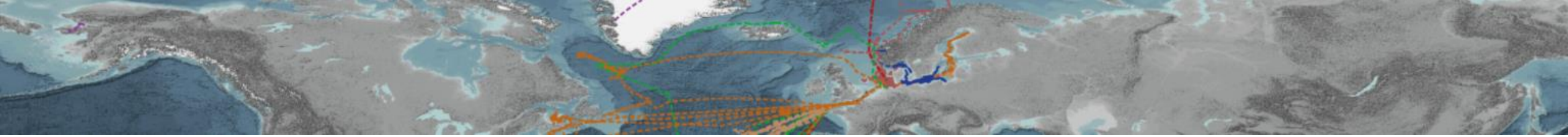


The DAM/DataHUB portal and viewer:

How to improve the visibility of my data?

June 13, 2022 || Digital Science Monday || Ulrike Schroller-Lomnitz



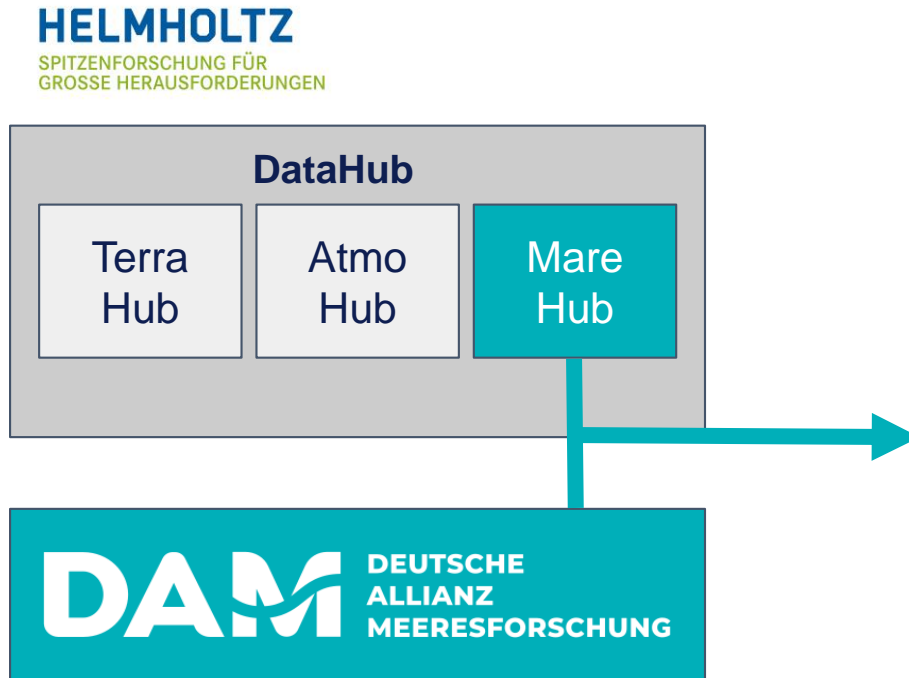
The DAM/DataHUB portal and viewer:

How to improve the visibility of my data?

Outline

1. Where does it come from?
2. What is the portal?
3. What is the viewer?
 - Dataproducts in the viewer
4. Sum up

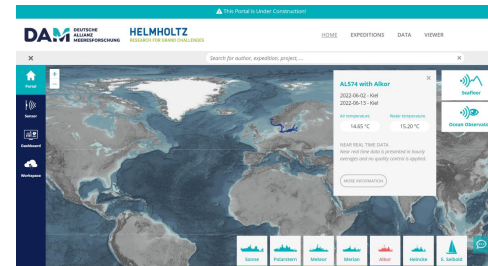
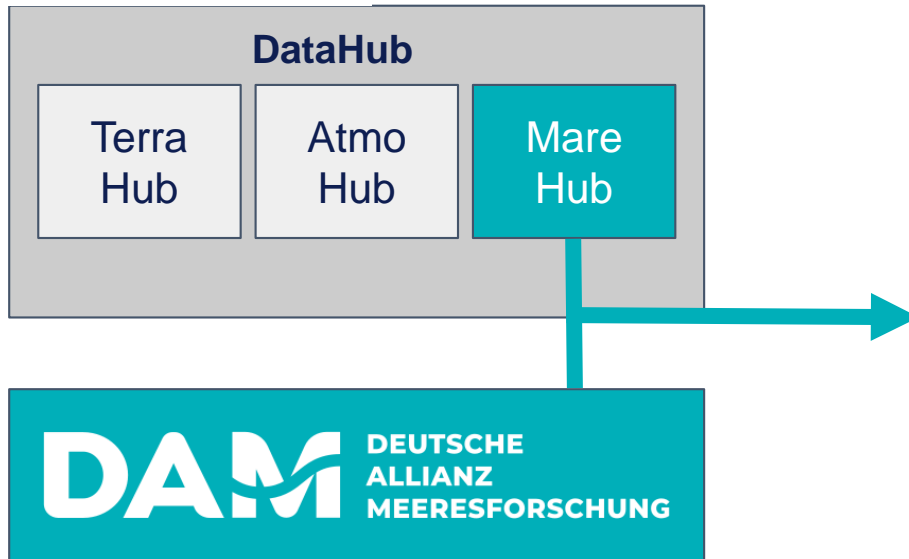
1. Where does it come from?



