E-03	4.038E+00	1.458E-02	4.550E-04	0.0
0.1250	3.520E+00	3.350E-03	3.523E+00	2.124E-02	5.396E-04	0.0
0.1500	3.172E+00	3.463E-03	3.176E+00	2.873E-02	6.199E-04	0.0
0.1750	2.923E+00	3.584E-03	2.926E+00	3.695E-02	6.967E-04	0.0
0.2000	2.733E+00	3.711E-03	2.739E+00	4.579E-02	7.709E-04	0.0
0.2500	2.475E+00	3.985E-03	2.479E+00	6.304E-02	9.131E-04	0.0
0.3000	2.305E+00	4.284E-03	2.309E+00	8.398E-02	1.050E-03	0.0
0.3500	2.187E+00	4.604E-03	2.192E+00	1.082E-01	1.182E-03	0.0
0.4000	2.101E+00	4.945E-03	2.106E+00	1.315E-01	1.312E-03	2.729E-03
0.4500	2.035E+00	5.304E-03	2.040E+00	1.557E-01	1.441E-03	2.688E-02
0.5000	1.984E+00	5.680E-03	1.990E+00	1.805E-01	1.570E-03	5.420E-02
0.5500	1.943E+00	6.071E-03	1.950E+00	2.059E-01	1.699E-03	8.383E-02
0.6000	1.911E+00	6.475E-03	1.918E+00	2.318E-01	1.827E-03	1.152E-01
0.7000	1.864E+00	7.322E-03	1.871E+00	2.846E-01	2.087E-03	1.810E-01
0.8000	1.832E+00	8.212E-03	1.840E+00	3.385E-01	2.349E-03	2.492E-01
0.9000	1.810E+00	9.142E-03	1.819E+00	3.952E-01	2.615E-03	3.179E-01
1.0000	1.794E+00	1.011E-02	1.804E+00	4.484E-01	2.885E-03	3.862E-01
1.2500	1.773E+00	1.267E-02	1.786E+00	5.878E-01	3.577E-03	5.515E-01
1.5000	1.766E+00	1.541E-02	1.781E+00	7.281E-01	4.293E-03	7.064E-01
1.7500	1.765E+00	1.830E-02	1.783E+00	8.684E-01	5.030E-03	8.501E-01
2.0000	1.768E+00	2.132E-02	1.789E+00	1.008E+00	5.788E-03	9.834E-01
2.5000	1.778E+00	2.766E-02	1.806E+00	1.287E+00	7.352E-03	1.222E+00
3.0000	1.791E+00	3.435E-02	1.825E+00	1.562E+00	8.970E-03	1.431E+00
3.5000	1.804E+00	4.132E-02	1.845E+00	1.835E+00	1.063E-02	1.616E+00
4.0000	1.816E+00	4.852E-02	1.865E+00	2.104E+00	1.233E-02	1.782E+00
4.5000	1.828E+00	5.593E-02	1.884E+00	2.371E+00	1.405E-02	1.932E+00
5.0000	1.839E+00	6.353E-02	1.902E+00	2.635E+00	1.580E-02	2.070E+00
5.5000	1.849E+00	7.129E-02	1.920E+00	2.897E+00	1.757E-02	2.197E+00
6.0000	1.859E+00	7.919E-02	1.938E+00	3.156E+00	1.936E-02	2.316E+00
7.0000	1.876E+00	9.539E-02	1.971E+00	3.667E+00	2.297E-02	2.531E+00
8.0000	1.891E+00	1.120E-01	2.003E+00	4.171E+00	2.662E-02	2.722E+00
9.0000	1.904E+00	1.290E-01	2.033E+00	4.666E+00	3.029E-02	2.896E+00
10.0000	1.916E+00	1.464E-01	2.062E+00	5.155E+00	3.399E-02	3.054E+00
12.5000	1.940E+00	1.909E-01	2.131E+00	6.347E+00	4.325E-02	3.403E+00
15.0000	1.960E+00	2.367E-01	2.196E+00	7.502E+00	5.249E-02	3.702E+00
17.5000	1.975E+00	2.835E-01	2.259E+00	8.525E+00	6.166E-02	3.963E+00
20.0000	1.989E+00	3.311E-01	2.320E+00	9.717E+00	7.072E-02	4.196E+00
25.0000	2.010E+00	4.282E-01	2.439E+00	1.182E+01	8.844E-02	4.596E+00
30.0000	2.027E+00	5.270E-01	2.554E+00	1.382E+01	1.056E-01	4.933E+00
35.0000	2.041E+00	6.271E-01	2.669E+00	1.574E+01	1.220E-01	5.223E+00
40.0000	2.053E+00	7.284E-01	2.782E+00	1.757E+01	1.378E-01	5.478E+00
45.0000	2.064E+00	8.306E-01	2.894E+00	1.933E+01	1.530E-01	5.704E+00
50.0000	2.073E+00	9.334E-01	3.006E+00	2.103E+01	1.676E-01	5.908E+00
55.0000	2.081E+00	1.037E+00	3.118E+00	2.266E+01	1.816E-01	6.093E+00
60.0000	2.089E+00	1.141E+00	3.230E+00	2.424E+01	1.951E-01	6.263E+00
70.0000	2.102E+00	1.351E+00	3.452E+00	2.723E+01	2.204E-01	6.565E+00
80.0000	2.113E+00	1.562E+00	3.675E+00	3.004E+01	2.439E-01	6.828E+00
90.0000	2.123E+00	1.774E+00	3.897E+00	3.268E+01	2.658E-01	7.060E+00

APPENDIX E. (Continued)

