

Webinar: MOSAiC research data publishing

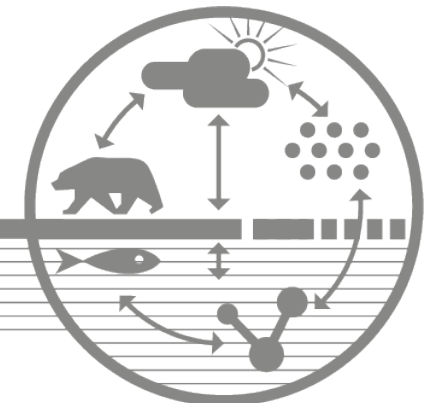
July 8th 2020, 16:30 CEST

with Dana Ransby (AWI Bremerhaven)
&
PANGAEA and RZ Team

*Photo credit: Oliver Müller, MOSAiC expedition
Melosira algaea underneath the sea ice*

MOSAiC

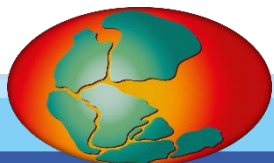
International
Arctic Drift
Expedition



MOSAiC research data publishing

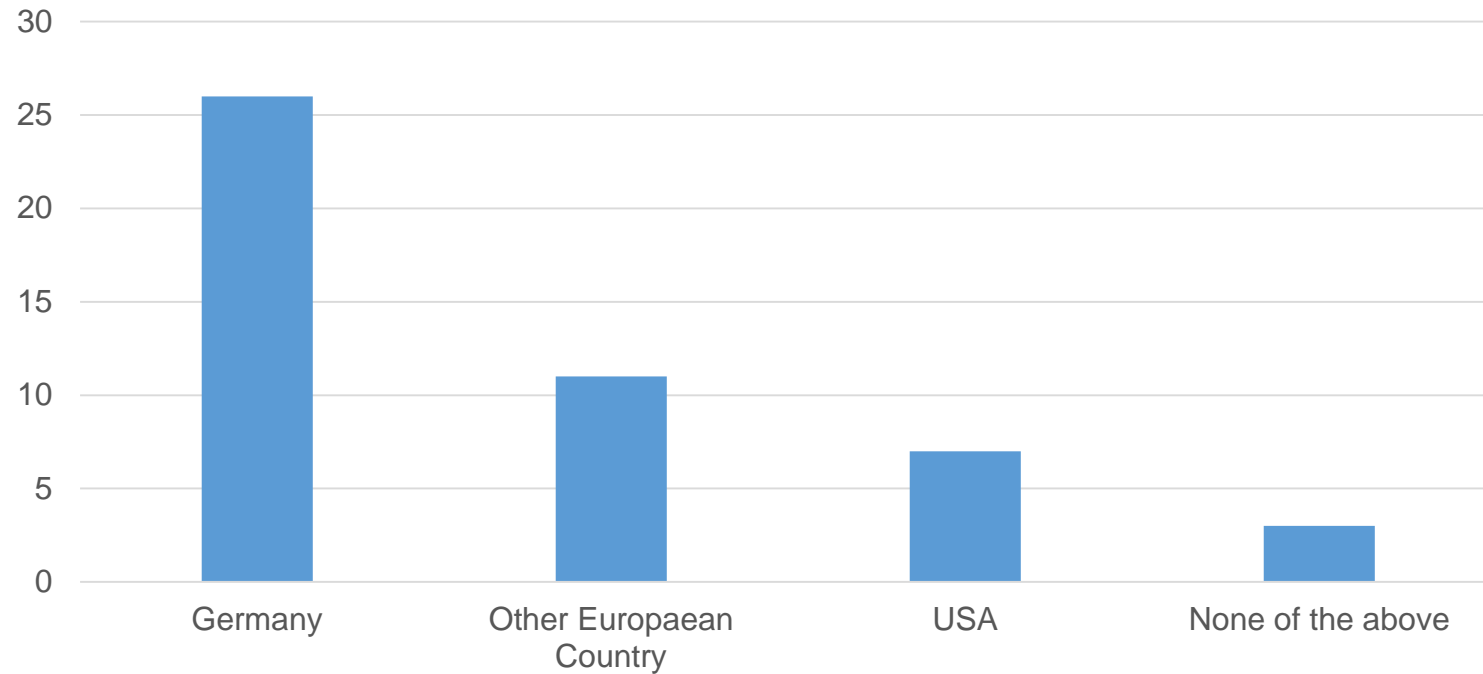
July 8th 2020, Bremerhaven

Dana Ransby (AWI)
&
PANGAEA and RZ Team



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

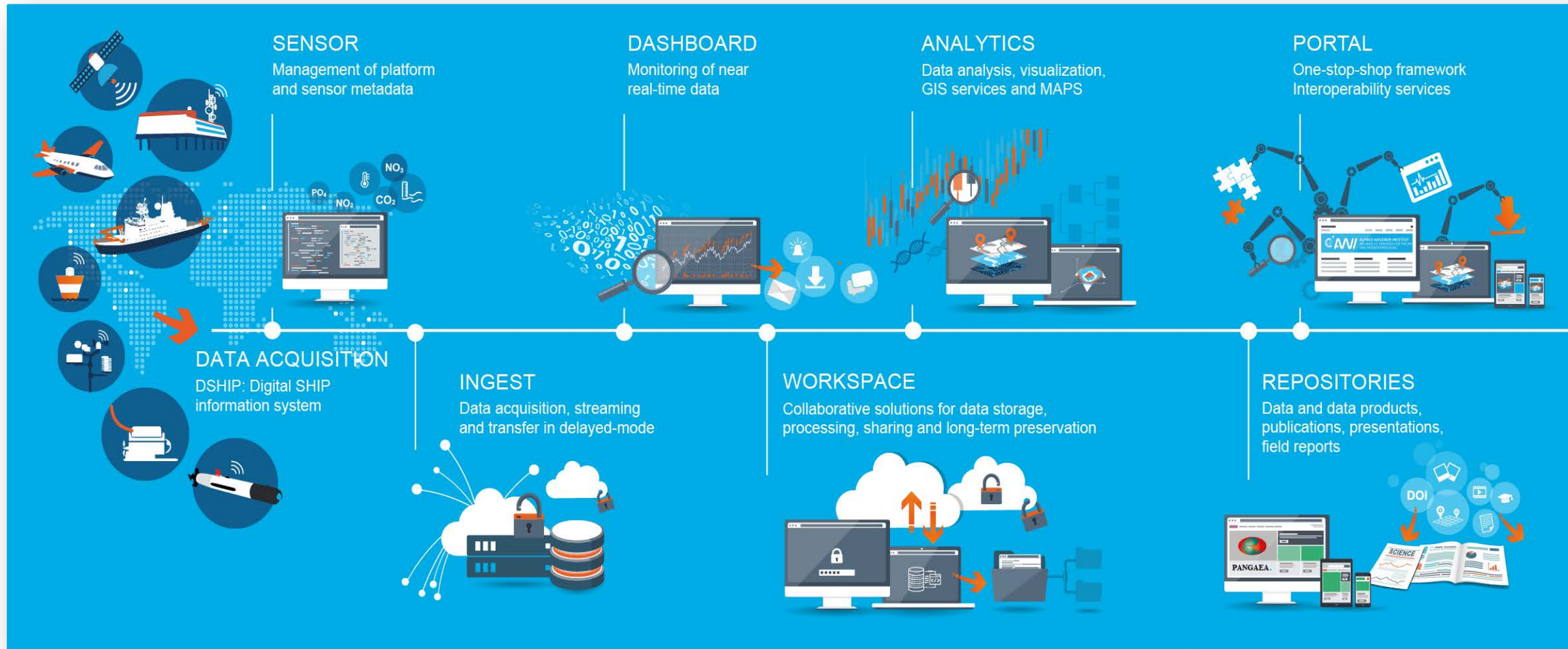
Poll: Where are you joining from?



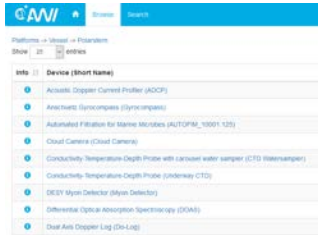
Overview

- Why do I have to publish “my” MOSAiC data?
In context of MOSAiC Data Policy, FAIR principles and good scientific practice
- What is data publication?
Publishing datasets, not scientific papers
- When do I publish “my” MOSAiC data?
Timing of data publication, (also) in connection to paper publication
- Where do I publish “my” MOSAiC data?
PANGAEA and other data repositories
- Data publication process in PANGAEA in detail

Observation to Analysis (O2A)



Data Flow in MOSAiC



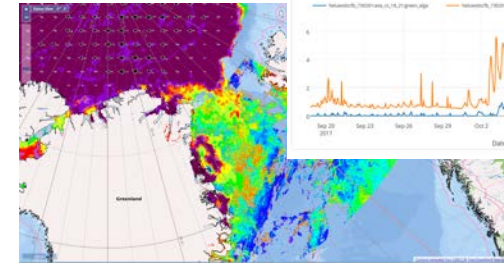
SENSOR for management of device metadata



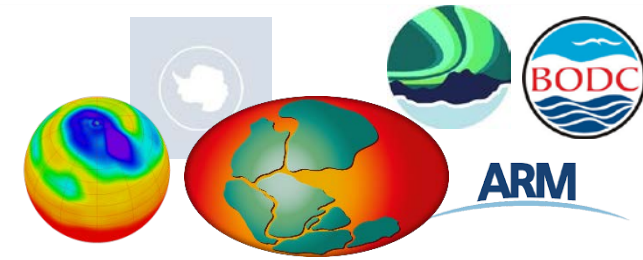
≡ ActionLog Events

| Activity - Device Operation | Start | Device | Action | Latitude | Longitude |
|-----------------------------|---------------------|-------------------|---------------|---------------|-----------|
| PS4_4-1 ADCP | 12.10.2016 11:49:24 | Acoustic Doppl... | station start | 51° 03.088' N | 001° 23' |
| | 12.10.2016 11:49:01 | Acoustic Doppl... | station start | 51° 03.157' N | 001° 23' |
| PS4_1-3 BLN | 11.10.2016 14:17:22 | BALLON | in the water | 46° 07.339' N | 010° 15' |
| PS4_1-1 BOAT | 11.10.2016 14:13:31 | Boat | MyAction | 46° 07.251' N | 010° 15' |

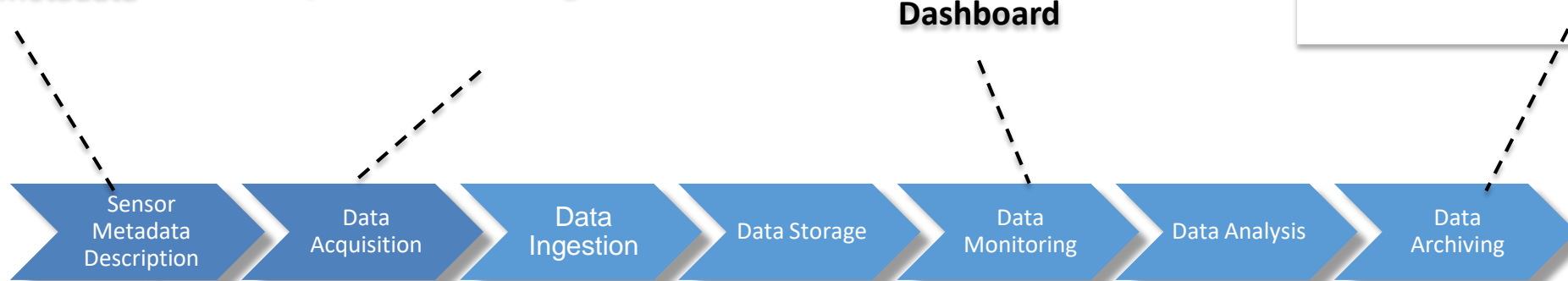
DSHIP-ActionLog for Device-Operation ID management



DSHIP-Mapviewer and Dashboard



Raw and primary data at PANGAEA and other repositories



Data transfer via satellite, local LAN, radio LAN as stream and/or in delayed mode

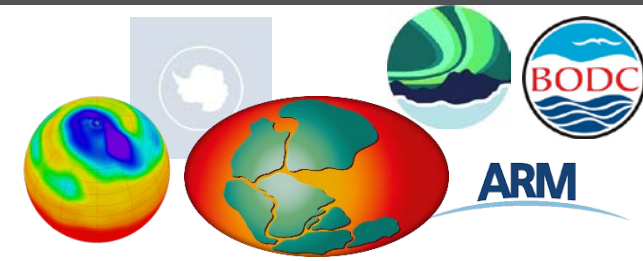
MOSAiC Central Storage and workspace



Using workspace and **Marketplace (VMs)** e.g. with **Jupyter Notebook** (R or Python) or Bash-Script or or ...?



