

NOAA Cloudwise



There are ten basic cloud types arranged in three divisions based on the altitude at which they form. Low level clouds are Cumulus, Cumulonimbus, Stratus, and Stratocumulus. Middle level clouds are Altostratus, Altostratus and Nimbostratus. High level clouds are Cirrus, Cirrocumulus and Cirrostratus. Precipitation primarily occurs from Cumulus, Cumulonimbus and Nimbostratus.

These ten clouds are further divided into 27 classifications. Many of these classifications represent the same basic cloud type (or combinations of clouds) but in various stages of development, opacity, or sky cover.

Learn more about clouds at www.weather.gov/jetstream

Cirrus



High1
Cirrus: Straight, nearly straight, or curved filaments, strands or hooks.



H2
Cirrus: Dense white puffs with wispy edges.



H3
Cirrus: Dense, anvil-shaped remains, which were originally the upper parts of **Cumulonimbus**.



H4
Cirrus: Filaments, strands or hooks, increasing in coverage and generally thickening as a whole.



H5
Cirrostratus with or without **Cirrus:** Increasing density and coverage, but coverage does not reach midway above the horizon.



H6
Cirrostratus with or without **Cirrus:** Increasing density and covering much of, but not the entire sky.



H7
Cirrostratus: Veil covering the whole sky, sometimes a halo around the sun or moon is present.



H8
Cirrostratus: Veil not covering the whole sky nor increasing in coverage.



H9
Cirrocumulus: Thin white ripples or small puffs, which may be accompanied by some **Cirrus/Cirrostratus**.

Cirrostratus

Cirrocumulus

Altostratus

Nimbostratus

Alto cumulus



Mid1
Altostratus: Full or nearly full sky cover that is gray, shapeless and translucent; produces no halo.



M2
Altostratus: Thick opaque coverage, no precipitation, or **Nimbostratus:** during precipitation or virga.



M3
Alto cumulus: Translucent bands or patches in a relatively continuous layer.



M4
Alto cumulus Lenticularis: Lens or almond shaped, often formed by air moving over hills or mountains.



M5
Alto cumulus: One or more layers of translucent or opaque bands.



M6
Alto cumulus: A result of the spreading tops of **Cumulus** or sides of **Cumulonimbus**.



M7
Alto cumulus: In one or more opaque layers, sometimes with **Altostratus** or **Nimbostratus**.



M8
Alto cumulus: Small towers, which can be similar to small **Cumulus** with wispy trails of virga.



M9
Alto cumulus: Chaotic sky with multiple layers and kinds of **Alto cumulus** at several altitudes.

Cumulus

Cumulonimbus

Stratocumulus

Stratus

Cumulus / Stratocumulus

Cumulonimbus



Low1
Cumulus: Thin and ragged with continuously changing edges; forms during fair weather by daytime heating.



L2
Cumulus: Moderately tall with rounded puffy tops; may occur with **Cumulus/Stratocumulus (L4)**.



L3
Cumulonimbus: Very tall summits, which lack sharp outlines and are not anvil-shaped.



L4
Stratocumulus: Spread out **Cumulus** when vertical development stabilizes; sometimes can occur along with **Cumulus**.



L5
Stratocumulus: One or more layers, not resulting from spreading **Cumulus**.



L6
Stratus: In a continuous layer, or **Stratus fractus:** In ragged shreds, or both, without precipitation.



L7
Stratus- or Cumulus-fractus: Ragged shreds during precipitation, usually seen below **Altostratus** or **Nimbostratus**.



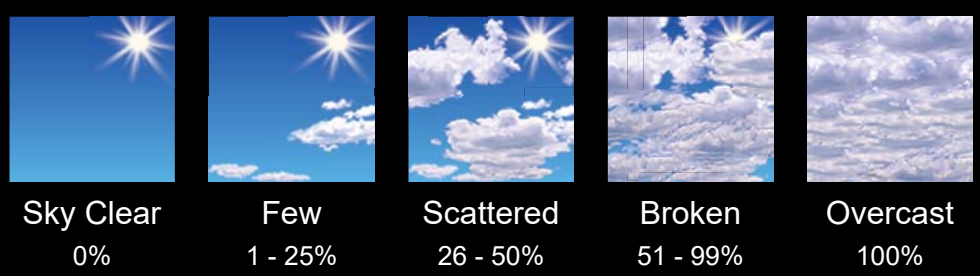
L8
Cumulus/Stratocumulus: Stratocumulus not from spreading **Cumulus**, with **Cumulus** base at a different level.



L9
Cumulonimbus: Very tall summits with anvil-shaped upper part.

Sky cover

The percent of sky covered by clouds. Clouds near the horizon appear to be lower, more numerous and closer together.



Other Cloud Phenomena



Mammatus: Small pouch or pocket-like clouds sinking into drier air and often seen near thunderstorms.



Fog: A cloud on the ground which lifts from the surface and becomes **Stratus** or dissipates with heat from the sun.



Wall Cloud: Rotating, lowered, rain-free base of thunderstorm in area of strongest updraft, under which a tornado may form.



Shelf Cloud: Forms in a gust front from a squall line or thunderstorm.



Asperitas: Long waves that ripple through the base of the cloud near the dry/moist air boundary of a thunderstorm.



Virga: Precipitation that evaporates before reaching the surface.