



## **Acoustic monitoring in the Ross Sea, Antarctica, using hydrophone of the Ocean Bottom Seismometer**

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Although a number of active source seismic experiments have been conducted over the last few decades to investigate the crustal structure in the Ross Sea, Antarctica, long-term observation to monitor underwater tectonic activities and changes in the cryospheric environment still remains challenging due to existence of sea ice in the study region. Korea Polar Research Institute has accomplished successful deployment of ocean bottom seismometers (OBS) in the Ross Sea collaborating with Alfred Wegener Institute during the period of 2011-2012 and 2014 by Korean icebreaker RV Araon. The OBS system manufactured by K.U.M. contains a hydrophone sensor that allow us to monitor underwater acoustics generated by tectonic and ice-related events. We present spectrograms of the continuous hydroacoustic data and various types of signals, e.g. seismic T-waves, icequakes, and tremors. There are periodic and harmonic tremors that might be related with tidal modulation, and the seasonal variation of the background noise seems to be related with sea ice concentration.