Data Flow in MOSAiC



Raw and primary data at PANGAEA and other repositories

SENSOR for management of device metadata

DSHIP-ActionLog for Device-Operation ID management

DSHIP-Mapviewer and Dashboard



Sensor Metadata Description

Data Acquisition

Data Ingestion

Data Storage

Data Monitoring

Data Analysis

Data Archiving

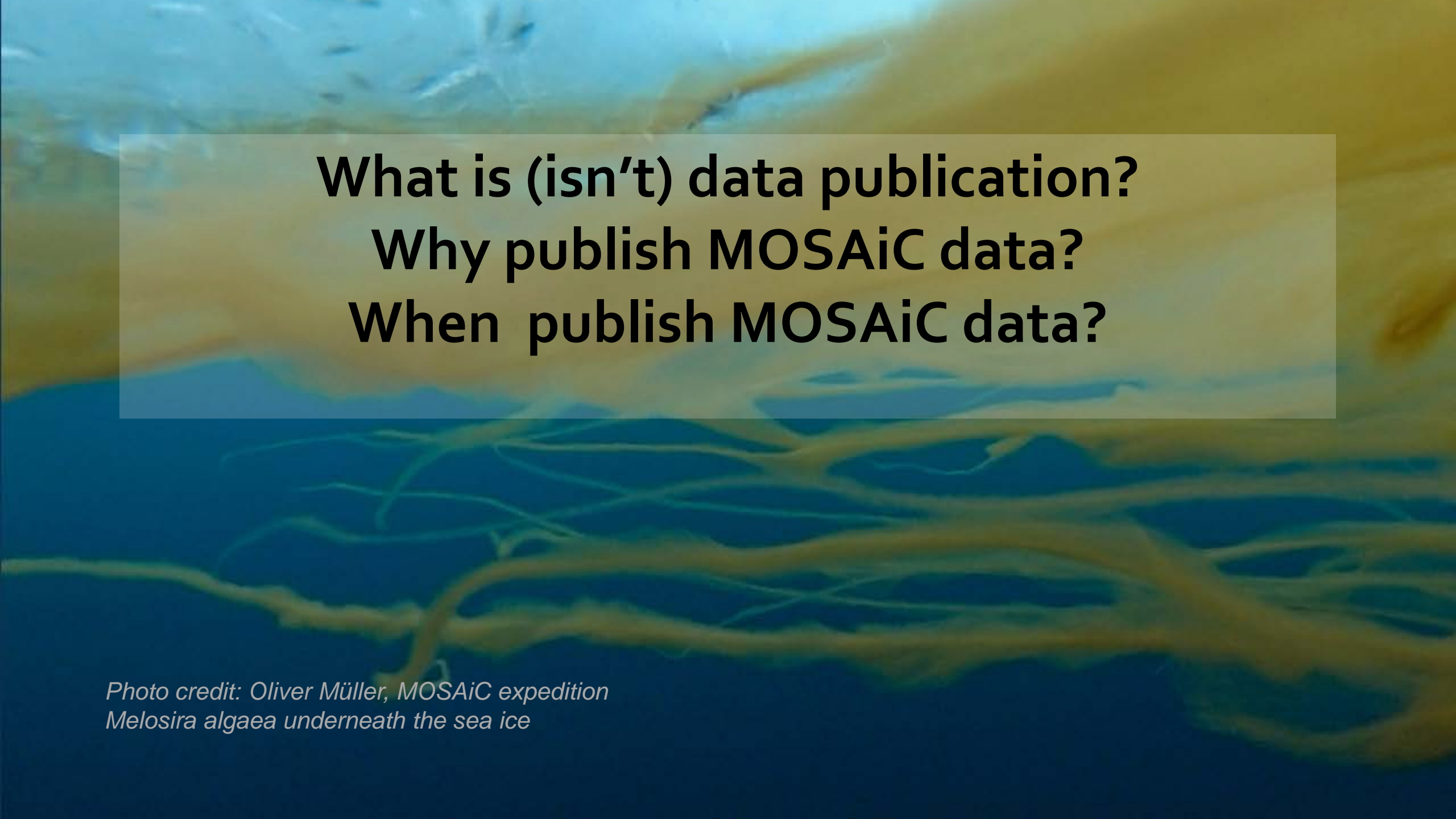
Data transfer via satellite, local LAN, radio LAN as stream and/or in delayed mode

MOSAiC Central Storage and workspace



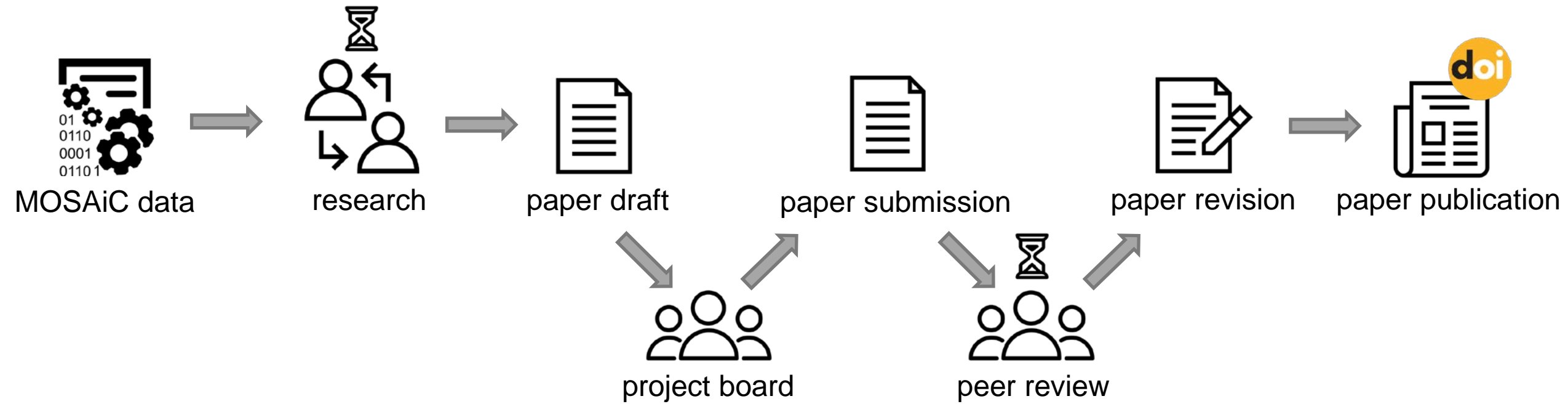
Using workspace and **Marketplace (VMs)** e.g. with **Jupyter Notebook** (R or Python) or Bash-Script or or ...?



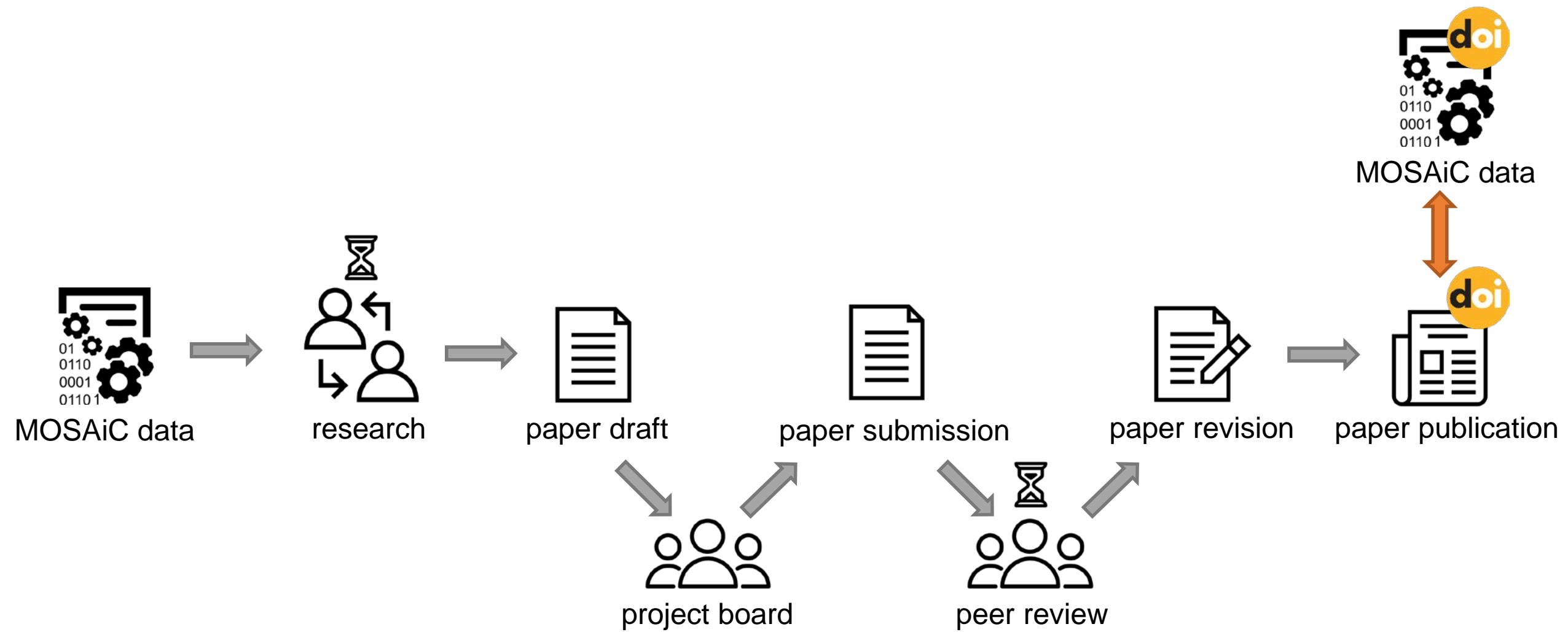
The background image shows a close-up of Melosira algae, which appear as thin, branching, yellowish-brown structures. These are set against a backdrop of sea ice, which is a mix of light blue and white. The overall scene is dimly lit, giving it a cold, underwater feel.

