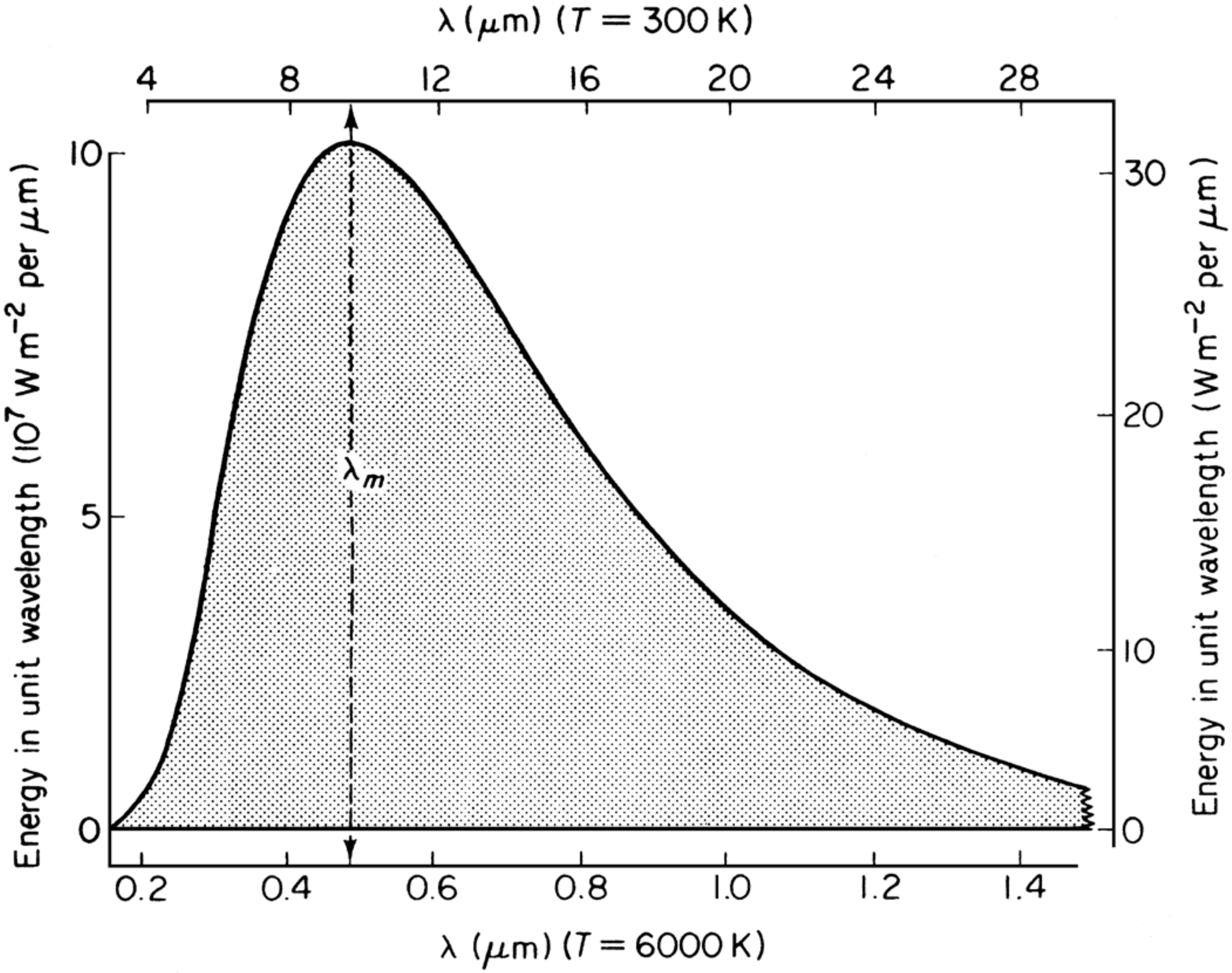

Figure 4.1 Spectral distribution of radiant energy from a full radiator at a temperature of (a) 6000 K, left-hand vertical and lower horizontal axis and (b) 300 K, right-hand vertical and upper horizontal axis. About 10% of the energy is emitted at wavelengths longer than those shown in the diagram. If this tail were included, the total area under the curve would be proportional to T^4 ($W\ m^{-2}$). λ_m is the wavelength at which the energy per unit wavelength is maximal.

