

Daily Earth Temperatures from Satellites

Please move the cursor to the altitude scale along the left side and click the graphic to view the [global atmospheric temperature trend](#) for the selected layer in the atmosphere, or choose a layer in the atmosphere from the pulldown menu at the bottom left. You may also view the current global [Advanced Microwave Sounding Unit \(AMSU\) satellite image](#) at many different layers of the atmosphere.

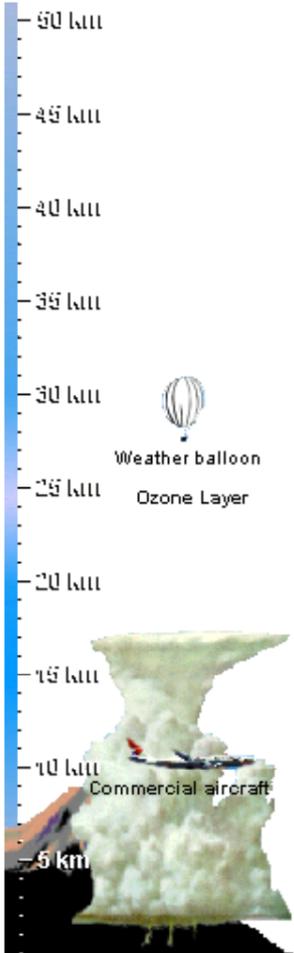
Daily averaged temperatures of the Earth are measured by the AMSU flying on the NOAA-15 satellite. The satellite passes over most points on the Earth twice per day, at about 7:30 am and 7:30 pm local time. The AMSU measures the average temperature of the atmosphere in different layers from the surface up to about 135,000 feet or 41 kilometers. During global warming, the atmosphere near the surface is supposed to warm at least as fast as the surface warms, while the upper layers are supposed to cool much faster than the surface warms.

These pages make extensive use of JavaScript and Java™. If you cannot view the graphs, you must download the latest version of Java from java.com.

What is a brightness temperature? A brightness temperature is a descriptive measure of radiation in terms of the temperature of a hypothetical blackbody emitting an identical amount of radiation at the same wavelength.

The brightness temperature is obtained by applying the inverse of the Planck function to the measured radiation. Depending on the nature of the source of radiation and any subsequent absorption, the brightness temperature may be independent of, or highly dependent on, the wavelength of the radiation.

A more technical description can be found in the [Wikipedia article](#).



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