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signal detected at the Lützow-Holm Bay region, East Antarctica, and their relation to surface environment

A single infrasound sensor has been making continuous recordings since 2008 at Syowa Station (SYO; 69.0S, 39.6E) in the Lützow-Holm Bay (LHB) of East Antarctica. The continuously recorded data clearly show the contamination of background oceanic signals (microbaroms) throughout all seasons. In austral summer 2013, several field stations with infrasound sensors were established along the coast of the LHB. Two infrasound arrays of different diameters were set up: one at SYO (with a 100-m spacing triangle) and one in the S16 area on the continental ice sheet (with a 1000-m spacing triangle). In addition to these arrays, isolated single stations were deployed at two outcrops in the LHB. Detailed and continuous measurements of infrasonic waves in Antarctica could prove to be a new proxy for monitoring regional environmental change as well as temporal climate variations in high southern latitudes. Until now, these arrays clearly detected the propagation direction and frequency content of microbaroms from the Southern Ocean. In addition to the microbaroms, several other remarkable infrasound signals were detected, including regional earthquakes, the calving of icebergs and glaciers, and so on. In this presentation, we would introduce detected infrasound signals.

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