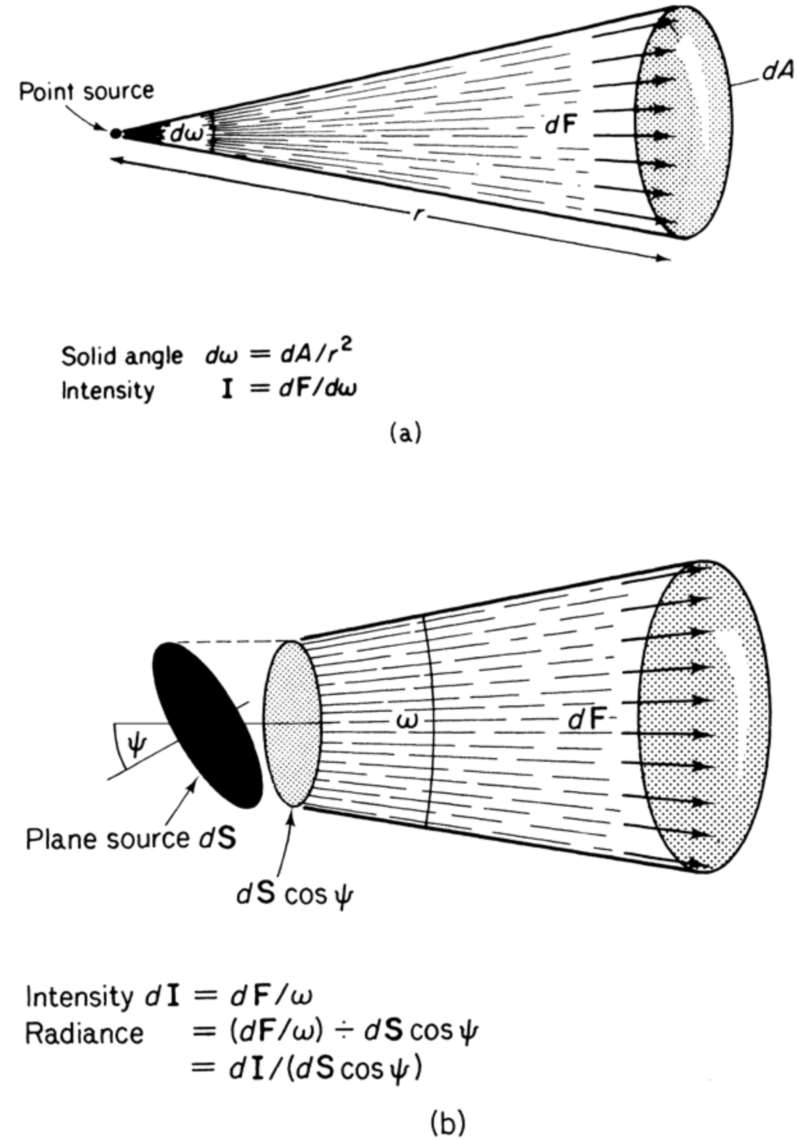

Figure 4.2 (a) Geometry of radiation emitted by a point source. (b) Geometry of radiation emitted by a surface element. In both diagrams a portion of a spherical surface receives radiation at normal incidence, but when the distance between the source and the receiving surface is large, it can be treated as a plane.

