



## **Dispersion Curve Analysis with Ambient Noise Cross Correlation in Case of Onshore-Offshore Networks**

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The determination of surface wave Green's functions between two seismic stations by cross correlating seismic noise has become a promising approach to tomography. In this study we emphasise the special application of this method for the case of onshore-offshore networks.

The seismic records of 65 three-component land stations (Guralp, Mark, STS-2) and 22 ocean bottom seismographs (OBS, only Hydrophone component) are available for this study. The EGELADOS network was deployed in the southern Aegean from October 2005 to April 2007. Dispersion analysis of resulting seismograms provides group velocity curves which give information about the crustal and uppermost mantle structure that cannot be obtained from earthquake data. For the Aegean region considerable regional differences in crustal structure can be expected.

Particular attention is paid to the determination and analysis of dispersive signals in case of Ocean Bottom Seismographs and hydrophones. At land stations we extract clear dispersion curves but OBS seismograms show multiple signals of different velocities. The frequency range and characteristics are dependent on surface structures between the two stations as well as their location. Ray path profiles between two hydrophones with no elevation have a strong acoustic phase with a faint surface wave signal.