

## 7. APPENDICES

### 7.1. SOLAR CONSTANT TABLE

The table of solar spectral irradiance used to calculate the effective solar spectral irradiance,  $E_o$ , for all satellite radiometers is an adaptation of the compilation of Neckel and Labs (1984). Values marked by (\*) are from Labs and Neckel (1968). This table is created by averaging or interpolating to irradiance values for 100 Å intervals centered on the indicated wavelengths (the interval becomes 500 Å wide beyond 1 μm wavelength). The integrated solar constant for the Neckel and Labs table, which is based on ground-based observations, is 1372 watts m<sup>-2</sup>. A review of spacecraft measurements suggests a slightly lower value (Willson 1984), 1368 watts m<sup>-2</sup>; however, most of the difference probably lies in the UV and near IR parts of the spectrum.

**Table 7.1.1.** Solar Spectral Irradiance (watts m<sup>-2</sup> μm<sup>-1</sup>).

Wavelength (μm)	Irradiance	Wavelength	Irradiance	Wavelength	Irradiance
0.300	530*	0.480	2032	0.660	1528
0.305	547*	0.485	1934	0.665	1557
0.310	608*	0.490	1895	0.670	1530
0.315	670*	0.495	1959	0.675	1515
0.320	752*	0.500	1921	0.680	1490
0.325	833*	0.505	1911	0.685	1475
0.330	874*	0.510	1929	0.690	1456
0.335	922	0.515	1837	0.695	1439
0.340	910	0.520	1824	0.700	1410
0.345	924	0.525	1871	0.705	1399
0.350	984	0.530	1876	0.710	1386
0.355	990	0.535	1900	0.715	1365
0.360	968	0.540	1876	0.720	1345
0.365	1118	0.545	1865	0.725	1342
0.370	1132	0.550	1878	0.730	1327
0.375	1105	0.555	1857	0.735	1311
0.380	1072	0.560	1844	0.740	1285
0.385	997	0.565	1847	0.745	1278
0.390	1031	0.570	1846	0.750	1269
0.395	1144	0.575	1842	0.755	1256
0.400	1479	0.580	1848	0.760	1240
0.405	1690	0.585	1815	0.765	1220
0.410	1700	0.590	1785	0.770	1201
0.415	1727	0.595	1792	0.775	1200
0.420	1728	0.600	1772	0.780	1188
0.425	1668	0.605	1759	0.785	1182
0.430	1593	0.610	1736	0.790	1160
0.435	1676	0.615	1705	0.795	1147
0.440	1840	0.620	1696	0.800	1138
0.445	1934	0.625	1690	0.805	1123
0.450	1998	0.630	1668	0.810	1113
0.455	2038	0.635	1654	0.815	1104
0.460	2046	0.640	1637	0.820	1082
0.465	2023	0.645	1609		
0.470	1999	0.650	1584		
0.475	2016	0.655	1538		

Solar Spectral Irradiance (watts m<sup>-2</sup> μm<sup>-1</sup>) (continued).

Wavelength (μm)	Irradiance	Wavelength	Irradiance	Wavelength	Irradiance
0.825	1078	0.895	953	0.960	830
0.830	1063	0.900	943	0.965	820
0.835	1051	0.905	933	0.970	812
0.840	1041	0.910	923	0.975	802
0.845	1021	0.915	914	0.980	794
0.850	971	0.920	904	0.985	786
0.855	973	0.925	894	0.990	777
0.860	996	0.930	884	0.995	769
0.865	964	0.935	875	1.000	760
0.870	950	0.940	866	1.050	676
0.875	994	0.945	856	1.100	612
0.880	984	0.950	848	1.150	560
0.885	974	0.955	838	1.200	514
0.890	964				