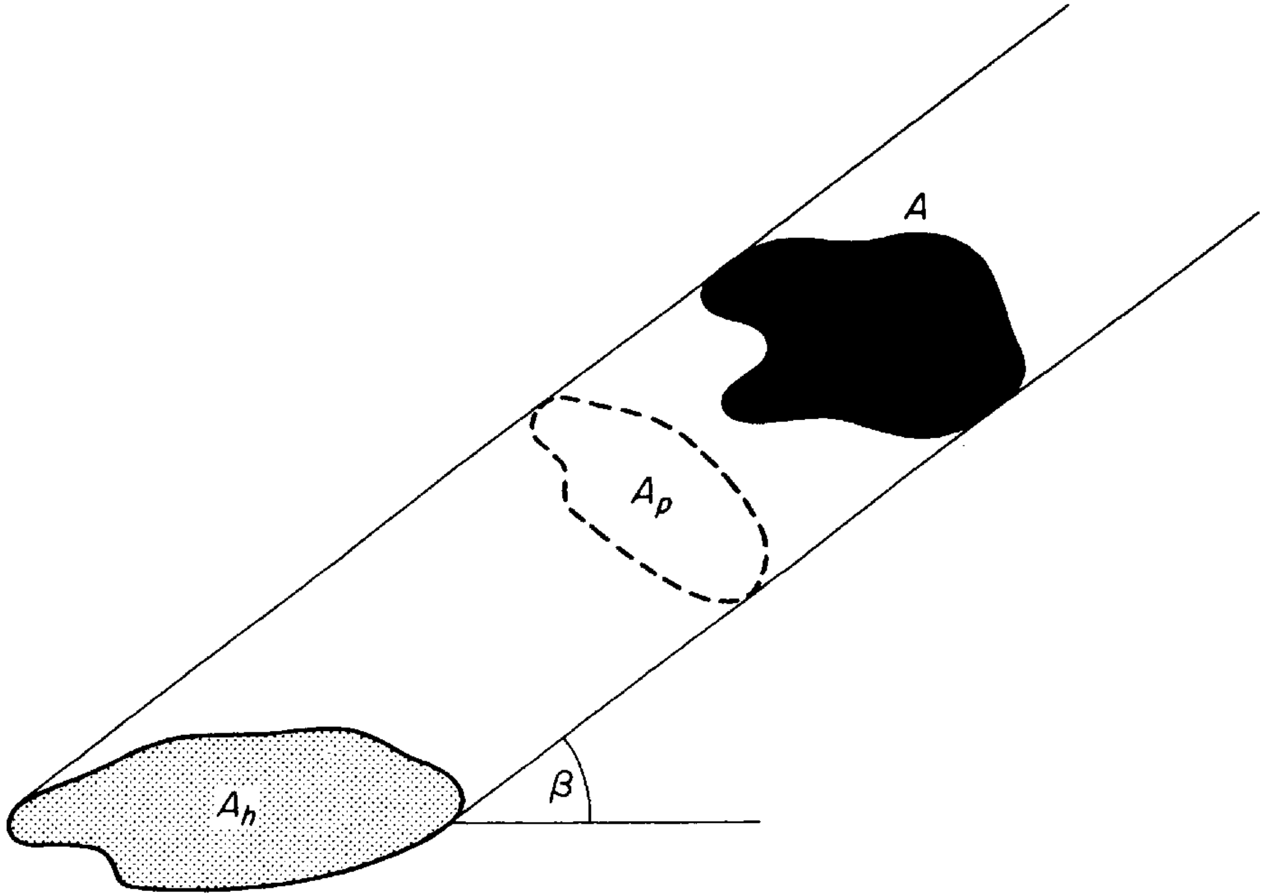

Figure 7.1 Area *A* projected on a surface at right angles to the solar beam *(A_p)* and on a horizontal surface *(A_h)*.

