SCUFN19-6.1T

INTERNATIONAL HYDROGRAPHIC ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

IHO/IOC Form No. 1

UNDERSEA FEATURE NAME PROPOSAL

(See NOTE overleaf)

Ocean or Sea: Scotia Sea

Name proposed: Göttingen Province

Coordinates : **A** - of midpoint or summit : Lat. 55°33' S, Long. 43°03.5' W

_____ kilometres in _____ direction from _____

and/or **B** - extremities (if linear feature) :

Lat. _____ Long. _____ } to { Lat. _____ Long. _____

Polygon area, coordinates (Lat, Long): set of 41 coordinates, digital file: Goettingen.bln

-42.751273294, -56.3781545341
-42.538116748, -56.259496966
-42.386843746, -56.1408393979
-42.32495944, -56.0298374304
-42.208067116, -55.8652479552
-42.0430423, -55.7619011642
-41.871141196, -55.654726997
-41.740496296, -55.5590353824
-41.657983888, -55.448033415
-41.637355786, -55.3255480465
-41.568595954, -55.214546079
-41.67861199, -55.080578158
-41.850513094, -54.9848865434
-42.001786096, -54.8968505295
-42.242447032, -54.8202974924
-42.421223662, -54.7360888546
-42.538116748, -54.6901569475
-42.703141564, -54.6671909939
-42.861290092, -54.7054677246
-43.040066722, -54.7781929614
-43.22571964, -54.8509186224
-43.397620744, -54.8930227292
-43.53514117, -54.9887143438
-43.672662358, -55.0767503577
-43.823934598, -55.1724419722
-44.023340092, -55.2681331626
-44.215868536, -55.3714799536
-44.325885334, -55.4595163917
-44.442777658, -55.5628631828
-44.545918168, -55.6508991967
-44.635306864, -55.7657289645
-44.662811254, -55.8958695094
-44.614678762, -55.9877333236
-44.470282048, -56.0719415372
-44.298380944, -56.1484949985
-44.092099924, -56.2403588128

-43.830810886, -56.3130840496
-43.548893746, -56.3551885806
-43.273852132, -56.3934648871
-43.067571112, -56.4164308406
-42.888794482, -56.3972926874

Description (kind of feature) : Province

Identifying or categorizing characteristics (shape, dimensions, total relief, least depth, steepness, etc.):

Shape: trapezium shape Dimensions: 135 km by 193 km (73 M x 104 M) diameter
Total relief: 2000 to 4000 m.
Maximum depth at about 3900 m (but still deeper to the deep in the South), least depth: about 2025 m
Characterized by a "wild mixture" of features. 3D map displays a “failed flan” impression.

Associated features : A "wild mixture" of escarpments, ridges, seamounts, moats, plateaus etc. Mapped, it looks like a “failed flan”. Identifiable as a feature of trapezium / rectangular shape with dimensions 135 km by 193 km. It seems to extend to the Northeast and Southwest which is not covered by multibeam survey.

Least depth of about 2025 m bsl at about 55° 31’ 04”S, 42° 41’ 53”W

Chart reference :
Shown with name on chart No. : none
Shown but not named on chart No. : unknown
Not shown but within area covered by chart No. : 511 GEBCO Plotting Sheet 1,000,000

Reason for choice of name (if a person, state how associated with the feature to be named) : Göttingen
Göttingen is a city in Germany. The city is place of an university with outstanding research history in various sciences including first researches in geophysics (e.g. Karl Friedrich Gauß and Wilhelm Weber in geomagnetic 1830-1840, Emil Wiechert in seismic 1898-1928 with the first professorship in "Geophysics" ever). The name of the feature is in honour of the city.
The feature lies within an area which demands further geophysical research to study the geo-tectonics of the seafloor; thus it is an appropriate feature to carry a name in relation to marine geophysics and geodesy.

