

POLAR-ICE

Interdisciplinary Coordinated Education

Bringing Polar Research to Your Classroom

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Funded by the National Science Foundation, the **objective of Polar-ICE** is to engage students in understanding how Polar Regions influence our lives while improving their understanding of how scientists work and understand a changing climate system.

Polar-ICE project site:

<http://polar-ice.org/>

NSTA Workshop site:

<http://polar-ice.org/2016/10/polar-ice-is-at-nsta-regional-conference-october-29-206/>

Today we will:

- Introduce resources available for use in classrooms
- Introduce educator PD opportunities
- Introduce a polar scientist

Dr. Alice Bradley
University of Colorado, Boulder



Classroom Activities

- **Ocean Robots and Data: What? How? Why?**
- **Investigating Why Penguins Forage There: Piloting Gliders**

Ocean Robots and Data: What? How? Why?

Gliders enable scientists to collect information about ocean conditions (temperature, salinity, chlorophyll, etc) throughout the water column.

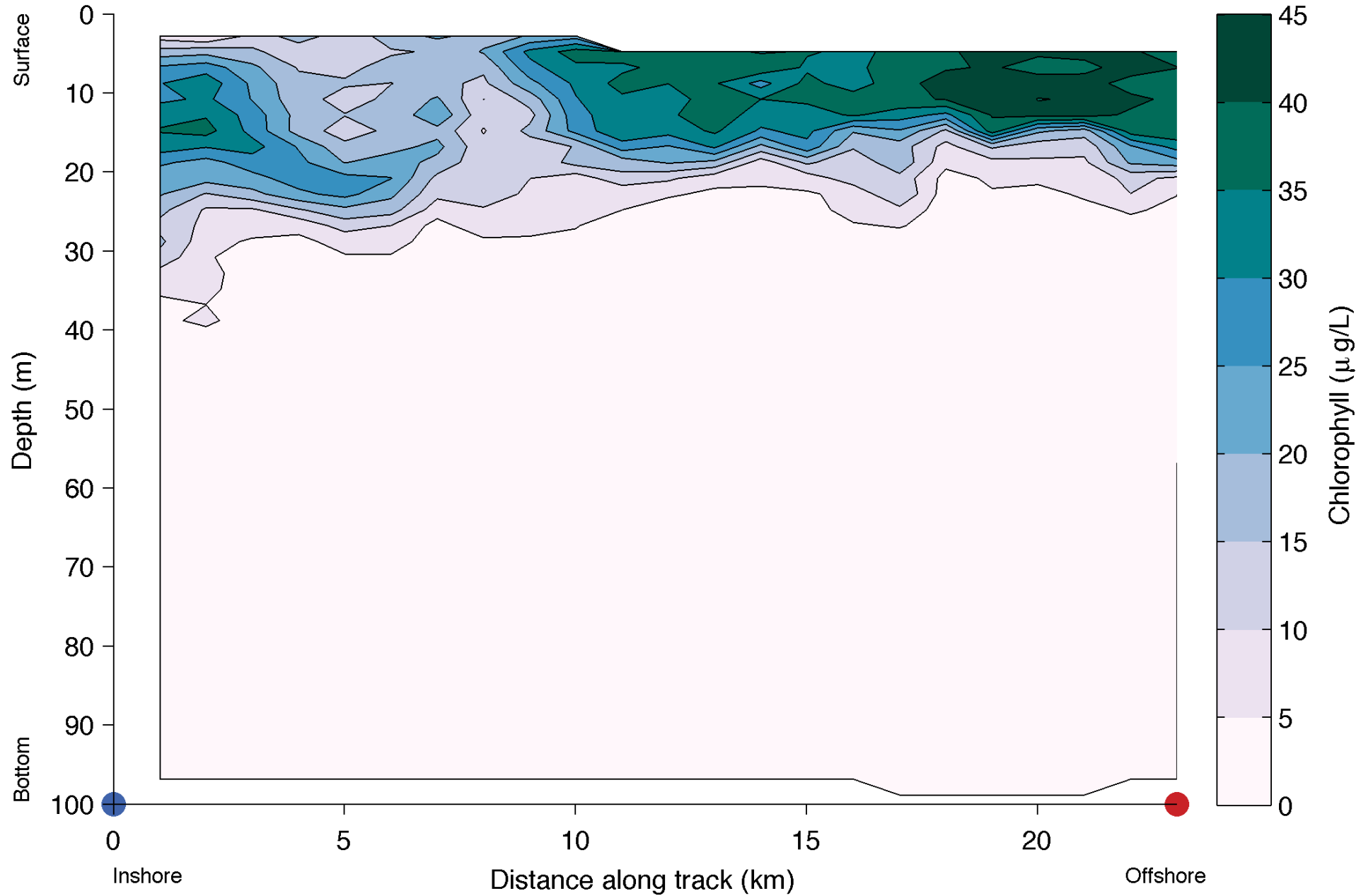
During this lesson, students will make observations about how a glider operates.

