Rho (wavelet shaping) filter

Modelling and migration should produce no change in a horizontal event, however some of these processes distort the wavelet. This distortion is illustrated in Figure 1 that shows in (a) a portion of a horizontal event created with a zero-phase wavelet. After modelling with diffractions this horizontal event should remain the same as the input, but there is a phase distortion as illustrated in (b). When the event in (a) is migrated with a 2D Kirchhoff algorithm, the event becomes that illustrated in (c). These wavelet distortions are corrected using a rho filter (operator) that corrects the shape of the wavelet back to the zero phase shape of (a). The rho filter modifies the phase and applies a taper to the amplitude spectrum.
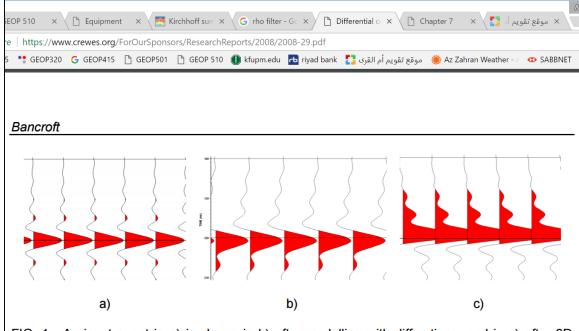

FIG. 1. An input event in a) is shown in b) after modelling with diffractions, and in c) after 2D Kirchhoff migration.