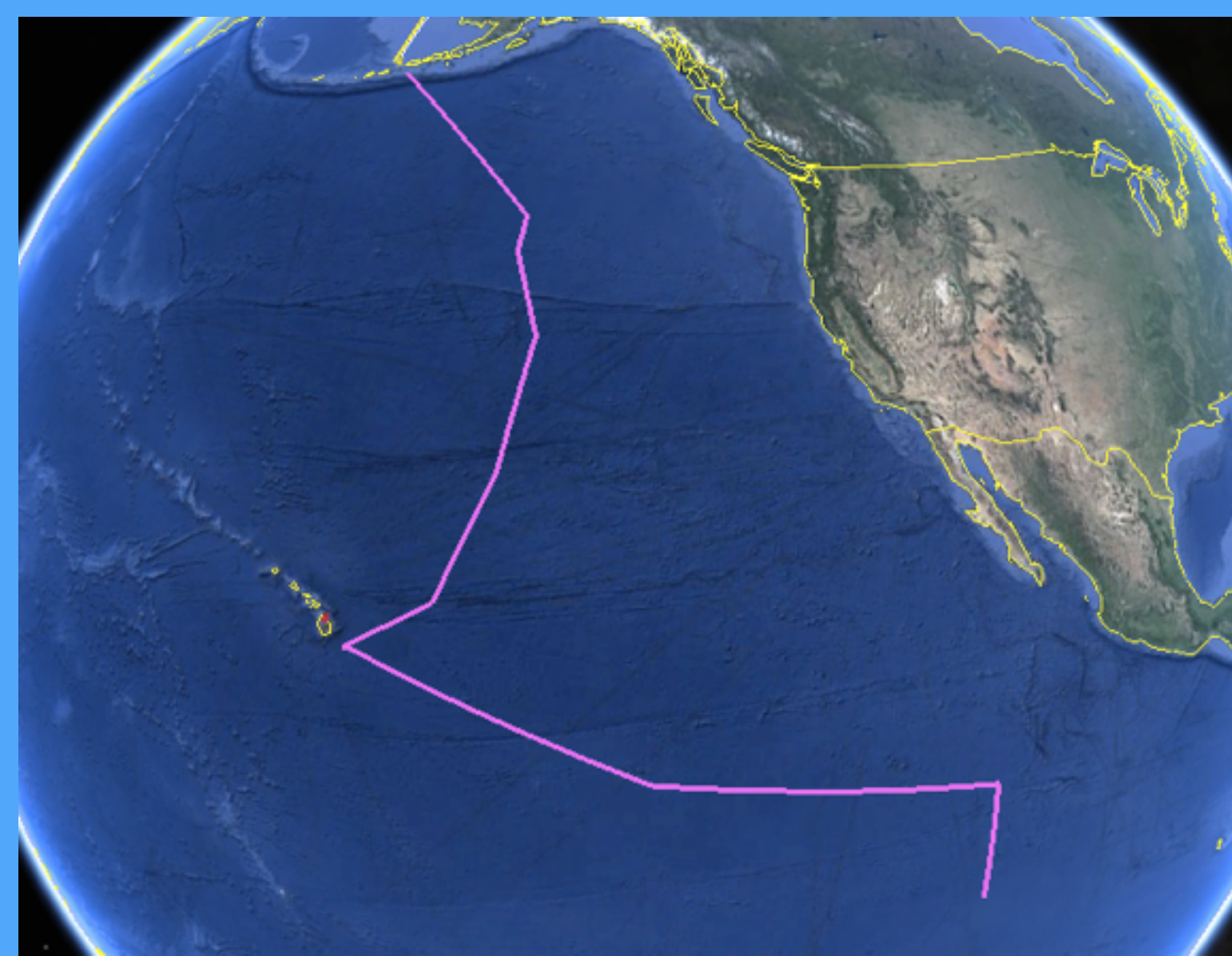


### Pacific Route:

**About 10,000 km**

- Average of 20 km/day, **500 day mission**
- About a year and a third (without complications)