The screenshot shows the user interface of the DAM Helmholtz portal. At the top, a teal banner reads "This Portal is Under Construction!". The header includes the "DAM DEUTSCHE ALLIANZ MEERESFORSCHUNG" and "HELMHOLTZ RESEARCH FOR GRAND CHALLENGES" logos, along with navigation links for "HOME", "EXPEDITIONS", "DATA", and "VIEWER". A search bar is positioned below the header. The main content area features a large satellite map of the North Atlantic. A data popup for "ALS74 with Alkor" is displayed, showing dates "2022-06-02 - Kiel" and "2022-06-13 - Kiel", and temperature readings: "Air temperature 14.65 °C" and "Water temperature 15.20 °C". A note states "NEAR REAL TIME DATA Near real time data is presented in hourly averages and no quality control is applied." with a "MORE INFORMATION" button. A vertical sidebar on the left contains icons for "Portal", "Sensor", "Dashboard", and "Workspace". On the right, there are icons for "Seafloor" and "Ocean Observatory". At the bottom, a row of ship icons is labeled "Sonne", "Polarstern", "Meteor", "Merian", "Alkor", "Heincke", and "E. Seibold".

1. Where does it come from?

HELMHOLTZ
SPITZENFORSCHUNG FÜR
GROSSE HERAUSFORDERUNGEN



Marine Data portal with thematic viewers

MareHub & DAM working groups

| | |
|-------------------|-------------------|
| Ocean Observation | Raster Analytics |
| Seafloor | Video & Images |
| Bathymetry | Sample Management |
| Ocean Sound | Viewer & Portal |

- The working groups represent scientific research areas and **deliver requirements & data** to the working group **Viewer & Portal**
- New features are presented and requirements are discussed in a regular jour fixe (every four weeks)
- Portal under construction, Feedback welcome

1. What is the portal?

Marine Data is a national cross-institute portal for finding, visualizing and downloading marine research data

- enables scientists to search effectively through access to a big amount of data on a centralized entry point
- decentralized data storage → many data providers already connected (Pangaea, Oceanrep, HCDC, etc.)

The screenshot displays the Marine Data portal interface. At the top, a teal banner reads "This Portal is Under Construction!". Below this, the logos for "DAM DEUTSCHE ALLIANZ MEERESFORSCHUNG" and "HELMHOLTZ RESEARCH FOR GRAND CHALLENGES" are visible, along with navigation links for "HOME", "EXPEDITIONS", "DATA", and "VIEWER". A search bar contains the text "sfb 754". The main content area is divided into a left sidebar with icons for "Portal", "Sensor", "Dashboard", and "Workspace", and a central panel. The central panel features a "MAP" section with a satellite map of the North Atlantic and Arctic regions, overlaid with several blue location pins. Below the map are filters for "Temporal Coverage" and "Author", with "Andreev, Sergey I (5)" listed under the author filter. To the right of the map, there are tabs for "DATASETS", "PUBLICATIONS", "REPORTS", and "MAPS", and a "SORT BY:" dropdown set to "RELEVANCE". A "SELECTED FILTERS:" section shows "dataset x". The search results list three entries:

- SFB754 Stable and radiogenic isotope measurements (2021)**
Grasse, Patricia; Mehrtens, Hela
<https://doi.org/10.1594/PANGAEA.926610>
- SFB754 Thermosalinograph (TSG) measurements (2021)**
Krahmann, Gerd; Mehrtens, Hela
<https://doi.org/10.1594/PANGAEA.926530>
- SFB754 Deployments of oxygen-sensor equipped ARGO floats (2021)**
Krahmann, Gerd; Mehrtens, Hela

Each result entry includes icons for sharing, linking, and a question mark. A chat bubble icon is also visible in the bottom right corner of the interface.

marine-data.de

1. What is the portal?

- **Core Feature:** Search engine for data and expeditions
- **FAIR:** Findable, Accessible Interoperable, Reusable
- Data portal offers free text search and various filter functions (e.g. spatial, temporal, authors, devices, platforms, etc)
- Map-based

The screenshot displays the marine-data.de portal interface. At the top, a teal banner reads "This Portal is Under Construction!". Below this, the header includes the logos for "DAM DEUTSCHE ALLIANZ MEERESFORSCHUNG" and "HELMHOLTZ RESEARCH FOR GRAND CHALLENGES", along with navigation links for "HOME", "EXPEDITIONS", "DATA", and "VIEWER". A search bar contains the query "sfb 754". The main content area is divided into a left sidebar with navigation icons for "Portal", "Sensor", "Dashboard", and "Workspace", and a central panel. The central panel features a "MAP" section with a satellite view of the North Atlantic and Arctic regions, overlaid with several blue location pins. Below the map are filter dropdowns for "Temporal Coverage" and "Author", with "Andreev, Sergey I (5)" selected under the author filter. To the right of the map, there are tabs for "DATASETS", "PUBLICATIONS", "REPORTS", and "MAPS", and a "SORT BY" dropdown set to "RELEVANCE". A "SELECTED FILTERS" section shows "dataset x". The search results list three entries:

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Each result entry includes icons for sharing, linking, and a question mark. A chat bubble icon is visible in the bottom right corner of the interface.

