

UNDERSEA FEATURE NAME PROPOSAL

(See NOTE overleaf)

Ocean or Sea: Scotia Sea

Name proposed: Wenzel Seamount

Coordinates : **A** - of midpoint or summit : Lat. 55°28' 20"S, Long. 43°10'20" W

_____ kilometres in _____ direction from _____

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

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

Description (kind of feature) : Seamount

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

Shape: rectangular shape Dimensions: about 10 km by 15 km (5.4 x 8 M) for seamount
Total relief: 3400 to 2200 m Least depth: about 2220 m
Characterized by a local deep of about 100 m at the top, opens to the North

Associated features :

Seamount, top at about 2220 m bsl, slight depression of max 100 m at its top, opens to the North, seafloor around at about 3400 m in the West and 3000 m in the East, local height between 800 and 1200 m above surrounding seafloor area, feature with slightly irregular / rectangular shape, extension about 10 km by 15 km (5.4 x 8 M).

Seamount, top at about 2300 m bsl, 1000 m above seafloor, seafloor around at about 3100 to 3300 m. Feature with irregular shape.

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) : Hans-Georg Wenzel

The professional domain of this person: Geophysics (Gravimetry, Earth tides, geopotential models)

Association: to professional work:

Hans-Georg Wenzel contributed to our understanding of the tides of the Earth, the gravimetry of the global gravity field as well as of local features, and the modeling of the geopotential of the Earth. Wenzel's research was independent from land or sea area, since the gravity field covers the entire Earth. However, Wenzel paid special attention to the marine and polar regions, since few data exist from these area but they have their influence upon ultra high-degree geopotential modelling.

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 gravimetry and geophysics.

Short biography of person (at May 2000):

Prof. Dr. Hans-Georg Wenzel: 1945: born in Hahnenklee/Harz, Germany (3 February 1945); died at 11 November 1999 in Germany

Following is in Memoriam Hans-Georg Wenzel; reprinted from the IAG Newsletter (March 2000, 74/02) edited by Ole Baltazar Andersen.

In Memoriam Hans-Georg Wenzel (1945 - 1999)

The geodetic community lost an outstanding scientist: completely unexpected Hans-Georg Wenzel died on 11 November 1999.

Hans-Georg Wenzel was born on 3 February 1945, in Hahnenklee/Harz, Germany. His professional education included the training for a technician in surveying (1962 - 1964), and studies of surveying engineering (School of Technology Essen, 1964 - 1967) and Geodesy (Technical University Hannover, 1968 - 1972), both finished with „summa cum laude“.

He then entered the Institut für Theoretische Geodäsie (today Institut für Erdmessung) of the University of Hannover, and worked there from 1972 - 1988, as scientific assistant, chief engineer and senior scientist. At this young institut, Hans-Georg Wenzel could fully display his high qualification and deep knowledge. With great enthusiasm and admirable efficiency, he engaged himself in teaching and research, and became a driving element at most of the institut's research projects in physical geodesy and gravimetry. He received the Doktor-Ingenieur degree with a thesis on the accuracy of gravimetric earth tides observations (1976), and his Dr.-Ing. habil. thesis dealt with high resolution spherical harmonic models for the gravitational potential of the earth (1985). These fundamental publications and many other papers on earth tides research, relative and absolute gravimetry, instrumental developments, spectral analysis of the gravity field, geoid determination (a first gravimetric geoid for Europe was presented in 1983), and network adjustment showed his solid theoretical background and his abilities at the acquisition and processing of large different type data sets, as well as his capacity to develop new methods for data evaluation and modelling.

In 1988 Hans-Georg Wenzel became Professor at the Geodetic Institute, University of Karlsruhe, and Director of the Schiltach Geodynamical Observatory. His research now concentrated on the analysis of earth tide measurements, including the determination of the pole tides and the nearly diurnal free wobble. Among the results of this period we find a new tidal potential catalogue, a world wide synthetic gravity tides model, and the earth tides data processing package ETERNA. In the last year, a remarkable step forward to the next generation of global gravity field models was done, with the development of the ultra high-degree (1800, 1800) geopotential models GPM 98. All together more than 150 papers, many of them presented on international meetings, document the scientific productivity of Hans-Georg Wenzel over more than a quarter of a century.