### Arctic Route 1: Russia

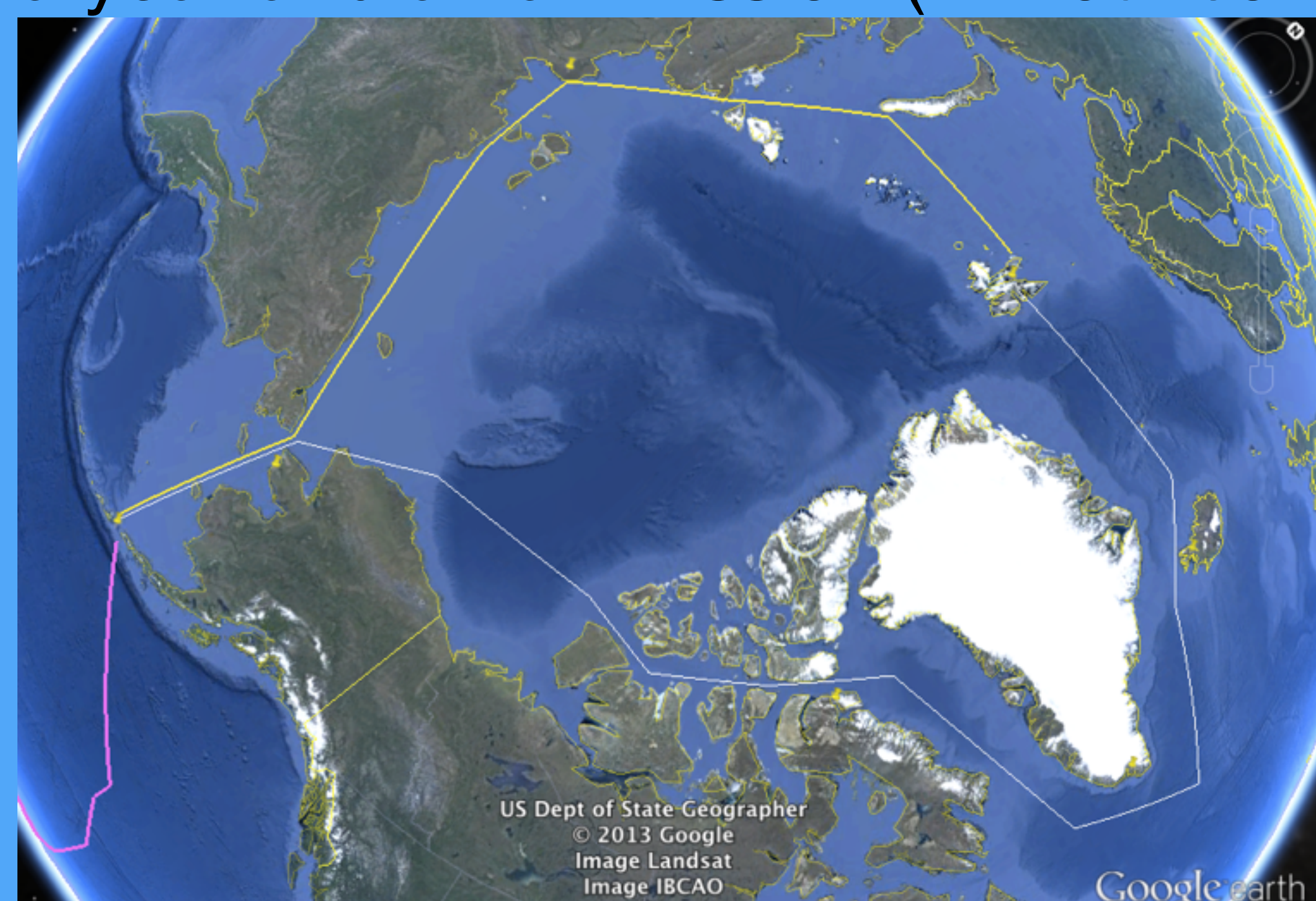
**About 7,000 km**

- Average of 20 km/day, **350 day mission**
- About a year (without complications)

### Arctic Route 2: Greenland

**About 11,000 km**

- Average of 20 km/day, **550 day mission**
- About a year and a half mission (without complications)



### Places to Stop Along The Way:

#### Pacific:

- Hawaii, USA
- Aleutian Islands, Alaska, USA

#### Arctic Route 1:

- Aleutian Islands, Alaska, USA
- Nome, Alaska, USA
- Tiksi, Russia
- **Svalbard, Norway\***

#### Arctic Route 2:

- Aleutian Islands, Alaska, USA
- Nome, Alaska, USA
- Pond Inlet, Canada
- Kujalleq, Greenland
- Westfjords, Iceland
- **Svalbard, Norway\***

