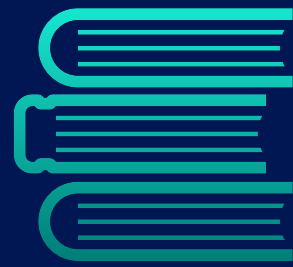
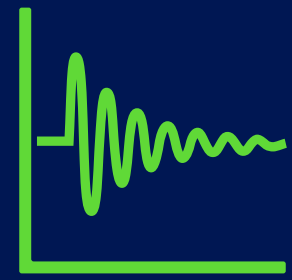
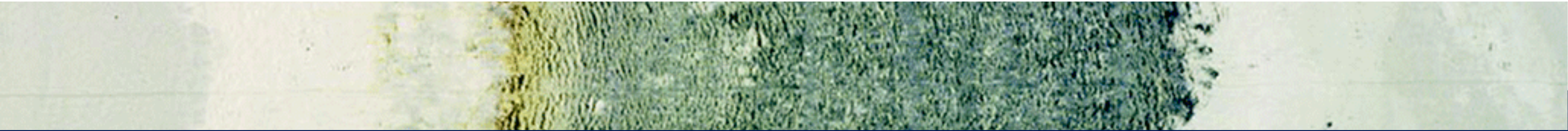
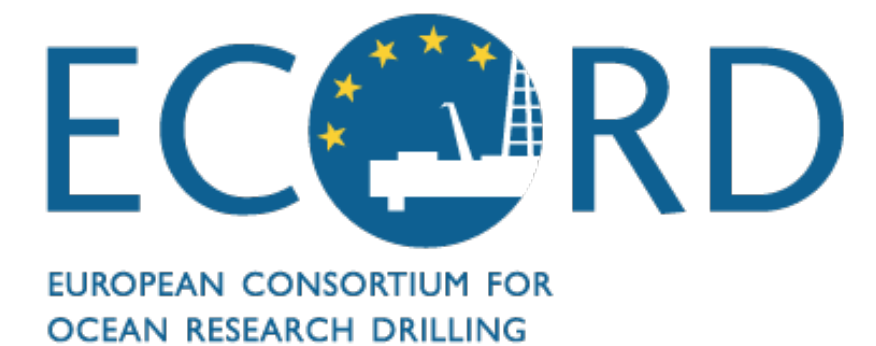


MATERIAL AND DATA LEGACY FROM 50 YEARS OF OCEAN DRILLING

Hanno Kinkel (ESSAC Science Coordinator), Plymouth University, UK (hanno.kinkel@plymouth.ac.uk)



Exploring the Earth Under the Sea

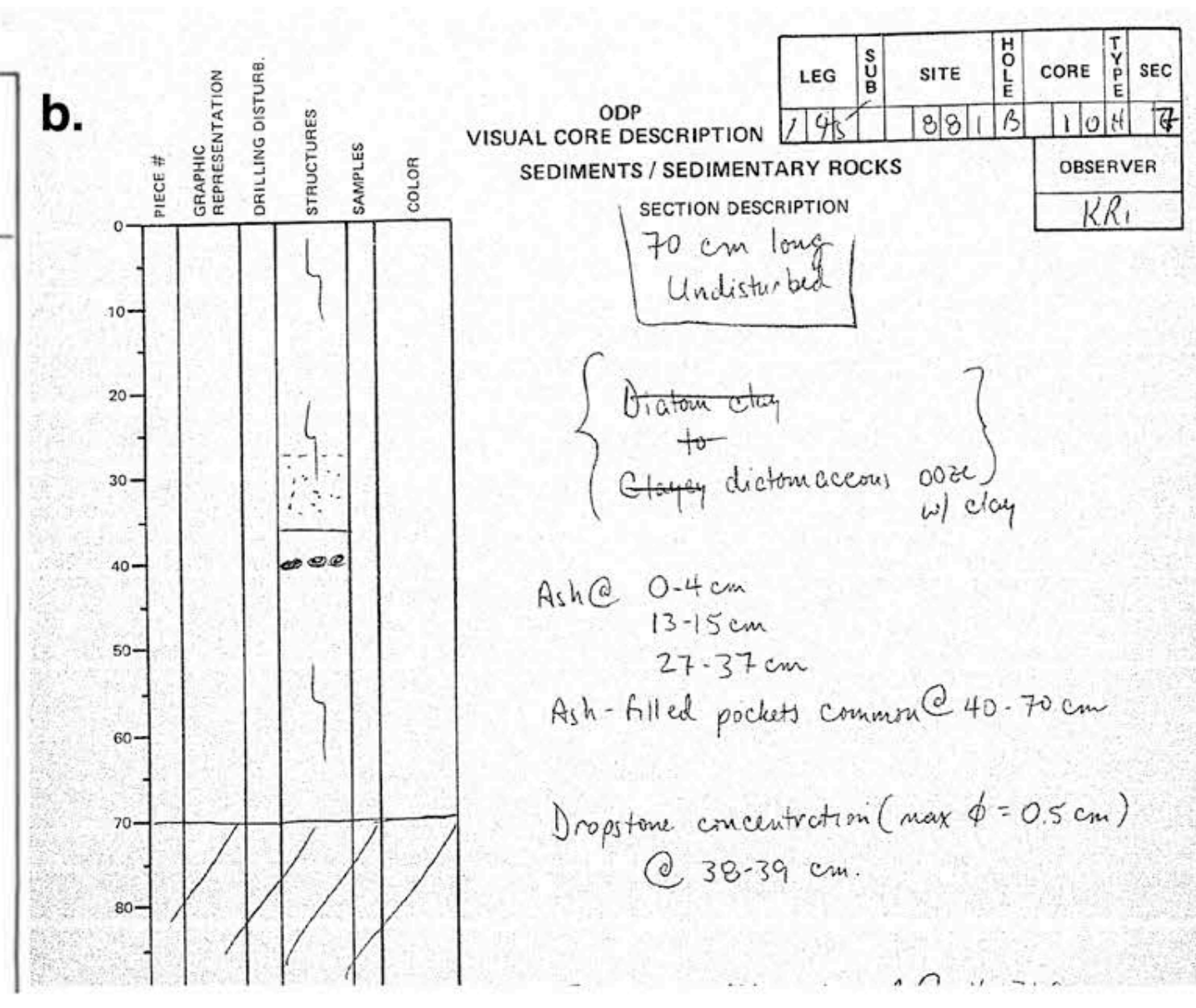
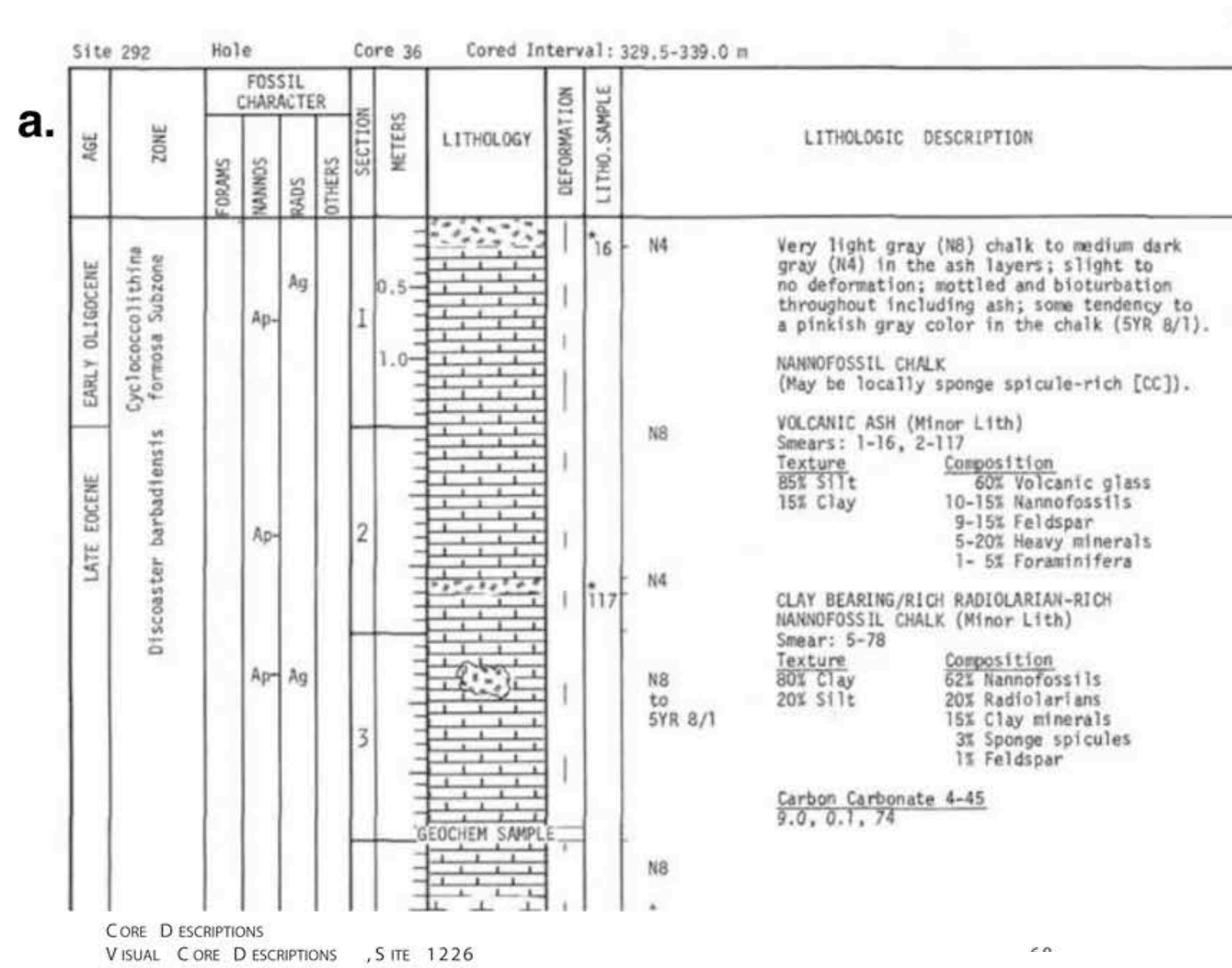