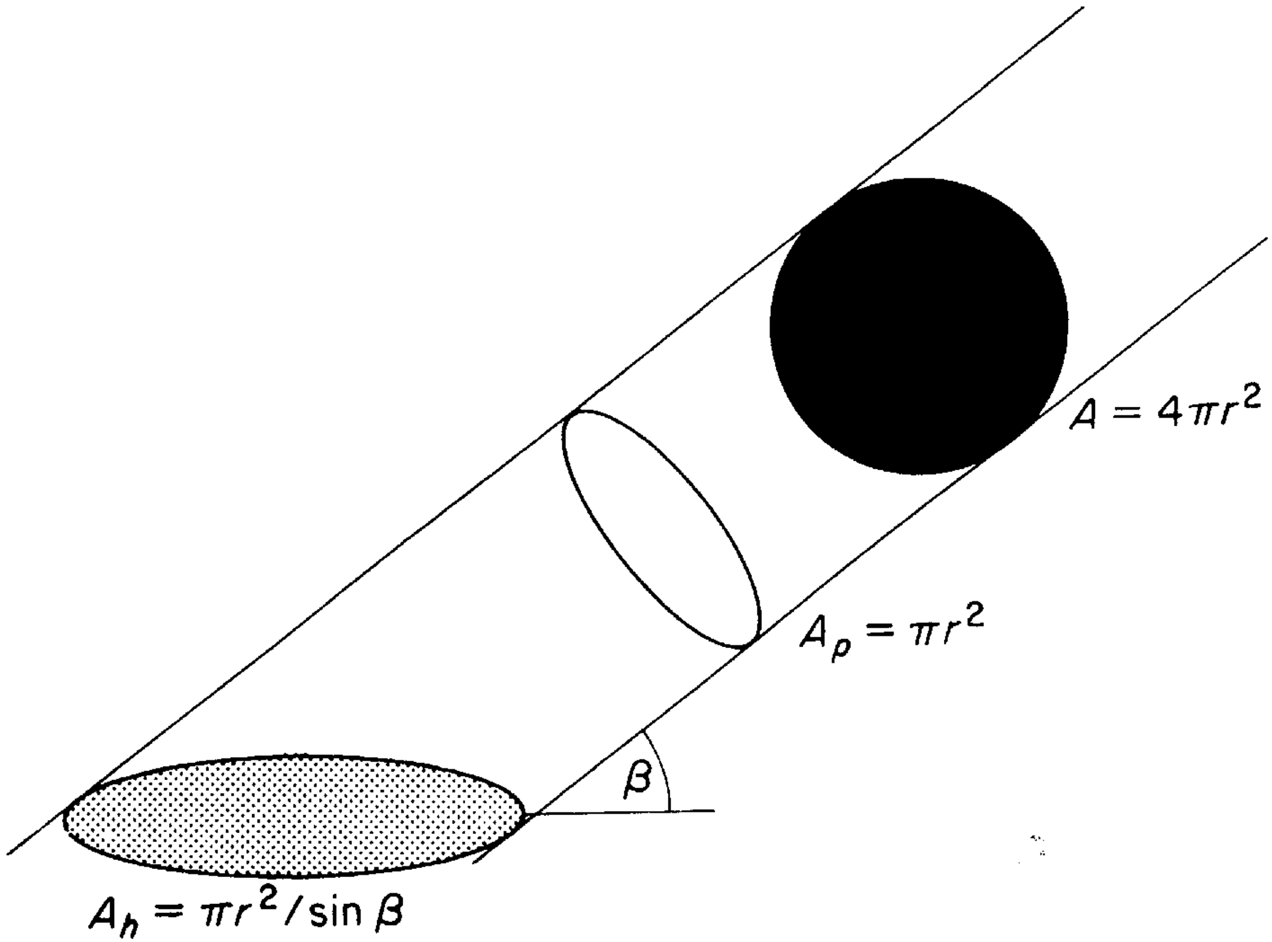

Figure 7.2 Geometry of a sphere projected on a horizontal surface.

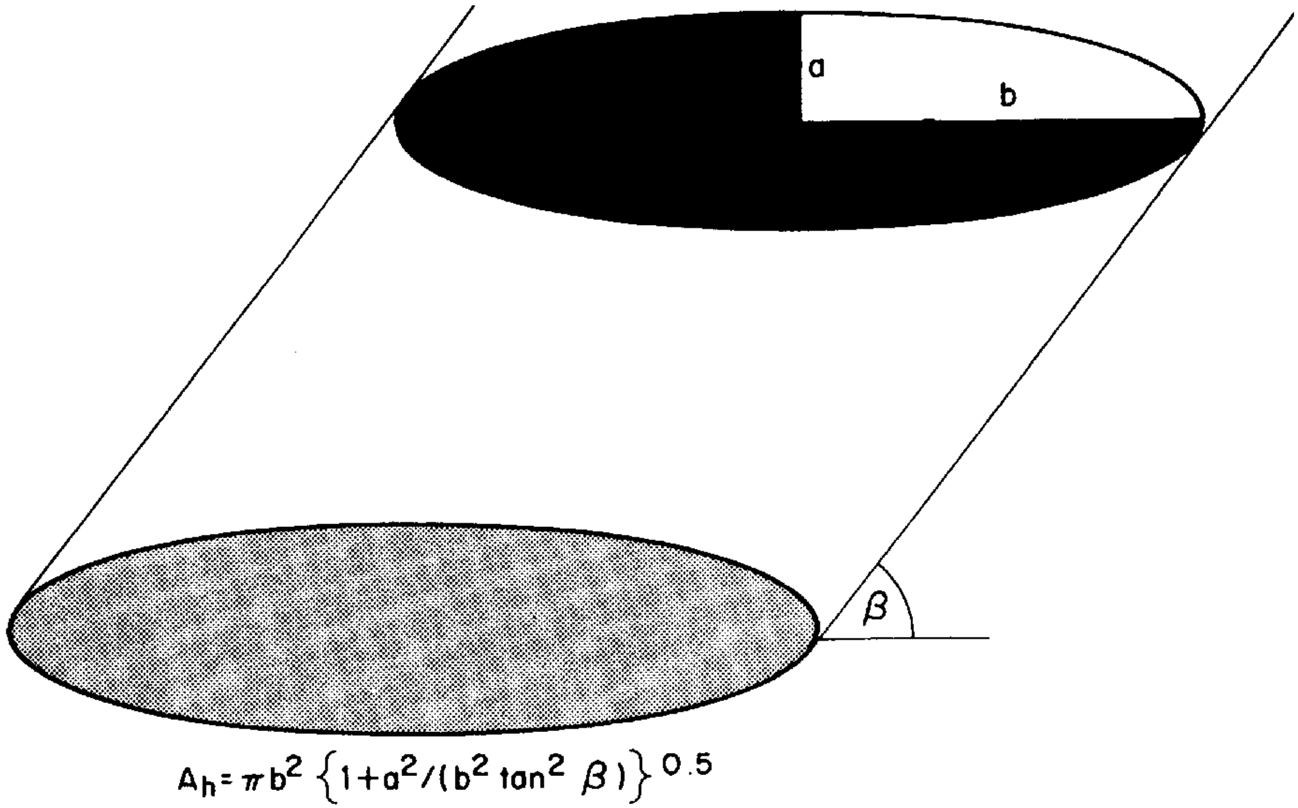

Figure 7.3 Geometry of an ellipsoid with semi-axes *a* and *b* projected on a horizontal surface.