<https://marine-data.de>

2. What is the portal?

Sitemap /-structure

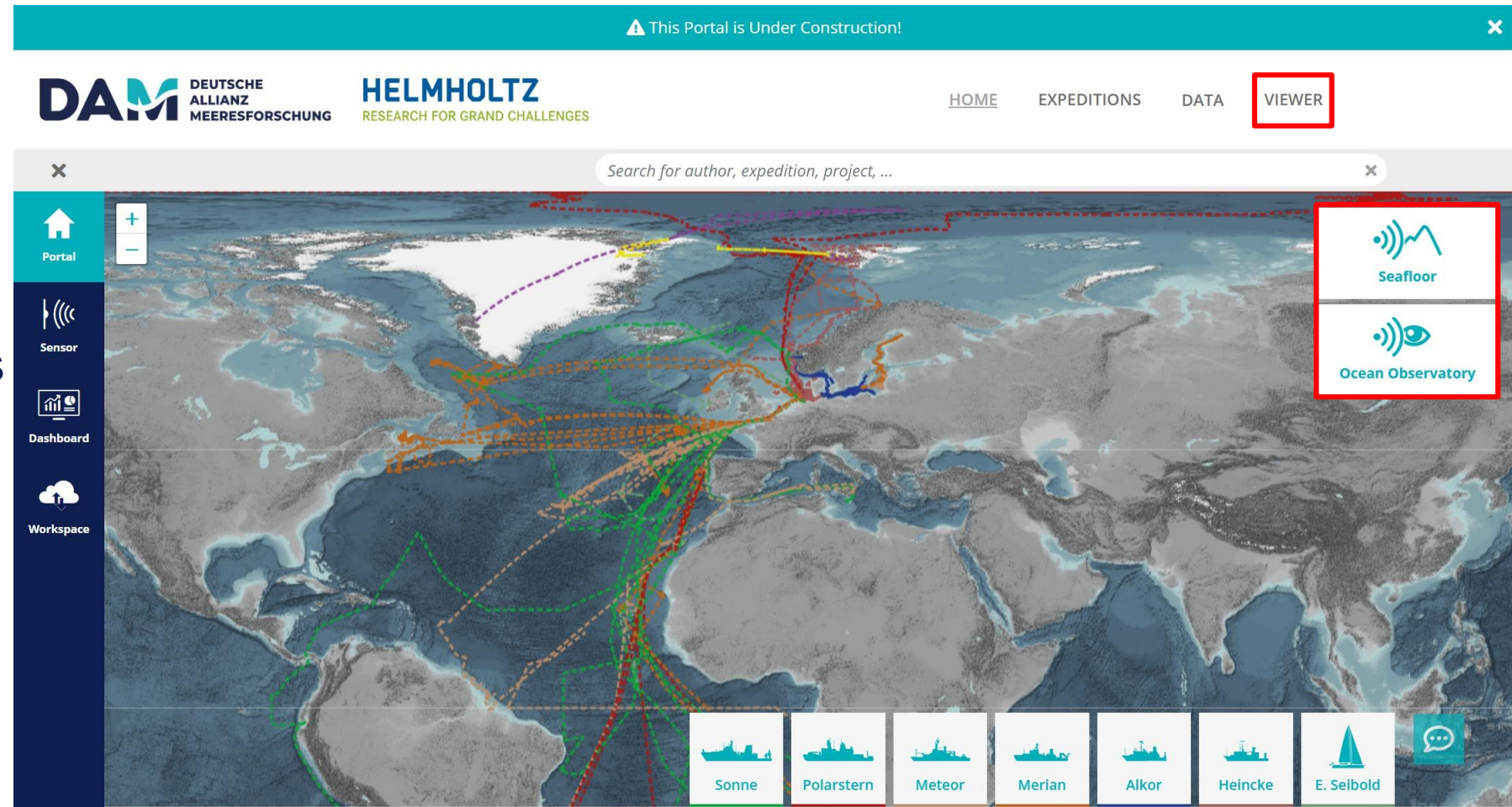
Live Demo

<https://marine-data.de/>

The screenshot displays the marine-data.de portal interface. At the top, a teal banner contains the text "This Portal is Under Construction!". Below this, the header features the logos for "DAM DEUTSCHE ALLIANZ MEERESFORSCHUNG" and "HELMHOLTZ RESEARCH FOR GRAND CHALLENGES". Navigation links for "HOME", "EXPEDITIONS", "DATA", and "VIEWER" are positioned to the right. A search bar with the placeholder "Search for author, expedition, project, ..." is located below the header. The main content area is a map of the Arctic region, overlaid with various colored lines and markers representing data. On the left side, a dark blue sidebar contains navigation icons for "Portal", "Sensor", "Dashboard", and "Workspace". On the right side, there are two white boxes with icons and labels: "Seafloor" and "Ocean Observatory". At the bottom of the map, a row of ship icons is displayed, labeled "Sonne", "Polarstern", "Meteor", "Merian", "Alkor", "Heincke", and "E. Seibold". A chat icon is visible in the bottom right corner of the map area.

