Figure 4.1. The annual mean global energy balance of the Earth-atmosphere system. Numbers are given as percentages of the globally averaged solar energy incident upon the top of the atmosphere (TOA). The 100 units of incoming solar radiation at the TOA represents $342\,W\,m^{-2}$ (see text).
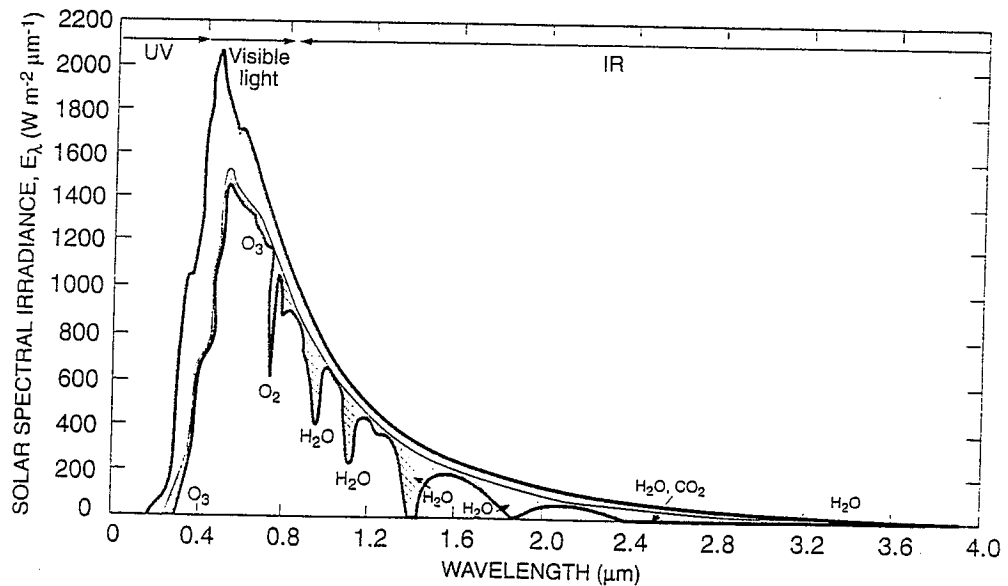

Figure 4.5. The upper thick curve shows the solar irradiance at the top of the atmosphere, and the lower thick curve the computed solar irradiance at sea level for the hypothetical case of an aerosol-free atmosphere. The thin curve represents the irradiance at sea-level if scattering by gaseous molecules alone attenuated solar radiation. The shaded area shows the contribution to the reduction in solar irradiance due to absorption by atmospheric gases, with the main gaseous absorbers indicated. [Adapted from *An Introduction to Atmospheric Radiation* by K.-N. Liou, Academic Press (1980).]