SO MANY CORES, SO MANY DATA, WHERE DO I START?



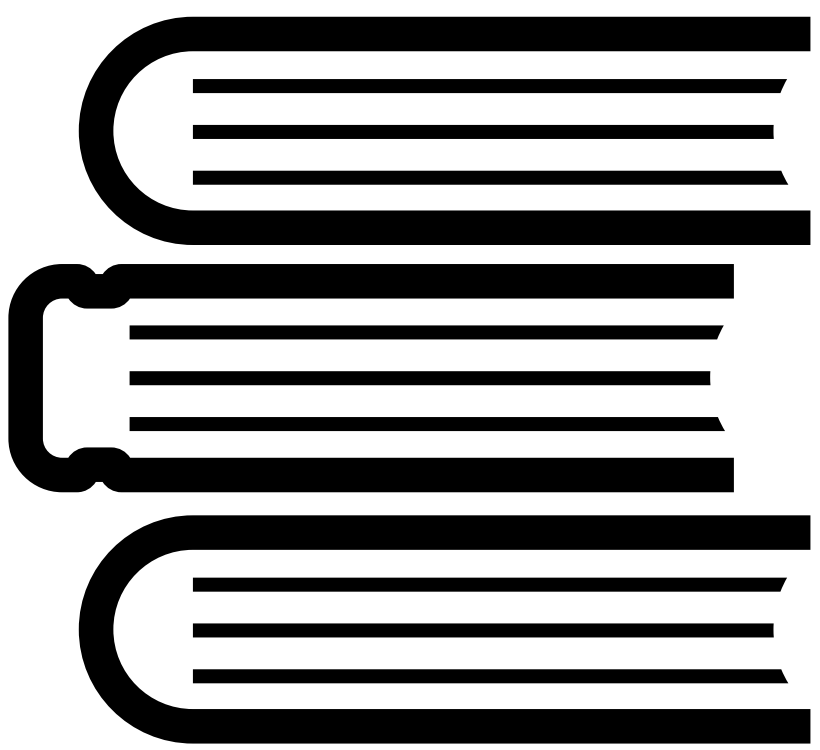
MARUM – Center for Marine Environmental Sciences, University of Bremen; Photographer (CC-BY 4.0)

FROM HANDWRITTEN VISUAL CORE DESCRIPTION (VCD) TO FULLY DIGITAL IODP VCD



e.

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Top [cm]	Bottom [cm]	Top Depth [m]	Bottom Depth [m]	Lithologic	Bottom cont	Bottom cont	Bottom co	Lithology pref	Lithology principal	Lithology suffix	Lithology	Lithology	Lithology	Lithology
2	0	109	0	1.09	IA	planar	sharp	horizontal	silty	mud	with medium to c	silty mud	silty mud	mud with medium to	5Y
3	109	113	1.09	1.13	IA	planar	sharp	horizontal	silty	fine sand	with foraminifers	silty fine s	silty fine s	fine sand with forami	7.!
4	113	146	1.13	1.46	IA				silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	5Y
5	0	10	1.46	1.56	IA	irregular	bioturbated	sub-horiz	silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	5Y
6	10	64	1.56	2.1	IA	irregular	bioturbated	sub-horiz	nannofossil-b	mud	with silt	nannofoss	nannofoss	mud with silt	5Y
7	64	66.5	2.1	2.125	IA	irregular	bioturbated	sub-horiz	tuffaceous	nannofossil ooze		tuffaceous	tuffaceous	nannofossil ooze	5Y
8	66.5	73	2.125	2.19	IA	irregular	bioturbated	sub-horiz	sandy	nannofossil ooze	with silt	sandy nar	sandy nar	nannofossil ooze wit	10
9	73	118	2.19	2.64	IA	irregular	bioturbated	sub-horiz	silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	10
10	118	150	2.64	2.96	IA	irregular	bioturbated	sub-horiz	silty	nannofossil ooze		silty nann	silty nann	nannofossil ooze	10
11	0	38	2.96	3.34	IA			sub-horiz	silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	10
12	38	95	3.34	3.91	IA	planar	sharp	sub-horiz	silty	nannofossil ooze	with ash pods	silty nann	silty nann	nannofossil ooze wit	10
13	95	99	3.91	3.95	IA	irregular	scoured	sub-vertical		ash		ash	ash	ash	10
14	99	140	3.95	4.36	IA	planar	sharp	sub-horiz	silty	nannofossil ooze	with ash pods	silty nann	silty nann	nannofossil ooze wit	10
15	140	146	4.36	4.42	IA	planar	sharp	sub-horizontal		ash		ash	ash	ash	10
16	146	150	4.42	4.46	IA				silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	5Y
17	0	80	4.46	5.26	IA	irregular	bioturbated	sub-horiz	silty	mud	with fine sand	silty mud	silty mud	mud with fine sand	5Y
18	80	100	5.26	5.46	IA	irregular		sub-horiz	silty	fine sand	with foraminifers	silty fine s	silty fine s	fine sand with forami	5Y
19	100	108	5.46	5.54	IA	irregular	sharp	sub-horizontal		ash	with foraminifers	ash	ash	with fash with foraminifers	10
20	108	146	5.54	5.92	IB				silty	nannofossil ooze	with nannofossil	silty fine s	silty fine s	nannofossil ooze wit	10
21	146	150	5.92	5.96	IB										



Mahony, S.H., Barnard, N.H., Sparks, R.S.J. *et al.* VOLCORE, a global database of visible tephra layers sampled by ocean drilling. *Sci Data* 7, 330 (2020). <https://doi.org/10.1038/s41597-020-00673-1>

Access Data and Samples

Data Access



Data from IODP expeditions can be accessed via the expedition's Science Operator:

JRSO: <http://web.iodp.tamu.edu/OVERVIEW/>

MarE3: <http://sio7.jamstec.go.jp>

ESO: <http://iodp.pangaea.de>

Downhole logging data: <http://mlp.ldeo.columbia.edu/data>

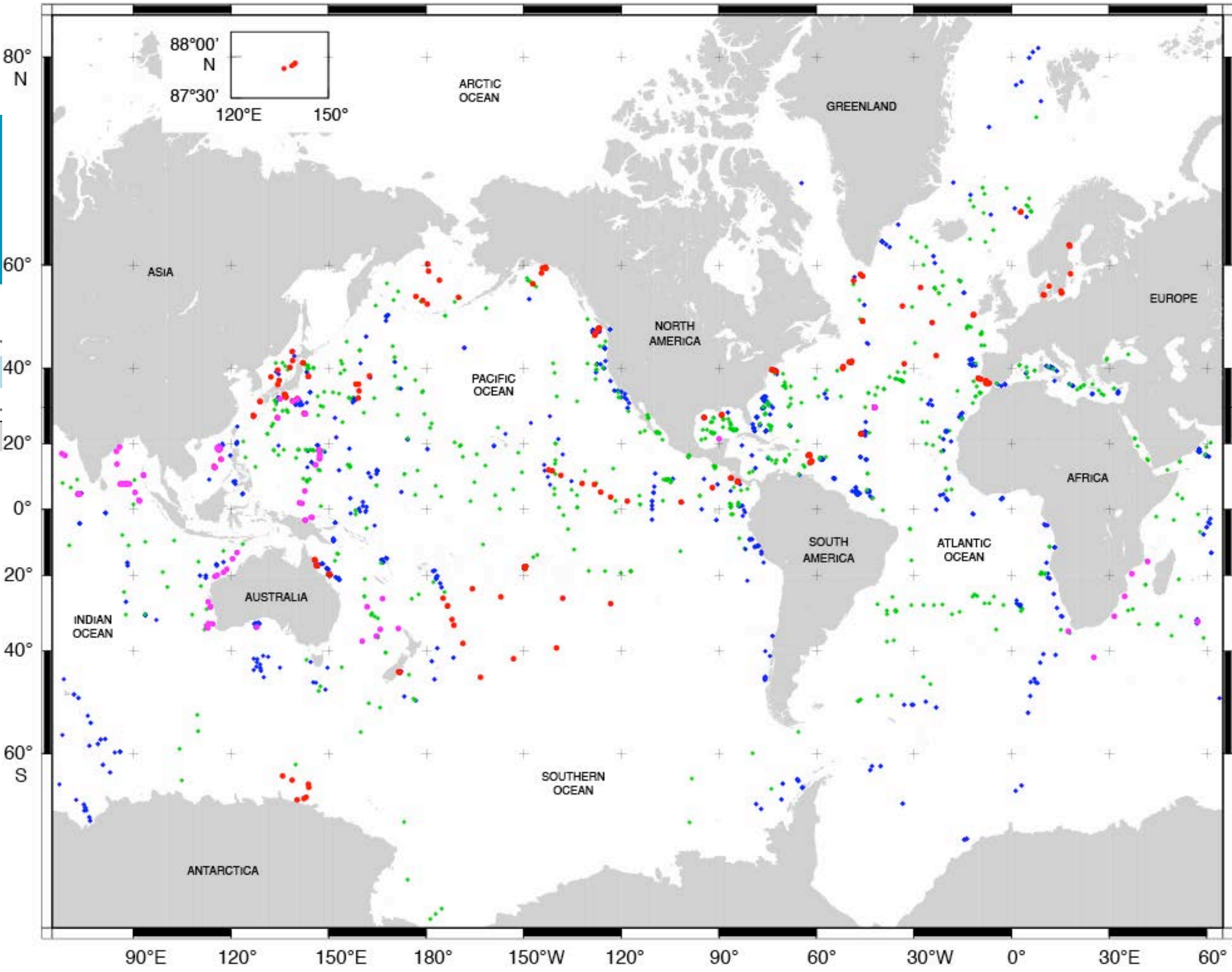
ALL DATA SINCE THE START

International Ocean Discovery Program JOIDES Resolution Science Operator

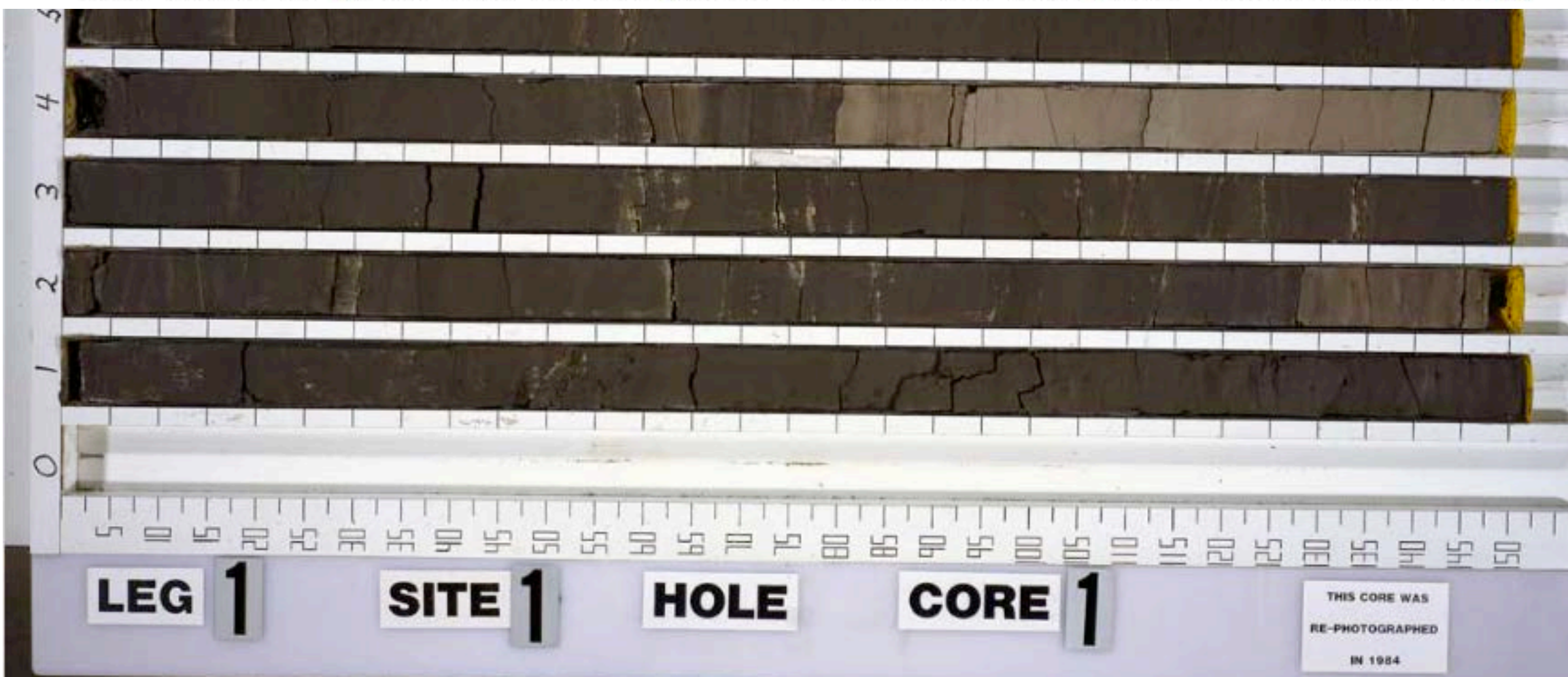
Ocean Drilling Data

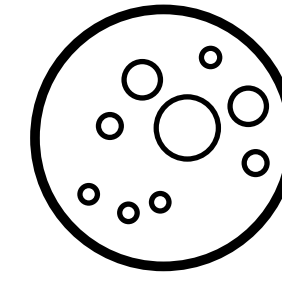
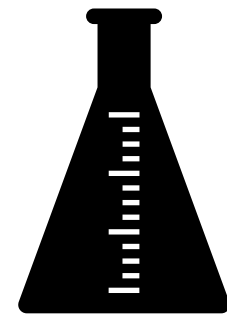
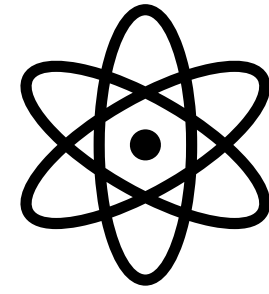
IODP community on Zenodo | [DSDP \(1 - 96\)](#) | [ODP \(101 - 210\)](#) | [IODP \(301 - 312\)](#) | [IODP \(317 - 346\)](#) | [IODP \(349 onwards\)](#)

