



Collaborative  
Data Infrastructure



Collaborative  
Data Infrastructure

## B2FIND

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*Claudia Martens | DKRZ / EUDAT  
Sept 14th 2022*

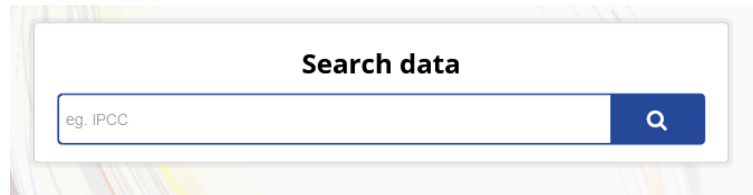


eudat.eu

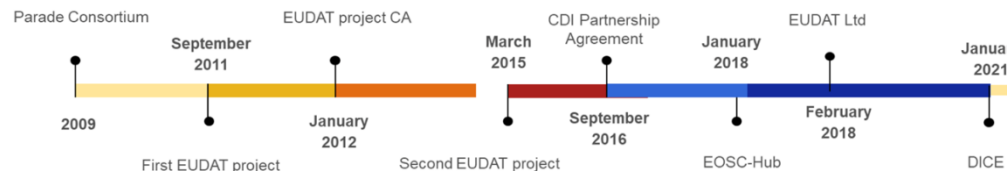


@eudat\_eu

## Overview



- ❖ **existing** simple and user-friendly **discovery portal** for **research data**
- ❖ evolving system, focus on **Community specific needs**, practical approach
- ❖ joint metadata catalogue for records from **divergent research areas**, stored in **EUDAT data centers** and beyond
- ❖ started **2012 in EUDAT Project**, ever evolving system, central indexing tool in **EOSC-hub**, registered discovery service in **EOSC**



# Workflow

upload

CKAN Postgres DB

harvesting

OAI-PMH,  
CSW,  
RestAPI



mapping

DublinCore,  
Datacite,  
OpenAire,  
EUDAT Core

ISO 19115/19139  
[INSPIRE],  
DDI 2.5

community  
specific

## Update: structure

DATA CATALOG

COMMUNITIES

REPOSITORIES

FOR PROVIDERS

FOR USERS

ABOUT

### Communities

Communities are research infrastructures, metadata aggregators, or thematic projects that generate research data. Several individual repositories may form a community in B2FIND to enable a common project-related search space.

### Repositories


In B2FIND, repositories represent metadata harvested from one harvesting endpoint or metadata provider. Several repositories may form a community and thus create a search space for e.g. a certain research projects or -infrastructure.

## Benefit

Making research projects and infrastructures visible as well as their associated members; creating Community-related search spaces

# Examples


Home / Communities / PaNOSC



**PaNOSC**  
The PaNOSC project, Photon and Neutron Open Science Cloud, brings together six strategic European research infrastructures (ESRF, CERIC-ERIC, ELI Delivery Consortium, the...  
[read more](#)

Followers: **0**  
Datasets: **2.7k**

**Spatial Coverage**



Temporal Coverage

Publication Year

Repositories

Filter: 9-1

ESRF (2332)  
ESS (456)  
CERIC (7)

Communities

PaNOSC (2735)

Datasets About

Search datasets... Q

**2,795 datasets found** Order by: Relevance

**Degradation of green historical pigment Verdigris**  
Preliminary study in order to establish the suitability of the instrumental method

**2022\_SciComPty\_paper**  
Data and metadata used in a 2022 manuscript on the SciComPty ptychography software framework

**manuscript\_dataset\_sample\_prep\_XRF2022**  
FAIR and Open dataset for the manuscript...

**Crystallisation lab-Marta**  
20195588-2

**PyPore3D**  
FAIR and Open data repository for the raw data of the manuscript : PyPore3D: An open source software tool for imaging data processing and analysis of porous and multiphase...


**manuscript\_dataset\_for\_Compressive\_Sensing\_for\_Dynamic\_XRF\_Scanning**  
Open/FAIR Dataset of Synchrotron Low Energy XRF and STXM files used in a manuscript on "Compressive Sensing for Dynamic XRF Scanning" Synchrotron Low Energy XRF and STXM Dataset...

**COVID-19 Multiscale Imaging of COVID-19 Lung Injury Patterns Bridges the Gap ...**  
This is an addition to Fast-track Proposal #20202210 (SISS/AFM), please process the proposals combined. COVID-19 related project in conjunction with structural lung...