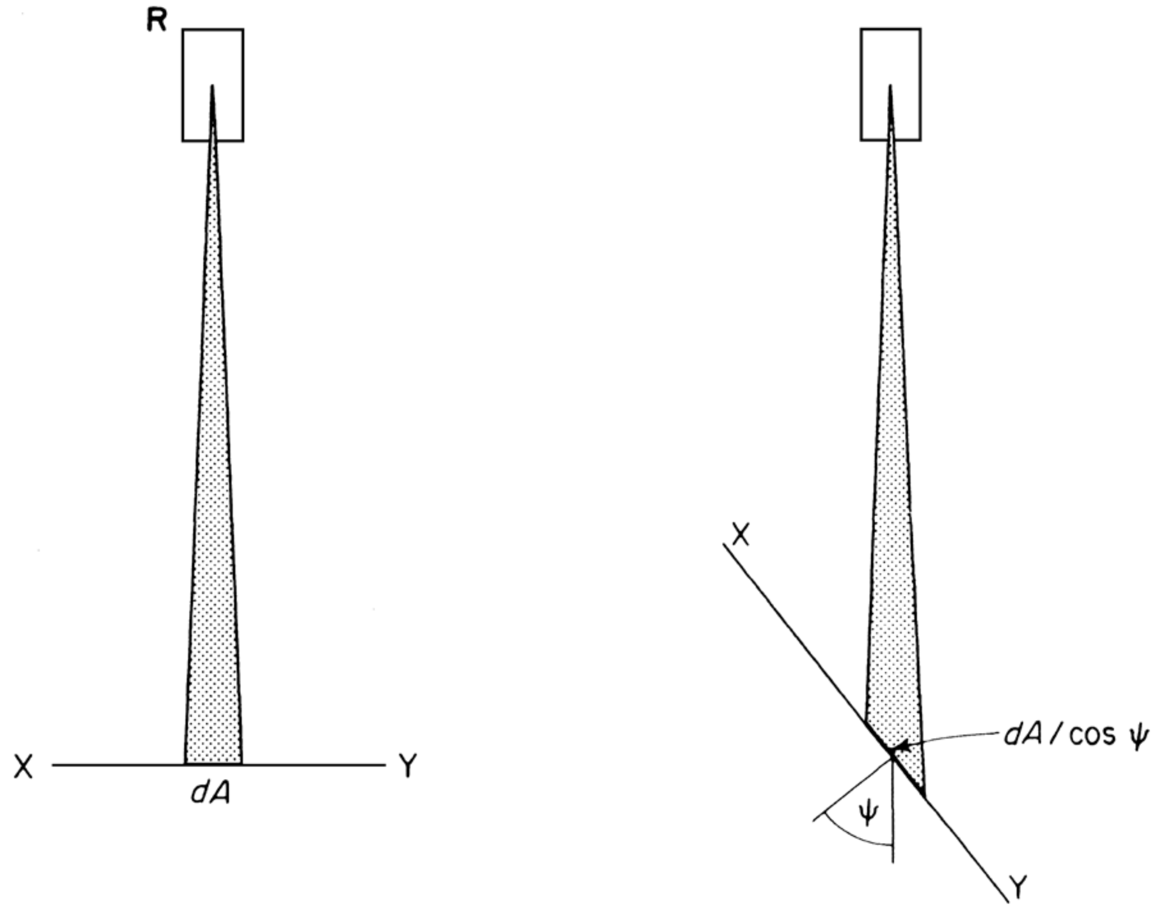

Figure 4.3 The amount of radiation received by a radiometer from the surface XY is independent of the angle of emission, but the flux emitted per unit area is proportional to cos ψ.

