Tracking melting glaciers by tuning in to bubble noise

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Video Byte

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Abstract

Climate change is causing glaciers to melt at an unprecedented rate. Although tracking this melting is essential to monitor changing sea levels and ocean conditions, however, conducting research on glaciers can be extremely dangerous. Huge icebergs can spontaneously break off, crashing into the surrounding water making glacier-front measurements risky. But researchers have proposed a potential solution: tuning into bubble noise. Glacier ice contains thousands of tiny air bubbles. As ice along the sea margin melts, the bubbles are released into the ocean. Each released bubble produces a characteristic sound which can be recorded with underwater microphones. The faster the ice melts, the greater the bubble noise. By carefully analyzing the acoustic properties of this noise, scientists can more safely track planetary changes. O. Glowacki, et al. The Intensity, Directionality, and Statistics of Underwater Noise From Melting Icebergs. (2018) Geophysical Research Letters