

Abstract Submitted
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Modeling Electron Sources with Time-Dependent Green's Functions¹ MARK HESS, CHONG SHIK PARK, Indiana University Cyclotron Facility — Modern electron sources which are utilized in accelerators and microwave sources can be difficult to model due to a combination of complicated effects. In general, these sources may produce tight electron bunches which have small length and time scales associated with them. In addition, the conducting boundary conditions of the source itself may give rise to non-trivial electromagnetic effects on the beam. We demonstrate how both of these effects can be successfully modeled using a time-dependent Green's function method, and show preliminary examples of simulations based on this technique of electron sources found in experiments.

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