

A Science Service Feature

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? WHY THE WEATHER ?

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WARM RAINDROPS PROMOTE LIGHTNING

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According to the widely accepted hypothesis of Dr. G.C. Simpson, the electrification of thunderclouds is due to the breaking up of rain drops by the wind; especially by the violent uprush of air associated with thunderstorms. The amount of the electrical charge resulting from this process depends upon various circumstances. It is greatly affected by the purity of the water. It also depends on the size of the drops and on the force of the air current.

Still another factor is revealed by experiments recently recorded by Prof. John Zeleny of Yale University. This physicist finds that the warmer the drops the more readily they break up, and hence the greater the amount of electricity produced. It may be at least three times as great when the drops are warm as when they are cold.

Thus it appears that warm weather is responsible in two ways for promoting frequent and intense discharges of lightning. It favors the production of the vertical air blasts, by which the raindrops are disrupted, and it warms the rain.

Which, if you think this story is out of season, explains why we DON'T often have thunderstorms in winter.

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