Short history of the city and the university:

The origins of Göttingen lay in a village named Gutingi which was mentioned the first time in a document of the emperor Otto I in 953. Archaeological evidence points towards a settlement as early as in the seventh century. The findings in this village show the existence of extensive commercial relations with other regions and a developed craftsmanship. At an uncertain point in time between 1150 and 1200 the present city was founded to the north-west of the older village. The new city adopted the name of the village. As normally the founding of a city is a privilege granted by the ruler of the territory, and the ruler was the duke of Saxony and Bavaria, Henry the Lion, it is presumed that he founded the city. Around 1200 Göttingen possessed full city rights. With time the former Old village was fully integrated into the city, and with the construction of the new city walls in 1362, it was integrated in the city precinct.

Between 1351 and 1572 Göttingen was a member of the Hanseatic League. During this time it had gained considerable independence from its territorial rulers. The city council did not allow the construction of castles in the surroundings of the city, and moved to destroy these, for example in Rosdorf, Grone and the one inside the city as well. This independence later waned, and around the first half of the 16th century the princes of Calenberg-Göttingen, a branch of the Welf dynasty had taken back control.
In 1584 the city came into possession of the princes of Braunschweig-Wolfenbüttel, also of the Welf dynasty, and in 1635 to the princes of Calenberg. In 1692 it became a possession of the prince-electors of Hanover.

As far back as 1311 education was taken seriously in Göttingen. Records show that the town already had a school at that time. By 1530 it had acquired a grammar school and in 1536 the Town Council even applied to

the Emperor for permission to establish a university. However, troubled times followed and the ambitious plans were laid aside. Although the town failed in its purpose then, its ambitions were fulfilled in 1734 through the generosity of the local ruler, Elector George Augustus of Hanover, who founded Göttingen University.

Georg II, King of Great Britain and Elector of Hannover, founded the University of Göttingen in 1737; his name became its name – Georgia Augusta. He founded one of the first institutions of higher education in Germany in which Faculties were on an equal footing rather than subordinate to an all-powerful Faculty of Theology. The University was created in the spirit of the Enlightenment. It started with four faculties and was a true product of the Age of Enlightenment. Soon, with 800 students, it was the best-attended university in Europe. In his adept management of personnel matters, Gerlach Adolph von Münchhausen – privy counsellor and prime minister to the King – laid the foundations for Göttingen´s success and fame. He attracted, among other well-known scholars, classical philologist Johann Matthias Gesner and Christian Gottlob Heyne to the University, who took over the management of its famous University library. Universal scientist Albrecht von Haller founded the Botanical Garden in 1751 and served concurrently as first president of the famous Göttingen Academy of Science, which had also been founded by Georg II.

Göttingen has always focused on experimentation, basic research and document-based criticism; this was and is its methodological touchstone in research and teaching. Pragmatism in science and a sense for the realities are Göttingen´s style. They served as an excellent foundation for education of modern natural scientists in the 19th century, some of the most influential of which were Karl-Friedrich Gauss, Wilhelm Weber, and Friedrich Wöhler. Thus, it was inevitable that Göttingen achieved a reputation as the mathematical natural-scientific center of the world between 1880 and 1933.

In 1837, the Georgia Augusta had suffered a serious loss in scientific quality when it dismissed the so-called 'Göttinger Sieben' (The Göttingen Seven). Seven Göttingen professors, among them Friedrich Christoph Dahlmann and both Jacob and Wilhelm Grimm, protested the repeal of the Hannoverian basic rights by King Ernst August, Duke of Cumberland. Yet this chapter of constitutional disagreement between a king and liberal professors was not the University´s darkest chapter. That commenced when more than 50 lecturers and professors had to leave the University in 1933, because of the National Socialist Party´s ascendancy to power. Among those sacked were Nobel Prize winners Max Born and James Franck. With them went Göttingen´s world fame for mathematics and natural sciences and the Göttingen Nobel Prize wonder.

