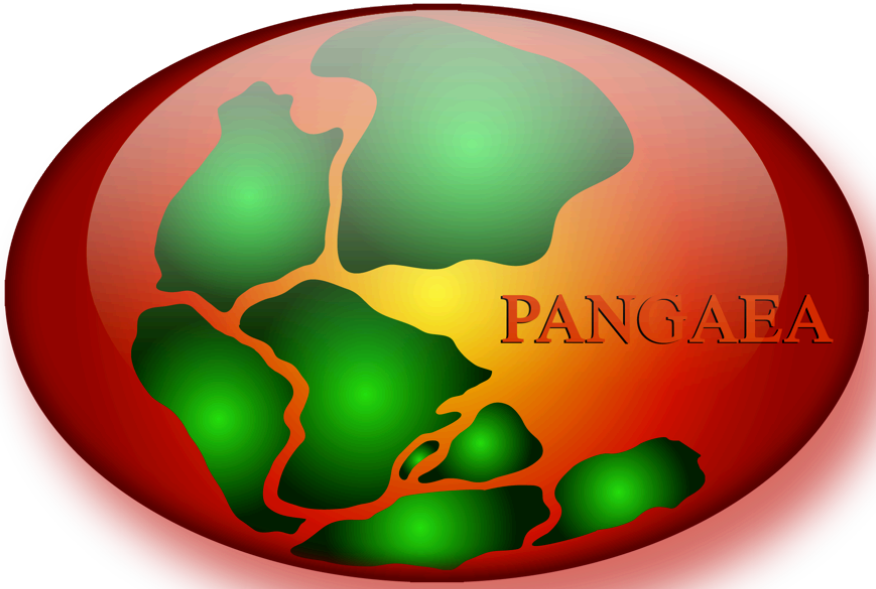
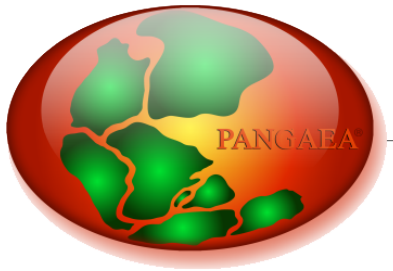
ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR- UND MEERESFORSCHUNG

PANGAEA® - more than 20 years serving the earth science community with data archiving and publication



Stefanie Schumacher, Amelie Driemel, Hannes Grobe, Rainer Sieger
hdl:10013/epic.45879

HELMHOLTZ GEMEINSCHAFT



What is PANGAEA® ?

- Pangaea is an open access **data library** for earth system research.
- Data are stored georeferenced in space and time in a relational database and a tape archive.
- Datasets have a citation and a DOI
- The data content is accessible on the internet via a search engine, a data warehouse and web services.
- The system is open to any scientist or project to archive and publish data.

PANGAEA hosts

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HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG

marum
Center for Marine
Environmental Sciences

Both institutions have committed to long-term operate PANGAEA

Data model

numerical

16 B. dilatata [#]
178
17
4

text

3 Lithology
Aleuritic clay
Aleuritic clay
Nannofossil clays

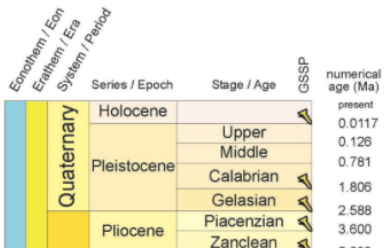
object

Data model

where?

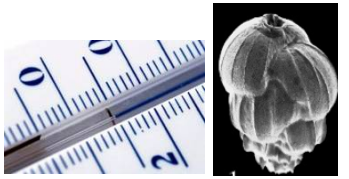
Latitude/Longitude

when?



Date/Time or *geol. Age*

what?

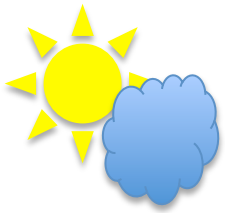


Parameter [unit]

numerical **text** **object**

16 B. dilatata [#]
178
17
4

3 Lithology
Aleuritic clay
Aleuritic clay
Nannofossil clays



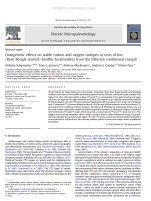
Air

Ice

Water

Sediment

who?



