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A Science Service Feature

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? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society
discusses:

THE HOT WAVE

The hot wave results when an area of high pressure covers the southeastern states, while an area of low pressure advances from the west across the United States. The heated air of the rear of the "high" pours northward, not directly toward the "low", but to the right of it, in summer giving the sun in a clear sky opportunity to send the mercury into the 90s in the afternoon and causing much suffering.

The summer hot wind is usually accompanied by increasingly moist air as the heat evaporates local moisture, adding it to the greater and greater imported water vapor. Usually by the third or fourth afternoon, the moisture is sufficient to allow the formation of "heat" thunderstorms. Before another day passes the hot spell is terminated by windshift line thunderstorms, sometimes of terrific violence, with torrential rains and occasional tornado-like windstorms, the immediate cause being the approach of the cool wind of the front of the succeeding "high", which, in contact with the hot, moist south wind, results in violent vertical convection and abundant condensation.

(Tomorrow: The Sea Breeze.)

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