NSF Arctic Data Center

https://arcticdata.io

@arcticdatactr

the Arctic Data Center

Amber Budden

0000-0003-2885-3980

NCEAS

DataONE

NSF Award #1546024

Arctic Data Center Data Science Training
October 7-11, 2019

the **Arctic Data Center,**
NSF Standards & Policies


NSF


Troms Fylke
Rama
Detroit Publishing Co.

Features and Services

- **Data Archive**
- **Portal** for data discovery
- **Tools & Infrastructure**
  - *Data and metadata submission*
  - *Provenance features*
  - *Replication features*
  - *Metadata quality check*
- **Support Services**
- **Training & Outreach**
- **Data Rescue**






Teams

Leadership Team


M. Jones


Schildhauer


Budden


Casey


Baker-Yeboah


Dozier

CI Team


Walker


C. Jones


Mecum


Chong

Data and User Services Teams


Clark

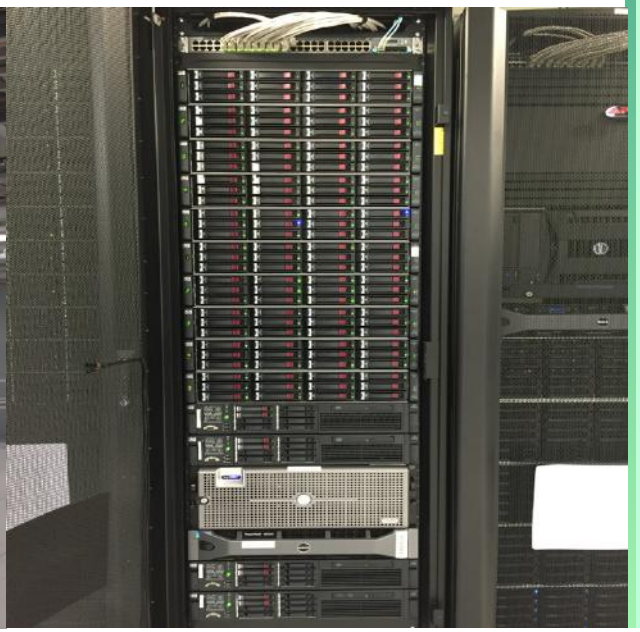

Vacant


Li


Mullen

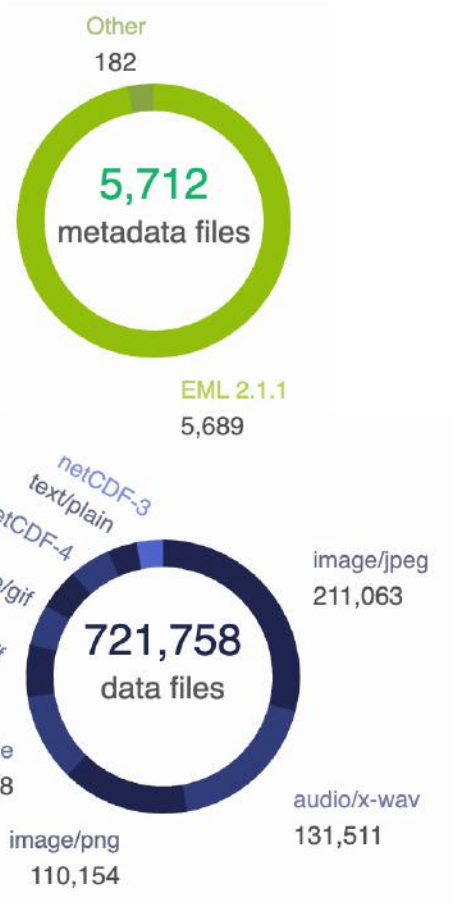

Semnacher

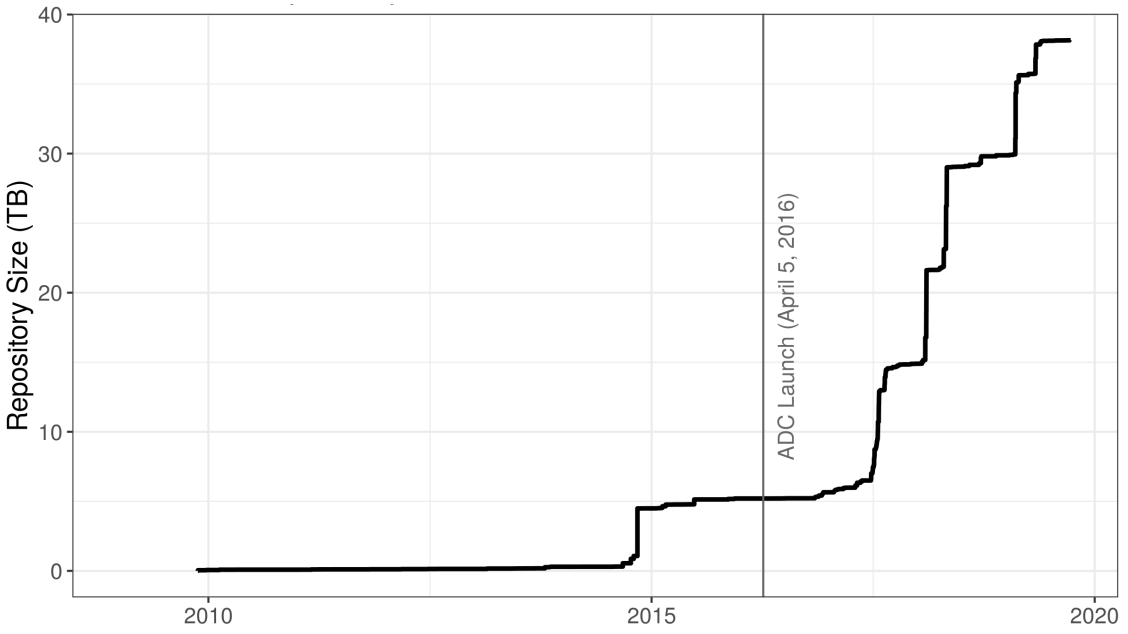
Data Archive



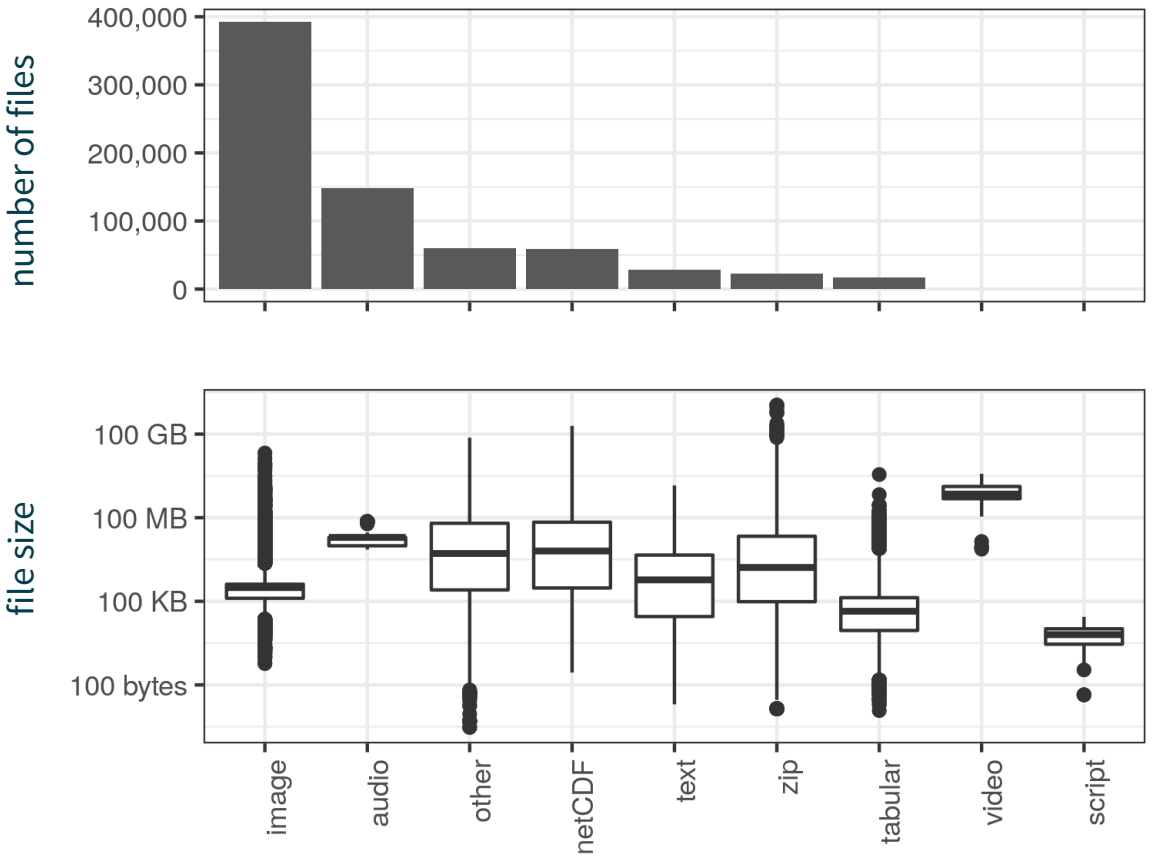
Data archive growth

4 to 34 TB





