



New OBS network deployment offshore Ireland

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With the presence of the stormy NE Atlantic, Ireland is ideally located to investigate further our understanding of ocean generated microseisms and use noise correlation methods to develop seismic imaging in marine environments as well as time-lapse monitoring. In order to study the microseismic activity offshore Ireland, 10 Broad Band Ocean Bottom Seismographs (OBSs) units including hydrophones have been deployed in January 2016 across the shelf offshore Donegal and out into the Rockall Trough. This survey represents the first Broadband passive study in this part of the NE Atlantic. The instruments will be recovered in August 2016 providing 8 months worth of data to study microseisms but also the offshore seismic activity in the area.

One of the main goal of the survey is to investigate the spatial and temporal distributions of dominant microseism source regions, close to the microseism sources. Additionally we will study the coupling of seismic and acoustic signals at the sea bed and its evolution in both the deep water and continental shelf areas. Furthermore, the survey also aims to investigate further the relationship between sea state conditions (e.g. wave height, period), seafloor pressure variations and seismic data recorded on both land and seafloor. Finally, the deployed OBS network is also the first ever attempt to closely monitor local offshore earthquakes in Ireland. Ireland seismicity although relatively low can reduce slope stability and poses the possibility of triggering large offshore landslides and local tsunamis.