Polymethyl Methacrylate

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	2.198E+01	3.332E-03	2.198E+01	2.580E-04	8.329E-05	0.0
0.0125	1.848E+01	3.349E-03	1.849E+01	3.826E-04	9.993E-05	0.0
0.0150	1.604E+01	3.359E-03	1.604E+01	5.282E-04	1.158E-04	0.0
0.0175	1.423E+01	3.366E-03	1.423E+01	6.940E-04	1.311E-04	0.0
0.0200	1.283E+01	3.372E-03	1.284E+01	8.792E-04	1.460E-04	0.0
0.0250	1.080E+01	3.382E-03	1.081E+01	1.306E-03	1.744E-04	0.0
0.0300	9.400E+00	3.391E-03	9.404E+00	1.803E-03	2.015E-04	0.0
0.0350	8.367E+00	3.401E-03	8.370E+00	2.368E-03	2.275E-04	0.0
0.0400	7.573E+00	3.413E-03	7.576E+00	2.997E-03	2.526E-04	0.0
0.0450	6.942E+00	3.425E-03	6.946E+00	3.687E-03	2.770E-04	0.0
0.0500	6.429E+00	3.438E-03	6.433E+00	4.436E-03	3.007E-04	0.0
0.0550	6.003E+00	3.453E-03	6.007E+00	5.241E-03	3.238E-04	0.0
0.0600	5.644E+00	3.468E-03	5.647E+00	6.100E-03	3.464E-04	0.0
0.0700	5.070E+00	3.502E-03	5.073E+00	7.972E-03	3.901E-04	0.0
0.0800	4.631E+00	3.538E-03	4.635E+00	1.004E-02	4.322E-04	0.0
0.0900	4.286E+00	3.577E-03	4.289E+00	1.228E-02	4.729E-04	0.0
0.1000	4.006E+00	3.619E-03	4.010E+00	1.470E-02	5.125E-04	0.0
0.1250	3.496E+00	3.732E-03	3.500E+00	2.140E-02	6.070E-04	0.0
0.1500	3.152E+00	3.855E-03	3.155E+00	2.894E-02	6.966E-04	0.0
0.1750	2.904E+00	3.987E-03	2.908E+00	3.721E-02	7.824E-04	0.0
0.2000	2.719E+00	4.126E-03	2.723E+00	4.610E-02	8.650E-04	0.0
0.2500	2.461E+00	4.425E-03	2.465E+00	6.547E-02	1.023E-03	0.0
0.3000	2.292E+00	4.751E-03	2.297E+00	8.653E-02	1.175E-03	0.0
0.3500	2.175E+00	5.101E-03	2.180E+00	1.089E-01	1.322E-03	0.0
0.4000	2.090E+00	5.474E-03	2.096E+00	1.323E-01	1.466E-03	0.0
0.4500	2.026E+00	5.867E-03	2.032E+00	1.566E-01	1.609E-03	1.466E-02
0.5000	1.975E+00	6.278E-03	1.981E+00	1.815E-01	1.751E-03	4.112E-02
0.5500	1.935E+00	6.707E-03	1.942E+00	2.070E-01	1.892E-03	6.992E-02
0.6000	1.903E+00	7.149E-03	1.910E+00	2.330E-01	2.035E-03	1.005E-01
0.7000	1.856E+00	8.076E-03	1.864E+00	2.860E-01	2.320E-03	1.650E-01
0.8000	1.825E+00	9.050E-03	1.834E+00	3.401E-01	2.609E-03	2.321E-01
0.9000	1.803E+00	1.007E-02	1.813E+00	3.950E-01	2.902E-03	3.001E-01
1.0000	1.788E+00	1.113E-02	1.799E+00	4.504E-01	3.199E-03	3.679E-01
1.2500	1.767E+00	1.393E-02	1.781E+00	5.902E-01	3.959E-03	5.330E-01
1.5000	1.760E+00	1.693E-02	1.776E+00	7.308E-01	4.744E-03	6.887E-01
1.7500	1.759E+00	2.009E-02	1.779E+00	8.715E-01	5.553E-03	8.339E-01
2.0000	1.762E+00	2.338E-02	1.785E+00	1.012E+00	6.383E-03	9.689E-01
2.5000	1.772E+00	3.031E-02	1.802E+00	1.291E+00	8.096E-03	1.212E+00
3.0000	1.784E+00	3.761E-02	1.822E+00	1.567E+00	9.868E-03	1.425E+00
3.5000	1.797E+00	4.521E-02	1.842E+00	1.839E+00	1.168E-02	1.615E+00
4.0000	1.809E+00	5.307E-02	1.862E+00	2.109E+00	1.354E-02	1.783E+00
4.5000	1.821E+00	6.115E-02	1.882E+00	2.376E+00	1.542E-02	1.936E+00
5.0000	1.832E+00	6.943E-02	1.901E+00	2.641E+00	1.733E-02	2.077E+00
5.5000	1.842E+00	7.788E-02	1.920E+00	2.903E+00	1.926E-02	2.207E+00
6.0000	1.851E+00	8.648E-02	1.938E+00	3.162E+00	2.120E-02	2.327E+00
7.0000	1.868E+00	1.041E-01	1.972E+00	3.673E+00	2.513E-02	2.545E+00
8.0000	1.883E+00	1.222E-01	2.005E+00	4.176E+00	2.910E-02	2.739E+00
9.0000	1.896E+00	1.407E-01	2.037E+00	4.671E+00	3.309E-02	2.914E+00
10.0000	1.908E+00	1.596E-01	2.067E+00	5.158E+00	3.710E-02	3.073E+00
12.5000	1.932E+00	2.079E-01	2.140E+00	6.346E+00	4.712E-02	3.421E+00
15.0000	1.952E+00	2.577E-01	2.210E+00	7.496E+00	5.709E-02	3.716E+00
17.5000	1.968E+00	3.086E-01	2.277E+00	8.610E+00	6.695E-02	3.974E+00
20.0000	1.982E+00	3.603E-01	2.342E+00	9.693E+00	7.667E-02	4.202E+00
25.0000	2.004E+00	4.656E-01	2.470E+00	1.177E+01	9.561E-02	4.596E+00
30.0000	2.022E+00	5.728E-01	2.595E+00	1.375E+01	1.138E-01	4.927E+00
35.0000	2.036E+00	6.815E-01	2.718E+00	1.563E+01	1.313E-01	5.212E+00
40.0000	2.049E+00	7.912E-01	2.840E+00	1.743E+01	1.480E-01	5.463E+00
45.0000	2.059E+00	9.020E-01	2.961E+00	1.915E+01	1.639E-01	5.687E+00
50.0000	2.069E+00	1.013E+00	3.082E+00	2.081E+01	1.792E-01	5.889E+00
55.0000	2.077E+00	1.126E+00	3.203E+00	2.240E+01	1.939E-01	6.072E+00
60.0000	2.085E+00	1.238E+00	3.323E+00	2.393E+01	2.079E-01	6.241E+00
70.0000	2.098E+00	1.465E+00	3.563E+00	2.684E+01	2.342E-01	6.541E+00
80.0000	2.109E+00	1.694E+00	3.804E+00	2.955E+01	2.585E-01	6.803E+00
90.0000	2.120E+00	1.924E+00	4.044E+00	3.210E+01	2.810E-01	7.034E+00

