

Released on receipt
but intended for use
November 3, 1928

A Science Service Feature

? WHY THE WEATHER ?

Mailed October 27, 1928

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LOCAL VARIATIONS OF RAINFALL

It is a familiar observation that rainfall is often subject to striking local variations. One may even, for example, see a brisk shower falling on one side of a city street while the opposite side remains quite dry,

In order to investigate variations of this sort, a Russian meteorologist, T. J. Kassatine, has for some years been collecting results of rainfall observations made at brief intervals of time at a large network of stations in the city of Moscow. Thus in the summer of 1921 there were 78 stations in different parts of the city at which, on certain rainy days, the occurrence or non-occurrence of rainfall was noted at intervals as brief as five or ten minutes. The results of the measurements were plotted on a series of large-scale charts, each chart showing the places where rain was falling at a specified moment.

While in certain types of rainfall the shower prevailed simultaneously at all stations, there were other cases in which the rainfall was remarkably "spotty". On several occasions the rain areas shown on the charts have roughly the shape of a horseshoe, and there is a tendency for areas of this kind to retain their identity through a series of maps, though changing in outline and location. Such a rain area tends to travel along the axis of the horseshoe, but not usually in the direction of the wind. The movement may be at right angles to the wind or even directly opposed to it.

In other cases the rainfall starts with several patches in different parts of the map, which grow without changing location and finally merge together. During one thundershower the rain fell in a number of narrow bands, which advanced parallel to one another.

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