Investigator/Reference

how?

Method

HELMHOLTZ GEMEINSCHAFT

Data in PANGAEA

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Data Description

Show Map | Google Earth | RIS | BibTeX

Citation: Leduc, G et al. (2015): Salinity estimation from Gulf of Guinea, sediment core MD03-2707 doi:10.1594/PANGAEA.849518
Supplement to: **Leduc, Guillaume; Sachs, Julian P; Kawka, Orest E; Schneider, Ralph R (2013):** Holocene changes in eastern equatorial Atlantic salinity as estimated by water isotopologues. *Earth and Planetary Science Letters*, **362**, 151-162, doi:10.1016/j.epsl.2012.12.003

Abstract: The isotopic composition of surface seawater is widely used to infer past changes in sea surface salinity using paired foraminiferal Mg/Ca and d18O from marine sediments. At low latitudes, paleosalinity reconstructions using this method have largely been used to document changes in the hydrological cycle. This method usually assumes that the modern seawater d18O (d18Osw)/salinity relationship remained constant through time. Modelling studies have shown that such assumptions may not be valid because large-scale atmospheric circulation patterns linked to global climate changes can alter the seawater d18Osw/salinity relationship locally. Such processes have not been evidenced by paleo-data so far because there is presently no way to reconstruct past changes in the seawater d18Osw/salinity relationship. We have addressed this issue by applying a multi-proxy salinity reconstruction from a marine sediment core collected in the Gulf of Guinea. We measured hydrogen isotopes in C37:2 alkenones (dDa) to estimate changes in seawater dD. We find a smooth, long-term increase of ~10 per mil in dDa between 10 and 3 kyr BP, followed by a rapid decrease of ~10 per mil in dDa between 3 kyr BP and core top to values slightly lighter than during the early Holocene. Those features are inconsistent with published salinity estimations based on d18Osw and foraminiferal Ba/Ca, as well as nearby continental rainfall history derived from pollen analysis. We combined dDa and d18Osw values to reconstruct a Holocene record of salinity and compared it to a Ba/Ca-derived salinity record from the same sedimentary sequence. This combined method provides salinity trends that are in better agreement with both the Ba/Ca-derived salinity and the regional precipitation changes as inferred from pollen records. Our results illustrate that changes in atmospheric circulation can trigger changes in precipitation isotopes in a counter-intuitive manner that ultimately impacts surface salinity estimates based on seawater isotopic values. Our data suggest that the trends in Holocene rainfall isotopic values at low latitudes may not uniquely result from changes in local precipitation associated with the amount effect.

Related to: **Weldeab, Syee; Lea, David W; Schneider, Ralph R; Andersen, Nils (2007):** 155,000 Years of West African Monsoon and Ocean Thermal Evolution. *Science*, **316(5829)**, 1303-1307, doi:10.1126/science.1140461

Coverage: *Latitude:* 2.502000 * *Longitude:* 9.395000

Minimum Elevation: -1295.0 m * *Maximum Elevation:* -1295.0 m

Event(s): **MD03-2707** * *Latitude:* 2.502000 * *Longitude:* 9.395000 * *Elevation:* -1295.0 m * *Device:* Piston corer (PC)

Comment: The dataset includes deuterium measurements performed on C37:2 alkenones. These measurements, jointly with seawater d18O estimates previously published in Weldeab et al.(2007), are jointly used to derive sea surface salinity using the isotopologues method as described in Rohling (2007).

Parameter(s):

#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	AGE	Age	ka BP	Leduc, Guillaume		Geocode
2	Alkenone C37:2, d2H	C37:2 d2H	per mil SMOW	Leduc, Guillaume	Gas chromatography - Isotope ratio mass spectrometer (GC-IRMS)	
3	delta Deuterium, standard deviation	d2H std dev	±	Leduc, Guillaume	Gas chromatography - Isotope ratio mass spectrometer (GC-IRMS)	
4	Sea surface salinity	SSS		Leduc, Guillaume	SSS calculated from d18O and d2H (Rohling, 2007)	
5	Salinity, standard error	Sal std e	±	Leduc, Guillaume	SSS calculated from d18O and d2H (Rohling, 2007)	

