The background of the slide is a wide-angle photograph of a vast, snow-covered Antarctic landscape. In the foreground, there are rolling, snow-covered hills. In the middle ground, there are more snow-covered hills and valleys. In the background, there are several large, rugged mountains with snow-covered peaks and ridges. The sky is a pale, clear blue.

# A USGS Antarctic Portal for the IPY: from Atlas to Portal

Cheryl A. Hallam

Jerry L. Mullins

S. Jean Paulson

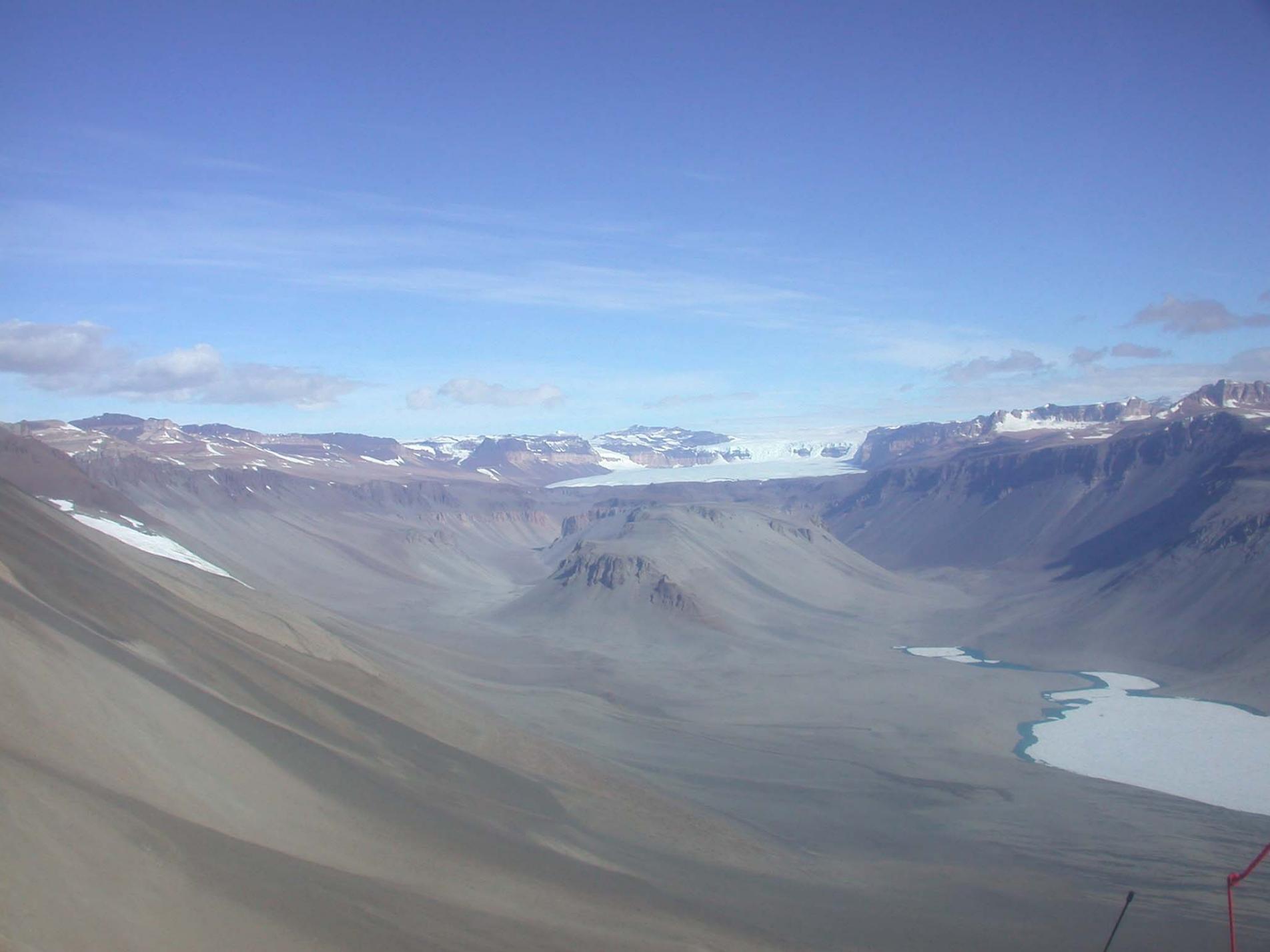
















**Taylor Valley – Lake Fryxell and Commonwealth Glacier**





**Mt. Erebus:** We have an active volcano too



But Antarctica is a harsh continent – at least sometimes...

# Outline

- Origin of the Atlas
- Versions 1 – 3 of the Atlas
- Transition to the Antarctic Portal
- International Web Service Activities

# Origin of the Atlas

- 1994: GIS/digital geospatial data project
  - Promote data sharing and collaborative research
  - Were Antarctic scientists collecting data in a georeferenced digital frame?
  - Were Antarctic scientists using GIS?

# Origins of the Atlas

- US Geological Survey decided to build an on-line Atlas to provide
  - Common base for geospatial data display/organization
  - Platform to share Antarctic research information and geospatial data

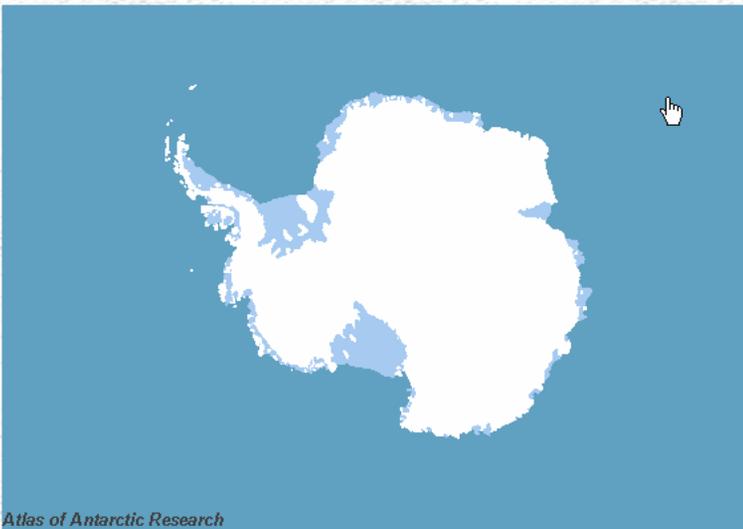
# U.S. Atlas of Antarctic Research 1999

- Map/data display window
- Index map window/Layer list
- Query capability with display
- Links to geodetic control information site
- Links to digital raster graphic (DRG) display site
- Download capability for selected data

# The original Atlas was patterned after the National Atlas



## Atlas of Antarctic Research



Atlas of Antarctic Research

Zoom In 2X  Zoom Out 2X  Pan  Identify Resolution:  Low  High

Continent Redraw Layers Legends Index Map Names Query Help

Scale 1:55,768,768

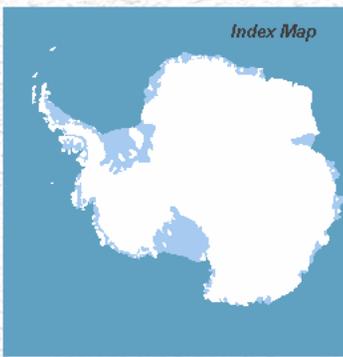
*Last modified: November 5, 1999*

**Scheduled maintenance may be performed on Mondays between 7:00 and 9:00 a.m. Eastern Time in the United States or on Fridays between 1:00 and 3:00 p.m.**

**If you have comments or suggestions for the atlas, [please contact us](#)**

### MAP LAYERS

- Raster Graphic
- Rock Outcrops
- Sand/Gravel (Seymour Is. only)
- Manmade Structures (Seymour Is. only)
- Snow/Ice (Seymour Is. only)
- Lakes
- Contours
- Streams (Seymour Is. only)
- Spot Elevations
- USGS Complete Map Index
  - .....Topographic Reconnaissance Maps (250,000-scale)
  - .....Topographic Maps
  - .....Satellite(TM) Image Maps
  - .....Satellite(MSS) Image Maps
  - .....Satellite(AVHRR) Image Maps
  - .....Coastal Change Maps
  - .....Topographic Reconnaissance Maps (Misc.)
- .....Topographic Maps(Misc.)
- .....Geologic Reconnaissance Maps



Index Map

When red locator is visible, click on this map to change map center.

# Version 2

- Zoom to AREA
- Layer list enhancements
- Geographic names layers
- Search and display maps in catalog
- Satellite imagery (Landsat/SPOT)
- Make and Print a Map

# Zoom Directly to Seymour Island



## Atlas of Antarctic Research



US Atlas of Antarctic Research

**Zoom to Area**     **Zoom In**     **Zoom Out**     **Pan**     **Identify**

None Selected

- None Selected
- Seymour Island
- Ross Island
- McMurdo Dry Valleys
- Anvers Island

Layers    Legend    Index Map    Query    Print    Help

km    2    4    6

Last Modified September 30, 2001

**Scheduled maintenance may be performed on Mondays between 7:00 and 9:00 a.m. Eastern Time in the United States or on Fridays between 1:00 and 3:00 p.m.**

**If you have comments or suggestions for the atlas, please contact us**

[Privacy Statement](#)

- Named Glaciers
- Named Islands
- Named Lakes
- Named Streams
- Named Summits
- Named Valleys

### Grid Layers

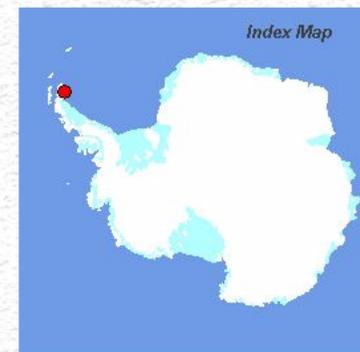
- International Map of the World Grid
- Latitude/Longitude Grid

### Seymour Island Layers

- Sand/Gravel
- Manmade Structures
- Snow/Ice
- Streams

### Research Layers

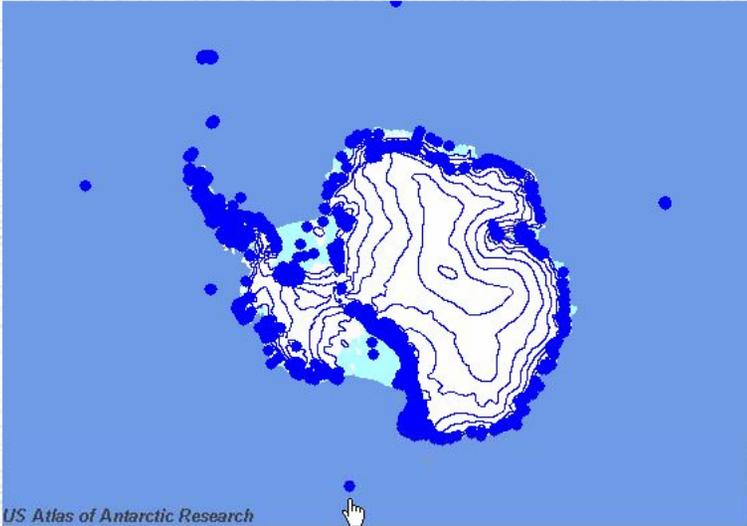
- Active winter-over stations - 1999
- Faults
- Helicopter Landing Sites - 2000
- Twin Otter Landing Sites - 2000
- LC130 Landing Sites - 2000



When red locator is visible, click on this map to

# Named Features by Type as Layers - Glaciers

 **Atlas of Antarctic Research**



US Atlas of Antarctic Research

Zoom to Area  Zoom In  Zoom Out  Pan  Identify

None Selected 8X 2X

Continent Redraw Layers Legend Index Map Query Print Help

km 500 1000 1500

*Last Modified September 30, 2001 -*

**Scheduled maintenance may be performed on Mondays between 7:00 and 9:00 a.m. Eastern Time in the United States or on Fridays between 1:00 and 3:00 p.m.**

**If you have comments or suggestions for the atlas, please contact us**

[Privacy Statement](#)

### Named Geographic Features Layers

- All Named Features
- Named Arches
- Named Areas
- Named Bars
- Named Basins
- Named Bays
- Named Beaches
- Named Benches
- Named Capes
- Named Caves
- Named Channels
- Named Cliffs
- Named Craters
- Named Flats
- Named Gaps
- Named Glaciers
- Named Islands
- Named Lakes
- Named Streams
- Named Summits
- Named Valleys

### Identify Results

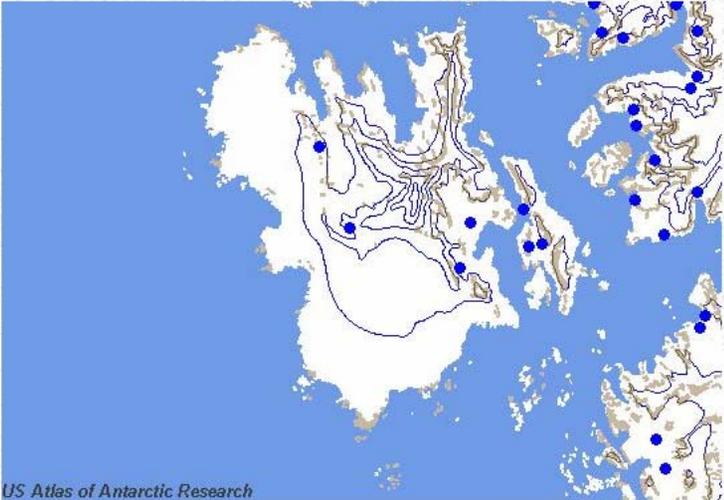
**Longitude:** 171° 30' 43" West  
**Latitude:** 64° 42' 05" South

### Named Glaciers

**Name:** Gough Glacier  
**Type:** glacier  
**Latitude:** -64.7  
**Longitude:** -171.5833  
**Elevation:**

# Named Glaciers for Anvers Island

**USGS**  
*Atlas of Antarctic Research*



*US Atlas of Antarctic Research*

**Zoom to Area**     **Zoom In**     **Zoom Out**     **Pan**     **Identify**

Anvers Island    4X    2X

Continent    Redraw    Layers    Legend    Index Map    Query    Print    Help

km    10    20    30

*Last Modified September 30, 2001 -*

**Scheduled maintenance may be performed on Mondays between 7:00 and 9:00 a.m. Eastern Time in the United States or on Fridays between 1:00 and 3:00 p.m.**

**If you have comments or suggestions for the atlas, please contact us**

[Privacy Statement](#)

**Named Geographic Features Layers**

- All Named Features
- Named Arches
- Named Areas
- Named Bars
- Named Basins
- Named Bays
- Named Beaches
- Named Benches
- Named Capes
- Named Caves
- Named Channels
- Named Cliffs
- Named Craters
- Named Flats
- Named Gaps
- Named Glaciers**
- Named Islands
- Named Lakes
- Named Streams
- Named Summits
- Named Valleys



*Index Map*

When red locator is visible, click on this map to

# Version 3

- Similar capabilities
- Utilizes Web map and feature services
- OGC compliant
- Open Source
- Labels for selected layers
- Larger Map Display Window

