



## **Characterization and applicability of an Ocean Bottom Seismometer Array to detect incoherent seismic signals**

Roberto Cabieces (1), Araceli García (2), Antonio Pazos (1), and Frank Krüger (3)

(1) Real Instituto y Observatorio de la Armada, Spain (rcabdia@roa.es), (2) Universidad Cádiz (araceli.garcia@uca.es), (3) Universität Potsdam (kruegerf@geo.uni-potsdam.de)

The use of land seismic arrays has been broadly used to calculate the apparent slowness and backazimuth of the seismic waves. For many reasons, the use of conventional array techniques by Ocean Bottom Seismometers (OBS) is a challenge but, it gives an important Earth structure information from the survey area. In this research, we have deployed a 70 km aperture array formed by 5 OBS in the Cape Saint Vincent area.

Against all odds, We have been able to obtain seismic wave parameters for regional earthquakes by using this incoherent array (array aperture much larger than wavelength).

In order to obtain these parameters, We have implemented two techniques. On the one hand a multitaper spectrogram time domain beamforming and on the other one a Frequency-Wavenumber (F-K) over the lowpass filtered waveforms. Finally, It will be shown some example of this applicability either in teleseism cases and local earthquakes.