



# Agenda

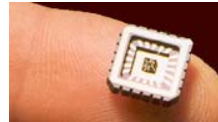
1. Teil
  - Helmholtz Gemeinschaft
  - Geowissenschaften
    - Forschung und Forschungsdaten
2. Teil
  - Publishing Network for Geoscientific and Environmental Data – Pangaea
  - Earth System Science Data – A Data Publishing Journal
- Zusammenfassung

# Die Helmholtz Gemeinschaft

## Die sechs Forschungsbereiche



Energie



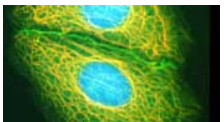
Schlüsseltechnologien



Erde & Umwelt



Struktur der Materie



Gesundheit



Verkehr & Weltraum

## Erde und Umwelt Zum Beispiel: den Klimawandel verstehen



Großgeräte und große  
Forschungsinfrastrukturen:  
Polarforschung mit Polarstern



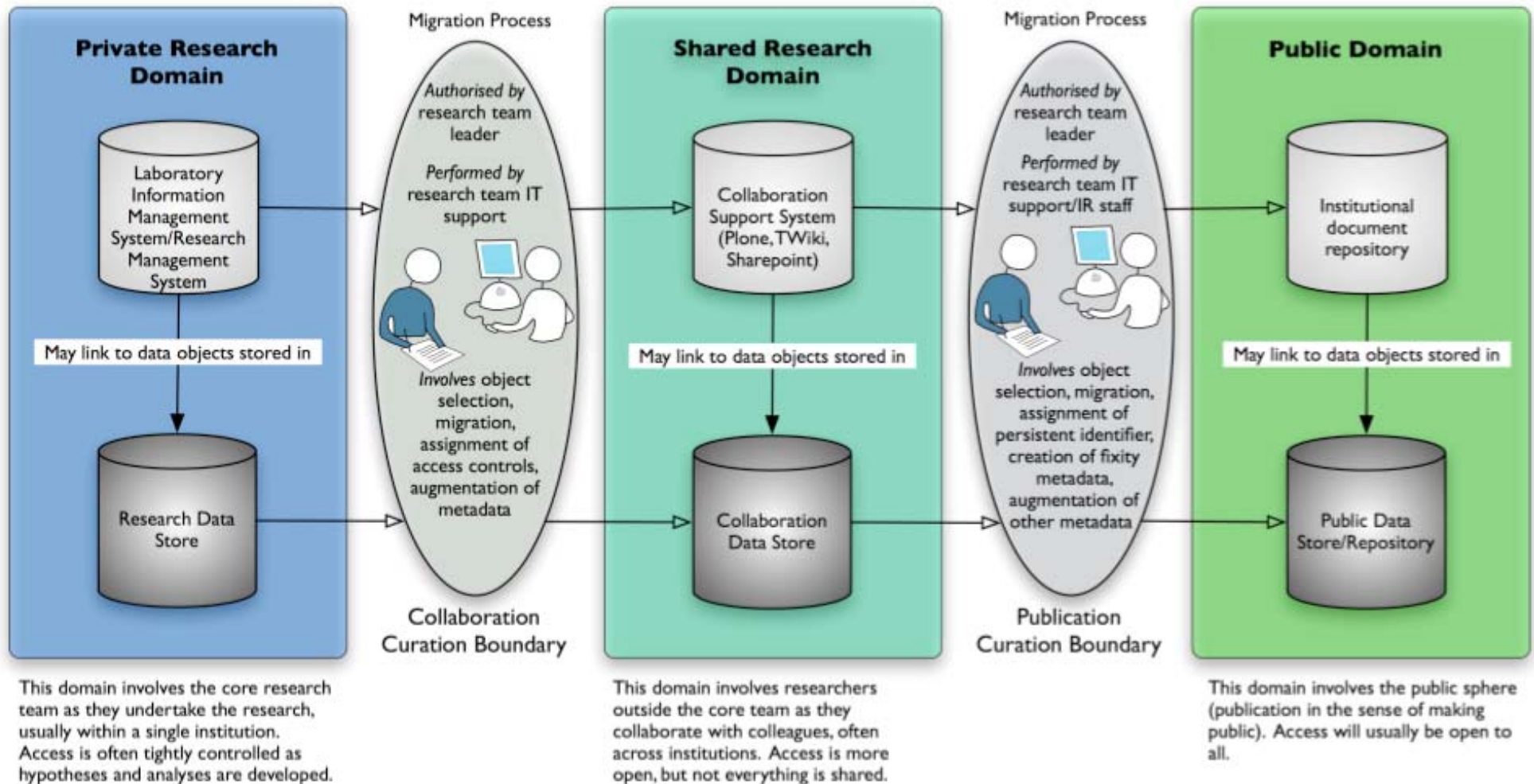
und Neumayer III-Station

Fotos: Alfred-Wegener Institut für Polar und Meeresforschung

## Forschung in den Geowissenschaften heute - sehr divers



# Unterschiedliche Daten – unterschiedliche Anforderungen





## Daten“publikation“ heute:

- Print
- CD
- Eigener Computer – Email, ftp
- Supplement zu „traditionellen“ Publikationen
- Websites: Projekt- oder Institutswebsite
- Repositorium, Datenbanken
- ...