APPENDIX E. (Continued)

Polyethylene

ENERGY MeV	STOPPING POWER			TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g				
0.0100	2.441E+01	2.837E-03	2.442E+01	2.308E-04	6.391E-05	0.0	
0.0125	2.049E+01	2.847E-03	2.049E+01	3.430E-04	7.666E-05	0.0	
0.0150	1.775E+01	2.854E-03	1.776E+01	4.745E-04	8.887E-05	0.0	
0.0175	1.573E+01	2.860E-03	1.573E+01	6.244E-04	1.007E-04	0.0	
0.0200	1.417E+01	2.864E-03	1.417E+01	7.921E-04	1.121E-04	0.0	
0.0250	1.191E+01	2.873E-03	1.192E+01	1.179E-03	1.340E-04	0.0	
0.0300	1.035E+01	2.883E-03	1.036E+01	1.630E-03	1.550E-04	0.0	
0.0350	9.206E+00	2.894E-03	9.209E+00	2.143E-03	1.752E-04	0.0	
0.0400	8.325E+00	2.905E-03	8.328E+00	2.715E-03	1.948E-04	0.0	
0.0450	7.627E+00	2.918E-03	7.630E+00	3.343E-03	2.138E-04	0.0	
0.0500	7.060E+00	2.931E-03	7.063E+00	4.025E-03	2.323E-04	0.0	
0.0550	6.589E+00	2.945E-03	6.592E+00	4.758E-03	2.503E-04	0.0	
0.0600	6.191E+00	2.960E-03	6.194E+00	5.541E-03	2.680E-04	0.0	
0.0700	5.557E+00	2.992E-03	5.560E+00	7.249E-03	3.023E-04	0.0	
0.0800	5.074E+00	3.025E-03	5.077E+00	9.134E-03	3.354E-04	0.0	
0.0900	4.692E+00	3.061E-03	4.696E+00	1.118E-02	3.675E-04	0.0	
0.1000	4.384E+00	3.099E-03	4.387E+00	1.339E-02	3.987E-04	0.0	
0.1250	3.822E+00	3.201E-03	3.825E+00	1.952E-02	4.733E-04	0.0	
0.1500	3.443E+00	3.312E-03	3.446E+00	2.642E-02	5.443E-04	0.0	
0.1750	3.171E+00	3.429E-03	3.174E+00	3.399E-02	6.124E-04	0.0	
0.2000	2.967E+00	3.553E-03	2.970E+00	4.215E-02	6.782E-04	0.0	
0.2500	2.683E+00	3.820E-03	2.687E+00	5.991E-02	8.045E-04	0.0	
0.3000	2.497E+00	4.110E-03	2.501E+00	7.923E-02	9.258E-04	0.0	
0.3500	2.368E+00	4.420E-03	2.373E+00	9.979E-02	1.044E-03	0.0	
0.4000	2.272E+00	4.750E-03	2.277E+00	1.213E-01	1.160E-03	2.626E-02	
0.4500	2.199E+00	5.098E-03	2.204E+00	1.437E-01	1.276E-03	5.906E-02	
0.5000	2.142E+00	5.462E-03	2.147E+00	1.667E-01	1.391E-03	9.409E-02	
0.5500	2.097E+00	5.841E-03	2.103E+00	1.902E-01	1.506E-03	1.307E-01	
0.6000	2.061E+00	6.233E-03	2.068E+00	2.142E-01	1.622E-03	1.683E-01	
0.7000	2.008E+00	7.053E-03	2.016E+00	2.632E-01	1.856E-03	2.453E-01	
0.8000	1.972E+00	7.915E-03	1.980E+00	3.133E-01	2.092E-03	3.231E-01	
0.9000	1.947E+00	8.816E-03	1.956E+00	3.641E-01	2.332E-03	4.002E-01	
1.0000	1.930E+00	9.754E-03	1.940E+00	4.155E-01	2.575E-03	4.759E-01	
1.2500	1.905E+00	1.224E-02	1.917E+00	5.452E-01	3.200E-03	6.568E-01	
1.5000	1.895E+00	1.490E-02	1.910E+00	6.759E-01	3.848E-03	8.243E-01	
1.7500	1.893E+00	1.770E-02	1.911E+00	8.068E-01	4.516E-03	9.785E-01	
2.0000	1.895E+00	2.062E-02	1.916E+00	9.375E-01	5.203E-03	1.121E+00	
2.5000	1.905E+00	2.678E-02	1.932E+00	1.197E+00	6.623E-03	1.375E+00	
3.0000	1.917E+00	3.327E-02	1.950E+00	1.455E+00	8.095E-03	1.596E+00	
3.5000	1.930E+00	4.004E-02	1.970E+00	1.710E+00	9.608E-03	1.791E+00	
4.0000	1.942E+00	4.704E-02	1.989E+00	1.963E+00	1.116E-02	1.966E+00	
4.5000	1.954E+00	5.424E-02	2.008E+00	2.213E+00	1.273E-02	2.124E+00	
5.0000	1.965E+00	6.162E-02	2.026E+00	2.461E+00	1.433E-02	2.269E+00	
5.5000	1.975E+00	6.914E-02	2.044E+00	2.706E+00	1.594E-02	2.402E+00	
6.0000	1.984E+00	7.684E-02	2.061E+00	2.950E+00	1.758E-02	2.527E+00	
7.0000	2.002E+00	9.259E-02	2.094E+00	3.431E+00	2.089E-02	2.751E+00	
8.0000	2.017E+00	1.088E-01	2.126E+00	3.905E+00	2.424E-02	2.952E+00	
9.0000	2.030E+00	1.253E-01	2.156E+00	4.372E+00	2.762E-02	3.132E+00	
10.0000	2.042E+00	1.422E-01	2.184E+00	4.833E+00	3.102E-02	3.298E+00	
12.5000	2.067E+00	1.855E-01	2.253E+00	5.940E+00	3.956E-02	3.660E+00	
15.0000	2.087E+00	2.301E-01	2.317E+00	7.054E+00	4.811E-02	3.967E+00	
17.5000	2.103E+00	2.757E-01	2.379E+00	8.119E+00	5.661E-02	4.235E+00	
20.0000	2.117E+00	3.220E-01	2.439E+00	9.157E+00	6.503E-02	4.473E+00	
25.0000	2.139E+00	4.166E-01	2.556E+00	1.116E+01	8.156E-02	4.880E+00	
30.0000	2.157E+00	5.129E-01	2.670E+00	1.307E+01	9.759E-02	5.221E+00	
35.0000	2.171E+00	6.105E-01	2.782E+00	1.491E+01	1.131E-01	5.514E+00	
40.0000	2.184E+00	7.092E-01	2.893E+00	1.667E+01	1.280E-01	5.770E+00	
45.0000	2.195E+00	8.088E-01	3.004E+00	1.837E+01	1.424E-01	5.997E+00	
50.0000	2.204E+00	9.092E-01	3.114E+00	2.000E+01	1.562E-01	6.202E+00	
55.0000	2.213E+00	1.010E+00	3.223E+00	2.158E+01	1.695E-01	6.388E+00	
60.0000	2.221E+00	1.112E+00	3.333E+00	2.310E+01	1.824E-01	6.558E+00	
70.0000	2.235E+00	1.316E+00	3.551E+00	2.691E+01	2.067E-01	6.861E+00	
80.0000	2.247E+00	1.522E+00	3.769E+00	2.874E+01	2.293E-01	7.125E+00	
90.0000	2.257E+00	1.730E+00	3.987E+00	3.132E+01	2.504E-01	7.357E+00	

