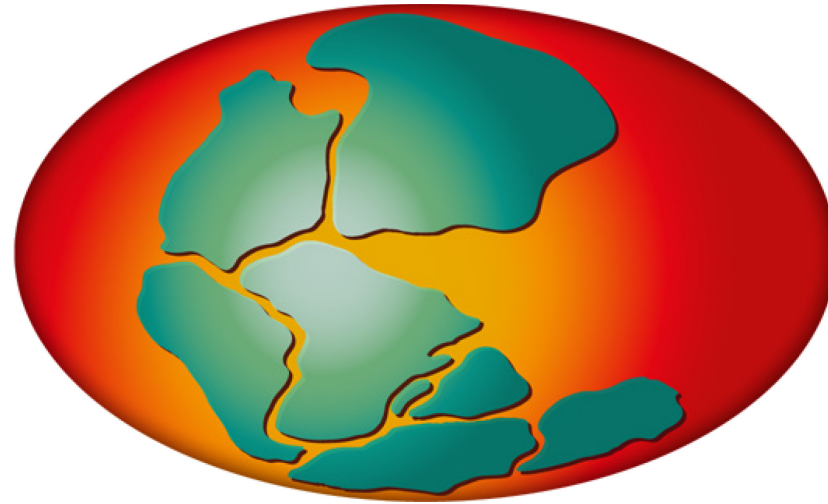


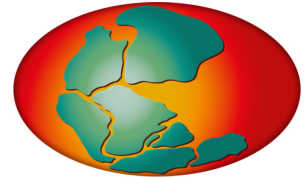
PANGAEA - Data Publisher for Earth & Environmental Science



Amelie Driemel, PANGAEA Team

Cologne, Coordination Workshop SPP 1158, 2024-09-30

Why should I publish my data?



DFG

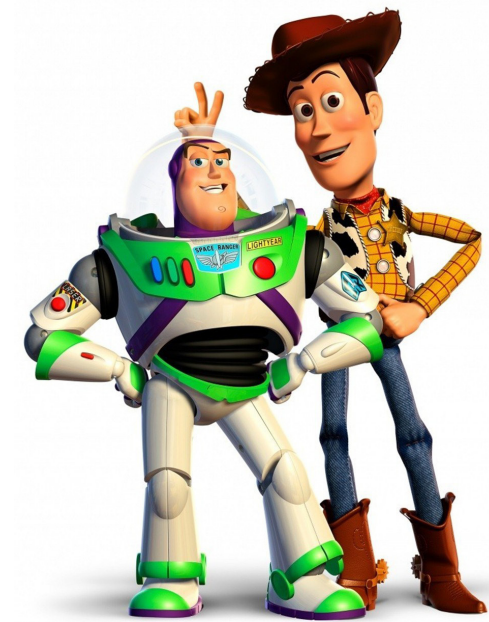
Deutsche
Forschungsgemeinschaft

DFG rules

In the interest of transparency and to enable research to be referred to and reused by others, whenever possible researchers make the research data and principal materials on which a publication is based available in recognised archives and repositories in accordance with the FAIR principles (Findable, Accessible, Interoperable, Reusable). Restrictions may apply to public availability in the case of patent applications. If self-developed

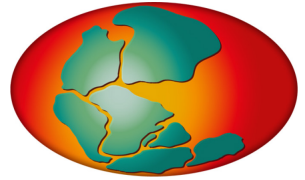
Because shit can happen...

In 1998 a year before the movie was released, one of the animators was cleaning up some files and **accidentally deleted the root folder of the Toy Story 2 data.**

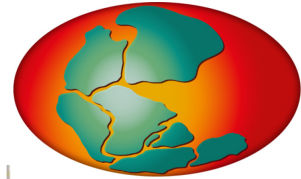


Picture by GoodFon.com

Why should I publish my data?



Why should I publish my data?



404

Page not found

- unstable links,
- data not machine readable,
- metadata missing

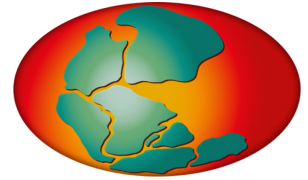
TABLE 2.—COMPARATIVE X-RAY DATA FOR PHOSPHORITES. DATA AND MOST INDICES FOR FRANCOLITE ARE FROM MCCONNELL (1938). THIS SAMPLE IS A CARBONATE FLUORAPATITE (COLLOMENE) FROM GADDO, POLAND (NOW USSR), CONTAINING 51.0% CaO, 5.8% CO₂, 33.5% P₂O₅, 3.5% F, 0.5% MgO, AND 3.2% H₂O. THE FLORIDA SAMPLE IS A LAND PEBBLE FROM THE LAKELAND REGION OF CENTRAL FLORIDA, AND REPRESENTS REWORKED MIDDLE TERTIARY PHOSPHORITE. THE PUNGO RIVER SAMPLE IS FROM THE TEXAS GULF SULPHUR MINE, BEAUFORT COUNTY, NORTH CAROLINA AND CONSISTS OF A MASSIVE WHITISH AGGREGATE. UNIT CELL DIMENSIONS DETERMINED BY DANIEL APPELMAN, SMITHSONIAN INSTITUTION.