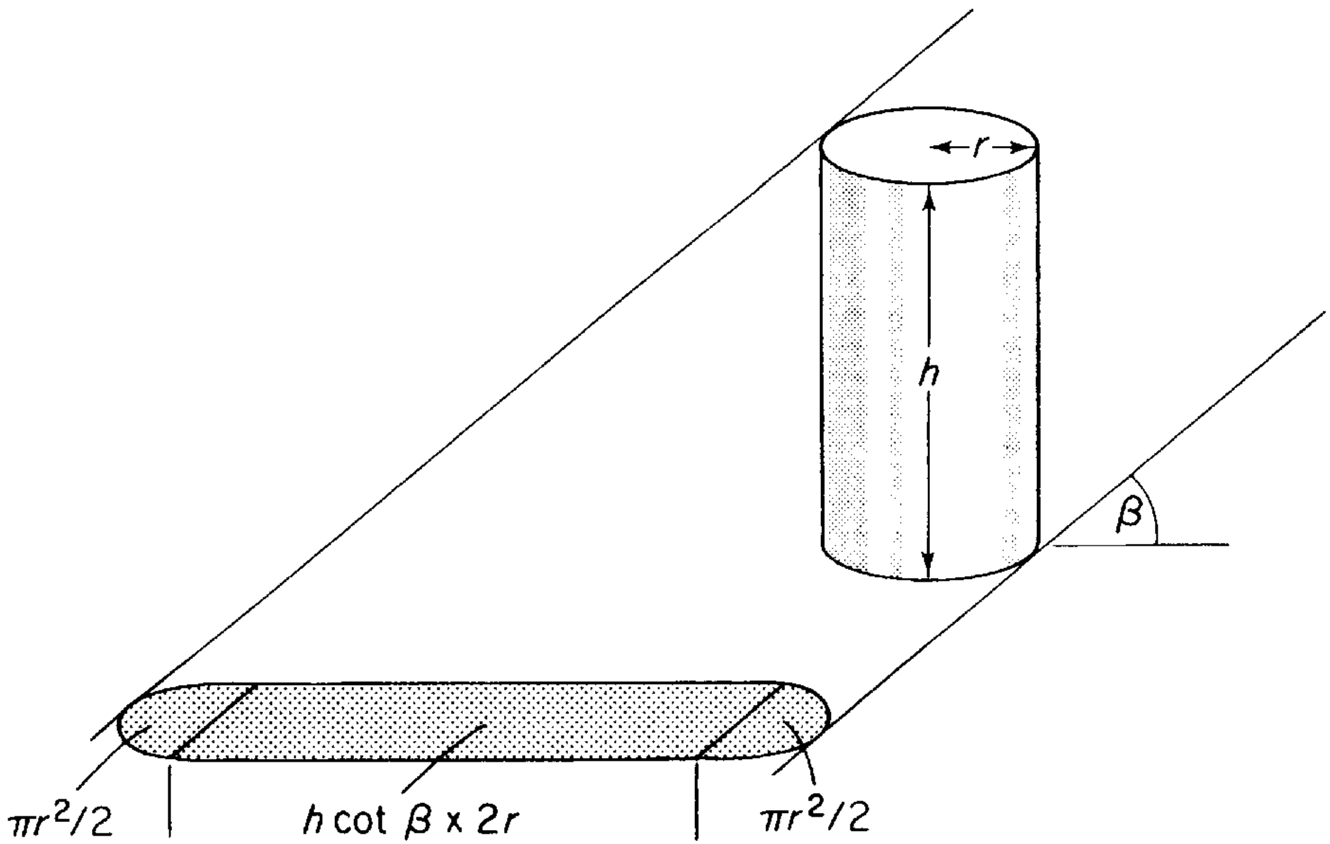

Figure 7.4 Geometry of a vertical cylinder projected on a horizontal surface.

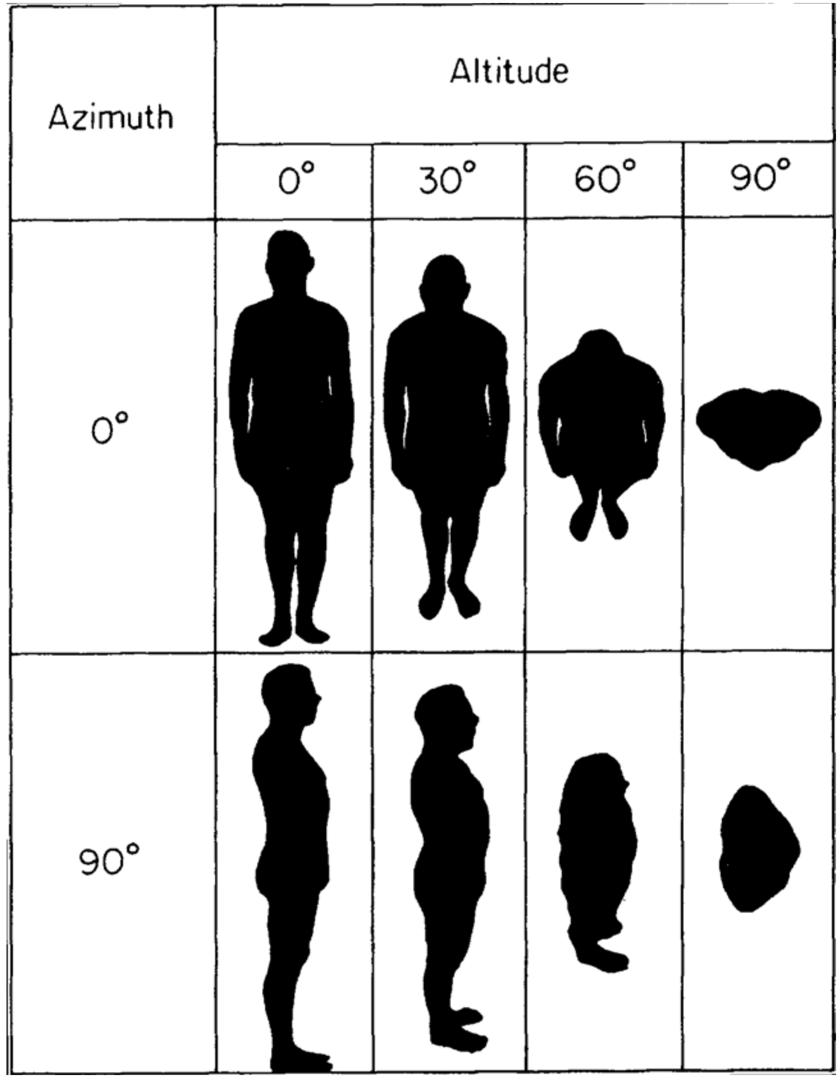

Figure 7.5 The area of an erect male figure projected in the direction of the solar beam for different values of solar azimuth and altitude. The silhouettes were obtained photographically by Underwood and Ward (1966).

