Contribution ID: **62** Type: **poster**

Ambient seismic noise and its potential use in seismic exploration and monitoring

Tuesday, 24 May 2016 18:00 (0 minutes)

We investigate to what extent subsurface information can be extracted from ambient seismic noise. Seismic noise is always present in seismic records and can be measured around the world, even in the quietest deserts. This makes noise an excellent candidate for seismic exploration or monitoring (and a nuisance for gravitational wave detection). The modal structure and strength of the noise field depend on several factors, such as noise-source distribution and mechanism, depth of observation, atmospheric conditions, geographical location of observation, local geology, regional tectonic activity, etc. We study the characteristics of seismic noise in the frequency range 0.05-10 Hz. We discuss the measurement and analysis of seismic noise and present results from experiments in The Netherlands, Libya, Egypt and Saudi Arabia. Next, we review methods to extract subsurface information from noise. Finally we show examples of successful surface-wave or body-wave retrieval from seismic noise.

Primary author: CAMPMAN, Xander (Shell Global Solutions International B.V.)

Co-author: Dr WALK, Wim (Shell Global Solutions International B.V.)

Presenter: CAMPMAN, Xander (Shell Global Solutions International B.V.)

Session Classification: Poster Session