Indices	Francolite (McConnell, 1938)		Blake phosphorite ¹ Sta. 2485		Phosphatized Manatee rib, Gerda Terrace Sta. 2348		Phosphorite ² Bone Valley Formation, Fla.		Phosphorite ³ Pungo River Formation, N.C.	
	d(Å)	l	d	l	d	l	d	l	d	l
100	ND		8.08	4	8.15	b	8.08	4	8.07	5
101	ND		5.23	4	—	—	5.23	3	5.25	3
200	ND		4.03	4	—	—	4.05	6	4.03	4
111	ND		3.86	6	—	—	3.86	6	3.86	4
002	3.431	2	3.446	43	3.44	41	3.45	46	3.445	42
102	3.157	0.5	3.173	16	3.17	12	3.173	12	3.163	13
120	3.044	2	3.055	18	—	—	3.060	17	3.050	13
121	2.765	>10	2.791	100	2.78	100b	2.793	100	2.785	100
112	—	—	2.688	54	2.695	43b	2.698	58	2.691	51
202	2.618	4	2.622	28	2.622	20	2.625	29	2.621	26
301	2.508	0.5	—	—	—	—	2.514	4	2.502	4
122	2.277	1	2.280	24	—	—	2.285	8	2.285	9
130	2.238	3	2.237	21	2.245	18	2.245	24	2.238	20
131	2.127	2	2.127	7	2.125	5	2.137	5	2.123	6
113	2.057	1	2.055	5	—	—	2.062	5	2.057	6
203	1.996	1	1.993	4	1.995	8	2.000	4	1.993	4
222	1.928	3	1.930	21	1.931	17	1.934	25	1.929	20
132	1.876	1	1.877	15	1.88	8b	1.881	13	—	—
123	1.835	3	1.834	25	1.837	21b	1.837	35	1.834	28
231	1.788	2	1.786	10	—	—	1.793	13	1.785	10
140	1.762	2	1.760	11	1.764	13	1.766	14	1.760	13
402	1.740	2	1.738	10	—	—	1.744	11	1.740	10
004	1.720	2	1.721	13	1.720	12	1.723	13	1.721	13
232	1.631	0.5	1.630	4	—	—	1.634	6	1.633	9
135	1.601	0.5	1.605	3	—	—	1.604	3	1.602	2
240	1.525	0.5	1.525	1	—	—	1.530	4	1.525	3
331	1.515	0.5	1.515	4	—	—	1.519	4	—	—
124	1.496	0.5	1.500	4	—	—	1.500	4	1.502	4
502	1.462	1	1.462	6	—	—	1.463	9	1.459	6
304	1.453	1	1.452	6	—	—	1.453	8	1.448	7
233	1.441	1	—	—	1.43	6b	—	—	1.438	6
151	1.419	1	1.418	6	—	—	1.422	5	1.416	4
Unit cell a(Å)			9.320		9.314		9.345		9.317	

¹Quartz main peak 3.336.
²Quartz main peak 3.345.
³Quartz main peak 3.335.
 Gives values are uncorrected for shifts in this internal standard line.

SORT	SPP	DATE	STAGE	TL	SEX	SVL	ZSVL	TAL	MAL	ECC	ECP	RBC	RBP
1	TAGR	7/15/13	M	33	U	18.38	0.106	14.32999992	0	0	0	1	1
2	TAGR	7/15/13	M	31	U	15.25	-0.452	16.10000038	0	0	0	3	1
3	TAGR	7/15/13	M	23	U	14.29	-0.623	9.079999924	0	0	0	2	1
4	TAGR	7/15/13	M	25	U	13.76	-0.717	11.57	0	0	0	0	0
5	TAGR	7/15/13	M	20	U	12.61	-0.922	7.77	0	0	0	18	1
6	LICA	8/5/13	M	63	M	62.9	1.806		0	14	1	0	0
7	LICA	8/8/13	M	61	F	60.98	1.591		0	472	1	1	1
8	LICA	8/8/13	M	60	F	60.14	1.497		0	0	0	0	0
9	LICA	8/5/13	M	59	M	59.39	1.413		0	76	1	0	0
10	LICA	8/8/13	M	58	F	58.27	1.288		0	146	1	99	1
11	LICA	7/1/13	M	58	M	57.71	1.226		0	0	0	0	0

