

Contents

Introduction	5
Members of consortium “Seismic waves in complex 3-D structures”	9
Research programme on seismic waves in complex 3-D structures	11
Seismic models and inversion techniques:	
L. Klimeš: Sobolev scalar products in the construction of velocity models	15
K. Žáček: Smoothing the Marmousi model	41
L. Klimeš: Smoothing the Marmousi model for Gaussian–packet migrations	63
P. Bulant: Smoothing 2-D model HESS for Kirchhoff migrations	75
I. Pšenčík, J. Liu & R.P. Young: Inversion of qP wave travel times from the URL experiment	83
Ray methods in isotropic media:	
P. Bulant: Is the bicubic travel–time interpolation time consuming?	113
L. Klimeš: Calculation of geometrical spreading from gridded slowness vectors in 2-D	115
Ray methods in anisotropic media:	
V. Červený: Summation of paraxial Gaussian beams and of paraxial ray approxi- mations in inhomogeneous anisotropic structures	121
V. Vavryčuk: Ray tracing for anisotropic media in singular directions of S waves	161
V. Vavryčuk: Simple anisotropic Green functions derived by higher–order ray ap- proximations of asymptotic ray theory	185
Weak anisotropy:	
I. Pšenčík & J. Dellinger: Quasi–shear waves in inhomogeneous weakly anisotropic media by the quasi–isotropic approach: a model study	203
CD–ROM:	
V. Bucha, P. Bulant & L. Klimeš (eds.): SW3D–CD–4	227