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recording filter settings. In the case of marine data it is also possible to include the shot and receiver ghost.

The data is analysed and a bandwidth selected which relates to the good signal to noise portion of the input data's spectrum. A bandwidth of 8Hz to 70Hz was selected for this dataset. Within this bandwidth the data is deconvolved using standard spiking deconvolution operators based on averaged autocorrelation functions.

Outside the selected bandwidth an all-pass dephasing filter is designed that will correct for the modelled wavelet's phase distortion.

The deterministic dephasing filter and spiking deconvolution operator are combined and applied to each input record.

The benefits of this approach are:

1. Spatial Stability

The stability of the output wavelet is improved as the input autocorrelation functions are averaged. If standard trace-by-trace deconvolution is applied noise can, especially in the case of spiking deconvolution, influence the design of the deconvolution operators.

2. Deterministic stability in wavelet design

The low frequency end of the spectrum often governs the shape of the deconvolved wavelet. By replacing this part of the spectrum with known amplitude and phase characteristics the deconvolution will be more stable in the presence of spatially variable low frequency noise, such as ground-roll, mud-roll etc.

For this survey the selected parameters were :

Number of operators per record	: 4
Percentage White Noise	: 0.1%
Operator Length	: 400 msec.
Number of Design Gates	: 1

Design Gates in msec.

Near trace	100 to 4400
Far Trace	2200 to 5000