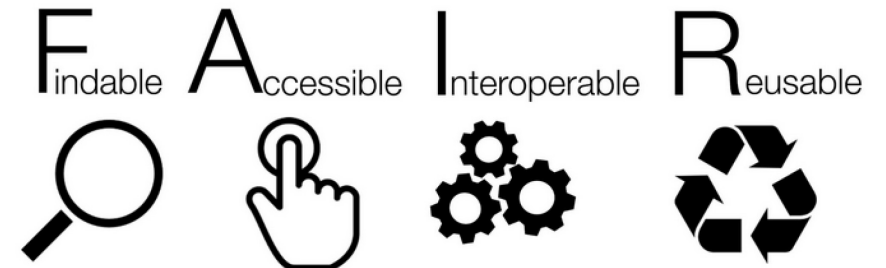
PANGAEA in a nutshell

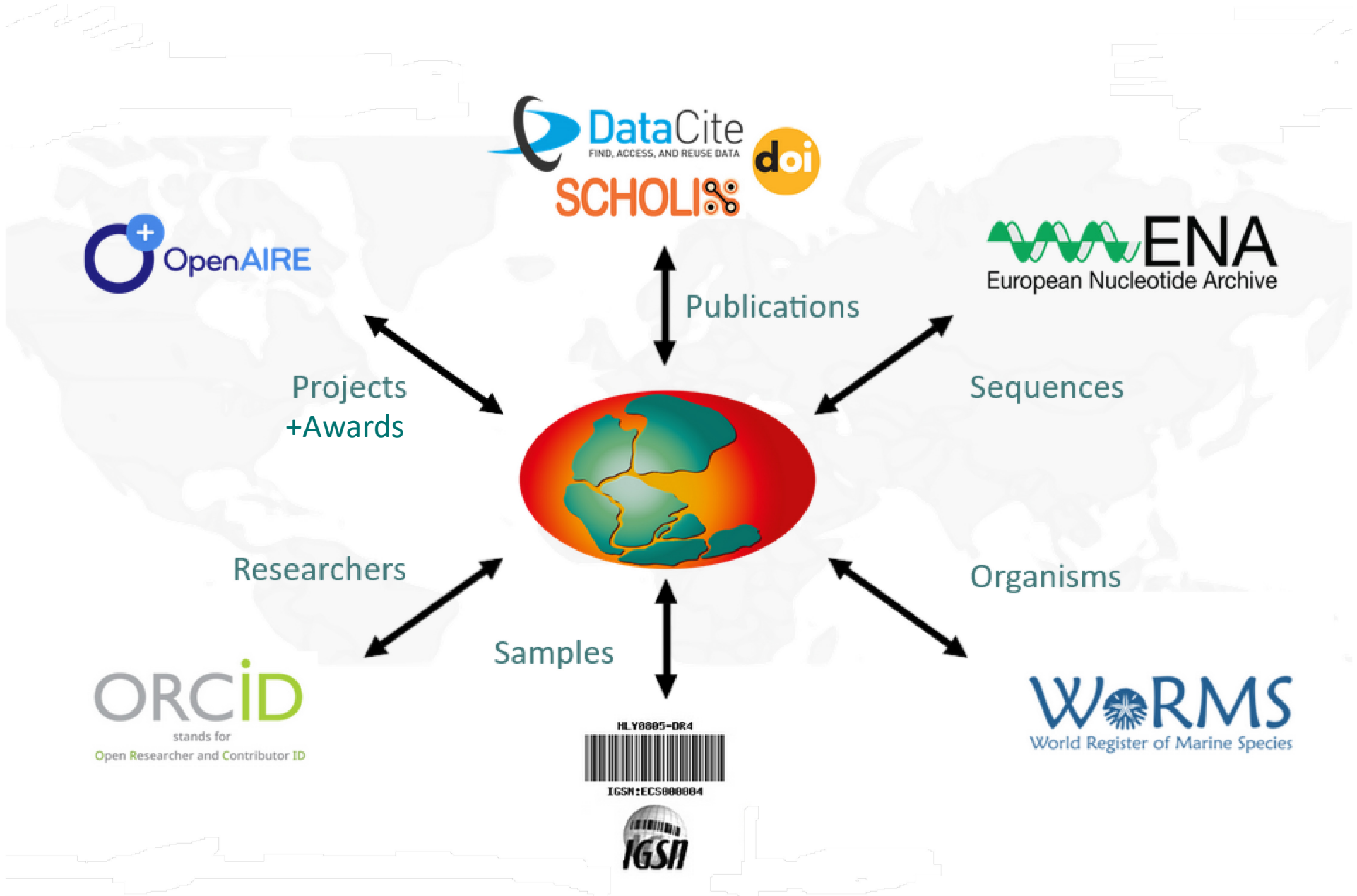


- PANGAEA is a relational database and an open access Data Publisher
- It is the **designated database for SPP1158** (data + metadata!)
- Your data are stored **georeferenced** in space and time
- Your datasets receive a **citable and permanent DOI**
- Your datasets can be **found** via the internet and can be **downloaded** from the PANGAEA web page (**moratorium possible!**)

=> Your data are safe with PANGAEA!