Report	390C	385	384	383	382	379T	379	378	376	375	374	372
Hole Summary	11	26	11	19	18	25	11	5	15	14	11	10
Core Summary	134	759	67	334	425	244	159	147	239	241	312	47
Section Summary	743	3837	268	2223	2502	1941	927	807	294	1130	1251	208
Samples	2246	24144	1125	8658	11078	8588	4626	3325	6518	14632	25236	2766
Piece Log	0	1919	834	0	0	0	0	0	2542	0	0	0
Core Composites (COREPHOTO)	0	749	58	295	412	241	145	148	213	233	279	36
Core Sections (LSIMG)	714	4276	343	2331	2659	1940	987	872	596	1141	1240	215
Whole-round Core Sections (WRLSC)	0	182	30	0	0	0	0	0	160	0	0	0
Core Closeups (CLOSEUP)	1	344	4	82	170	10	33	55	230	35	93	4
Thin Sections (TSIMAGE)	0	100	36	12	28	6	42	86	302	120	14	0
Photomicrographs (MICROIMG)	0	1707	9	1355	4679	211	283	947	1870	438	685	63
Scanning Electron Microscope (SEM)	0	21	0	398	74	96	11	17	26	268	338	0
Gamma Ray Attenuation Bulk Density (GRA)	32566	182143	16899	163946	146374	82990	50174	43797	12228	54849	48485	16415
Magnetic Susceptibility Pass-through (MS)	32031	179476	16667	164670	147093	83224	50511	43123	12146	51113	48589	16491
Magnetic Susceptibility Contact (MSPOINT)	31583	139609	11227	128404	129615	81916	52839	33403	10813	50581	49996	15974
Moisture and Density (MAD)	0	1098	60	458	1152	525	434	96	566	1406	774	152



DSDP Legs 1-96 (●), ODP Legs 100-210 (●), IODP Expeditions 301-348 (●), IODP Expeditions 349-371 (●)





CHOOSE YOUR DATA FROM THE MENU

International Ocean Discovery Program
JOIDES Resolution Science Operator

LIMS Reports
Ver 18.1
Best viewed with Firefox

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Database **SHORE**

[Data Overview](#)
[Applications](#)
[User Guide](#)

Select report

- + **Summaries**
- + **Curation and Samples**
- + **Descriptive Information**
- + **Images**
- + **Magnetism**
- + **Physical Properties**
- + **Chemistry and Microbiology**
- + **X-Ray**
- + **Stratigraphic Correlation**

Hierarchy Search [?](#)

Expedition(s)

Site(s)

Hole(s)

Core(s) Type

Section Half (A/W)

Splice Search [?](#)

Text ID Search [?](#)

Sample Filters [?](#)

Sample type

Test code

Sample name

Request number

Request code

Changed after

Changed before

Additional Filters [?](#)

Alternate depth scale

Trim edges by (cm)

Instrument

Display status (T/F)

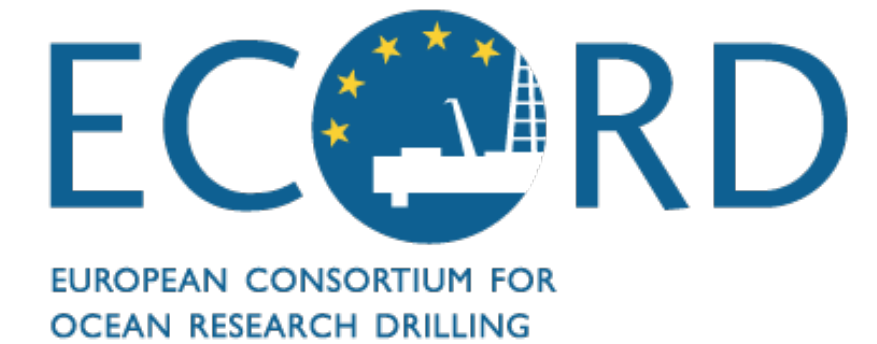
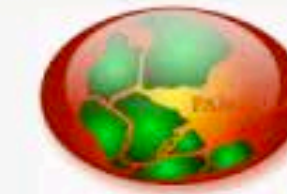
Acquired after

[View data](#) [About this report](#) [Display to CSV](#) [Download tabular data](#) [Batch download linked files](#)

MISSION SPECIFIC PLATFORM (MSP) DATA @ MARUM BCR (BREMEN CORE REPOSITORY)



Portal for
• Bremen Core Repository Curation Data
• Mission Specific Platform Expedition Data



- Home
- MSP Expeditions
 - Expedition 302
 - Participants
 - Publications
 - Sites/Holes
 - Data
 - Expedition 310
 - Participants
 - Publications
 - Sites/Holes
 - Data
 - Expedition 313
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 - Sites/Holes
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 - Expedition 347
 - Participants
 - Publications
 - Sites/Holes
 - Data
 - Expedition 357
 - Participants
 - Sites/Holes
 - Data
 - Expedition 364
 - Participants
 - Sites/Holes
 - Data
 - Expedition 381
 - Participants
 - Sites/Holes
 - Data
- SEDIS Portal
- USIO Data Center
- CDEX SIO7 Data Center

To access the Bremen Core Repository inventory use this link:

[Bremen Core Repository core & sample inventory](#)

DSDP Legs: 2-4 (Sites 23-28), 11-14, 36-53, 71-76, 78-82, 93-95
ODP Legs: 101, 103-110, 114, 149-164, 166, 171-173, 174A (Sites 1071-1073), 175, 177, 207-210
IODP Exp.: 302-307, 313, 336, 339, 342, 347, 357, 381, 382

NOTE:

IODP MSP-Exp. 310 and Exp. 364 cores have been moved to the **Gulf Coast Repository** (Texas A&M University, Galveston, TX). This "Cores & samples inventory" contains only Exp310 and Exp364 samples taken before the cores moved to GCR. For GCR samples see [here](#)

IODP MSP-Exp. 325 cores have been moved to the **Kochi Core Center** (Kochi University, Kochi, Shikoku, Japan)

<-- Use the navigation bar on the left to access the IODP-MSP data archive

PANGAEA® is the long-term archive for expedition and post-expedition scientific data resulting from the **Discovery Program** (IODP) and the **Integrated Ocean Drilling Program** (IODP, 2003-2013). MSP is part of the IODP.

PANGAEA® is an information system for processing, long-term storage, and publication of heterogeneous data from the **ICSU World Data System** and operated by **MARUM - Centre for Marine Environmental Science Research** (AWI, Bremerhaven, Germany).

For additional information, see [IODP-MSP data management](#) and [Bremen Core Repository](#).

Modified on 17 November



BCR Drilling Information System

Welcome to the BCR DIS Internet Interface
This interface provides online access to the repository database

Please login to use the features of this interface
Click 'Login' to use the public default group 'IODP-MSP' or enter your personal group and password

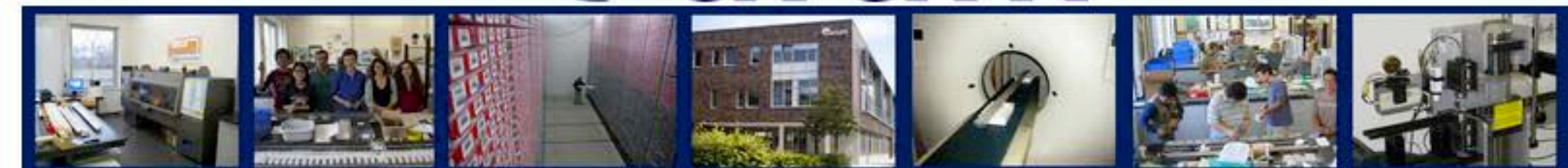
enter user group

.....

enter password

.....

