

Measuring Glaciers with Unmanned Boats

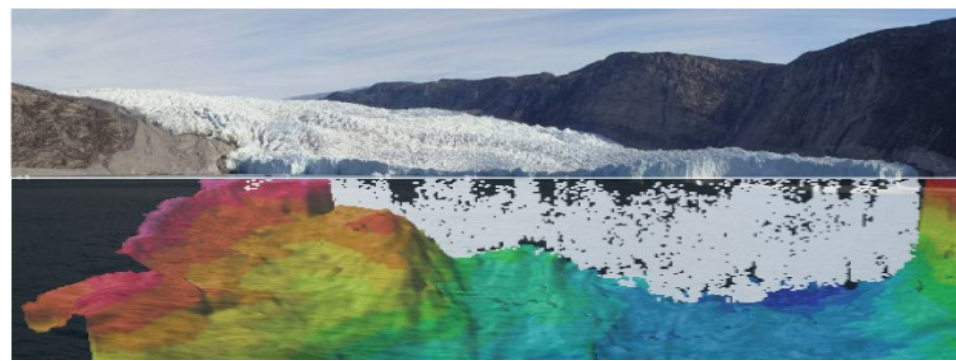
Introduction

Glaciologists study glaciers flowing into the sea in Greenland. They measure them from a boat with underwater sonar and 3D laser scanners.

Unmanned boats are a safer way to do this, because falling ice creates very big waves.



The boat approaching the glacier. The cylinder on the deck is the laser scanner.



The 3D image from the sonar.

Why is it important?

- Glaciers move ice from the land into the sea.
- This contributes to sea level rise.
- It's also a measure of climate change.

How is it done?

- Robot boats safely scan the glacier above and below the water.
- The scans are turned into 3D maps of the glacier.
- Comparing scans shows how much ice fell into the sea.