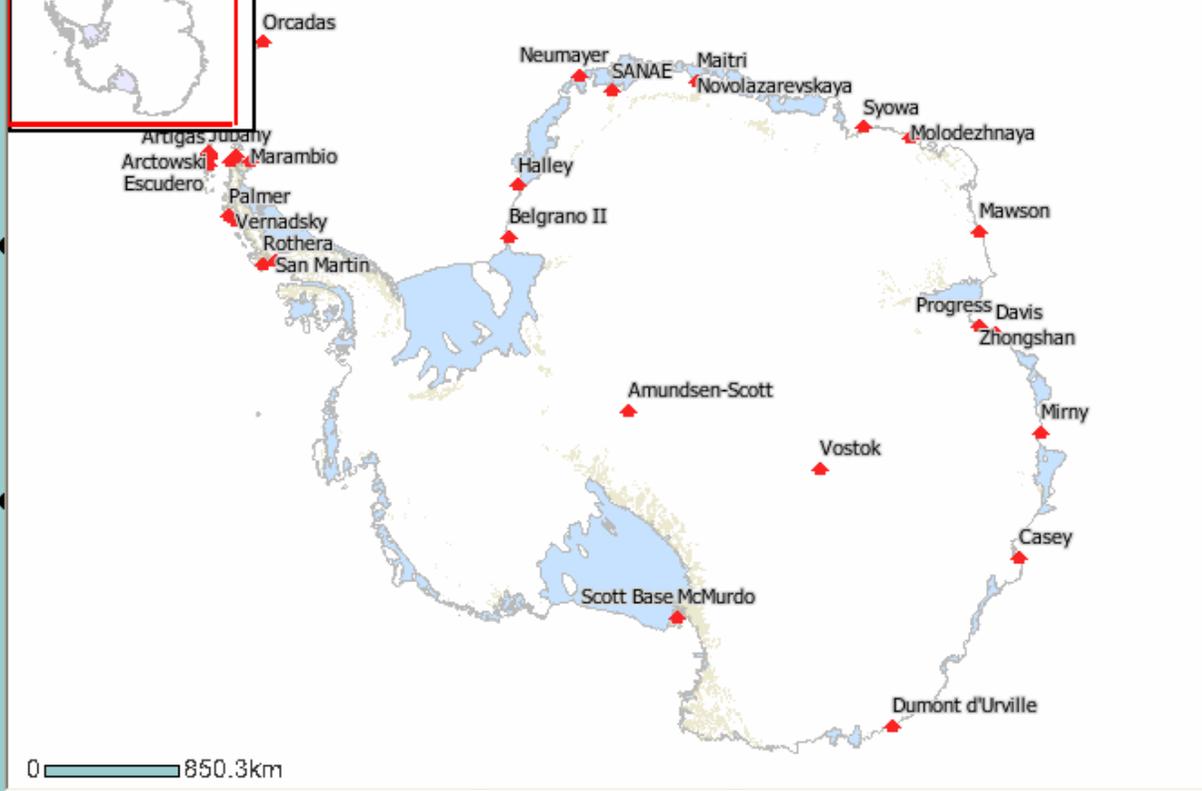
# Entry Map for Antarctic Atlas – Version 3



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

- Visible
- Elevation
  - Geographic Names
  - Hydrography
  - Locations
  - Orthoimagery
  - Physiography
  - Reference
  - Satellite Imagery
  - Topographic Maps

Last Modified: September 30, 2005 If you have comments or suggestions for the atlas, [please contact us](#). Currently tested against Internet Explorer 6.0.

# Data Download Access through the Atlas Map Window

The screenshot displays a web-based map application interface. A 'Data Download' dialog box is open in the foreground, providing access to three data types: [Digital Raster Graphics](#), [Declassified Satellite Imagery](#), and [LIDAR Elevation Data](#). A 'Close' button is located at the bottom of the dialog. The background map shows the continent of Antarctica with several research stations marked by red triangles and labeled: Maitri, Syowa, Molodezhnaya, Mawson, Progress, Davis, Zhongshan, Mirny, Casey, Dumont d'Urville, and McMurdo. A scale bar at the bottom indicates a distance of 891.2km. On the right side, a 'Visible' layer control panel lists various map layers: Elevation, Geographic Names, Hydrography, Locations, Orthoimagery, Physiography, Reference, Satellite Imagery, and Topographic Maps. Above this panel are buttons for 'Layers', 'Legend', and 'Redraw'. The browser's address bar shows 'Internet'.

# Download or View Digital Raster Graphics

## Digital Raster Graphics (DRG)

These files contain scans of Topographic Reconnaissance maps of Antarctica. The source maps were published at 1:250,000-scale by the U.S. Geological Survey in cooperation with the National Science Foundation. The extent of their coverage can be seen in the "Topographic Reconnaissance Index - 250k" layer of the Atlas of Antarctic Research viewer. Use the "VIEW" link below to look at a low resolution version of the map. Then download the selected map at full resolution by clicking the download link. The metadata for each of the maps is contained in the "Full Map" download file.

The maps were scanned at a ground resolution of 25.4 meters and range from 10 to 30 megabytes.

They are provided in two formats:

### FULL MAP

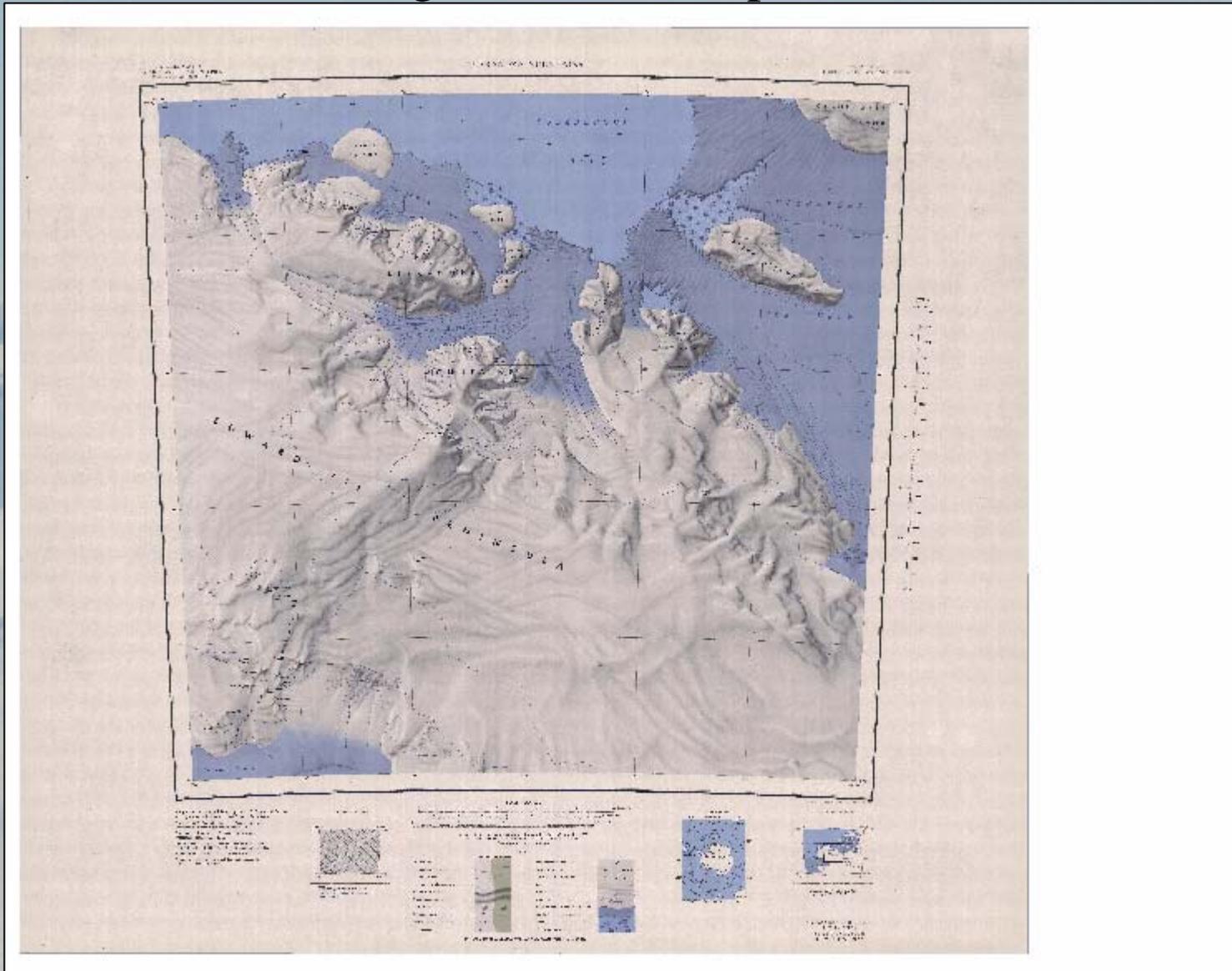
- Georeferenced to the publication projection
- With collar information
- With north at the top
- Metadata are included with the full map download file.

### SEAMLESS MAP

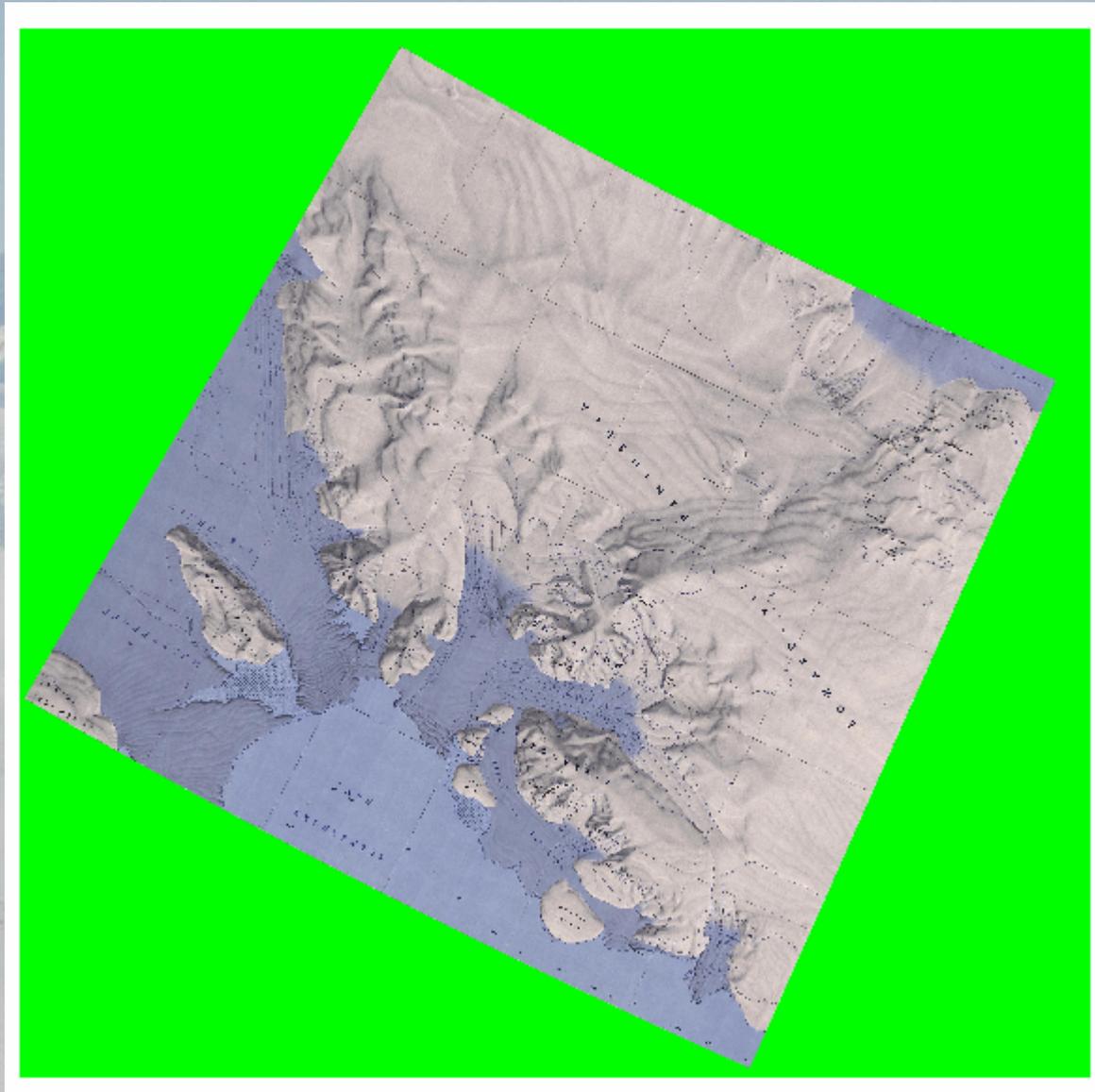
- As displayed in the DRG layer of the viewer
- Collar information removed
- Georeferenced to the [SCAR Polar Stereographic projection](#)

MAP NAME	FULL MAP	FULL MAP	SEAMLESS MAP	SEAMLESS MAP
Alexandra Mountains	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Argentina Range	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Bear Peninsula	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Beethoven Peninsula	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Blackburn Nunatak	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Boyd Glacier	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>
Buckley Island	<a href="#">VIEW</a>	<a href="#">download</a>	<a href="#">VIEW</a>	<a href="#">download</a>

# View Full Digital Raster Graphics



# View Seamless Digital Raster Graphics



# Seamless Digital Raster Graphics in the Map Viewer

**USGS**  
*Atlas of Antarctic Research*

**Visible**

- Elevation
- Geographic Names
- Hydrography
- Locations
- Orthoimagery
- Physiography
- Reference
- Satellite Imagery
- Topographic Maps
- Digital Raster Graphics

0 826.2km

Overview  
Zoom In  
Zoom Out  
Zoom Extent  
Full Extent  
Re-center  
Identify  
Find Place  
Find Map  
Print  
Download  
Clear  
Help

Layers Legend Redraw

Orcadas  
Neumayer  
SANAE  
Maitri  
Novolazarevskaya  
Syowa  
Molodezhnaya  
Mawson  
Progress  
Davis  
Zhongshan  
Mirny  
Casey  
Dumont d'Urville  
Scott Base  
McMurdo  
Vostok  
Amundsen-Scott  
Belgrano II  
Halley  
Palmer  
Vernadsky  
Rothera  
San Martin  
Arctowski  
Escudero  
Jubany  
Marambio

