

Oct. 5

? WHY THE WEATHER ?

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Except in the South, autumn thunderstorms are usually of but one kind, "line thunderstorms". The word "line" refers to a line or zone in which markedly different air streams are meeting. It is a moving belt in which cold and warm air are mingling more or less violently. On some parts of the line the overturning of warm air by the cold is not sufficiently violent to produce heavy rain and lightning and thunder. In other parts the down and up rushes of air may be very rapid. The overturning and turbulence are greatest usually on the front of the advancing zone of mixture, for there the contrasts are greatest and the water vapor most abundant in the warm air. First a particularly dark cloud and heavy thunderstorm may come suddenly. Then for the next few hours there are likely to be occasional flashings, thunderings and showerings gradually weakening. After this there may be a rainy day before the colder air becomes sufficiently established to bring fair as well as cool weather.

In autumn water vapor is less abundant and high temperatures are less common than in summer; so thunderstorms are becoming less frequent. Local heating by day is insufficient to produce thunderstorms readily without considerable aid from the over and underrunning of winds typical of strong lows. This means that the daytime excess of thunderstorms, so marked in summer, will dwindle, and that when thunderstorms do occur they are likely to come when a "line" passes, irrespective of the time of day.

While summer thunderstorms of the local type may occur without heralding a general change in the weather, those of autumn and winter, almost without exception, give warning of a marked change of temperature immediately in prospect. Usually the change is to colder.

(Tomorrow: Rainy Air)

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