Georg-August University remains attractive to scientists of repute. Over 40 Nobel Prize winners have been connected with it; the last was Herbert Kroemer (Physics 2000) who was awarded a Ph.D. by the University of Göttingen in the 1950ies. Scientists who received their prizes because of research and teaching done in Göttingen were Otto Wallach (Chemistry 1910), Walther Nernst (Chemistry 1920), Richard Zsigmondy (Chemistry 1925), Adolf Windaus (Chemistry 1928), James Franck (Physics 1925), Gustav Hertz (Physics 1925) und Max Born (Physics 1954). Currently, Nobel Prize winner Manfred Eigen (Nobel Prize for Chemistry 1967) und Erwin Neher (Nobel Prize for Medicine 1991) work in the Göttingen Max-Planck-Institute for Biophysical Chemistry.

In 1945, after WW II, Georg-August University started operations again as the first University in Germany and with a record number of 5000 students. The following decades saw dramatic increases in student numbers, the expansion of departmental capacities and the construction of modern buildings both within the city and in its northern periphery. A University hospital was built. The four founding Faculties Theology, Law, Medicine, and Philosophy have been joined by nine others who now offer more than 130 different courses of study. Georg-August University´s modern profile remains rooted in the rich tradition of internationally acknowledged quality and a strong accent in research-based teaching. The challenges of present and future are being balanced by reform projects in teaching, research, and administration. The University continues to value the scientific tenets of its founding years: the freedom of science and an obligation to do excellent work in research and teaching.

Today the university has 14 faculties and is one of Germany's leading universities with more than 32,000 students, 2,500 professors and academics and a technical and administrative staff of 7,000. When the old premises became inadequate as a result of the enormous expansion, a brand-new, modern 'university quarter" arose in the north of the town. The architecture of the old Göttingen University can still be seen in the Auditorium maximum (1862/1865) and the Great Hall (1835/1837) on the Wilhelmsplatz. Closely linked with the university are the State and University Library of Lower Saxony with its 3,5 million volumes and precious manuscripts, the Science Academy, which was originally founded in 1751 as the "Royal Society for Sciences", and the four institutes of the Max-Planck-Society for the Promotion of Science.

The international reputation of the university was founded by many eminent professors who are commemorated by statues and memorial plaques. 42 Nobel Prize-winners have studied or taught in Göttingen and many students attained a place in history.

References (internet links) concerning the history of the city Göttingen: http://www.goettingen.de, http://de.wikipedia.org, http://en.wikipedia.org and of the Georg-August University: http://www.eng.goettingen.de/geschich/index.htm, http://www.uni-goettingen.de/en/sh/1528.html

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Discovery facts :

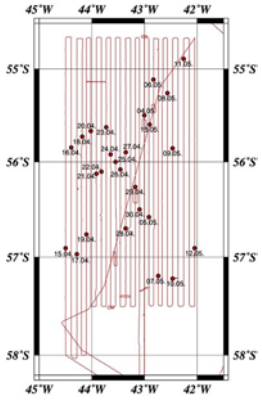
Date 14 April 2005 – 17 May 2005 by (individuals or ship) Research Vessel "Polarstern"
By means of (equipment) : Mapping of swath sonar measurement and compilation of boxed survey
Navigation used : GPS Two frequencies Trimble plus other data (gyro, inertial etc.)
Estimated positional accuracy in nautical miles : 10 m to 30 m (0.005 M to 0.016 M)

Description of survey (track spacing, line crossing, grid network, etc.) : boxed survey

Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity, photographs, etc.) : geophysics: magnetics (ship-born; partially plus helicopter-born magnetics), gravity; oceanography: XBT, CTD; geology: cores

