

## Have a question?



### Remote Sensing in Alaska

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### ASGP

**NEAL BROWN**

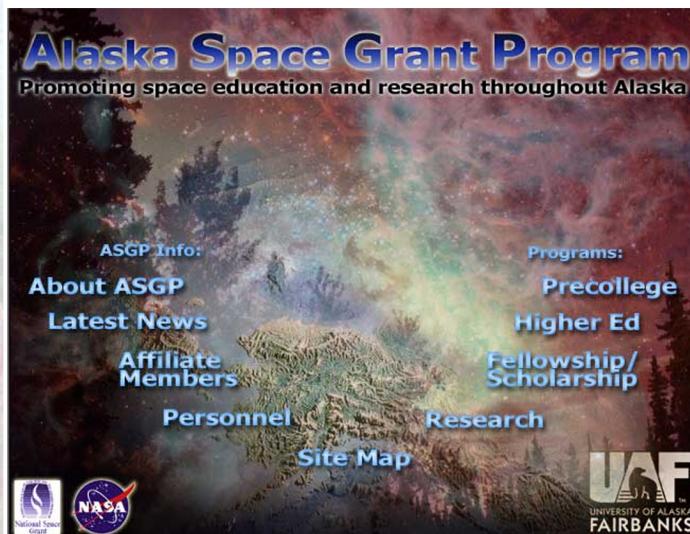
nbrown@eagle.ptialaska.net



## Alaska Space Grant Program

The Alaska Space Grant Program (ASGP) was established at the University of Alaska Fairbanks in 1991 under a program grant from NASA's National Space Grant College and Fellowship Program. The ASGP sponsors a broad range of programs to enhance teaching, research, and educational outreach within aerospace-related disciplines throughout Alaska.

Visit ASGP at [www.uaf.edu/asgp](http://www.uaf.edu/asgp)



Alaska Space Grant Program

University of Alaska Fairbanks

Duckering Hall 225

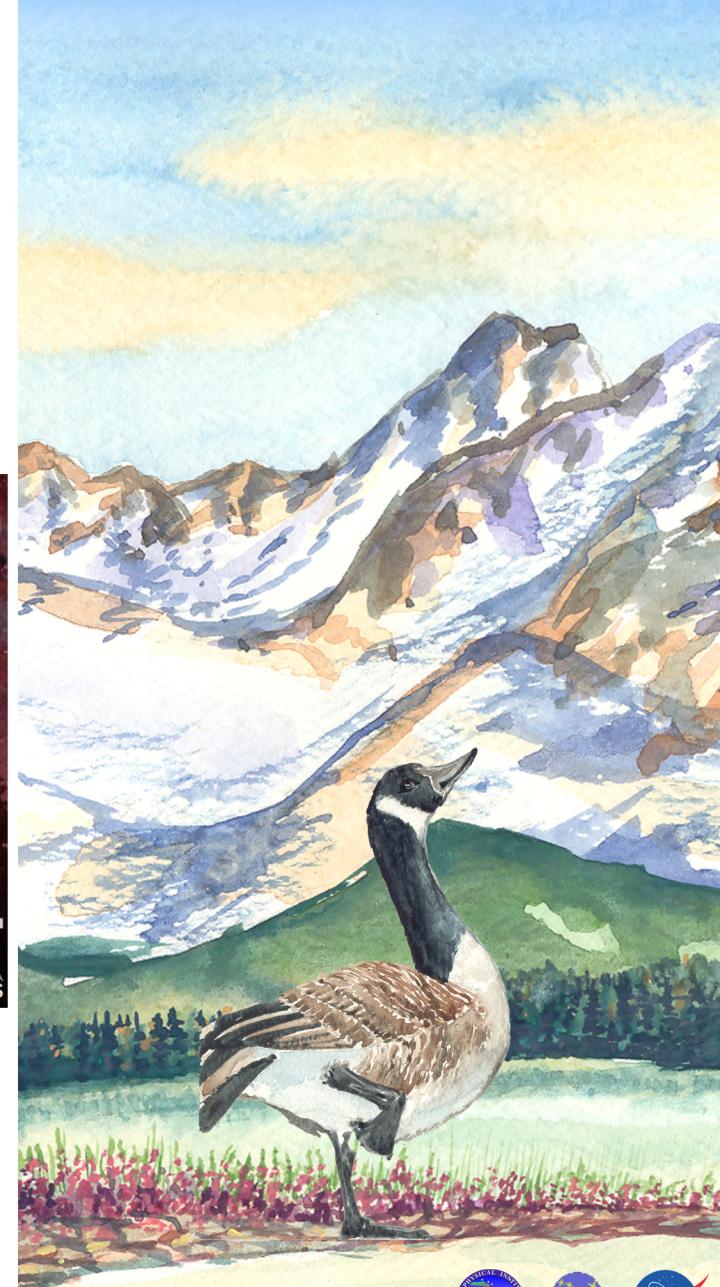
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## ALASKA: A BIRD'S EYE VIEW