Login

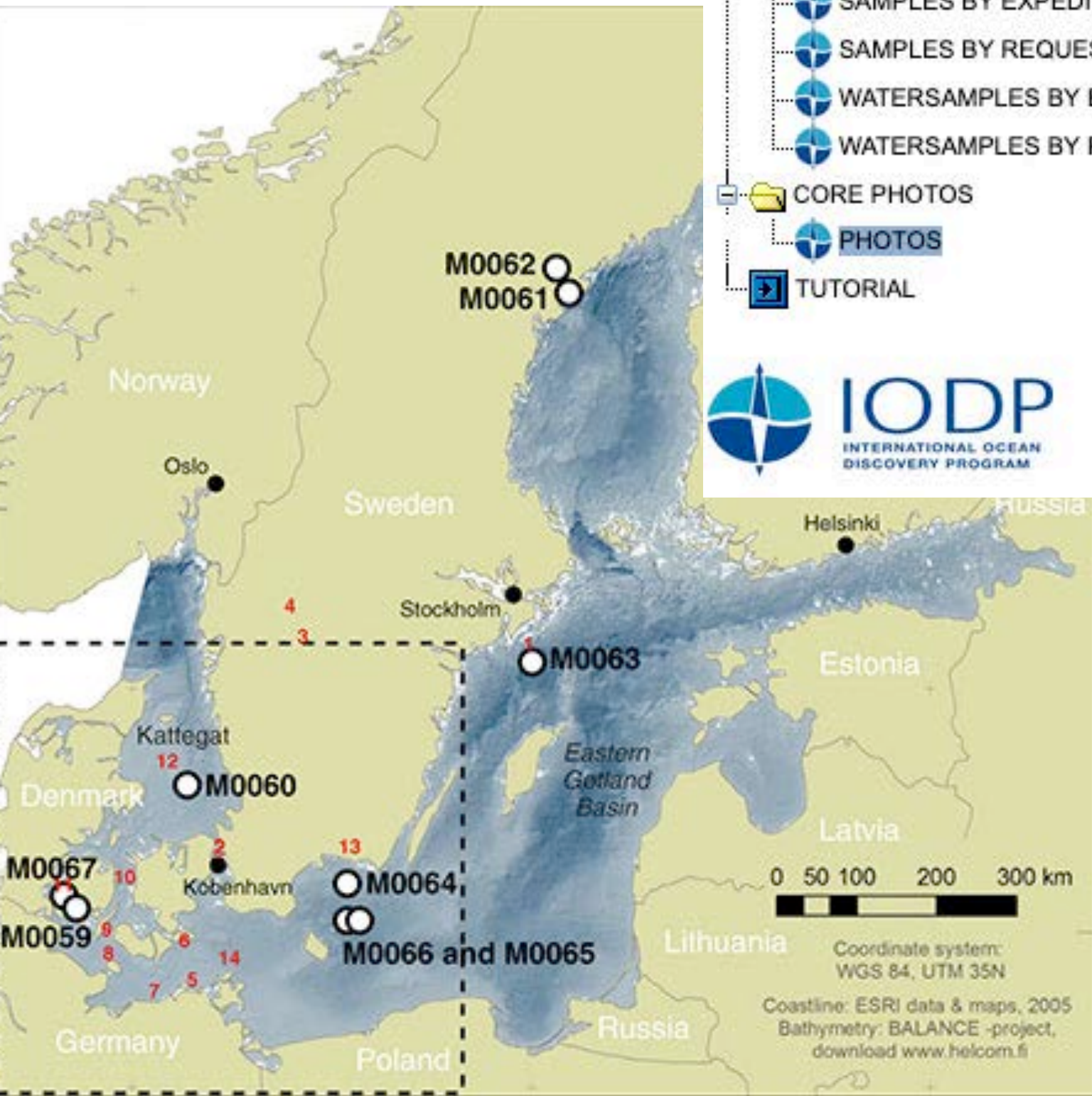


MISSION SPECIFIC PLATFORM (MSP) DATA



BCR Drilling Information System

- EXPEDITIONS
 - EXPEDITIONS
 - SITES main navigation tree
 - HOLES
- CORES/SECTIONS
 - CORES
 - SECTIONS
- SAMPLES
 - SAMPLES BY EXPEDITION
 - SAMPLES BY REQUEST
 - WATERSAMPLES BY EXP.
 - WATERSAMPLES BY REQ.
- CORE PHOTOS
 - PHOTOS
- TUTORIAL



DIS View: CORE PHOTOS Displays only data of expeditions not under moratorium!

Select Exp.: 347 | Site: 64 | Hole: A | Select a Field: EXPEDITION | Apply: Show/Hide | Show: All | Hide: All | PageSize: 100 | Set

Select a Field: EXPEDITION | Criterion: = | Value: | Apply: Apply Filter | Remove: Remove Filter

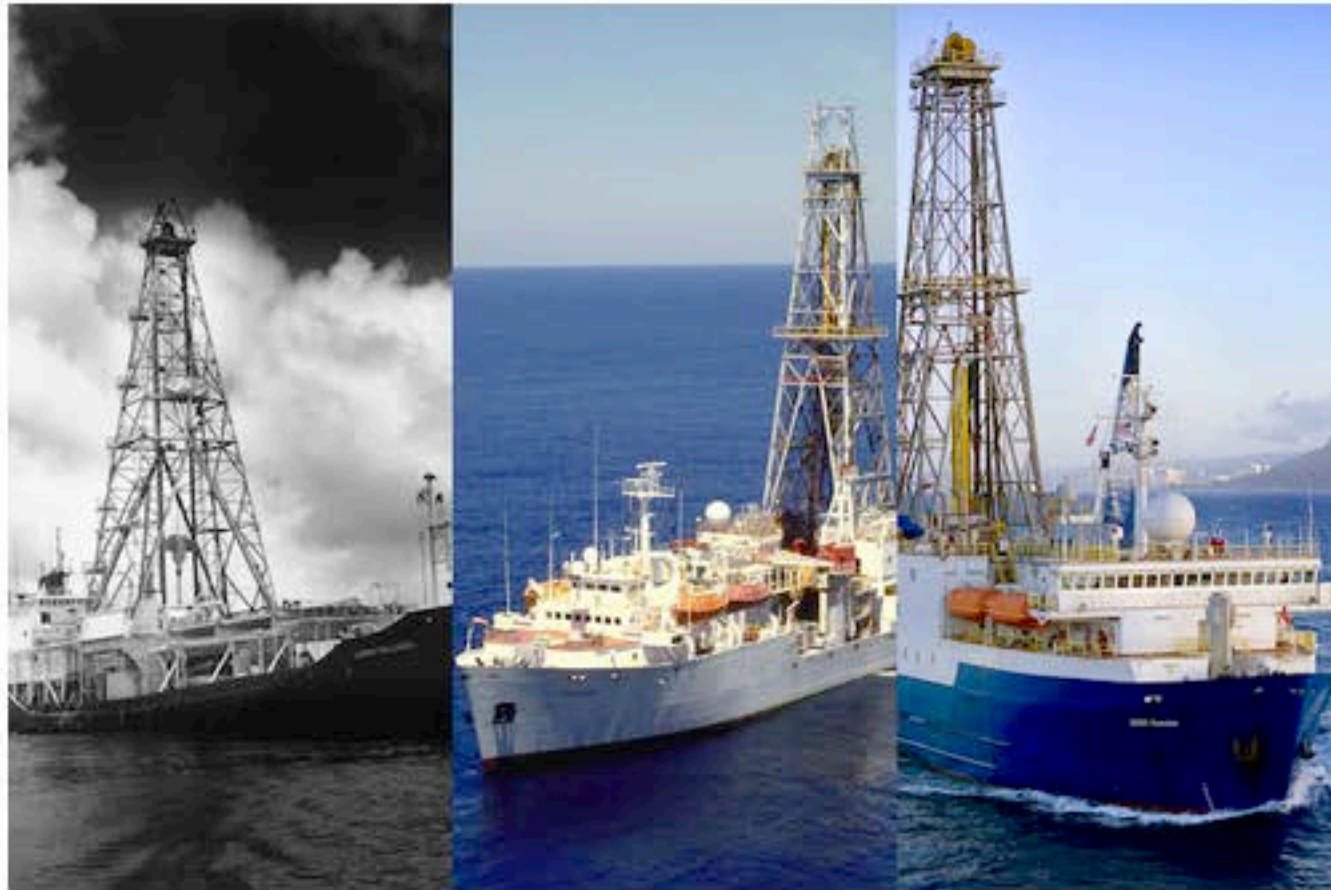
Exp.	Site	Hole	Core	Sec.	Type	No.	Date	Creator	Filename	Source



DOWNHOLE LOGGING DATA @ LAMONT-DOHERTY EARTH OBSERVATORY

Search Logging Data

The Borehole Research Group has collected and processed logging data for a number of research projects around the globe. The data are available through the following search pages.



