3D SIMULATION OF SEISMIC NOISE IN A SEDIMENTARY BASIN WITH A BLIND FAULT STRUCTURE: APPLICATION TO THE SENSITIVITY OF SURFACE H/V AND NOISE ARRAY MEASUREMENTS

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We have developed a 3D computational tool to synthesize ambient seismic vibration (ASV) wavefields due to surface noise sources. We have applied this tool to a set of receivers located around a blind fault, in a canonical model of the Mygdonian sedimentary basin in Greece. We present the results of several analyses of synthetic noise seismograms (up to 5 Hz) corresponding to many different source-receiver configurations. We further focus on two different analyses: single-station H/V, which are compared to the predictions obtained in the Diffusive Field Approximation, and noise array measurements.