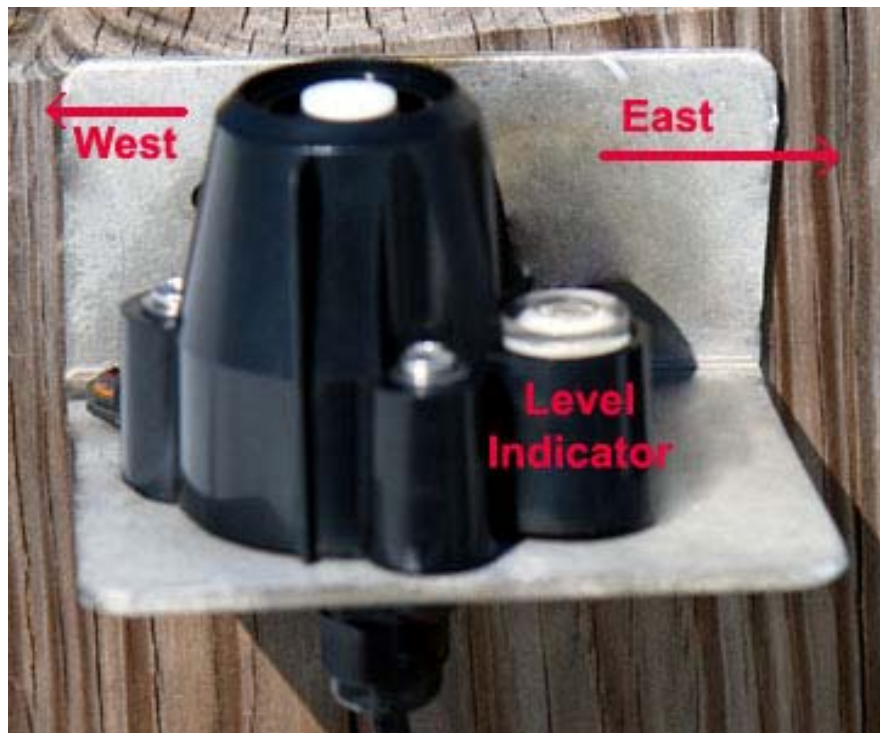


Davis Solar Radiation Sensor Product # 06450



Above you can see the solar sensor which measures the amount of incoming solar radiation.



Ideally you want to place a solar sensor so you can see down to the East, South, and West horizon so the sensor receives solar radiation throughout the whole day.

Total solar radiation that the Earth receives from the Sun is the solar constant which as it turns out has been found not to be exactly constant but is around 1370 watts per square meter. But not all of the solar radiation makes it through the atmosphere. The maximum solar radiation will generally occur when the sun angle is at the highest around noon in June when the sun is highest each day. Other things will alter the amount such as clouds but it is interesting that cirrus clouds scatter the light and give you a higher solar radiation when there is a thin layer of cirrus. Generally on a very clear summer's day the instrument will show a reading around 1000 watts per square meter. This instrument detects radiation at wavelengths between 300 and 1100 nanometers. This instrument can also help to determine whether it was a cloudy or clear day by not only the amount of radiation received but also by the tracing on the graph. If it is clear it will give a smooth tracing during the course of the day but if clouds were present there will be many peaks and troughs in the graph of the day's solar radiation.