3. What is the viewer?

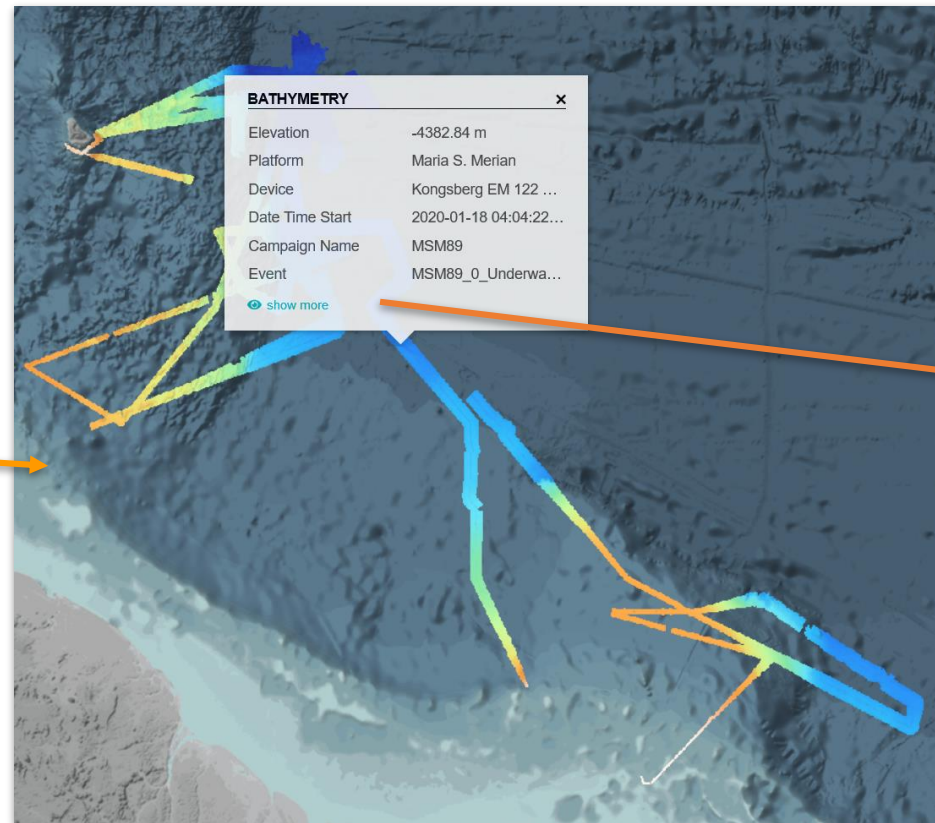
- Two viewer instances with individual configuration options
- Selection of curated data sets to explore



3. Viewer Data Products - Bathymetry

LAYER TREE

- Expeditions
- Water
 - Samples
 - In-Situ
 - Remote Sensing or Modelled
- Sediment
 - In-Situ
 - Remote Sensing or Modelled
- Bathymetry**
- Gazetteers



PANGAEA MULTIBEAM RAW DATA BATHYMETRY (0... X

SOURCE & DOWNLOAD

Source (DOI) <https://doi.org/10.1594/PAN...>
PANGAEA Dataset ID 923066

FILE INFO

File Suffix .all
MBIO MB-System Data Format 58

REFERENCES

Citation Karstensen, Johannes; Lavik...
License CC-BY-4.0
Access Rights unrestricted

MEASUREMENT INFO

Platform Maria S. Merian
Platform Type (NERC L06 SeaVc research vessel)
Method (NERC L05 SeaDataNet multi-beam echosounders)
Device (NERC L22 SeaVoX Devic Kongsberg EM 122 multibea...
Sensor URN void
Ancillary SVP Available no
Date Time Start 2020-01-18 04:04:22.095 UTC
Date Time End 2020-02-19 18:30:39.077 UTC
Elevation (Minimum) -6477.00 m
Elevation (Maximum) -42.00 m
Elevation -4382.84 m

CAMPAIGN & PROJECT INFO

Campaign Name MSM89
Campaign Optimal Name EUREC4A
Cruise Report (DOI) https://doi.org/10.2312/cr_...
Campaign Start 2020-01-17 00:00:00 UTC
Campaign Start Location Bridgetown
Campaign End 2020-02-20 00:00:00 UTC
Campaign End Location Bridgetown
Expedition Program <https://www.lfd.uni-hambur...>
BSH ID 20200086
Project Label DAM
Project Name Underway Research Data
Project URI <https://www.allianz-meeresf...>

PANGAEA STATUS

PANGAEA Curation Level Enhanced curation

PANGAEA EVENT INFO

Event Name MSM89_0_Underway-9
Depth Type ELEVATION, Bathymetric

DAM underway research data (Anne Wölfel)

Clicking on the data opens a popup with measurement-specific metadata—including a reference to the source

3. Viewer Data Products: Videos & Images

You can explore video and image data (e.g. OFOS) and directly play it in the viewer (Timm Schöning)

The screenshot displays the DAM (Deutsche Allianz Meeresforschung) viewer interface. At the top, there are logos for DAM and HELMHOLTZ, along with navigation links for HOME, EXPEDITIONS, DATA, and VIEWER. The main area features a map of the Pacific Ocean with a video player overlay. The video player shows a timestamp of 1:51:00 / 2:07:29. A metadata panel on the right provides details for the video, including its title, date, coordinates, and format.