What is (isn't) data publication?
Why publish MOSAiC data?
When publish MOSAiC data?

*Photo credit: Oliver Müller, MOSAiC expedition
Melosira algae underneath the sea ice*



A digital object identifier (DOI) is a persistent identifier used to identify objects uniquely



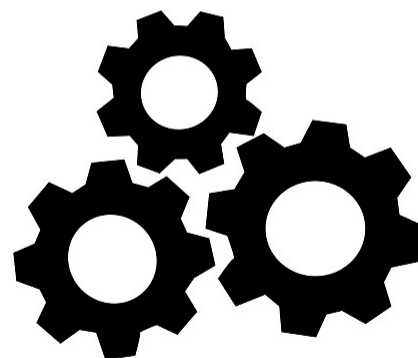
F indable



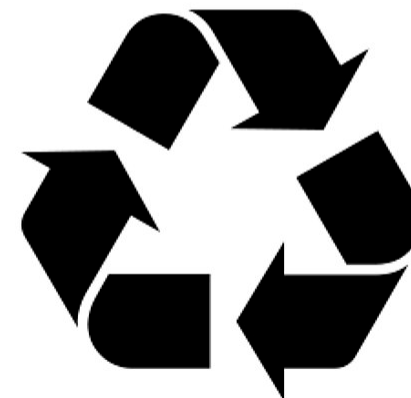
A ccessible



I nteroperable



R eusable



Metadata: Data about Data

What?



Parameter [unit]

Who?



Author(s),
PI, Article

Where?



Latitude/Longitude

Depth in ice/water/
sediment; Altitude...

When?

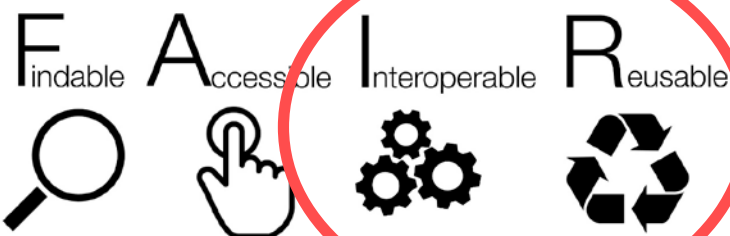


Date,
Age...

How?



Method



What ISN'T / IS published data?



| | F Findable | A Accessible | I Interoperable | R Reusable |
|---|----------------------|------------------------|---------------------------|----------------------|
| MOSAiC Central Storage (MCS) or some server | | | | |
| Supplement to a published paper | | | | |
| Accredited data repository (e.g., PANGAEA, BODC, ...) | | | | |

~~Statement in the paper "Data used for this manuscript were uploaded to PANGAEA and will be available soon."~~

~~USB stick / Hard drive~~



What IS published data?

A published data set equipped with a complete set of metadata.

It is fully citable by having:

- a title,

- authors,

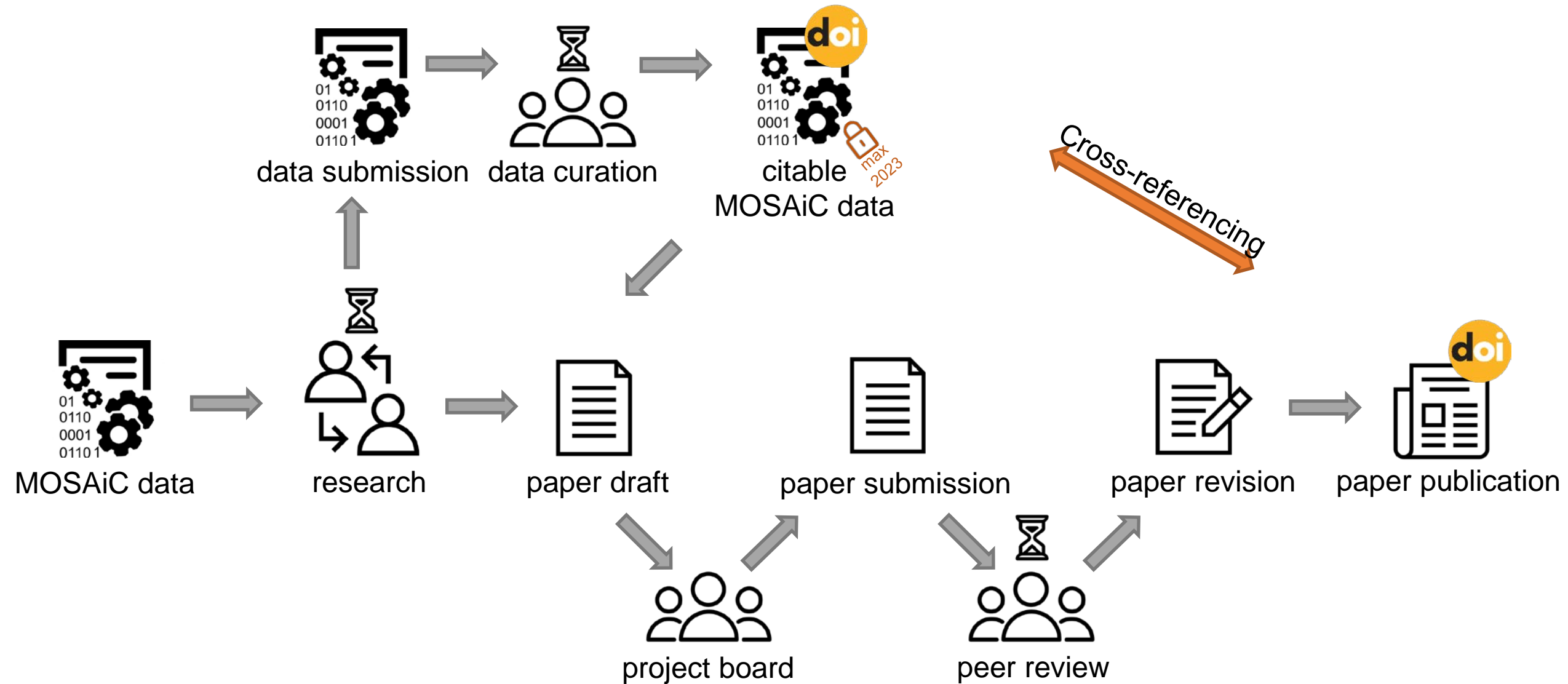
- abstract and

- a persistent identifier (usually DOI).

It can have (but doesn't need to have) a reference to a scientific paper publication.

Correct citation: Authors (YYYY) Title. PANGAEA, DOI. (not only DOI)

Example: *Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönike, Lutz; Steen-Larsen, Hans-Christian; Tippenhauer, Sandra (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS93.2 (ARK-XXIX/2.2). PANGAEA, <https://doi.org/10.1594/PANGAEA.897406>*



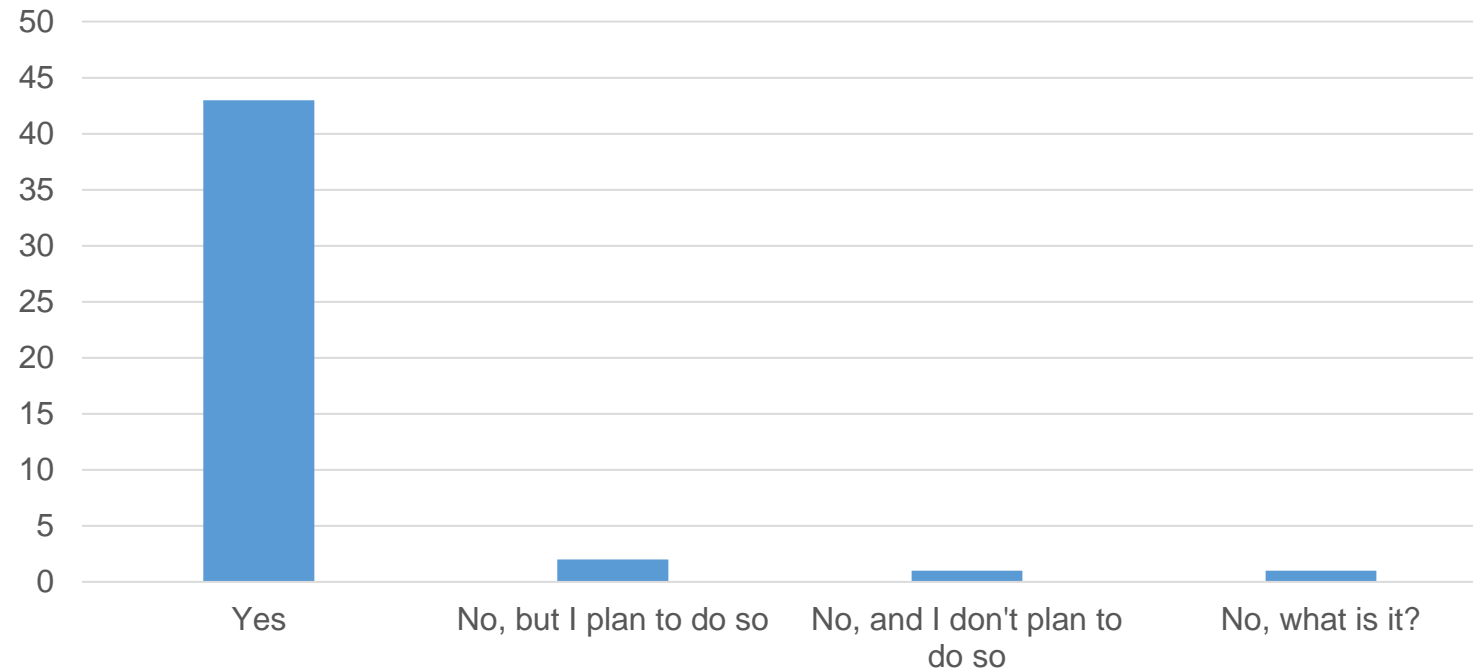
Benefits for the authors



- Visibility – more citations
- Credibility – more credits
- Exchange – improve accessibility
- Data authors \neq paper authors
- Acknowledging contributions of scientists, technicians, students, who generated the data, but did not contribute to the interpretation or manuscript writing
- Authors of datasets: those who contributed to collection and processing of data
- Follow general rules of good scientific practice



MOSAiC Data Policy



MOSAiC Data Policy



- Regulates
 - data management
 - data access
 - data release
 - authorship
 - acknowledgments
- Signing [Data Policy](#) pre-requisite for participation in MOSAiC field operations and being a member of the MOSAiC consortium

Data Provision, Access and Sharing



- Early access by MOSAiC consortium to data crucial for successful collaboration within the consortium
 - all data must be made available to the consortium by the MCS as fast as possible
- Internal release:
 - 31 Jan 2021: quality-assured automated sensor & fast analysis sample data
 - ...
 - 31 Jan 2022: full collection of laboratory sample analysis data
- Data provider / data PI must be informed and offered collaboration and offered co-authorship when using data for publications
- **Public release: 1 Jan 2023**
 - all MOSAiC data publicly available

Acknowledgment



- MOSAiC data to be acknowledged or referenced in publications and other public documentation
- Top-level acknowledgment of MOSAiC
 - **"Data used in this manuscript was produced as part of the international Multidisciplinary drifting Observatory for the Study of the Arctic Climate (MOSAiC) with the tag MOSAiC20192020".**
- Mention Project ID given for specific expedition
 - Polarstern expedition: AWI_PS122_00
 - Additional attributions like specific award/grant numbers...






