

Mechanism of Stepped Leaders in a Simple Discharge Model

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We construct a one-dimensional model for the stepped leader in the filamental discharge by simplifying an electric-circuit model of discharge. We find that the leader of the discharge moves stepwise by direct numerical simulations, and then we try to understand the mechanism of the stepwise motion by reducing the spatially extended system to the dynamics of the tip position of the discharge.

Comments: 4 figures

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