## 2. Teil

# Innovativer Umgang mit Forschungsdaten

- Datenbibliothek: Pangaea
  - DOI-Vergabe für Forschungsdaten
- Earth System Science Data – A Data Publishing Journal
  - Peer-Review auf Forschungsdaten
  - Anreize zur Datenpublikation



# Pangaea – Publishing Network for Geoscientific and Environmental Data

- Vom Alfred-Wegener-Institut für Polar- und Meeresforschung und dem Zentrum für Marine Umweltwissenschaften (MARUM) der Universität Bremen



[www.pangaea.de](http://www.pangaea.de):

„The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.“

Informationsdienst Wissenschaft  
 You are here: Home » Press release: Bremer Forschungseinrichtungen werden ...  
 Press release  
**Bremer Forschungseinrichtungen werden für die Datenbibliothek PANGAEA® mit einem internationalen Preis für Informationstechnologie geehrt**  
 Dipl.-Ing. Margarete Pauli, Presse- und Öffentlichkeitsarbeit  
 Alfred-Wegener-Institut für Polar- und Meeresforschung  
 06.25.2009

Das Alfred-Wegener-Institut für Polar- und Meeresforschung in der Helmholtz-Gemeinschaft (AWI) und das Zentrum für Marine Umweltwissenschaften (MARUM) erhalten im Computerworld Hesse's Programm des 21st Century Achievement Award in der Kategorie Research and Data einen der weltweit angesehensten Preise der Informationstechnologie.

Honoriert werden Aufbau und erfolgreicher Betrieb eines einzigartigen Informationssystems zur Archivierung, Publikation und Verlinkung von Daten der Erdwissenschaften. Die das System zur Unterstützung einer

Delft, Hannover, London, Lyngby, Nancy, Zürich on March 13, 2009  
**EUROPEAN INITIATIVE TO FACILITATE ACCESS TO RESEARCH DATA**  
 A group of Europe's leading research libraries and technical information providers have established a partnership to improve access to research data on the internet. The German National Library of Science and Technology (TIB), the British Library, the Library of the ETH Zurich, the French Institute for Scientific and Technical Information (INIST), the Technical Information Center of Denmark and the Dutch TU Delft Library all signed a Memorandum of Understanding to this effect during the meeting of the International Council for Scientific and Technical Information (ICSTI) in Paris on 2 March 2009.

The goal of this cooperation is to establish a not-for-profit agency that enables organisations to register research datasets and assign persistent identifiers to them, so that research datasets can be handled as independent, citable, unique scientific objects.

"This is an important step in developing a strategy in a new field of responsibility and services for libraries and other information providers", said Uwe Rosemann, Director of TIB. Maria Heijne, Director of the TU Delft Library added: "Citability of research data will reward researchers and therefore hopefully convince them that long term data preservation is worth while."

As a first step, this agency will build on an approach developed by TIB and promote the use of Digital Object Identifiers (DOI) for datasets. A Digital Object Identifier (DOI) is used to cite and link to electronic resources (text as well as research data and other types of content). The DOI differs from other reference systems commonly used on the Internet, such as the URL, since it is permanently linked to the object itself, not just to the place in which the object is located. Since 2005 TIB has registered around 600,000 research data sets with a DOI name to allow easy access and improve citability.

## Georeferenzierung und Metadaten

*wann ?*



Datum/Zeit  
Alter

*was ?*



Parameter  
[unit]

*wie ?*



Methode



*wo?*

Eis, Wasser, Luft,  
Sediment, Objekt...

*wer ?*



Autor/  
Produzent

# Inside Pangaea I

**Citation:** Grobe, H et al. (2007): Paleomagnetic on three sediment cores from the Antarctic continental slope in the Weddell Sea, doi:10.1594/PANGAEA.587842, *Supplement to: Grobe, Hannes; Mackensen, Andreas; Hubberten, Hans-Wolfgang; Spieß, Volkhard; Fütterer, Dieter K (1990): Stable isotope record and late quaternary sedimentation rates at the Antarctic continental margin, In: Bleil, U & Thiede, J (eds.), Geological History of the Polar Oceans - Arctic versus Antarctic, NATO ASI Series, Kluwer Academic Publishers, Dordrecht, Boston, London, 539-571, hdl:10013/epic.11660.d001*

**Abstract:** Four cores from the Antarctic continental margin located between 50 and 200 km from the present-day ice shelf edge, were selected for sedimentological and mass spectrometer analysis. The first stable isotope records of the Southern Polar Ocean can be correlated in detail with global isotope stratigraphy. Together with magnetostratigraphic, sedimentological and micropaleontological data, the record provides stratigraphic and paleoceanographic information back to the Jaramillo subchron (910 kyr).

Although the isotope values have been altered by diagenetic processes in the sediments, which are poor in carbonate, an interpretation is possible via correlation with the sedimentological parameters. Oxygen isotope data give indications for a meltwater spike at the beginning of interglacials, when large scale melting of parts of the ice shelves took place. The synchronous record of the benthic and planktonic  $\delta^{13}C$ -signals reflect continuous bottom water formation also during glacials.

Primary productivity was strictly reduced during glacials due to continuous ice coverage in the Weddell Sea. The climatic improvement at the beginning of an interglacial is associated with peak values in biologic activity lasting for about 15 kyr.

During one climatic cycle, mean sedimentation rates at the continental margin decrease with increasing distance from the continent from 5.2 to 1.3 cm/kyr. Maximum sedimentation rates of 25 cm/kyr at the beginning of an interglacial down to 0.6 cm/kyr during glacial periods have been calculated. The rate is mainly controlled by movements of the ice shelf edge and ice rafting.

