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Determining the S-wave velocity model for the Low Andarax River Valley (SE Spain) by means of the coherence function of the ambient noise

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We investigate the shallow velocity structure of the Low Andarax River by means of the analysis of the coherence function of the vertical component of the ambient noise. We performed a field campaign consisting in tracing several profiles perpendicular to the Andarax river. The data points are deployed every 500 m along the lines. The goal is to find the depth to the basement along the profiles.

The ambient noise data processing procedure was divided into four principal phases: (1) single station data preparation, (2) average coherence between pairs with 1 minute windows, (3) calculation of dispersion curves and (4) inversion of those dispersion curves in order to obtain the S-wave velocity structure.

The results are in agreement with previous geologic studies.