

Distinctive sounds announce iceberg births

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The Hans Glacier in Svalbard, Norway in August 2013. New research finds that different types of ice loss from glaciers are associated with distinct rumbles, snaps and splashes. Credit: Oskar Glowacki

Underwater sounds can be used to detect different ways glaciers lose ice as they flow into the ocean, giving scientists new insight into these poorly understood events, according to new research.

Scientists used [underwater microphones](#) aboard buoys to record a variety of iceberg births at the Hans Glacier in Svalbard, Norway during three days in August 2013. These recordings were combined with time-lapse photos of the glacier during the same time period.

By synchronizing the sound recordings with the photographs, the researchers discovered that different types of [ice](#) loss are associated with distinct rumbles, snaps and splashes, according to a new study accepted for publication in *Geophysical Research Letters*.

The scientists identified acoustic signatures for three different ways that ice breaks away from a glacier, or calves: An ice chunk falls off the leading face of the glacier into the water below. An ice fragment cracks away from that face and slides down it into the water. Or, an underwater ice block detaches from the face beneath the water, then pops up to the sea surface.

The newly reported findings may give scientists a better understanding of how [glaciers](#) lose ice, the study's authors write, even when icebergs detach underwater—a difficult-to-observe phenomenon. If inexpensive acoustic methods could be used to gain insight into various calving events, they add, that could be important as glaciers around the world continue to crumble and contribute to global [sea level rise](#).

More information: "Underwater acoustic signatures of glacier calving." *Geophysical Research Letters*, [DOI: 10.1002/2014GL062859](https://doi.org/10.1002/2014GL062859)

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