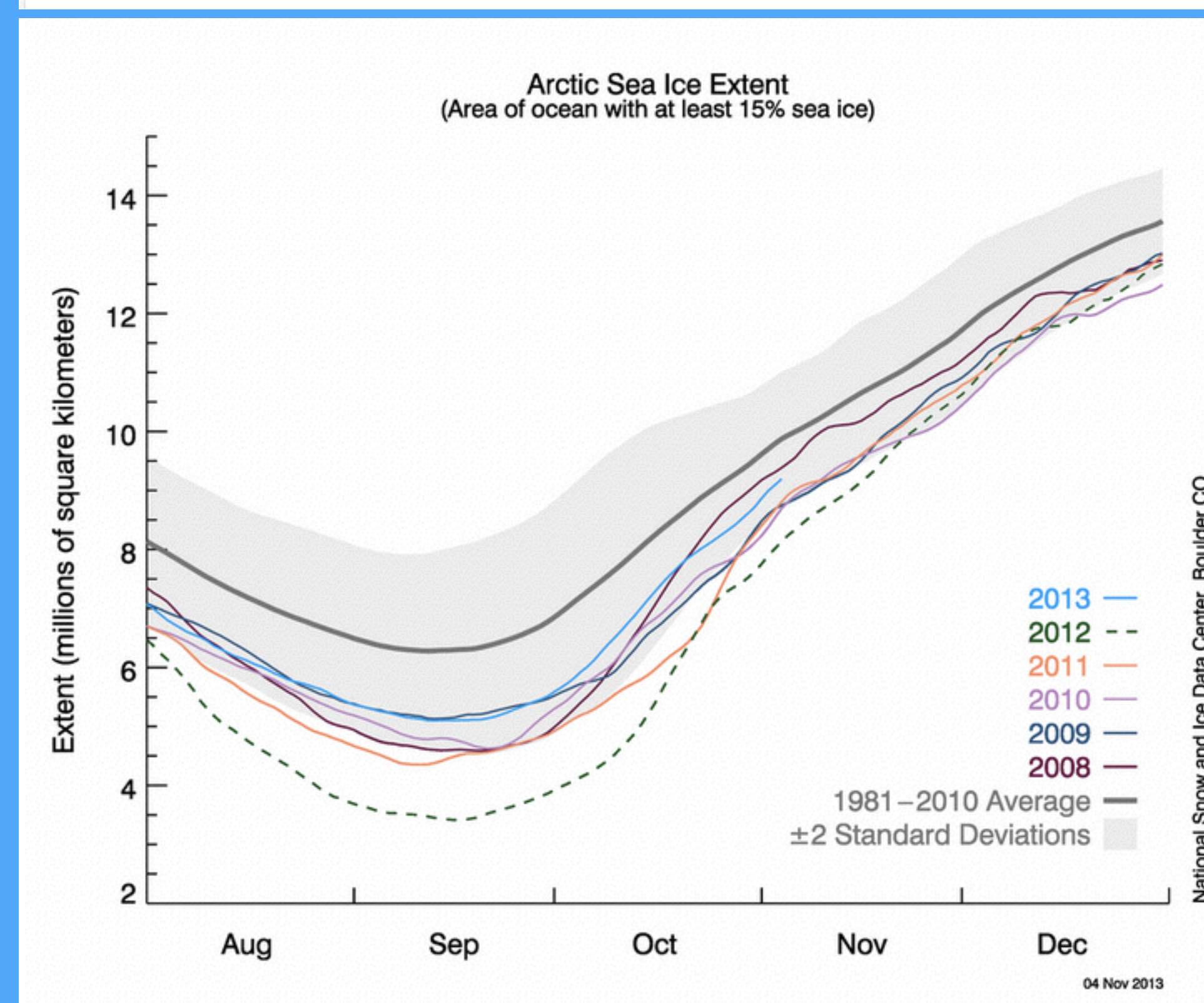
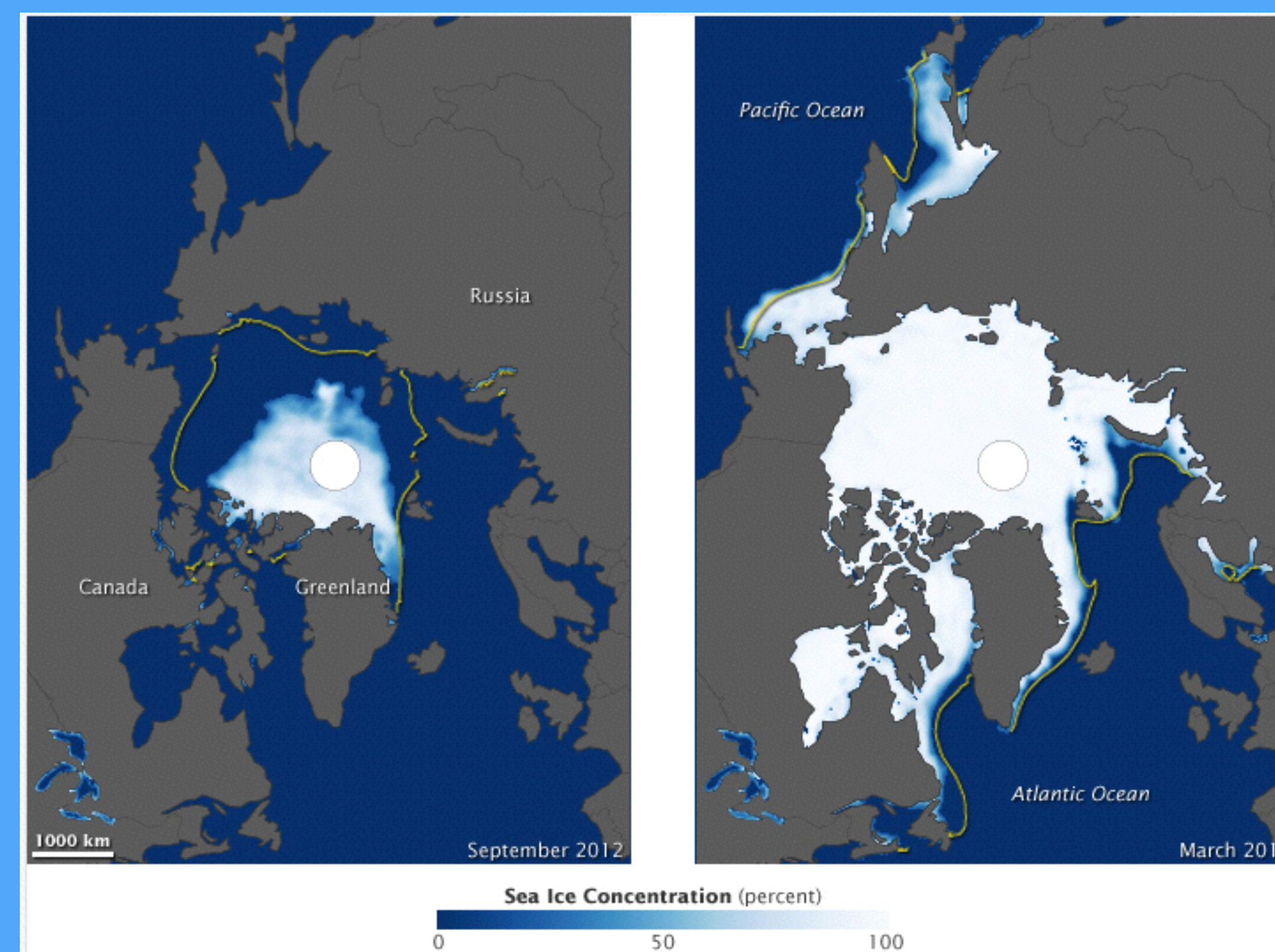
- The entire mission will finish in Svalbard, Norway. Each stop along the way is accessible by airplane.

