Abstracts

Perfectly matched layer media for an unconditionally stable three-dimensional ADI-FDTD method

Gang Liu and S.D. Gedney. "Perfectly matched layer media for an unconditionally stable three-dimensional ADI-FDTD method." 2000 Microwave and Guided Wave Letters 10.7 (Jul. 2000 [MGWL]): 261-263.

A split field perfectly matched layer (PML) medium is introduced for the three-dimensional (3-D) alternating direction implicit (ADI) formulation of the finite-difference time-domain (FDTD) method. It is demonstrated that the ADI-FDTD method remains unconditionally stable with the inclusion of the PML. The effectiveness of the absorbing medium as a function of the time step is also demonstrated.

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