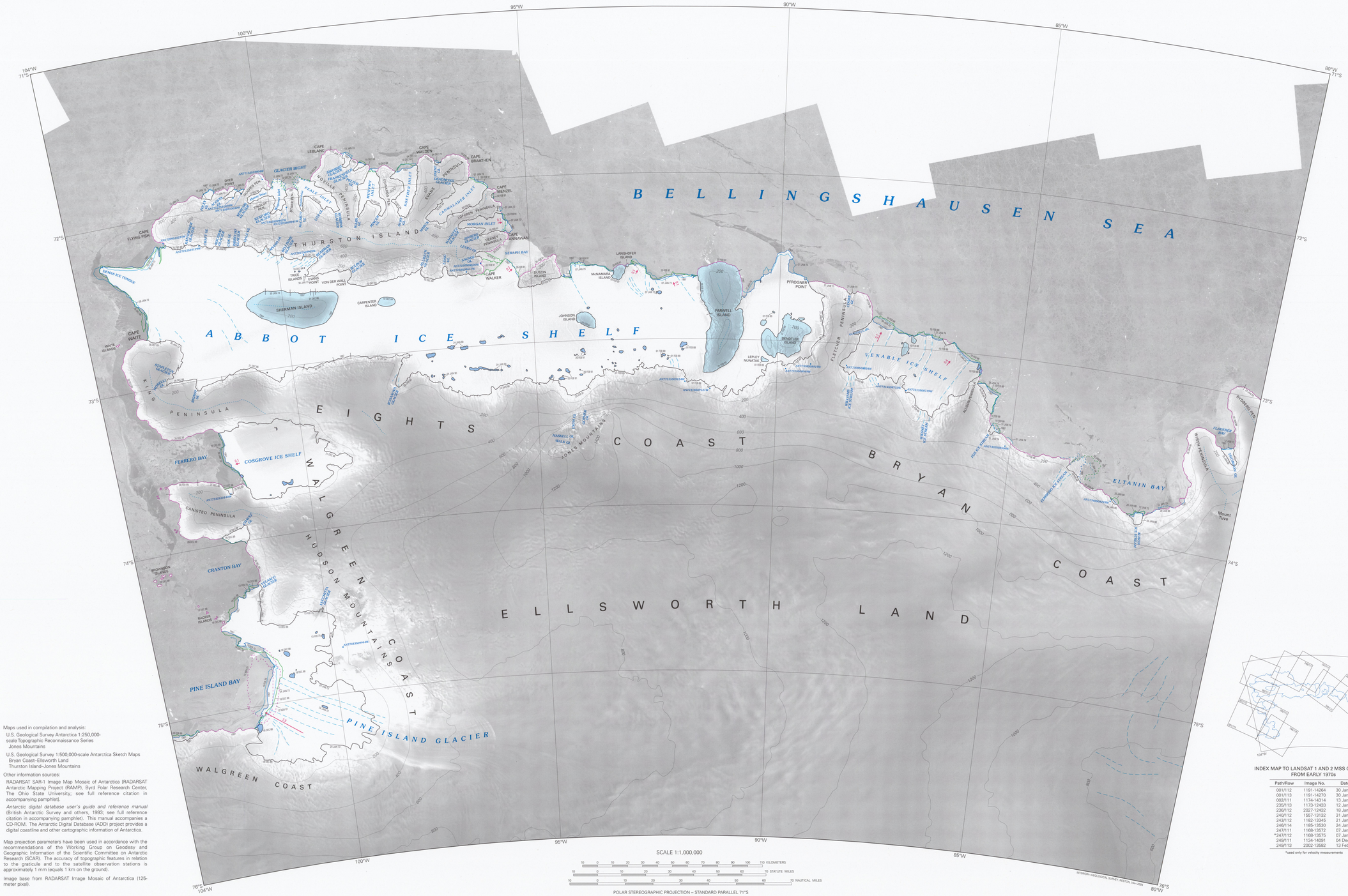
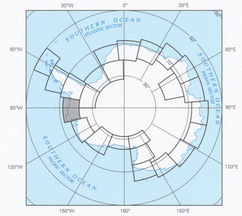
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
SCOTT POLAR RESEARCH INSTITUTE, UNIVERSITY OF CAMBRIDGE, UNITED KINGDOM

GEOLOGIC INVESTIGATIONS SERIES
MAP I–2600–E
Explanatory pamphlet accompanies map

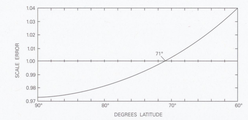




Index map of the planned 24 coastal-change and glaciological maps of Antarctica at 1:1,000,000 scale. Eights Coast area map is shaded.