=> Your data are reusable for others!





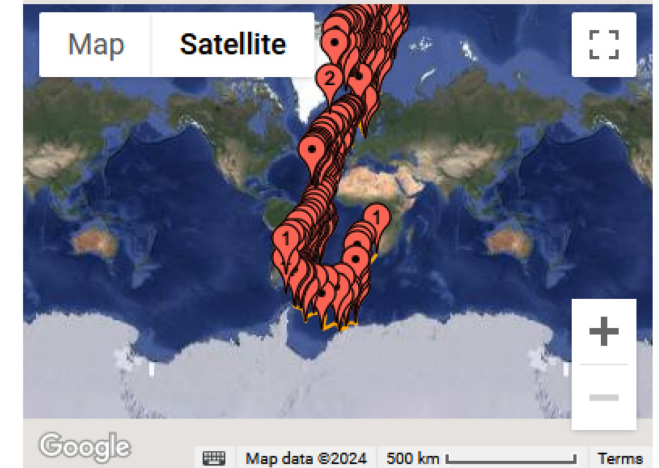
Citation:

Xi, Hongyan; Peeken, Ilka; Gomes, Mara; Brotas, Vanda; Tilstone, Gavin H; Brewin, Robert J W; Dall'Olmo, Giorgio; Tracana, Andreia; Alvarado, Leonardo M A; Murawski, Sandra; Wiegmann, Sonja; Bracher, Astrid (2023): Phytoplankton pigment concentrations and phytoplankton groups measured on water samples collected from various expeditions in the Atlantic Ocean from 71°S to 84°N [dataset]. PANGAEA, doi <https://doi.org/10.1594/PANGAEA.954738>

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📈 👁️ 273 🗺️ 18 📄 27



Abstract:

This data set composes a large amount of quality controlled in situ measurements of major pigments based on HPLC collected from various expeditions across the Atlantic Ocean spanning from 71°S to 84°N, including 11 expeditions with RV Polarstern from the North Atlantic to the Arctic Fram Strait: PS74, PSS76, PS78, PS80, PS85, PS93.2 (doi <https://doi.org/10.1594/PANGAEA.894872>), PS99.1 (doi <https://doi.org/10.1594/PANGAEA.905502>), PS99.2 (doi <https://doi.org/10.1594/PANGAEA.894874>), PS106 (doi <https://doi.org/10.1594/PANGAEA.899284>), PS107 (doi <https://doi.org/10.1594/PANGAEA.894860>), PS121 (doi <https://doi.org/10.1594/PANGAEA.941011>), four expeditions (two with RV Polarstern and two Atlantic Meridional Transect expeditions with RRS James Clark Ross and RRS Discovery) in the trans-Atlantic Ocean: PS113 (doi <https://doi.org/10.1594/PANGAEA.911061>), PS120, AMT28 and AMT29, and one expedition with RV Polarstern in the Southern Ocean: PS103 (doi <https://doi.org/10.1594/PANGAEA.898941>). Chlorophyll a concentration (Chl-a) of six phytoplankton functional groups (PFTs) derived from these pigments have been also included. This published data set has contributed to validate satellite PFT products available on the EU funded Copernicus Marine Service (CMEMS, <https://marine.copernicus.eu/>), which are derived from multi-sensor ocean colour reflectance data and sea surface temperature using an empirical orthogonal function based approach (Xi et al. 2020; 2021).

Description on in situ PFT Chl-a determination from pigment data: PFT Chl-a in this data set were derived using an updated diagnostic pigment analysis (DPA) method (Soppa et al., 2014; Losa et al., 2017) with retuned coefficients by Alvarado et al (2021), that was originally developed by Vidussi et al. (2001), adapted in Uitz et al. (2006) and further refined by Hirata et al. (2011) and Brewin et al. (2015). The values of retuned DPA weighting coefficients for PFT Chl-a determination are: 1.56 for fucoxanthin, 1.53 for peridinin, 0.89 for 19'-hexanoyloxyfucoxanthin, 0.44 for 19'-butanoyloxyfucoxanthin, 1.94 for alloxanthin, 2.63 for total chlorophyll b, and 0.99 for zeaxanthin. The coefficient retuning was based on an updated global HPLC pigment data base for the open ocean (water depth >200 m), which was compiled based on the previously published data sets spanning from 1988 to 2012 described in Losa et al. (2017), with updates in Xi et al. (2021) and Álvarez et al. (2022), by adding other newly available HPLC pigment data collected between 2012 and 2018 mainly from SeaBASS (<https://seabass.gsfc.nasa.gov/>), PANGAEA, British Oceanographic Data Centre (BODC, <https://www.bodc.ac.uk/>), and Australian Open Access to Ocean Data (AODN, <https://portal.aodn.org.au/>) (as of February 2020, see Table 1 attached in the 'Additional metadata' for more details on the data sources).

