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A Science Service Feature

? WHY THE WEATHER ?

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RADIO "STATIC"

The "static" which is at times so annoying to radio fans may be attributed to a variety of atmospheric disturbances. Our limited knowledge of the causes of these troublesome noises has been summarized by Dr. L. W. Austin of the Bureau of Standards. Static disturbances are generally most marked during the summer months and are especially severe in the tropics. "They differ in strength from year to year, and their intensity usually increases rapidly with the wave length to which the receiving apparatus is tuned." These sounds may be classified as clicks, hissing, rumbling, and crashing. The clicks are attributed to distant flashes of lightning and the hisses to dust, snow, or rain striking the antenna. Both clicks and hisses are relatively unimportant; rumbling sounds (grinders) constitute the commonest disturbance. It is thought that rumblings are produced by electrical readjustments in the upper atmosphere which send electrical waves to the ground. "The more powerful rumbling disturbances seem to come frequently from definite centers which often appear to lie over mountainous regions." For instance, a center of great energy somewhere in southern Mexico often causes receiving difficulties in the eastern United States, where disturbances from the Allegheny Mts. are also noticed. Mt. Rainier and the mountains back of San Francisco and San Diego are trouble centers on the Pacific Coast.

Large cities, thunderclouds, and the advancing edges of rain areas also are sources of rumbling. Rumbling disturbances, in general, occur over land surfaces and do not much trouble ships at sea. Rumblings seem to show a seasonal variation in intensity connected with the height of the sun's path. At the equator, two maxima occur each year when the sun passes through the zenith. All these sources and times of rumblings correspond to localities and seasons most favorable to thunderstorms. The crashes which are heard over the radio are not well understood but may possibly be connected with solar outbursts. They are frequent on days when earth-current disturbances are noted on telegraph and cable lines.

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