**Sample Data from V20**  
This data was collected as part of BrightnESS, funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant...

**Sample Data from V20**  
This data was collected as part of BrightnESS, funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant...


Home / Communities / Nordic Archaeology



**Nordic Archaeology**  
This Community consists of records from Danish and Norwegian Sites and Monuments Data Providers. Askeladden is a Norwegian database system for managing cultural heritage...  
[read more](#)

Followers: **0**  
Datasets: **398.1k**

**Spatial Coverage**



Temporal Coverage

Publication Year

Repositories

Filter: 9-1

SLKS (206279)  
Askeladden (191836)

Communities

Nordic Archaeology (398114)

Datasets About

Search datasets... Q

**398,114 datasets found** Order by: Relevance

**130812-354 Viskum Høje**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: Mulig del af jysk...

**090702-2 Tante Dorthes have**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: Skår af glaseret...

**010510-57 Kassemose**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: Fund af...

**010510-56 Kassemose**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: to...

**090704-198 St. Rise**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: Grube med skår af...

**200103-271 Fuglebæk**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: bjergartsakse...

**010109-218 Hyrdehøj**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: Fund af tre...

**160406-277 Addit**  
This record describes ancient sites and monuments as well archaeological excavations undertaken by Danish museums. Excerpt of the Danish description of events: 2020-03-05:...

# Update: documentation



DATA CATALOGUE

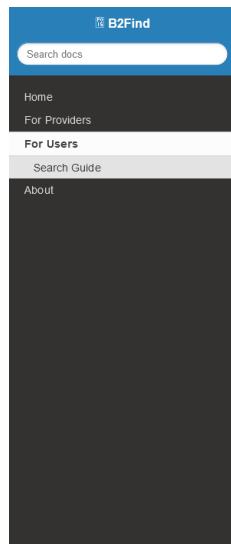
REPOSITORIES

COMMUNITIES

FOR PROVIDERS

FOR USERS

ABOUT



»For Users

## For Users

### Search Guide

#### The B2FIND Portal

You can access the EUDAT metadata discovery portal B2FIND at [b2find.eudat.eu](http://b2find.eudat.eu). It can be utilized in two ways:

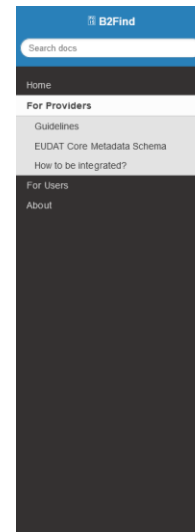
- The discovery web portal supports user-friendly navigation and filtering features. Powerful search functionalities are provided, that include:
  - Free text search over the full text bodies of all datasets indexed in the B2FIND catalogue
  - Geospatial and temporal search for all datasets, that cover a chosen region or, respectively, a chosen time period.
  - Other faceted search, i.e. selecting values from certain metadata fields

In the following we describe the usage of B2FIND step by step.

#### Welcome

The B2FIND homepage is your starting point.

DATA CATALOG COMMUNITIES REPOSITORIES FOR PROVIDERS FOR USERS ABOUT



»For Providers

## For Providers

### Guidelines

Welcome to the guidelines of EUDAT's metadata service B2FIND for data providers. B2FIND gathers diverse metadata on the research output of many heterogeneous sources with the aim of providing a unified discovery portal. The portal then allows widespread and cross-disciplinary search and access to the underlying data collections. These guidelines are intended to provide information about the requirements for successful metadata integration into B2FIND.

#### Providing Metadata

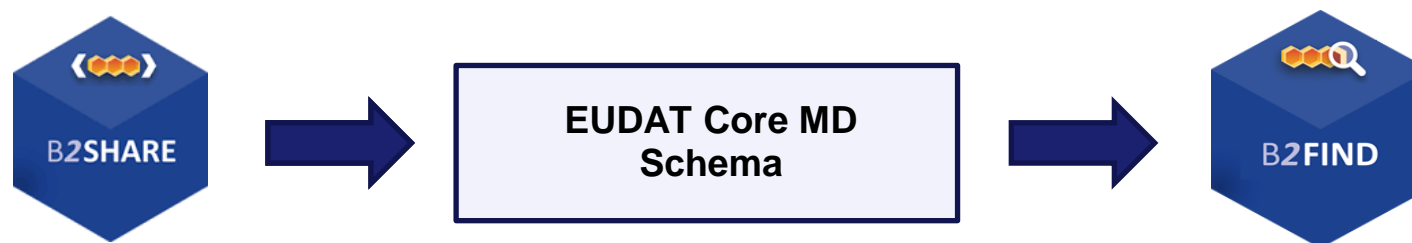
In order to join B2FIND, the data provider must meet a few requirements:

- The data provider must agree with the licensing principles of B2FIND, see the [Terms of Use of EUDAT Services](#) and the [Legal Notice of DKRZ](#).
- In particular, the provider must consent to the provided metadata being made publicly available and openly accessible under CC-BY International v4.0 or subsequent without any restrictions on reuse in original and derivative forms. **Note: This open access licence only applies to the metadata records published and visible in the B2FIND portal, not to the underlying data collections referred to and described by the B2FIND datasets.**
- The data provider agrees to the metadata being made available for free in B2FIND and also for it to be harvested by and re-distributed to other metadata aggregators. No confidential metadata should be provided (although the described research data sets themselves may have access limitations).
- Copyright-protected metadata can only be published if there is a licence agreement between the data provider and EUDAT that meets the B2FIND requirements.
- An interface to retrieve metadata must be available, accessible and usable.

## Benefit

Clearer division of useful information for different user roles (data providers vs. search portal user)

## Update: EUDAT Core Metadata Schema



- The EUDAT Core metadata schema defines and describes metadata for research output. It assures the transfer of a core set of metadata information through different EUDAT CDI services, especially between B2SHARE and B2FIND.
- Now information within metadata elements such as <temporalCoverage>, <spatialCoverage> and <instruments> can be automatically exchanged between the two services.
- Additionally, each B2SHARE community can define their own metadata elements. However, these will not be displayed in B2FIND.

# Example

**ILMATIETEEN LAITOS  
METEOROLOGISKA INSTITUTET  
FINNISH METEOROLOGICAL INSTITUTE**

Search records for:  **SEARCH**

HELP COMMUNITIES UPLOAD CONTACT **Login**

## METIS - FMI's Research Data repository

Please read the FMI's Research Data Policy here

Create record **Create a new record**

### Latest records

**Data and code for the manuscript "Impacts of marine organic emissions on low level stratiform clouds – a large eddy simulator study"** by Frank et al., submitted to *ACP*  
7 Aug 2022 by Prank, Marjo, Torikka, Juha, Ahola, Jaakko, Kikkola, Harri, Kuhn, Thomas, Romakkaniemi, Sami, Raatikainen, Tomi  
This dataset consists of UCLALES-SALSA model output of the experiments presented in the manuscript "Impacts of marine organic emissions on low level stratiform clouds – a large eddy simulator study"

**Data and code for the manuscript "Mapping the dependence of BC radiative forcing on emission region and season"** by Petri Raisanen et al. (submitted to *ACP*)  
4 Aug 2022 by Raisänen, Petri  
This dataset presents results from experiments, in which the dependence of black carbon (BC) radiative forcing on emission location and season has been systematically evaluated with the NoRESM-Happi

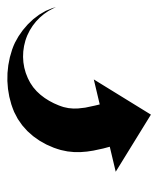
**Continuous N2O and CO2 fluxes by Eddy Covariance technique on a shallow drained agricultural boreal peatland**  
3 Jul 2022 by Geiri, Stephanie, Vekuri, Henrikka, Liimatainen, Maarit, Tuovinen, Juha-Pekka, Keikkonen, Jarkko, Kulmala, Liisa, Laurila, Tuomas, Linkosalmi, Maija, Lassi, Jari, Jokik-Tokola, Erkki, Lohila, Annelies  
This package contains data from a drained agricultural boreal peatland for grass silage in Northern Finland. The field, located in Ruuska (N64°41.039' E25°6.379'), has a shallow peat depth of 15-30cm.