# Proposed Route for Korean Pacific/Arctic Mission

Jonathan Campos, Marc Katronetsky  
Francesca Roselli, Simon Wake

**Our Korean partners desire to expand on the Challenger Mission and collect data on the Northern Pacific Ocean and the Arctic Ocean.**

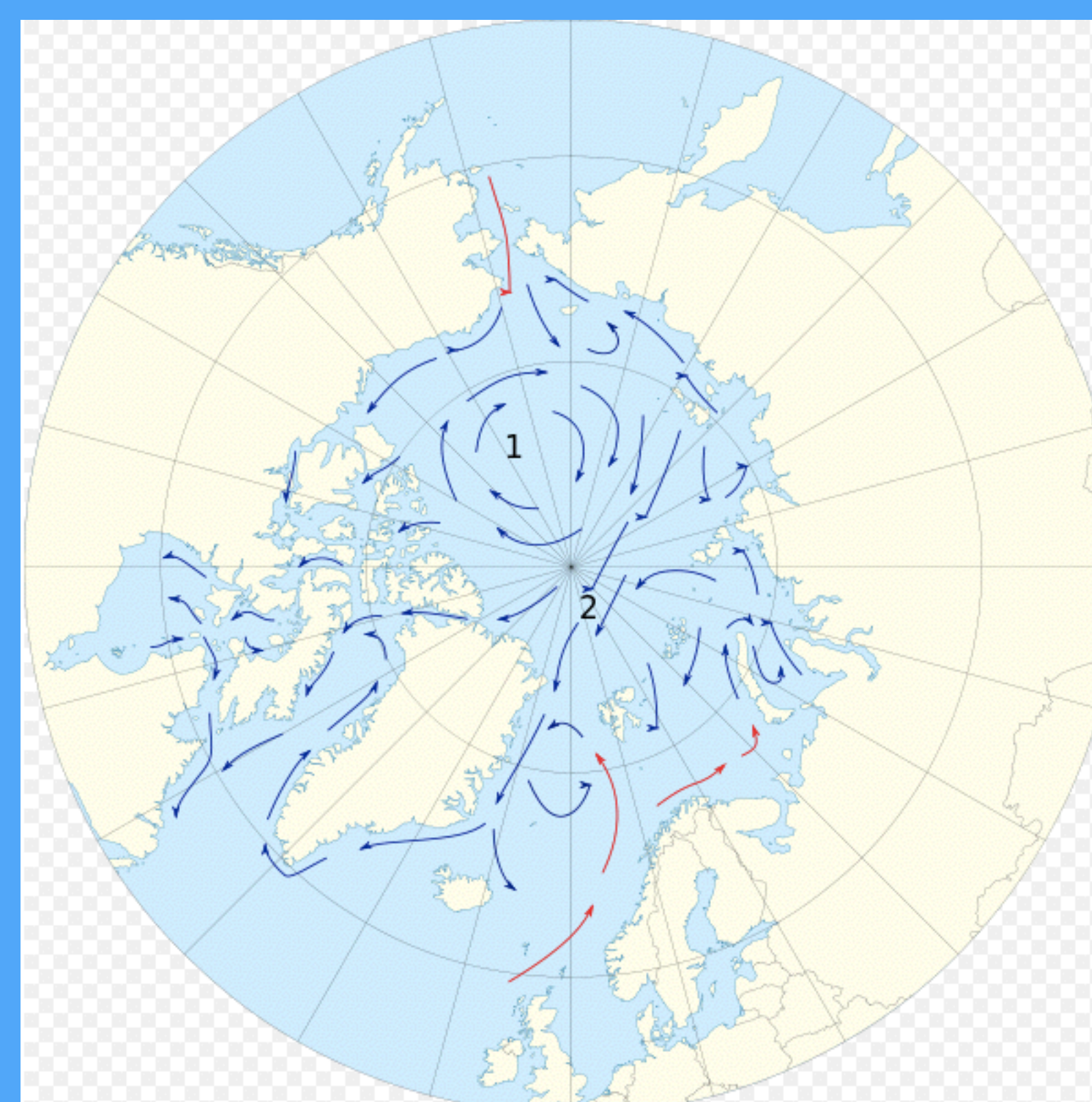
### Arctic Sea Ice Extent



The Sea Ice extent is at it's greatest in the Arctic Ocean between the months of December through May. It would be ideal to fly the glider during the months of June through November, being the least amount of ice clearing a path for the glider.

- June through November is about 180 days; this is a small fraction of the amount of days it will take to complete this full mission.