**Project(s):** **Paleoenvironmental Reconstructions from Marine Sediments @ AWI** (AWI\_Paleo)

**Coverage:** *West:* -6.8500 \* *East:* -5.8667 \* *South:* -70.1000 \* *North:* -68.7333

*Date/Time Start:* 1985-12-28T15:48:00 \* *Date/Time End:* 1986-02-26T17:34:00

**Event(s):** **PS1387-3** (PS08/365) \* *Latitude:* -68.7333 \* *Longitude:* -5.8667 \* *Elevation:* -2416.0 m \* *Date/Time:* 1985-12-28T15:48:00 \* *Recovery:* 10.0 m \* *Penetration:* 11.2 m \* *Location:* Atka Bay \* *Campaign:* ANT-IV/3 (PS08) \* *Basis:* Polarstern \* *Device:* Gravity corer (Kiel type) \* *Comment:* upper 30 cm lost in weight, parallel station PS1506

**PS1394-4** (PS08/374) \* *Latitude:* -70.1000 \* *Longitude:* -6.8500 \* *Elevation:* -1700.0 m \* *Date/Time:* 1985-12-31T10:15:00 \* *Recovery:* 8.9 m \* *Penetration:* 10.1 m \* *Location:* Atka Bay \* *Campaign:* ANT-IV/3 (PS08) \* *Basis:* Polarstern \* *Device:* Gravity corer (Kiel type)

**PS1431-1** (PS08/486) \* *Latitude:* -69.8200 \* *Longitude:* -6.5883 \* *Elevation:* -2457.0 m \* *Date/Time:* 1986-02-26T17:34:00 \* *Recovery:* 9.4 m \* *Penetration:* 10.1 m \* *Location:* Atka Bay \* *Campaign:* ANT-IV/3 (PS08) \* *Basis:* Polarstern \* *Device:* Gravity corer (Kiel type)

**Comment:** Paleomagnetic of PS1388-3 see doi:10.1594/PANGAEA.51317

**Size:** 3 datasets

## Download Data

Download **ZIP** file containing all datasets as tab-delimited text (use the following character encoding: )

## Datasets listed in this Collection

- **Spieß, V; Grobe, H (1996):** Paleomagnetic measurements on sediment core PS1387-3, doi:10.1594/PANGAEA.51316
- **Spieß, V; Grobe, H (1996):** Paleomagnetic measurements on sediment core PS1394-4, doi:10.1594/PANGAEA.51320

# Inside Pangaea II


**PANGAEA®**

Publishing Network for Geoscientific &amp; Environmental Data

You are not logged in (LOG IN)

Always quote citation when using data!

## Data Description

**Citation:** Spieß, V; Grobe, H (1996): Paleomagnetic measurements on sediment core PS1387-3, doi:10.1594/PANGAEA.51316, *In Supplement to: Grobe, Hannes; Mackensen, Andreas; Hubberten, Hans-Wolfgang; Spieß, Volkhard; Fütterer, Dieter K (1990): Stable isotope record and late quaternary sedimentation rates at the Antarctic continental margin, In: Bleil, U & Thiede, J (eds.), Geological History of the Polar Oceans - Arctic versus Antarctic, NATO ASI Series, Kluwer Academic Publishers, Dordrecht, Boston, London, 539-571, hdl:10013/epic.11660.d001*

**Project(s):** [Paleoenvironmental Reconstructions from Marine Sediments @ AWI \(AWI\\_Paleo\)](#)

**Coverage:** West: -5.8667 \* East: -5.8667 \* South: -68.7333 \* North: -68.7333  
 Date/Time Start: 1985-12-28T15:48:00 \* Date/Time End: 1985-12-28T15:48:00  
 Minimum DEPTH, sediment: 0.1 m \* Maximum DEPTH, sediment: 10.0 m

**Event(s):** **PS1387-3** (PS08/365) \* Latitude: -68.7333 \* Longitude: -5.8667 \* Elevation: -2416.0 m \* Date/Time: 1985-12-28T15:48:00 \* Recovery: 10.0 m \* Penetration: 11.2 m \* Location: Atka Bay \* Campaign: ANT-IV/3 (PS08) \* Basis: Polarstern \* Device: Gravity corer (Kiel type) \* Comment: upper 30 cm lost in weight, parallel station PS1506

**Parameter(s):**

#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	DEPTH, sediment	Depth	m			<a href="#">Geocode</a>
2	Susceptibility	Susceptibility	sensor units	Spieß, Volkhard	Susceptibility unit AWI, MS2C, 145 mm	

**Size:** 100 data points

## Data

 Download dataset as tab-delimited text (use the following character encoding: )

1	2
Depth [m]	Susceptibility [sensor units]
0.06000	0.83
0.15000	1.04
0.25000	1.00
0.35000	1.00
0.45000	1.28
0.55000	0.90
0.65000	0.89
0.75000	0.86
-----	---

# TIB-Katalog I

Suchergebnis sichern

Datenbankauswahl

Bestellung ohne Recherche

Benutzerinfo

TIB Homepage

■ Ihre Aktion suchen [und] (Alle Wörter) hannes grobe

1 - 10 von 30

1. [Radionuclides measured on three sediment cores from the Weddell Sea, Antarctica, supplementary data to: Frank, Martin; Eisenhauer, Anton; Bonn, Wolfgang J; Walter, Peter; Grobe, Hannes; Kubik, Peter W; Dittrich-Hannen, Beate; Mangini, Augusto \(1995\): Sediment redistribution versus paleoproductivity change: Weddell Sea margin sediment stratigraphy and biogenic particle flux of the last 250,000 years deduced from 230Thex, 10Be and biogenic barium profiles. Earth Planetary Science Letters, 136\(3-4\), 559-573](#)  
/ Martin Frank. - 2009-01-20

2. [Clay mineralogy and sedimentology of coring Site BDP-1-B \(BDP93-2\)](#)  
/ Richard Yuretich. - 2008-01-03