Content Characterization

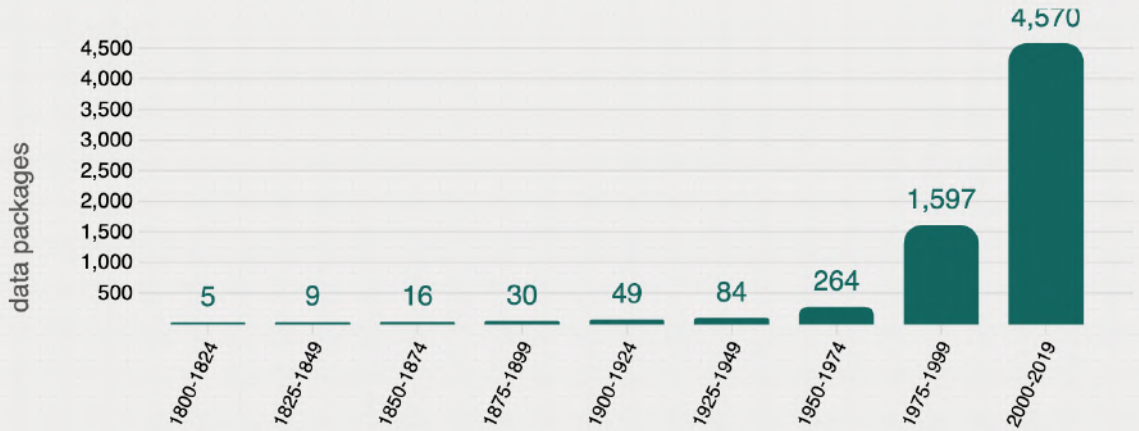


Data by time period

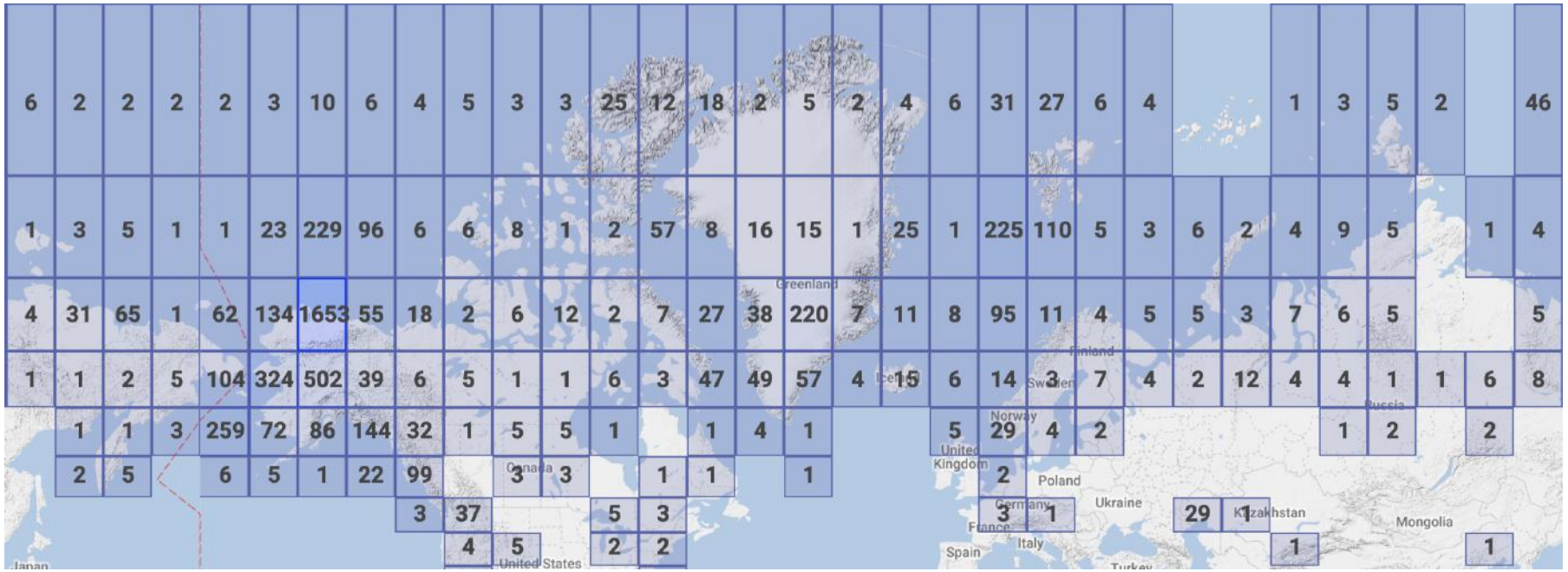
Time period of data

1800 - 2019

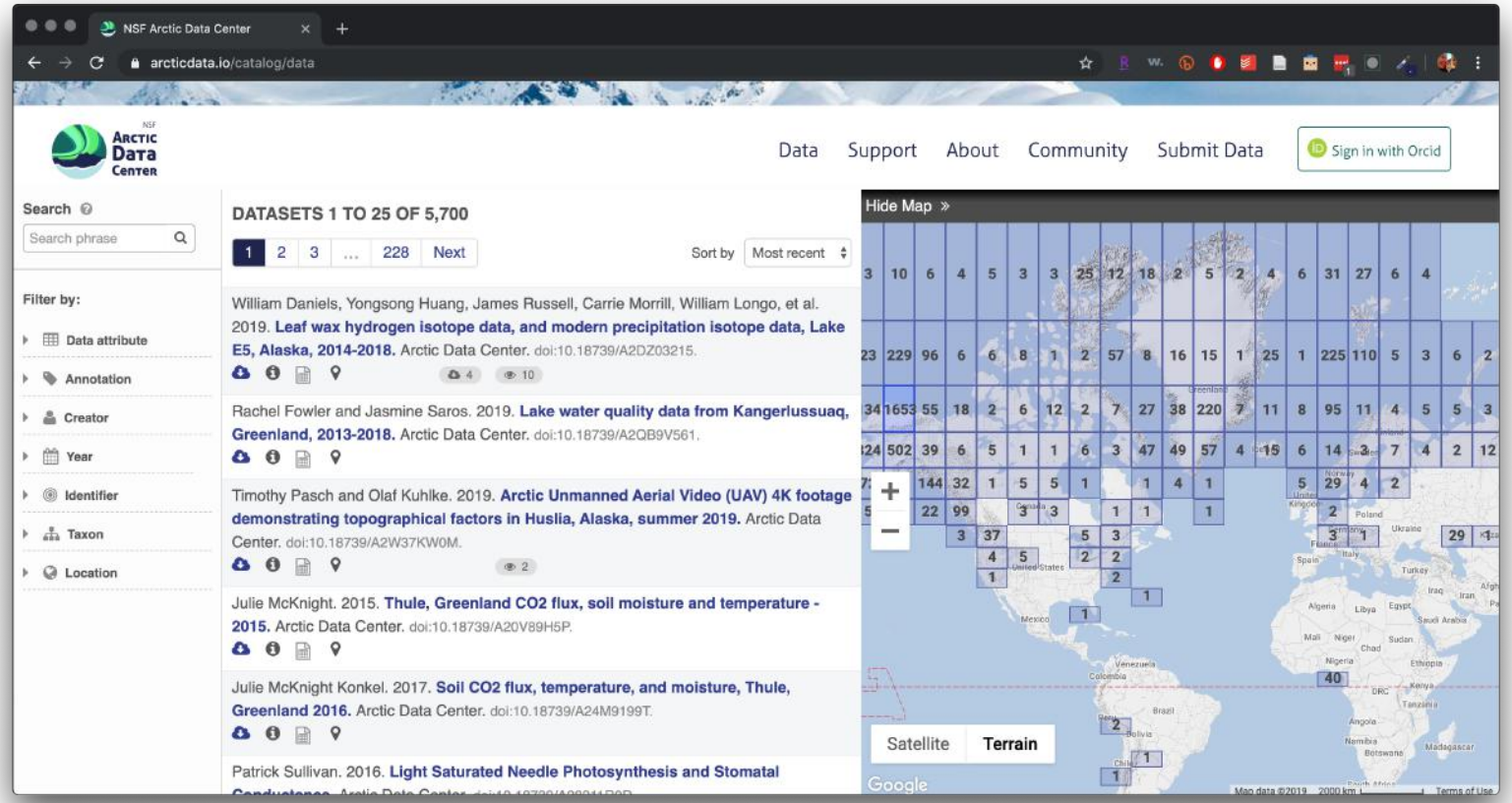
The years in which data was collected, regardless of upload date. Only the most recent version of the data package is counted.



