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Hydroacoustic monitoring in the Scotia sea, Antarctica

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Since December 2005, KOPRI and OSU/NOAA have collaboratively operated an Autonomous Underwater Hydrophone (AUH) array in the Southern Ocean, mostly in the Bransfield Strait, Antarctica. During the period, however, from December 2007 to February, we moored five AUHs in the Scotia Sea to monitor seismicity and ice-related signals in the vicinity of the South Sandwich Islands. The array takes advantage of the efficient propagation of sound in the oceans to detect, locate and analyze the temporal and spatial distribution of small- to moderate-size earthquakes and cryospheric sounds along the study region. A total of 793 earthquakes were identified from an automated-detection-association algorithm during the mooring period. In this presentation, we will show our preliminary analysis of hydroacoutic observation and discuss tectonics in the Scotia Sea.

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