

A Science Service Feature

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? WHY THE WEATHER ? Mailed May 2, 1933

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FARADAY ON BALL LIGHTNING

Michael Faraday was the foremost authority of his time on the subject of electricity, but he undoubtedly went astray when in February, 1838, he said in the Philosophical Transactions of the Royal Society:

"Electric discharges in the atmosphere in the form of balls of fire have occasionally been described. Such phenomena appear to me to be incompatible with all that we know of electricity and its modes of discharge. As time is an element in the effect it is possible perhaps that an electric discharge might really pass as a ball from place to place; but as everything shows that its velocity must be almost infinite, and the time of its duration exceedingly small, it is impossible that the eye should perceive it as anything else than a line of light. That phenomena of balls of fire may appear in the atmosphere, I do not mean to deny; but that they have anything to do with the discharge of ordinary electricity, or are at all related to lightning or atmospheric electricity, is much more than doubtful."

Ball lightning is generally seen during thunderstorms and there can hardly be any question today about its being a manifestation of atmospheric electricity. Whether it should be classed as a variety of lightning is, however, another question. The principal reason we now call it lightning appears to be because it was so described nearly a century ago by the distinguished French physicist, Arago.

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