Scientific Ocean Drilling

Access all the logging data recorded over more than 50 years by the Deep Sea Drilling Project (DSDP, 1968-1983), the Ocean Drilling Program (ODP, 1985-2003) and the Integrated Ocean Drilling Program (IODP, 2004-2013), now the International Ocean Discovery Program:

- [DSDP, ODP, IODP](#)



Scientific Continental Drilling

Projects in the US where logging data helped address topics from local tectonics and geology to earth quake monitoring or carbon sequestration.

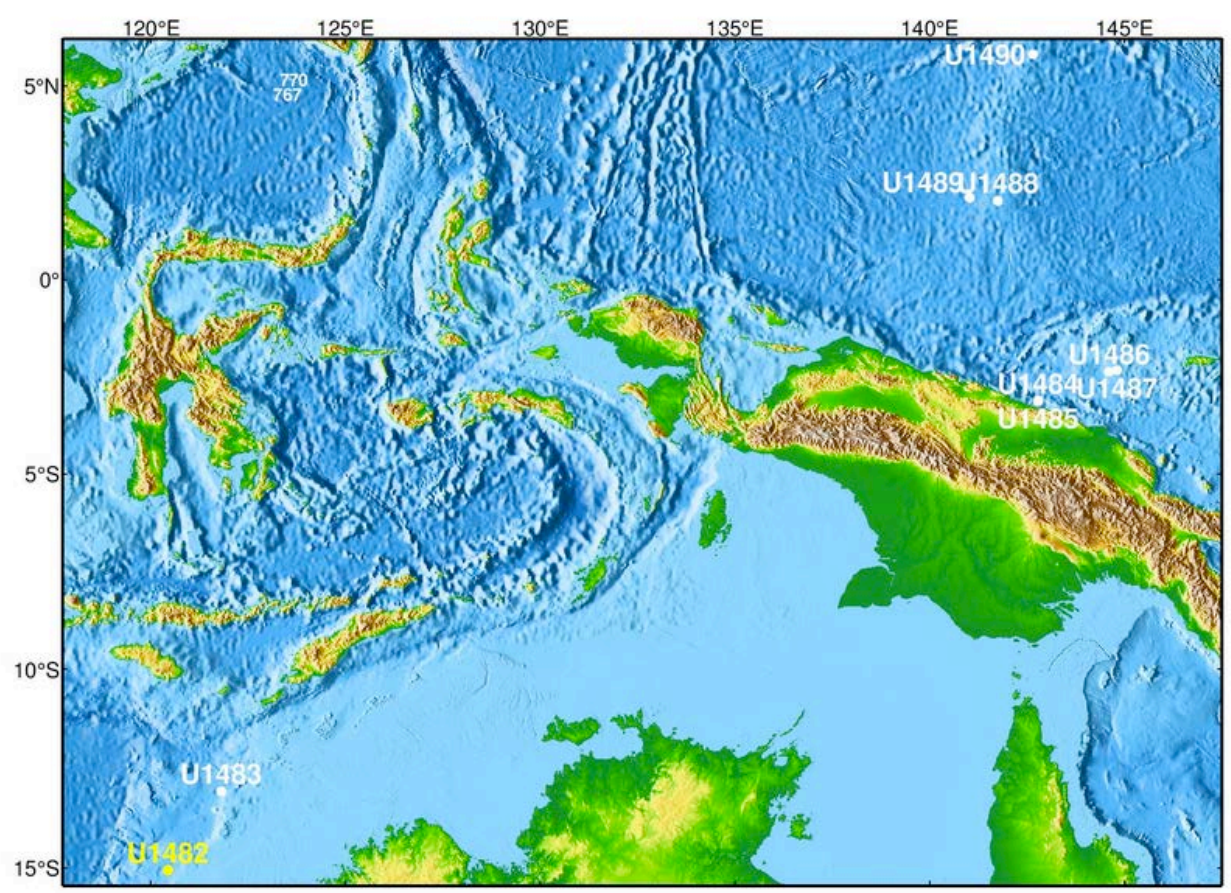
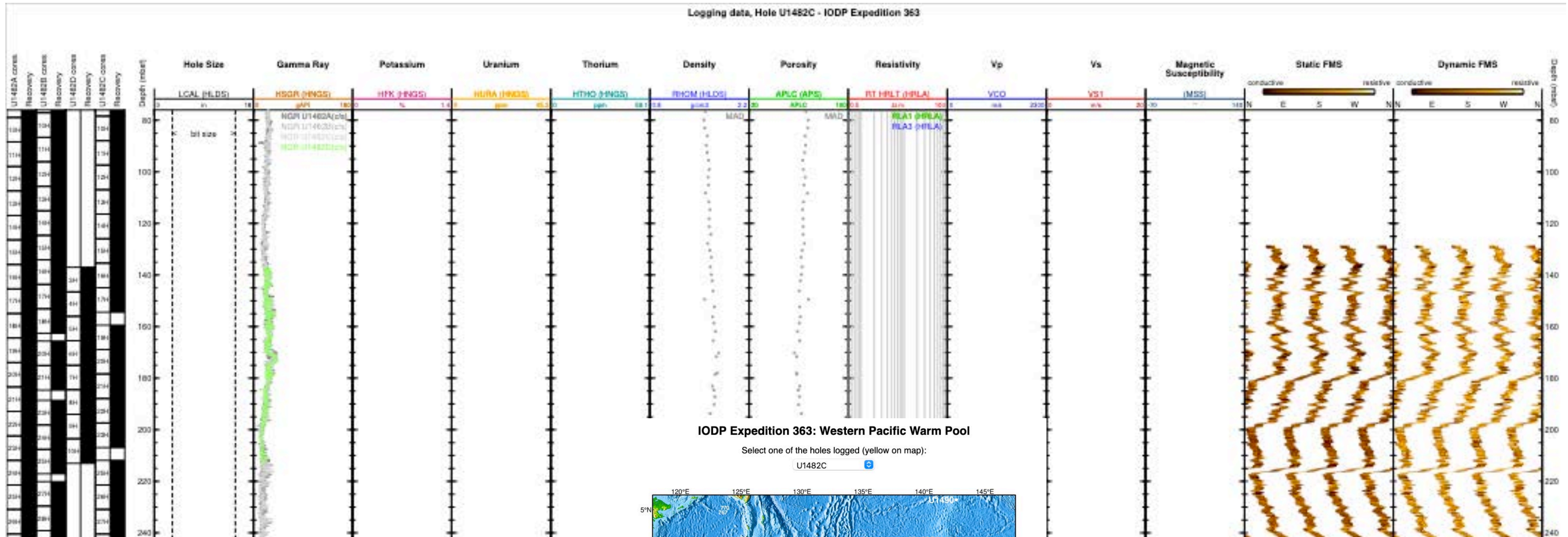
- [Search all logging data from these projects,](#)

Or the data from individual projects:

- [Northern Newark Basin](#), New York
- [Southern Newark Basin](#), New Jersey
- [Moodus Township](#), Connecticut
- [Black Rock Forest](#), New York
- [Toa Baja](#), Puerto Rico
- [Cajon Pass](#), California

<https://mlp.ldeo.columbia.edu/logdb/>

DOWNHOLE LOGGING DATA @ LAMONT-DOHERTY EARTH OBSERVATORY



location of IODP Expedition 363

CHIKYU DATA @ MarE3: Institute for Marine-Earth Exploration and Engineering

JAMSTEC 国立研究開発法人 海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

CDEX CENTER FOR DEEP EARTH EXPLORATION

ENHANCED BY Google

地球研 ちきゅう CHIKYU Japanese English

CDEX Operations Science Services Technology Development Expedition Outreach

HOME > Science Services > Sample and Data

Sample and Data

Access to all IODP expedition samples and data is restricted until the end of the 1-year moratorium period, after which they are open to the public.



