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? WHY THE WEATHER ?

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THUNDER: VERTICAL VS HORIZONTAL

Sometimes thunder is abrupt and business-like, lasting only a few seconds. Occasionally, however, in mild thunderstorms covering a great area- probably strong thunderstorms overgrown and in the process of decay- the thunder is very rambling. Even the preliminary lightning does not appear to strike but spreads rather slowly for two or three seconds through the clouds. Though the clouds directly overhead may be brilliantly lighted by discharges within them there is a surprisingly long wait, 10, 15, 20, even 25 seconds before the first growl of thunder is heard. Then the noise goes rumbling off in several directions, dying out on one side in a quarter to half a minute or more, and on another side in half to three quarters of a minute.

The magnificent scale of the lightning that is first traceable more or less by the flashes, but even more surely by the thunder that can come right through intervening clouds, is hard to believe when one applies the simple rule of about 5 seconds for the thunder to come a mile. The flashes are taking place in clouds 2 to 5 miles directly overhead, and on either side to 3, 6, or 9 miles. Discharges of lightning taking but two or three seconds in relaying from cloud to cloud cover distances of 10, 15, or even 20 miles within the sight or hearing of a single observer.

It is fairly evident that the abrupt short-lived thunder is from nearly vertical streaks of lightning, no part of which is much farther from a distant observer than any other part, except when the lightning strikes near by. The rolling thunder, on the other hand, occurs when the flashes are generally horizontal, from cloud to cloud and therefore at considerably varying distances from anyone enjoying the rumbles. Echoes may prolong the sound in a mountain region.

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