Building upon these observations, students will brainstorm why and how scientists

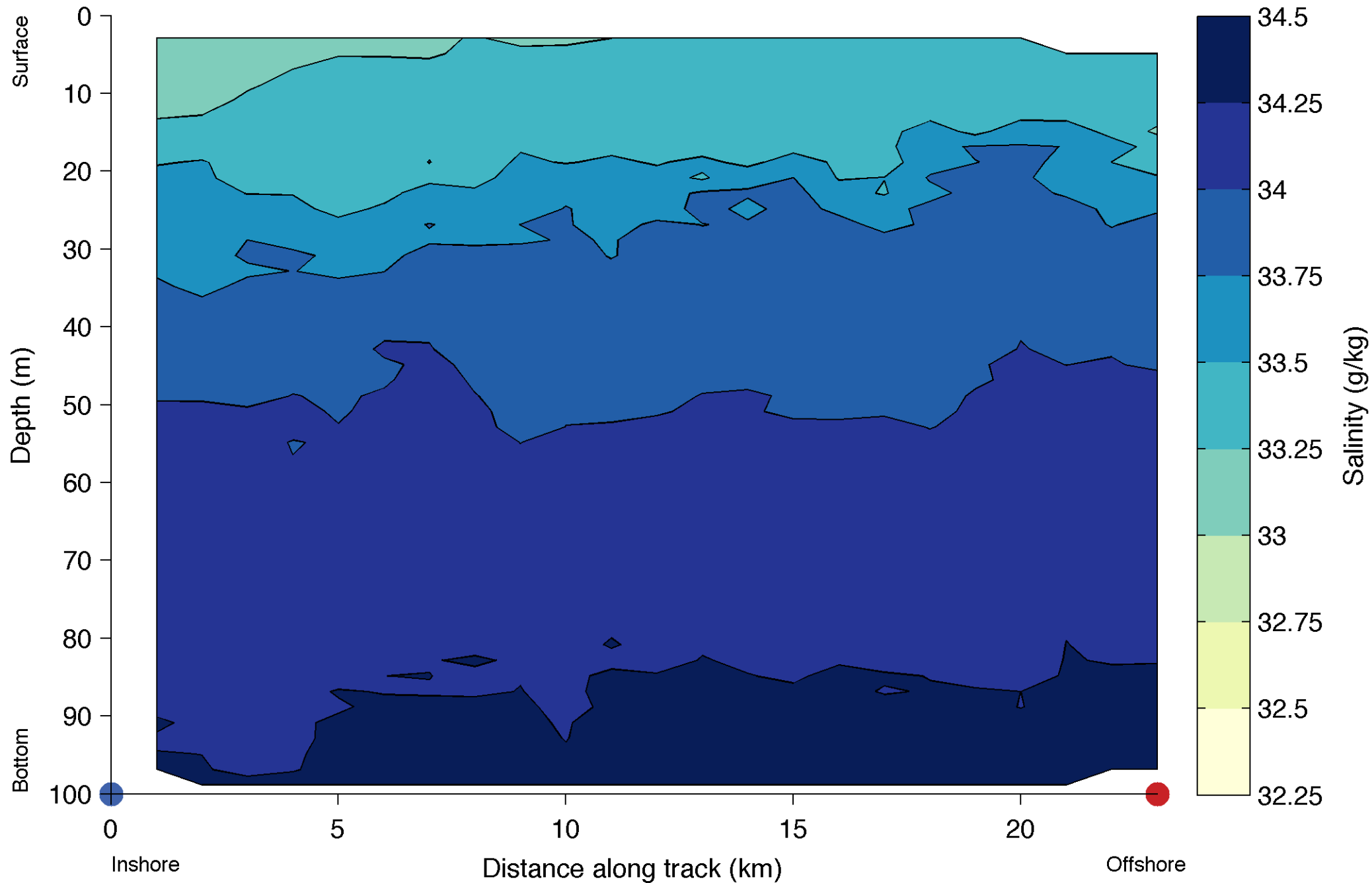
Use ocean robots, such as gliders, to collect data as well as become oriented to glider

Data to look for variations of ocean conditions.