JAMSTEC > Institute for Marine-Earth Exploration and Engineering (MarE3) > Topics > Details

Institute for Marine-Earth Exploration and Engineering MarE3

研究プラットフォーム
運用開発部門

Institute for Marine-Earth Exploration and Engineering (MarE3)

> [Home](#)

> **Topics**

Internal organizations

> Planning and Coordination Department

> Engineering Department

> Operations Department

> [Mantle Drilling Promotion Office](#)

Older organizations

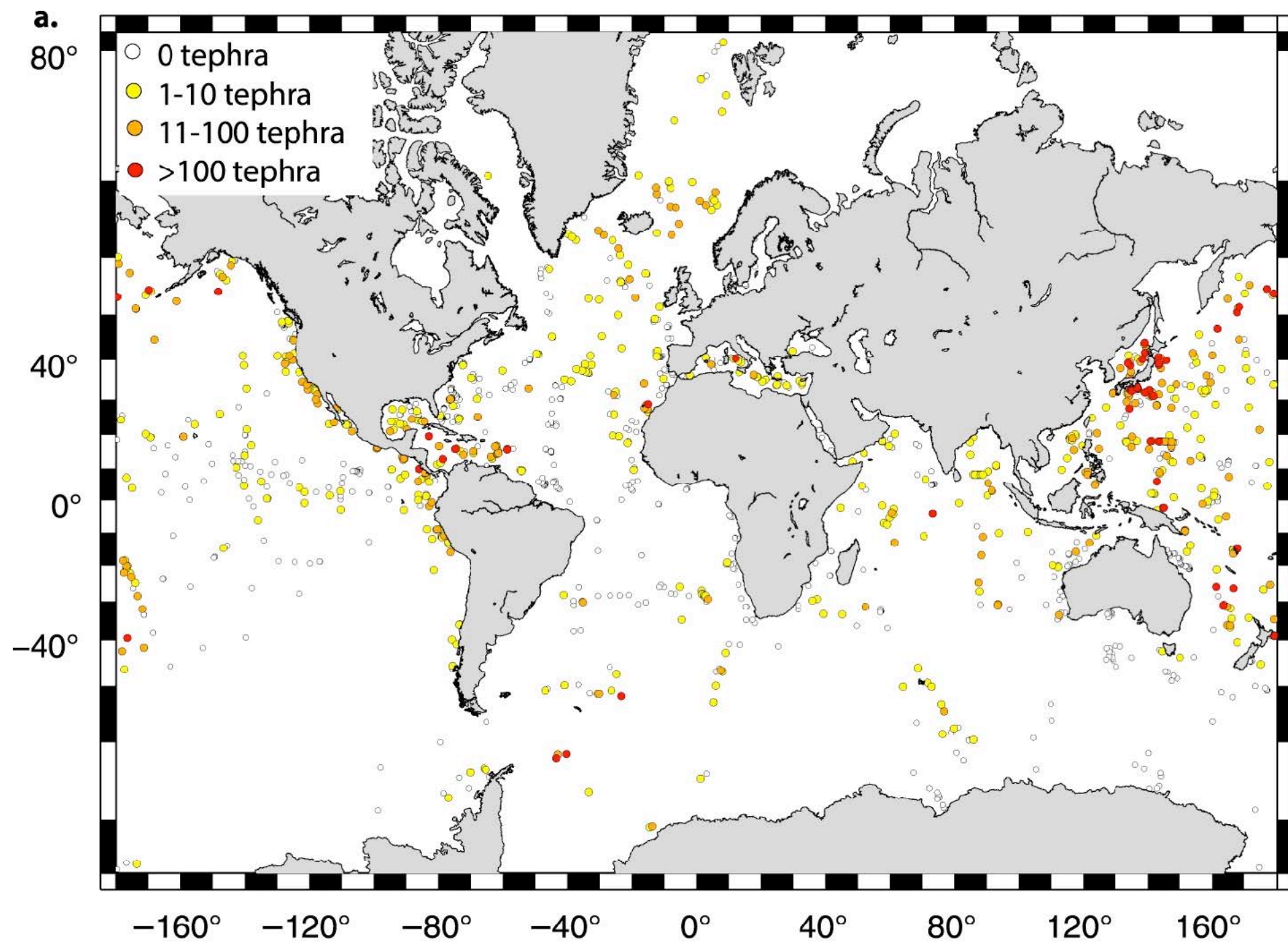
Topics

"SIO7.jamstec.go.jp" site is closed for a while

March 24, 2021

Thanks for accessing the Chikyu IODP data webpage. The webpage is currently offline while the JAMSTEC server is undergoing a security review. In the meantime, if you require data from the webpage, please send requests to this address: MarE3 (mare3-exp-kikan@jamstec.go.jp, this should be link)

HOW TO USE ALL THOSE DATA : EXAMPLES



Data Descriptor | [Open Access](#) | Published: 06 October 2020

VOLCORE, a global database of visible tephra layers sampled by ocean drilling

[Sue H. Mahony](#) , [Nicholas H. Barnard](#), [R. Stephen J. Sparks](#) & [Jonathan C. Rougier](#)

Scientific Data 7, Article number: 330 (2020) | [Cite this article](#)

1153 Accesses | 29 Altmetric | [Metrics](#)

34,696 visible tephra (volcanic ash and lithological or grain size variations)

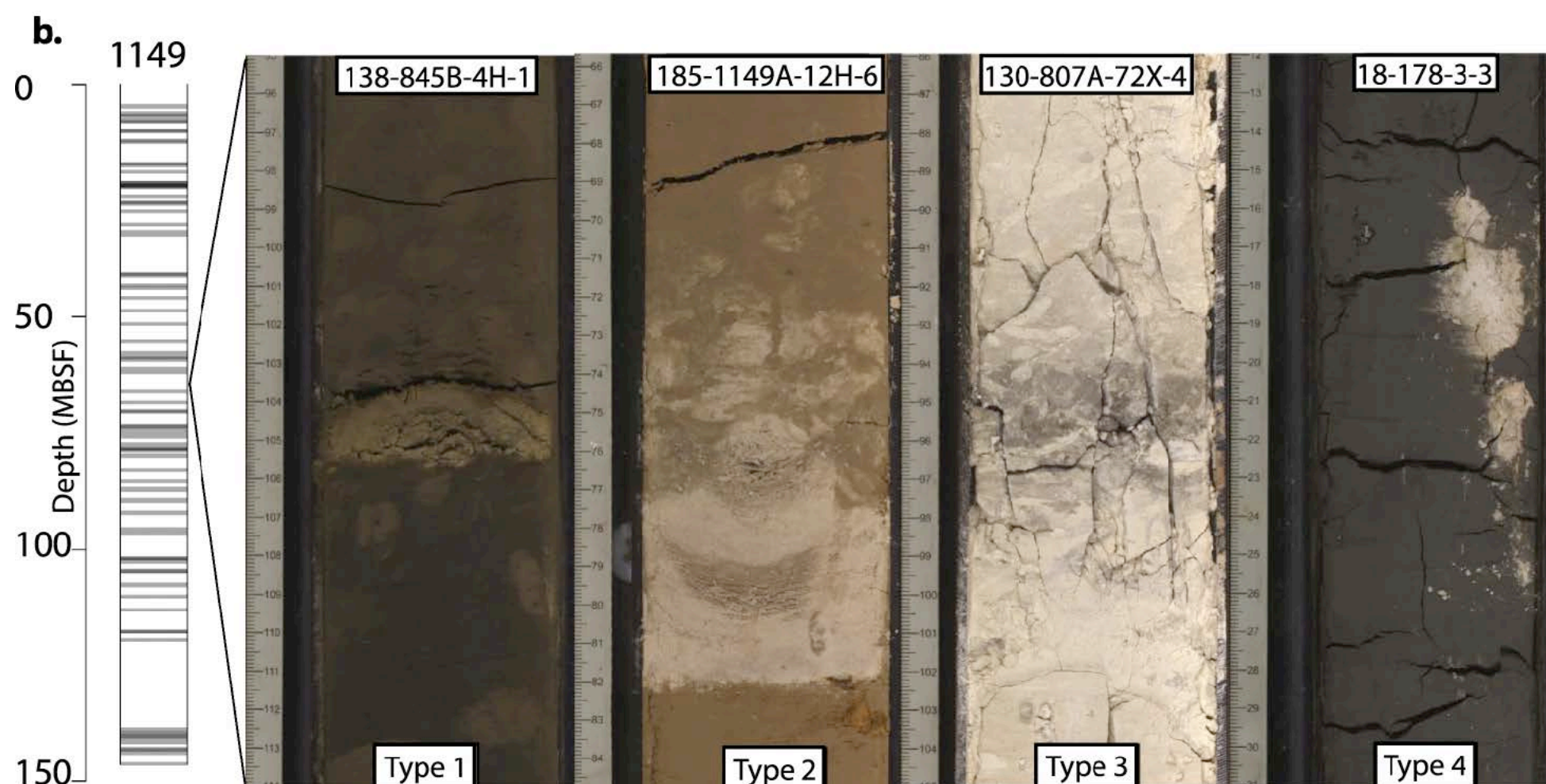
Deep Sea Drilling Project (DSDP; 1966–1983)

