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Electrical Breakdown in Lightning Arrestor Connector (LAC) Devices HAROLD P. HJALMARSON, KENNETH KAMBOUR, Sandia National Laboratories, ANDREW C. PINEDA, U.S. Air Force Research Laboratory — Lightning arrestor connector (LAC) devices protect electronic devices by providing a conductive path to ground for electrical power surges caused by lightning. Such devices consist of an insulating material between electrodes. This insulation region is composed of an air gap and a high permittivity dielectric. In this presentation, the physics of the phenomena active in the early stages of the flow of transient electrical current will be described. The conditions that lead to thermal breakdown of the dielectric will also be discussed.–Sandia National Laboratories is a multiprogram laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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