Abstracts

Spectral Method for Modes Excitation Problem in Anisotropic Waveguides

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In modes excitation problem of anisotropic waveguides it should be paid attention to the case of excitation sources with longitudinal components. In such case the usage of the basis of membrane functions of normal modes for the solution of the excitation problem may not lead us to unequivocal results because only transverse components of modes fields form a complete set of orthonormal basis on the waveguide cross section. In this paper it is shown that in the presence of longitudinal currents it appears the additional terms in the excitation integral caused with as anisotropy of medium as the transversal derivatives of longitudinal currents.

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