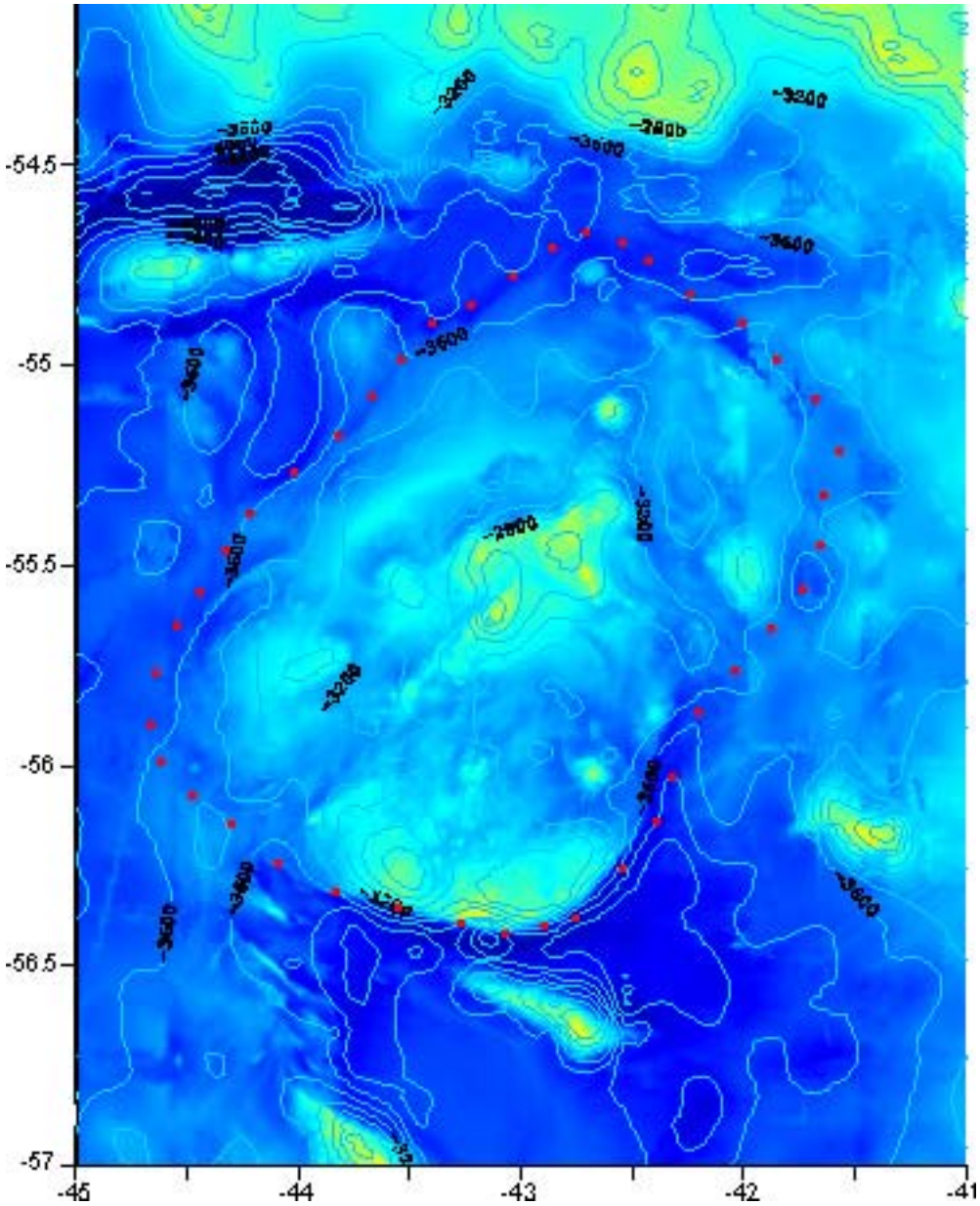
Supporting material : enclose, if possible, a sketch map of the survey area, profiles of the features, etc., with reference to prior publication, if any :

Publication/s: not yet published.
Report about the Antarctic expedition ANT XXII/4 of the research vessel "Polarstern" in 2005 will be published soon; Berichte zur Polarforschung / Reports on Polar Research, Bremerhaven, 2006.
Track plot (also separate files, file names: ANTXXII-4-Kursplot.jpg, ANTXXII-4-Profile.jpg):