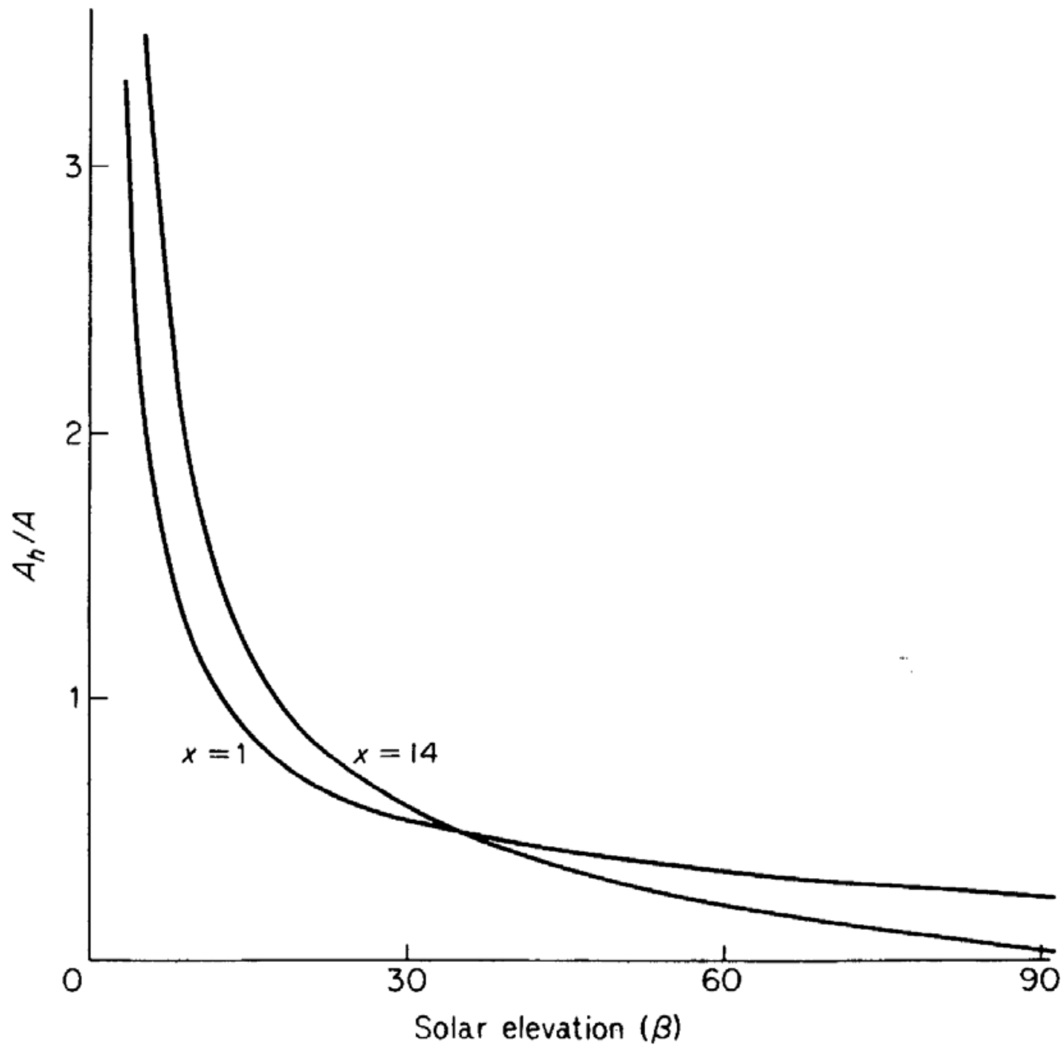

Figure 7.6 The ratio A_h/A for vertical cylinders with height/radius ratios *(x)* of 1 and 14.