It was only natural, that IAG early recognized H.-G. Wenzel's talents, and incorporated him into the world wide IAG network. He chaired the special study group „Global Gravity Field Approximation“ (1987 - 1991) and the International Gravity Commission working group „Computation of Mean Gravity Anomalies“ (1989 - 1991). He served as Secretary (1987 - 1991) and President (1991 - 1995) of Section 3 „Gravity Field Determination“ and as President of the Earth Tides Commission (1995 - 1999). His management abilities were acknowledged in the Directing Board of the Bureau Gravimetrique International (1987 - 1995), and as Secretary of the Federation of the Astronomical and Geophysical Data and Analysis Services FAGS, since 1996.

In 1999 Hans-Georg Wenzel accepted a call from the University of Hannover, to become Professor for Physical Geodesy at the Institut für Erdmessung, and thus to return to his previous sphere of activity, as the successor of his former teacher, colleague and friend, who has the sad duty to write this obituary. Hans-Georg was the ideal person to take over this chair, with the expectation to further develop well-established research areas, and to build up new branches. With great energy he started work on the 1st of March 1999, and at many discussions with him I again admired his clear thinking, his energy and his visions on the challenges and the development of physical geodesy and the future of the Institute.

Without any recognizable warning Hans-Georg Wenzel left us far too early. We shall miss him and we mourn with his wife Marion and his daughter Christine. His excellent scientific work will remain, as well as the manifold personal reminiscences of a kind colleague and a good friend.

The 2nd ETC Medal Award

The ETC steering committee decided to award the ETC Medal 2000 to the late Prof. H.- G. Wenzel for his outstanding contribution to international cooperation in earth tide research (May 2000).

References:

Torge, W.: In memoriam Hans-Georg Wenzel (1945-1999). J. Geodesy 74: 269-270, 2000.

Torge, W.: In memoriam Prof. Dr.-Ing. Hans-Georg Wenzel, Z.f.Verm.wesen 125: 112-113, 2000.

Links e.g.: www.geo.uni-jena.de/geophysik/etc/wenzel.html, <http://www.geo.uni-jena.de/geophysik/etc/wenzel.gif>

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

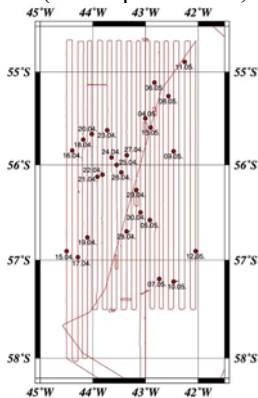
Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity, photographs, etc.) :
geophysics: magnetics (ship-born; partially plus helicopter-born magnetics), gravity; oceanography: XBT, CTD;
geology: cores

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.