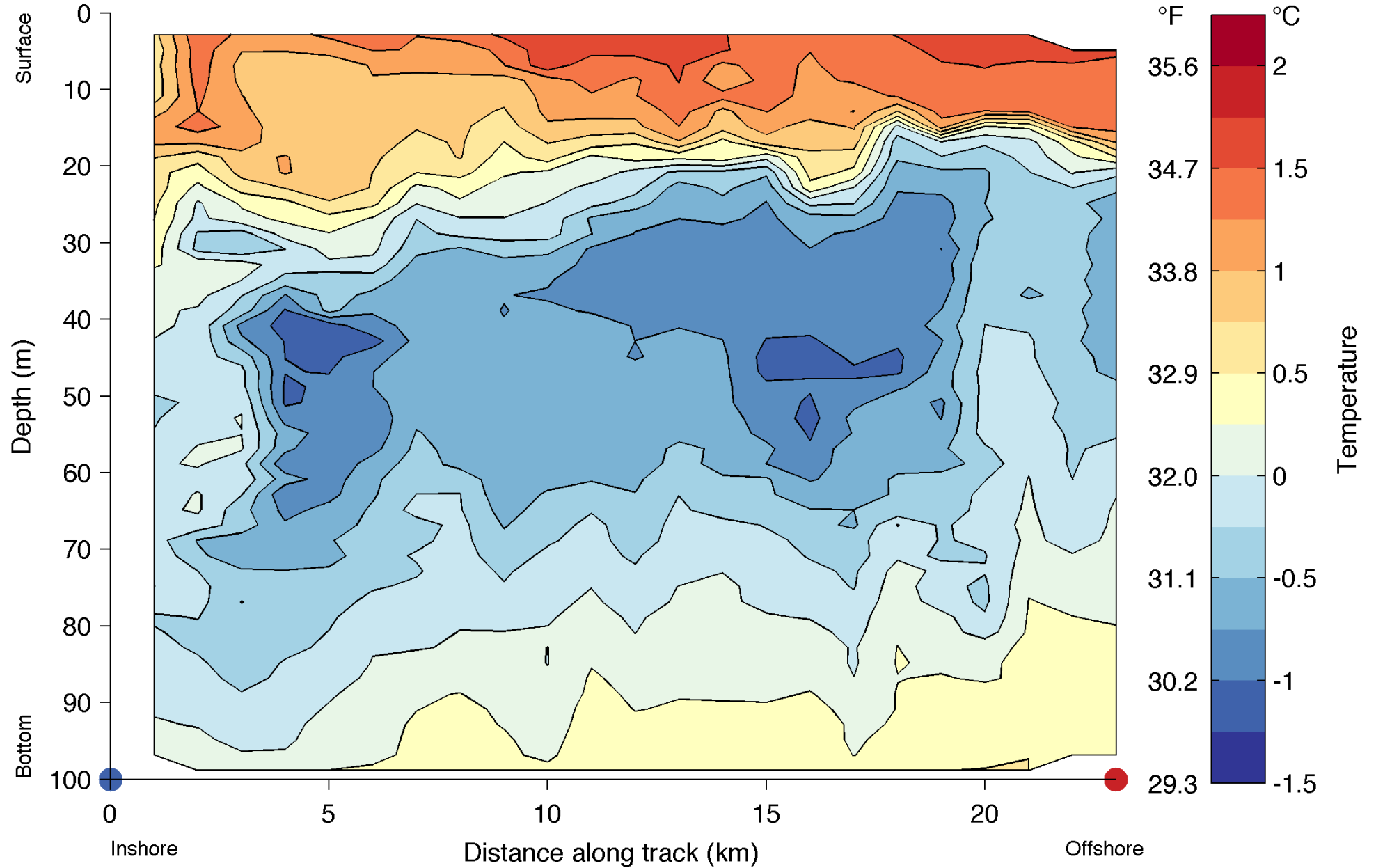
Glider RU01



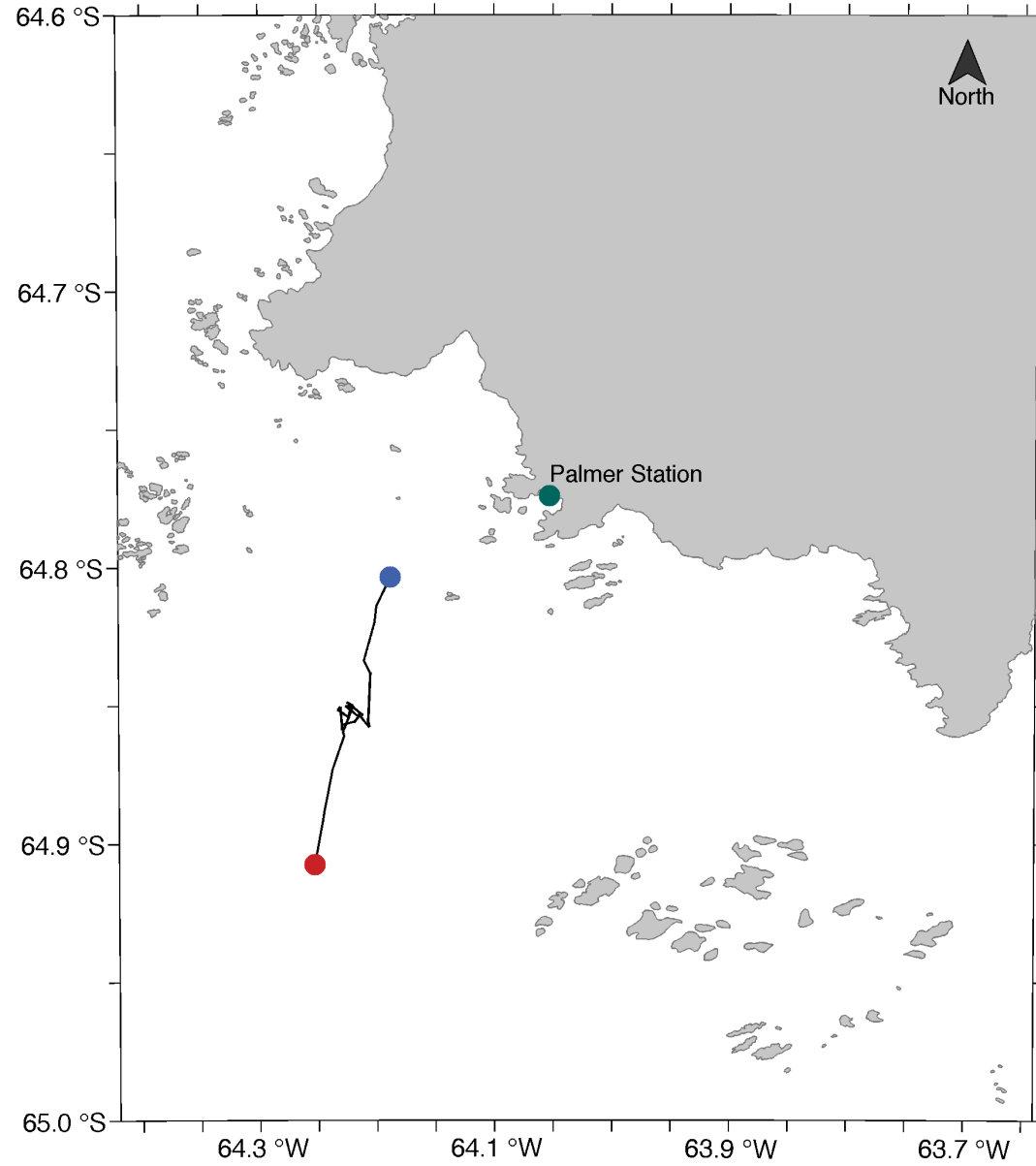
Glider RU01



Glider RU01



Glider RU01

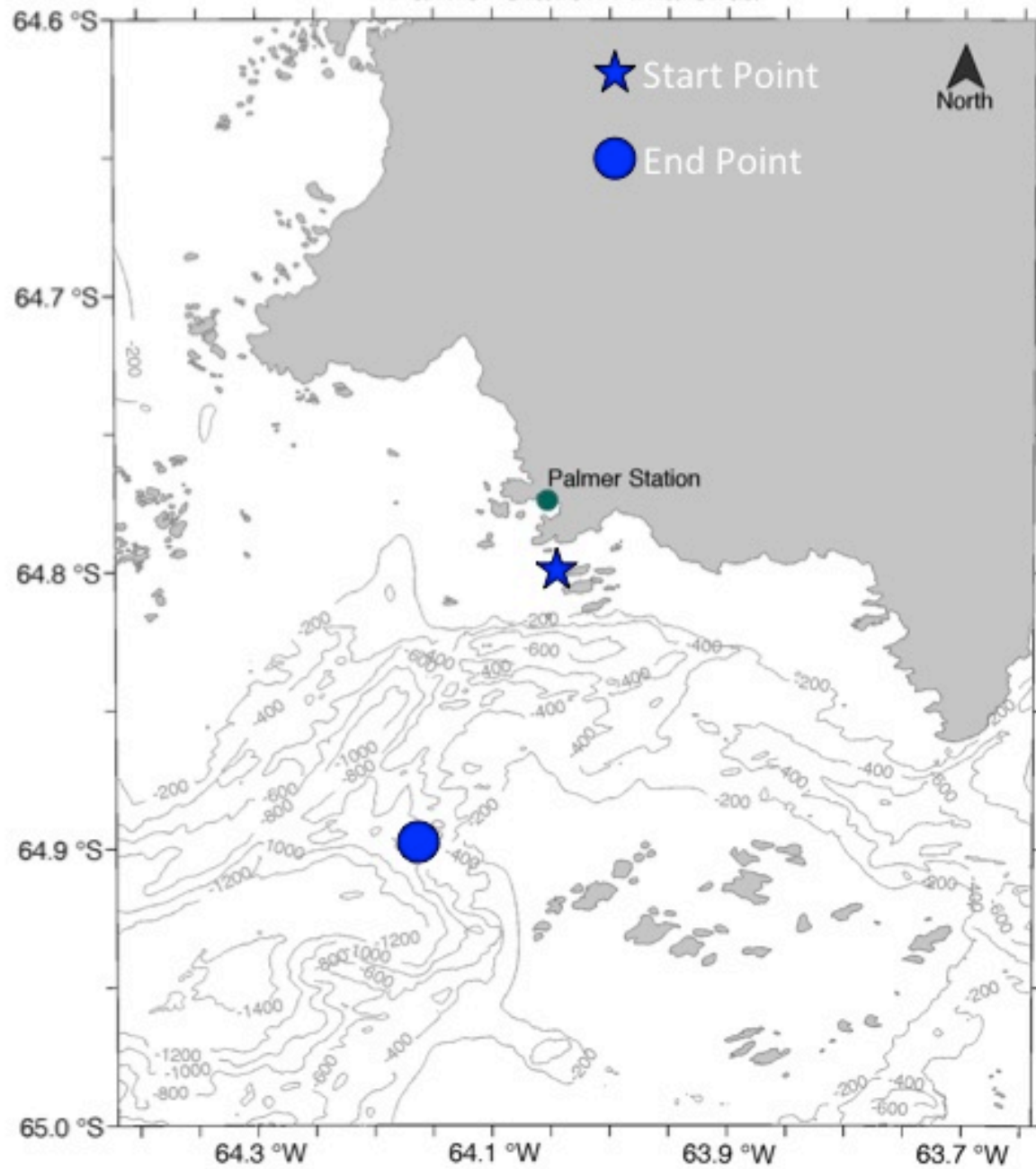


