

Thwaites Glacier

The International Thwaites Glacier Collaboration

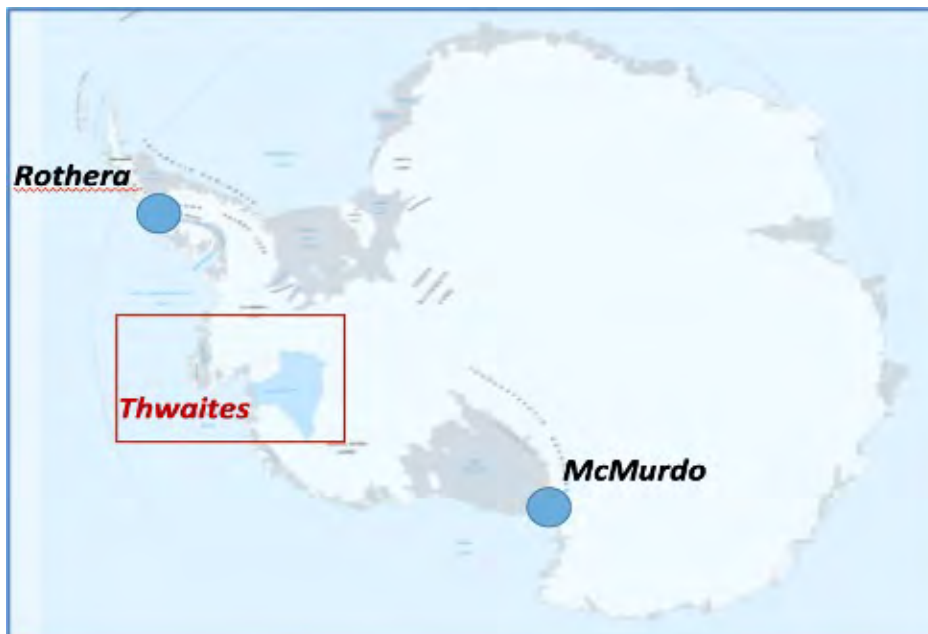


Boaty McBoatface and the Thwaites Glacier

Rob Larter, British Antarctic Survey

North/South/East/West? The presenter starts by asking what direction we need to go to get to Antarctica from the UK or US. Many did not know the answer! Which direction is it? _____

Thwaites is Remote: In the map below Thwaites Glacier (light blue area in red box) looks quite small, yet it's as large as Great Britain or Florida. Thwaites is in the West Antarctic Ice Sheet. Most of this area is pushed down by ice so the land is more than 2 km (1.2 miles) below sea level, and almost all of Thwaites is below sea level! Why do you think this makes the area so vulnerable?

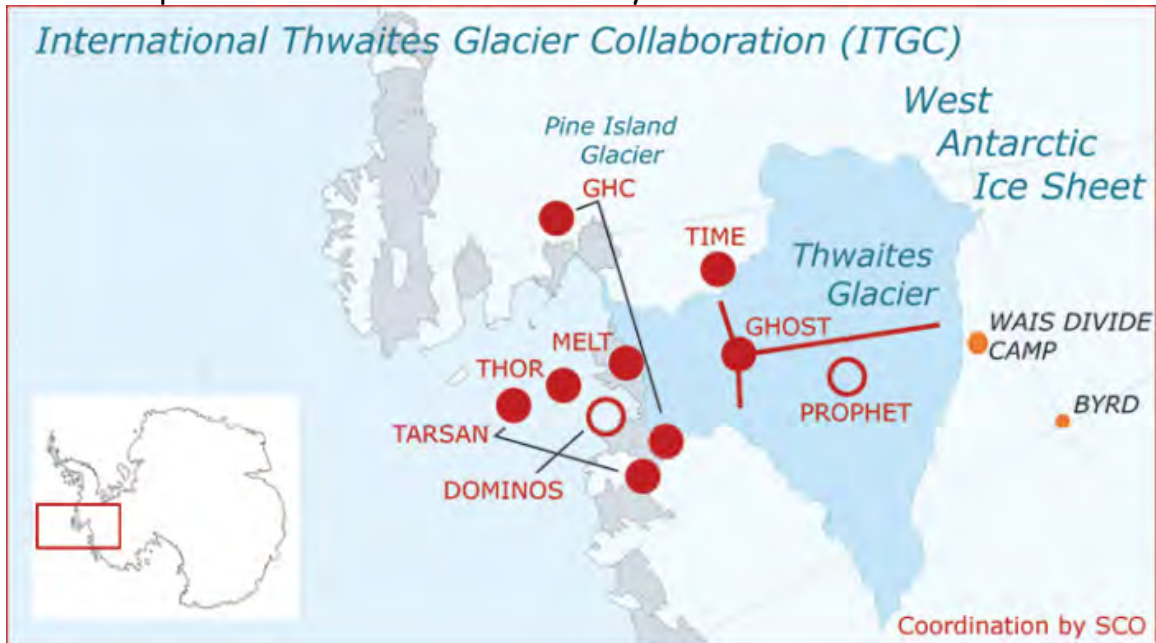


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An Antarctic map of the remote location of Thwaites between the US McMurdo base, and the BAS Rother base. Its distance from our two main bases of operations makes it hard to study!



ITGC is using remote field camps, aircraft and ships as well as data from satellites to study the changes in Thwaites! Each of labeled red dots is a project that is part of ITGC. On the map the grey sections are ice shelves.



Boaty McBoatface is a small 3 meter (~10 ft) Autonomous Underwater Vehicle. It can be programmed by the science team to go and collect data, diving to depths of 6000 meters (3.7 miles) and under an ice shelf!

Ice shelves are sections of the ice sheet that have flowed off the land and are now floating on the ocean. They surround much of Antarctica. Sitting in the ocean makes the ice shelves vulnerable to the warming occurring there.

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Understanding what is going on under the ice shelf is challenging. This is where Boaty McBoatface can help! What kinds of things do you think the scientists want to know from under the ice shelf?

Batty Boaty! Our presenter noted that Boaty is like a bat in how it navigates under the ice. Explain how Boaty's Obstacle Avoidance System is like a bat?

One, Two, Three... We learned there is more than one Boaty, three or possibly more! Why would we need more than one Boaty?

Consider this! Boaty's data is all collected internally. What challenge would you see with this? _____

What's in a name! Boaty McBoatface was named by the public, using online voting. If a new Autonomous Underwater Vehicle ITGC were to be developed and launched as part of the ITGC what name would you submit?