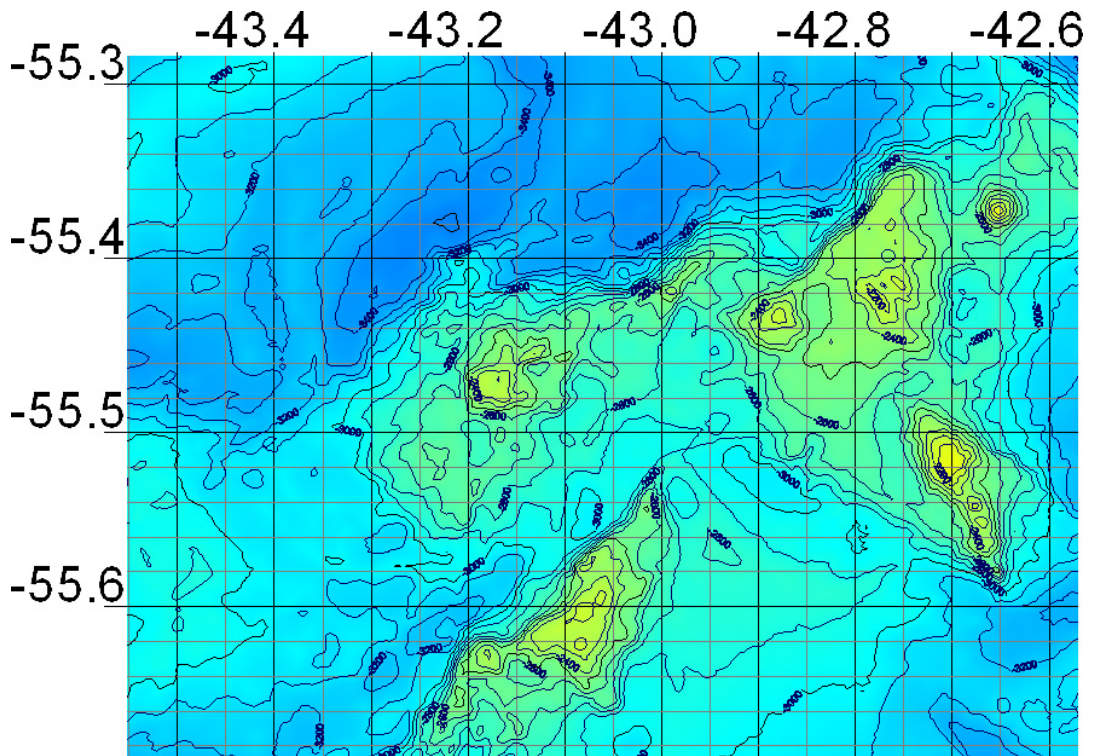
Report about the Antarctic expedition ANT XXII/4 of the research vessel "Polarstern" in 2005 will be published soon; Berichte zur Polarforschung / Reports on Polar Research, Bremerhaven, 2006.

Track plot (also separate files, file names: ANTXXII-4-Kursplot.jpg, ANTXXII-4-Profile.jpg):