**Data for Ritvanen et al. (2022) "Complementarity of Wind Measurements from Co-located X-band Weather Radar and Doppler Lidar"**  
23 Jun 2022 by Ritvanen, Jenna, O'Connor, Ewan, Moisseev, Dmitri, Lehtinen, Raisa, Tyynelä, Jari, Thobois, Ludovic  
Data for producing Figures 4, 6, 10, and 12 in the article "Complementarity of Wind Measurements from Co-located X-band Weather Radar and Doppler Lidar" by Ritvanen et al. Figure 4 (1st column: range)

**Data for Rantanen et al. (2022) "The Arctic has warmed nearly four times faster than the globe since 1979"**  
20 Jun 2022 by Rantanen, Mika, Karpechko, Alexey Yu., Lipponen, Antti, Nordling, Kalle, Hyvärinen, Olli, Ruosteenoja, Kimmo, Vilma, Timo, Laaksanen, Ari  
Data descriptions ———— This dataset includes data for producing the graphs and charts in the manuscript with title "The Arctic has warmed nearly four times faster than the globe since 1979"

**NWP model data (ECMWF IFS) for Penttinen et al. (2022) "Evaluating wind profiles in a numerical weather prediction model with Doppler lidar"**  
29 Jun 2022 by O'Connor, Ewan James  
This dataset contains vertical columns of u and v winds (eastward and northward winds) from the operational global model Integrated Forecasting system (IFS) operated by the European Centre for Medium

**Daily surface concentration of fire related PM2.5 for 2003-2021, modelled by SILAM CTM when using the MODIS satellite data for the fire radiative power**  
21 Jun 2022 by Hanninen, Risto, Sofiev, Mikhail, Uppala, Andreas, Kozmirev, Rodoslav  
Fine particles from wildfires are one important source for PM2.5. These small aerosol particles are risk to health and cause a large number of premature deaths world-wide. Using the MODIS satellite da



Home / Repositories / FMI

**FMI**  
The Finnish Meteorological Institute FMI produces observation and research data on the atmosphere, the near space and the seas, as well as weather, sea, air quality and climate...

Followers **0** Datasets **47**

**Spatial Coverage**

**Temporal Coverage**

**47 datasets found** Order by: Relevance

**Eddy-covariance measurements collected during two austral summers in the Schi...**  
The data set includes eddy-covariance measurements collected during two field campaigns (2017–2018 and 2019–2020) carried out in the Schirmacher oasis, East Antarctica (70° 45'...

**UCLALES-SALSA outputs for the manuscript "Aerosol-stratocumulus interactions:..."**  
This data set contains UCLALES-SALSA simulation outputs used in a closure study of aerosol-cloud interactions during stratocumulus formation using in situ observations from the...

**Airborne albedo observations from the SNORTEX campaign**  
These files contain airborne measurements of surface albedo and leaf area index of snow-covered boreal forest, taken during the SNORTEX campaigns of 2008-2010 in Finnish Lapland...

**Climate Data for Puruvesi, Finland, used in the OPERANDUM Del 5.2 (Spyrou et al. ...)**  
Climate Data for Puruvesi, Finland, used in the OPERANDUM Del 5.2 (Spyrou et al. 2021) Project: OPEN-air laborAtoRies for Nature baseD solUtions to Manage hydro-meteo risks...

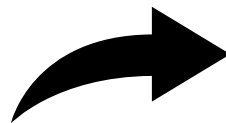
**Data for Rantanen et al. (2022) "The Arctic has warmed nearly four times fast..."**  
Data descriptions This dataset includes data for producing the graphs and charts in the manuscript with title "The Arctic has warmed nearly four times faster than the globe..."

**Updraft velocity parameterisation data and figures of "Parameterising cloud b..."**  
Results of "Parameterising cloud base updraft velocity of marine stratocumuli" -manuscript as updraft velocity parameterisation input and output data in .csv files and figures...


**Airborne albedo observations from the SNORTEX campaign**

# Example

Identifier	
DOI	<a href="https://doi.org/10.23728/fmi-b2share.60eca53148e84c4580c4c8cac6cee3ff">https://doi.org/10.23728/fmi-b2share.60eca53148e84c4580c4c8cac6cee3ff</a>
Source	<a href="https://fmi.b2share.csc.fi/records/60eca53148e84c4580c4c8cac6cee3ff">https://fmi.b2share.csc.fi/records/60eca53148e84c4580c4c8cac6cee3ff</a>
Related Identifier	<a href="https://doi.org/10.5194/egusphere-egu22-8305">https://doi.org/10.5194/egusphere-egu22-8305</a>
Related Identifier	<a href="https://doi.org/10.5194/tc-2021-218">https://doi.org/10.5194/tc-2021-218</a>
Metadata Access	<a href="https://fmi.b2share.csc.fi/api/oai2d?verb=GetRecord&amp;metadataPrefix=eudatcore&amp;identifier=oai:fmi.b2share.csc.fi:b2rec/60eca53148e84c4580c4c8cac6cee3ff">https://fmi.b2share.csc.fi/api/oai2d?verb=GetRecord&amp;metadataPrefix=eudatcore&amp;identifier=oai:fmi.b2share.csc.fi:b2rec/60eca53148e84c4580c4c8cac6cee3ff</a>



Dataset / Eddy-covariance...



