

Chapter 4: Photometry

Some corrections and changes

1. page 62, top line should read ‘of area 1 m^2 ’ instead of ‘of diameter 1 m^2 ’.
2. page 66, The paragraph ‘The independence of intensity ...’ should read as follows:

The independence of intensity with respect to distance is a general property. We can understand this intuitively by considering the simple example of solar radiation at normal incidence. Consider two observers O_1 and O_2 located at distances r_1 and r_2 respectively, as shown in Figure 1. Let F_1 and F_2 be the flux densities observed by them and Ω_1 and Ω_2 be the solid angle subtended by the Sun at their locations respectively. The intensities observed by them are

$$I_1 = \frac{F_1}{\Omega_1}, \quad \text{and} \quad I_2 = \frac{F_2}{\Omega_2},$$

respectively. Since both the flux density and the solid angle are proportional to $1/r^2$, it is clear that $I_1 = I_2$, that is, the intensity is independent of distance.

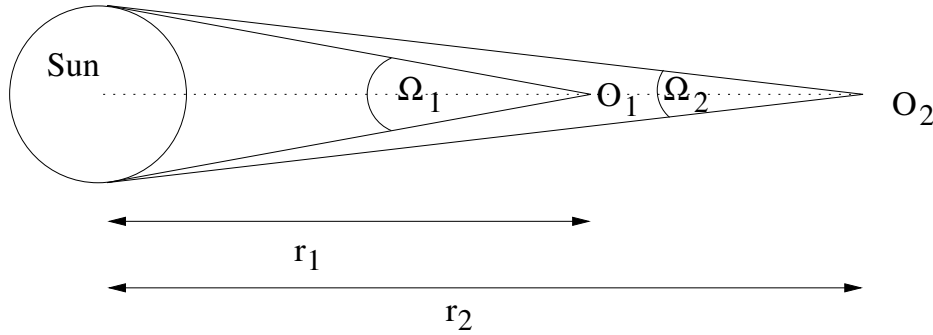


Figure 1: Two observers O_1 and O_2 located at distances r_1 and r_2 observe the same intensity.