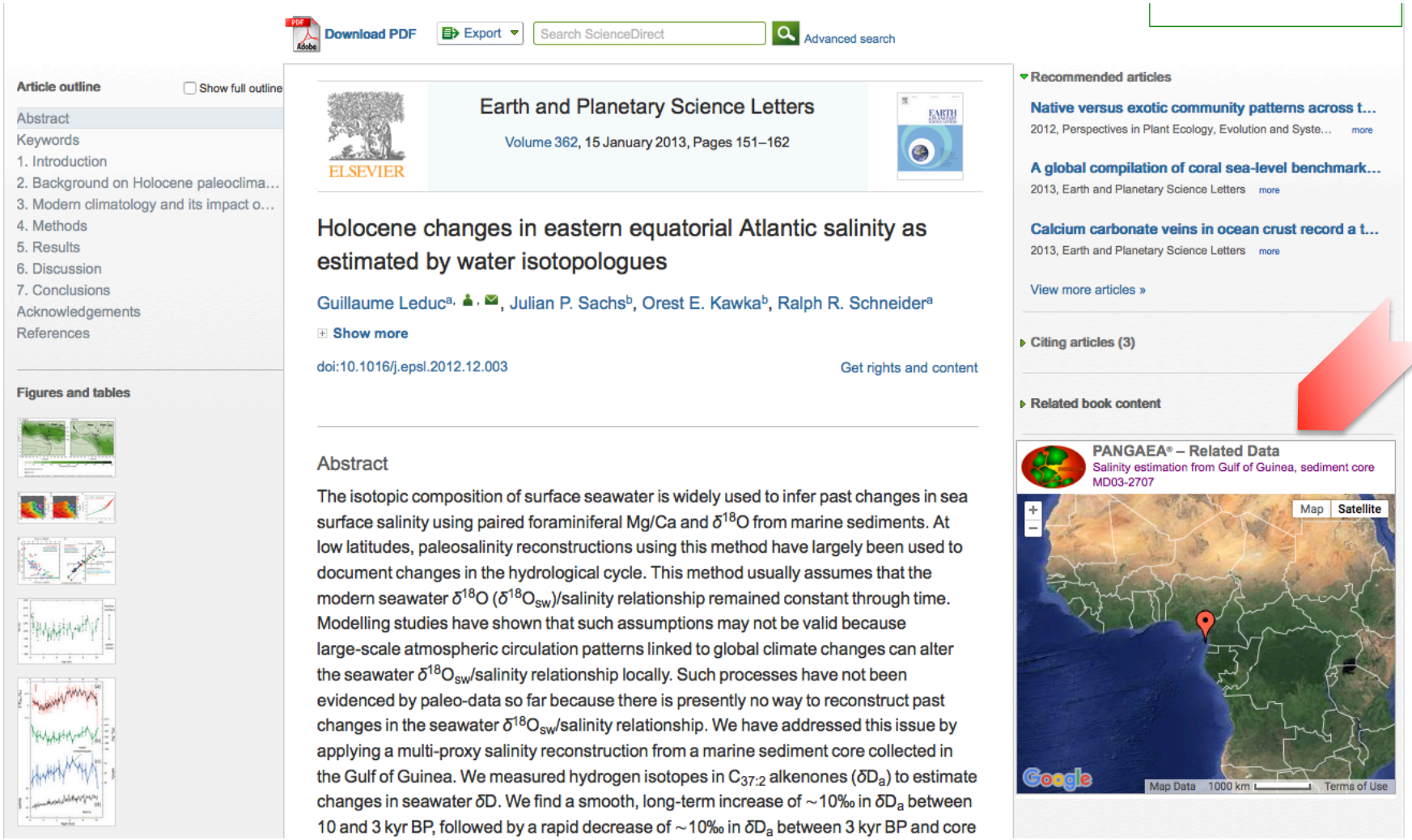
Size: 112 data points

Data

Download dataset as tab-delimited text *(use the following character encoding:* x-MacRoman: Macintosh Roman *)*

1 Age [ka BP]	2 C37:2 d2H [per mil SMOW]	3 d2H std dev [±]	4 SSS	5 Sal std e [±]
0.240	-209.6	0.9	30.00	5.56
0.470	-204.6	4.1	25.45	5.43
1.000	-200.3	4.0	21.27	5.02