APPENDIX E. (Continued)

Teflon

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	1.843E+01	4.211E-03	1.843E+01	3.105E-04	1.249E-04	0.0
0.0125	1.553E+01	4.247E-03	1.554E+01	4.589E-04	1.502E-04	0.0
0.0150	1.351E+01	4.271E-03	1.351E+01	6.320E-04	1.743E-04	0.0
0.0175	1.200E+01	4.287E-03	1.201E+01	8.287E-04	1.975E-04	0.0
0.0200	1.084E+01	4.300E-03	1.084E+01	1.048E-03	2.199E-04	0.0
0.0250	9.141E+00	4.316E-03	9.146E+00	1.553E-03	2.629E-04	0.0
0.0300	7.965E+00	4.329E-03	7.970E+00	2.140E-03	3.037E-04	0.0
0.0350	7.098E+00	4.341E-03	7.102E+00	2.806E-03	3.428E-04	0.0
0.0400	6.430E+00	4.353E-03	6.435E+00	3.547E-03	3.805E-04	0.0
0.0450	5.900E+00	4.366E-03	5.904E+00	4.359E-03	4.169E-04	0.0
0.0500	5.468E+00	4.380E-03	5.472E+00	5.239E-03	4.522E-04	0.0
0.0550	5.109E+00	4.395E-03	5.113E+00	6.185E-03	4.865E-04	0.0
0.0600	4.806E+00	4.410E-03	4.810E+00	7.194E-03	5.200E-04	0.0
0.0700	4.321E+00	4.444E-03	4.325E+00	9.391E-03	5.847E-04	0.0
0.0800	3.951E+00	4.483E-03	3.955E+00	1.181E-02	6.467E-04	0.0
0.0900	3.658E+00	4.525E-03	3.663E+00	1.444E-02	7.065E-04	0.0
0.1000	3.421E+00	4.571E-03	3.426E+00	1.727E-02	7.643E-04	0.0
0.1250	2.989E+00	4.700E-03	2.994E+00	2.511E-02	9.021E-04	0.0
0.1500	2.697E+00	4.844E-03	2.702E+00	3.392E-02	1.032E-03	0.0
0.1750	2.487E+00	5.000E-03	2.492E+00	4.357E-02	1.156E-03	0.0
0.2000	2.330E+00	5.167E-03	2.335E+00	5.395E-02	1.275E-03	0.0
0.2500	2.111E+00	5.330E-03	2.117E+00	7.651E-02	1.503E-03	0.0
0.3000	1.968E+00	5.928E-03	1.974E+00	1.010E-01	1.721E-03	0.0
0.3500	1.869E+00	6.353E-03	1.875E+00	1.271E-01	1.931E-03	0.0
0.4000	1.797E+00	6.805E-03	1.804E+00	1.543E-01	2.137E-03	2.294E-03
0.4500	1.742E+00	7.279E-03	1.749E+00	1.824E-01	2.341E-03	2.538E-02
0.5000	1.699E+00	7.775E-03	1.707E+00	2.114E-01	2.543E-03	4.753E-02
0.5500	1.665E+00	8.291E-03	1.674E+00	2.410E-01	2.744E-03	7.398E-02
0.6000	1.639E+00	8.823E-03	1.647E+00	2.711E-01	2.945E-03	1.022E-01
0.7000	1.600E+00	9.937E-03	1.610E+00	3.326E-01	3.347E-03	1.623E-01
0.8000	1.573E+00	1.111E-02	1.585E+00	3.952E-01	3.753E-03	2.253E-01
0.9000	1.555E+00	1.233E-02	1.568E+00	4.587E-01	4.162E-03	2.896E-01
1.0000	1.543E+00	1.360E-02	1.557E+00	5.227E-01	4.575E-03	3.541E-01
1.2500	1.527E+00	1.697E-02	1.544E+00	6.841E-01	5.631E-03	5.127E-01
1.5000	1.522E+00	2.057E-02	1.542E+00	8.462E-01	6.719E-03	6.637E-01
1.7500	1.522E+00	2.437E-02	1.546E+00	1.008E+00	7.837E-03	8.056E-01
2.0000	1.525E+00	2.834E-02	1.553E+00	1.169E+00	8.983E-03	9.382E-01
2.5000	1.535E+00	3.667E-02	1.572E+00	1.490E+00	1.134E-02	1.178E+00
3.0000	1.546E+00	4.544E-02	1.592E+00	1.806E+00	1.377E-02	1.390E+00
3.5000	1.558E+00	5.456E-02	1.612E+00	2.118E+00	1.626E-02	1.578E+00
4.0000	1.569E+00	6.399E-02	1.633E+00	2.426E+00	1.879E-02	1.748E+00
4.5000	1.579E+00	7.367E-02	1.653E+00	2.730E+00	2.136E-02	1.902E+00
5.0000	1.589E+00	8.357E-02	1.672E+00	3.031E+00	2.395E-02	2.043E+00
5.5000	1.598E+00	9.367E-02	1.692E+00	3.328E+00	2.656E-02	2.173E+00
6.0000	1.606E+00	1.040E-01	1.710E+00	3.622E+00	2.919E-02	2.294E+00
7.0000	1.621E+00	1.250E-01	1.746E+00	4.201E+00	3.447E-02	2.512E+00
8.0000	1.635E+00	1.466E-01	1.781E+00	4.768E+00	3.978E-02	2.706E+00
9.0000	1.646E+00	1.686E-01	1.815E+00	5.324E+00	4.509E-02	2.880E+00
10.0000	1.657E+00	1.910E-01	1.848E+00	5.870E+00	5.040E-02	3.039E+00
12.5000	1.679E+00	2.483E-01	1.927E+00	7.194E+00	6.355E-02	3.385E+00
15.0000	1.697E+00	3.071E-01	2.004E+00	8.464E+00	7.648E-02	3.677E+00
17.5000	1.712E+00	3.672E-01	2.079E+00	9.691E+00	8.913E-02	3.930E+00
20.0000	1.724E+00	4.281E-01	2.152E+00	1.087E+01	1.015E-01	4.155E+00
25.0000	1.745E+00	5.521E-01	2.297E+00	1.312E+01	1.252E-01	4.541E+00
30.0000	1.761E+00	6.781E-01	2.439E+00	1.523E+01	1.476E-01	4.866E+00
35.0000	1.774E+00	8.056E-01	2.579E+00	1.723E+01	1.687E-01	5.146E+00
40.0000	1.785E+00	9.344E-01	2.719E+00	1.911E+01	1.886E-01	5.394E+00
45.0000	1.795E+00	1.064E+00	2.859E+00	2.091E+01	2.075E-01	5.614E+00
50.0000	1.803E+00	1.195E+00	2.998E+00	2.262E+01	2.253E-01	5.814E+00
55.0000	1.811E+00	1.326E+00	3.137E+00	2.429E+01	2.421E-01	5.996E+00
60.0000	1.818E+00	1.458E+00	3.276E+00	2.580E+01	2.581E-01	6.163E+00
70.0000	1.830E+00	1.724E+00	3.554E+00	2.874E+01	2.878E-01	6.461E+00
80.0000	1.840E+00	1.991E+00	3.831E+00	3.144E+01	3.147E-01	6.721E+00
90.0000	1.849E+00	2.260E+00	4.109E+00	3.396E+01	3.392E-01	6.952E+00