3. [Sedimentology on cores off Filchner Shelf Ice, Weddell Sea, Antarctica, supplementary data to: Wessels, Martin \(1989\): Sedimentationsprozesse an der Filchner Schelfeiskante, Antarktis, Diploma Thesis, Institut und Museum für Geologie und Paläontologie der Georg-August-Universität zu Göttingen \(in Zusammenarbeit mit dem Alfred-Wegener-Institut\), 126 pp](#)  
/ Martin Wessels. - 2008-07-14

4. [Geological mapping of the Heber, Rhüdener Sattel, Northern Germany, supplementary data to: Grobe, Hannes \(1982\): Geologische Kartierung auf Teilen des Blattes 4026 Lamspringe, NW-Teil des Heber, Rhüdener Sattel, Diplomarbeit am Fachbereich Mathematik-Naturwissenschaften der Christian-Albrechts-Universität, Kiel, 34 pp](#)  
/ Hannes Grobe. - 2008-01-16

5. [Sedimentology of various sediment cores from the West Antarctic continental margin, supplementary data to: Hillenbrand, Claus-Dieter; Moreton, Steven Grahame; Caburlotto, Andrea; Pudsey, Carol J; Lucchi, Renata G; Smellie, John L; Benetti, Sara; Grobe, Hannes; Hunt, John B; Larter, Robert D \(2008\): Volcanic time-markers for marine isotopic stages 6 and 5 in Southern Ocean sediments and Antarctic ice cores: implications for tephra correlations between palaeoclimatic records, Quaternary Science Reviews, 27\(5-6\), 518-540](#)  
/ Claus-Dieter Hillenbrand. - 2008-12-05

6. [Data compilation of the research vessel Meteor \(1964\)](#)  
/ Michael Samthein. - Bremerhaven [u.a.] : Alfred Wegener Inst. for Polar and Marine Research (AWI) [u.a.], 2008

7. [Sedimentology and age models of cores from the Antarctic continental margin in the eastern Weddell Sea, supplementary data to: Grobe, Hannes; Mackensen, Andreas \(1992\): Late Quaternary climatic cycles as recorded in sediments from the Antarctic continental margin, In: Kennett, J P & Warnke, D \(eds.\), The Antarctic Paleoenvironment: a perspective on Global Change, Antarctic Research Series, 56, 349-376](#)  
/ Hannes Grobe. - 2007-01-24

8. [Mineralogical and grain size analysis of Hole 119-745B from the Southern Ocean, supplementary data to: Ehrmann, Werner; Grobe, Hannes \(1991\): Cyclic sedimentation at sites 745 and 746, In: Barron, J; Larsen, B, et al. \(eds.\), Proceedings of the Ocean Drilling Program, Scientific Results, College Station, TX \(Ocean Drilling Program\), 119, 225-237](#)  
/ Werner Ehrmann. - 2007-01-23

9. [Paleomagnetic on three sediment cores from the Antarctic continental slope in the Weddell Sea, supplementary data to: Grobe, Hannes; Mackensen, Andreas; Hubberten, Hans-Wolfgang; Spieß, Volkhard; Fütterer, Dieter K \(1990\): Stable isotope record and late quaternary sedimentation rates at the Antarctic continental margin, In: Bleil, U & Thiede, J \(eds.\), Geological History of the Polar Oceans - Arctic versus Antarctic, NATO ASI Series, Kluwer Academic Publishers, Dordrecht, Boston, London, 539-571](#)  
/ Hannes Grobe. - 2007-01-23

10. [Clay and bulk mineralogy on sites 119-745 and 119-746 from the Southern Ocean, supplementary data to: Ehrmann, Werner; Grobe, Hannes; Fütterer, Dieter K \(1991\): Late Miocene to Holocene glacial history of east Antarctica revealed by sediments from sites 745 and 746, In: Barron, J; Larsen, B, et al. \(eds.\), Proceedings of the Ocean Drilling Program, Scientific Results, College Station, TX \(Ocean Drilling Program\), 119, 239-260](#)  
/ Werner Ehrmann. - 2007-01-23


1 - 10 von 30

Wort	Typ	Anzahl
<a href="#">hannes</a>	Alle Wörter	1437
<a href="#">grobe</a>	Alle Wörter	349

