

## MODELLING AND MIGRATION OF ELASTIC DATA (2-11)

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In the papers on 'One-way versions of the Kirchhoff integral' (2-23, 2-24) several expressions for extrapolation of downgoing and upgoing primary waves are derived, both for acoustic and elastic data. For the elastic case, the one-way Kirchhoff integrals are essentially based on one-way Green's functions for P- and S-waves. In this paper we briefly discuss a finite-difference modelling algorithm for elastic data. Next we show how this algorithm is modified for modelling the one-way Green's functions for P- and S-waves. After substituting these Green's functions into the elastic one-way Kirchhoff integrals we show results on forward and inverse extrapolation of primary P- and S-waves through inhomogeneous elastic media. Finally we discuss some simple examples on full elastic migration, based on the elastic one-way Kirchhoff integrals. The migrated sections represent the (angle-dependent) P-P, P-S, S-P and S-S reflectivity of the subsurface.

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