



Cloud Types

common cloud classifications

Clouds are classified into a system that uses Latin words to describe the appearance of clouds as seen by an observer on the ground. The table below summarizes the four principal components of this classification system ([Ahrens, 1994](#)).

Latin Root	Translation	Example
cumulus	heap	fair weather cumulus
stratus	layer	
cirrus	curl of hair	altostratus
nimbus	rain	cirrus cumulonimbus

Further classification identifies clouds by height of cloud base. For example, cloud names containing the prefix "cirr-", as in cirrus clouds, are located at high levels while cloud names with the prefix "alto-", as in altostratus, are found at middle levels. This module introduces several cloud groups. The first three groups are identified based upon their height above the ground. The fourth group consists of vertically developed clouds, while the final group consists of a collection of miscellaneous cloud types.

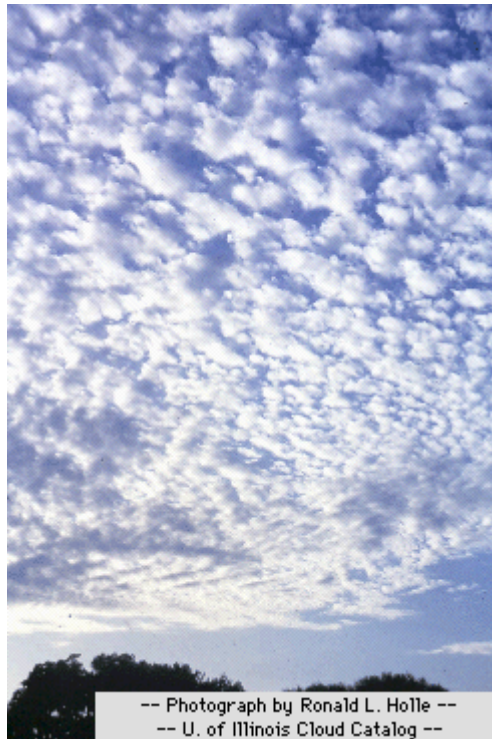


High-Level Clouds

High-level clouds form above 20,000 feet (6,000 meters) and since the temperatures are so cold at such high elevations, these clouds are primarily composed of ice crystals. High-level clouds are typically thin and white in appearance, but can appear in a magnificent array of colors when the sun is low on the horizon.

Photograph by: [Knupp](#)

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Mid-Level Clouds

The bases of mid-level clouds typically appear between 6,500 to 20,000 feet (2,000 to 6,000 meters). Because of their lower altitudes, they are composed primarily of water droplets, however, they can also be composed of ice crystals when temperatures are cold enough.

Photograph by: [Holle](#)

Low-level Clouds

Low clouds are of mostly composed of water droplets since their bases generally lie below 6,500 feet (2,000 meters). However, when temperatures are cold enough, these clouds may also contain ice particles and snow.



Photograph by: [Holle](#)

Vertically Developed Clouds

Probably the most familiar of the classified clouds is the cumulus cloud. Generated most commonly through either [thermal convection](#) or [frontal lifting](#), these clouds can grow to heights in excess of 39,000 feet (12,000 meters), releasing incredible amounts of energy through the [condensation](#) of water vapor within the cloud itself.



-- Photograph by Ronald L. Holle --
-- U. of Illinois Cloud Catalog --

Photograph by: [Holle](#)

Other Cloud Types

Finally, we will introduce a collection of miscellaneous cloud types which do not fit into the previous four groups.

Classifications

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High-Level Clouds

Cloud types include: [cirrus](#) and [cirrostratus](#).

Mid-Level Clouds

Cloud types include: [altocumulus](#), [altostratus](#).

Low-Level Clouds

Cloud types include: [nimbostratus](#) and [stratocumulus](#).

Clouds with Vertical Development

Cloud types include: [fair weather cumulus](#) and [cumulonimbus](#).

Other Cloud Types

Cloud types include: [contrails](#), [billow clouds](#), [mammatus](#), [orographic](#) and [pileus clouds](#).



Development

[Terms](#) for using data resources. [CD-ROM](#) available.

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High-Level Clouds