Keyword(s):

chlorophyll ; HPLC ; phytoplankton functional types ; pigments 

<https://doi.pangaea.de/10.1594/PANGAEA.954738>



Citation:



Xi, Hongyan; Peeken, Ilka; Gomes, Mara; Brotas, Vanda; Tilstone, Gavin H;

Xi, Hongyan 🔍

🌐 <https://orcid.org/0000-0003-2827-0603>

✉ hongyan.xi@awi.de

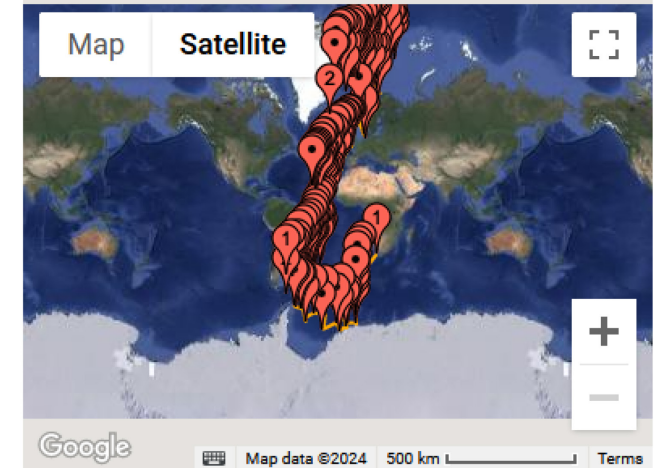
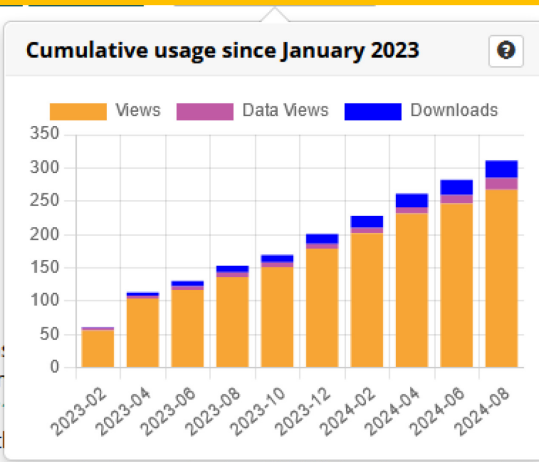
Affiliation:

- Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven (AWI, <https://ror.org/032e6b942>) 🔍

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📊 👁 273 🗺 18 📄 27



Abstract:

...y controlled in situ measurements of major pigments based on HPLC collected from various expeditions across the ... including 11 expeditions with RV Polarstern from the North Atlantic to the Arctic Fram Strait: PS74, PSS76, PS78, PS80, EA.894872), PS99.1 (📄 <https://doi.org/10.1594/PANGAEA.905502>), PS99.2 (📄 <https://doi.org/10.1594/PANGAEA.899284>), PS107 (📄 <https://doi.org/10.1594/PANGAEA.894860>), PS121 (📄 <https://doi.org/10.1594/PANGAEA.911061>), PS120, AMT28 and AMT29, and one expedition with RV Polarstern in the Southern Ocean: PS941). Chlorophyll a concentration (Chl-a) of six phytoplankton functional groups (PFTs) derived from these pigments has contributed to validate satellite PFT products available on the EU funded Copernicus Marine Service (CMEMS, <https://www.cmems.eu/>) and from multi-sensor ocean colour reflectance data and sea surface temperature using an empirical orthogonal function

Description on in situ PFT Chl-a determination from pigment data: PFT Chl-a in this data set were derived using an updated diagnostic pigment analysis (DPA) method (Soppa et al., 2014; Losa et al., 2017) with retuned coefficients by Alvarado et al (2021), that was originally developed by Vidussi et al. (2001), adapted in Uitz et al. (2006) and further refined by Hirata et al. (2011) and Brewin et al. (2015). The values of retuned DPA weighting coefficients for PFT Chl-a determination are: 1.56 for fucoxanthin, 1.53 for peridinin, 0.89 for 19'-hexanoyloxyfucoxanthin, 0.44 for 19'-butanoyloxyfucoxanthin, 1.94 for alloxanthin, 2.63 for total chlorophyll b, and 0.99 for zeaxanthin. The coefficient retuning was based on an updated global HPLC pigment data base for the open ocean (water depth >200 m), which was compiled based on the previously published data sets spanning from 1988 to 2012 described in Losa et al. (2017), with updates in Xi et al. (2021) and Álvarez et al. (2022), by adding other newly available HPLC pigment data collected between 2012 and 2018 mainly from SeaBASS (<https://seabass.gsfc.nasa.gov/>), PANGAEA, British Oceanographic Data Centre (BODC, <https://www.bodc.ac.uk/>), and Australian Open Access to Ocean Data (AODN, <https://portal.aodn.org.au/>) (as of February 2020, see Table 1 attached in the 'Additional metadata' for more details on the data sources).