### Arctic Ocean Currents



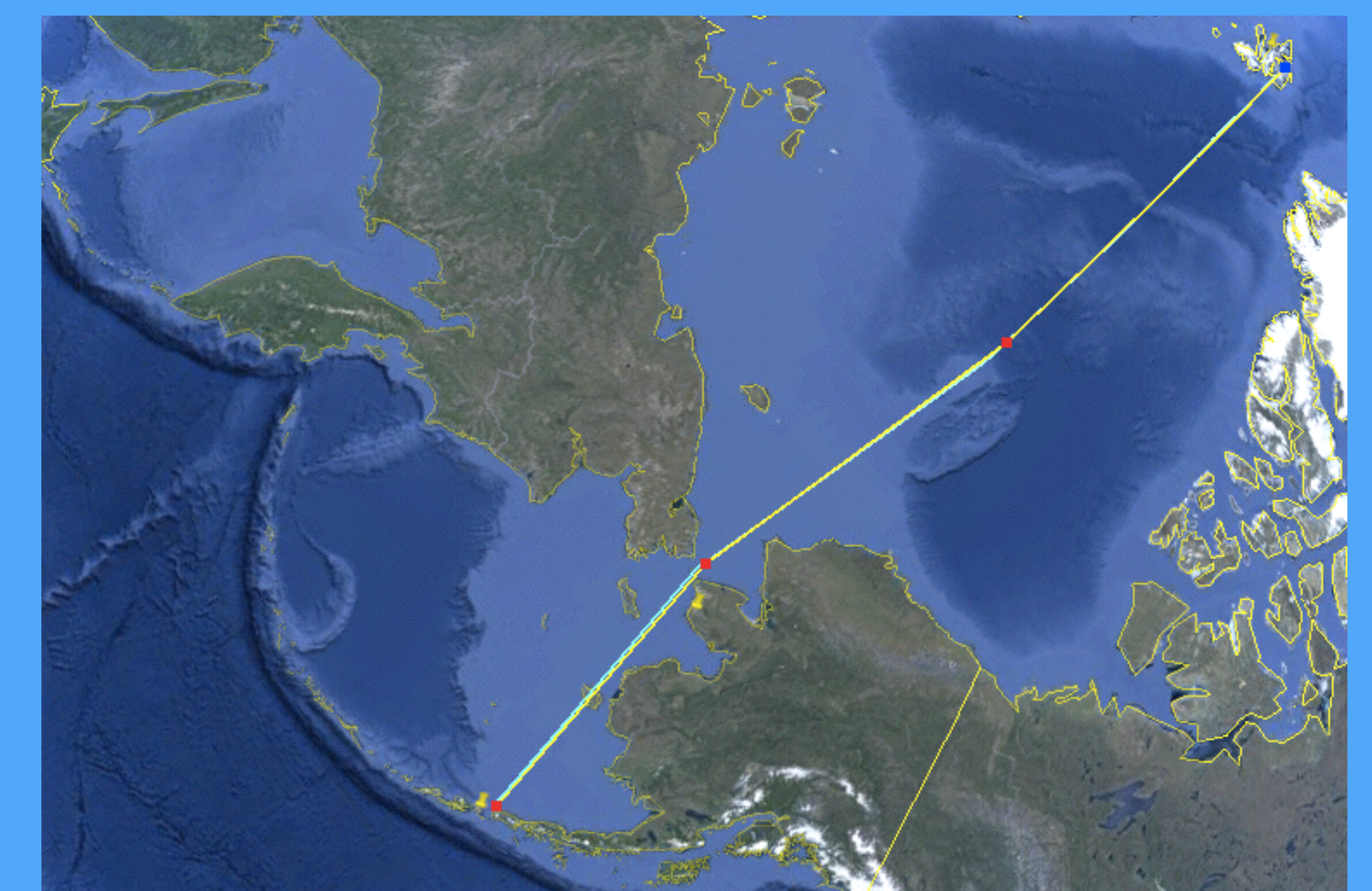
- The Arctic Ocean currents are sporadic and can be rough in certain areas. It is imperative to keep an eye on what direction they move in and how fast they move.

## Is this possible?

- The mission is possible, but there is an **issue of time**.
- There are about 180 days throughout June-November, not permitting enough time for the glider to make it's complete journey to Svalbard, Norway while the ice is melted.
- It is recommended to split the mission up in different time periods putting it on hold until the ice is melted enough again to make sure the glider is not stuck under the ice; extending the journey longer than it already would be.
  - Take breaks in Tiksi, Russia and Pond Inlet, Canada

## What can be done to shorten the mission?

- Improve the glider to make it faster, increasing it's rate and decreasing the amount of days it will take.
- Create a new glider that has the ability to **glide under the ice**, which will shorten the length of the route.



- Going under the ice would shorten the route to about 5,300 km taking about 265 days, significantly less than the previously planned routes.
- An under the ice glider would not have to stop in a city and wait for the ice to melt.