Log on to:

[www.uaf.edu/asgp/k12](http://www.uaf.edu/asgp/k12)



Join Tutangiaq, the Canada goose, and explore a unique state from a unique perspective.



## Introduction

Meet and make friends with Tutangiaq.

**Introduction**

Each summer I travel across Alaska. Some people think that Alaska is part of Canada but that's not true. I love Alaska and the people that live there. In fact, they gave me my name!

A detailed map of North America with the Arctic Ocean at the top. The map shows the outlines of Canada, the U.S.A., and Mexico. A Canada goose is depicted on the left side of the map, facing right. The Pacific Ocean is to the west and the Atlantic Ocean is to the east.

**Ring of Fire**

A colorful illustration of a volcano erupting with a bright orange glow. A ring of fire surrounds the base of the volcano. A Canada goose is shown flying towards the right side of the screen.

Oh it's hot! Let's move on to a cooler place!



## The Last Frontier

Learn about Alaska and see cool satellite images of some important places.

**The Last Frontier**

Anchorage

Anchorage is far the largest city in Alaska, with 41.5 percent of the state's total population. That equates to a little more than 260,000 people.

A satellite image of Anchorage, Alaska, showing the city's urban sprawl along the coast. The image is color-coded with red and brown areas representing developed land and green areas representing vegetation.

**Moving Ice Edge**

You're right. We walruses use sea ice as an important place to rest, breed, and molt. The ice breakup has been occurring earlier in the year and its edge receding further now than even a decade ago. Look at these satellite images which preserve a record of how the sea ice edge has changed over the years. Of course, we need data for many more years to establish a reliable trend.

A series of six satellite images showing the retreat of the sea ice edge from 1972 to 1993. Each image is labeled with the year: 1972, 1975, 1978, 1981, 1984, 1987, 1990, and 1993. The images show a significant reduction in the extent of sea ice over time.

Data from week 27 (2<sup>nd</sup> week in September) for each year.



## Ring of Fire

Find out how remote sensing is used to monitor Alaskan Volcanoes

**Ring of Fire**

You humans have sent up satellites into orbit that look back at earth from higher up than I could ever fly! From my perspective, I can usually see only one volcano at a time, but a satellite orbiting earth at 700 to 800 kilometers can look at an area 185 kilometers wide in one pass.

A diagram showing a satellite in orbit around Earth. A line connects the satellite to a point on the Earth's surface, indicating the field of view. Labels indicate a distance of 750 km from the satellite to the ground and 1 km as the width of the area being observed.

**The Golden Heart City**

A satellite image of Fairbanks, Alaska, showing the city's urban area and surrounding landscape. The Chena River is visible winding through the city.

Fairbanks sits along the winding Chena River just north of the much larger Tanana River. Whenever my family is passing through town, we always stop at the University of Alaska Fairbanks. Do you think they might be there now?

The UAF campus is located West of downtown Fairbanks and North of the Fairbanks International Airport, just across the Chena River. The Airport can be identified by its long straight runway and adjacent float pond. Can you help me by clicking on the campus? Use this city map for more clues.

A small, stylized icon of a Canada goose facing left, with its head turned back to look over its shoulder.



## The Golden Heart City

Help Tutangiaq find his family in Fairbanks using a satellite image.