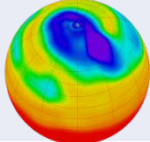


Where to publish MOSAiC data?

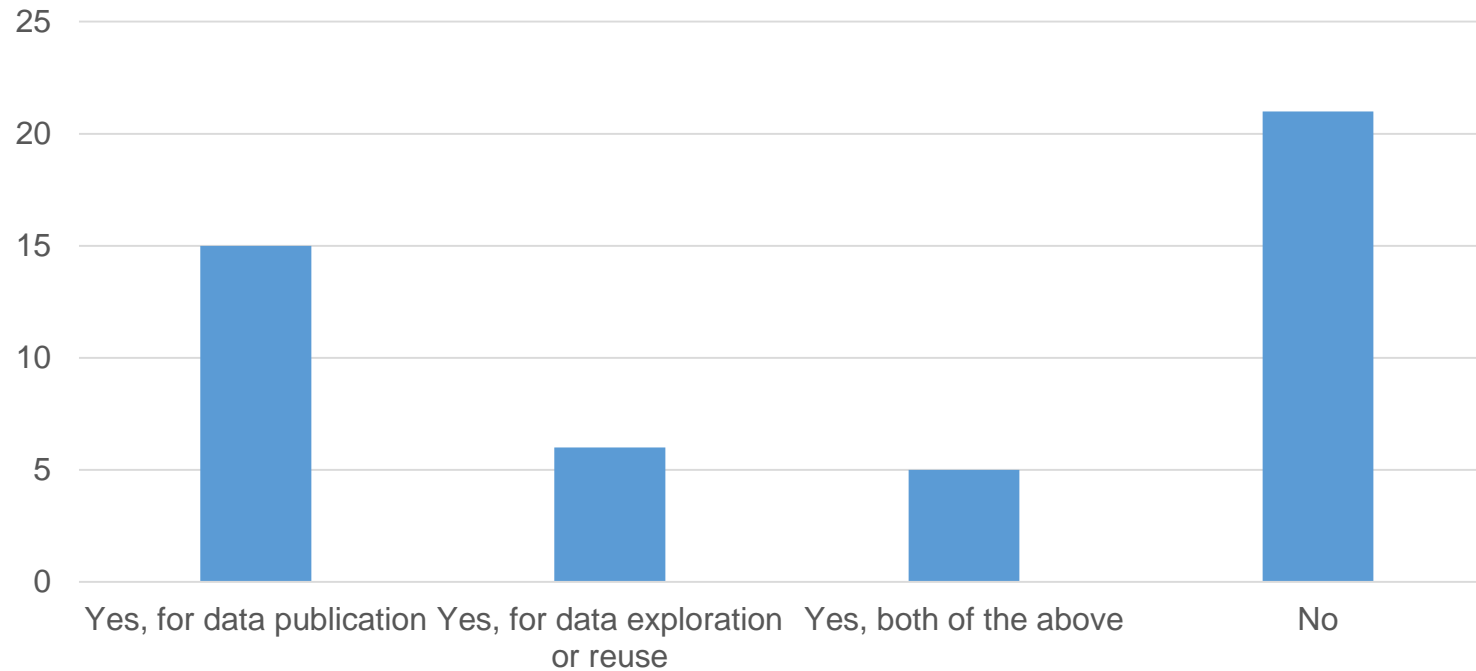
*Photo credit: Oliver Müller, MOSAiC expedition
Melosira algae underneath the sea ice*

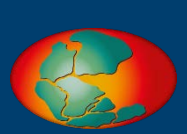
MOSAiC data repositories



| Repository | | Comment |
|---|---|--|
| PANGAEA |  | MOSAiC repository for primary and raw data |
| Arctic Data Center (ADC) |  | Data of NSF funded scientists |
| Atmospheric Radiation Measurement (ARM) data center |  | Data of Department of Energy funded scientists |
| British Oceanographic Data Centre (BODC) |  | Data of NERC funded scientists |
| UK Polar Data Centre |  | Data of NERC funded scientists |
| Centre for Environmental Data Analysis (CEDA) |  | Data of NERC funded scientists |

Poll: Have you used PANGAEA before?





PANGAEA

- Open access data repository for geoscientific & environmental data co-hosted by AWI & MARUM
- Data georeferenced in space & time, relational database
- Data citation incl. persistent identifier (DOI)
- Long-term accessibility of data guarantee
- Data FAIR (Findable, Accessible, Interoperable, Re-usable both for machines and for people)

How to use PANGAEA as data author



- Submission of data and metadata using ticket system
- Curators guide the users through the process
- Final step: before publishing approval needed
- Possibility of moratorium on access
- PANGAEA can provide access for reviewers of papers



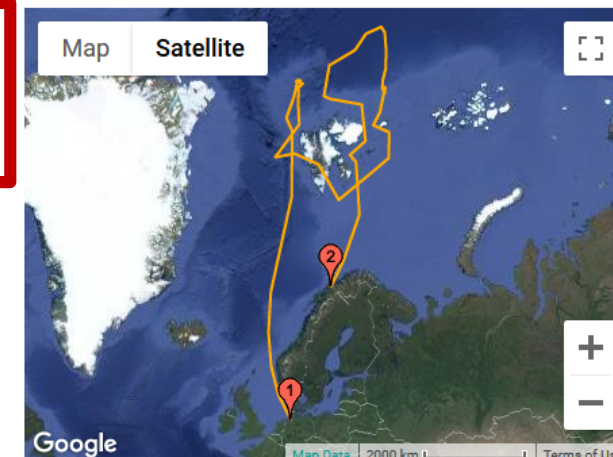


Citation:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Nikolopoulos, Anna; Heuzé, Céline (2018): Water vapour isotopes analyser raw data from POLARSTERN cruise PS106, links to files. *Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, PANGAEA*, <https://doi.org/10.1594/PANGAEA.884885>

Always quote above citation when using data! You can download the citation in several formats below.

[RIS Citation](#) [BIBTEX Citation](#) [Copy Citation](#) [Facebook](#) [Twitter](#) [Google+](#) [Show Map](#) [Google Earth](#)



Related to:

Macke, Andreas; Flores, Hauke (2018): The Expeditions PS106/1 and 2 of the Research Vessel POLARSTERN to the Arctic Ocean in 2017. *Berichte zur Polar- und Meeresforschung = Reports on Polar and Marine Research*, **719**, 171 pp, https://doi.org/10.2312/BzPM_0719_2018

Other version:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Nikolopoulos, Anna; Heuzé, Céline (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS106. *PANGAEA*, <https://doi.pangaea.de/10.1594/PANGAEA.897566>

Further details:

Bonne, Jean-Louis (2016): Manual for raw data from the Polarstern water vapour isotopes analyser. 5 pp, [hdl:10013/epic.48115.d001](https://hdl.handle.net/10013/epic.48115.d001)

Coverage:

Median Latitude: 78.564703 * Median Longitude: 17.810816 * South-bound Latitude: 53.622990 * West-bound Longitude: 2.654030 * North-bound Latitude: 83.681320 * East-bound Longitude: 34.017610

Date/Time Start: 2017-05-24T12:00:00 Date/Time End: 2017-07-20T00:00:00

Event(s):

PS106-track * Latitude Start: 53.567500 * Longitude Start: 8.554800 * Latitude End: 69.678000 * Longitude End: 18.989800 * Date/Time Start: 2017-05-24T00:00:00 * Date/Time End: 2017-07-20T00:00:00 * Campaign: PS106.1 (ARK-XXXI/1.1) * Basis: Polarstern * Device: Underway cruise track measurements (CT) * Comment: Combined underway cruise track measurements of PS106.1 and PS106.2

Other version:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Nikolopoulos, Anna; Heuzé, Céline (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS106. PANGAEA, <https://doi.pangaea.de/10.1594/PANGAEA.897566>

Further details:

Bonne, Jean-Louis (2016): Manual for raw data from the Polarstern water vapour isotopes analyser. 5 pp, <hdl:10013/epic.48115.d001> 🔍

Coverage:

Median Latitude: 78.564703 * *Median Longitude:* 17.810816 * *South-bound Latitude:* 53.622990 * *West-bound Longitude:* 2.654030 * *North-bound Latitude:* 83.681320 * *East-bound Longitude:* 34.017610

Date/Time Start: 2017-05-24T12:00:00 * *Date/Time End:* 2017-07-20T06:30:00

Event(s):

PS106-track 🔍 * *Latitude Start:* 53.567500 * *Longitude Start:* 8.554800 * *Latitude End:* 69.678000 * *Longitude End:* 18.989800 * *Date/Time Start:* 2017-05-24T00:00:00 * *Date/Time End:* 2017-07-20T00:00:00 * *Campaign:* PS106.1 (ARK-XXXI/1.1) 🔍 * *Basis:* Polarstern 🔍 * *Device:* Underway cruise track measurements (CT) 🔍 * *Comment:* Combined underway cruise track measurements of PS106.1 and PS106.2

Parameter(s):

| # | Name | Short Name | Unit | Principal Investigator | Method | Comment |
|---|---|------------|-------|------------------------|--------|-------------------|
| 1 | DATE/TIME 🔍 | Date/Time | | Bonne, Jean-Louis 🔍 | | Geocode |
| 2 | LATITUDE 🔍 | Latitude | | Bonne, Jean-Louis 🔍 | | Geocode |
| 3 | LONGITUDE 🔍 | Longitude | | Bonne, Jean-Louis 🔍 | | Geocode |
| 4 | File name 🔍 | File name | | Bonne, Jean-Louis 🔍 | | HKDS2021 |
| 5 | File size 🔍 | File size | kByte | Bonne, Jean-Louis 🔍 | | HKDS2021, gzipped |
| 6 | Uniform resource locator/link to file 🔍 | URL file | | Bonne, Jean-Louis 🔍 | | HKDS2021 |
| 7 | File name 🔍 | File name | | Bonne, Jean-Louis 🔍 | | Log file |
| 8 | File size 🔍 | File size | kByte | Bonne, Jean-Louis 🔍 | | Log file |
| 9 | Uniform resource locator/link to file 🔍 | URL file | | Bonne, Jean-Louis 🔍 | | Log file |

Size:

348 data points

Data

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

| 1 ⓘ Date/Time | 2 ⓘ Latitude | 3 ⓘ Longitude | 4 ⓘ File name (HKDS2021) | 5 ⓘ 📄 File size [kByte] (HKDS2021, gzipped) | 6 ⓘ URL file (HKDS2021) | 7 ⓘ File name (Log file) | 8 ⓘ 📄 File size [kByte] (Log file) | 9 ⓘ URL file (Log file) |
|------------------|-----------------|------------------|--|---|-------------------------------|--------------------------------|--|-------------------------------|
| 2017-05-24T12:00 | 53.62299 | 8.47016 | HKDS2021-20170524-000007Z-DataLog_User.dat | 29363 | Link | LogFile-20170524.txt | 34 | Link |
| 2017-05-25T12:00 | 57.25184 | 5.24041 | HKDS2021-20170525-000008Z-DataLog_User.dat | 29423 | Link | LogFile-20170525.txt | 33 | Link |
| 2017-05-26T12:00 | 61.10902 | 3.29890 | HKDS2021-20170526-000007Z-DataLog_User.dat | 29563 | Link | LogFile-20170526.txt | 26 | Link |
| 2017-05-27T12:00 | 65.09937 | 2.65403 | HKDS2021-20170527-000008Z-DataLog_User.dat | 29643 | Link | LogFile-20170527.txt | 24 | Link |
| 2017-05-28T12:00 | 69.16020 | 3.27261 | HKDS2021-20170528-000007Z-DataLog_User.dat | 30183 | Link | LogFile-20170528.txt | 25 | Link |
| 2017-05-29T12:00 | 72.69150 | 5.64165 | HKDS2021-20170529-000007Z-DataLog_User.dat | 30089 | Link | LogFile-20170529.txt | 32 | Link |
| 2017-05-30T12:00 | 76.39131 | 8.70832 | HKDS2021-20170530-000008Z-DataLog_User.dat | 30090 | Link | LogFile-20170530.txt | 36 | Link |
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| 2017-06-01T12:00 | 80.46653 | 7.28795 | HKDS2021-20170601-000007Z-DataLog_User.dat | 29776 | Link | LogFile-20170601.txt | 35 | Link |
| 2017-06-02T12:00 | 81.28870 | 9.26671 | HKDS2021-20170602-000008Z-DataLog_User.dat | 29989 | Link | LogFile-20170602.txt | 37 | Link |
| 2017-06-03T12:00 | 81.95812 | 10.30661 | HKDS2021-20170603-000007Z-DataLog_User.dat | 29942 | Link | LogFile-20170603.txt | 35 | Link |

Raw data

Calibrated
data

Data
collection

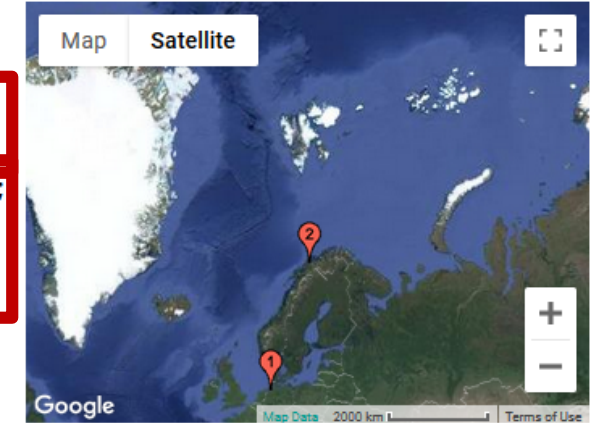
Journal
paper

Citation:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Nikolopoulos, Anna; Heuzé, Céline (2015): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS106. PANGAEA, <https://doi.pangaea.de/10.1594/PANGAEA.897566> (dataset in review).

In supplement to: Bonne, Jean-Louis; Behrens, Melanie K; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Werner, Martin (accepted): Water vapour isotopic composition over open ocean and sea ice in the Atlantic sector.

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Other version:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Nikolopoulos, Anna; Heuzé, Céline (2018): Water vapour isotopes analyser raw data from POLARSTERN cruise PS106, links to files. Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research, Bremerhaven, PANGAEA, <https://doi.org/10.1594/PANGAEA.884885>

Coverage:

Median Latitude: 78.567967 * Median Longitude: 17.751102 * South-bound Latitude: 53.570000 * West-bound Longitude: 2.490000 * North-bound Latitude: 83.720000 * East-bound Longitude: 34.710000

Date/Time Start: 2017-05-24T01:00:00 * Date/Time End: 2017-07-20T23:00:00

Event(s):

PS106-track [Q](#) * Latitude Start: 53.567500 * Longitude Start: 8.554800 * Latitude End: 69.678000 * Longitude End: 18.989800 * Date/Time Start: 2017-05-24T00:00:00 * Date/Time End: 2017-07-20T00:00:00 * Campaign: **PS106.1** (ARK-XXXI/1.1) [Q](#) * Basis: **Polarstern** [Q](#) * Device: Underway cruise track measurements (CT) [Q](#) * Comment: Combined underway cruise track measurements of PS106.1 and PS106.2

Parameter(s):

| # | Name | Short Name | Unit | Principal Investigator | Method | Comment |
|---|--|---|--------|-------------------------------------|--|--|
| 1 | DATE/TIME Q | Date/Time | | Bonne, Jean-Louis Q | | Geocode |
| 2 | LATITUDE Q | Latitude | | Bonne, Jean-Louis Q | | Geocode |
| 3 | LONGITUDE Q | Longitude | | Bonne, Jean-Louis Q | | Geocode |
| 4 | Humidity, specific Q | Humidity spec | g/kg | Bonne, Jean-Louis Q | Isotope analyzer L2130-i, Picarro Inc. Q | In situ, sampling height 29 m |
| 5 | $\delta^{18}\text{O}$, water vapour Q | $\delta^{18}\text{O}$ H ₂ O vapour | ‰ SMOW | Bonne, Jean-Louis Q | Isotope analyzer L2130-i, Picarro Inc. Q | In situ, sampling height 29 m |
| 6 | δ Deuterium, water vapour Q | δD H ₂ O vapour | ‰ SMOW | Bonne, Jean-Louis Q | Isotope analyzer L2130-i, Picarro Inc. Q | In situ, sampling height 29 m |
| 7 | Deuterium excess Q | d xs | ‰ | Bonne, Jean-Louis Q | Calculated after Dansgaard (1964) Q | dxs= $\delta\text{D} - 8 \times \delta^{18}\text{O}$ |

Size:

5116 data points

[Download Data \(login required\)](#)

[Download dataset as tab-delimited text](#) (use the following character encoding: windows-1252: Windows Western)

1)

Raw data

Calibrated data

Data collection

Journal paper

Citation:

Bonne, Jean-Louis; Werner, Martin; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Behrens, Melanie K; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Arndt, Stefanie; Bohlmann, Stephanie; Burkhardt, Elke; Engelmann, Ronny; Flau, Michael; Goedecke, Julia; Haarig, Moritz; Hampe, Hendrik; Heuzé, Céline; Hoppmann, Mario; Horn, Myriel; Kalesse, Heike; Lembke-Jene, Lester; Nikolopoulos, Anna; Rossmann, Leonard; Schlindwein, Vera; Steinmacher, Bermann; Tippenhauer, Sandra; Valk, Ole (2019): Near-surface atmospheric vapour and oceanic surface water isotopic compositions calibrated data from Polarstern cruises, 2015-2017. PANGAEA, <https://doi.org/10.1594/PANGAEA.897578>,

Supplement to: Bonne, Jean-Louis; Behrens, Melanie K; Meyer, Hanno; Kipfstuhl, Sepp; Rabe, Benjamin; Schönicke, Lutz; Steen-Larsen, Hans-Christian; Werner, Martin (2019): Resolving the controls of water vapour isotopes in the Atlantic sector. *Nature Communications*, 10(1), <https://doi.org/10.1038/s41467-019-09242-6>

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Abstract:

Here, we present a new isotopic dataset of near-surface water vapour and oceanic surface water continuously surveyed from the Polarstern research vessel during a period of two years from 2015-06-29 to 2017-07-01. The dataset covers areas spanning from the North Pole to the coasts of Antarctica in the Atlantic sector. Water vapour observations have been measured continuously on-board using a Cavity Ring-Down Spectrometer from a 29 m elevation above the sea level. The oceanic water has been sampled on a daily basis and later analyzed for water isotopic composition at the Alfred Wegener Institut laboratory in Potsdam, Germany.

These observations contribute to better understand the creation of the first water vapour isotopic signal during oceanic evaporation. They reveal that the vapour deuterium excess within the atmospheric boundary layer is not modulated by wind speed, contrary to the commonly used theory, but controlled by relative humidity and sea surface temperature only. In sea ice covered regions, the sublimation of deposited snow on sea ice is also revealed as a key process controlling the local water vapour isotopic composition.

Other details:

[Dataset description](#)

Coverage:

Median Latitude: 29.514206 * Median Longitude: -2.322791 * South-bound Latitude: -76.980000 * West-bound Longitude: -114.770000 * North-bound Latitude: 89.990000 * East-bound Longitude: 82.996960
Date/Time Start: 2015-07-01T09:00:00 * Date/Time End: 2017-07-20T23:00:00

License:

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Size:

23 datasets

Download Data

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

Datasets listed in this publication series

1. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS96 (ANT-XXXI/2). <https://doi.org/10.1594/PANGAEA.897567>
2. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS104. <https://doi.org/10.1594/PANGAEA.897564>
3. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS95.1 (ANT-XXXI/1.1). <https://doi.org/10.1594/PANGAEA.897408>
4. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS95.2 (ANT-XXXI/1.2). <https://doi.org/10.1594/PANGAEA.897409>
5. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS98 (ANT-XXXI/4). <https://doi.org/10.1594/PANGAEA.897569>
6. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS105. <https://doi.org/10.1594/PANGAEA.897565>
7. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS102. <https://doi.org/10.1594/PANGAEA.897562>
8. Bonne, J-L; Werner, M; Meyer, H et al. (2019): Water vapour isotopes analyser calibrated data from POLARSTERN cruise PS103. <https://doi.org/10.1594/PANGAEA.897563>

Raw data

Calibrated data

Data collection

Journal paper

MOSAiC data @PANGAEA



PANGAEA.

ALL TOPICS

project:label:MOSAiC



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15 datasets found on search for »project:label:MOSAiC«

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Dataset Author

Katlein, Christian (3)
Rex, Markus (3)
Smolyanitsky, Vasily (3)
Nicolaus, Marcel (2)
Anhaus, Philipp (1)
Behrens, Melanie K (1)
Bessonov, Vladimir (1)
Bonne, Jean-Louis (1)
[more...](#)

Dataset Publication Year

☐ 2020 (13)
☐ 2019 (2)

Topic

Chemistry (2)
Inorganic Chemistry (2)
Animalia (1)
Arthropoda (1)
Atmosphere (1)
Biological Classification (1)
Chordata (1)
Cryosphere (1)
[more...](#)

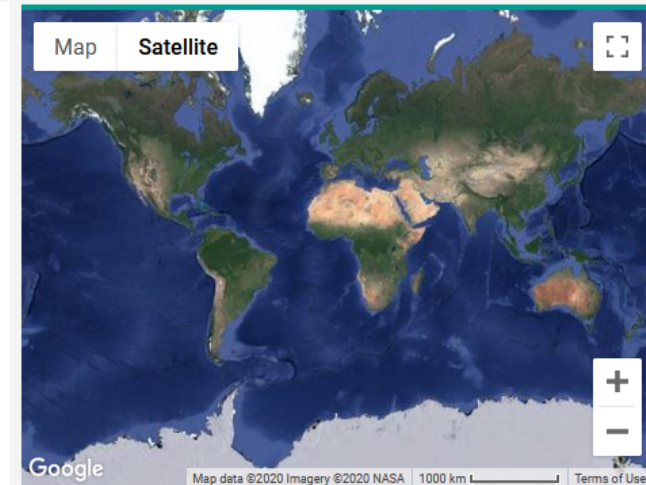
Project

☐ MOSAIC (15)
☐ AWI_GeoPhy (1)
☐ AWI_PhYOce (1)

Basis

Polarstern (11)
Akademik Fedorov (3)

