



# 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 Alto cumulus, Altostratus and Nimbostratus. High level clouds are Cirrus, Cirro cumulus 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](http://www.weather.gov/jetstream)  
[www.noaa.gov/education](http://www.noaa.gov/education) [www.weather.gov](http://www.weather.gov)

### Cirrus

**H1**  
**Cirrus:** Straight, nearly straight, or curved filaments, strands or hooks.

### Altostratus

**M1**  
**Altostratus:** Full or nearly full sky cover that is gray, shapeless and translucent; produces no halo.

### Cumulus

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

### Cirrus

**H2**  
**Cirrus:** Dense white puffs remains, which were originally the upper parts of Cumulonimbus.

### Nimbostratus

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

### Cumulus

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

### Cirrus

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

### Alto cumulus

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

### Cumulonimbus

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

### Cirrus

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

### Stratocumulus

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

### Stratocumulus

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

### Cirrostratus

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

### Alto cumulus

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

### Stratocumulus

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

### Cirrus

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

### Stratus

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

### Stratus

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

### Cirrus

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

### Alto cumulus

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

### Stratus

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

### Cirrus

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

### Cumulus / Stratocumulus

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

### Cumulus / Stratocumulus

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

### Cirrocumulus

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

### Cumulonimbus

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

### Cumulonimbus

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

### Other Cloud Phenomena

**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.

### Sky cover

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

	<b>Sky Clear</b>	0%
	<b>Few</b>	1 - 25%
	<b>Scattered</b>	26 - 50%
	<b>Broken</b>	51 - 99%
	<b>Overcast</b>	100%