VIDEO | QUICKTIME / MOV

| | |
|------------|----------------------------|
| Date Time | 2019-03-16 22:41:55 ... |
| Event | SO268_63-1 |
| Device | ofos_sonne |
| Resolution | 1920 x 1080 px |
| Codec Name | prores |
| Frame Rate | 29.97 fps |

[show more](#)

◀ previous 1 / 20 next ▶

VIDEOS

[View Keyboard Shortcuts](#)

SPACE & TIME

| | |
|--------------|-------------------------|
| Date Time | 2019-03-16 22:41:55 UTC |
| Coordinates | 14.10° N, 125.88° E |
| Marine Zone | seafloor |
| DEPTH, water | 4454 m |

EVENT

| | |
|------------|----------------------------|
| Event | SO268_63-1 |
| Expedition | SO268 |
| Platform | Sonne |
| Device | ofos_sonne |

GENERAL

| | |
|--------|-----------------|
| Format | QuickTime / MOV |
|--------|-----------------|

Leantier | Altred-Wegener-Institut

3. Viewer Data Products: Bio & Geo Samples

Bio Samples – BIS (Jakob Eckstein, Felix Mittermayer)

OCEAN OBSERVATORY

Search for author, expedition, project, ...

LAYER TREE

- Expeditions
- Expedition Events
- Tracklines
- Water
 - Samples
- In-Situ
 - Chlorophyll
 - Pressure
 - Salinity
 - Temperature
 - Turbidity
 - Alkalinity
 - Current
 - Oxygen
 - Videos
- Remote Sensing or Modelled
 - Chlorophyll a

SAMPLES

SPACE & TIME

| | |
|-------------|-------------------------|
| Date Time | 2001-05-31 00:00:00 UTC |
| Coordinates | 55.63° N, 16.00° E |
| depth | 74 m |

EVENT

| | |
|------------|-------|
| Expedition | AL182 |
| Event | BB07 |

DATA

| | |
|-------------------------|-----------|
| Method | Net |
| Original Parameter Name | Sample ID |

REFERENCES

| | |
|---------|---------------|
| Curator | GEOMAR(Felix) |
|---------|---------------|

show more

previous 1 / 50 next

Geo Samples – CurationDIS

OCEAN OBSERVATORY

Search for author, expedition, project, ...

LAYER TREE

- Expeditions
- Expedition Events
- Tracklines
- Water
 - Samples
- In-Situ
 - Chlorophyll
 - Pressure
 - Salinity
 - Temperature
 - Turbidity
 - Alkalinity
 - Current
 - Oxygen
 - Videos
- Remote Sensing or Modelled
 - Chlorophyll a

SAMPLES

SPACE & TIME

| | |
|-------------|-------------------------|
| Date Time | 2010-10-07 00:00:00 UTC |
| Coordinates | 36.63° S, 73.76° W |
| depth | 1825 m |

EVENT

| | |
|------------|--------------|
| Expedition | SO210/1 |
| Event | SO210-43GC14 |

DATA

| | |
|-------------------------|---------------|
| Method | Corer.Gravity |
| Original Parameter Name | Sample ID |

REFERENCES

| | |
|--------------|---|
| Metadata URL | https://portal.geomar.de/me... |
| Curator | GEOMAR(Doris) |

show more

previous 1 / 4 next

3. Viewer Data Products: Model Data

GEOMAR THREEDS (Klaus Getzlaff)

The screenshot displays the GEOMAR THREEDS viewer interface. At the top, there are logos for DAM (Deutsche Allianz Meeresforschung) and HELMHOLTZ (Research for Grand Challenges), along with navigation links for HOME, EXPEDITIONS, DATA, and VIEWER. A search bar is present with the text "Search for author, expedition, project, ...".

The main interface is divided into several panels:

- SEAFLOOR Panel:** Contains a "LAYER TREE" with a search box containing "sea". The tree lists various data layers, including "Sea surface temperature [°C] of Baltic Sea (2020, daily)", "Mirounga leonina", "Potential temperature [°C] at sea floor o...", "Sea surface salinity [psu] of Baltic Sea (2020, daily)", "Sea-ice Minimum", "Sea Vox Gazetteer", and "Practical salinity [psu] of Baltic Sea (2020, daily)". Below the tree, there are checkboxes for "Gazetteers" and "Sea surface temperature [°C] of Baltic Sea (2020, daily)". A "TEMPORAL COVERAGE" section shows a date range from "1980-01" to "2022-12" with a slider. There is also a "FILTER TRACKS BY VEHICLE" section.
- Map Panel:** Shows a 3D bathymetric map of the Baltic Sea region. A color-coded overlay represents sea surface temperature, with a legend below it titled "SEA SURFACE TEMPERATU...". The legend is a vertical color bar ranging from blue (low temperature) to red (high temperature).
- SEA SURFACE TEMPERATURE [°C] OF BALTIC SEA (2020, D... Panel:** Contains "LAYER INFORMATION" and "SERVICE ABSTRACT".