Investigating Why Penguins Forage There: Piloting Gliders

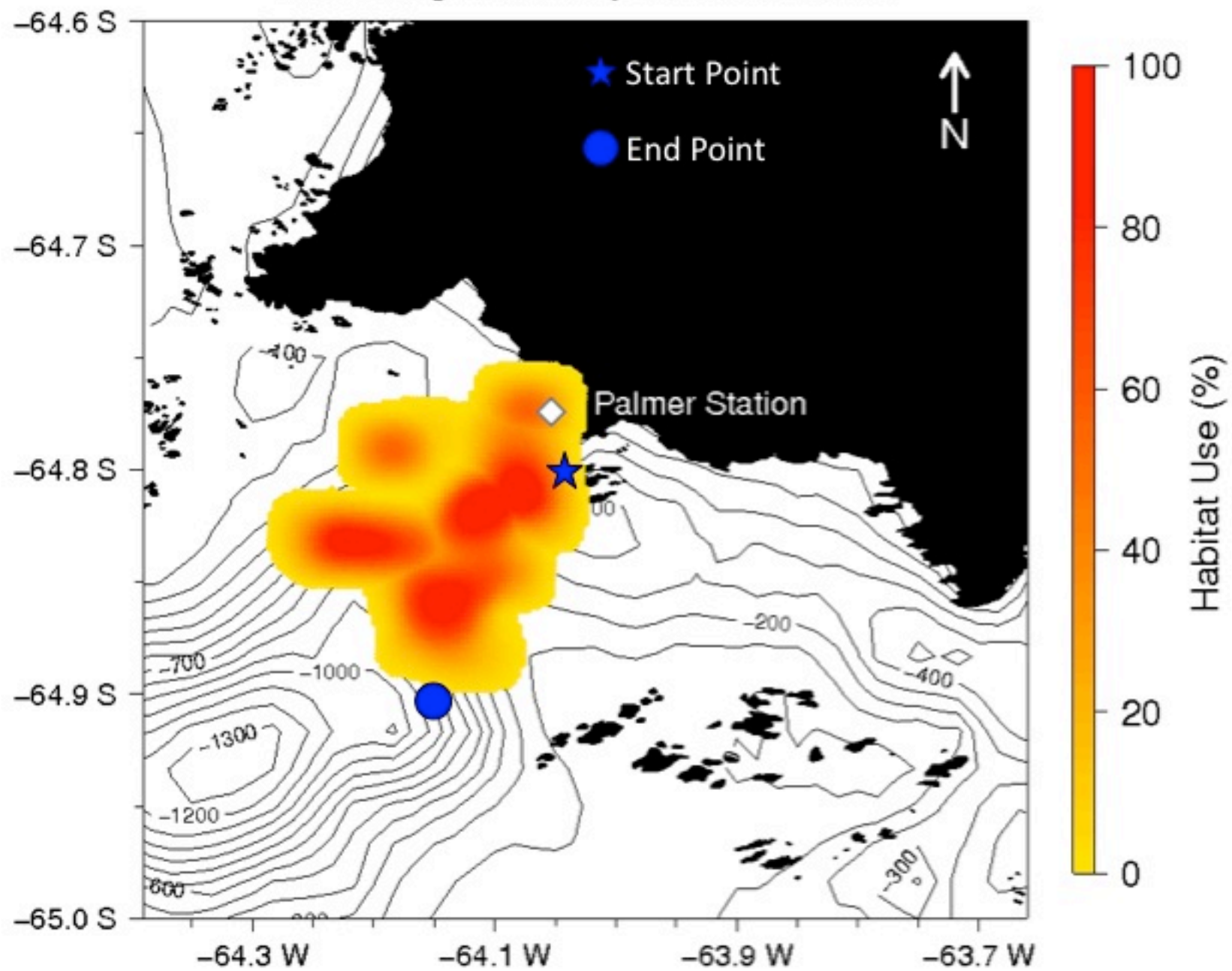
Balancing multiple data sets from locations where penguins are foraging and where ocean temperature convergence zones are located contribute to the decision as to where to send the glider.

Through a hands-on data synthesis activity, students will simulate the work of the Science Research Team as they integrate information and decide where to dispatch the Glider and other equipment to study Antarctic waters.