PANGAEA linked with Elsevier



Data Search

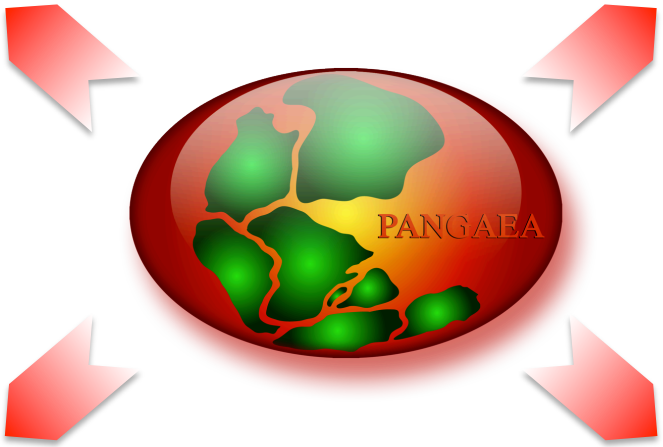
Search engines

Google Deutschland

Projects

WRMC-BSRN
World Radiation Monitoring Center-
Baseline Surface Radiation Network

IODP
INTERNATIONAL OCEAN DISCOVERY PROGRAM



Portal

Data Portal
German Marine Research

OAIster
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Free and open access to biodiversity data

Library catalogue

TIB | TECHNISCHE INFORMATIONSBIBLIOTHEK

ePIC

Data Search


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Sediment
Ice
Atmosphere
measurement type, author name, project, taxa,...
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About – Submit Data – Projects – Software – Contact

Data Compilation

Data search: www. pangaea.de

All Water Sediment Ice **Atmosphere**

parameter:Ozone parameter:[mPa] event:Neumayer eve Search

Help Advanced Search Preferences more...

2579 datasets found on search for **»parameter:Ozone parame...« in atmosphere**

Your query requires all search terms to be in the results, but produced no hits. Because of this, the behaviour was changed to show a ranked l

<< PREV | **1** | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | NEXT >>

1. **König-Langlo, G (2007):** Radiosonde measurements from Neumayer Station (1999-03)
   Size: 105462 data points
   doi:10.1594/PANGAEA.674435 - Score: 100% - Similar datasets
2. **König-Langlo, G (2007):** Radiosonde measurements from Neur
   Size: 124002 data points
   doi:10.1594/PANGAEA.674411 - Score: 100% - Similar datasets

PANGAEA®
Data Publisher for Earth & Environmental Science

Logged in as **sschumacher** (log out, profile)

Always quote citation when using data!

Data Description Show Map Google Earth

Citation: **König-Langlo, Gert (2007):** Radiosonde measurements from Neumayer Station (1999-03). *Alfred Wegener Institute, Helmholtz Center for Polar and Marine Research, Bremerhaven*, doi:10.1594/PANGAEA.674435

Other version: **König-Langlo, Gert (1999):** BSRN Station-to-archive file for Neumayer station (1999-03). ftp://ftp.bsrn.awi.de/gvn/gvn0399.dat.gz

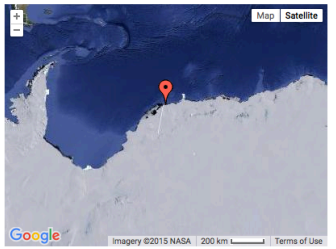
Project(s): **Baseline Surface Radiation Network** (BSRN)

Coverage: *Latitude:* -70.650000 * *Longitude:* -8.250000

Date/Time Start: 1999-03-01T09:31:00 * *Date/Time End:* 1999-03-31T09:33:00

Minimum ALTITUDE: 42.0 m * *Maximum ALTITUDE:* 38042.0 m

Event(s): **GVN** (Georg von Neumayer) * *Latitude:* -70.650000 * *Longitude:* -8.250000 * *Date/Time:* 1992-01-01T00:00:00 * *Elevation:* 42.0 m * *Location:* Dronning Maud Land, Antarctica * *Campaign:* WCRP/GEWEX * *Device:* Monitoring station (MONS) * *Comment:* BSRN station no: 13; Surface type: iceshelf; Topography type: flat, rural; Horizon from 1992 to 2009-01: doi:10.1594/PANGAEA.669516; Horizon after 2009-01: doi:10.1594/PANGAEA.757811; Station scientist: Gert König-Langlo (Gert.Koenig-Langlo@awi.de). Station description see hdl:10013/epic.28566.d001



