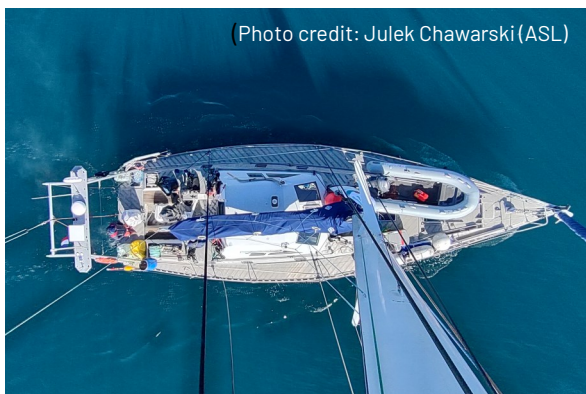




Photo credit: Julek Chawarski (ASL)

ASL's Biological Oceanographer, Dr. Julek Chawarski, successfully completed a research expedition to the glacial fjords along the southeast coast of Greenland, near the Ammassalik Archipelago. Aboard the 16-meter research sailboat *Atka*, the team focused on glacial-ocean interactions in a region rarely explored by research vessels. While most studies in the area concentrate on the massive Sermilik fjord system, home to the Helheim Glacier, the *Atka's* crew of five, including two scientists, conducted pioneering research in the surrounding, understudied fjords.

Julek, collaborating with a team of scientists from Stockholm University, aimed to investigate the heat flux of Atlantic water from the Irminger Sea and its impact on the melting of smaller outlet glaciers along the coastline. The region's unusually heavy ice conditions and storm activity delayed the *Atka* in Reykjavik for two weeks before it could embark on a challenging crossing of the Denmark Strait. The vessel finally arrived in Tasiilaq on August 9th, and the team proceeded to navigate narrow coastal waters to reach ice-free fjords in the Ikertivaq region.



(Photo credit: Julek Chawarski (ASL))

Using the *Atka's* newly installed custom-built winch system, the team profiled over 14 kilometers of the water column with a novel profiler package equipped with ASL's latest instrument, the AZFP-nano. This advanced profiler was developed to measure a wide range of physical and biological parameters, including plankton biomass and distribution. In addition to studying heat transfer to the Greenland ice sheet, the team sought to unravel the varying effects of meltwater on polar and subpolar plankton ecosystems.





The magnitude of heat exchange and meltwater volume often depends on fjord morphology and glacier type. By navigating the narrow coastal waterways, the team was able to study various glacier types, including floating and grounded marine-terminating glaciers and freshwater glaciers with riverine drainage into the ocean. By comparing the physical properties of meltwater and the associated plankton communities, scientists aim to better understand how marine ecosystems might respond to the accelerated melting of the Greenland ice cap.

During the expedition, Julek collaborated with Dr. Jakob Zopfi from Basel University, Switzerland, who was investigating the biogeochemical signatures of greenhouse gases in glacial meltwater.

The *Atka* is owned and operated by Temoins Polaire, a French foundation dedicated to climate literacy and research. Julek will continue working with researchers at Stockholm University to publish findings from the expedition and will collaborate with Temoins Polaire to communicate the results to school children and young adults interested in learning about climate change.

For more information on this expedition contact [Dr. Julek Chawarski](#).

Captain Paul Marre and Julek Chawarski deploying the novel water column profiler equipped with ASL's latest instrument, the AZFP-nano. Photo credit: Matthiea Klitting (*Témoins Polaires*).



Julek Chawarski recovering the plankton net. Photo credit: Matthiea Klitting (*Témoins Polaires*).