APPENDIX E. (Continued)

Borosilicate Glass

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.787E+01	5.400E-03	1.788E+01	3.237E-04	1.632E-04	0.0
0.0125	1.511E+01	5.488E-03	1.512E+01	4.764E-04	1.971E-04	0.0
0.0150	1.317E+01	5.548E-03	1.317E+01	6.540E-04	2.296E-04	0.0
0.0175	1.172E+01	5.593E-03	1.173E+01	8.556E-04	2.610E-04	0.0
0.0200	1.060E+01	5.626E-03	1.060E+01	1.080E-03	2.914E-04	0.0
0.0250	8.962E+00	5.674E-03	8.968E+00	1.595E-03	3.495E-04	0.0
0.0300	7.822E+00	5.707E-03	7.828E+00	2.194E-03	4.048E-04	0.0
0.0350	6.980E+00	5.735E-03	6.986E+00	2.871E-03	4.578E-04	0.0
0.0400	6.331E+00	5.759E-03	6.336E+00	3.624E-03	5.087E-04	0.0
0.0450	5.814E+00	5.781E-03	5.820E+00	4.448E-03	5.579E-04	0.0
0.0500	5.393E+00	5.803E-03	5.398E+00	5.341E-03	6.055E-04	0.0
0.0550	5.042E+00	5.824E-03	5.048E+00	6.300E-03	6.518E-04	0.0
0.0600	4.746E+00	5.847E-03	4.752E+00	7.321E-03	6.968E-04	0.0
0.0700	4.272E+00	5.895E-03	4.278E+00	9.544E-03	7.837E-04	0.0
0.0800	3.909E+00	5.943E-03	3.915E+00	1.199E-02	8.668E-04	0.0
0.0900	3.622E+00	5.997E-03	3.628E+00	1.465E-02	9.467E-04	0.0
0.1000	3.390E+00	6.055E-03	3.396E+00	1.750E-02	1.024E-03	0.0
0.1250	2.966E+00	6.215E-03	2.972E+00	2.540E-02	1.207E-03	0.0
0.1500	2.679E+00	6.393E-03	2.685E+00	3.427E-02	1.379E-03	0.0
0.1750	2.473E+00	6.588E-03	2.479E+00	4.398E-02	1.542E-03	0.0
0.2000	2.318E+00	6.796E-03	2.325E+00	5.440E-02	1.698E-03	0.0
0.2500	2.102E+00	6.796E-03	2.110E+00	7.706E-02	1.995E-03	0.0
0.3000	1.962E+00	7.749E-03	1.970E+00	1.016E-01	2.277E-03	0.0
0.3500	1.864E+00	8.286E-03	1.873E+00	1.277E-01	2.549E-03	0.0
0.4000	1.793E+00	8.857E-03	1.802E+00	1.549E-01	2.814E-03	8.985E-03
0.4500	1.739E+00	9.461E-03	1.749E+00	1.831E-01	3.075E-03	2.665E-02
0.5000	1.698E+00	1.009E-02	1.708E+00	2.121E-01	3.333E-03	4.637E-02
0.5500	1.665E+00	1.075E-02	1.676E+00	2.416E-01	3.590E-03	6.760E-02
0.6000	1.640E+00	1.143E-02	1.651E+00	2.717E-01	3.846E-03	8.997E-02
0.7000	1.603E+00	1.285E-02	1.616E+00	3.330E-01	4.359E-03	1.371E-01
0.8000	1.579E+00	1.434E-02	1.593E+00	3.953E-01	4.873E-03	1.860E-01
0.9000	1.563E+00	1.590E-02	1.579E+00	4.584E-01	5.391E-03	2.359E-01
1.0000	1.552E+00	1.751E-02	1.570E+00	5.220E-01	5.913E-03	2.859E-01
1.2500	1.540E+00	2.179E-02	1.561E+00	6.818E-01	7.240E-03	4.090E-01
1.5000	1.538E+00	2.636E-02	1.564E+00	8.418E-01	8.599E-03	5.271E-01
1.7500	1.541E+00	3.117E-02	1.572E+00	1.001E+00	9.990E-03	6.390E-01
2.0000	1.547E+00	3.617E-02	1.583E+00	1.160E+00	1.141E-02	7.448E-01
2.5000	1.561E+00	4.668E-02	1.608E+00	1.473E+00	1.431E-02	9.392E-01
3.0000	1.576E+00	5.771E-02	1.634E+00	1.782E+00	1.729E-02	1.114E+00
3.5000	1.590E+00	6.918E-02	1.660E+00	2.085E+00	2.032E-02	1.273E+00
4.0000	1.604E+00	8.102E-02	1.685E+00	2.384E+00	2.339E-02	1.419E+00
4.5000	1.616E+00	9.315E-02	1.709E+00	2.679E+00	2.649E-02	1.554E+00
5.0000	1.627E+00	1.056E-01	1.733E+00	2.970E+00	2.961E-02	1.679E+00
5.5000	1.637E+00	1.182E-01	1.756E+00	3.256E+00	3.275E-02	1.797E+00
6.0000	1.647E+00	1.311E-01	1.778E+00	3.539E+00	3.590E-02	1.907E+00
7.0000	1.664E+00	1.574E-01	1.821E+00	4.095E+00	4.222E-02	2.110E+00
8.0000	1.678E+00	1.844E-01	1.863E+00	4.638E+00	4.853E-02	2.292E+00
9.0000	1.691E+00	2.119E-01	1.903E+00	5.169E+00	5.483E-02	2.458E+00
10.0000	1.703E+00	2.399E-01	1.943E+00	5.689E+00	6.109E-02	2.611E+00
12.5000	1.726E+00	3.115E-01	2.038E+00	6.945E+00	7.653E-02	2.945E+00
15.0000	1.746E+00	3.850E-01	2.131E+00	8.145E+00	9.159E-02	3.229E+00
17.5000	1.761E+00	4.599E-01	2.221E+00	9.294E+00	1.062E-01	3.476E+00
20.0000	1.775E+00	5.360E-01	2.311E+00	1.040E+01	1.204E-01	3.695E+00
25.0000	1.797E+00	6.906E-01	2.487E+00	1.248E+01	1.474E-01	4.071E+00
30.0000	1.814E+00	8.477E-01	2.662E+00	1.442E+01	1.725E-01	4.388E+00
35.0000	1.828E+00	1.007E+00	2.835E+00	1.624E+01	1.961E-01	4.661E+00
40.0000	1.840E+00	1.167E+00	3.007E+00	1.796E+01	2.180E-01	4.901E+00
45.0000	1.851E+00	1.329E+00	3.179E+00	1.957E+01	2.386E-01	5.115E+00
50.0000	1.860E+00	1.491E+00	3.351E+00	2.111E+01	2.579E-01	5.309E+00
55.0000	1.868E+00	1.655E+00	3.523E+00	2.256E+01	2.761E-01	5.486E+00
60.0000	1.876E+00	1.819E+00	3.695E+00	2.395E+01	2.932E-01	5.649E+00
70.0000	1.889E+00	2.150E+00	4.039E+00	2.653E+01	3.246E-01	5.940E+00
80.0000	1.900E+00	2.483E+00	4.383E+00	2.891E+01	3.527E-01	6.194E+00
90.0000	1.909E+00	2.817E+00	4.727E+00	3.111E+01	3.782E-01	6.420E+00

APPENDIX E. (Continued)