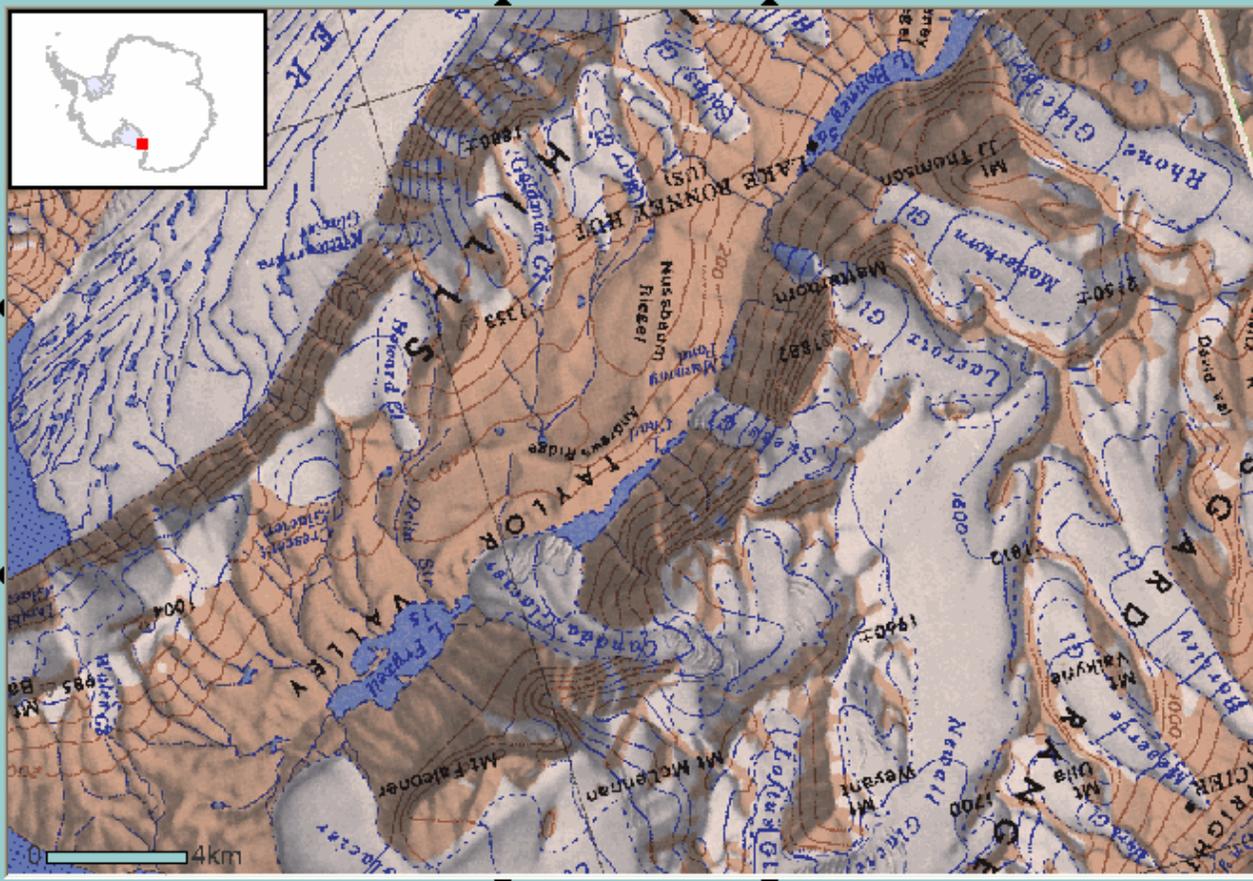
# Full Resolution DRG – Orientation Issues



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

### Visible

- Elevation
- Geographic Names
- Hydrography
- Locations
- Orthoimagery
- Physiography
- Reference
- Satellite Imagery
- Topographic Maps
  - Topographic Maps
  - Digital Raster Graphics

# Full Resolution DRG – Orientation Issues

**USGS**  
**Atlas of Antarctic Research**

**Visible**

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help

**Layers** **Legend** **Redraw**

**Visible**

- Elevation
- Geographic Names
- Hydrography
- Locations
- Orthoimagery
- Physiography
- Reference
- Satellite Imagery
- Topographic Maps
  - Topographic Maps
  - Digital Raster Graphics

0 8.4km

# Download or View LiDAR Elevation Data

The screenshot displays a web application interface for downloading LiDAR elevation data. A dialog box titled "Data Download" is open, showing three links: [Digital Raster Graphics](#), [Declassified Satellite Imagery](#), and [LiDAR Elevation Data](#). A "Close" button is located at the bottom of the dialog. The background shows a map of Antarctica with various research stations marked, including Maitri, Syowa, Molodezhnaya, Mawson, Progress, Davis, Zhongshan, Mirny, Casey, Dumont d'Urville, and Vostok. A scale bar at the bottom indicates 0 to 891.2 km. On the right side, there is a "Visible" list of layers: Elevation, Geographic Names, Hydrography, Locations, Orthoimagery, Physiography, Reference, Satellite Imagery, and Topographic Maps. Buttons for "Layers", "Legend", and "Redraw" are also present.

# Download or View LiDAR Elevation Data



## Lidar high-resolution DEM FINAL DATA download site

Low-resolution shaded relief maps and full resolution DEMs available!!!

View a: [generalized index map](#) or a [brief description](#) of the data. For a more detailed evaluation of the data download the Site Reports document [Site Reports document](#).

The **Version 5 (final) Digital Elevation Models** have 2-meter post spacing unless specified as (4m) below. File sizes are listed for each file. Shaded relief files are very generalized.

**Download (DEMS)** the digital elevation model files (zipped tiff/tfw) from list below:

<a href="#">Arena (26 MB)</a>	<a href="#">Barwick (34 MB)</a>	<a href="#">Beacon (96 MB)</a>	<a href="#">Bull (102 MB)</a>
<a href="#">Denton(4m) (111 MB)</a>	<a href="#">Discovery(4m) (64 MB)</a>	<a href="#">Doorly West (163 MB)</a>	<a href="#">Doorly East (76 MB)</a>
<a href="#">Erebus (30 MB)</a>	<a href="#">Hutpoint (111 MB)</a>	<a href="#">Mckelvey (82 MB)</a>	<a href="#">Morning (320 MB)</a>
<a href="#">Odell(4m) (14 MB)</a>	<a href="#">Radian(4m) (122 MB)</a>	<a href="#">Royds (12 MB)</a>	<a href="#">Taylor West (185 MB)</a>
<a href="#">Taylor East (115 MB)</a>	<a href="#">Victoria (80 MB)</a>	<a href="#">White(4m) (75 MB)</a>	<a href="#">Wright (190 MB)</a>

**Download POSTERS VERY GENERALIZED Shaded Relief Posters** (pdfs) from the list below:

<a href="#">Arena (21 MB)</a>	<a href="#">Barwick (21 MB)</a>	<a href="#">Beacon (21 MB)</a>	<a href="#">Bull (21 MB)</a>
<a href="#">Denton (21 MB)</a>	<a href="#">Discovery (21 MB)</a>	<a href="#">Doorly West (21 MB)</a>	<a href="#">Doorly East (21 MB)</a>
<a href="#">Erebus (21 MB)</a>	<a href="#">Hutpoint (21 MB)</a>	<a href="#">Mckelvey (21 MB)</a>	<a href="#">Morning (21 MB)</a>
<a href="#">Odell(4m) (21 MB)</a>	<a href="#">Radian (21 MB)</a>	<a href="#">Royds (21 MB)</a>	<a href="#">Taylor West (21 MB)</a>
<a href="#">Taylor East (21 MB)</a>	<a href="#">Victoria (21 MB)</a>	<a href="#">White (21 MB)</a>	<a href="#">Wright (21 MB)</a>

*(Last update: December 14, 2004)*

# LiDAR Elevation Data in the Map Viewer Beacon Valley Rock Glacier/Polygons



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



Layers Legend Redraw

- Visible**
- [LiDAR DEM Shades](#)
  - [Spot Elevations](#)
  - [Elevation Points - 250k](#)
- Geographic Names**
- Hydrography**
- Locations**
- Orthoimagery**
- Physiography**
- Reference**
- Satellite Imagery**
- Topographic Maps**

# LiDAR Elevation Data in the Map Viewer

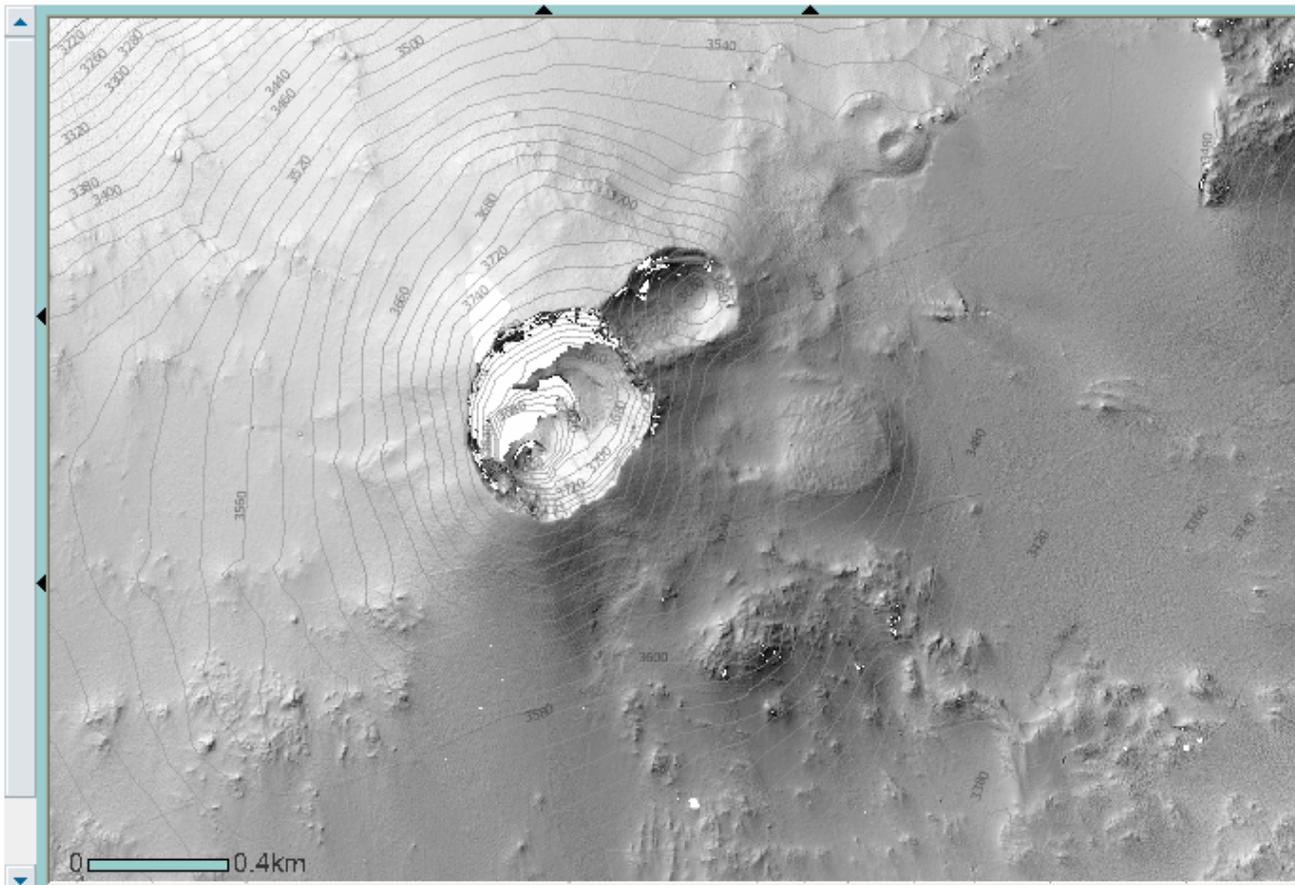
## Erebus Volcano Craters



USGS

### Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



Layers Legend

Redraw

- Visible
- [LiDAR DEM Shades](#)
  - [Spot Elevations](#)
  - [Elevation Points - 250k](#)
- [Geographic Names](#)
  - [Hydrography](#)
  - [Locations](#)
  - [Orthoimagery](#)
  - [Physiography](#)
  - [Reference](#)
  - [Satellite Imagery](#)
  - [Topographic Maps](#)

# LiDAR Elevation Data in the Map Viewer

## McMurdo Station



USGS

### Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



Layers Legend

Redraw

- Visible
- [LIDAR DEM Shades](#)
  - Spot Elevations**
  - [Elevation Points - 250k](#)
- Geographic Names
  - Hydrography
  - Locations
  - Orthoimagery
  - Physiography
  - Reference
  - Satellite Imagery
  - Topographic Maps

# Satellite Imagery – 30 meters McMurdo Dry valleys and Ross Island

**USGS**  
*Atlas of Antarctic Research*

**Visible**

- Physiography**
  - Coastline**
  - [Coast - 250k](#)
  - [Coast - 50k \(Ross Island & Vicinity\)](#)
  - Surface Features**
    - [Cliffs - 250k](#)
    - [Rocks - 10M](#)
- Reference**
- Satellite Imagery**
  - Landsat**
    - [Landsat Images - 30 m](#)
    - [Landsat Images - 5 m](#)
  - Radarsat**
    - [Radarsat Mosaic](#)
- Topographic Maps**

0 90.4km

Scott Base McMurdo

# Satellite Imagery – 30 meters Ross Island

The screenshot displays the USGS Atlas of Antarctic Research web application. The main map shows satellite imagery of Ross Island, Antarctica, with a 30-meter resolution. The map is color-coded, with red and brown tones indicating terrain features. A red arrow points to the location of the McMurdo Scott Base. An inset map in the top-left corner shows the location of Ross Island within the continent of Antarctica. The interface includes a navigation sidebar on the left with options such as Overview, Zoom In, Zoom Out, Zoom Extent, Full Extent, Re-center, Identify, Find Place, Find Map, Print, Download, Clear, and Help. The right sidebar contains a Layers panel with buttons for Layers, Legend, and Redraw. The Visible section lists the following layers:

- Physiography
  - Coastline
  - Coast - 250k
  - Coast - 50k (Ross Island & Vicinity)
  - Surface Features
    - Cliffs - 250k
    - Rocks - 250k
- Reference
- Satellite Imagery
  - Landsat
    - Landsat Images - 30 m
    - Landsat Images - 5 m
  - Radarsat
    - Radarsat Mosaic
- Topographic Maps

# Satellite Imagery – 5 and 30 meters

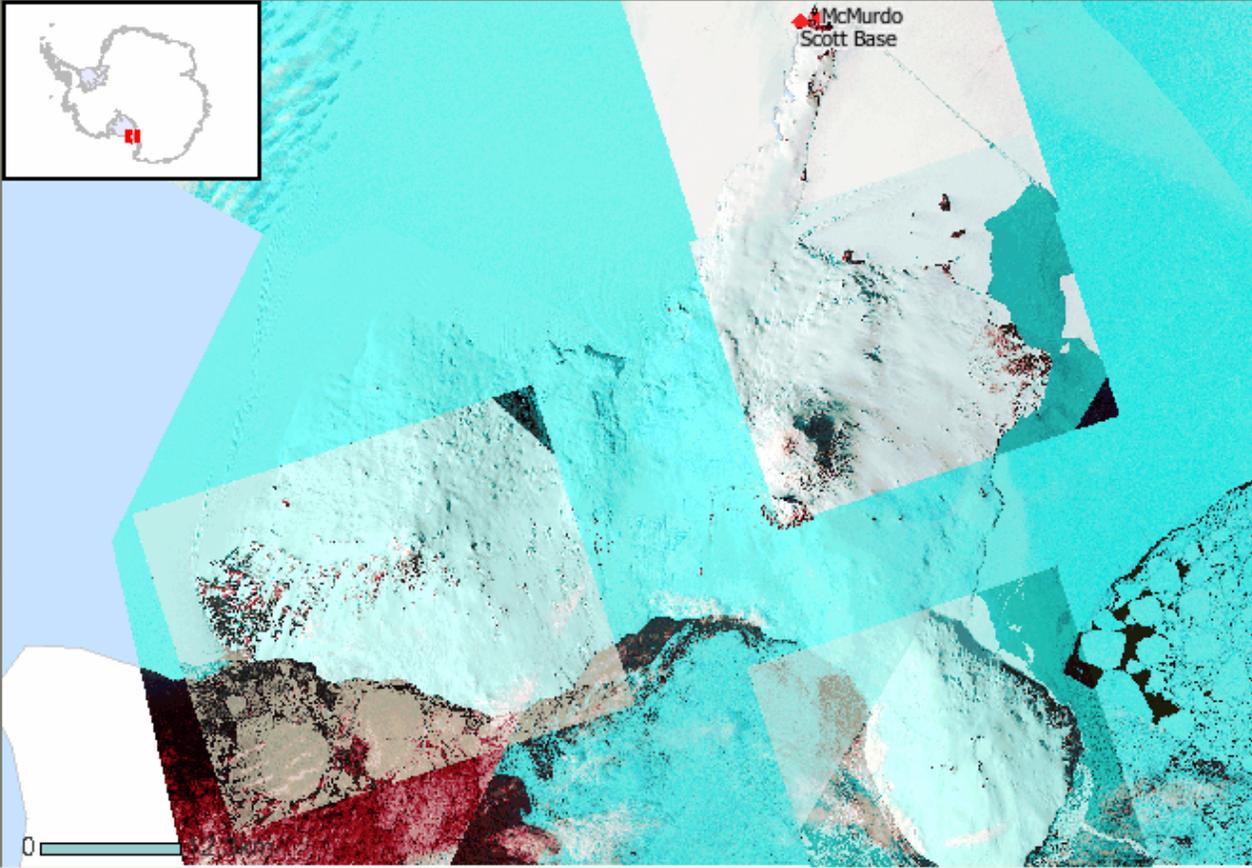
## Ross Island



USGS

### Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

#### Visible

- Physiography**
  - Coastline**
  - [Coast - 250k](#)
  - [Coast - 50k \(Ross Island & Vicinity\)](#)
  - Surface Features**
    - [Cliffs - 250k](#)
    - [Rocks - 250k](#)
- Reference**
- Satellite Imagery**
  - Landsat**
    - [Landsat Images - 30 m](#)
    - [Landsat Images - 5 m](#)
  - Radarsat**
    - [Radarsat Mosaic](#)
- Topographic Maps**