Keyword(s):

chlorophyll 🔍; HPLC 🔍; phytoplankton functional types 🔍; pigments 🔍

Keyword(s): chlorophyll [Q](#); HPLC [Q](#); phytoplankton functional types [Q](#); pigments [Q](#)

Supplement to:

Xi, Hongyan; Bretagnon, Marine; Losa, Svetlana N; Brotas, Vanda; Gomes, Mara; Peeken, Ilka; Alvarado, Leonardo M A; Mangin, Antoine; Bracher, Astrid (2023): Satellite monitoring of surface phytoplankton functional types in the Atlantic Ocean over 20 years (2002–2021). *in: 7th edition of the Copernicus Ocean State Report (OSR7), edited by: von Schuckmann, K., Moreira, L., Le Traon, P.-Y., Grégoire, M., Marcos, M., Staneva, J., Brasseur, P., Garric, G., Lionello, P., Karstensen, J., and Neukermans, G., State of the Planet, 1-osr7(5),* <https://doi.org/10.5194/sp-1-osr7-5-2023> [Q](#)

Source:

Bracher, Astrid (2019): Phytoplankton pigment concentrations during RV Sonne cruise SO243 [dataset]. *Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, PANGAEA,* <https://doi.org/10.1594/PANGAEA.898920>

Bracher, Astrid (2019): Phytoplankton pigment concentrations in the Southern Ocean during RV POLARSTERN cruise PS103 in Dec 2016 to Jan 2017 [dataset]. *Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, PANGAEA,* <https://doi.org/10.1594/PANGAEA.898941>

References:

Alvarado, Leonardo M A; Soppa, Mariana A; Gege, Peter; Losa, Svetlana N; Dröscher, Iris; Xi, Hongyan; Bracher, Astrid (2022): Retrievals of the main phytoplankton groups at Lake Constance using OLCI, DESIS, and evaluated with field observations. *12th EARSeL Workshop on Imaging Spectroscopy in Potsdam, The Photogrammetric Record, 37(177),* 145-146, https://doi.org/10.1111/phor.7_12405 [Q](#)

Álvarez, Eva; Losa, Svetlana N; Bracher, Astrid; Thoms, Silke; Völker, Christoph (2022): Phytoplankton Light Absorption Impacted by Photoprotective Carotenoids in a Global Ocean Spectrally-resolved Biogeochemistry Model. *Journal of Advances in Modeling Earth Systems,* <https://doi.org/10.1029/2022MS003126> [Q](#)

Additional metadata:

List of sources of the global in situ HPLC pigment data during 1988-2018 [Q](#)

Project(s):

[Arctic Amplification \(AC3\)](#) [Q](#)

[Arctic Amplification](#) [Q](#)

Label: AC3

Institution: Leipzig Institute for Meteorology, University of Leipzig (LIM, <https://ror.org/03s7gtk40>) [Q](#)

Funding:

[European Commission \(EC\)](#) [Q](#), grant/award no. [21036L05B-COP-INNO SCI-9000](#) [Q](#)

[European Space Agency \(ESA\)](#) [Q](#), grant/award no. [4000127533/19/I-NS-S5P+I-OC](#) [Q](#): Exploitation of Sentinel-5-P for Ocean Colour Products

[German Research Foundation \(DFG\)](#) [Q](#), grant/award no. [268020496](#) [Q](#): TRR 172: ArctiC Amplification: Climate Relevant Atmospheric and SurfaCe Processes, and Feedback Mechanisms

[Horizon 2020 \(H2020\)](#) [Q](#), grant/award no. [810139](#) [Q](#): PORTWIMS

When you submit data,
be sure to state it is a
SPP1158 dataset



Event(s):

AMT28_1-1 (CTD001) [Q](#) * *Latitude:* 49.638100 * *Longitude:* -5.501600 * *Date/Time:* 2018-09-25T12:32:00 * *Campaign:* JR18001 (AMT28) [Q](#) * *Basis:* James Clark Ross [Q](#) *
Method/Device: CTD/Rosette (CTD-RO) [Q](#) * *Comment:* Ships time is GMT+1 (BST)

