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A Science Service Feature

! WHY THE WEATHER !

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ACTION ALOFT

A sudden shower of large sleet recently fell at Worcester, Mass., with an intensity suggestive of the downpour of a summer thunderstorm. Soon it was snowing, making an addition to the several inches that had already fallen in this general storm. The barograph during this hour showed most extraordinary pressure changes, yet the cold wind at the surface had remained light to moderate from a northeasterly direction. The barometer, which had been falling at a moderate rate characteristic of the approach of a low of ordinary intensity, suddenly rose 0.12 inch in 7 minutes. Then during about a quarter of an hour it fell 0.15 inch, rose again about 0.08, fell again, and then descended less rapidly.

The sharp rise in pressure, occurring without action in the lower wind, must have indicated the sudden arrival of a mass of heavy air at some height aloft. The pressure change was of the order that would be expected if a volume of cold air a mile thick were to displace an equal volume of air 15 degrees Fahrenheit warmer. This quick change in pressure occurred some minutes before the fall of sleet. It is probable, therefore, that the sudden expansional cooling of the displaced warm air was responsible for the precipitation of large drops of rain, which then froze in falling through the thick layer of cold air. The more slowly falling snow, probably formed within the cold air at the same time, reached the ground some time after the sleet.

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