| LAYER INFORMATION | |
|--------------------------|----------------------------------|
| Title | Sea surface temperature [°... |
| Spatial Reference System | EPSG:4326, CRS:84, EPSG:4... |
| Processing Level | NASA Level 4 |
| Data Type | grid |
| Date Time Start | 2020-01-01T12:00:00 |
| Date Time End | 2020-10-13T12:00:00 |
| Axis Names | time, latitude, longitude |
| Output Formats | image/png, image/png;mod... |
| Available Styles | boxfill/thermal, boxfill/curl... |
| Name | sea_surface_temperature |

SERVICE ABSTRACT

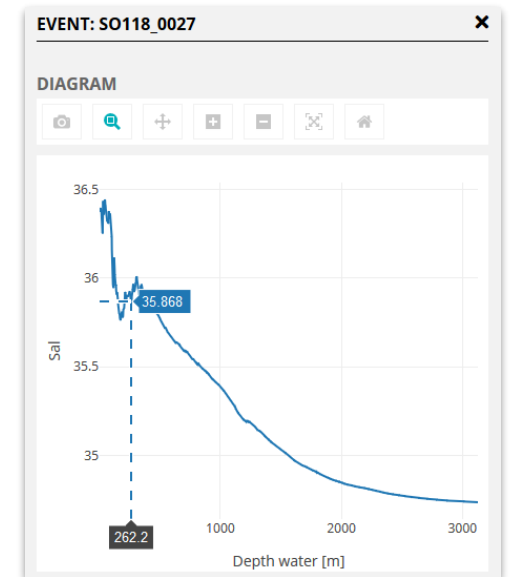
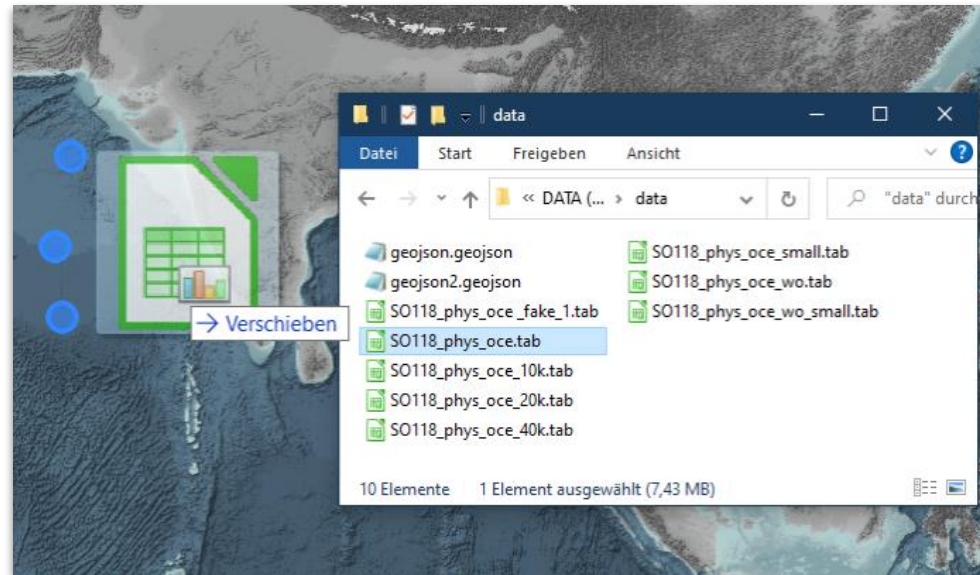
Hindcast simulation (1979-2020) using HRBSIOM configuration based on configuration described in <https://doi.org/10.1016/j.jmarsys.2014.02.012> with ERA5 atmospheric forcing applied (<https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5>) Cite as: Lehmann, Andreas, and Getzlaff, Klaus (2020). Simulated daily conditions at sea surface of Baltic Sea in 2020 at 2.5 km resolution [Data set]. hdl:20.500.12085/8e682d6e-8d78-43e9-82e9-b590e1e0dafa

SERVICE INFORMATION

| | |
|---------|--------------------------------|
| Title | Simulated daily conditions ... |
| Name | hdl:20.500.12085/8e682d6... |
| License | CC BY 4.0 |

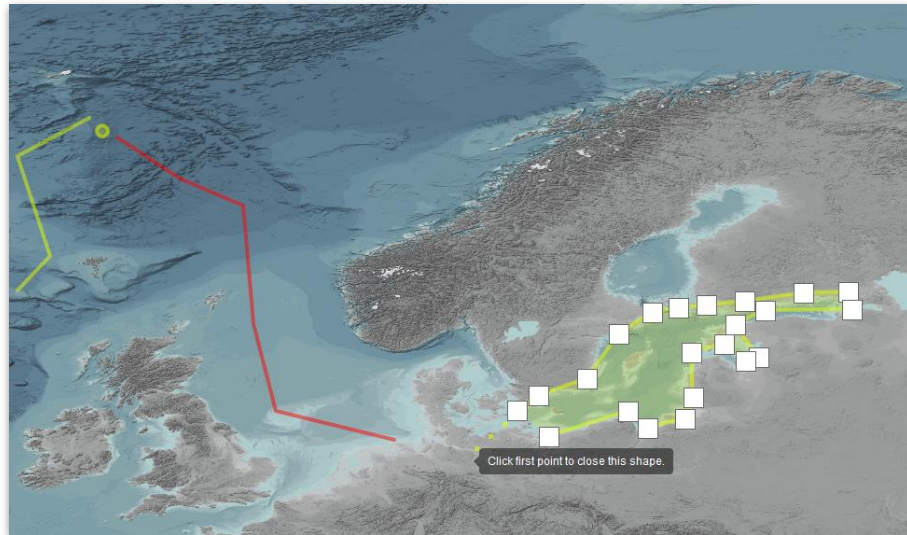
3. Viewer: Drag & Drop

- Drag & drop of local ***.geojson** and ***.csv/*.tab** files
- Currently only for depth profiles
- Supports PANGAEA ***.tab** format
- Includes simple graph visualizations