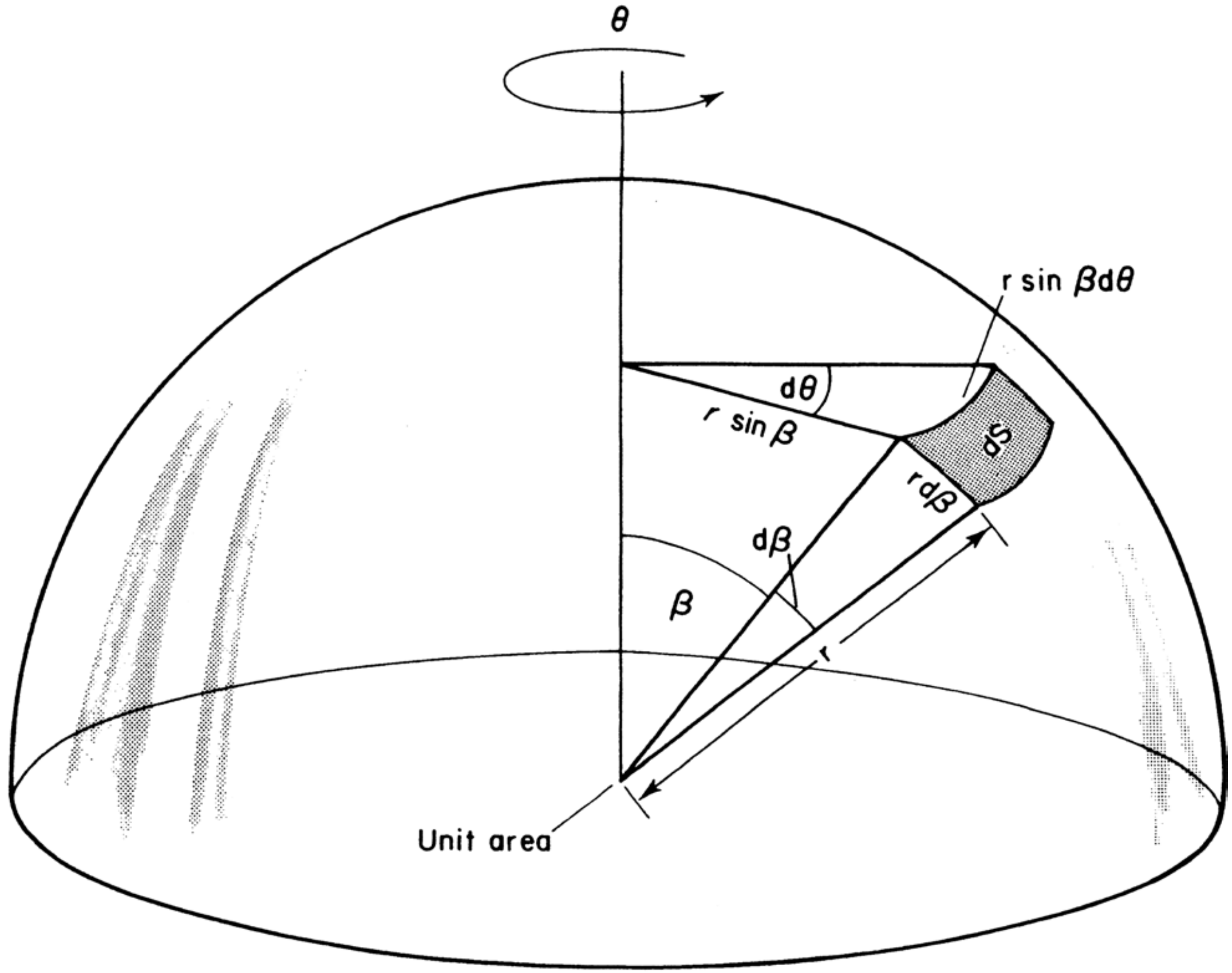

Figure 4.4 Method for calculating irradiance at the center of an equatorial plane from a surface element *dS* at angle *β* to vertical axis

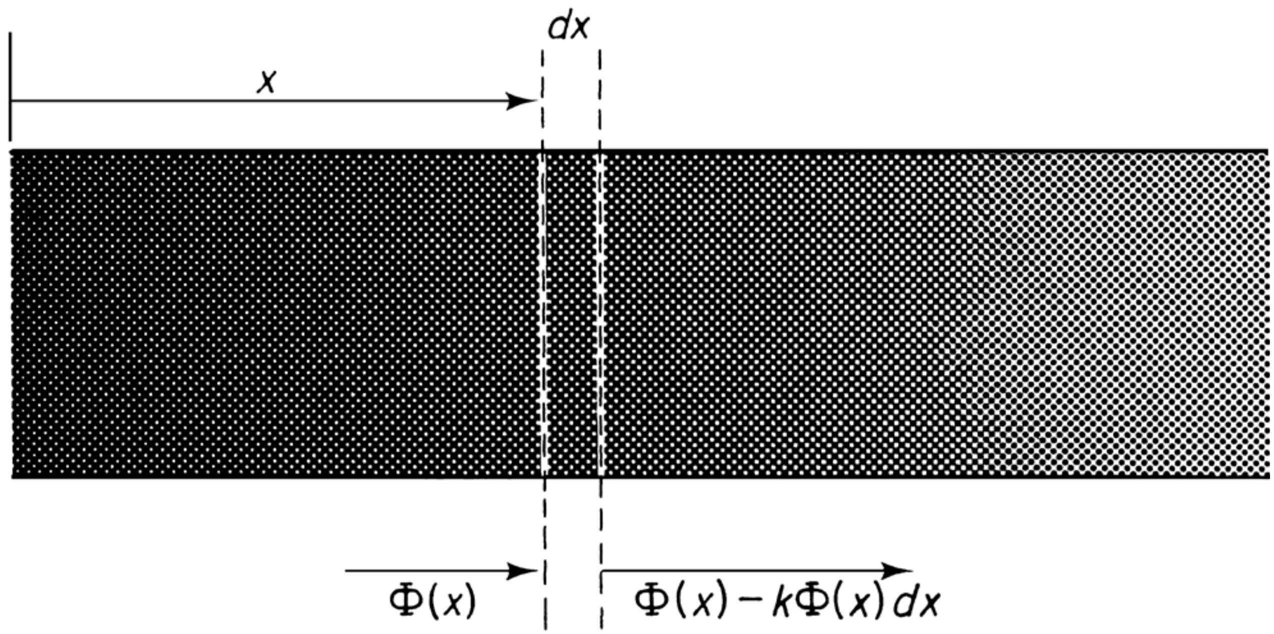

Figure 4.5 The absorption of a parallel beam of monochromatic radiation in a homogeneous medium with an absorption coefficient k. $\Phi(0)$ is the incident flux, $\Phi(x)$ is the flux at depth x and the flux absorbed in a thin layer dx is $k\Phi(x)dx$