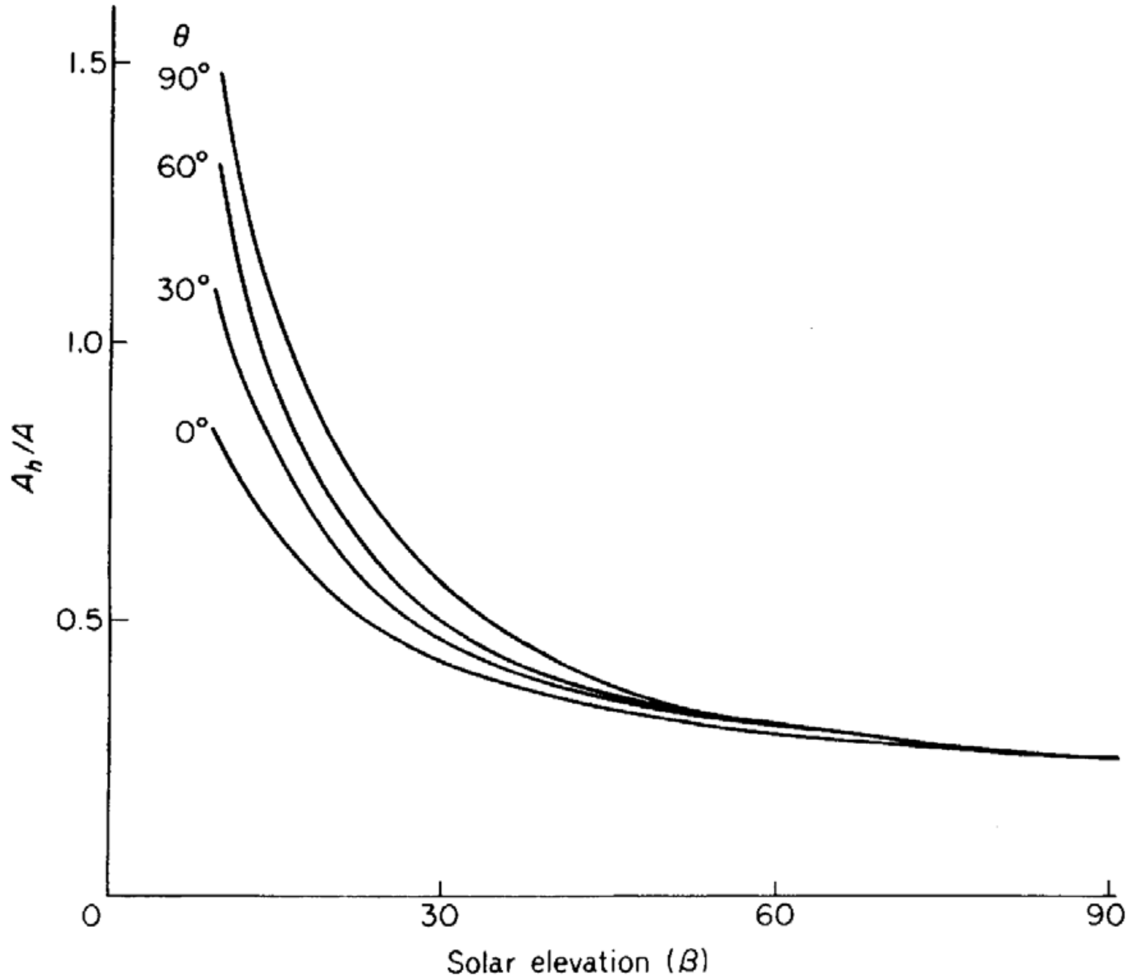

Figure 7.7 The ratios A_h/A for horizontal cylinders at different values of solar elevation *(β)* and azimuth *(ϑ)* with a length/radius ratio of $x = 4$.

Figure 7.8 A juniper tree with a conical shape, casting a shadow which closely resembles the lower part of Figure 7.9. The amount of direct solar radiation intercepted by the tree could therefore be calculated from Eq. (7.15).

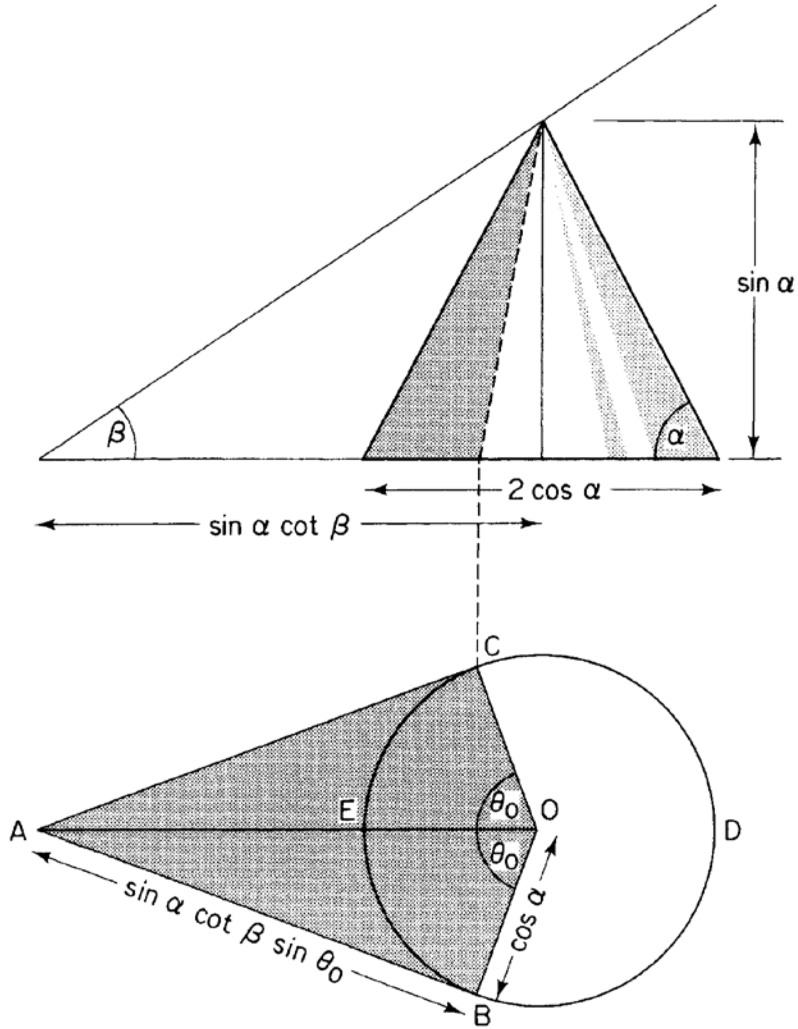

Figure 7.9 The geometry of a cone projected on a horizontal surface.