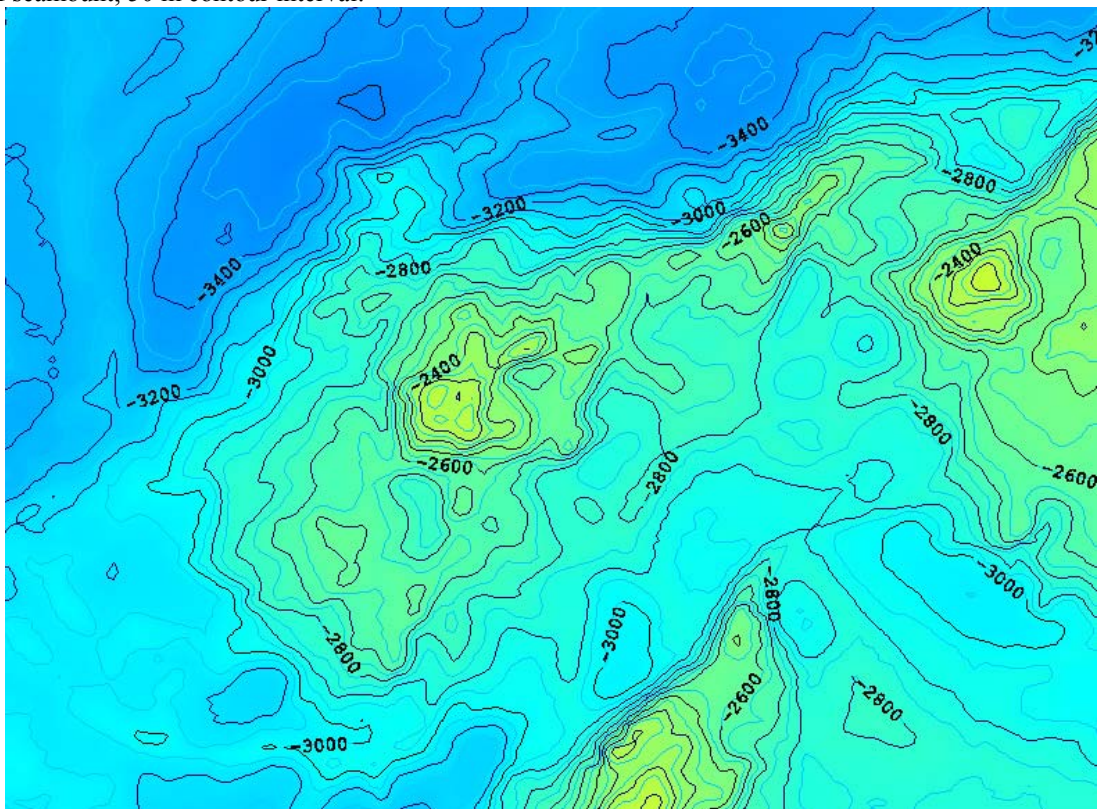


Maps etc. are produced from a DTM of about 300 m grid distance by Surfer and/or Fledermaus software (Golden Software; IVS)); higher resolutions and interpolation (e.g. Delaunay triangulation of swath data) will be processed by AWI soon.

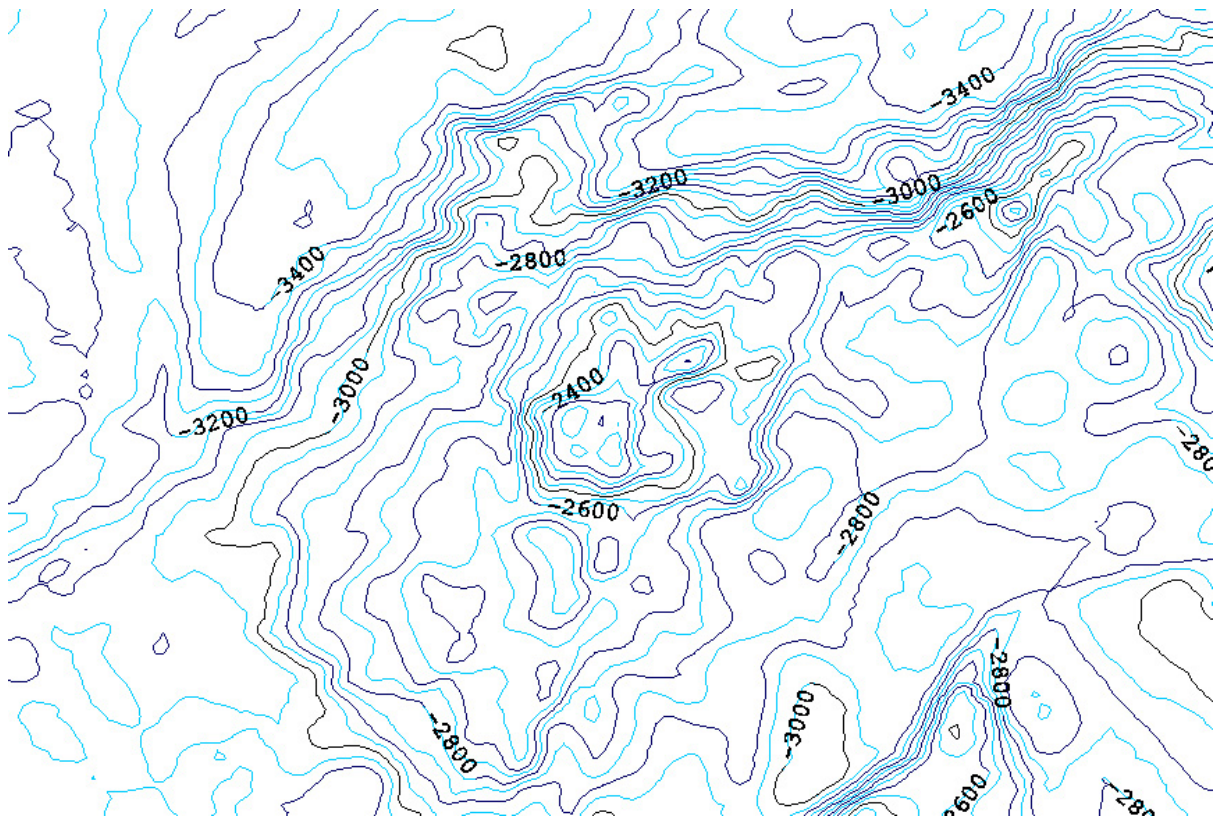
Map of seamount; 200 m contour interval:



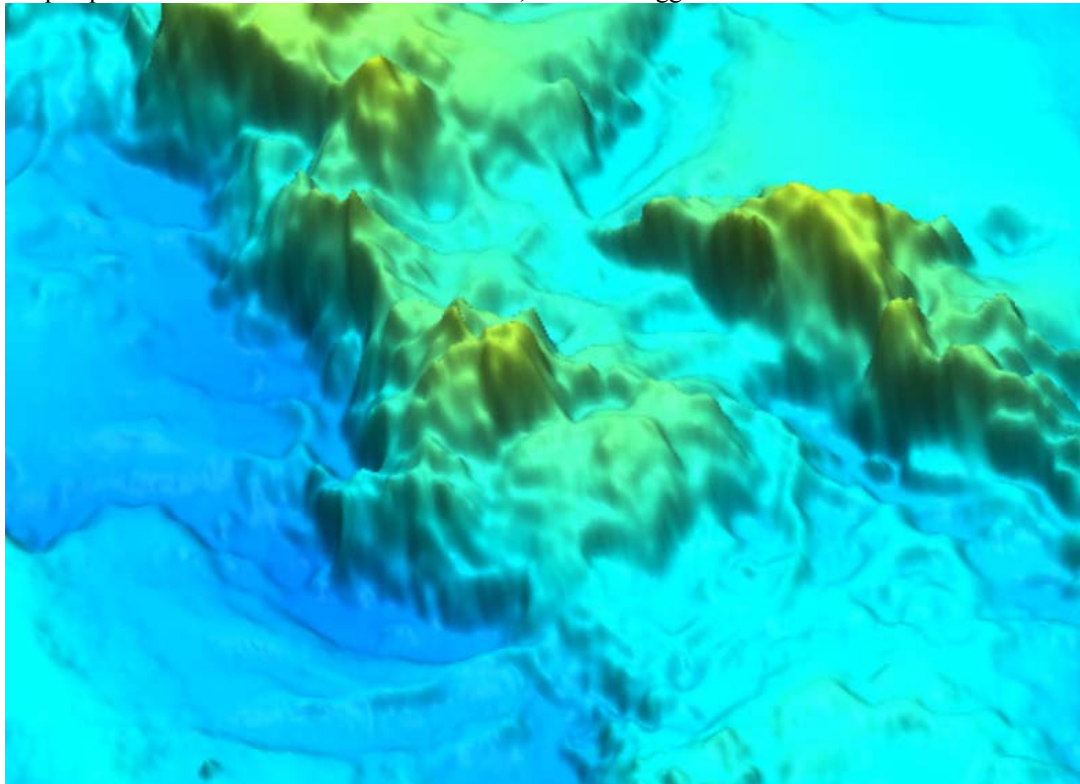
Map of seamount; 50 m contour interval:



Map of seamount; 50 m contour interval:



3D perspective view from Southsouthwest SSW, vertical exaggeration:



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

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 1^{er}
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
Place de Fontenoy
75700 PARIS
FRANCE
Fax: +33 1 45 68 58 12
E-mail : info@unesco.org