Lithium Fluoride

ENERGY MeV	STOPPING POWER			CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g	TOTAL MeV cm ² /g			
0.0100	1.796E+01	3.678E-03	1.796E+01	3.181E-04	1.117E-04	0.0
0.0125	1.513E+01	3.712E-03	1.514E+01	4.704E-04	1.344E-04	0.0
0.0150	1.315E+01	3.735E-03	1.316E+01	6.480E-04	1.561E-04	0.0
0.0175	1.168E+01	3.750E-03	1.169E+01	8.501E-04	1.770E-04	0.0
0.0200	1.055E+01	3.762E-03	1.055E+01	1.076E-03	1.973E-04	0.0
0.0250	8.894E+00	3.779E-03	8.898E+00	1.594E-03	2.360E-04	0.0
0.0300	7.748E+00	3.792E-03	7.751E+00	2.198E-03	2.729E-04	0.0
0.0350	6.902E+00	3.804E-03	6.906E+00	2.883E-03	3.082E-04	0.0
0.0400	6.252E+00	3.815E-03	6.256E+00	3.645E-03	3.423E-04	0.0
0.0450	5.736E+00	3.827E-03	5.739E+00	4.480E-03	3.752E-04	0.0
0.0500	5.315E+00	3.840E-03	5.319E+00	5.386E-03	4.071E-04	0.0
0.0550	4.965E+00	3.853E-03	4.969E+00	6.359E-03	4.382E-04	0.0
0.0600	4.670E+00	3.867E-03	4.674E+00	7.397E-03	4.684E-04	0.0
0.0700	4.198E+00	3.898E-03	4.202E+00	9.659E-03	5.269E-04	0.0
0.0800	3.838E+00	3.932E-03	3.842E+00	1.215E-02	5.831E-04	0.0
0.0900	3.553E+00	3.970E-03	3.557E+00	1.486E-02	6.372E-04	0.0
0.1000	3.323E+00	4.011E-03	3.327E+00	1.777E-02	6.896E-04	0.0
0.1250	2.903E+00	4.125E-03	2.907E+00	2.584E-02	8.143E-04	0.0
0.1500	2.619E+00	4.253E-03	2.623E+00	3.492E-02	9.321E-04	0.0
0.1750	2.415E+00	4.392E-03	2.419E+00	4.486E-02	1.045E-03	0.0
0.2000	2.261E+00	4.540E-03	2.266E+00	5.559E-02	1.153E-03	0.0
0.2500	2.048E+00	4.863E-03	2.053E+00	7.881E-02	1.360E-03	6.058E-03
0.3000	1.907E+00	5.215E-03	1.912E+00	1.041E-01	1.558E-03	2.136E-02
0.3500	1.809E+00	5.592E-03	1.814E+00	1.310E-01	1.750E-03	3.978E-02
0.4000	1.737E+00	5.992E-03	1.743E+00	1.591E-01	1.939E-03	6.095E-02
0.4500	1.683E+00	6.412E-03	1.690E+00	1.883E-01	2.125E-03	8.445E-02
0.5000	1.642E+00	6.852E-03	1.649E+00	2.183E-01	2.310E-03	1.098E-01
0.5500	1.609E+00	7.308E-03	1.617E+00	2.489E-01	2.495E-03	1.367E-01
0.6000	1.583E+00	7.779E-03	1.591E+00	2.801E-01	2.679E-03	1.648E-01
0.7000	1.546E+00	8.765E-03	1.555E+00	3.437E-01	3.048E-03	2.236E-01
0.8000	1.521E+00	9.800E-03	1.530E+00	4.086E-01	3.419E-03	2.846E-01
0.9000	1.503E+00	1.088E-02	1.514E+00	4.743E-01	3.794E-03	3.467E-01
1.0000	1.491E+00	1.200E-02	1.504E+00	5.406E-01	4.173E-03	4.093E-01
1.2500	1.476E+00	1.499E-02	1.491E+00	7.077E-01	5.141E-03	5.644E-01
1.5000	1.471E+00	1.818E-02	1.489E+00	8.756E-01	6.138E-03	7.142E-01
1.7500	1.471E+00	2.154E-02	1.493E+00	1.043E+00	7.163E-03	8.568E-01
2.0000	1.474E+00	2.505E-02	1.499E+00	1.210E+00	8.214E-03	9.917E-01
2.5000	1.483E+00	3.244E-02	1.515E+00	1.542E+00	1.038E-02	1.240E+00
3.0000	1.493E+00	4.021E-02	1.533E+00	1.870E+00	1.262E-02	1.461E+00
3.5000	1.503E+00	4.830E-02	1.552E+00	2.194E+00	1.491E-02	1.660E+00
4.0000	1.513E+00	5.666E-02	1.570E+00	2.515E+00	1.725E-02	1.839E+00
4.5000	1.523E+00	6.524E-02	1.588E+00	2.832E+00	1.962E-02	2.003E+00
5.0000	1.531E+00	7.402E-02	1.605E+00	3.145E+00	2.202E-02	2.154E+00
5.5000	1.539E+00	8.298E-02	1.622E+00	3.455E+00	2.444E-02	2.293E+00
6.0000	1.547E+00	9.211E-02	1.639E+00	3.761E+00	2.687E-02	2.422E+00
7.0000	1.560E+00	1.108E-01	1.671E+00	4.365E+00	3.178E-02	2.655E+00
8.0000	1.572E+00	1.299E-01	1.702E+00	4.958E+00	3.672E-02	2.861E+00
9.0000	1.583E+00	1.494E-01	1.732E+00	5.541E+00	4.168E-02	3.046E+00
10.0000	1.592E+00	1.693E-01	1.761E+00	6.113E+00	4.663E-02	3.214E+00
12.5000	1.612E+00	2.201E-01	1.832E+00	7.504E+00	5.894E-02	3.577E+00
15.0000	1.629E+00	2.723E-01	1.901E+00	8.844E+00	7.108E-02	3.881E+00
17.5000	1.642E+00	3.256E-01	1.968E+00	1.014E+01	8.299E-02	4.143E+00
20.0000	1.654E+00	3.797E-01	2.034E+00	1.139E+01	9.463E-02	4.374E+00
25.0000	1.673E+00	4.896E-01	2.163E+00	1.377E+01	1.171E-01	4.769E+00
30.0000	1.688E+00	6.014E-01	2.289E+00	1.602E+01	1.384E-01	5.099E+00
35.0000	1.700E+00	7.146E-01	2.415E+00	1.814E+01	1.585E-01	5.383E+00
40.0000	1.711E+00	8.289E-01	2.540E+00	2.016E+01	1.774E-01	5.633E+00
45.0000	1.720E+00	9.441E-01	2.664E+00	2.208E+01	1.957E-01	5.856E+00
50.0000	1.728E+00	1.060E+00	2.788E+00	2.392E+01	2.129E-01	6.057E+00
55.0000	1.736E+00	1.177E+00	2.912E+00	2.567E+01	2.292E-01	6.240E+00
60.0000	1.742E+00	1.294E+00	3.036E+00	2.735E+01	2.447E-01	6.408E+00
70.0000	1.754E+00	1.530E+00	3.283E+00	3.052E+01	2.735E-01	6.707E+00
80.0000	1.764E+00	1.767E+00	3.531E+00	3.346E+01	2.998E-01	6.968E+00
90.0000	1.772E+00	2.006E+00	3.778E+00	3.619E+01	3.238E-01	7.199E+00

APPENDIX E. (Continued)