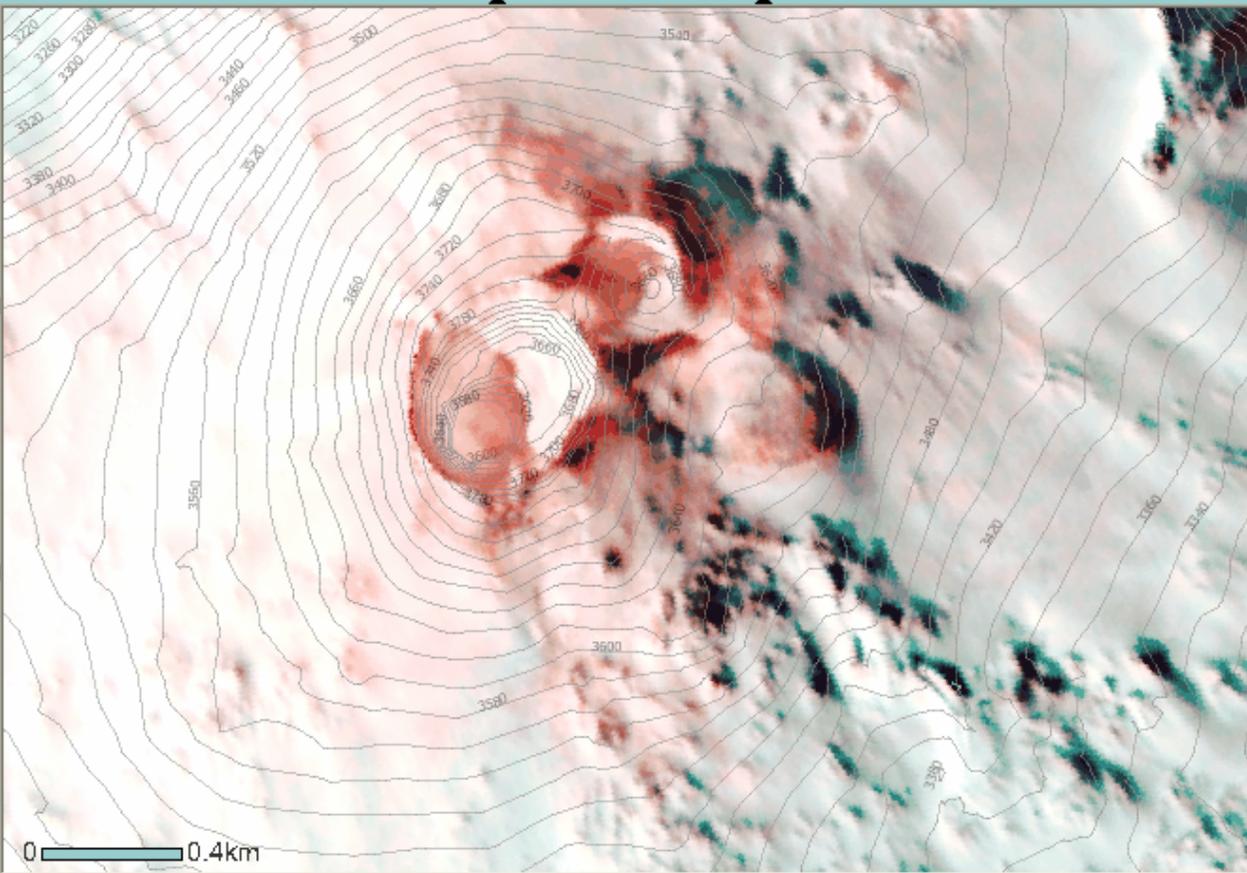
# Satellite Imagery – 5 and 30 meters Erebus Volcano with Labeled Contours



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

- Visible
- Hydrography
  - Locations
  - Orthoimagery
  - Physiography
  - Reference
  - Satellite Imagery
    - Landsat
      - Landsat Images - 30 m
      - Landsat Images - 5 m
    - Radarsat
      - Radarsat Mosaic
  - Topographic Maps

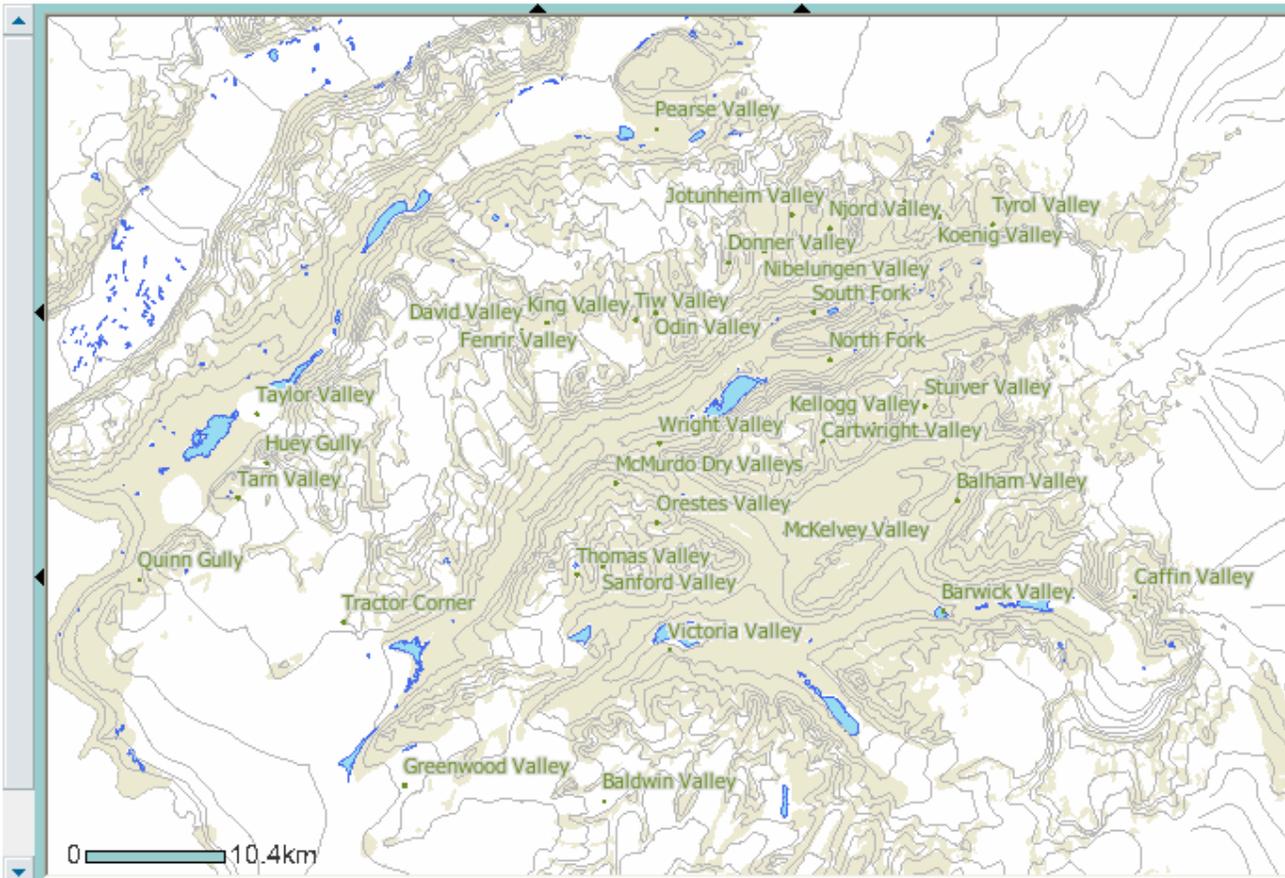
# Named Features – Labels for Valleys



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

- Visible
- Elevation
    - Contours
      - Contours - 250k
      - Contours - 50k (Ross Island & Vicinity)
      - Contours - 50k Labels (Ross Island & Vicinity)
    - Radarsat DEM
    - Radarsat DEM
    - Shaded Relief
    - LIDAR DEM Shades
    - Spot Elevations
    - Elevation Points - 250k
  - Geographic Names
  - Hydrography
    - Lakes
      - Lakes - 50k (Ross Island & Vicinity)
    - Snow and Ice

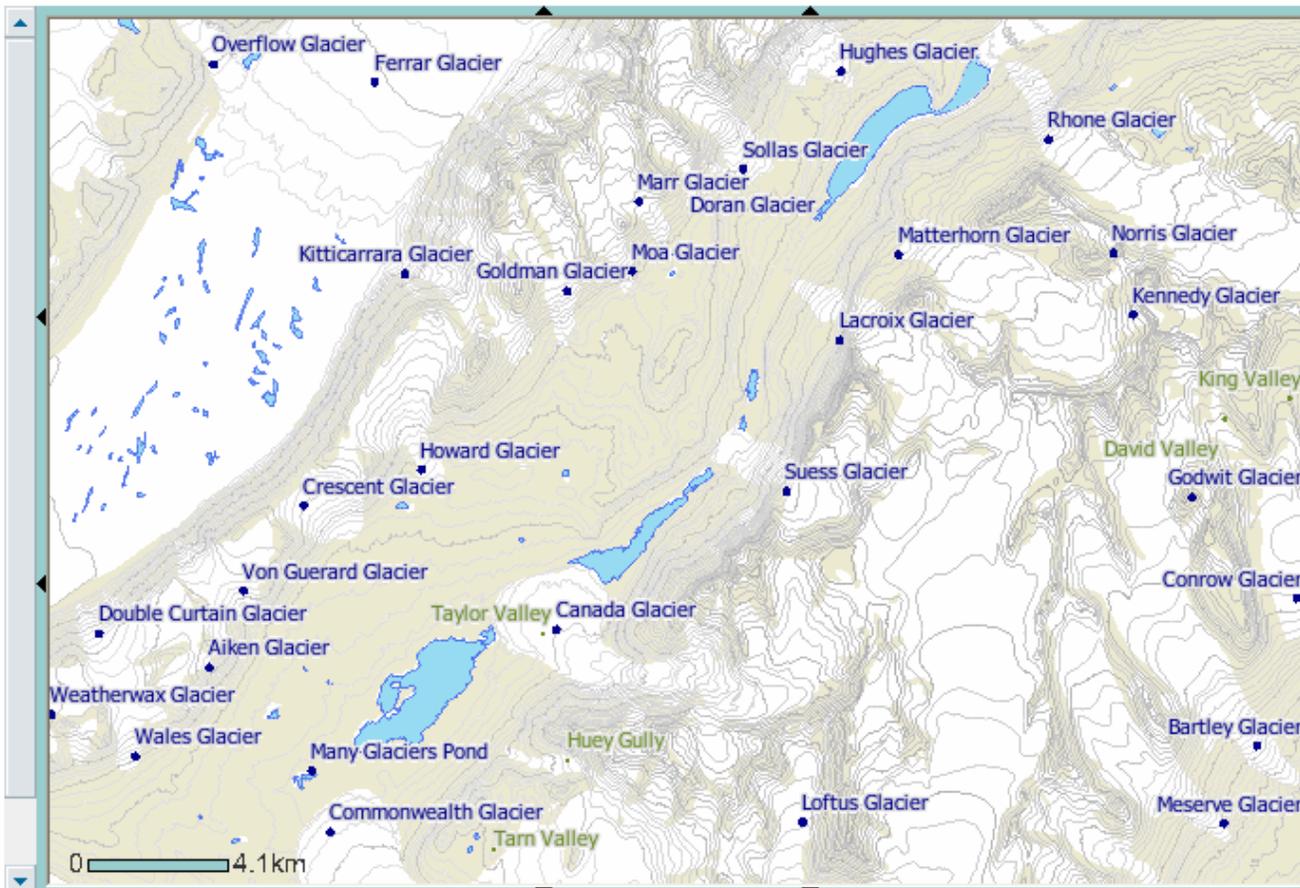
# Named Features – Labels for Valleys and Glaciers



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

- Visible
- Geographic Names
  - Hydrography
    - Lakes
      - Lakes - 50k (Ross Island & Vicinity)
    - Snow and Ice
      - No layers available.
    - Streams
      - Streams - 50k (Ross Island & Vicinity)
  - Locations
  - Orthoimagery
  - Physiography
    - Coastline
      - Coast - 250k
      - Coast - 50k (Ross Island & Vicinity)
    - Surface Features

# Named Features Search – Commonwealth

## Feature Name Query Result

4 features found.

Click on feature name for detailed information. Click on "Zoom" link to display feature in viewer.

