

A Science Service Feature

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? WHY THE WEATHER ?

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DUST STORM ELECTRICITY

By Charles Fitzhugh Talman,  
Authority on Meteorology

Writing in the Bell Telephone Quarterly, G. J. Van de Steeg describes some of the electrical phenomena that attended the severe dust storms of last year and early this year in Kansas. He says:

"The most serious handicap to sustained good telephone service was caused by static discharge from rural and toll lines. It appears that, with the extremely dry conditions prevailing, the fine particles of dust and sand in their passage through the air accumulated an electrical charge which upon contact was transmitted to the open wire lines. The effect of these charges was a severe popping noise similar to that experienced at times on the radio, and this was frequently severe enough to make conversation difficult or even impossible. Also at times the discharges caused slight shocks to the operators at the switchboards. These shocks occurred chiefly when the operator picked up the calling cord in completing calls from metallic rural lines.

"There is not available an exact measure of the severity of the static discharges, although there are stories to the effect that barbed wire fences, radio antennae and similar wires were luminous at times. Another effect of the static was to charge objects such as automobiles, with the result that a large number of people trailed chains or wires from their cars either to prevent accidental shock from a discharge or to eliminate a fancied danger from explosion of the gasoline tanks."

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2101 Constitution Ave.  
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