Parameter(s):

#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	DATE/TIME	Date/Time				Geocode
2	ALTITUDE	Altitude	m			Geocode
3	Pressure, at given altitude	PPPP	hPa	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	
4	Temperature, air	TTT	°C	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	
5	Dew/frost point	TdTdTd	°C	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	
6	Wind direction	dd	deg	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	
7	Wind speed	ff	m/s	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	
8	Ozone	O3	mPa	König-Langlo, Gert	Radiosonde, Vaisala, DigiCora	

Size: 105462 data points

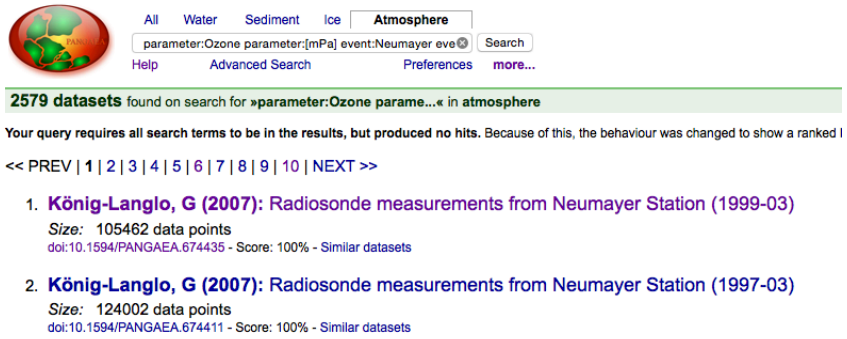
Data

Download dataset as tab-delimited text *(use the following character encoding:* x-MacRoman: Macintosh Roman *)*

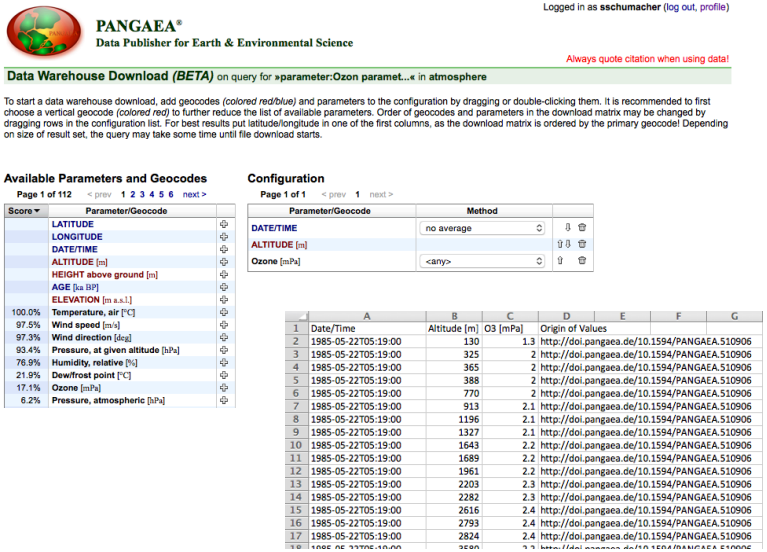
Date/Time	Altitude [m]	PPPP [hPa]	TTT [°C]	TdTdTd [°C]	dd [deg]	ff [m/s]	O3 [mPa]
1999-03-01T09:31	42	987	-11.1	-14.2	86	8	
1999-03-01T09:31	99	979	-9.3	-16.0	81	9	
1999-03-01T09:31	138	974	-9.5	-16.2	77	10	
1999-03-01T09:31	175	970	-9.7	-16.8	73	10	
1999-03-01T09:31	215	965	-9.8	-16.9	70	10	
1999-03-01T09:31	255	960	-9.6	-17.8	67	10	
1999-03-01T09:31	297	955	-8.0	-17.3	65	9	

