

History of Cloud Classification

“If in fair weather a thin cloud appears stretched in length and feathery, the winter will not end yet.”

— Theophrastus of Eresus (circa 400 B.C.)

In 1803 English chemist and weather observer Luke Howard wrote “On the Modification of Clouds.”

Howard’s classification system is essentially the one used today.

“Cloud Forms According to Howard”

— Goethe (1817).

“International Cloud Atlas” (1896)

First comprehensive photographic text dedicated to cloud identification.

Updated by WMO in 1956, 1987. Standard reference for cloud identification and classification by weather observers.

Elements of Cloud Classification

1) Clouds resulting from rising unstable air currents:

cumulus “heap”

2) Clouds resulting from rising stable air currents:

stratus “layer”

3) Clouds that produce precipitation:

nimbus “rain”

4) Cloud height above the earth’s surface:

low (\approx surface–2 km), middle (\approx 2–6 km), high (\approx >5 km)

Cumulus: flat based, cauliflower-like domes.

stratus: layered clouds in broad sheets with small aspect ratio.

nimbus: rain falling from clouds that are often dark and ill defined.

water vs. ice: “hard” cloud edges vs. “diffuse” cloud edges.