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A Science Service Feature

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? WHY THE WEATHER ?

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LOCALIZED HEAVY SNOW

Heavy snowfall is even more localized in general storms than is heavy rainfall. For the production of much snow the temperature where the snow is forming must be near to but not above the freezing point. At temperatures about 15 degrees Fahrenheit cooling processes can produce snow from saturated air only half as fast as at freezing. Intense March storms which depend to a considerable extent on great contrasts in temperature for their energy can have but a small area in which snow can be produced at a high rate. For example, in the storm at the end of January, with a contrast of about 80 degrees in 600 miles, the belt where the surface temperature ranged from 20 to 30 degrees Fahrenheit was but 100 miles wide. Thus, as one of these storms passes there is a belt of but 100 or 200 miles width where heavy snow can fall, while the path of excessive snowfall may not be over 20 to 50 miles wide. These belts are naturally just north or northwest of the track of the center of the storm, where the winds are below freezing throughout the passage of the disturbance. The map shows in a general way the distribution of snowfall relative to the center of the extraordinary storm at the end of January.

(Pick up one column matrix of map diagram. Cut last sentence if map is not used.)

(Tomorrow: When a Thaw Comes On, The Frost Goes Down)

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