A Science Service Feature

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MULTIPLE LIGHTNING

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The fact that many flashes of lightning consist of several discharges in rapid succession along a common path (or a path slightly shifting with the wind) has long been known. Recently new knowledge concerning these multiple flashes has come to light through the use of special photographic apparatus. Studies by engineers of the General Electric Company, confirming results previously announced from South Africa by Prof. B. F. J. Schonland, show that in most cases a multiple stroke is initiated by a relatively faint "leader" stroke or discharge from cloud to earth, followed by a brilliant, powerful flow of energy in the other direction but over exactly the same path established by the leader. In rapid succession, only a few micro-seconds apart, there follows a series of subsequent discharges -- first a leader and then a brilliant reverse flow, and so on for as many as ten such discharges, all occurring in a split fraction of a second -- so rapidly that neither human eye nor ordinary camera could follow them. The photographic records also show that the forked streamers frequently associated with lightning are usually confined to the first discharge only; thereafter the discharges all follow the main path only.

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