Zoom	Name (U.S.)	Type	Lat-Lon
<a href="#">Zoom</a>	<a href="#">Commonwealth Bay</a>	bay	( -66.9, 142.6667 )
<p>An open bay about 30 mi wide at the entrance between Point Alden and Cape Gray. Discovered in 1912 by the AAE under Douglas Mawson, who established the main base of the expedition at Cape Denison at the head of the bay. Named by AAE after the Commonwealth of Australia.</p>			
<a href="#">Zoom</a>	<a href="#">Commonwealth Glacier</a>	glacier	( -77.5833, 163.3167 )
<p>Glacier which flows in a SE direction and enters the N side of Taylor Valley immediately W of Mount Coleman, in Victoria Land. Charted and named by the BrAE under Scott, 1910-13. Named for the Commonwealth of Australia, which made a financial grant to the BrAE and contributed two members to the Western Geological Party which explored this area.</p>			
<a href="#">Zoom</a>	<a href="#">Commonwealth Range</a>	range	( -84.25, 172.3333 )
<p>A N-S trending range of rugged mountains, 60 mi long, bordering the E side of Beardmore Glacier from the Ross Ice Shelf to Keltie Glacier. Discovered by the BrAE (1907-09) and named by them for the Commonwealth of Australia, which gave much assistance to the expedition.</p>			
<a href="#">Zoom</a>	<a href="#">Commonwealth Stream</a>	stream	( -77.5833, 163.5 )
<p>A meltwater stream in Taylor Valley which flows E from Commonwealth Glacier into New Harbor of McMurdo Sound. Studied on the ground during USN OpDFrz, 1957-58, by Troy L. Pewe, who suggested the name in association with Commonwealth Glacier.</p>			

Close Window

Build New Query

# Named Features Search Results – Commonwealth

## Feature Name Query Result - Detail Page

<b>Feature Name (U.S.)</b>	Commonwealth Glacier
<b>Latitude</b>	-77.5833
<b>Longitude</b>	163.3167
<b>SCAR PS Map-X (m)</b>	388764.450081359
<b>SCAR PS Map-Y (m)</b>	-1297192.95894255
<b>Elevation (m)</b>	--
<b>Other Name(s)</b>	--
<b>Description</b>	Glacier which flows in a SE direction and enters the N side of Taylor Valley immediately W of Mount Coleman, in Victoria Land. Charted and named by the BrAE under Scott, 1910-13. Named for the Commonwealth of Australia, which made a financial grant to the BrAE and contributed two members to the Western Geological Party which explored this area.

[Zoom To Feature](#)

Close Window

Back to Query Results

Build New Query

# Named Features Search Results Display– Commonwealth

The screenshot displays the USGS Atlas of Antarctic Research web application. The interface includes a top navigation bar with the USGS logo and the title "Atlas of Antarctic Research". On the left, a vertical toolbar contains icons for Overview, Zoom In, Zoom Out, Zoom Extent, Full Extent, Re-center, Identify, Find Place, Find Map, Print, Download, Clear, and a home icon. The main map area shows a topographic map of an Antarctic region with various features labeled in blue text. A search result for "Commonwealth" is highlighted with a yellow square icon on the map, corresponding to "Commonwealth Glacier". An inset map in the top-left corner shows the location of the search area on the continent of Antarctica. On the right side, there is a "Layers" and "Legend" section with a "Redraw" button. Below this is a "Visible" section with checkboxes for "Spot Elevations" and "Elevation Points - 250k". A vertical list of categories is shown on the right, each with a blue arrow icon: Geographic Names, Hydrography, Locations, Orthoimagery, Physiography, Reference, Satellite Imagery, and Topographic Maps. A scale bar at the bottom left of the map indicates 0 to 2 km.

**USGS**  
*science for a changing world*

## Atlas of Antarctic Research

Overview  
Zoom In  
Zoom Out  
Zoom Extent  
Full Extent  
Re-center  
Identify  
Find Place  
Find Map  
Print  
Download  
Clear

Commonwealth Glacier  
Green Creek  
Maria Cr ek  
Canada Stream  
Bowles Creek  
Young Hill  
Aiken Glacier  
Harnish Creek  
Clow Island  
Crescent Stream  
Fryxell, Lake  
Von Guerard Stream  
Wales Glacier  
Lost Seal Stream  
Aiken Cr ek  
McKnight Creek  
Huey Creek  
Keohane, Mount  
Scholars Peak  
Huey Gully  
Knox, Mount  
Penn Tarn  
Princeton Tarn  
Falconer, Mount  
Many Glaciers Pond  
Commonwealth Glacier  
Coral Ridge  
Yale Tarn  
Ghent Ridge  
Sanders Nunatak  
Tarn Valley  
Commonwealth Stream  
Wales Stream  
Marinovic Beach  
Explorers Cove  
Baker Point  
MacDonald Hills  
Territory Cirque  
Colony Cirque  
Harp Glacier  
Dominion Hill  
Noxon Cliff  
Flint Hill  
Flint Ridge

Layers Legend  
Redraw

Visible  
 Spot Elevations  
 Elevation Points - 250k

Geographic Names  
Hydrography  
Locations  
Orthoimagery  
Physiography  
Reference  
Satellite Imagery  
Topographic Maps

0 2km

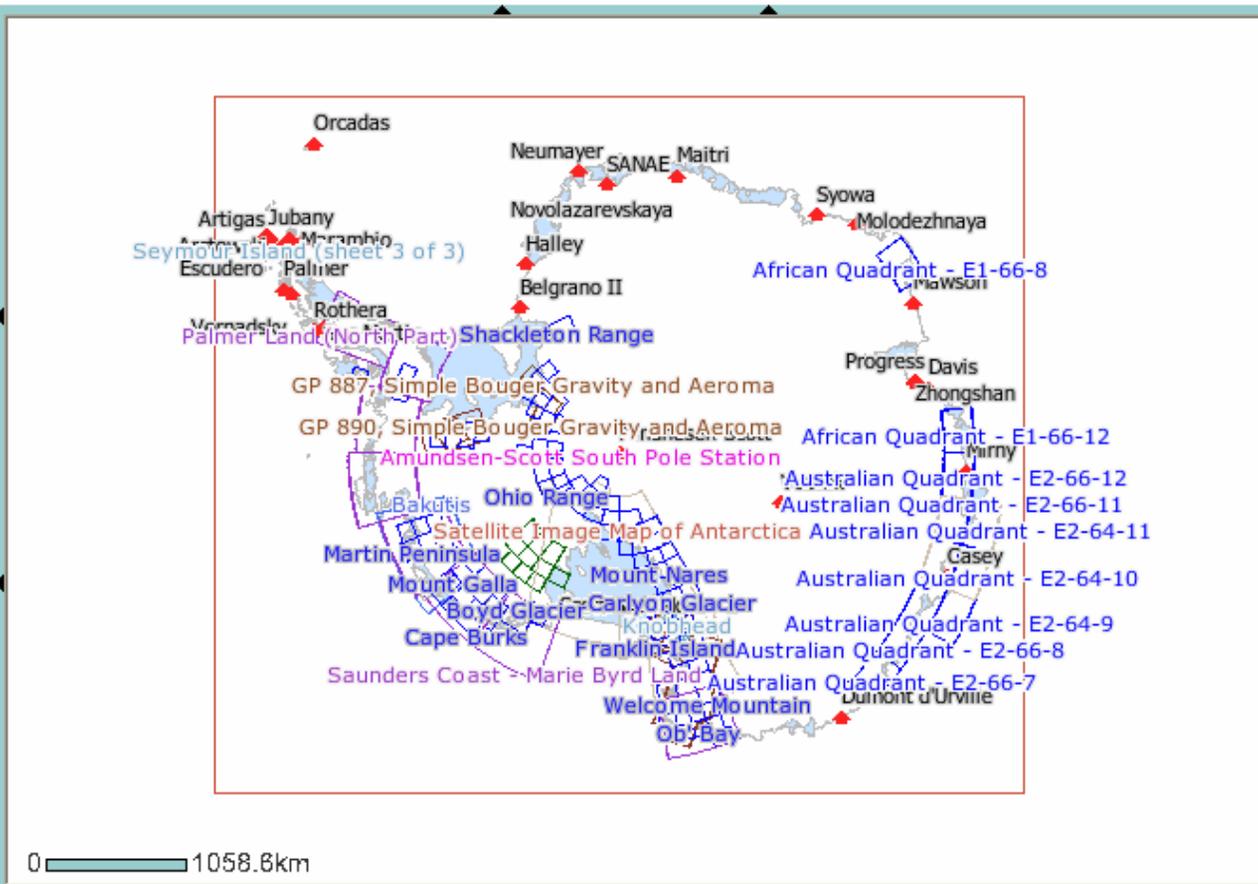
# Map Index Displays - Labels



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



Layers Legend Redraw

- Visible**
- [Geologic Reconnaissance](#)
  - [Geologic Reconnaissance Labels](#)
  - [Gravity Aeromagnetic](#)
  - [Gravity Aeromagnetic Labels](#)
  - [Photographic Image](#)
  - [Photographic Image Labels](#)
  - [Satellite Image - AVHRR](#)
  - [Satellite Image - AVHRR, Labels](#)
  - [Satellite Image - MSS](#)
  - [Satellite Image - MSS, Labels](#)
  - [Satellite Image - TM](#)
  - [Satellite Image - TM, Labels](#)
  - [Shaded Relief Sketch](#)
  - [Shaded Relief Sketch Labels](#)
  - [Topographic - Large Scale](#)
  - [Topographic - Large Scale Labels](#)
  - [Topographic Miscellaneous](#)

# Map Index Displays – Labels for 50K Maps

**USGS**  
*Atlas of Antarctic Research*

Overview  
Zoom In  
Zoom Out  
Zoom Extent  
Full Extent  
Re-center  
Identify  
Find Place  
Find Map  
Print  
Download  
Clear  
Help

Layers Legend  
Redraw

**Visible**

- [Satellite Image - MSS, Labels](#)
- [Shaded Relief Sketch](#)
- [Shaded Relief Sketch Labels](#)
- [Topographic - Large Scale](#)
- [Topographic - Large Scale Labels](#)
- [Topographic Miscellaneous](#)
- [Topographic Miscellaneous Labels](#)
- [Topographic Reconnaissance - 250k](#)
- [Topographic Reconnaissance - 250k Lab](#)
- [Topographic Reconnaissance - Other](#)
- [Topographic Reconnaissance - Other, La](#)

**Satellite Imagery**

**Topographic Maps**

- [Topographic Maps](#)
- [Digital Raster Graphics](#)

0 28km

# Map Index Search Results –50K Maps

## Find Map Results

Found 33 maps.

Select	Name	Type	Publication Date	Map Scale
<input type="checkbox"/>	Beacon Valley	Topographic	1993	1:50000
<input type="checkbox"/>	Cape Chocolate	Topographic	1993	1:50000
<input type="checkbox"/>	Cape Roberts	Topographic	0	1:50000
<input type="checkbox"/>	Cathedral Rocks	Topographic	1993	1:50000
<input type="checkbox"/>	Debenham Glacier	Topographic	0	1:50000
<input type="checkbox"/>	Granite Knolls	Topographic	1993	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000
<input type="checkbox"/>	In Compilation	Topographic	0	1:50000

# Map Index Search Results Display –50K Maps

The screenshot displays the USGS Atlas of Antarctic Research interface. At the top left is the NSF logo, and at the top center is the USGS logo with the title "Atlas of Antarctic Research".

**Left Panel (Tools):**

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear

**Main Map:** A topographic map of Antarctica with a red grid overlay. Labeled features include Twin Rocks, The Pyramid, The Spire, Mount Lister, Joyce Glaciers, Marshall Valley, Beacon Valley, Knobhead, Granite Knolls, Labyrinth, Lake Vanda, Lake Fryxell, Webb Lake, Lake Brownworth, Marble Point, Skew Peak, Mount Mahony, Cape Roberts, and Cape Chocolate. Scott Base and McMurdo are also marked. A scale bar at the bottom left indicates 0 to 42.3 km. An inset map in the top left shows the location of the search area on the continent.

**Right Panel (Layers and Legend):**

- Layers
- Legend
- Redraw
- Visible
  - Spot Elevations
  - Elevation Points - 250k
- Geographic Names
- Hydrography
- Locations
- Orthoimagery
- Physiography
- Reference
- Satellite Imagery
- Topographic Maps

# Orthophotos Near Palmer Station in the Map Viewer

The screenshot displays the USGS Atlas of Antarctic Research map viewer interface. The main map area shows a white background with black outlines of the Antarctic continent and islands. A red triangle labeled "Palmer" is positioned on the coast of the Antarctic Peninsula. A scale bar at the bottom left of the map indicates a distance of 3.2 km. The interface includes a top navigation bar with the USGS logo and the title "Atlas of Antarctic Research". On the left side, there is a vertical toolbar with icons for Overview, Zoom In, Zoom Out, Zoom Extent, Full Extent, Re-center, Identify, Find Place, Find Map, Print, Download, Clear, and Help. On the right side, there is a "Visible" layer control panel with buttons for "Layers", "Legend", and "Redraw". The "Visible" panel lists several layers: Elevation, Geographic Names, Hydrography, Locations, Orthoimagery (expanded to show "Aerial Photographs" and "Palmer Aerial Photos"), Physiography, Reference, Satellite Imagery, and Topographic Maps. The "Aerial Photographs" and "Palmer Aerial Photos" layers are checked and highlighted.

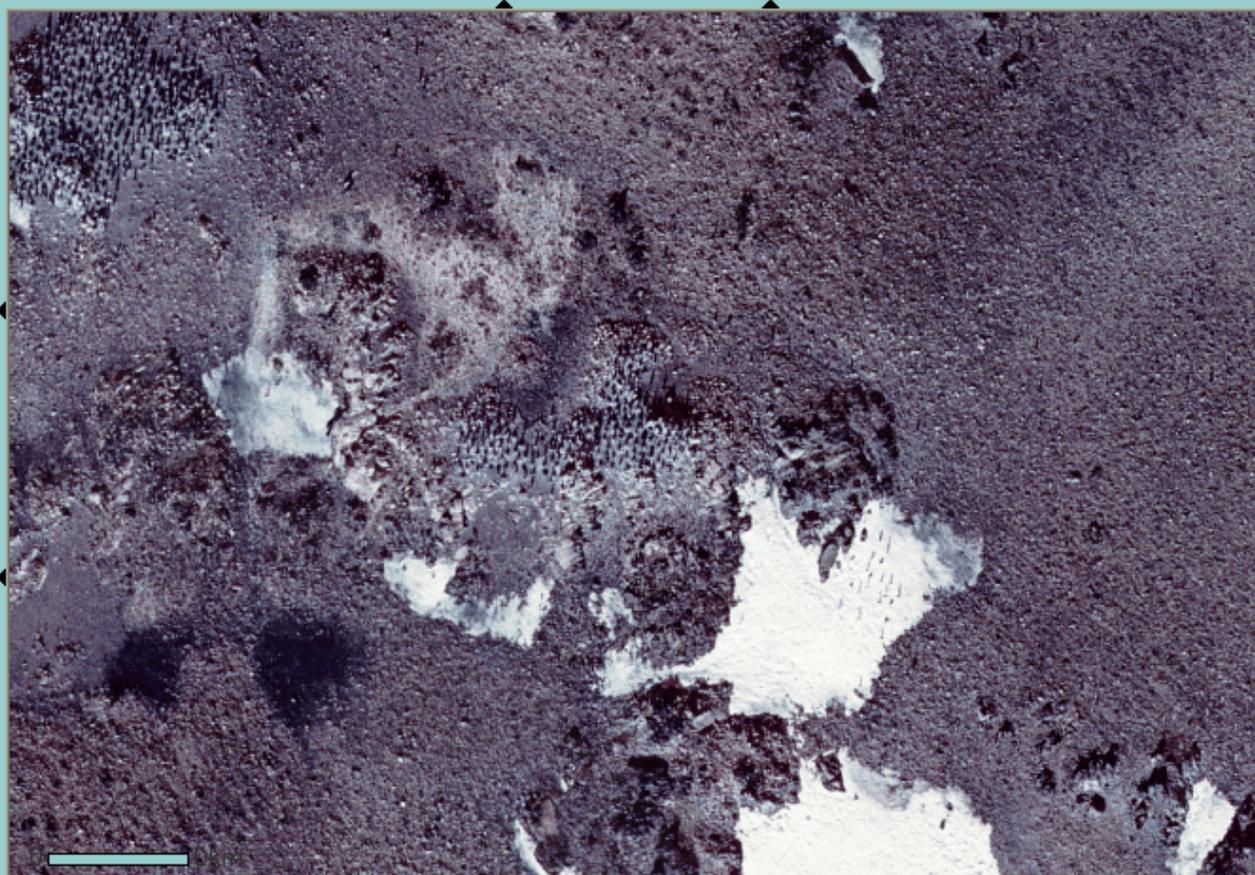
# Orthophotos Near Palmer Station - Penguins