Calcium Fluoride

ENERGY MeV	STOPPING POWER		TOTAL MeV cm ² /g	CSDA RANGE g/cm ²	RADIATION YIELD	DENS. EFF. CORR. (DELTA)
	COLLISION MeV cm ² /g	RADIATIVE MeV cm ² /g				
0.0100	1.666E+01	7.284E-03	1.667E+01	3.503E-04	2.300E-04	0.0
0.0125	1.412E+01	7.499E-03	1.413E+01	5.139E-04	2.809E-04	0.0
0.0150	1.233E+01	7.657E-03	1.233E+01	7.039E-04	3.301E-04	0.0
0.0175	1.099E+01	7.778E-03	1.099E+01	9.190E-04	3.778E-04	0.0
0.0200	9.943E+00	7.874E-03	9.953E+00	1.138E-03	4.243E-04	0.0
0.0250	8.424E+00	8.016E-03	8.432E+00	1.706E-03	5.138E-04	0.0
0.0300	7.363E+00	8.118E-03	7.371E+00	2.343E-03	5.993E-04	0.0
0.0350	6.577E+00	8.197E-03	6.585E+00	3.062E-03	6.813E-04	0.0
0.0400	5.970E+00	8.263E-03	5.979E+00	3.860E-03	7.604E-04	0.0
0.0450	5.487E+00	8.319E-03	5.495E+00	4.733E-03	8.368E-04	0.0
0.0500	5.093E+00	8.370E-03	5.101E+00	5.678E-03	9.109E-04	0.0
0.0550	4.764E+00	8.416E-03	4.773E+00	6.693E-03	9.829E-04	0.0
0.0600	4.486E+00	8.458E-03	4.495E+00	7.773E-03	1.053E-03	0.0
0.0700	4.041E+00	8.541E-03	4.050E+00	1.012E-02	1.188E-03	0.0
0.0800	3.701E+00	8.621E-03	3.709E+00	1.271E-02	1.316E-03	0.0
0.0900	3.432E+00	8.704E-03	3.440E+00	1.551E-02	1.440E-03	0.0
0.1000	3.213E+00	8.788E-03	3.222E+00	1.851E-02	1.559E-03	0.0
0.1250	2.814E+00	9.016E-03	2.823E+00	2.684E-02	1.840E-03	0.0
0.1500	2.544E+00	9.265E-03	2.553E+00	3.617E-02	2.102E-03	0.0
0.1750	2.349E+00	9.534E-03	2.359E+00	4.638E-02	2.350E-03	0.0
0.2000	2.203E+00	9.821E-03	2.213E+00	5.733E-02	2.586E-03	0.0
0.2500	2.000E+00	1.045E-02	2.011E+00	8.111E-02	3.033E-03	0.0
0.3000	1.867E+00	1.113E-02	1.878E+00	1.069E-01	3.435E-03	5.037E-03
0.3500	1.774E+00	1.187E-02	1.786E+00	1.342E-01	3.859E-03	1.737E-02
0.4000	1.706E+00	1.266E-02	1.719E+00	1.628E-01	4.252E-03	3.256E-02
0.4500	1.656E+00	1.348E-02	1.669E+00	1.923E-01	4.638E-03	5.026E-02
0.5000	1.617E+00	1.435E-02	1.631E+00	2.226E-01	5.017E-03	7.003E-02
0.5500	1.587E+00	1.525E-02	1.602E+00	2.536E-01	5.394E-03	9.144E-02
0.6000	1.563E+00	1.618E-02	1.579E+00	2.850E-01	5.768E-03	1.141E-01
0.7000	1.528E+00	1.812E-02	1.547E+00	3.491E-01	6.512E-03	1.623E-01
0.8000	1.506E+00	2.016E-02	1.526E+00	4.142E-01	7.256E-03	2.128E-01
0.9000	1.491E+00	2.229E-02	1.515E+00	4.800E-01	8.002E-03	2.645E-01
