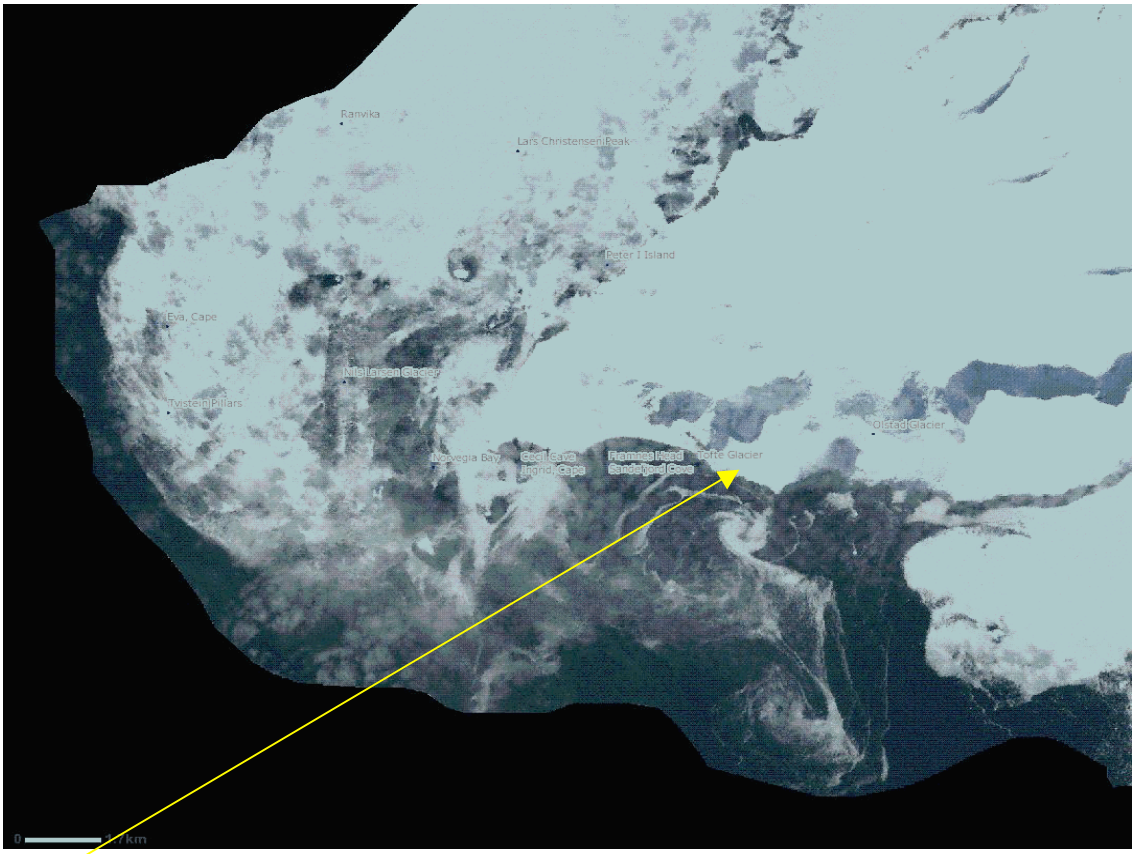
LIMA Challenge Proposal

Our team has studied the Landsat Image Mosaic of Antarctica, and has found an area we believe to be very interesting from a scientific standpoint- the Tofte Glacier. This glacier is immediately south of Sandefjord Cove on the west side of Peter I island, which is off the west coast of the Antarctic Continent in the Bellingshausen Sea. The glacier was discovered in 1927 by a Norwegian expedition on the ship Odd I and named for Eyvind Tofte, the leader of the expedition. The Tofte Glacier's coordinates are 68˚48' S and 90˚42' W.



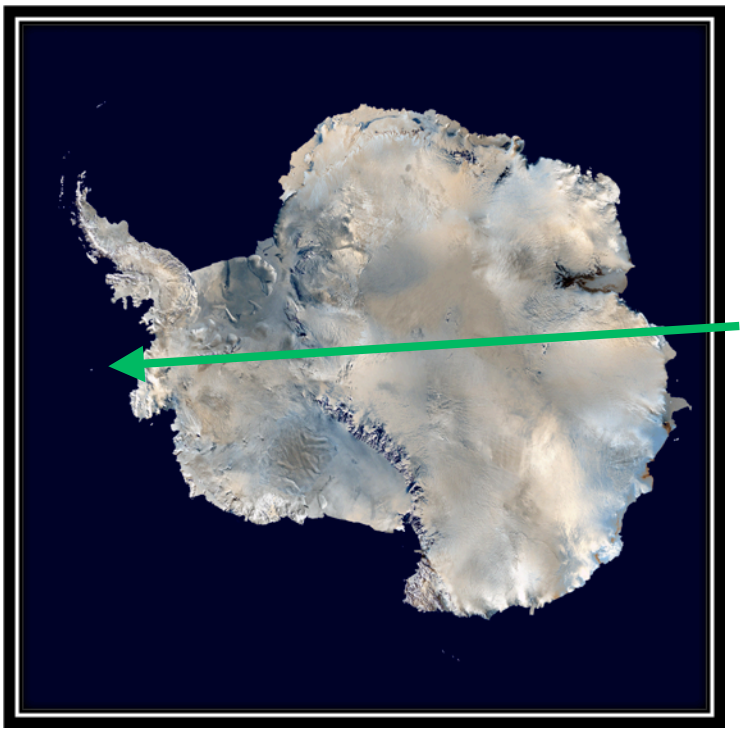
This is the Tofte Glacier, with the help of the Landsat Image Mosaic of Antarctica (LIMA).

The Tofte Glacier is scientifically interesting because the glacier is remotely located on an island in the Bellingshausen Sea, which may be impacted by rising

global temperatures. Also, there are swirl-like patterns in the water and ice near the glacier. We'd like to know what is causing these patterns in the LIMA satellite imagery.

We think that the glacier might be melting or retreating at a faster rate than glaciers closer to the interior of the continent. We think that the rough, warmer currents of the sea may be pulling some of the ice away from the glacier. This ice will eventually melt and might contribute to rising sea levels- a global concern. In addition, we believe that a large, new iceberg may be forming off the coast of the glacier from this process. There are currently no scientific research centers in the area we wish to study, so there is a need for further exploration and data gathering in this region.

Further study of this geologic feature may help us to determine the impact of global warming on the Antarctic continent, and to what extent people all over the world should focus on the problem. It appears that further scientific evidence is needed regarding the melting of polar ice caps. Our team strongly believes that we should receive funding for our project.



This is Peter I Island, where the Tofte Glacier is located.

This proposal is respectfully submitted by the Fifth Grade class at the Good Shepherd Day School in Punta Gorda, Florida. Team members are: Julianna,

James, Kristin, Sravya, and Nicholas. Thank you very much for considering our work!