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# sound of melting glaciers in Greenland in a changing climate

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The infrasound component of the IMS is not only capable of detecting nuclear-test explosions, a wide variety of natural and anthropogenic sources are continuously measured by the network.
A rich infrasonic wavefield is recorded by station I18DK, located in Northwest Greenland. I18DK is located in an unique environment far above the polar circle. Operations started in 2004, enabling long-term monitoring of its surroundings and building a statistically reliable soundscape. The infrasonic recordings reveal lots of infrasonic activity during summer, while the surroundings are infrasonically quiet in winter. The sounds are associated to glaciers around I18DK, active during the melting season. Different mechanisms like run-off and calving generate infrasound. It is found that sea and land-terminating glaciers leave a distinctly different infrasonic signature.
The simultaneous observation of sounds from different glaciers over a long time period paves the way for studying the melting behavior in the Arctic cryosphere under a changing climate. Between the years a large variability is found in infrasonic activity of the glaciers. Such activity is quantified in terms glacier dynamics by comparing it to both modeled and locally measured run-off. Sounds of the land terminating Qaanaaq glacier show an increase in activity over the years.

## Promotional text

Listening to inaudible sounds, infrasound, of Arctic glaciers under a changing climate

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