gehe zu  1 - 10 von 30



# TIB-Katalog II

 <a href="#">Einfache Suche</a>   <a href="#">Erweiterte Suche</a>   <b><a href="#">Suchergebnis</a></b>   <a href="#">Zwischenspeicher</a>   <a href="#">Suchgeschichte</a>   <a href="#">Hilfe</a>		© 1998-2009 OCLC PICA
<b>TIBORDER</b> Katalog	<input type="text" value="suchen [und]"/> <input type="text" value="Alle Wörter"/> sortiert nach <input type="text" value="Erscheinungsjahr"/>	
	<input type="text" value="hannes grobe"/> <input type="button" value="Suchen"/>	
Nummer:   <a href="#">Abmelden</a>		
		<a href="#">Titelliste</a>   <a href="#">Titeldaten</a>
Suchergebnis sichern Datenbankauswahl Bestellung ohne Recherche Benutzerinfo TIB Homepage	<p>■ <b>Ihre Aktion</b> suchen [und] (Alle Wörter) hannes grobe <span style="float: right;">9 von 30</span></p> <p><b>Titel:</b> <a href="#">Paleomagnetic</a> on <a href="#">three sediment cores</a> from the <a href="#">Antarctic continental slope</a> in the <a href="#">Weddell Sea</a>, <a href="#">supplementary data</a> to: <a href="#">Grobe, Hannes; Mackensen, Andreas; Hubberten, Hans-Wolfgang; Spieß, Volkhard; Fütterer, Dieter K (1990): Stable isotope record</a> and <a href="#">late quaternary sedimentation rates</a> at the <a href="#">Antarctic continental margin</a>, In: <a href="#">Bleil, U &amp; Thiede, J (eds.), Geological History of the Polar Oceans - Arctic versus Antarctic, NATO ASI Series, Kluwer Academic Publishers, Dordrecht, Boston, London, 539-571</a>  <b>Verfasser:</b> <a href="#">Hannes Grobe</a> ; <a href="#">Andreas Mackensen</a> ; <a href="#">Hans-Wolfgang Hubberten</a> ; <a href="#">Volkhard Spieß</a> ; <a href="#">Dieter K Fütterer</a>  <b>Erschienen:</b> Bremen/Bremerhaven : PANGAEA - Publishing Network for Geoscientific &amp; Environmental Data, 2007-01-23  <b>Umfang:</b> 3 Datasets.  <b>Anmerkung:</b> This dataset is supplement to hdl:10013/epic.11660.d001          Four cores from the Antarctic continental margin located between 50 and 200 km from the present-day ice shelf edge, were selected for sedimentological and mass spectrometer analysis. The first stable isotope records of the Southern Polar Ocean can be correlated in detail with global isotope stratigraphy. Together with magnetostratigraphic, sedimentological and micropaleontological data, the record provides stratigraphic and paleoceanographic information back to the Jaramillo subchron (910 kyr). &lt;br&gt;Although the isotope values have been altered by diagenetic processes in the sediments, which are poor in carbonate, an interpretation is possible via correlation with the sedimentological parameters. Oxygen isotope data give indications for a meltwater spike at the beginning of interglacials, when large scale melting of parts of the ice shelves took place. The synchronous record of the benthic and planktonic d13C-signals reflect continuous bottom water formation also during glacial. &lt;br&gt;Primary productivity was strictly reduced during glacial due to continuous ice coverage in the Weddell Sea. The climatic improvement at the beginning of an interglacial is associated with peak values in biologic activity lasting for about 15 kyr.&lt;br&gt;During one climatic cycle, mean sedimentation rates at the continental margin decrease with increasing distance from the continent from 5.2 to 1.3 cm/kyr. Maximum sedimentation rates of 25 cm/kyr at the beginning of an interglacial down to 0.6 cm/kyr during glacial periods have been calculated. The rate is mainly controlled by movements of the ice shelf edge and ice rafting.</p> <p><b>Technische Angaben:</b>Format: application/zip  <b>Links:</b> doi: <a href="https://doi.org/10.1594/PANGAEA.587842">10.1594/PANGAEA.587842</a>          URN: <a href="https://nbn-resolving.org/urn:nbn:de:tib-10.1594/PANGAEA.5878428">urn:nbn:de:tib-10.1594/PANGAEA.5878428</a></p> <p><b>BestandsInfo:</b> <a href="#">Anzeigen</a> <a href="#">lizenzfrei!</a>  <b>Anmerkung:</b> Primaerdaten</p> <p style="text-align: right;">9 von 30</p>	

