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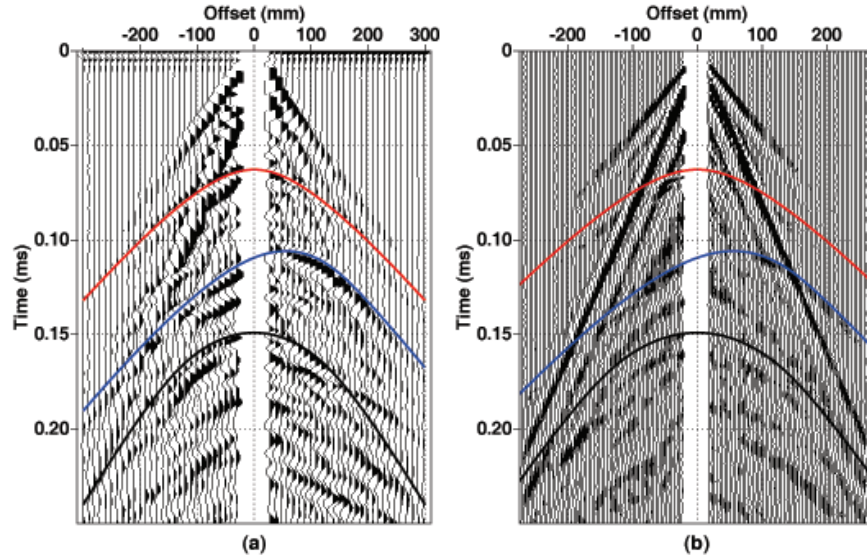


Figure 5.7 Horizontal component of the wavefield: (a) data recorded with the P-wave source and S-wave receiver transducer; (b) data recorded with the S-wave source and the laser vibrometer as the receiver.

Figure 5.7B shows the densely sampled dataset recorded with the laser vibrometer. Since most of the reflections are masked by the ground roll, I suppress that noise by applying FK filtering (Figure 5.8). As before, a close similarity exists between the two datasets recorded with the two different experimental setups. The PSV-wave can be identified at a zero-offset travelt ime of 0.11 ms. As expected, it has asymmetric moveout since the travelt ime does not remain the same when the source and receiver are interchanged. This asymmetry indicates that the model indeed lacks a horizontal symmetry plane, as should be the case for TTI media.

The PS-wave travelt ime picks were made using the laser dataset (the solid line in Figure 5.8). I intentionally reverse the polarity at negative offsets to facilitate correlation of PS travelt imes. Even on the horizontal component, the P-wave primary reflection can still be identified around the zero-offset time $t_0 = 0.064$ ms. The solid line with apex at 0.064 ms, which marks the picked P-wave travelt ime from the vertical component, matches P-wave arrival on the horizontal component. It may also be possible to interpret the SS-wave primary reflection but it is not as prominent as the other modes because the P-wave transducer does not excite enough S-wave energy.