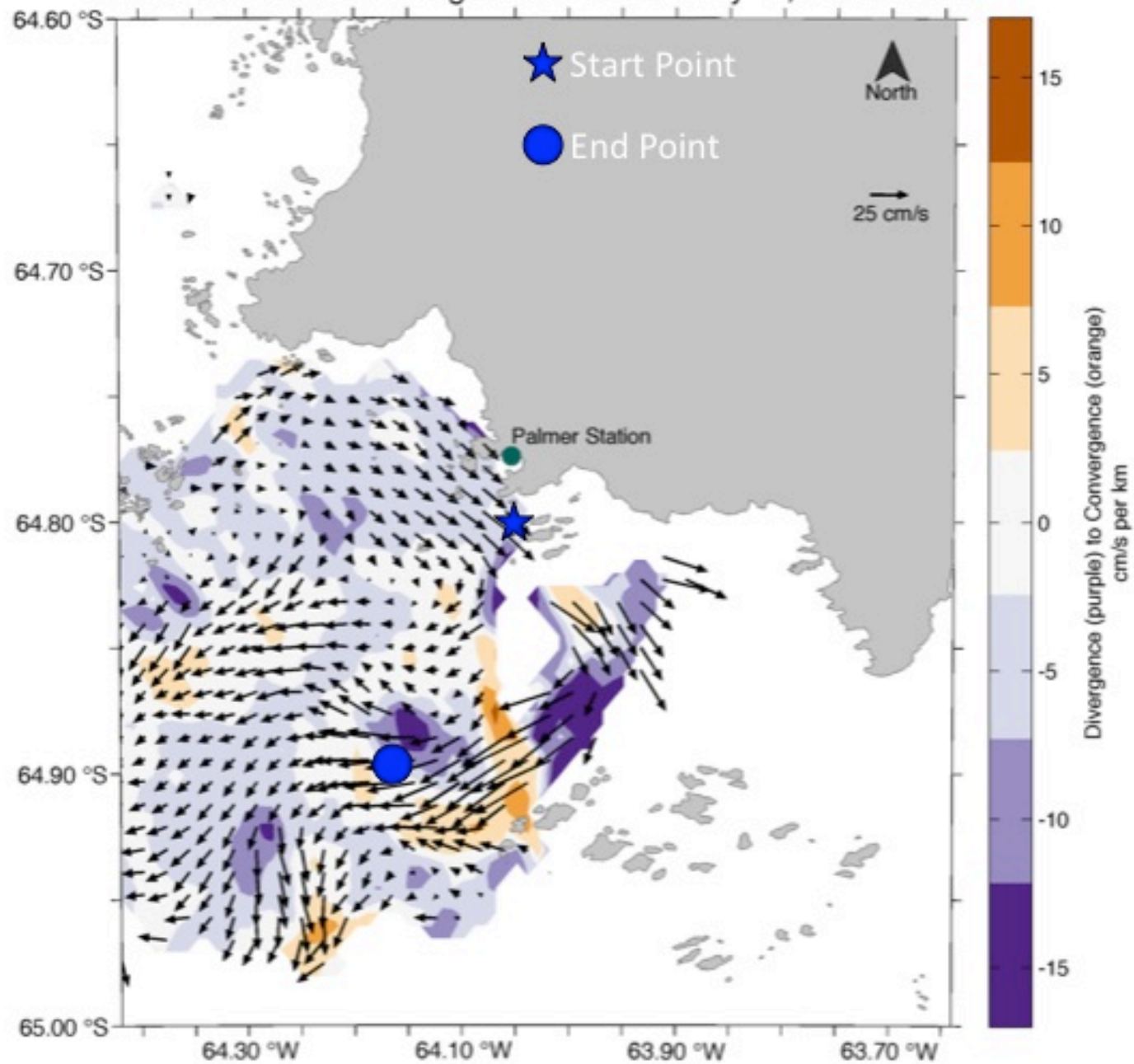
Palmer Station Antarctica

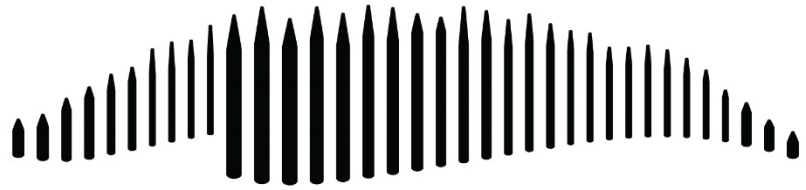


Adelie Penguin: January 12, 2013 06:00 AM



Surface Currents & Convergence Zones: January 12, 2013 6:00 AM





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Questions? Thank you!!!

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