

You Are My Sunshine

As we will discuss in class later this week, light obeys an "inverse square law": the apparent brightness of an object (the amount of energy received per second by a collecting surface of fixed size) falls off as the inverse square of your distance from it. Expressed mathematically:

$$b = \frac{L}{4 \pi r^2}$$

Here L is the luminosity of the object (the total amount of energy it puts out per second), r is your distance from the object, and b is its apparent brightness.

1. Use the lightbulb at the front of the room to measure the luminosity of the Sun.