



Contribution ID: 1243

Type: **Poster**

## 2P30 - Electrostatic Finite Element Numerical Modeling of Spark Gap and Related Accelerator Structures

*Tuesday 25 June 2019 13:00 (1h 30m)*

L3 Applied Technologies is developing series pulsed forming water transmission lines for Los Alamos National Laboratory. The Series Pulse-Line Integrated Test Stand (SPLITS) consists of a set of four, 5.5 ohm coaxial water pulse forming lines in series. Each water line is capable of producing a -300 kV pulse when driving a matched resistive load.

As part of this effort, the University of New Mexico is carrying out a 2d and 3d Finite Element Electrostatic modeling of the main spark gap switch design in support of advanced laser triggered switch resistivity studies. This paper presents results of 2d electrostatic modeling of the main spark gap geometries using the FEM tool ESTAT. 3 dimensional models of these structures using FEM code HiPhi will also be shown as well as some preliminary electrodynamic time domain models for selected geometries.

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**Session Classification:** Poster - Microwave Generation and Plasma Interactions and Pulsed Power Switches and Components

**Track Classification:** 2.5 Codes and Modeling