Abstracts

Introduction of artificial boundary conditions in the spectral moments method

E. Bachelier, G. Poussigue, P. Borderies and C. Benoit. "Introduction of artificial boundary conditions in the spectral moments method." 1997 Microwave and Guided Wave Letters 7.12 (Dec. 1997 [MGWL]): 396-398.

The overall objective of this paper is to demonstrate the ability of the spectral moments method, a new method in electromagnetism, to incorporate absorbing boundary conditions. This demonstration is done successfully with plane pulse propagation in free space, and through a comparison with finite-difference time-domain (FDTD) results. The very good agreement of the results leads to the conclusion that the spectral moments method application for electromagnetic propagation and diffraction problems should be further investigated.

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