

Abstract Submitted
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Digital Simulation of Thunder from Three-Dimensional Lightning

JAMES DUNKIN, DANIEL FLEISCH, Wittenberg University — The physics of lightning and its resultant thunder have been investigated by many people, but we still don't have a full understanding of the governing processes. In this study, we have constructed a three-dimensional model of lightning using MATLAB[®] software, and used N-waves as postulated by Ribner and Roy to synthesize the resultant thunder signature. In addition, we have taken an FFT of the thunder signature, and compared the time-domain waveform and frequency spectrum to recordings of thunder taken over the summer of 2009. This analysis is done with the goal of further understanding the processes of thunder production.

James Dunkin
Wittenberg University

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