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Fast electromagnetic field solver for transient antenna simulations

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This paper introduces a Finite-Difference Time Do- main (FDTD) electromagnetic field solver focused on speed and low-memory usage. It solves both electric and magnetic fields on axisymmetric grids. The accuracy of the code has been compared to the equivalent Finite Element Method (FEM) models in 2D and 3D. Finally, the performance metric of the FDTD solver has been estimated and compared with a FEM code.

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