AMT28_2-4 (CTD002) [Q](#) * *Latitude:* 48.469400 * *Longitude:* -8.836600 * *Date/Time:* 2018-09-25T12:32:00 * *Campaign:* JR18001 (AMT28) [Q](#) * *Basis:* James Clark Ross [Q](#) *
Method/Device: CTD/Rosette (CTD-RO) [Q](#) * *Comment:* Ships time is GMT+1 (BST)

AMT28_3-8 (CTD003) [Q](#) * *Latitude:* 47.901300 * *Longitude:* -10.381400 * *Date/Time:* 2018-09-25T12:32:00 * *Campaign:* JR18001 (AMT28) [Q](#) * *Basis:* James Clark Ross [Q](#) *
Method/Device: CTD/Rosette (CTD-RO) [Q](#) * *Comment:* Ships time is GMT+1 (BST)

Show more...



Parameter(s):

#	Name	Short Name	Unit	Principal Investigator	Method/Device	Comment
1	Event label Q	Event		Xi, Hongyan Q		
2	ORDINAL NUMBER Q	Ord No		Xi, Hongyan Q		Geocode
3	Campaign Q	Campaign		Xi, Hongyan Q		
4	Station label Q	Station		Xi, Hongyan Q		
5	DATE/TIME Q	Date/Time		Xi, Hongyan Q		Geocode - in UTC
6	LATITUDE Q	Latitude		Xi, Hongyan Q		Geocode
7	LONGITUDE Q	Longitude		Xi, Hongyan Q		Geocode
8	DEPTH, water Q	Depth water	m	Xi, Hongyan Q		Geocode
9	Chlorophyll a + Divinyl chlorophyll a + Chlorophyllide a Q	Chl a + DV Chl a + Chlide a	µg/l	Xi, Hongyan Q		
10	Chlorophyll a Q	Chl a	µg/l	Xi, Hongyan Q		High Performance Liquid Chromatography (HPLC) Q
11	Chlorophyllide a Q	Chlide a	µg/l	Xi, Hongyan Q		High Performance Liquid Chromatography (HPLC) Q
12	Divinyl chlorophyll a Q	DV chl a	µg/l	Xi, Hongyan Q		High Performance Liquid Chromatography (HPLC) Q
13	Chlorophyll b + Divinyl chlorophyll b + Chlorophyllide b Q	Chl b + DV Chl b + Chlide b	µg/l	Xi, Hongyan Q		High Performance Liquid Chromatography (HPLC) Q

Campaign: JR18001 [Q](#)

Optional name: AMT28

Event list: [Link](#)

Chief Scientist(s): Tarran, Glen A

Cruise Report: <https://www.amt-uk.org/Cruises/AMT28>

Start: 2018-09-23

End: 2018-10-29

Divinyl chlorophyll a [[µg/l](#)] [Q](#)

Short name: DV chl a [[µg/l](#)]

Terms used:

- [divinyl chlorophyll a](#) (http://purl.obolibrary.org/obo/CHEBI_73113) [Q](#)
- [Density](#) (<http://qudt.org/1.1/vocab/quantity#Density>) [Q](#)

This is a beta feature. Please [report](#) any incorrect term assignments.

Xi, Hongyan [Q](#)

<https://orcid.org/0000-0003-2827-0603>

hongyan.xi@awi.de

High Performance Liquid Chromatography (HPLC) [Q](#)

Terms used:

- [Chromatographs & spectrometers](#) [Q](#)
- [high performance liquid chromatographs](#) ([SDN:L05::LAB11](#)) [Q](#)

This is a beta feature. Please [report](#) any incorrect term assignments.

23	Chlorophyll a, Haptophyta	Chl a Haptophyta	µg/l	Xi, Hongyan	Diagnostic Pigment Analysis (DPA) (DPA)
24	Chlorophyll a, Prokaryotes	Chl a Prokaryotes	µg/l	Xi, Hongyan	Diagnostic Pigment Analysis (DPA) (DPA)
25	Chlorophyll a, Prochlorococcus	Chl a Prochlorococcus	µg/l	Xi, Hongyan	Diagnostic Pigment Analysis (DPA) (DPA)

2023-08-29T11:43:13 - PS121_0_Underway-65 , ordinal no: 318 lat/long was corrected from: 58.30054, 4.42914 to 62.4518, 3.15368

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Curation Level: Enhanced curation (CurationLevelC)