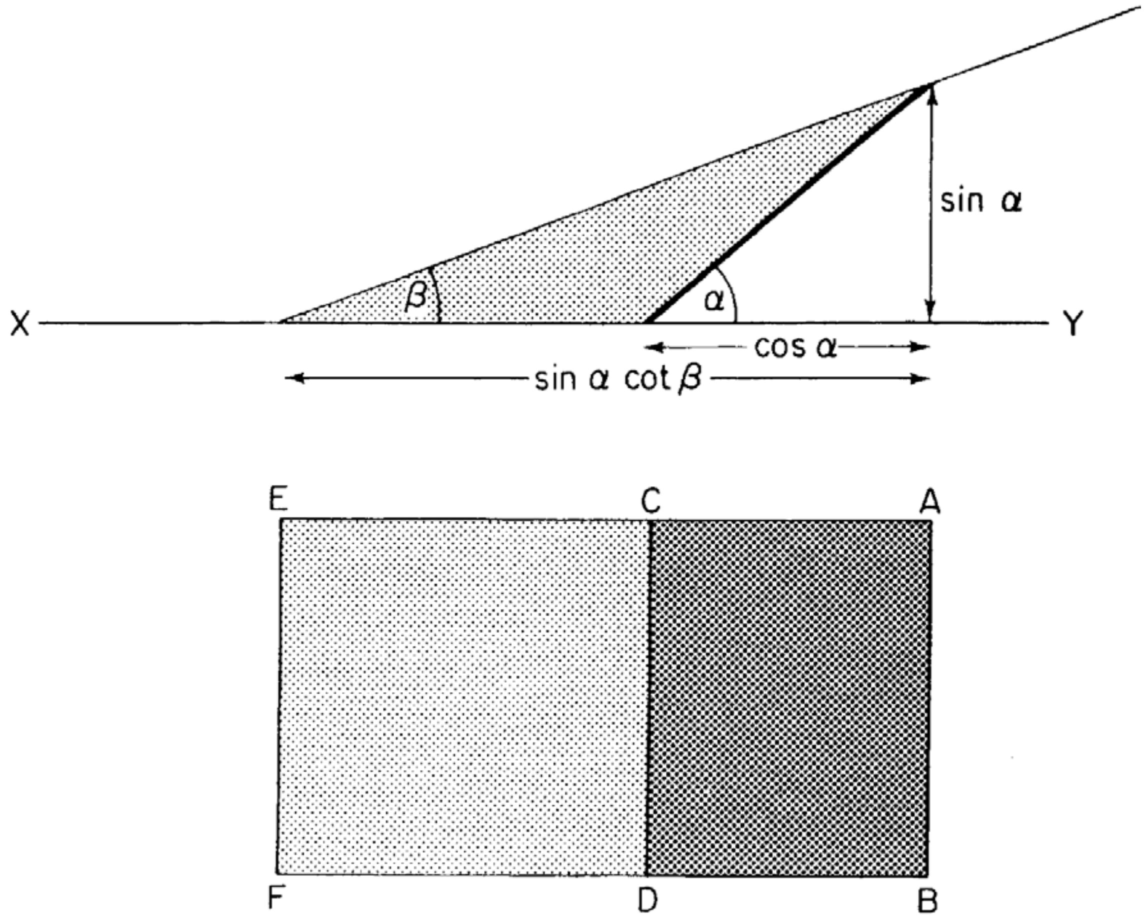

Figure 7.10 Geometry of a square plane, ABCD, projected on a horizontal surface when the edges AC and BD are parallel to solar beam.

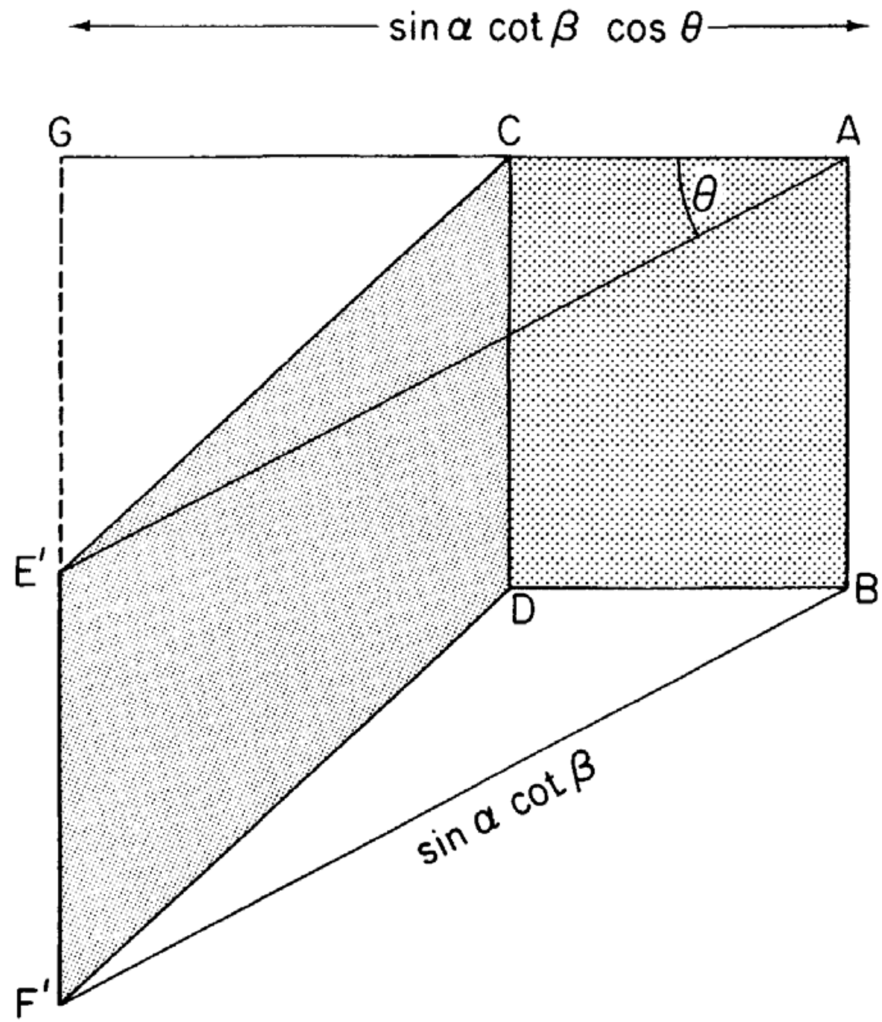

Figure 7.11 Geometry of a rectangle projected on a horizontal surface when the edge makes an angle ϑ with the solar beam.