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

### Visible

- Elevation
- Geographic Names
- Hydrography
- Locations
- Orthoimagery
  - Aerial Photographs
  - Palmer Aerial Photos
- Physiography
- Reference
- Satellite Imagery
- Topographic Maps

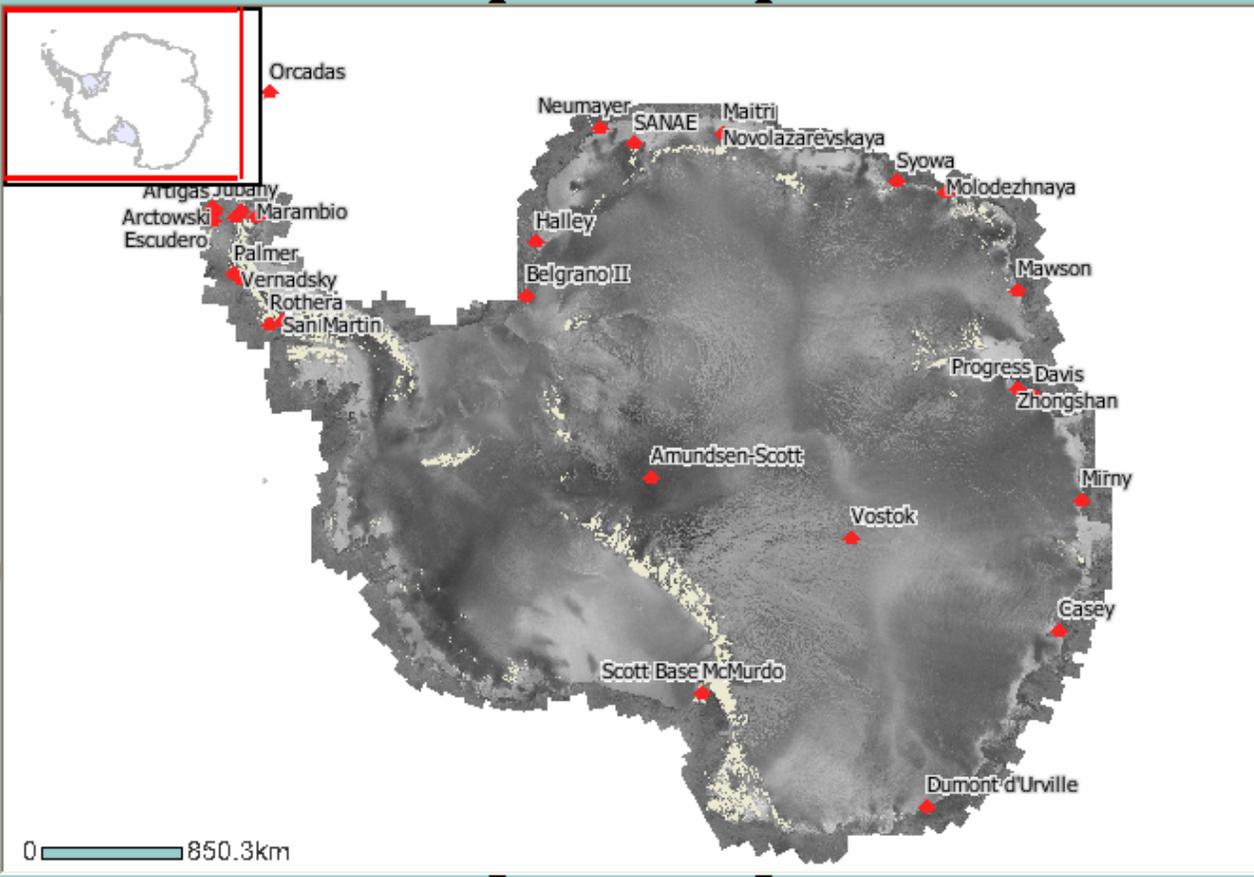
# Radarsat Mosaic – 125 m



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



- Layers
- Legend
- Redraw

- Visible
- Hydrography
  - Locations
  - Orthoimagery
  - Physiography
  - Reference
  - Satellite Imagery
    - Landsat
      - Landsat Images - 30 m
      - Landsat Images - 5 m
    - Radarsat
      - Radarsat Mosaic
  - Topographic Maps

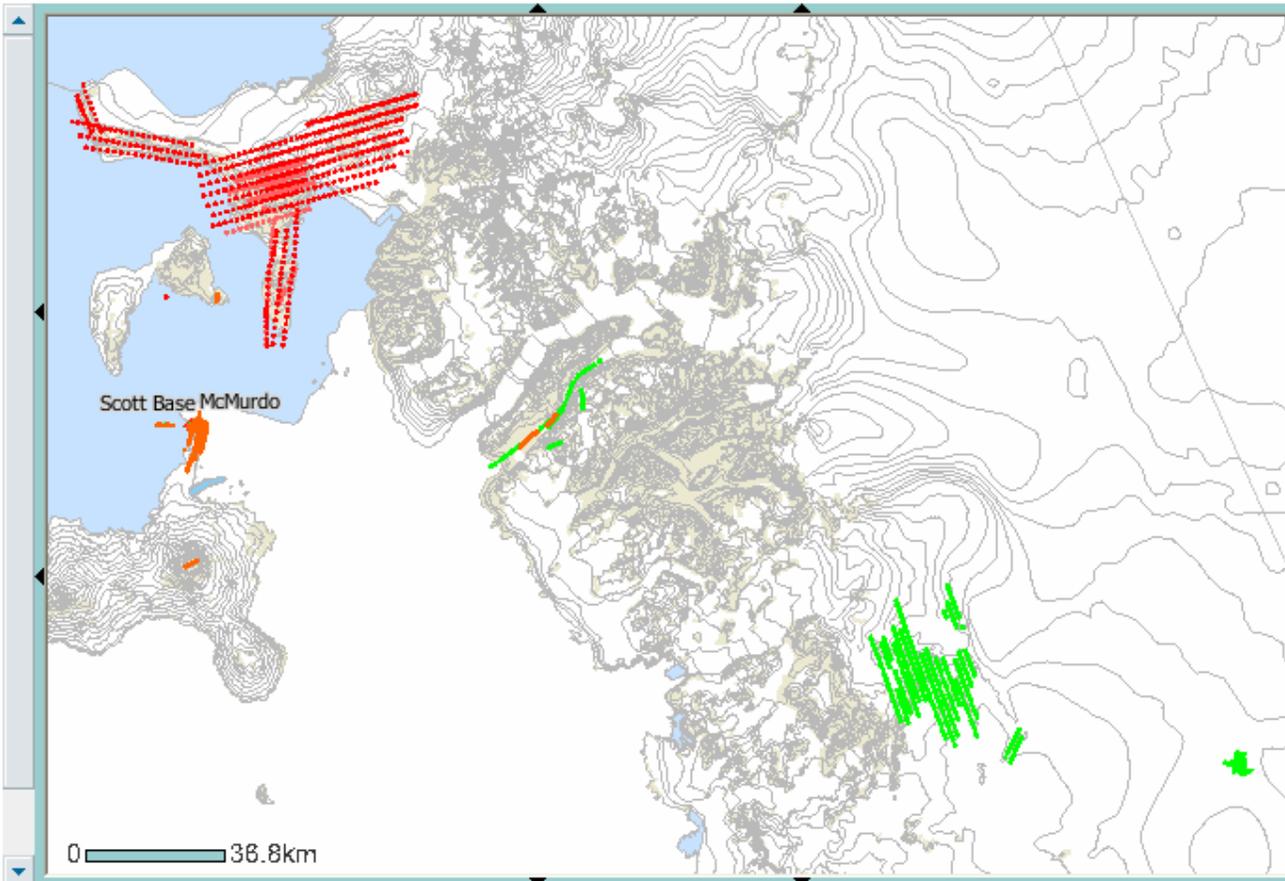
# Aerial Photography Center Points - Legend



USGS

## Atlas of Antarctic Research

- Overview
- Zoom In
- Zoom Out
- Zoom Extent
- Full Extent
- Re-center
- Identify
- Find Place
- Find Map
- Print
- Download
- Clear
- Help



Layers

Legend

Redraw

Visible

[Rocks - 3M](#)

Rock Outcrops - 3 Million

Rock Outcrop

Other

### Reference

[Aerial Photograph Centers 1999 - 1](#)

• Aerial Photograph Centers 1999 - 1

[Aerial Photograph Centers 2000 - 1](#)

• Aerial Photograph Centers 2000 - 1

[Aerial Photograph Centers 2000 - 2](#)

• Aerial Photograph Centers 2000 - 2

[Aerial Photograph Centers 2000 - 3](#)

• Aerial Photograph Centers 2000 - 3

### Satellite Imagery

# USGS Web Map Services

Service	CRS	Capabilities URL	Service ID
<b>USGS - Special Study Sites Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	special_sites
<b>USGS - Antarctica Base Layers Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	antarctica
<b>USGS - Seamless DRG Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	drgs
<b>USGS - McMurdo LTER Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	mcmlter
<b>USGS - Radarsat DEM Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	osude030
<b>USGS - Reference Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	reference
<b>USGS - Radarsat Mosaic Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	rs125030
<b>USGS - Seymour Island Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	seymour
<b>USGS - Antarctic Overview Map Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	antarctic_ov
<b>USGS - Antarctic Scale Bar Service</b>	SCAR Polar Stereographic	<a href="#">GetCapabilities</a>	antarctic_scale

# USGS Web Features Services

Service Group	CRS	Namespace	GetCapabilities URL*	DescribeFeatureType URL
<b>USGS - McMurdo Features</b>	SCAR Polar Stereographic	usgsMcmurdo	<a href="#">GetCapabilities</a>	<a href="#">DescribeFeatureType - lakes050</a> <a href="#">DescribeFeatureType - contr050</a> <a href="#">DescribeFeatureType - strms050</a> <a href="#">DescribeFeatureType - coast050</a>
<b>USGS - Seymour Features</b>	SCAR Polar Stereographic	usgsSeymour	<a href="#">GetCapabilities</a>	<a href="#">DescribeFeatureType - gmarg010</a> <a href="#">DescribeFeatureType - coast010</a> <a href="#">DescribeFeatureType - elevn010</a> <a href="#">DescribeFeatureType - noveg010</a> <a href="#">DescribeFeatureType - contr010</a> <a href="#">DescribeFeatureType - lakes010</a> <a href="#">DescribeFeatureType - human010</a> <a href="#">DescribeFeatureType - strms010</a>
<b>USGS - Map Index Features</b>	SCAR Polar Stereographic	usgsMapIndex	<a href="#">GetCapabilities</a>	<a href="#">DescribeFeatureType - ndxal030</a>
<b>USGS - Antarctic Names</b>	SCAR Polar Stereographic	usgs	<a href="#">GetCapabilities</a>	<a href="#">DescribeFeatureType - agnis030</a>
<b>University of New Hampshire - Antarctic Features</b>	SCAR Lambert Conformal Conic	unh	<a href="#">GetCapabilities</a>	<a href="#">DescribeFeatureType - s_str1970</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (72-73)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (73-74)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (74-75)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (75-76)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (77-78)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (78-79)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (79-80)</a> <a href="#">DescribeFeatureType - Glacier Mass Balance (80-81)</a> <a href="#">DescribeFeatureType - Firn 1970 - Clip</a> <a href="#">DescribeFeatureType - Glacial Crevasse - Clip</a> <a href="#">DescribeFeatureType - Glacier 1970 - Clip</a> <a href="#">DescribeFeatureType - Lake 1970 - Clip</a> <a href="#">DescribeFeatureType - Glacial Topography 1970 - Clip</a> <a href="#">DescribeFeatureType - Glacial Cliff 1970 - Clip</a>

# LIMA Transition Activities

- Viewers are plentiful and free downloads
- The greater need is for reliable (24/7) data services.
- Plan:
  - Establish the Antarctic Portal for Data Display and distribution
  - Utilize Existing Web Services
  - Transfer Data to the Portal Site
  - Utilize International Web Services
  - Add the Landsat Image Mosaic as it is available

# USGS Antarctic Portal for the IPY (and beyond)



IPY Antarctic Web Portal

[Back to Main Page](#)

Zoom



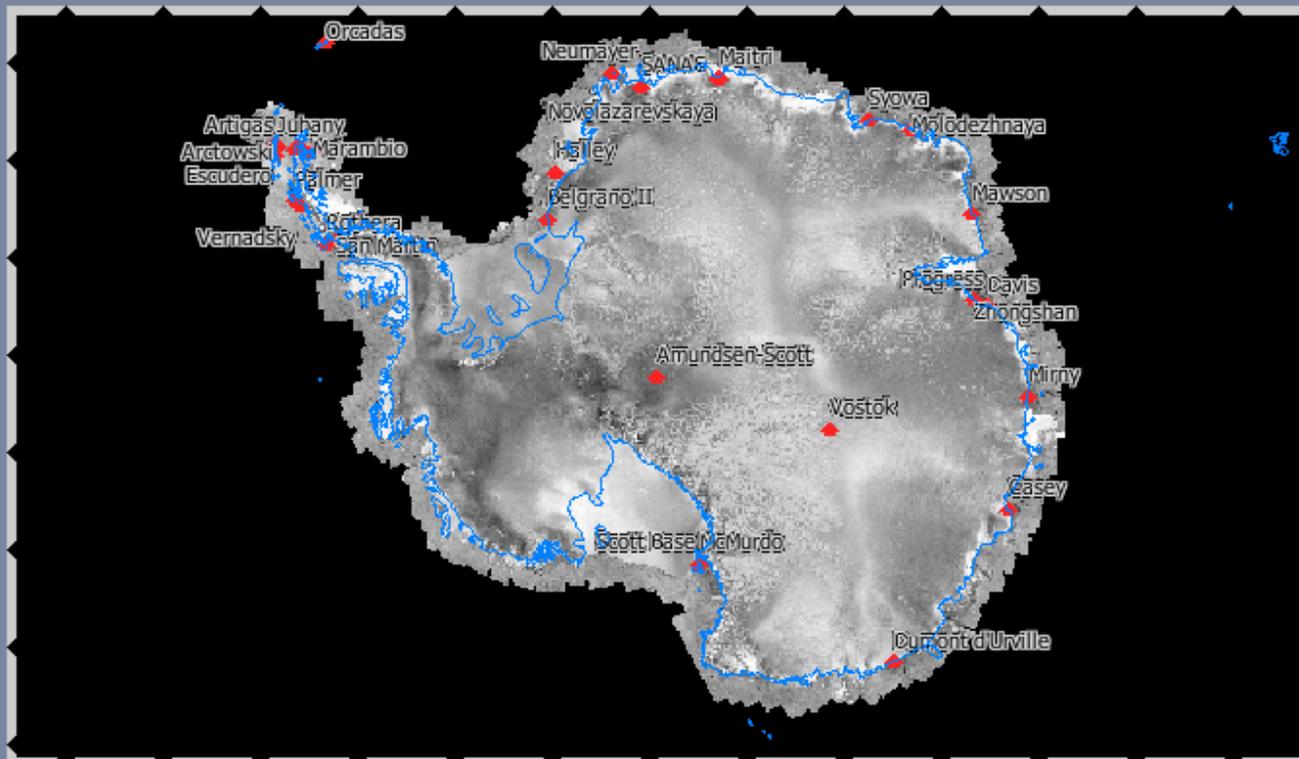
Query



Tools



Documents



Scale Information



Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery

# Digital Raster Graphics



IPY Antarctic Web Portal

[Back to Main Page](#)