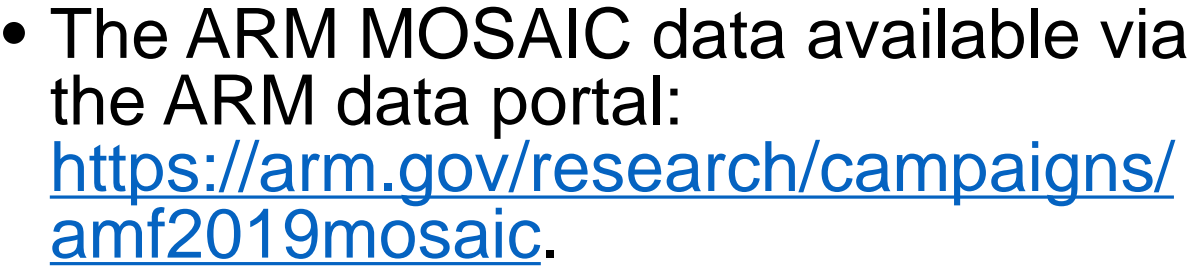
- Katlein, C; Itkin, P; Divine, D (2020):** Salinity measured on sea ice core PS122/2_24-114 during MOSAIC Leg 2
Size: 28 data points
<https://doi.pangaea.de/10.1594/PANGAEA.919474> - Score: 11.24
- Ransby, D (2020):** Test dataset
Size: 0 data points
<https://doi.pangaea.de/10.1594/PANGAEA.912116> - Score: 10.35
- von der Gathen, P; Maturilli, M (2020):** Ozone sonde profiles during MOSAIC Leg 1-2-3
Size: 2743920 data points
<https://doi.pangaea.de/10.1594/PANGAEA.919538> - Score: 10.35
- Haas, C (2020):** Links to master tracks in different resolutions of POLARSTERN cruise PS122/2, Arctic Ocean - Arctic Ocean, 2019-12-13 - 2020-02-24
Size: 21022 data points
<https://doi.pangaea.de/10.1594/PANGAEA.919904> - Score: 10.35
- Smolyanitsky, V (2019):** Navigation track of Akademik Fedorov during pre-MOSAIC project phase with 10 minute interval for 21 September - 25 October 2019
Size: 7490 data points
<https://doi.org/10.1594/PANGAEA.909433> - Score: 9.73
- Bonne, J-L; Behrens, MK; Werner, M (2020):** Water vapour isotopes analyser raw data from POLARSTERN cruise PS122/1, links to files
Size: 177 data points
<https://doi.org/10.1594/PANGAEA.916096> - Score: 9.73
- Kanzow, T (2020):** Links to master tracks in different resolutions of POLARSTERN cruise PS122/3, Arctic Ocean - Longyearbyen, 2020-02-24 - 2020-06-04
Size: 29056 data points
<https://doi.pangaea.de/10.1594/PANGAEA.919912> - Score: 9.73
- Rex, M (2020):** Links to master tracks in different resolutions of POLARSTERN cruise PS122/1, Tromsø - Arctic Ocean, 2019-09-20 - 2019-12-13



To create a new geographic search coverage, use the buttons and input fields to enter coordinates below. The GPS button (*top-left of wind rose*) selects the area around your current location. For using the map, select the viewport button (*top-right of wind rose*) and drag or zoom the bounding rectangle on its borders. You can also select a date range by entering a start/end date. Press "Apply" to restrict current search results!



Start date:
End date:



- A new data discovery portal: an “integrated view of data details, including rich metadata, data plots, citations, and contacts etc..)

AOSMET

Data Level: a1 ?

Description:

AOS: aerosol-based meteorology data

Site: MOSAIC (Drifting Obs - Study of Arctic Climate); Mobile Facility (MOS)

Location: MOSAIC (Drifting Obs - Study of Arctic Climate); AMF2 (Lat: 86.619, Long: 118.1129)

Facility Code: M1

Category: Surface Meteorology

Source Instrument/Data: Meteorological Measurements associated with the Aerosol Observing System

Sampling Interval: 1 second

Start Date: 2019-10-11

End Date: 2020-04-21

DOI: 10.5439/1025153

Citation Format: ARM

Hide

Copy

Atmospheric Radiation Measurement (ARM) user facility. 2019, updated hourly. Meteorological Measurements associated with the Aerosol Observing System (AOSMET). 2019-10-11 to 2020-04-21, ARM Mobile Facility (MOS) MOSAIC (Drifting Obs - Study of Arctic Climate); AMF2 (M1). Compiled by J. Kyrouac and S. Springston. ARM Data Center. Data set accessed 2020-06-24 at <http://dx.doi.org/10.5439/1025153>.

MapSatellite

+

-

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Data Timeline & Quality

Viewing: pressure_ambient

10

NovDecJanFebMarApr

ROUTINE

INCORRECT

SUSPECT

MISSING

NOTE

LIMITED ACCESS

Click to view data quality reports, scroll to zoom in/out

Reset timeline view

Data Plots

pressure_ambient

rain_amount

rain_duration

rain_intensity

rh_ambient

Primary Measurements

File Header Information

VARIABLES:

Atmospheric pressure:
Variable: Ambient pressure (pressure_ambient)
Recommended

Atmospheric temperature:
Variable: Ambient air temperature (temperature_ambient)
Recommended

Horizontal wind:
Variable: Wind speed (wind_speed)
Recommended

Atmospheric moisture:
Variable: Ambient air relative humidity (rh_ambient)
Recommended

Horizontal wind:
Variable: Wind direction, relative to true North (wind_direction)
Recommended

Precipitation:
Variable: Rain amount (rain_amount)

View More...

Instrument Contacts:

Jenni Kyrouac (Lead)

Stephen Springston (Associate)

Additional Resources:

Instrument/VAP Info

Related Publications

Instrument Handbook

Actions:

Visualize Data

Tag this Data

Add to Cart

- The datastreams will be available via the DataOne member node.
- ARM PIs contribute data using:
<https://arm.gov/policies/datapolicies/data-product-registration-and-submission>

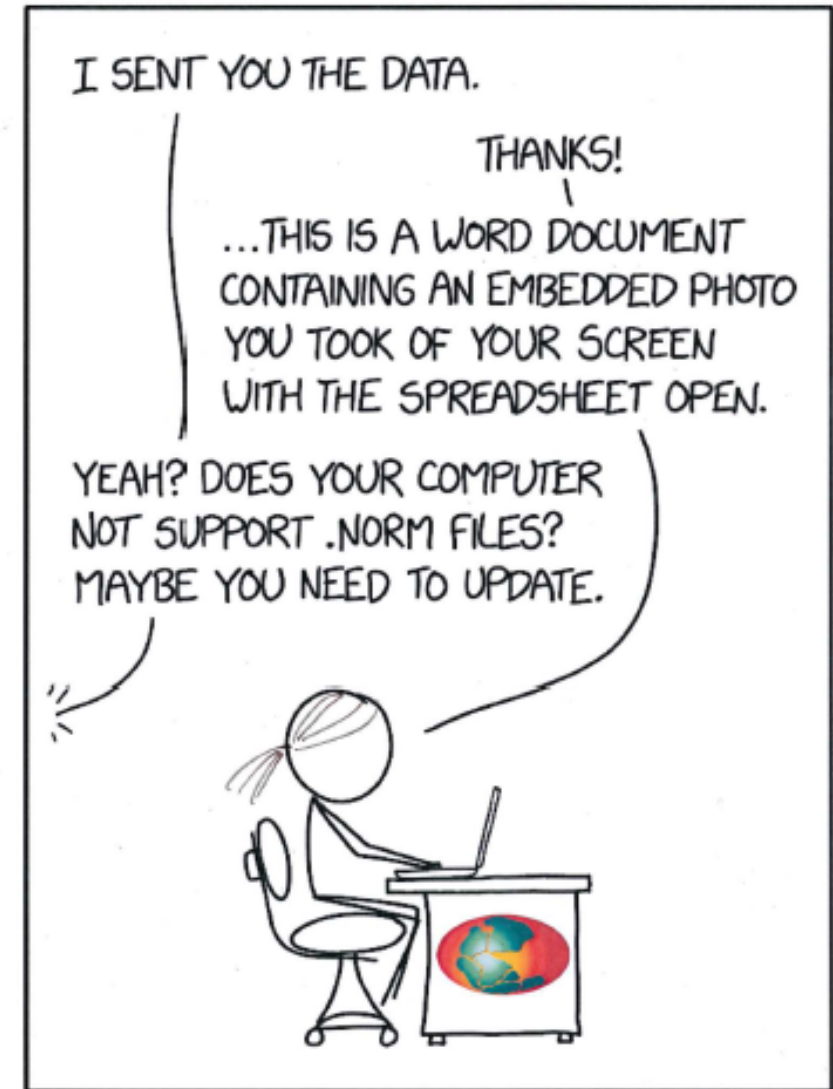
MOSAiC data publication with PANGAEA

The background of the slide is a photograph of sea ice. The ice is a mix of white and light blue, with prominent, wavy, yellowish-brown lines or patterns that resemble algae or sediment. These patterns are spread across the lower two-thirds of the image. The top third of the image is a lighter, more uniform blue/white area, possibly representing a different part of the ice or the sky.

*Photo credit: Oliver Müller, MOSAiC expedition
Melosira algae underneath the sea ice*

Data submission preparation

...to minimize the preparatory work prior to upload



SINCE EVERYONE SENDS STUFF THIS WAY ANYWAY, WE SHOULD JUST FORMALIZE IT AS A STANDARD.

Data submission preparation (tabular data)

- Data might be submitted as TAB-delimited TEXT-files (ASCII) or excel-format
 - For all samples, observations and measurements made somewhere on earth, **georeference is mandatory** (latitude/longitude in decimal degree).
 - Additionally, third dimension: water depth, altitude, depth in ice, ...
 - Date/Time must be provided in ISO-format (e.g. 2020-04-07T13:34:11).
 - For each observation provide **Event (Device operation ID)** in the first column
 - **Parameters** are always accompanied by a **unit**.
 - Abbreviations should be explained.
 - A separate metadata table can be added, with short name / long name / PI / method / comment for each parameter

Data submission preparation (binary files)