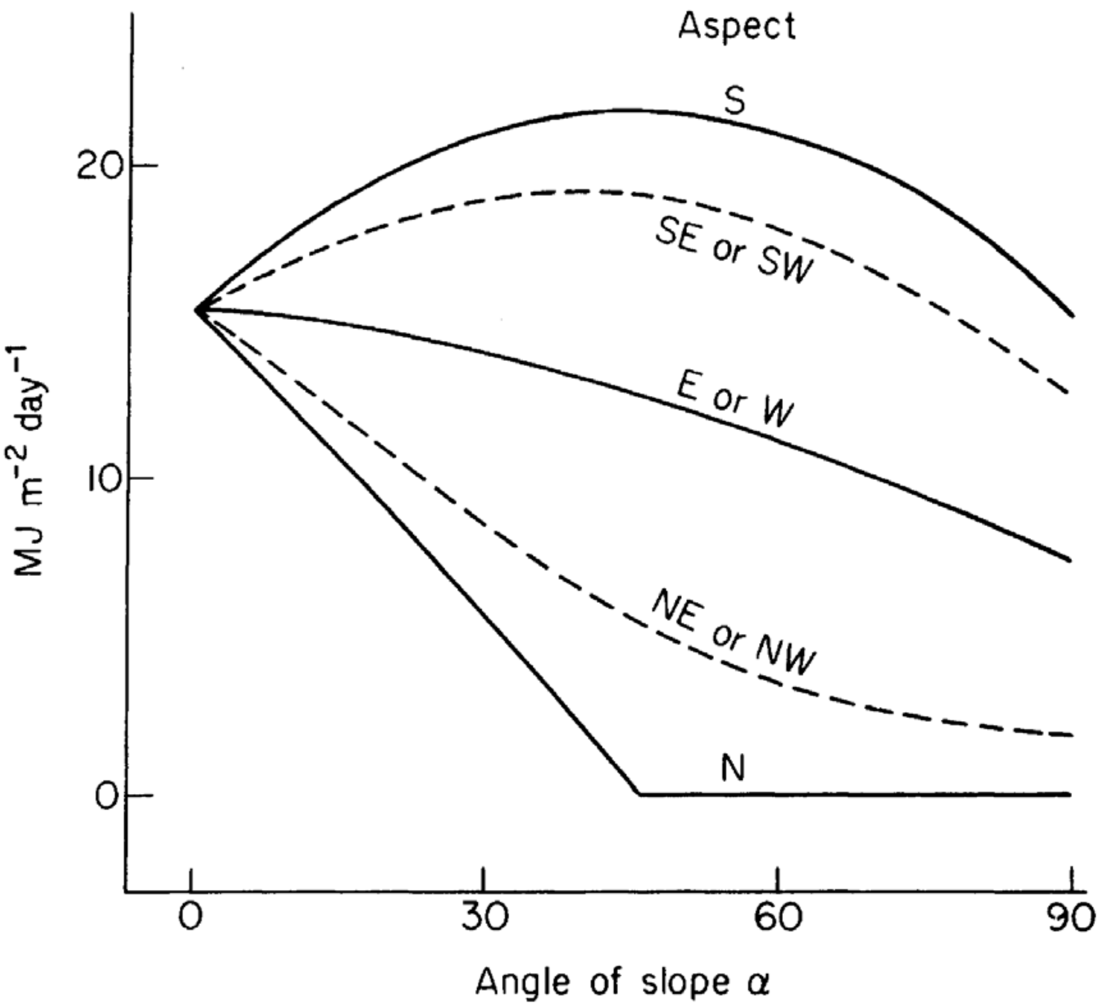

Figure 7.12 Daily integral of direct solar radiation at the equinoxes for latitude 45°N (from Garnier and Ohmura, 1968).