## Zoom



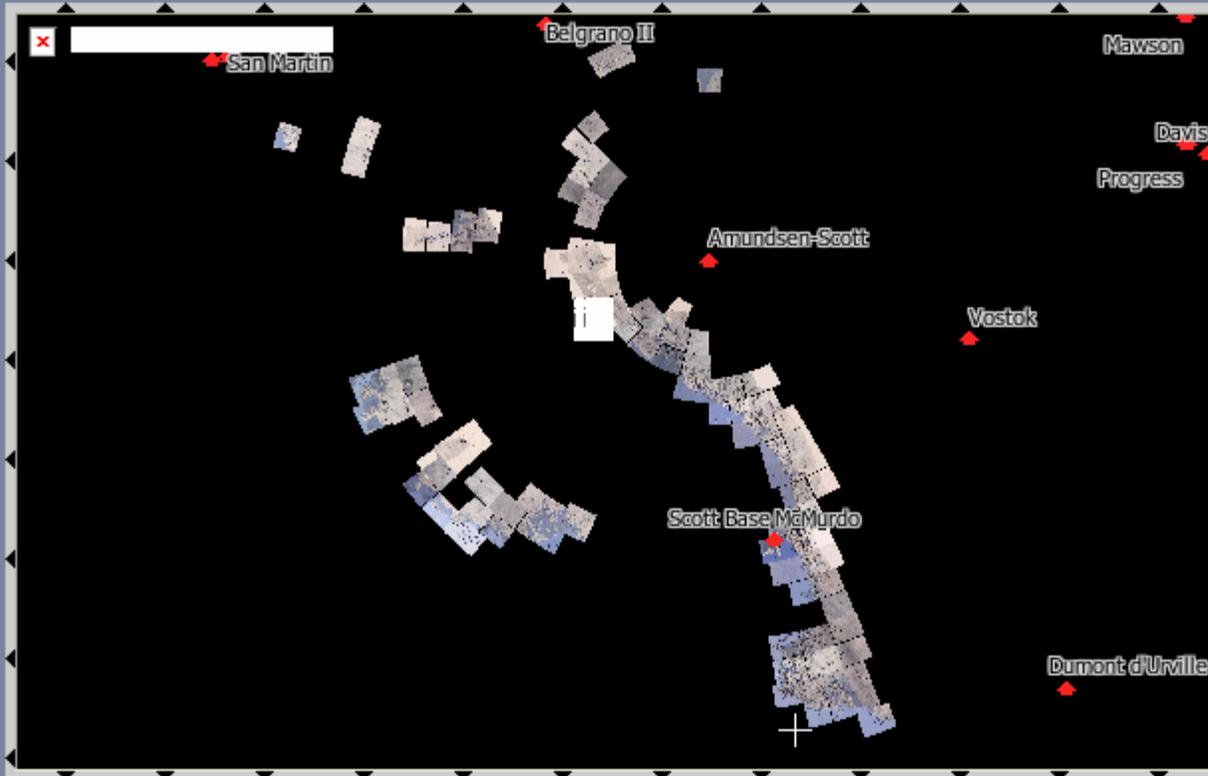
## Query



## Tools



## Documents



## Scale Information



## Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#) | [USGS for Earth Resources Observation and Science \(EROS\)](#)  
URL: /Website/Antarctica/ | Last Update: August 3, 2005 || Maintainer: [Comments and Suggestions](#) | [Disclaimer](#)

Map: 393614.14 , -2159384.88 -- Image: 392 , 360 -- ScaleFactor: 9152.89631512593

Internet



# Coastline – SCAR ADD



Zoom

Navigation icons: Home, Previous, Next, Full Screen, Print, XY coordinates

Query

Query icons: Information, Search

Tools

Tools icons: Pan, Measure, Download, Print, Legend

Documents

Documents icons: Home, List, Refresh, Print



Scale Information

Scale bar and text: Scale ~ 1 Inch:51785766.2 Met

Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

Map navigation controls: Previous, Next, Home, Full Screen

# Landsat Image – 30 Meter – Ross Island/McMurdo Dry Valleys



IPY Antarctic Web Portal

[Back to Main Page](#)

## Zoom



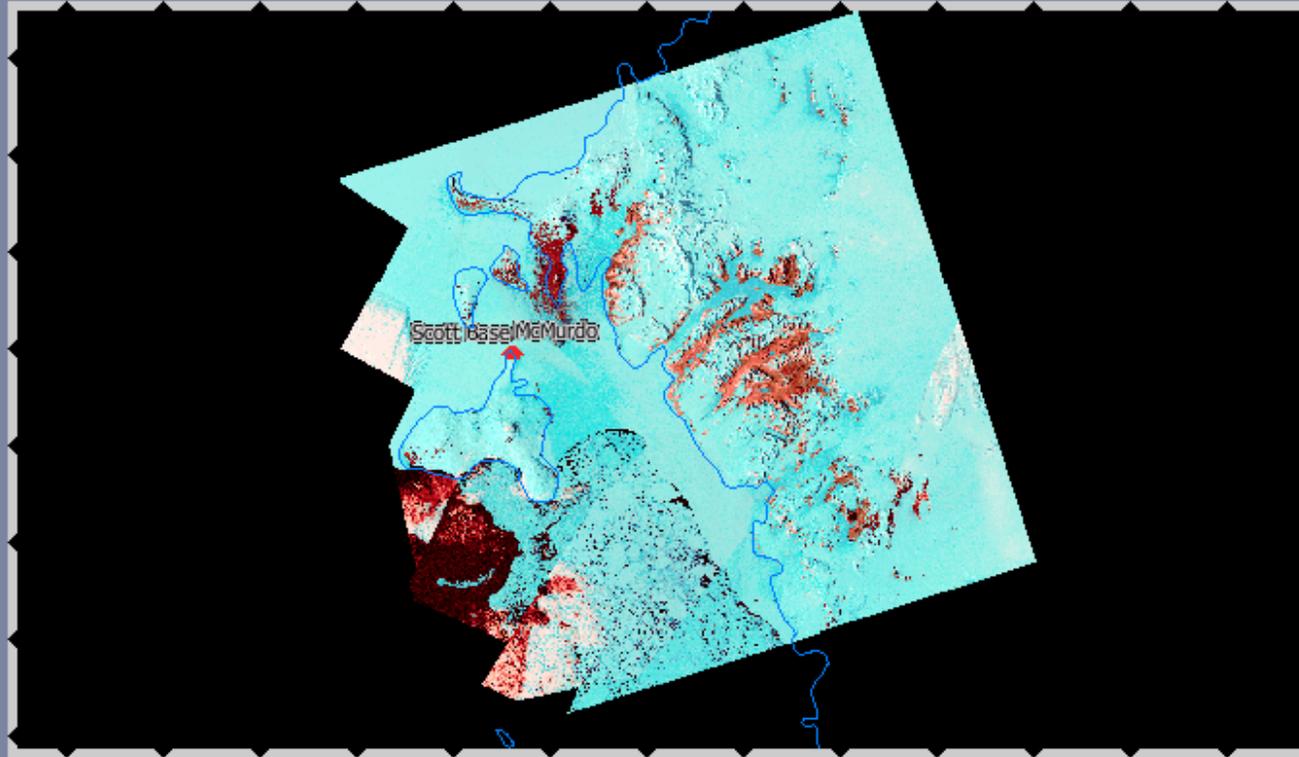
## Query



## Tools



## Documents



## Scale Information



## Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#) | [USGS for Earth Resources Observation and Science \(EROS\)](#)  
URL: [/Website/Antarctica/](#) | Last Update: August 3, 2005 || [Maintainer: Comments and Suggestions](#) | [Disclaimer](#)

Map: -1651086.34 , -2472774.4 -- Image: 206 , 369 -- ScaleFactor: 13464.299212598436

Internet



# Landsat over Radarsat



IPY Antarctic Web Portal

[Back to Main Page](#)

## Zoom



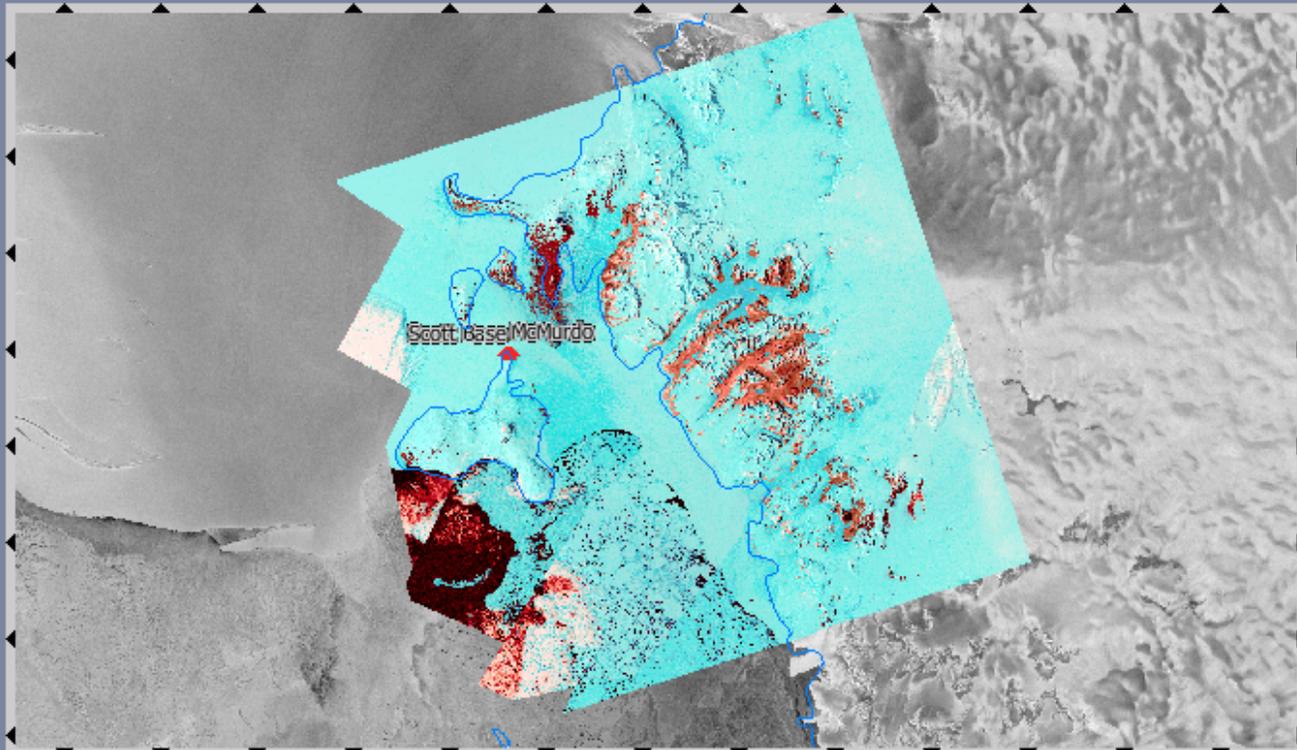
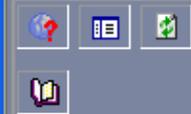
## Query



## Tools



## Documents



## Scale Information



## Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

Set Transparency for Layer: Antarctica Radarsat 125 Meter

Changes will be applied at the next map transparency without refreshing the map.

- Antarctica Radarsat 125 Meter
- Antarctica Landsat 7 Mosaic 30 Meters
- Antarctic Coast - 30 million
- Antarctic Science Stations 2000
- Antarctica Continent Outline

Apply Transparency

U.S. Department of the Interior | U.S. Geological Survey  
URL: /Website/Antarctica/ | Last Update: August 3, 2005

tion and Science (EROS)  
Disclaimer



# Landsat over Radarsat with Transparency Set



IPY Antarctic Web Portal

[Back to Main Page](#)

Zoom



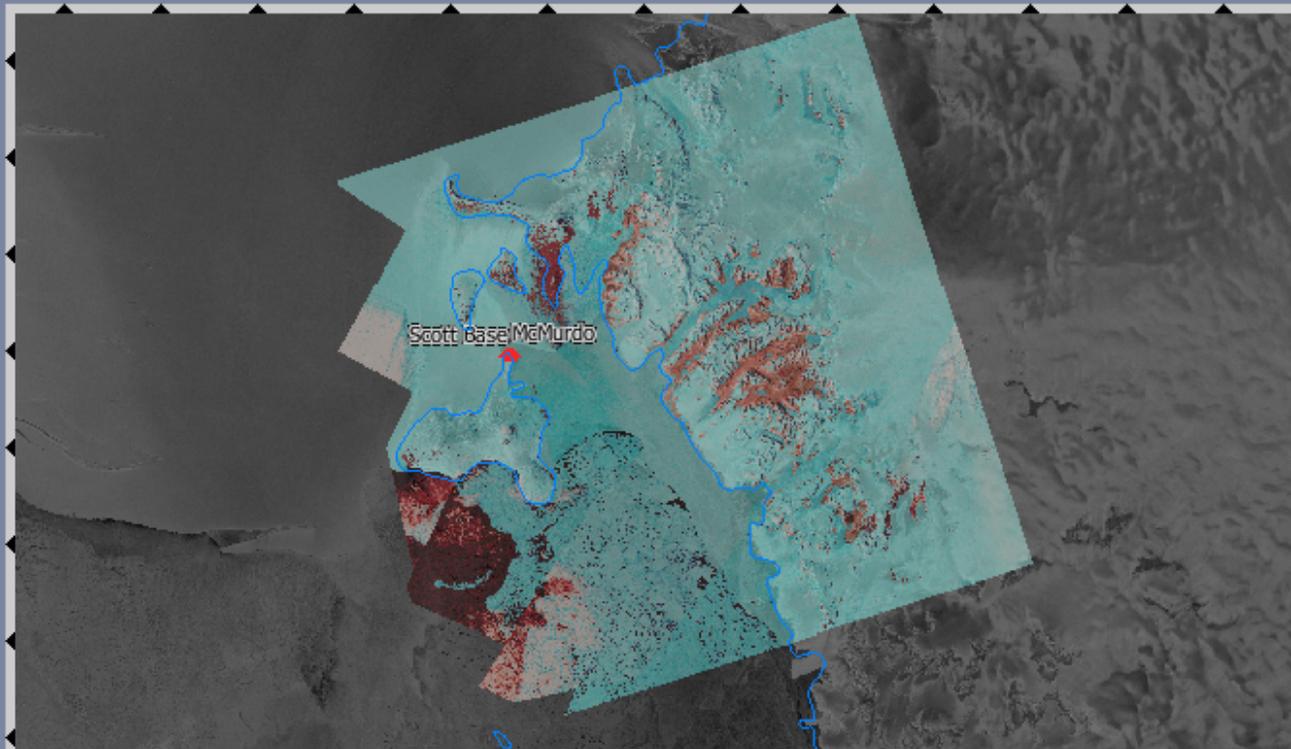
Query



Tools



Documents



Scale Information



Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▶ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

Set Transparency for Layer: **Antarctica Landsat 7 Mosaic 30 Meters**



Changes will be applied at the next map refresh. Using this button applies the transparency without refreshing the map.

