

Actinometer

The actinometer is used to measure the intensity of solar radiation.

It consists of two maximum thermometers, mounted on a wood block. The bulb of the thermometer is involved in radiation absorbing material (called black smoke) and the other has a bright and reflecting surface of mercury. From the temperature difference between the two thermometers, it is possible to determine the intensity of solar radiation. In this sense, radiation intensity is the physical definition of the intuitive concept of the 'glow' of a luminous object.



This invention is due to the French physicist Hippolyte Marie-Davy (1820-1893). Professor of physics and mathematics and PhD in medicine, he dedicated his life to the study of electricity and optics. It was in the field of meteorology that he stood out, having joined the Paris Observatory in 1862. In 1873, he was appointed Director of the Montsouris Observatory.

The measurement of solar radiation and, in general, the intensity of light, is a question for centuries at the center of scientific concerns. Vital for human daily life, the importance of light crosses all disciplines. Among other applications, its measurement revolutionized medicine and led to global communications, such as the Internet.

In 2015, we celebrate the International Year of Light, by decision of the United Nations General Assembly. It recognizes the importance of light-associated technologies in promoting sustainable development and the search for solutions to global challenges in the fields of energy, education, agriculture and health.