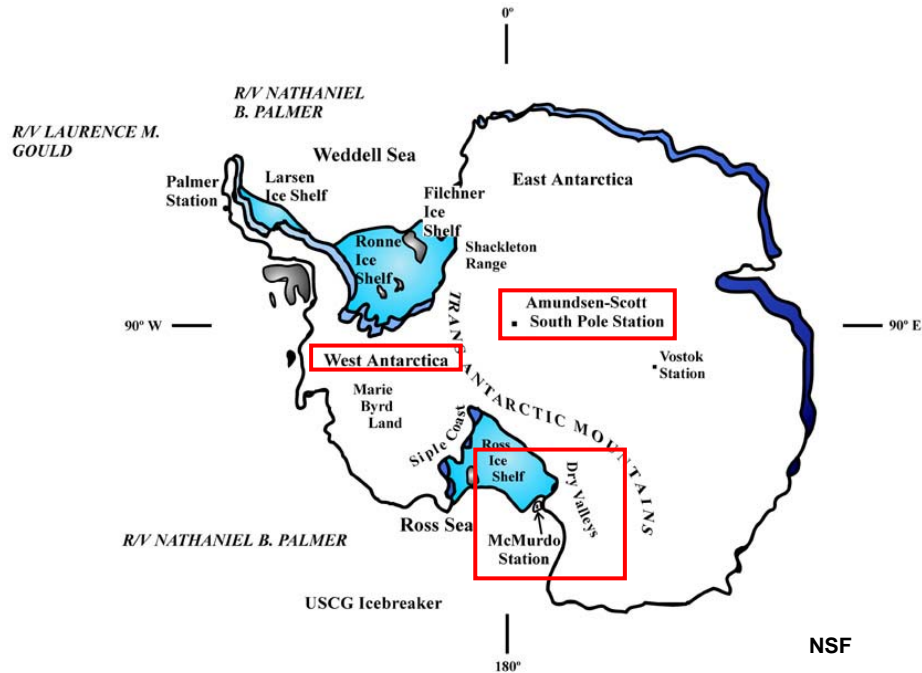




From January 5-12, 2010, Ann Posegate, Earth Gauge outreach coordinator, and Dan Satterfield, chief meteorologist at WHNT-TV, will embark on a media expedition to Antarctica. They have been selected by the National Science Foundation (NSF) to cover a range of science stories, including important weather and climate research. During their journey, Earth Gauge and WHNT will be reporting from the field through e-newsletters, Twitter, Facebook and the Web.

Ann and Dan will be visiting McMurdo Station, South Pole Station, the West Antarctic Ice Sheet and possibly the McMurdo Dry Valleys. Below, learn more about some of the major studies they will be investigating. (Please keep in mind that the itinerary is weather-dependent and may change unexpectedly.)



West Antarctic Ice Sheet (WAIS) Divide Ice Core

Ann and Dan will be visiting a remote field camp on the West Antarctic Ice Sheet, where a research team led by Dr. Kendrick Taylor of the Desert Research Institute studies deep ice cores.



This project has four goals:

- 1) Develop the most detailed record of greenhouse gases possible for the last 100,000 years;
- 2) Determine if the climate changes that occurred during the last 100,000 years were initiated by changes in the northern or southern hemisphere;
- 3) Investigate the past and future stability of the West Antarctic Ice Sheet; and
- 4) Investigate the biology of deep ice.

More information: www.waisdivide.unh.edu.



South Pole Telescope

Construction of the new South Pole Telescope, the largest telescope ever deployed to the South Pole, was completed in early 2007 and its research began shortly after. The goals of the Telescope are to investigate Dark Energy and Dark Matter, which will help determine the age and make-up of the Universe, how it has changed as it has aged, how it works now and what it may look like in the future. The instrument's first major scientific breakthrough included the detection of four galaxy clusters in 2008, three of which are new discoveries.

More information: <http://pole.uchicago.edu>.

Antarctic Automated Weather Station Program

In addition to weather observation stations manned by meteorologists, Antarctica and the surrounding islands contain about 50 automated weather stations. The automated stations record atmospheric conditions and send their data to ground stations via satellite. These data play an important role in operational forecasting, global forecasting, climate records and research. Ann and Dan will also be interviewing meteorologists at South Pole Station.

More information:

<http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0636873>

<http://amrc.ssec.wisc.edu/aws.html>

The Ozone 'Hole'

Since 1986, scientists have continuously monitored stratospheric ozone depletion over Antarctica. Ann and Dan will be investigating the current status of the ozone 'hole,' how balloons are used to measure ozone levels and new research linking ozone depletion with climate change impacts on Antarctic ice.

More information:

<http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0839124>

Sub-glacial Lakes: Lake Vida

Lake Vida is the largest lake in the McMurdo Dry Valleys region. The lake is seven times as saline as seawater, exists at temperatures below 14 degrees Fahrenheit and is covered with over 60 feet of ice. Scientists are entering the lake for the first time to obtain water and sediment core samples in order to study the lake's unique geochemistry and microbiology.

More information: <http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0739698>

