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Barometric Pressure

You always hear the T.V. weather forecaster talking about barometric pressure. But what is it, and what does it do? A barometer measures air pressure. Air pressure, barometric pressure or atmospheric pressure, is all the same thing - the actual weight of air molecules pressing down on the earth due to gravity. Air pressure can also be thought of in terms of density. It is almost a complete vacuum in outer space, so the air pressure there is about zero. But on earth, the weight of the air creates an atmospheric pressure of about 14.7 psi (pounds per square inch) at sea level.

How Barometric Pressure Is Measured

While scientists measure air pressure in psi units, meteorologists use either inches of mercury ("Hg) or millibars (mb). Inches of Mercury is usually used in TV forecasts, while millibars is often the unit found in the paper on weather maps. The average atmospheric pressure at sea level is 29.93 "Hg or 1013.25 mb. When you look at all the units of measurement together, they are just different ways to express the same thing: 14.7 psi = 29.93 "Hg = 1013.25 mb.

Atmospheric pressure on earth is not a constant. It fluctuates from place to place and day to day. At higher altitudes and hot regions the air is less dense and the pressure is lower.

Barometric pressure can affect weather dramatically. *As a general rule of thumb, a low-pressure area will be cloudy and rainy, and high-pressure area will be clear.* If your weather station has a barometer, you can use it to make educated predictions about the weather.

Barometric Pressure:

[Department of Atmospheric Sciences \(DAS\)](#) at the University of Illinois at Urbana-Champaign

The Pressure Module:

<http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/prs/home.rxml>

Wireless Home Weather Stations and Equipment

<http://www.home-weather-stations.com/Barometric-Pressure.html>