Ocean Drilling Program (ODP; 1983–2003)

Integrated Ocean Drilling Program (IODP; 2003–2013)

International Ocean Discovery Program (IODP; 2013–present)

up to and including IODP Expedition 381.



<https://doi.pangaea.de/10.1594/PANGAEA.907331>

HOW TO USE ALL THOSE DATA : EXAMPLES

[About Nanotax](#) | [Live & Cenozoic](#) | [Mesozoic](#) | [Other groups](#) | [Farinacci](#) | [Comments](#) | [Tools](#) | [Links](#)

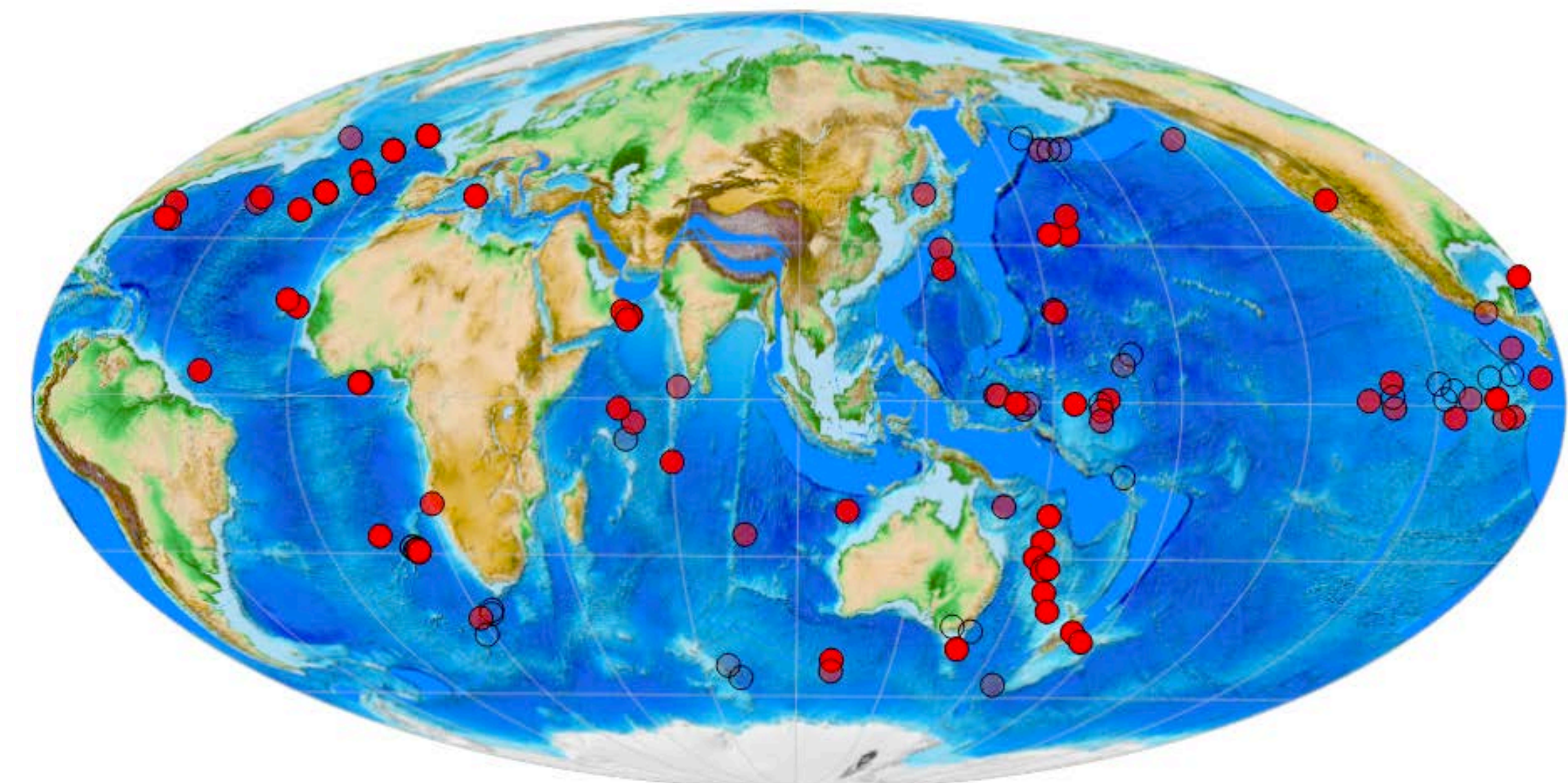
Biogeography - mapping of Neptune Occurrences
 Alternatives - [space-time plot](#) :: [Range chart plot](#)

Fossil Group: Taxon to plot:

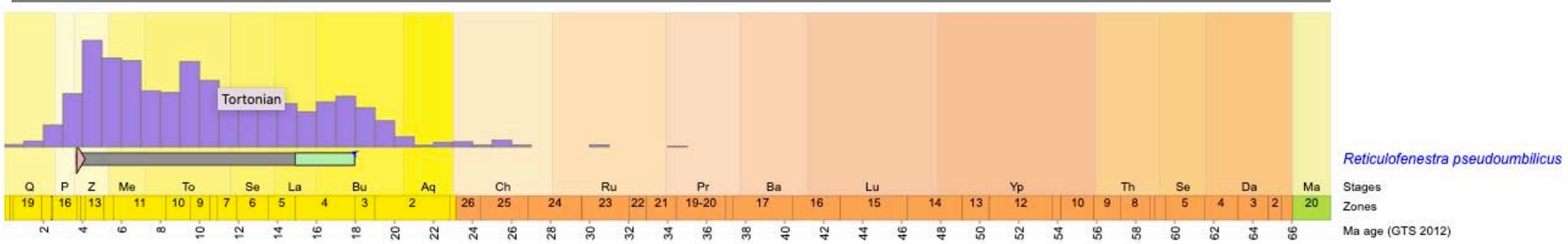
Age min: Age max: Lat max/N: Lat min/S:

Species threshold: Age anomaly threshold:

Taxon plotted: *Reticulofenestra pseudoumbilicus*



Basemap is plate-reconstruction from 10Ma (Tortonian), produced using GPlates2.1. Flat blue colour indicates subducted ocean crust, and so areas from which fossil assemblages cannot be recovered. The palaeolatitudes and longitudes of the sites were calculated separately and there are some discrepancies. Symbols - all sites with samples in the time interval are plotted as circles, the opacity of the red fill is proportional to % of samples with the taxon. Hover over symbol for caption.



<https://www.mikrotax.org/>

THANK YOU FOR YOUR ATTENTION AND WELCOME @BCR