Dataset


### Eddy-covariance measurements collected during two aus Schirmacher oasis, East Antarctica.

**DOI**

The data set includes eddy-covariance measurements collected during two field camp 2019–2020 carried out in the Schirmacher oasis, East Antarctica (70° 45' S, 11° 44' E integrated CO2 and H2O open-path gas analyzer and 3-D sonic anemometer Irgason serial number 1243) was operated on the shore of two glacial lakes. In the first experin on the north-west shore of Lake Zub/Priyadarshini at a distance of 10 m from the coas 07.02.2018. The instrument was placed on the aluminium tripod on the height of 2 m, i toward 137° south-eastwards (SE). The second experiment lasted from 07.12.2019 to deployed at a distance of 10 m from the shore of Lake Glubokoe at a height of 1.8 m a toward 144° south-eastwards (SE).

The data are stored in the datafiles with the format given in Irgason\_output.pdf; the rav files (one per day) and then compressed (bz2). The calibration of the Irgason was don.

Organization



<b>Spatial Coverage</b>	(11.400 LON, -70.400 LAT); Antarctica
<b>Temporal Coverage</b>	2017-12-31T22:00:00.000Z 2018-02-08T22:00:00.000Z



## Facts



shutterstock.com - 623001206

Communities



Repositories



66



>1M

Research data records

### Used for:

-  interdisciplinary data discovery
-  metadata curation & research community communication

### Partner of:



**onboarded**



Find resource... All resour... ▾ 🔍

My EOSC Marketplace

Resources > Processing & Analysis > Data Management > Discovery > B2FIND



## B2FIND

B2FIND

Find research data, research data portal

Organisation: **EUDAT**

Provided by: **Deutsches Klimarechenzentrum GmbH**

☆☆☆☆☆ (0.0 / 5) 0 reviews  Add to comparison  Add to favourites

Access the resource

📦 VARIOUS ORDER TYPES

- [Webpage](#)
- [Helpdesk](#)
- [Helpdesk e-mail](#)
- [Manual](#)
- [Training information](#)

[Ask a question about this resource?](#)

ABOUT

DETAILS

REVIEWS (0)

🔔 Report a technical problem

**by mid / end 2023**

- Planning for the integration with other services & platforms
- Pilots for the integration with other services & platforms
- Provisioning integration of repositories (and Communities) in B2FIND including support via Virtual Access Mechanism

**by end 2023**

- To coordinate and implement the pipeline which populates the EOSC with Providers and their Resources
- Training activities

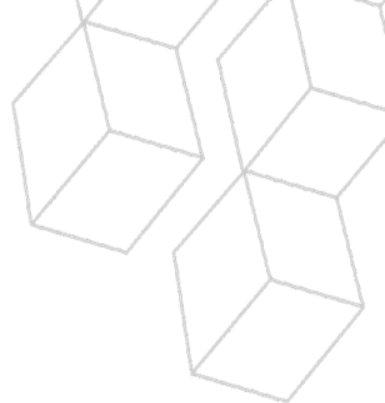


**by end 2023**

- Demonstrator for Nordic Archaeology Community and semantics

**by end 2025**

- Integration of B2FIND with the RDGraph (via the EOSC resource catalogue)
- Metadata Exposure by B2FIND to enrich the PIDGraph and RDGraph
- Establish the EOSC Metadata schema and cross-walk registries (MSCR), the EOSC Data Type Registry (DTR) and EOSC Research Activity Identifier (RaiD) service



1

Why is B2FIND so slowly?

because of CKAN and our extensions that require multiple SolR queries

2

Why are not all Communities in B2SHARE visible in B2FIND?

because of Schema updates that require some time

?



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## CONTACT



### **EUDAT**

<https://www.eudat.eu/contact-support-request>

### **DICE**

<https://www.dice-eosc.eu/call-service-requests>

### **EOSC Portal**

<https://marketplace.eosc-portal.eu/services/b2find>



[eudat.eu](https://www.eudat.eu)



[@eudat\\_eu](https://twitter.com/eudat_eu)