Data Compilation

Data search: www. pangaea.de



Data download: Data Warehouse

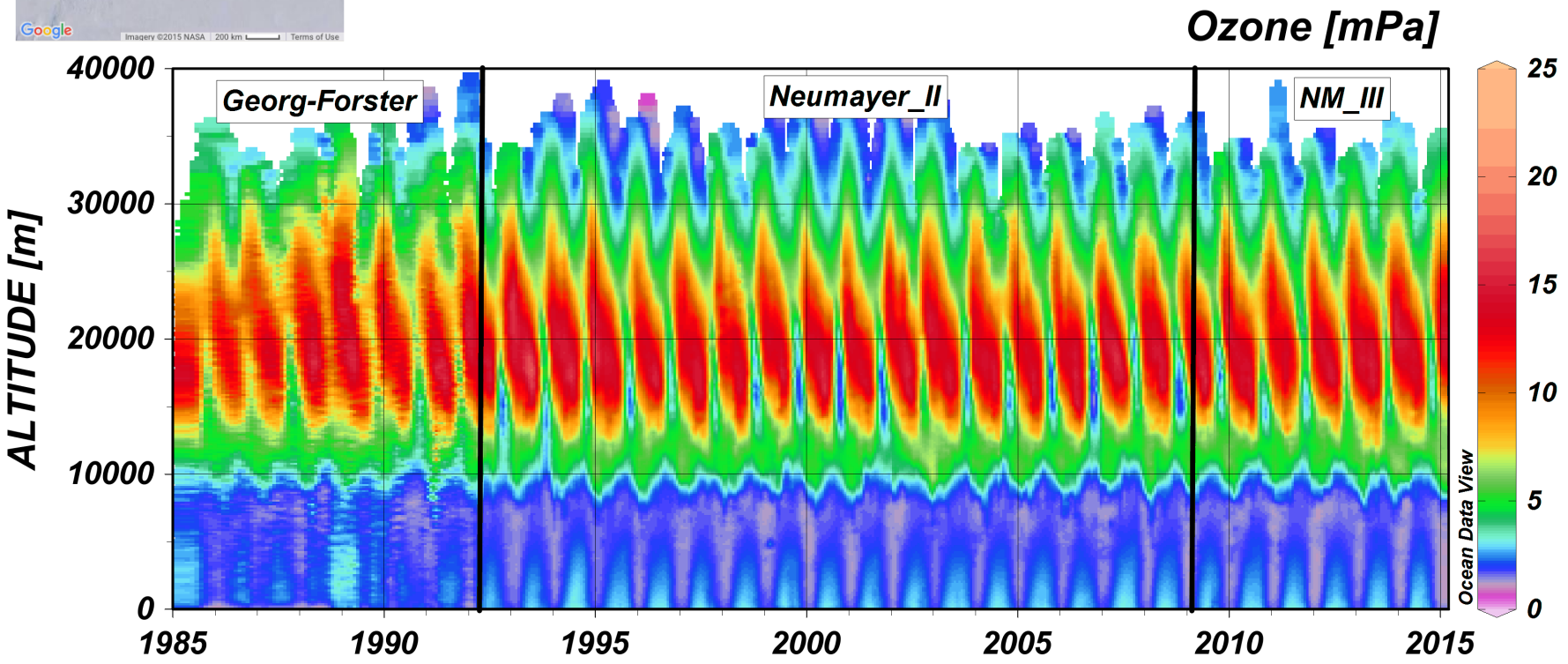


Data visualisation: ODV

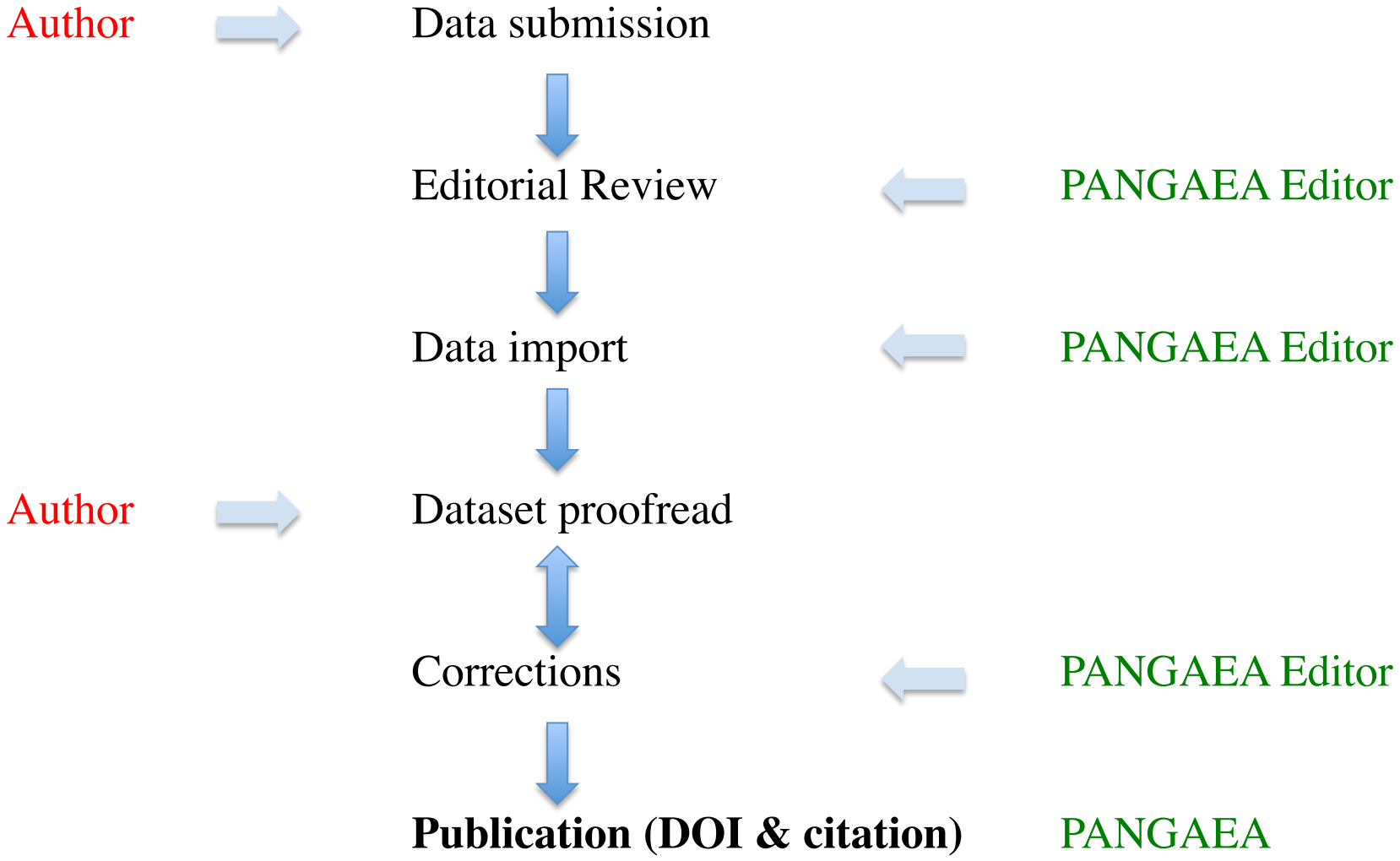
Schlitzer, R., Ocean Data View, http://odv.awi.de, 2015

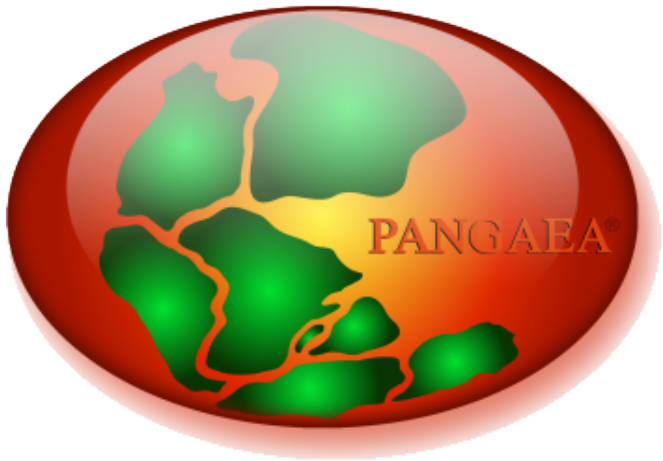
Data Compilation

30-year record of Ozone



Data Publishing





www.pangaea.de

Thank You