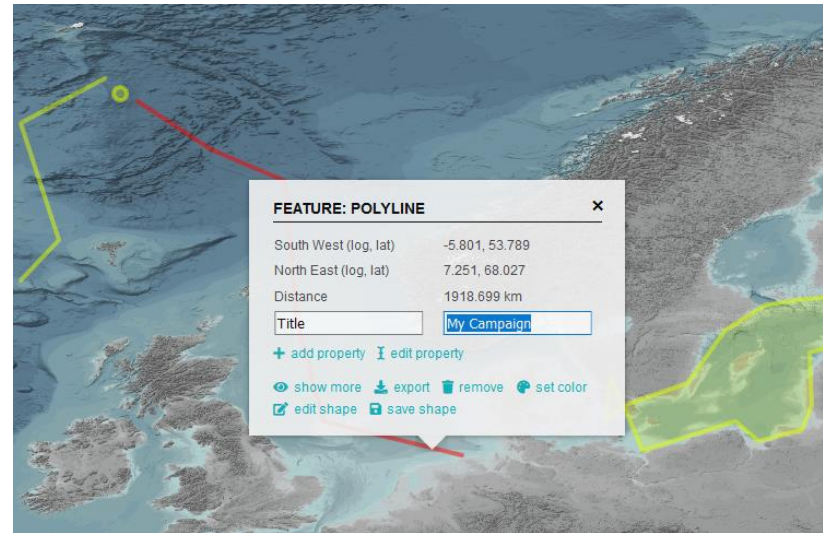


3. Viewer: Drag & Drop

The drawing tool allows drawing custom geometries in the viewer



Drawing directly on the map



Adding annotations and exporting geometries

Planned Feature:
Cut out data and add it to a “shopping cart”

Sum up: Your data – your visibility

- **Publish** your data in a recommended **data repository**:
- follow the existing GEOMAR publication workflow – Tutorials on GEOMAR- Portal Website: <https://portal.geomar.de>
- use the information on the internal website <https://intranet.geomar.de/en/ze/idrz/digital-research-services-department/>
- add the necessary metadata to describe your dataset and make it unique
- **your data sets are incorporated automatically in the portal and on the longterm perspective in the viewer**

The screenshot shows the GEOMAR website interface. At the top, there is a navigation bar with 'HOME', 'RESEARCH DATA', 'TUTORIALS', 'SIGN UP', 'PROJECTS', 'READ MORE', and 'CONTACT US'. Below this, there are sections for 'OSIS TUTORIAL' and 'RESEARCH PROJECTS'. The 'OSIS TUTORIAL' section includes links to 'PANGAEA DATA SUBMISSION TUTORIAL', 'MEDIA-LIBRARY (ELEMENTS)', 'DSHIP TUTORIAL V.2', 'DSHIP TUTORIAL V.3', 'SUBVERSION TUTORIAL', 'INTERNAL GIT TUTORIAL', 'GUIDE FOR HANDLING', 'SUPPLEMENTARY DATA', 'JUPYTER NOTEBOOK FOR MATLAB', and 'TUTORIAL RESEARCH SOFTWARE'. The 'RESEARCH PROJECTS' section features logos for 'CDRmare', 'CUSCO EVAR REEBUS', and 'MOSES'. Below these, there is a section for 'DATA MANAGEMENT SERVICES' with the heading '"Open Access" Research Data' and a list of services including 'OSIS - Kiel (Ocean Science Information System)' and 'How To - Integrate your Data'.

The screenshot shows the GEOMAR Intranet website. At the top, there is a navigation bar with 'Home', 'Deutsch', 'Search', and 'Quick access'. Below this, there is a section for 'Digital Research Services (DRS)'. The 'DRS' section includes a description of the department's responsibilities and a list of services such as 'Digital Research Services for Science' and 'Our networking and collaborations'. There is also a 'Contact' section with the name 'Head of Department Dr. Andreas Lehmann' and an email address 'datamanagement@geomar.de'. At the bottom, there is a 'TOP PAGES' section with links to 'Form Centre', 'Purchase', 'Personnel', and 'Information, Data and Computing Centre'. A central graphic titled 'Our offerings for science' shows various services like 'High Performance Computing (HPC)', 'Data Management Consulting & Workshops', 'Data Management Portal', 'Data Management Plan', 'Data Services Tutorials', and 'Data Management Plan'.