EXPLANATION

- **Ice front**—RADARSAT imagery; image acquisition dates: 9 September–20 October 1997
- **Ice front**—Middle 1980s to early 1990s imagery; date of observation shown
- **Ice front**—Early 1970s imagery; date of observation shown
- **Iceberg tongue**—RADARSAT imagery; image acquisition dates: 9 September–20 October 1997
- **Iceberg tongue**—Middle 1980s to early 1990s imagery; date of observation shown
- **Iceberg tongue**—Early 1970s imagery; date of observation shown
- **Iceberg**—Position of iceberg and new ice front on 12 November 2001, formed by the 2001 Pine Island Glacier calving event
- **Ice wall**—Date of observation shown
- **Grounding line**—Date of observation shown
- **Ice rumple**—Within a grounding line and (or) ice wall
- **Ice rise**—Within a grounding line and (or) ice wall
- **Flow line**
- **Ridge line on ice**
- 1200 **Topographic contour, in meters**—Modified from RAMP digital elevation model (Byrd Polar Research Center)
- AN7731150071996 **Unnamed outlet glacier or ice stream**—Identified by World Glacier Monitoring Service geographic location code (AN7) and by latitude and longitude. See table 2 in pamphlet for description
- COX GL **Named outlet or valley glacier or ice stream**
- 0.7 **Ice-velocity vector**—Number shows ice velocity in kilometers per year (km a⁻¹)

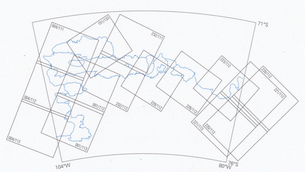


Graph showing scale error of polar stereographic projection with standard parallel at 71°S. Modified from Sievers and Bennat (1989).

INDEX MAP TO LANDSAT 1 AND 2 MSS COVERAGE FROM EARLY 1970s

Path/Row	Image No.	Date
001/112	1191-14264	30 Jan 73
001/113	1191-14270	30 Jan 73
002/111	1174-14314	13 Jan 73
235/113	1173-12433	12 Jan 73
236/112	2027-12432	18 Jan 75
240/112	1557-13132	31 Jan 74
243/112	1182-13346	21 Jan 73
246/114	1185-13530	24 Jan 73
247/111	1168-13572	07 Jan 73
*247/112	1168-13575	07 Jan 73
249/111	1134-14091	04 Dec 72
249/113	2002-13582	13 Feb 75

*used only for velocity measurements



INDEX MAP TO LANDSAT 4 AND 5 MSS AND TM COVERAGE FROM MID-1980s TO EARLY 1990s

Path/Row	Image No.	Date
001/112	51025-14102	21 Dec 86
001/112	42347-14232	18 Dec 88
001/113	42347-14234	18 Dec 88
004/111	42720-14422	26 Dec 89
004/112	42720-14424	26 Dec 89
004/112	42400-14424	09 Feb 89
004/113	42016-14341	22 Jan 88
004/113	42400-14430	09 Feb 89
151/133	50284-05565	10 Dec 84
220/112	50719-12513	18 Feb 86
220/113	50735-12513	06 Mar 86
221/112	42384-13033	24 Jan 89
221/113	42384-13035	24 Jan 89
223/112	42014-13071	20 Jan 88
226/112	42035-13263	10 Feb 88
229/112	42392-13531	01 Feb 89
232/111	52547-13593	20 Feb 91
232/112	42749-14223	24 Jan 90
232/112	52547-14000	20 Feb 91

Maps used in compilation and analysis:

U.S. Geological Survey Antarctica 1:250,000-scale Topographic Reconnaissance Series
Jones Mountains

U.S. Geological Survey 1:500,000-scale Antarctica Sketch Maps
Bryan Coast–Ellsworth Land
Thurston Island–Jones Mountains

Other information sources:

RADARSAT SAR-1 Image Map Mosaic of Antarctica [RADARSAT Antarctic Mapping Project (RAMP), Byrd Polar Research Center, The Ohio State University; see full reference citation in accompanying pamphlet].

Antarctic digital database user's guide and reference manual (British Antarctic Survey and others, 1993; see full reference citation in accompanying pamphlet). This manual accompanies a CD-ROM. The Antarctic Digital Database (ADD) project provides a digital coastline and other cartographic information of Antarctica.

Map projection parameters have been used in accordance with the recommendations of the Working Group on Geodesy and Geographic Information of the Scientific Committee on Antarctic Research (SCAR). The accuracy of topographic features in relation to the graticule and to the satellite observation stations is approximately 1 mm (equals 1 km on the ground).

Image base from RADARSAT Image Mosaic of Antarctica (125-meter pixel).

AUTHOR AFFILIATIONS

[1]Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER, United Kingdom.
[2]U.S. Geological Survey, 384 Woods Hole Road, Woods Hole, MA 02543–1598.
[3]U.S. Geological Survey, Reston, VA 20192.
[4]U.S. Geological Survey, 2255 North Gemini Drive, Flagstaff, AZ 86001–1689.
[5]George Mason University, 4400 University Drive, Fairfax, VA 22030–4444.

COASTAL-CHANGE AND GLACIOLOGICAL MAP OF THE EIGHTS COAST AREA, ANTARCTICA: 1972–2001

By
Charles Swithinbank,[1] Richard S. Williams, Jr.,[2] Jane G. Ferrigno,[3] Kevin M. Foley,[3] Christine E. Rosanova,[4] and Lina M. Dailide[5]

2004

ISBN 0-607-97548-2

Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government

For sale by U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225; telephone 1-888-ASK-USGS

Printed on recycled paper

USGS
science for a changing world