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A Science Service Feature

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University
tells why:

CLOUDS DO NOT FLOAT

While the cumulus cloud is held up by a vertical air current, other types of clouds remain aloft in other ways. Clouds do not float, their particles are always tending to fall. The larger drops or crystals will fall more rapidly because they have greater weight in proportion to their surface, and so encounter relatively less friction in falling through the air.

Observe a high cirrus cloud, one of the delicate streamers marking the edge of an advancing cloud sheet. Such a cloud is typically curled slightly, like a feather. The larger snow particles are dropping out of the advancing higher portion, leaving a long trail behind, usually in the direction from which the cloud is moving, and finally evaporating. Blurry masses of snow or rain may sometimes be seen dropping from a stationary lens-shaped cloud of water droplets. As long as conditions continue to favor condensation, the cloud will keep forming and replacing the particles that drop out. Similar is the case of a convectional cloud sheet occurring on the boundary between a cold and a moist, warm wind. The droplets keep settling gradually, either evaporating or producing rain, but as long as condensation is maintained along the line of contact, the cloud keeps forming and so appears to remain aloft.

(Tomorrow: Temperatures for Spring Seeding)

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