Sum up: Your data – your visibility

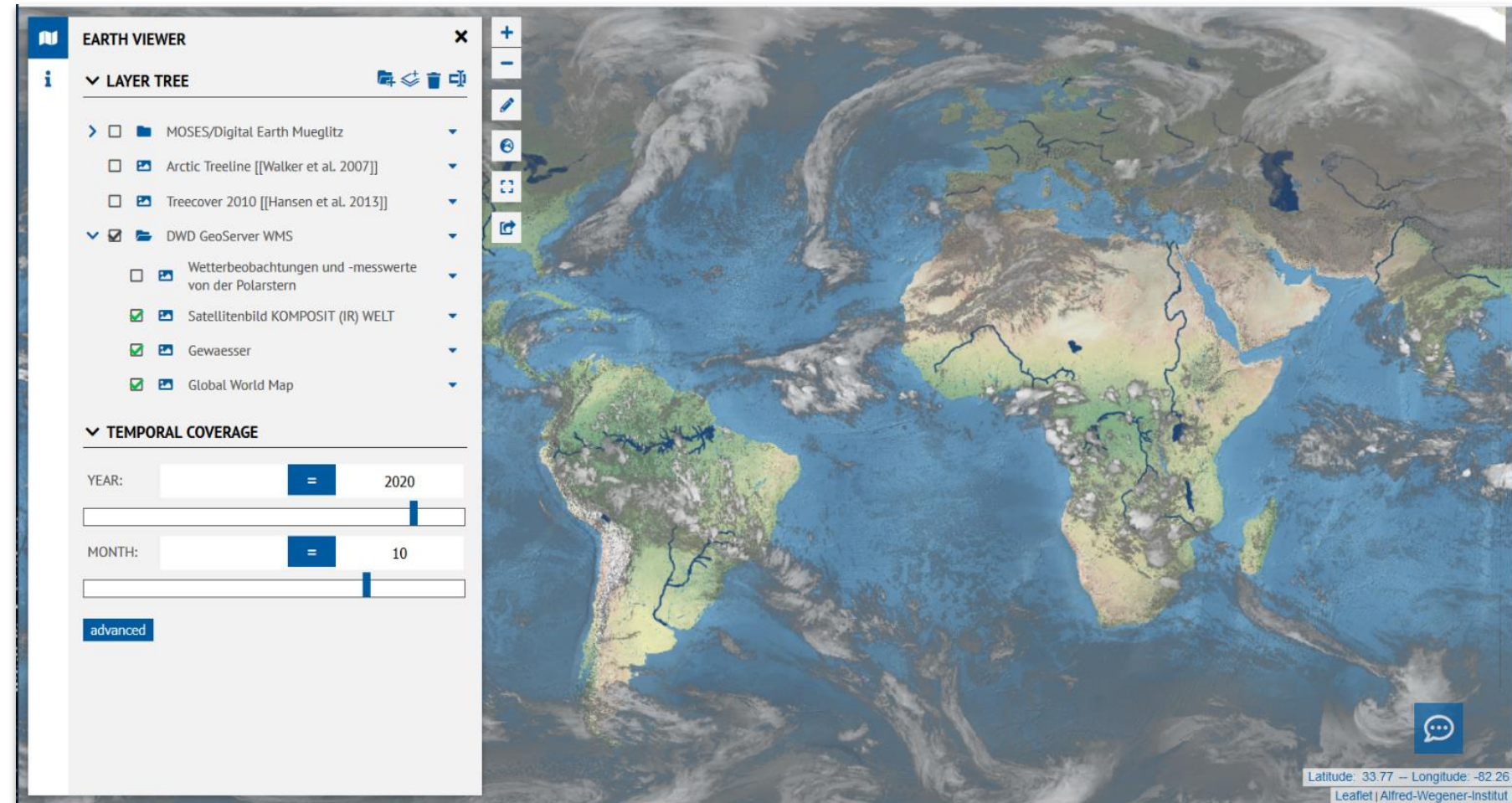
Explore the Marine Data Portal by yourself and use the Feedback button!

<https://marine-data.de>

The screenshot displays the Marine Data Portal interface. At the top, a teal banner contains the text "This Portal is Under Construction!". Below this, the logos for "DAM DEUTSCHE ALLIANZ MEERESFORSCHUNG" and "HELMHOLTZ RESEARCH FOR GRAND CHALLENGES" are visible, along with navigation links for "HOME", "EXPEDITIONS", "DATA", and "VIEWER". A search bar is positioned above the main map area, with the placeholder text "Search for author, expedition, project, ...". The central part of the interface is a world map showing various colored tracks (red, orange, green, blue, purple) representing data collection paths. On the left side, there is a dark blue sidebar with icons for "Portal", "Sensor", "Dashboard", and "Workspace". On the right side, there are two white boxes with icons for "Seafloor" and "Ocean Observatory". At the bottom, a row of ship icons is shown, labeled "Sonne", "Polarstern", "Meteor", "Merian", "Alkor", "Heincke", and "E. Seibold". A red square highlights a feedback icon (a speech bubble with three dots) in the bottom right corner of the map area.

Outlook

- Marine Data is under construction and will be developed further
- Technical infrastructure of Marine Data will be transferred to build a broader **Earth Data Portal** to visualize terrestrial and atmospheric data from the DataHub context



The domain earth-data.de is already registered – currently redirects to Marine Data

Thank you for your attention