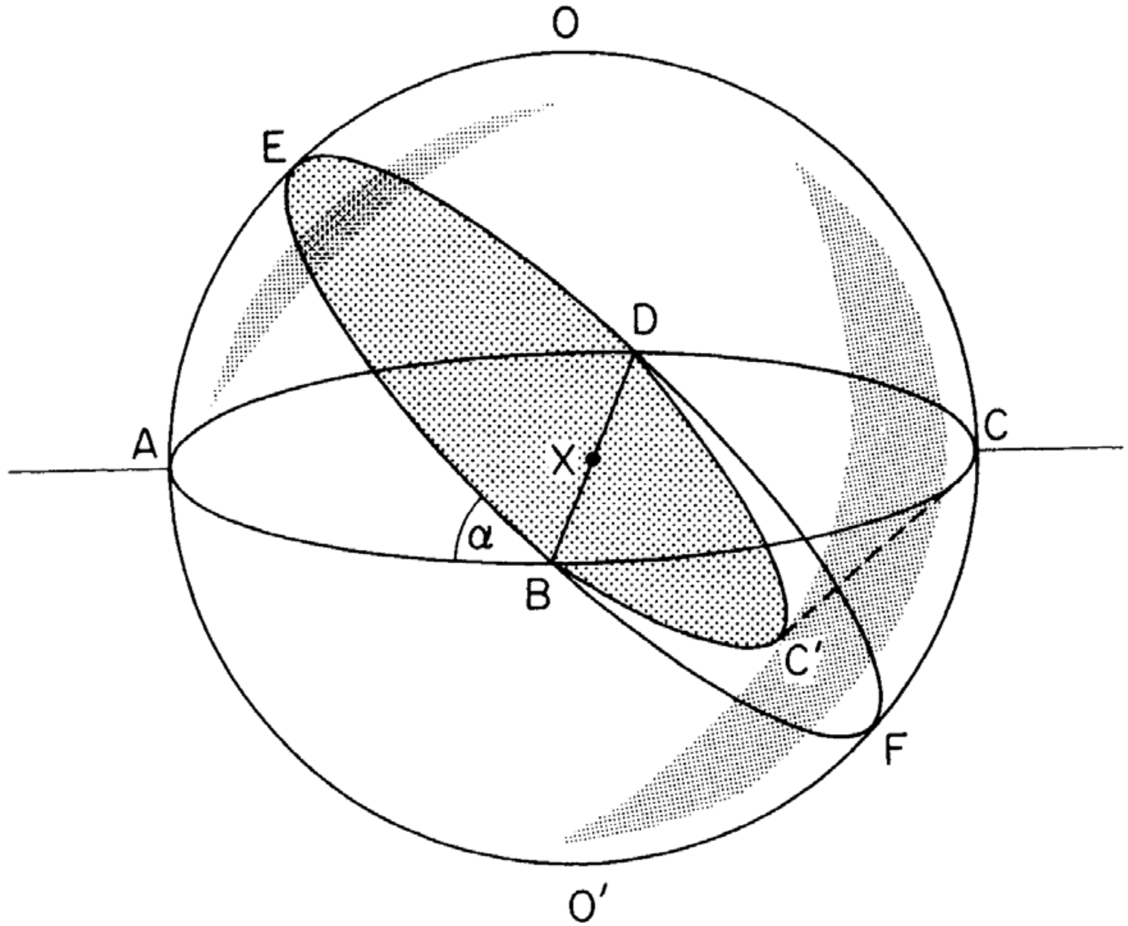

Figure 7.13 Diagram for calculating the diffuse irradiance at a point X in the center of a sphere from a sector of the sphere subtending an angle α at the equatorial plane.

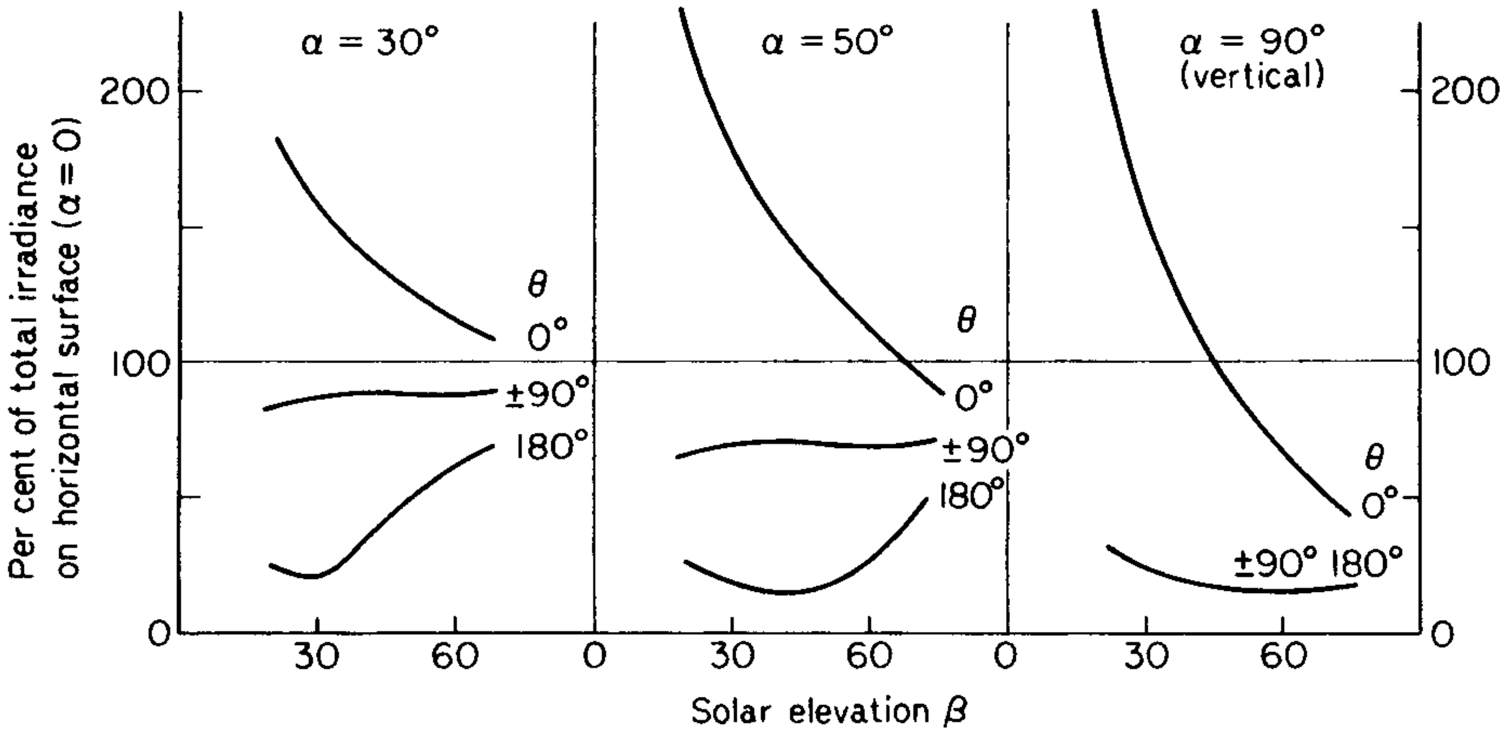

Figure 7.14 Irradiance of planes (direct and diffuse solar radiation) at latitude 45°N as a function of solar elevation β, elevation of the plane α, and azimuth angle ϑ between the solar beam and the normal to the plane. From measurements by Kondratyev and Manolova (1960).