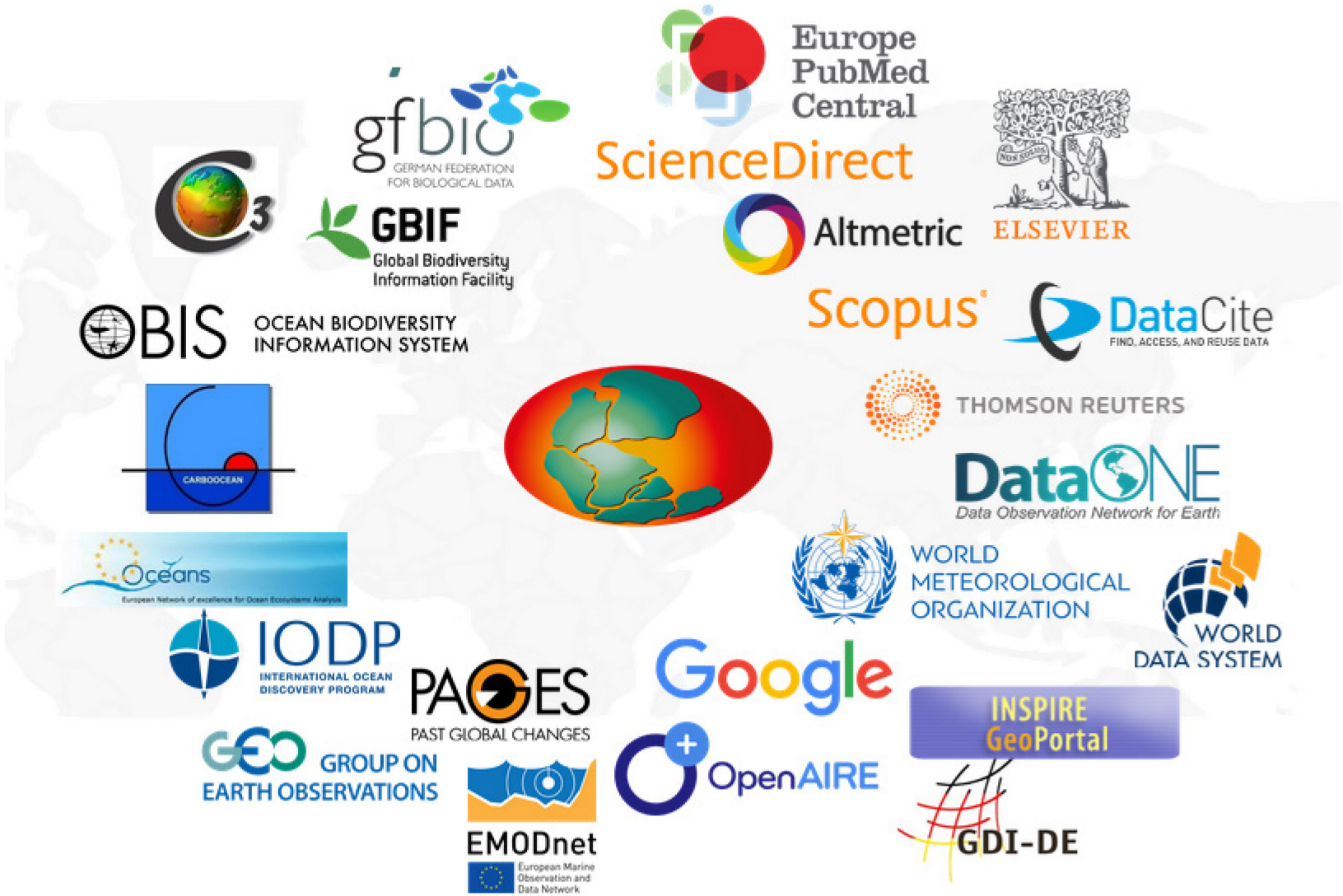
Size: 37522 data points

Data

 [Download dataset as tab-delimited text](#) — use the following character encoding:

1	2	3	4	5	6	7	8	9	10	11	
Event	Ord No	Campaign	Station	Date/Time	Latitude	Longitude	Depth water [m]	Chl a +DV	Chl a + Chlide a [µg/l]	Chl a [µg/l]	Chlide a [µg/l]
PS74/104-1	1	PS74	104-1	2009-07-11T21:18	79.06720	4.19620	9.9		1.394711434	1.394711434	0.000
PS74/104-1	2	PS74	104-1	2009-07-11T21:18	79.06720	4.19620	9.9		2.978661941	2.978661941	0.000
PS74/107-1	3	PS74	107-1	2009-07-12T19:10	79.11250	4.56450	9.9		2.257573442	2.257573442	0.000
PS74/108-1	4	PS74	108-1	2009-07-12T22:28	79.12980	4.90450	9.9		0.983535259	0.983535259	0.000

Data discovery



<https://www.pangaea.de/submit/>



Ask me: Amelie Driemel amelie.driemel@awi.de

Look at https://wiki.pangaea.de/wiki/Main_Page

Attend an online Community Workshop: 07./08.11.2024

<https://pad.gwdg.de/s/KJd9s6Fb#>

"The coolest thing to do with your data might be thought of by someone else" [Rufus Pollock]