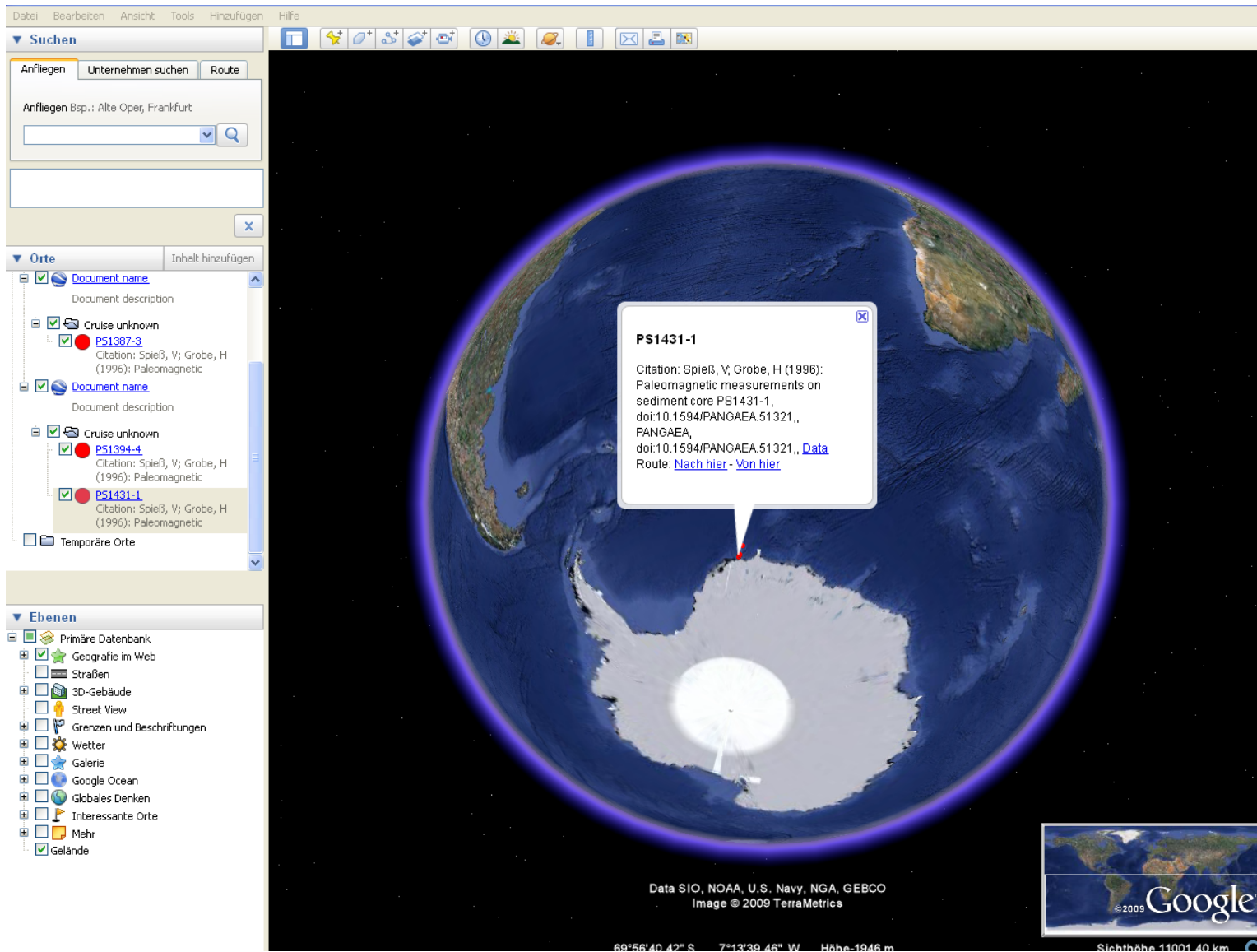


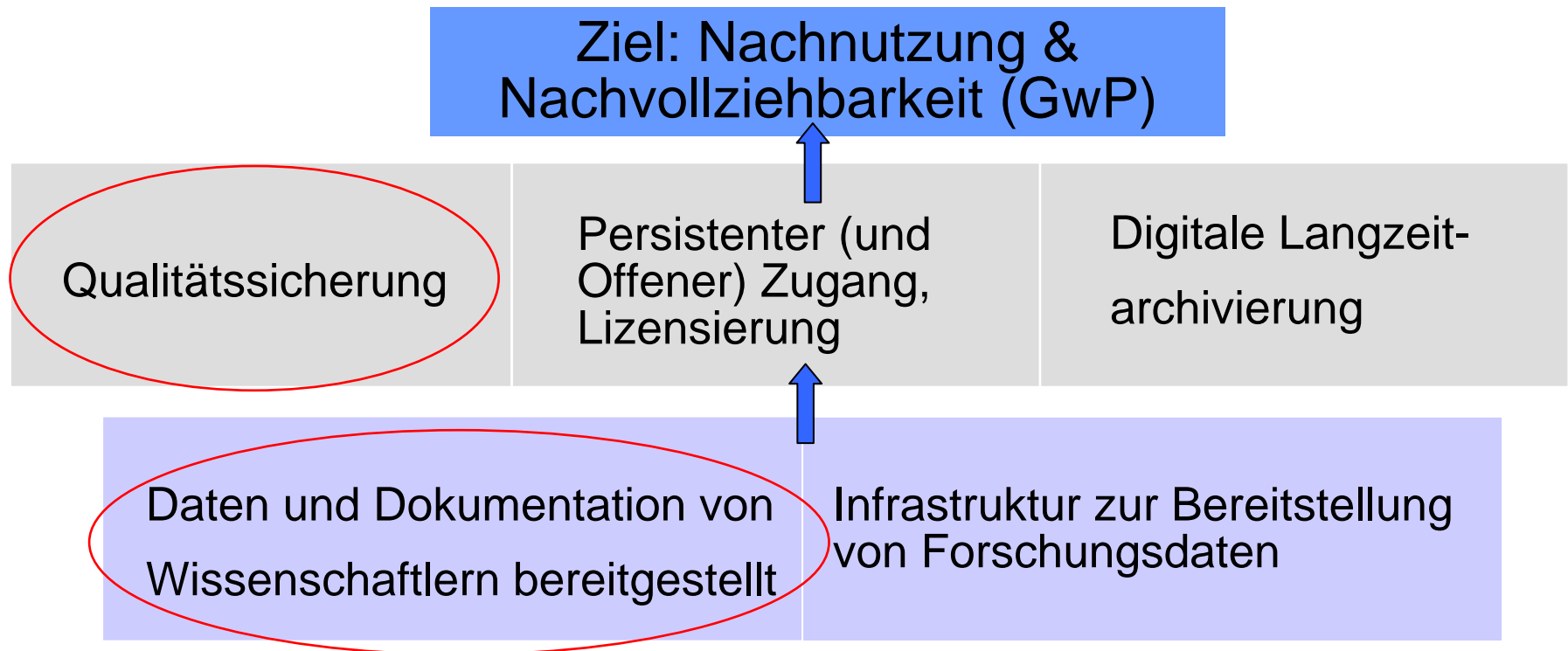
Abbildung: Google Earth



## Contentakquise und Qualitätssicherung

Herausforderung:

- Daten-Submission von WissenschaftlerInnen
- Qualitätssicherung – technisch und wissenschaftlich!



## Datenpublikation: Earth System Science Data

Problem:

Kein Gewinn für die WissenschaftlerInnen?

Qualitätssicherung?!