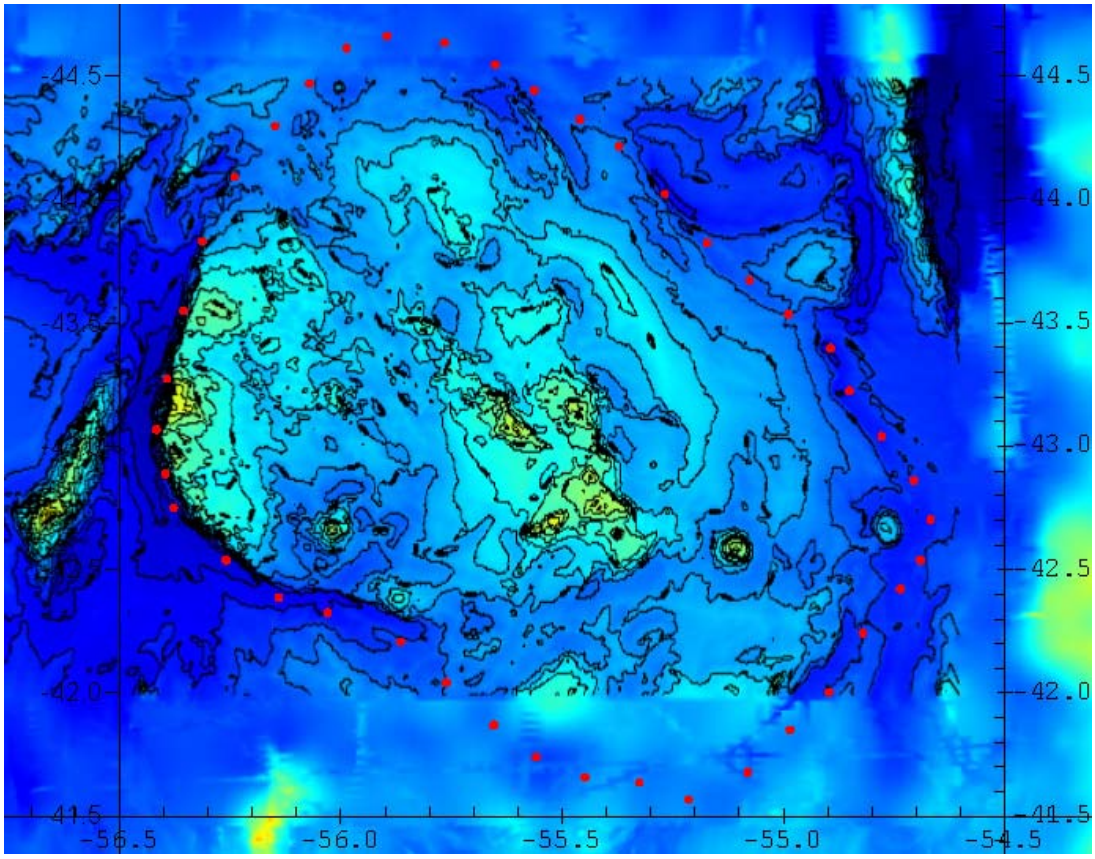


Maps etc. are produced from a DTM of about 300 m grid distance by Surfer and/or Fledermaus software (Golden Software; IVS)); higher resolutions and interpolation (e.g. Delaunay triangulation of swath data) will be processed by AWI soon.