- Binary files with specific formats (e.g. shape, netCDF, segy, images, films ...) archived as links to files.
- A file list including
 - Event / Device operation ID
 - Latitude, Longitude
 - Date/Time
 - data description (readme file)
- File names should not contain spaces and special symbols

| | A | B | C | D | E | F | G |
|----|----------------|----------|-----------|-------|------------------|--|--|
| 1 | Event | Latitude | Longitude | Depth | Date/Time | Content | File name |
| 2 | PS122/2_25-44 | 88.0912 | 77.6853 | 33 | 2020-02-18T00:00 | Under-ice fauna in between ice platelets | amphipodvlsnap-2020-02-19-11h15m18s072.png |
| 3 | PS122/2_18-89 | 87.0071 | 115.3934 | 91 | 2020-01-04T00:00 | Brinicles covered in platelets | vlcsnap-2020-01-05-17h51m34s474.png |
| 4 | PS122/2_19-115 | 87.2136 | 111.325 | 41 | 2020-01-11T00:00 | Platelet covered level ice next to "Fort ridge" | vlcsnap-2020-01-12-11h02m09s615.png |
| 5 | PS122/2_19-115 | 87.2136 | 111.325 | 11 | 2020-01-11T00:00 | Platelet covered eastern side of "Fort ridge" site | vlcsnap-2020-01-12-11h03m00s535.png |
| 6 | PS122/2_19-115 | 87.2136 | 111.325 | 17 | 2020-01-11T00:00 | Platelet ice on rope | vlcsnap-2020-01-12-11h18m23s083.png |
| 7 | PS122/2_19-115 | 87.2136 | 111.325 | 42 | 2020-01-11T00:00 | Platelet ice on ridge blocks | vlcsnap-2020-01-12-11h19m57s927.png |
| 8 | PS122/2_19-115 | 87.2136 | 111.325 | 47 | 2020-01-11T00:00 | Platelet ice on level ice and ridge blocks | vlcsnap-2020-01-12-11h20m29s474.png |
| 9 | PS122/2_20-23 | 87.4001 | 105.3323 | 20 | 2020-01-14T00:00 | Platelet ice on ridge blocks next to sediment trap deployment hook | vlcsnap-2020-01-15-06h38m08s331.png |
| 10 | PS122/2_20-23 | 87.4001 | 105.3323 | 26 | 2020-01-14T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-01-15-06h38m20s328.png |
| 11 | PS122/2_20-101 | 87.4132 | 98.2978 | 60 | 2020-01-18T00:00 | Brinicle covered in platelets | vlcsnap-2020-01-19-13h03m54s055.png |
| 12 | PS122/2_20-101 | 87.4132 | 98.2978 | 27 | 2020-01-18T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-01-19-13h10m50s462.png |
| 13 | PS122/2_20-101 | 87.4132 | 98.2978 | 31 | 2020-01-18T00:00 | Platelet ice on hot wire crossbar and ablation stake | vlcsnap-2020-01-19-13h14m54s168.png |
| 14 | PS122/2_21-125 | 87.4053 | 92.83 | 81 | 2020-01-25T00:00 | Platelet ice growing upwards on rafted floe | vlcsnap-2020-01-26-12h36m55s039.png |
| 15 | PS122/2_21-125 | 87.4053 | 92.83 | 45 | 2020-01-25T00:00 | Platelet ice growing upwards on rafted floe | vlcsnap-2020-01-26-12h37m17s483.png |
| 16 | PS122/2_21-125 | 87.4053 | 92.83 | 3 | 2020-01-25T00:00 | Under-ice fauna in between ice platelets | vlcsnap-2020-01-26-12h55m49s566.png |
| 17 | PS122/2_21-125 | 87.4053 | 92.83 | 3 | 2020-01-25T00:00 | Under-ice fauna in between ice platelets close to ROV hole | vlcsnap-2020-01-26-12h56m03s753.png |
| 18 | PS122/2_21-125 | 87.4053 | 92.83 | 35 | 2020-01-25T00:00 | Under-ice fauna and sediment (?) deposit in between ice platelets atop a rafted floe | vlcsnap-2020-01-26-12h57m03s914.png |
| 19 | PS122/2_21-125 | 87.4053 | 92.83 | 74 | 2020-01-25T00:00 | Brinicles covered in platelets | vlcsnap-2020-01-26-13h25m36s839.png |
| 20 | PS122/2_21-125 | 87.4053 | 92.83 | 94 | 2020-01-25T00:00 | Brinicles covered in platelets | vlcsnap-2020-01-26-13h25m42s652.png |
| 21 | PS122/2_22-107 | 87.345 | 95.2801 | 33 | 2020-02-02T00:00 | Platelet ice growth on MYI structures | vlcsnap-2020-02-03-07h00m21s589.png |
| 22 | PS122/2_22-107 | 87.345 | 95.2801 | 89 | 2020-02-02T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-03-07h12m31s555.png |
| 23 | PS122/2_22-107 | 87.345 | 95.2801 | 77 | 2020-02-02T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-03-07h12m31s555.png |
| 24 | PS122/2_22-107 | 87.345 | 95.2801 | 30 | 2020-02-02T00:00 | Platelet ice on protruding spine catching the ROV tether cable | vlcsnap-2020-02-03-07h12m31s555.png |
| 25 | PS122/2_23-29 | 87.4704 | 95.1437 | 40 | 2020-02-04T00:00 | Platelet ice on under-ice ablation stake | vlcsnap-2020-02-05-09h18m49m02s251.png |
| 26 | PS122/2_23-29 | 87.4704 | 95.1437 | 41 | 2020-02-04T00:00 | Platelet ice on under-ice ablation stake | vlcsnap-2020-02-05-09h18m49m02s251.png |
| 27 | PS122/2_23-116 | 87.6688 | 93.8622 | 8 | 2020-02-08T00:00 | Platelet ice along MYI structures | vlcsnap-2020-02-09-18h49m25s189.png |
| 28 | PS122/2_23-116 | 87.6688 | 93.8622 | 52 | 2020-02-08T00:00 | Platelet ice growing on rafted floes | vlcsnap-2020-02-09-18h52m12s840.png |
| 29 | PS122/2_23-116 | 87.6688 | 93.8622 | 11 | 2020-02-08T00:00 | Platelet ice growing on rafted floes | vlcsnap-2020-02-09-18h59m49s773.png |
| 30 | PS122/2_23-116 | 87.6688 | 93.8622 | 68 | 2020-02-08T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-09-19h01m23s342.png |
| 31 | PS122/2_23-116 | 87.6688 | 93.8622 | 23 | 2020-02-08T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-17-07h26m12s452.png |
| 32 | PS122/2_23-116 | 87.6688 | 93.8622 | 49 | 2020-02-08T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-17-07h28m49s856.png |
| 33 | PS122/2_23-116 | 87.6688 | 93.8622 | 76 | 2020-02-08T00:00 | Brinicle with only few platelets | vlcsnap-2020-02-17-07h31m40s224.png |
| 34 | PS122/2_23-116 | 87.6688 | 93.8622 | 9 | 2020-02-08T00:00 | Platelet ice on ridge blocks and on sediment trap deployment hook | vlcsnap-2020-02-17-07h32m07s381.png |
| 35 | PS122/2_24-97 | 88.0688 | 79.8141 | 25 | 2020-02-15T00:00 | Platelet ice growing on rafted floes | |
| 36 | PS122/2_24-97 | 88.0688 | 79.8141 | 75 | 2020-02-15T00:00 | Platelet ice along MYI structures | |
| 37 | PS122/2_24-97 | 88.0688 | 79.8141 | 63 | 2020-02-15T00:00 | Platelet ice on under-ice ablation stake | |
| 38 | PS122/2_24-97 | 88.0688 | 79.8141 | 0 | 2020-02-15T00:00 | Platelet ice on hot wire crossbar and ablation stake | |

<https://doi.pangaea.de/10.1594/PANGAEA.919398>

Data submission preparation



- **Titles** for all your submitted datasets (tables) – different from the paper, should reflect what was measured, where and when
- **MOSAiC** as project
- (Preliminary) paper **citation** – if data related to a publication
- [Abstract](#) – data specific
- Extended documentation (SOPs) – as plain text or pdf-file, or hdl (link to Epic)
- Check more details at [PANGAEA wiki](#)

Data submission

Create Issue

Project **PANGAEA Data Archiving & Publication**

Issue Type **+ Data Submission**

Summary* **py, Alfred-Wegener-Institut, Helmholtz-Zentrum für Polar und Meeresforschung]**

The summary (subject) is used as identifier in the further communication.

Author(s)* **Ransby, Daniela**

Please, enter the author(s) (the principal investigators) for the data set(s) you want to submit. One author per line;
example: Smith, Joe Peter

Title

ABSTRACT and/or further details describing the data.


...

ABSTRACT and/or further details describing the data.

Keywords

Separate keywords by comma or semicolon.

Attachment

 Drop files to attach, or browse.

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ences to articles or submitted manuscripts related to this data submission.

Copy/paste the full citation, preferably with a Digital Object Identifier (DOI name).

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ORCID: Open Researcher and Contributor ID is a nonproprietary alphanumeric code to uniquely identify scientific and other academic authors and contributors.

New submission interface:



- Coming soon!

Basic Informations

Title*

Title max length: 100 chars

What was measured, where and when

The title should ideally reflect what has been measured, observed, or calculated, when, where, and how.

Authors*



Ransby

Daniela

daniela.ransby@awi.de

Alfred-Wegener-Institut, Helm



Please, enter the author(s) (the principal investigators) for the data set(s) you want to submit.

Add an author

Keywords

diatom; ice core; Antarctica; south westerly wind;

Press 'Enter' to create badge.

Abstract/Describe your Data*

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- **WHERE**
- **WHEN**
- **HOW**
- **WHY**

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Where do I find Event /
Device operation ID?

D-ship log → PANGAEA



Device Operation ID (D-ship):

Campaign/Expedition-Leg_Science Activity-No. of Device Operation within Science Activity

The screenshot shows a web browser window with the URL `dship1.fs-polarstern.de:8080/dship-web/`. The browser's address bar and tabs are visible. Below the browser window, a table titled "DShip_ActionLog" is displayed. The table has the following columns: Activity - Device Operation, Timestamp, Device, Action, Latitude, Longitude, Depth (m), Speed (kn), and Co. The table contains five rows of data.

| Activity - Device Operation | Timestamp | Device | Action | Latitude | Longitude | Depth (m) | Speed (kn) | Co |
|-------------------------------|-------------------|--------------------|---------------|---------------|----------------|-----------|------------|----|
| PS122/1_4-1 CTD_SBE9plus_485 | 22.09.2019 09:... | Conductivity-Te... | information | 75° 07,932' N | 039° 05,969' E | 184.0 | 13.1 | |
| PS122/1_3-1 topAWI | 22.09.2019 09:... | Towed Ocean ... | information | 75° 05,362' N | 038° 51,058' E | 186.0 | 13.3 | |
| PS122/1_2-1 AIRGUN_PS | 22.09.2019 08:... | Air Gun | profile start | 74° 59,125' N | 038° 15,496' E | 177.0 | 13.3 | |
| PS122/1_1-1 topAWI | 21.09.2019 18:... | Towed Ocean ... | information | 73° 08,358' N | 029° 49,934' E | 267.0 | 12.7 | |
| PS122/1_0_Underway-60 Weather | 20.09.2019 17:... | Weather Station | station start | 69° 40,773' N | 018° 59,799' E | 0.0 | 0.0 | |

Science Activities and Device Operations

- **Science Activities** are a collection of device operations
- **Device Operations** are your measurements or sampling actions
- Device Operations can be composed of several **actions**



Device operation ID = Event



- Device Operation ID (logged during MOSAiC expedition) = **Event** (in PANGAEA)
Campaign/Expedition-Leg_Science Activity-No. of Device Operation within Science Activity
- Events in PANGAEA are not sub-divided to Actions! (a simplified list)

View and download Event lists by MOSAiC leg: <https://www.pangaea.de/expeditions/byproject/MOSAiC>



PANGAEA.