Lösung:

Nutzen des etablierten Publikationsprozesses

→ Zitierbare Publikation

→ Peer Review

*Earth System Science Data*

→ *Ermöglicht Nachnutzung von Forschungsdaten*



<http://www.earth-system-science-data.net/>

## Who is who...

### Advisory Board:

Prof. Dr. Paul J. Crutzen

Prof. Dr. Sydney Levitus

Prof. Dr. Alexander Petrovich Lisitzin

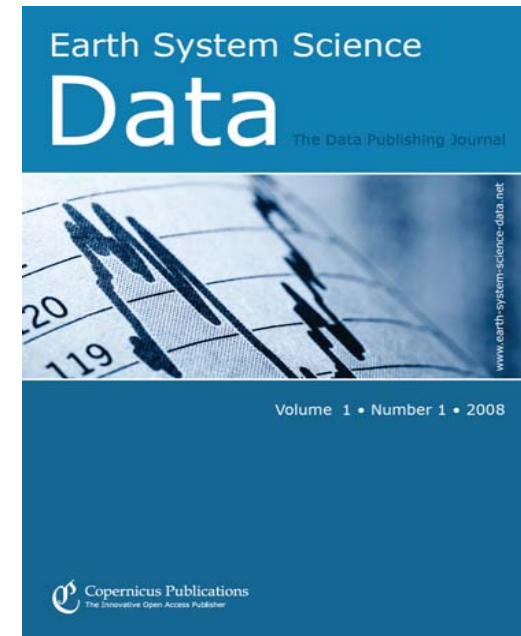
### Editors in Chief:

David Carlson

Hans Pfeiffenberger

### Verlag

Copernicus Publishers – OA Publisher



<http://www.earth-system-science-data.net/>

# Open Peer Review – Discussion Paper

Earth Syst. Sci. Data Discuss., 1, 1–13, 2008  
www.earth-syst-sci-data-discuss.net/1/1/2008/  
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*Earth System Science Data Discussions* is the access reviewed  
discussion forum of *Earth System Science Data*

## Compilation of ozonesonde profiles from the Antarctic Georg-Forster-Station from 1985 to 1992

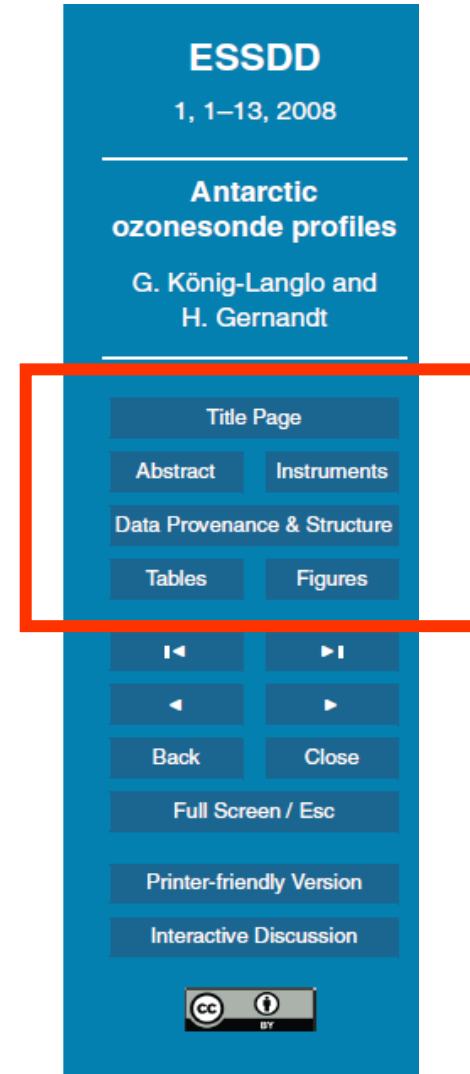
G. König-Langlo and H. Gernandt

Alfred Wegener Institute for Polar and Marine Research, Bussestraße 24, 27570  
Bremerhaven, Germany

Received: 29 July 2008 – Accepted: 5 September 2008 – Published: 22 September 2008

Correspondence to: G. König-Langlo (gert.koenig-langlo@awi.de)

Published by Copernicus Publications.



The screenshot shows a blue navigation menu for the article. At the top, it says "ESSDD" and "1, 1–13, 2008". Below that, the article title "Antarctic ozonesonde profiles" and authors "G. König-Langlo and H. Gernandt" are listed. A red box highlights a set of navigation buttons: "Title Page", "Abstract", "Instruments", "Data Provenance & Structure", "Tables", and "Figures". Below these are navigation arrows, "Back", "Close", "Full Screen / Esc", "Printer-friendly Version", and "Interactive Discussion". At the bottom is a Creative Commons Attribution (CC BY) license logo.

# Repository Reference

## Abstract

On 22 May 1985 the first balloon-borne ozonesonde was successfully launched by the staff of Georg-Forster-Station (70°46' S, 11°41' E). The following weekly ozone soundings mark the beginning of the continuous investigation of Germany to study the vertical ozone distribution in the southern hemisphere.

In 1985 these ozone soundings have been the only record showing the change of vertical ozone distribution in the southern polar stratosphere in September and October. The regular ozone soundings from 1985 until 1992 are a valuable reference data set since the chemical ozone loss became a significant feature in the southern polar stratosphere.

The balloon-borne soundings were performed at the upper air sounding facility of the neighbouring station Novolazarevskaya, just 2 km apart from Georg-Forster-Station. Till 1992, ozone soundings were taken without interruption. Afterwards, the ozone sounding program was moved to Neumayer-Station (70°39' S, 8°15' W) 750 km further west.

### Data coverage and parameter measured

Repository-Reference: doi:10.1594/PANGAEA.547983  
 Available at: <http://dx.doi.org/10.1594/PANGAEA.547983>  
 Coverage: East: 11.8300; South: -70.7700  
 Location Name: Georg-Forster-Station, Antarctica  
 Date/Time Start: 1985-05-22T05:19:00  
 Date/Time End: 1992-01-29T01:19:00

Pangaea!