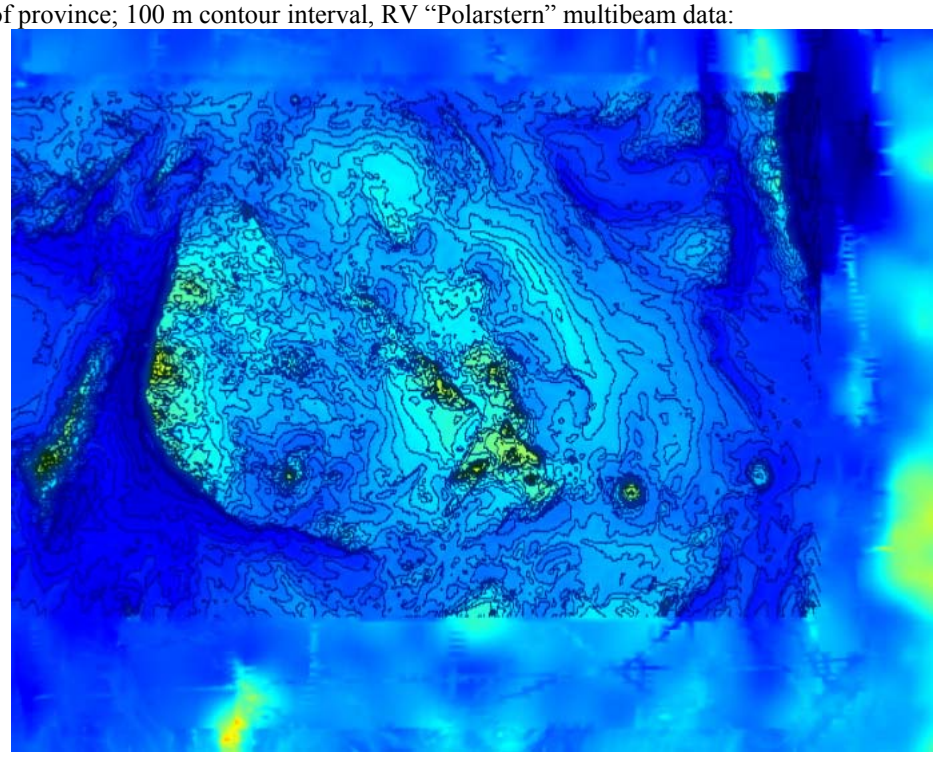
Map of province (red dots) and surrounding area; 200 m contour interval from ETOPO2 data, Digital Terrain Model (DTM) from RV "Polarstern" multibeam data in central part and from ETOPO2 data in surrounding area – to show location and feature roughly:



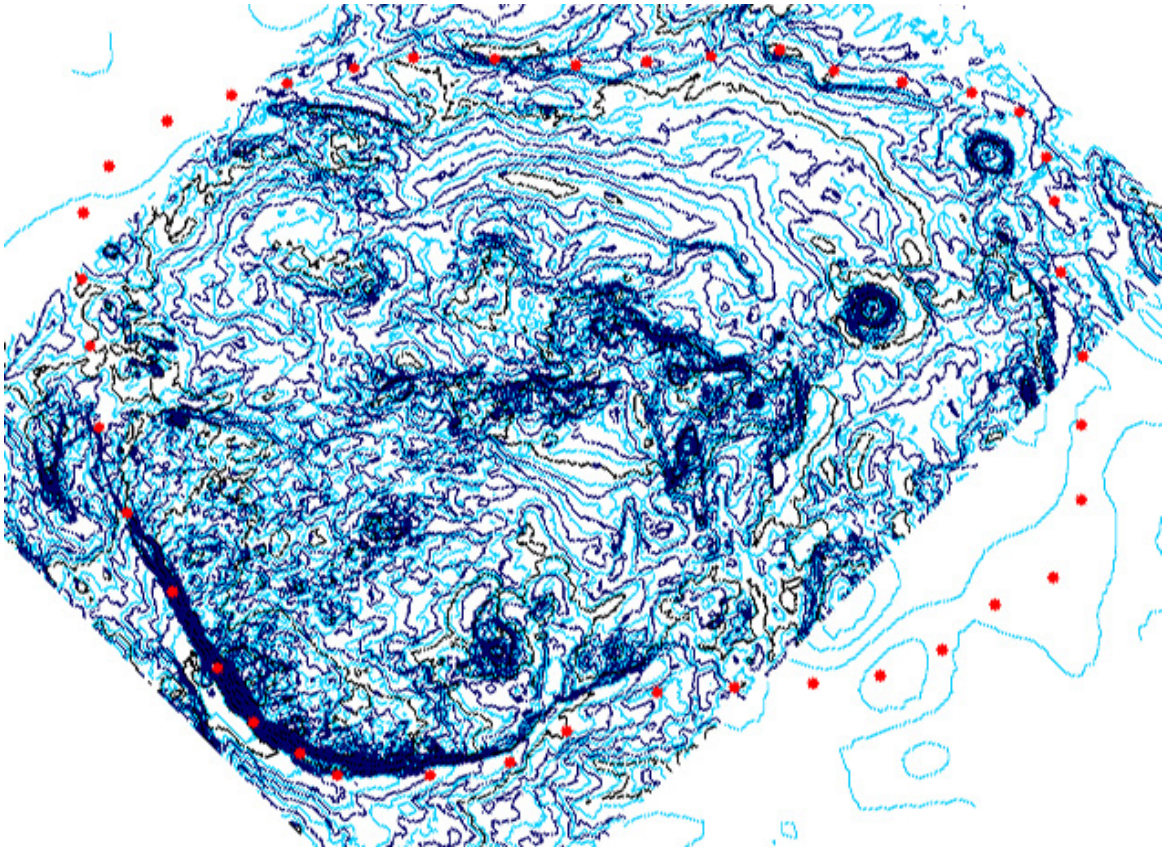
Map of province (red dots); 200 m contour interval, RV “Polarstern” multibeam data:



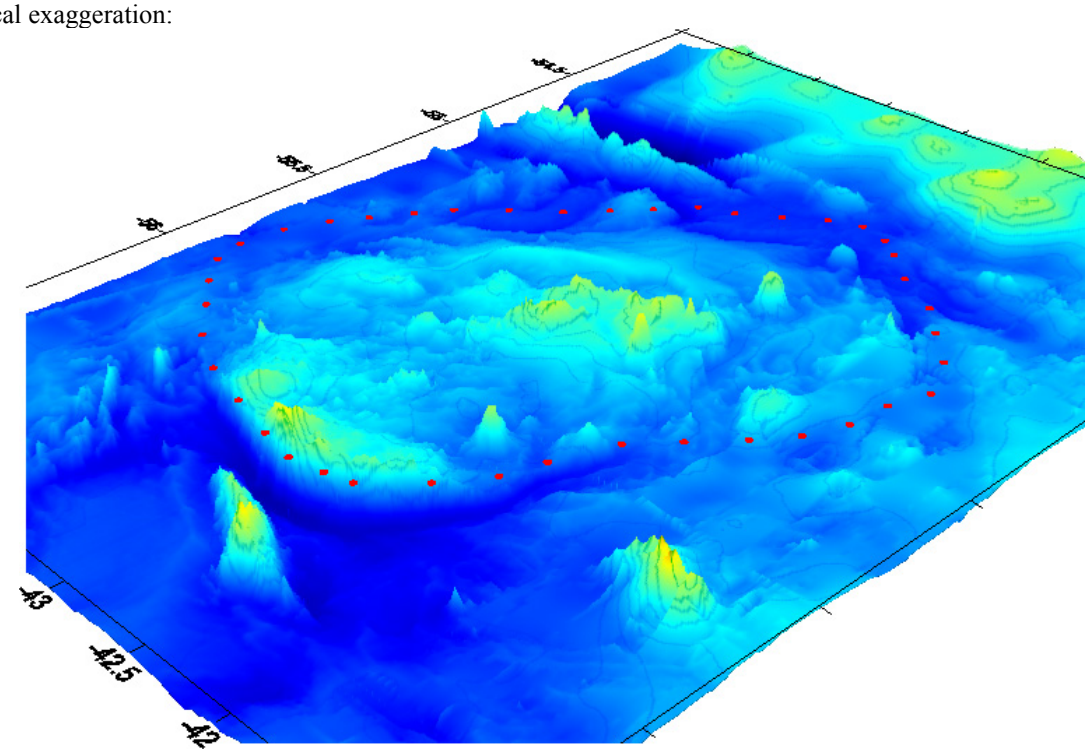
Map of province; 100 m contour interval, RV “Polarstern” multibeam data:



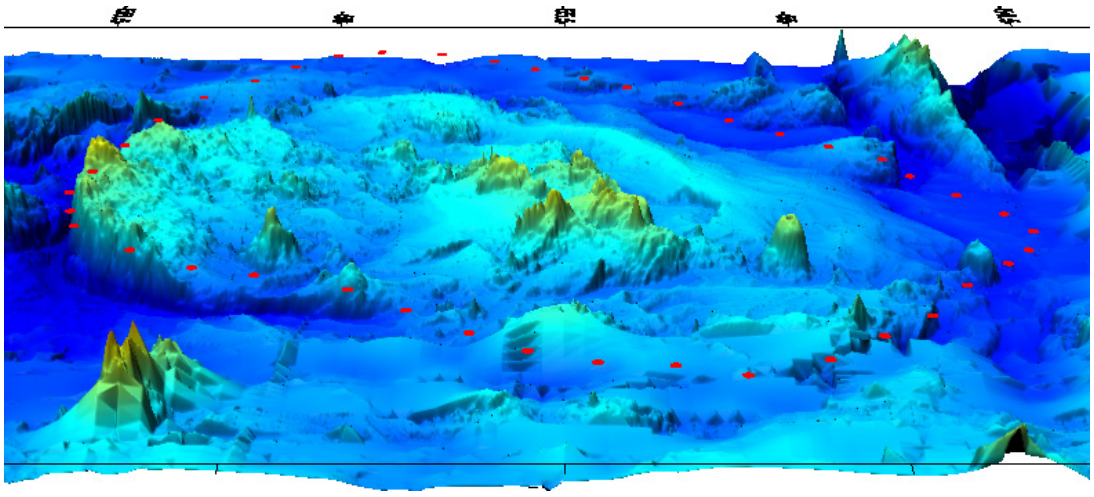
Map of province; 50 m contour interval, RV “Polarstern” multibeam data:



3D perspective view from Southeast SE, 200 m contour interval from ETOP2 data, but Digital Terrain Model (DTM) from RV “Polarstern” multibeam data in central part and from ETOPO2 data in surrounding area, vertical exaggeration:



3D perspective view from East, Digital Terrain Model (DTM) from RV “Polarstern” multibeam data in central part and from ETOPO2 data in surrounding area, vertical exaggeration; data errors are visible in areas which are not covered by the multibeam data:



Submitted by : Dr. Heinrich Hinze
Date : 9 May 2006
Address : AWI, Van Ronzelen Str. 2, D-27568 Bremerhaven, Germany

Concurred in by (if applicable) :

_____

Address :

_____

National Authority (if any) : Alfred Wegener Institute for Polar and Marine Research (AWI)
Address : AWI, D - 27515 Bremerhaven, Germany

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NOTE : This form should be forwarded, when completed :

a) **If the undersea feature is located in territorial waters** :-
to your "National Authority for Approval of Undersea Feature Names" or, if this does not exist or is not known, either to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission (see addresses below);

b) **If the undersea feature is located in international waters** :-
to the International Hydrographic Bureau or to the Intergovernmental Oceanographic Commission, at the following addresses :

International Hydrographic Bureau
4, quai Antoine 1er
B.P. 445
MC 98011 MONACO CEDEX
Principality of MONACO
Fax: +377 93 10 81 40
E-mail: info@ihb.mc

Intergovernmental Oceanographic Commission
UNESCO
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75700 PARIS
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E-mail : info@unesco.org

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