Data Publisher for Earth & Environmental Science



SEARCH SUBMIT ABOUT CONTACT

Event List of AF-MOSAIC-1

[Download as tab-delimited text](#)

| Event label | Optional label | Method/Device | Sensor URI | Date/Time | Latitude | Longitude | Elevation | Date/Time end | Latitude end | Longitude end | Elevation end | Comment |
|-------------------|----------------|------------------------------------|----------------------|---------------------|----------|-----------|-----------|---------------------|--------------|---------------|---------------|--|
| AF-MOSAIC-1_track | | Underway cruise track measurements | | 2019-09-21T08:00:11 | 69.67879 | 18.99250 | | 2019-10-18T00:19:10 | 84.76533 | 132.13295 | | |
| AF-MOSAIC-1_139 | PS122/1_1-157 | Surface velocity profiler | Link | 2019-09-29T00:36:00 | 85.53700 | 139.03100 | | | | | | Station P40_Measurement:GPS Position__Comment:EUMETNET YOPP buoy. Deployed by heli crew during survey flight.__Old Labels:MO_SVP-I-BXGS-AP,PS122/1_1-157 |
| AF-MOSAIC-1_3 | PS122/1_3-3 | Helicopter | Link | 2019-09-30T00:01:00 | 85.12439 | 137.98501 | | | | | | __Measurement:Sea ice thickness__Comment:EM-Bird survey over floe 4a and in the vicinity. Instrument showed strong drift in signal which may be the result of a broken SBC computer. After flight, computer was replaced and problem solved. Data requires additional processing to compensate for strong instrument drift__Old Labels:HELI_AEM_AWI_20190930,PS122/1_3-3 |
| AF-MOSAIC-1_1 | PS122/1_3-1 | Broadband electromagnetic sensor | Link | 2019-09-30T03:15:00 | 85.12085 | 137.85481 | | | | | | 20190930_Station_001__Measurement:__Comment:__Old Labels:PS122/1_3-1 |
| AF-MOSAIC-1_43 | PS122/1_3-43 | Ice thickness gauge | Link | 2019-09-30T03:21:00 | 85.78149 | 123.69648 | | | | | | Ice Thickness measurement__Measurement:__Comment:__Old Labels:PS122/1_3-43 |
| AF-MOSAIC-1_36 | PS122/1_3-36 | Broadband electromagnetic sensor | Link | 2019-09-30T06:54:00 | 85.10939 | 137.70180 | | | | | | 20190930_Station_002__Measurement:__Comment:__Old Labels:PS122/1_3-36 |
| AF-MOSAIC-1_165 | PS122/1_1-180 | Buoy, universal tracker | Link | 2019-09-30T12:00:00 | 86.18000 | 125.37000 | | | | | | Station P45_Measurement:GPS Position__Comment:Placed during survey flight north of distributed network area. Loc,date estimated from buoy reports.__Old Labels:OSU-UT-0003,PS122/1_1-180 |
| AF-MOSAIC-1_164 | PS122/1_1-179 | Buoy, universal tracker | Link | 2019-09-30T12:00:00 | 85.83000 | 118.19000 | | | | | | Station P44_Measurement:GPS Position__Comment:Placed during survey flight north of distributed network area. Loc,date estimated from buoy reports.__Old Labels:OSU-UT-0001,PS122/1_1-179 |
| AF-MOSAIC-1_44 | PS122/1_3-44 | Ice thickness gauge | Link | 2019-10-01T01:15:00 | 85.71339 | 123.24103 | | | | | | Ice Thickness measurement__Measurement:__Comment:__Old Labels:PS122/1_3-44 |
| AF-MOSAIC-1_45 | PS122/1_3-45 | Ice thickness gauge | Link | 2019-10-03T01:24:00 | 85.19975 | 135.47300 | | | | | | Ice Thickness measurement__Measurement:__Comment:__Old Labels:PS122/1_3-45 |
| AF-MOSAIC-1_154 | PS122/1_1-191 | Buoy, ice tracker | Link | 2019-10-04T11:08:00 | 85.11570 | 133.13030 | | | | | | Station P04_Measurement:GPS Position__Comment:Deployed on small flow along side ship by Daniel Watkins__Old Labels:OSU-IT-0013,PS122/1_1-191 |



Found a mistake in an Event?



- Errors cannot be corrected in D-ship log, but can be corrected in PANGAEA & Sensor web
- Go to for instructions: <https://spaces.awi.de/x/ADFrEw> , download correction sheet and contact PANGAEA (submit correction sheet)



Raw data publishing

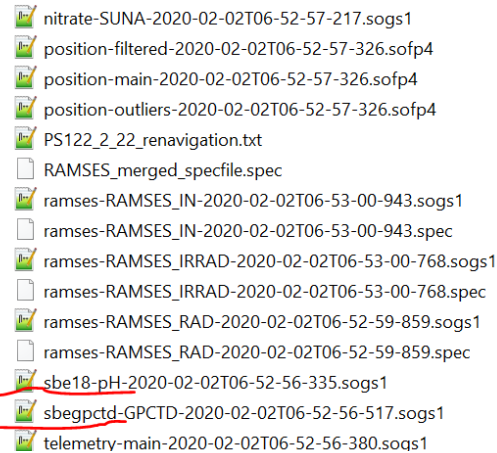
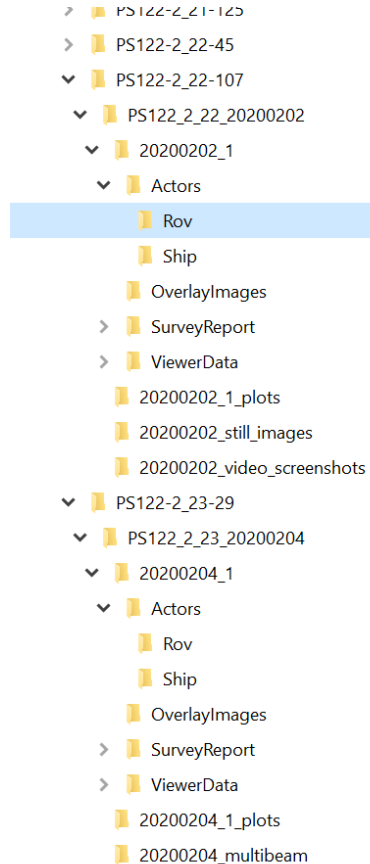


- Raw data publication: semi-automatic in the near future
- The responsible PIs will be informed about the process
- If the raw data wasn't published with PANGAEA at the time of primary data publication yet, and is needed, [contact the PANGAEA team](#)
- During data publication instruct the editors in your data repository to create links to other versions of data (e.g., raw data)

Raw data description

- Each relevant file type must be described prior to submission via the sensor related ingest tab on sensor.awi.de
<https://spaces.awi.de/x/IACZBQ>
- A link to a detailed description (in epic.awi.de) shall be given for non standard RAW files.
- A data directory and files structure description must answer the following questions:
 - Under which path on the MCS are the files stored?
 - Where are the relevant files on the data storage?
 - Naming schema of relevant files. (Prefix, postfix, timestamp, datatype)?
 - Are there files in the data storage which shall not be published. (E.g. redundant data, ...)

Data directory and file description example:



- vehicle:beast:gpctd_0168__ ctd data shall be published.
- Files are stored here:
vehicle/beast/exdata/PS122_..._.../..._1/Actors/Rov/ (. Placeholder)
- File prefix: sbegpctd-GPCTD
- File ending: .sogs1
- If you are familiar with regex filters than it is highly appreciated if you prepare the filters similar to the following example and attach them to the data description on sensor.awi.de.

`".*(?<campaign>PS[0-9]{2,3})-(?<leg>[1-9])_(?<science_operation>[0-9]{1,3})-(?<device_operation>[0-9]{1,3}).*",
".*20[1,2][0-9][0-1][0-9][0-3][0-9]_1/Actors/Rov/sbegpctd-GPCTD-(?<year>20[1,2][0-9])-(?<month>[0-1][0-9])-(?<day>[0-3][0-9])T(?<hour>[0-2][0-9])-(?<minute>[0-5][0-9])-(?<second>[0-5][0-9])-.*.sogs1"`

Data available to MOSAiC team

Onboard MCS Data



Raw and primary data

1

Land MCS



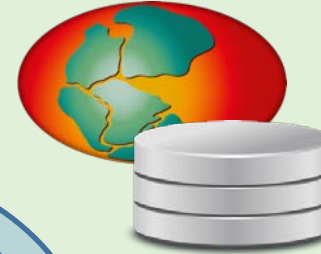
Metadata

| Sensor | |
|--------|---|
| Info | Device (Short Name) |
| | Acoustic Doppler Current Profiler (ADCP) |
| | Anemometer Synchronizer (Synsynchronizer) |
| | Automated Filtration for Marine Microbes (AutoFIM, 10001-120) |
| | Cloud Camera (Cloud Camera) |
| | Conductivity-Temperature-Depth Probe with carousel water sampler (CTD WaterSampler) |
| | Conductivity-Temperature-Depth Probe (Underway CTD) |
| | DESY Micro Detector (Micro Detector) |
| | Differential Optical Absorption Spectrometry (DOAS) |
| | Dust Air Droplet Log (DroLog) |

Primary data

Upon Data-Ticket issued by researcher via Ticketing System of PANGAEA

4



Published data

PANGAEA = Publication with DOI (=> citable)



Link between datasets



Password protection until 2023-01-01 possible (only metadata are visible)



MOSAiC Data not stored on onboard MCS (e.g. buoy data or DOE-ARM)

Raw and primary data

5

Raw data

2



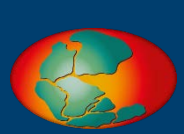
Long term archive

Raw data

Upon request of Researcher, some automated

3





PANGAEA's data management team for MOSAiC



daniela.ransby@awi.de
info@pangaea.de

Information on data publication:
<https://spaces.awi.de/x/AKnFEw>



Welcome to MOSAiC data services

Welcome to the services for MOSAiC provided by the Alfred Wegener Institute.

General information

Web Site

Visit the official MOSAiC web site.

[Goto MOSAiC](#)

MOSAIC Handbook

Visit the MOSAiC Handbook with information about Polarstern and MOSAiC data

[Goto MOSAiC Handbook](#)

Password

Change your password for MOSAiC Account

[Password change](#)

MOSAIC Logbook

Logbook from Polarstern

[Open Logbook](#)

Access the Data

File Transfer

Access Mosaic Data via SFTP Protokoll.

[Open SFTP documentation](#)

JupyterHub

Work with your MOSAiC data in Jupyter notebooks.

[Open JupyterHub](#)

VPN Access

Connect to the AWI network via VPN (for external project members)

[Open VPN documentation](#)

AWI marketplace

Request virtual machines / services from AWI marketplace (VPN required)

[Open marketplace documentation](#)

Observation to Archive (O2A)

SENSOR

Manage your platforms and devices.

[Goto SENSOR](#)

DASHBOARD

Manage your data dashboards.

[Goto DASHBOARD](#)

DATA PORTAL and MAPS

Explore data, metadata and maps.

[Goto DATA](#)

PANGAEA

Find, archive and publish data.

[Goto PANGAEA](#)

O2A Best Practices

Understand the O2A framework.

[Goto documentation](#)

O2A Videos

Learn about O2A components.

[Goto YouTube](#)

O2A Examples

Explore and try data science examples.

[Goto GitHub](#)

O2A Wiki

Visit the MOSAiC O2A information.

[Goto O2A](#)

Ingest Submission Service

Uploading data files according to descriptions in sensor.awi.de

[Goto Ingest Submission Service](#)

Data Publication

Publish MOSAiC datasets

[Goto MOSAiC data publication guideline](#)

support@mosaic-data.org