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K

Smoke- Smoke in various concentrations can cause significant problems for people with respiratory ailments. It becomes a more universal hazard when visibilities are reduced to ¼ mile or less.

K AMS

Cold Air Mass

K Corona

In solar-terrestrial terms, of the white-light corona (that is, the corona seen by the eye at a total solar eclipse), that portion which is caused by sunlight scattered by electrons in the hot outer atmosphere of the sun.

K-Index

A measure of the thunderstorm potential based on vertical temperature lapse rate, moisture content of the lower atmosphere, and the vertical extent of the moist layer. The temperature difference between 850 mb and 500 mb is used to parameterize the vertical temperature lapse rate. The 850 dew point provides information on the moisture content of the lower atmosphere. The vertical extent of the moist layer is represented by the difference of the 700 mb temperature and 700 mb dew point. This is called the 700 mb temperature-dew point depression. The index is derived arithmetically and does not require a plotted sounding.

$$\text{K-index} = (850 \text{ mb temperature} - 500 \text{ mb temperature}) + 850 \text{ mb dew point} - 700 \text{ mb dew point depression}$$

Katabatic Wind

A wind that is created by air flowing downhill.

Katafront

A front where the warm air descends the frontal surface (except in the low layers of the atmosphere).

Keetch-Byrum Drought Index

An index used to gage the severity of drought in deep duff and organic soils.

Kelvin Temperature Scale

An absolute temperature scale in which a change of 1 Kelvin equals a change of 1 degree Celsius; 0°K is the lowest temperature on the Kelvin scale. The freezing point of water is +273°K (Kelvin) and the boiling point of +373°K. It is used primarily for scientific purposes. It is also known as the Absolute Temperature Scale.

Kelvin Waves

Fluctuations in wind speed at the ocean surface at the Equator result in eastward propagating waves, known as Kelvin Waves. Kelvin Waves cause variations in the depth of the oceanic thermocline, the boundary between warm waters in the upper ocean and cold waters in the deep ocean. They play an important role in monitoring and predicting El Niño episodes.

Kelvin-Helmholtz Waves

Vertical waves in the air associated with wind shear across statically-stable regions. Can appear as breaking waves and as braided patterns in radar images and cloud photos.

Kilopascal

The internationally recognized unit used by the Atmospheric Environment Service for measuring atmospheric pressure. Abbreviated kPa.

Kinetic Energy

Energy that a body has as a result of its motion. Mathematically, it is defined as one-half the product of a body's mass and the square of its speed ($KE = 1/2 * \text{mass} * \text{velocity squared}$).

Klystron

An electron tube used as a low-power oscillator or a high-power amplifier at ultrahigh frequencies.

Knot

(abbrev. Kt) Unit of speed used in navigation, equal to 1 nautical mile (the length of 1 minute latitude) per hour or about 1.15 statute miles per hour, or 0.5 meters/sec).

Knuckles

Slang for lumpy protrusions on the edges, and sometimes the underside, of a thunderstorm anvil. They usually appear on the upwind side of a back-sheared anvil, and indicate rapid expansion of the anvil due to the presence of a very strong updraft. They are not mammatus clouds. See also cumuliform anvil and anvil rollover.

Kp Index

A 3-hourly planetary geomagnetic index of activity generated in Gottingen, Germany, based on the K Index from 12 or 13 stations distributed around the world

KT

(Knot)- Unit of speed used in navigation, equal to 1 nautical mile (the length of 1 minute latitude) per hour or about 1.15 statute miles per hour, or 0.5 meters/sec.

KTS

Knots

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US Dept of Commerce
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1325 East West Highway
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Page Author: NWS Internet Services Team
Page last Modified: 25 June, 2009 1:01 PM

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