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A Science Service Feature

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
discusses:

ELECTRIFIED SNOWFLAKES

Every snowflake as well as every raindrop has its electricity. During snowstorms delicate electrical instruments show great changes in electrical potential even from minute to minute. This may be partly from friction of colliding flakes, or of snow driving along the ground, but it appears likely that it is chiefly owing to the fracturing of flakes, corresponding to the electrification of splitting raindrops.

When snow forms in an upward current of appreciable velocity, only the largest and densest flakes may make appreciable progress earthward. As with breaking raindrops in an upward wind, it seems probable that with any breakage of snowflakes the heavier fragments, falling low in the cloud, will carry an excess of positive electrons, while the lighter fragments, remaining above, will carry more of the negative electrons.

As the breakage of snowflakes occurs much less readily than that of oversized raindrops, and since the relative rates of fall of larger and smaller snow fragments do not differ so much as those of raindrops, there is in winter but rarely a degree of electrical separation that is so common in summer. Thus, winter thunderstorms are rare.

(Tomorrow: Winter Temperature Differences in Cities)

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