

Case Study :

OSKER X

Improving Iceberg Forecasting in the Arctic

Icebergs are exceedingly difficult to track. Their movement is constantly influenced by external factors such as ocean currents, wind and surrounding sea ice. Furthermore, their mass and shape is under constant deterioration which makes predicting their trajectories even more complex.

As the Arctic continues to warm and sea ice retreats, icebergs are becoming increasingly mobile. This proves to be a growing challenge for safe navigation and offshore operations. [The Nansen Environmental and Remote Sensing Center \(NERSC\)](#) in Bergen, Norway is leading the [ACCIBERG project](#), an initiative focused on improving forecasts of iceberg drift and sea ice evolution. These forecasts rely on advanced numerical simulations combined with satellite data.

NERSC reached out to Xeos seeking a solution that was both easy to deploy and capable of operating in the harsh Arctic climate. The objective was to collect continuous, real-world iceberg trajectory data to validate drift algorithms and improve forecast reliability.

Xeos supplied the [OSKER X](#) surface tracking beacon, equipped with satellite communications to transmit real-time GPS positions from remote polar environments. OSKER X's rugged design and autonomous operation made it suitable for deployment on free-drifting icebergs.



Photo Credit: Laurent Bertino, NERSC

OSKER X deployed on iceberg "Juliette" in Northwest Greenland.

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On November 15, 2025, tracking began for an iceberg nicknamed “**Juliette**” off the coast of **Northwest Greenland**. With the support of local expertise to ensure safe deployment, OSKER X was installed directly onto the iceberg.

The deployment lasted approximately three months, during which OSKER X provided valuable, continuous records of iceberg motion in a region where comparable data has been extremely limited. In these remote waters, the transmitted trajectory data also served as an indirect indicator of local ocean currents. The data collected through the OSKER X is now being used to validate numerical simulations of iceberg drift and improve iceberg forecast models.

As Arctic activity continues to grow, the need for accurate, real-time data becomes critical. OSKER X is helping lay the foundation for smarter forecasting and safer decision-making in one of the world’s most unpredictable environments.

To learn more about the ACCIBERG project, please visit:
<https://acciberg.nersc.no/>



GPS data captured by OSKER X during deployment.