

OPTIMAL DISCRETIZATION OF PML FOR ELASTICITY PROBLEMS*

VADIM LISITSA[†]

Abstract. This paper presents a generalization of the optimal finite-difference perfectly matched layer (PML) approach to isotropic elasticity. It allows the use of methods of rational approximation theory for a clever choice of discretization parameters in order to essentially reduce reflection coefficients for a wide range of incident angles while using a small number of grid points.

Key words. artificial boundary conditions, optimal grids, perfectly matched layers, finite-difference schemes, rational approximation

AMS subject classifications. 65N06, 74C02

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[†]Institute of Petroleum Geology and Geophysics, Siberian Branch of the Russian Academy of Science, 630090 Novosibirsk, Russia (lisitsavv@ipgg.nsc.ru).