Apply Transparency



[U.S. Department of the Interior](#) | [U.S. Geological Survey](#) | [USGS for Earth Resources Observation and Science \(EROS\)](#)  
URL: /Website/Antarctica/ | Last Update: August 3, 2005 || Maintainer: [Comments and Suggestions](#) | [Disclaimer](#)

Antarctica Landsat 7 Mosaic 30 Meters Opacity Percentage: 47

Internet



# McMurdo Dry Valleys Landsat over Radarsat with Transparency Set



IPY Antarctic Web Portal

[Back to Main Page](#)

Zoom



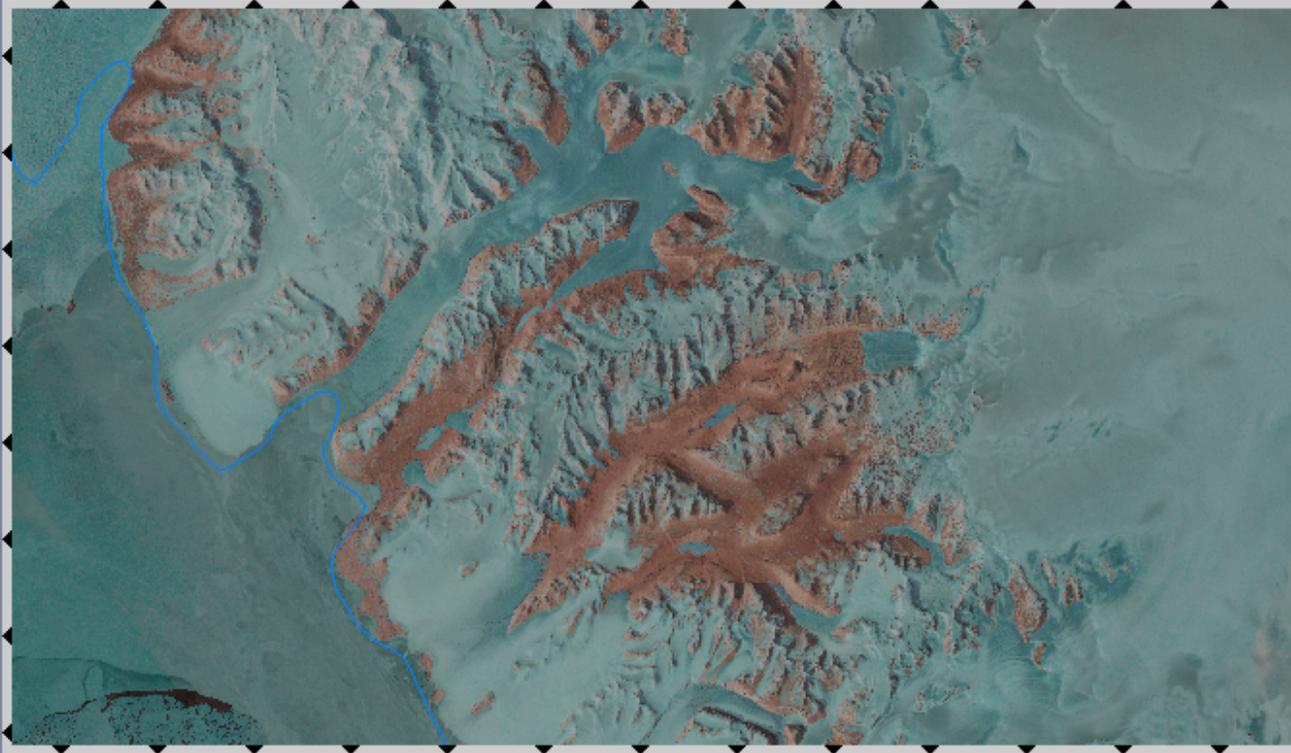
Query



Tools



Documents



Scale Information



Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▼ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

Set Transparency for Layer: Antarctica Landsat 7 Mosaic 30 Meters



Changes will be applied at the next map refresh. Using this button applies the transparency without refreshing the map.

Apply Transparency



[U.S. Department of the Interior](#) | [U.S. Geological Survey](#) | [USGS for Earth Resources Observation and Science \(EROS\)](#)  
[URL: /Website/Antarctica/](#) | [Last Update: August 3, 2005](#) || [Maintainer: Comments and Suggestions](#) | [Disclaimer](#)

Antarctica Landsat 7 Mosaic 30 Meters Opacity Percentage: 31



# Distance Measure



IPY Antarctic Web Portal

[Back to Main Page](#)

Zoom



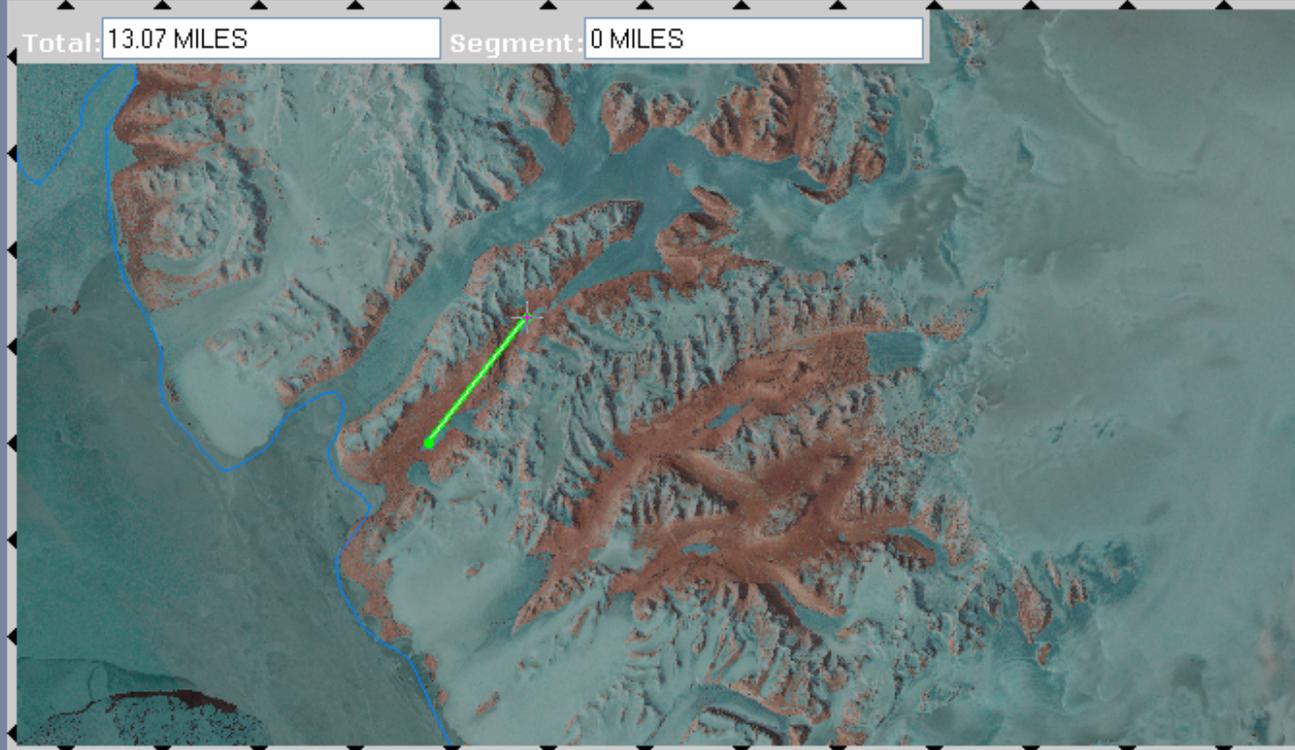
Query



Tools



Documents



Total: 13.07 MILES Segment: 0 MILES

Scale Information



Layers

- ▶ Boundaries
- ▶ Places (Names)
- ▶ Elevation
- ▶ Transportation
- ▶ Land Cover
- ▼ Orthoimagery
  - Antarctica Landsat 7 Mosaic 30 Meters
  - Antarctica Radarsat 125 Meter
  - Antarctic Seamless DRG

# International Collaboration

- SCAR Expert Group-Geospatial Information
- Geographic Information
- Data Sharing
- Web Services
- Standards
- EPSG codes for Antarctica

# Developing SCAR Services

- SCAR ADD – UK (tested)
- SCAR KGIS – Germany (tested)
- Landsat image – USGS (tested)
- Assorted services – Canada
- SCAR Map Catalog services – Australia
- Soil sample sites services – New Zealand
- Feature Names services - undecided

# Generic Viewer for Web Service Display

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a map of Antarctica with a green fill and a red outline. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various icons, and a left-hand pane titled "Open Window Definitions" containing a tree view with "Open 1" and "Antarctic Digital Database Geoserver WFS". At the bottom, there are tabs for "DisplayView" and "ThemeView", a coordinate input field, a projection dropdown menu set to "Polar Stereographic (Modified)", and a status bar with coordinates (0 0) and scale information (3363.42mile 1: 56,437,889).

Cadcorp SIS Map Browser - Open 1

File Edit Map Tools Window Help

Open Window Definitions

Open 1

Antarctic Digital Database Geoserver WFS

DisplayView ThemeView

Track Co-ordinates

Polar Stereographic (Modified)

0 0 3363.42mile 1: 56,437,889

# Generic Viewer – UK, Ger., US Services

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a map of Antarctica with a red outline. A small inset map is visible in the lower right quadrant of the map area. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various icons, and a panel on the left titled "Open Window Definitions" containing a tree view with the following items:

- Open 1
  - Antarctic Digital Database Geoserver WFS
  - USGS EROS Web Map Service USGS\_EDC\_Antarctic\_Data
  - WMS SCAR KGIS

At the bottom of the interface, there is a status bar with the following elements:

- DisplayView and ThemeView buttons.
- A "Track" checkbox and a "Co-ordinates" dropdown menu.
- A projection dropdown menu set to "Polar Stereographic (Modified)".
- Coordinate fields showing "0 0".
- Scale and zoom information: "3440.26mile" and "1: 42,608,236".

The background of the slide features a landscape of sand dunes.

# Generic Viewer – zoom to King George Island

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a map of King George Island. The map features a dark grey landmass with a red shaded area in the center and numerous red triangles scattered across the island. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various icons, and a left-hand pane titled "Open Window Definitions" containing a tree view with the following items:

- Open 1
  - Antarctic Digital Database Geoserver WFS
  - USGS ERDS Web Map Service USGS\_EDC\_Antarctic\_Data
  - WMS SCAR KGIS

At the bottom of the interface, there is a status bar with the following information:

- Coordinates: -2662361m, 1937135m, 0m
- Track:  Track
- Co-ordinates: WGS 84.UTM zone 21S
- Scale: 49.71mile 1: 615,681

The background of the slide shows a landscape of snow-covered dunes.

# Generic Viewer Adding Radarsat Mosaic

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a grayscale map of Antarctica. A large, irregular red-shaded area is overlaid on the map, representing a Radarsat mosaic. This area is densely populated with small red triangle markers, likely indicating data points or sampling locations. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various icons, and a left-hand pane titled "Open Window Definitions" containing a tree view of data layers. The status bar at the bottom shows the coordinates "411000m, 3095000m, 0m", a "Track Co-ordinates" checkbox, a coordinate system dropdown set to "WGS 84.UTM zone 21S", and scale information: "0 0 49.71mile 1: 615,681".

Cadcorp SIS Map Browser - Open 1

File Edit Map Tools Window Help

Open Window Definitions

- Open 1
  - USGS ERDS Web Map Service USGS\_EDC\_Antarctic\_Data
  - USGS ERDS Web Map Service USGS\_EDC\_Antarctic\_Data
  - WMS SCAR KGIS
  - Antarctic Digital Database Geoserver WFS

DisplayView ThemeView

411000m, 3095000m, 0m  Track Co-ordinates WGS 84.UTM zone 21S

0 0 49.71mile 1: 615,681

# Generic Viewer zoom to USGS Landsat Image

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a zoomed-in view of a Landsat satellite image of Antarctica. The image is overlaid with a cyan-colored polygon and red outlines, indicating a specific area of interest. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various icons, and a left-hand pane titled "Open Window Definitions" containing a tree view of data layers. The bottom status bar shows the coordinates "636580m,-1583985m,0m", a "Track Co-ordinates" checkbox, a projection dropdown set to "Polar Stereographic (Modified)", and a scale of "349.87mile 1: 4,333,224".

Cadcorp SIS Map Browser - Open 1

File Edit Map Tools Window Help

Open Window Definitions

- Open 1
  - USGS ERDS Web Map Service USGS\_EDC\_Antarctic\_Data
  - USGS EROS Web Map Service USGS\_EDC\_Antarctic\_Data
  - WMS SCAR KGIS
  - Antarctic Digital Database Geoserver WFS

DisplayView ThemeView

636580m,-1583985m,0m  Track Co-ordinates Polar Stereographic (Modified)

Corner of rectangle to zoom to, or double-click to zoom around a position 0 0 349.87mile 1: 4,333,224

# Generic Viewer Radarsat plus Rock Outcrops

The screenshot displays the Cadcorp SIS Map Browser interface. The main window, titled "Open 1", shows a grayscale satellite image of Antarctica. Overlaid on this image are numerous irregular polygons in shades of green and red, representing rock outcrops. The interface includes a menu bar (File, Edit, Map, Tools, Window, Help), a toolbar with various map navigation icons, and a left-hand pane titled "Open Window Definitions" containing a tree view with "Open 1" and its sub-items: "USGS EROS Web Map Service USGS\_EDC\_Antarctic\_Data" and "Antarctic Digital Database Geoserver WFS". At the bottom, there is a status bar with a coordinate field showing "595233m,-1531515m,0m", a "Track Co-ordinates" checkbox, a projection dropdown set to "Polar Stereographic (Modified)", and a scale indicator showing "291.97mile 1: 3,616,102".

Cadcorp SIS Map Browser - Open 1

File Edit Map Tools Window Help

Open Window Definitions

- Open 1
  - USGS EROS Web Map Service USGS\_EDC\_Antarctic\_Data
  - Antarctic Digital Database Geoserver WFS

DisplayView ThemeView

595233m,-1531515m,0m  Track Co-ordinates Polar Stereographic (Modified)

Corner of rectangle to zoom to, or double-click to zoom around a position

0 0 291.97mile 1: 3,616,102

# USGS Web Service Transition

- Currently
  - Small stand alone server
  - Limited support
  - “Small fish in our own pond”
- Future
  - Large server with multiple databases
  - 24/7 support
  - “Small fish in large pond”
  - Compatible Services with our Antarctic colleagues

# Inter-Polar Coordination

- IPY presents an opportunity:
- Most countries working in the Arctic also work in the Antarctic
- Most scientists work in both as well
- Seek compatible standards for both the Arctic and Antarctic
- Similar interfaces
- Compatible web services

# A USGS Antarctic Portal for the IPY: from Atlas to Portal

The **operational Atlas** can be found at:

[http://usarc.usgs.gov/antarctic\\_atlas/](http://usarc.usgs.gov/antarctic_atlas/)

The prototype USGS Antarctic Portal can be found at:

<http://imsdemo.cr.usgs.gov/website/antarctica/>

For more information, contact Cheryl Hallam:  
challam@usgs.gov