1.0000	1.481E+00	2.450E-02	1.505E+00	5.463E-01	8.752E-03	3.167E-01
1.2500	1.470E+00	3.034E-02	1.500E+00	7.128E-01	1.065E-02	4.459E-01
1.5000	1.468E+00	3.680E-02	1.505E+00	8.793E-01	1.258E-02	5.700E-01
1.7500	1.471E+00	4.313E-02	1.515E+00	1.045E+00	1.456E-02	6.875E-01
2.0000	1.477E+00	4.935E-02	1.527E+00	1.209E+00	1.656E-02	7.980E-01
2.5000	1.491E+00	6.423E-02	1.555E+00	1.534E+00	2.065E-02	9.994E-01
3.0000	1.506E+00	7.922E-02	1.585E+00	1.852E+00	2.481E-02	1.178E+00
3.5000	1.520E+00	9.476E-02	1.615E+00	2.165E+00	2.903E-02	1.338E+00
4.0000	1.533E+00	1.108E-01	1.644E+00	2.472E+00	3.328E-02	1.482E+00
4.5000	1.545E+00	1.272E-01	1.673E+00	2.773E+00	3.753E-02	1.614E+00
5.0000	1.557E+00	1.439E-01	1.701E+00	3.070E+00	4.183E-02	1.735E+00
5.5000	1.567E+00	1.610E-01	1.728E+00	3.361E+00	4.611E-02	1.848E+00
6.0000	1.577E+00	1.783E-01	1.755E+00	3.649E+00	5.038E-02	1.953E+00
7.0000	1.594E+00	2.137E-01	1.808E+00	4.210E+00	5.889E-02	2.144E+00
8.0000	1.610E+00	2.499E-01	1.859E+00	4.755E+00	6.732E-02	2.316E+00
9.0000	1.623E+00	2.868E-01	1.910E+00	5.286E+00	7.566E-02	2.472E+00
10.0000	1.635E+00	3.243E-01	1.959E+00	5.803E+00	8.388E-02	2.615E+00
12.5000	1.660E+00	4.199E-01	2.079E+00	7.041E+00	1.039E-01	2.931E+00
15.0000	1.679E+00	5.180E-01	2.197E+00	8.210E+00	1.231E-01	3.203E+00
17.5000	1.695E+00	6.177E-01	2.313E+00	9.319E+00	1.415E-01	3.442E+00
20.0000	1.709E+00	7.189E-01	2.428E+00	1.037E+01	1.590E-01	3.656E+00
25.0000	1.731E+00	9.243E-01	2.655E+00	1.234E+01	1.917E-01	4.026E+00
30.0000	1.748E+00	1.133E+00	2.881E+00	1.415E+01	2.217E-01	4.338E+00
35.0000	1.762E+00	1.344E+00	3.106E+00	1.582E+01	2.491E-01	4.609E+00
40.0000	1.774E+00	1.557E+00	3.331E+00	1.738E+01	2.742E-01	4.848E+00
45.0000	1.784E+00	1.771E+00	3.555E+00	1.883E+01	2.974E-01	5.061E+00
50.0000	1.793E+00	1.987E+00	3.780E+00	2.019E+01	3.189E-01	5.253E+00
55.0000	1.802E+00	2.204E+00	4.005E+00	2.148E+01	3.388E-01	5.429E+00
60.0000	1.809E+00	2.422E+00	4.231E+00	2.269E+01	3.574E-01	5.590E+00
70.0000	1.822E+00	2.860E+00	4.682E+00	2.494E+01	3.909E-01	5.878E+00
80.0000	1.833E+00	3.301E+00	5.134E+00	2.698E+01	4.205E-01	6.130E+00
90.0000	1.843E+00	3.744E+00	5.587E+00	2.884E+01	4.468E-01	6.353E+00