Pan-Arctic Data

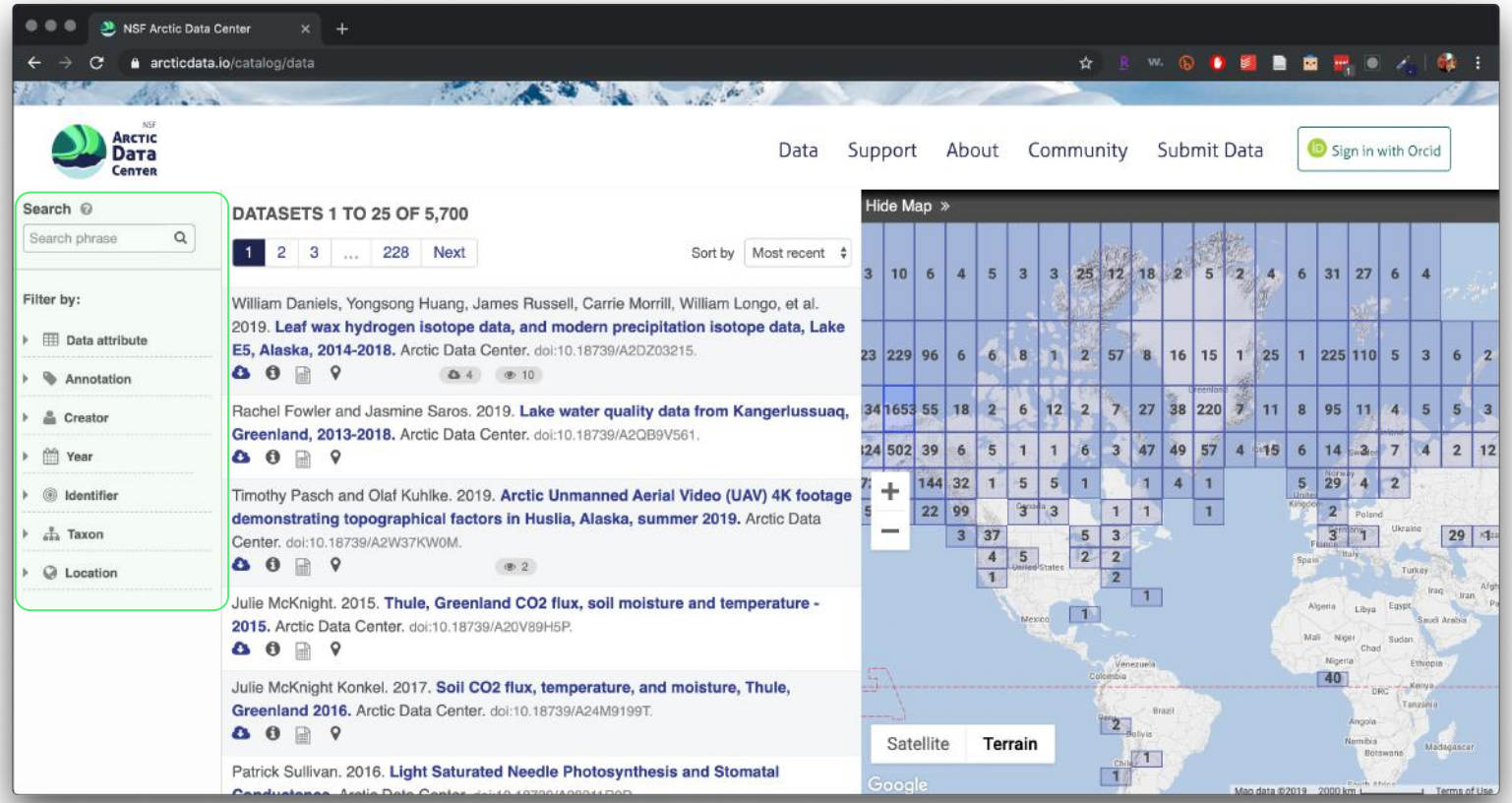


Data Discovery Portal



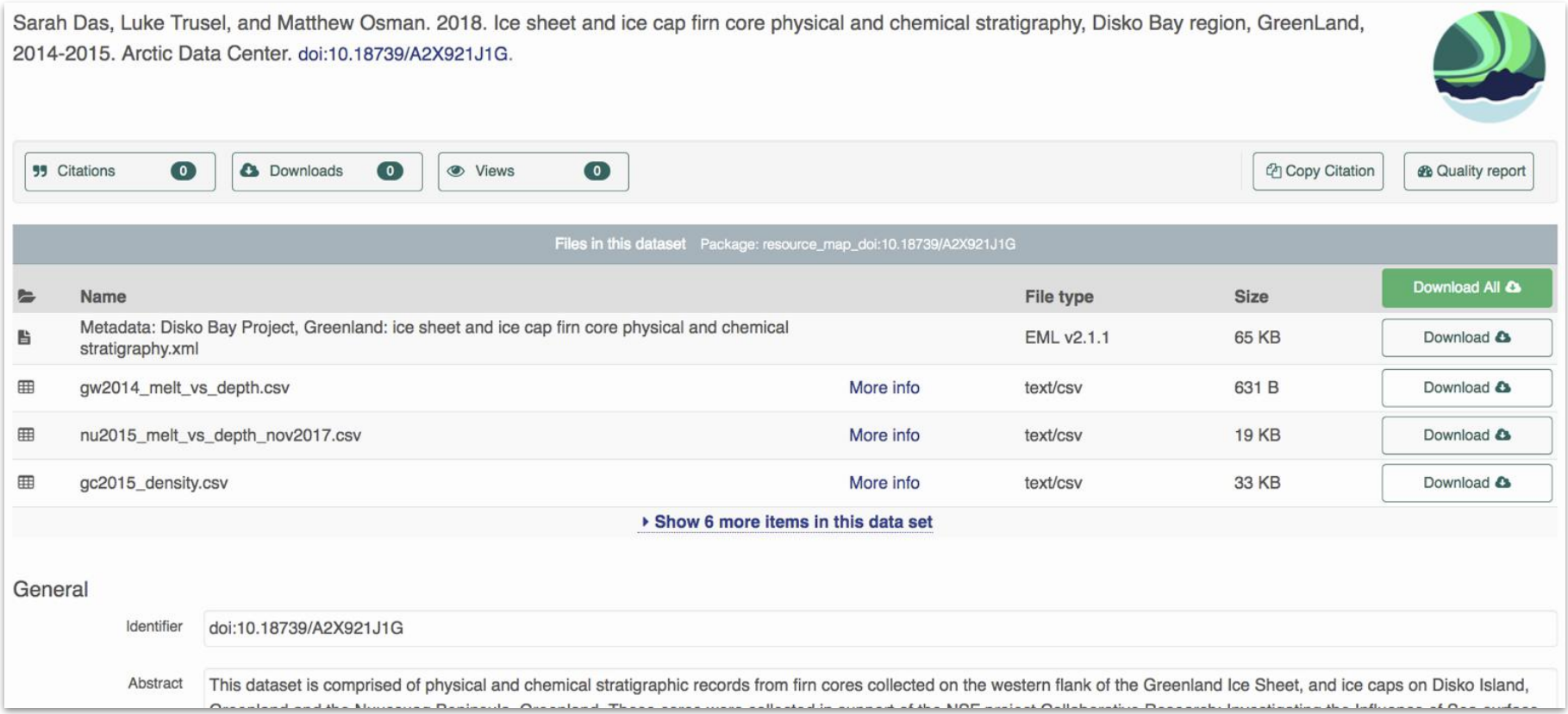