**ESSDD**  
1, 1–13, 2008

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**Antarctic  
ozonesonde profiles**

G. König-Langlo and  
H. Gernandt

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Title Page

Abstract

Instruments

Data Provenance & Structure

Tables

Figures

◀

▶

◀

▶

Back

Close

Full Screen / Esc

Printer-friendly Version

Interactive Discussion



## Open Peer Review – ESSD

Invited reviewers and open discussion!

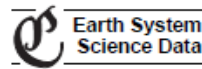
- Is the article itself appropriate to support the publication of a dataset?
- Is the dataset significant – unique, useful and complete?
- Is the dataset itself of high quality?
- Is the dataset publication, as submitted, of high quality?

→ By reading the article and downloading the dataset would you be able to understand and (re-)use the dataset in the future?



# ESSD – Akzeptierter finaler Artikel

Earth Syst. Sci. Data, 1, 1–5, 2009  
www.earth-syst-sci-data.net/1/1/2009/  
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Datensatz auf bekannte Art und Weise  
zitierbar

## Compilation of ozonesonde profiles from the Antarctic Georg-Forster-Station from 1985 to 1992

G. König-Langlo and H. Gernandt

Alfred Wegener Institute for Polar and Marine Research, Bussestraße 24, 27570 Bremerhaven, Germany

Received: 29 July 2008 – Published in Earth Syst. Sci. Data Discuss.: 22 September 2008

Revised: 1 December 2008 – Accepted: 23 December 2008 – Published: 12 January 2009

**Abstract.** On 22 May 1985 the first balloon-borne ozonesonde was successfully launched by the staff of Georg-Forster-Station (70°46' S, 11°41' E). The subsequent weekly ozone soundings mark the beginning of a continuous investigation of the vertical ozone distribution in the southern hemisphere by Germany.

The measurements began the year the ozone hole was discovered. They significantly contribute to other measurements made prior to and following 1985 at other stations. The regular ozone soundings from 1985 until 1992 are a valuable reference data set since the chemical ozone loss became a significant feature in the southern polar stratosphere.

The balloon-borne soundings were performed at the upper air sounding facility of the neighbouring station Novolazarevskaya, just 2 km from Georg-Forster-Station. Until 1992, ozone soundings were taken without interruption. Thereafter, the ozone sounding program was moved to Neumayer-Station (70°39' S, 8°15' W) 750 km further west.

### Data coverage and parameter measured

Repository-Reference: doi:10.1594/BANGAEA.547983  
Coverage: East: 11.8300; South: -70.7700;  
Location Name: Georg-Forster-Station, Antarctica  
Date/Time Start: 1985-05-22T05:19:00  
Date/Time End: 1992-01-29T01:19:00

Parameter	Short Name	Unit	Comment
Altitude	Altitude	m	height above mean sea level
Date/Time	Date/Time		universal time code (UTC)
Longitude	Longitude		at launching point
Latitude	Latitude		at launching point
Ozone, partial pressure	O <sub>3</sub>	hPa	
Pressure, at given altitude	PPPP	hPa	
Temperature, air	TTT	degC	
Wind direction	dd	deg	
Wind speed	ff	m/sec	

### 1 Introduction

The first permanently operated German research base – later named Georg-Forster-Station – was established in 1976 in the Schirmacher Oasis at 70°46' S, 11°41' E. The station was permanently used and operated as an annex to the Russian station Novolazarevskaya until 1987, and then as a German Antarctic station named after the German natural scientist, author and revolutionary Georg Forster (1754–1794) until 1993.

Long-term studies of magnetospheric-ionospheric processes, geophysical investigations, biological studies and sea ice observations using satellite imaging were performed.

The station became known to the international scientific community when the vertical extent of the "ozone hole" in the southern polar stratosphere was firstly recorded by regular balloon-borne ozone observations in 1985 (Gernandt, 1987a, b).

The ozone sounding programme was a major contribution of the Meteorological Service to the Antarctic research of the German Democratic Republic (GDR). The station was established as a long-term ozone-sonde observatory in cooperation with the Russian Arctic and Antarctic Research Institute (AARI) and the Aerological Observatory Lindenberg (AOL) in order to study the climatology of the ozone layer in

Datensatz nachnutzbar:  
Daten online abrufbar,  
kontrollierte Nachnutzung



Correspondence to: G. König-Langlo  
(gert.koenig-langlo@awi.de)

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<http://www.earth-system-science-data.net/>



## Auf den Punkt gebracht! (Zusammenfassung)

- Geowissenschaften: diverse Forschungsstruktur stellt spezielle Ansprüche an Forschungsdateninfrastrukturen
- Pangaea:
  - innovative Datenbibliothek,
  - zitierfähige Datensätze, meist Open Access
- Earth System Science Data – A Data Publishing Journal:
  - qualitätsgesicherte Datenpublikation und –dokumentation
  - Enge Zusammenarbeit mit Datenrepositorien
  - Anreizmechanismen zur Datenpublikation

## Referenzen

- Pangaea [www.pangaea.de](http://www.pangaea.de)
- Earth System Science Data (Journal): <http://www.earth-system-science-data.net/>
- Treloir, Andrew; Harboe-Ree, Cathrine; "Data management and the curation continuum: how the Monash experience is informing repository relationships", [http://www.valaconf.org.au/vala2008/papers2008/111\\_Treloar\\_Final.pdf](http://www.valaconf.org.au/vala2008/papers2008/111_Treloar_Final.pdf)

Vielen Dank für  
Ihre Aufmerksamkeit!

[suenje.dallmeier-tiessen@awi.de](mailto:suenje.dallmeier-tiessen@awi.de)