https://arcticdata.io/catalog/

Data Discovery Portal

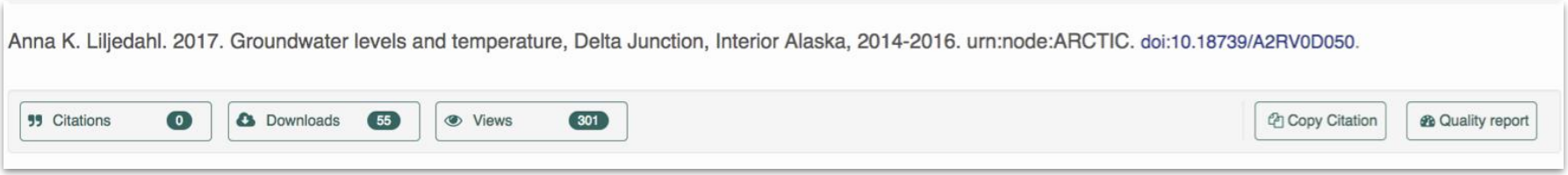


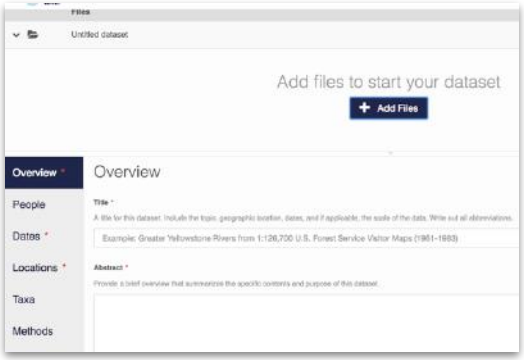
https://arcticdata.io/catalog/

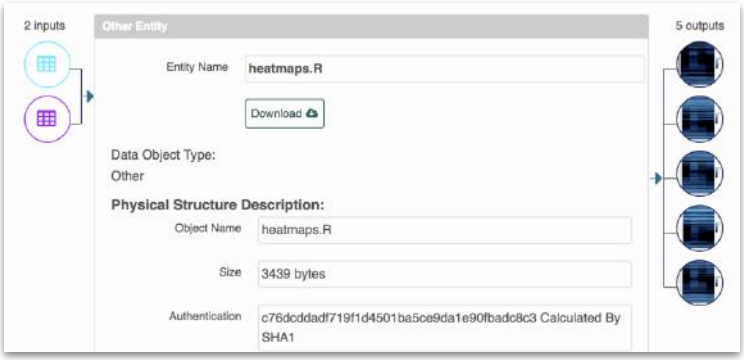
Data Discovery Portal



Tools and Infrastructure

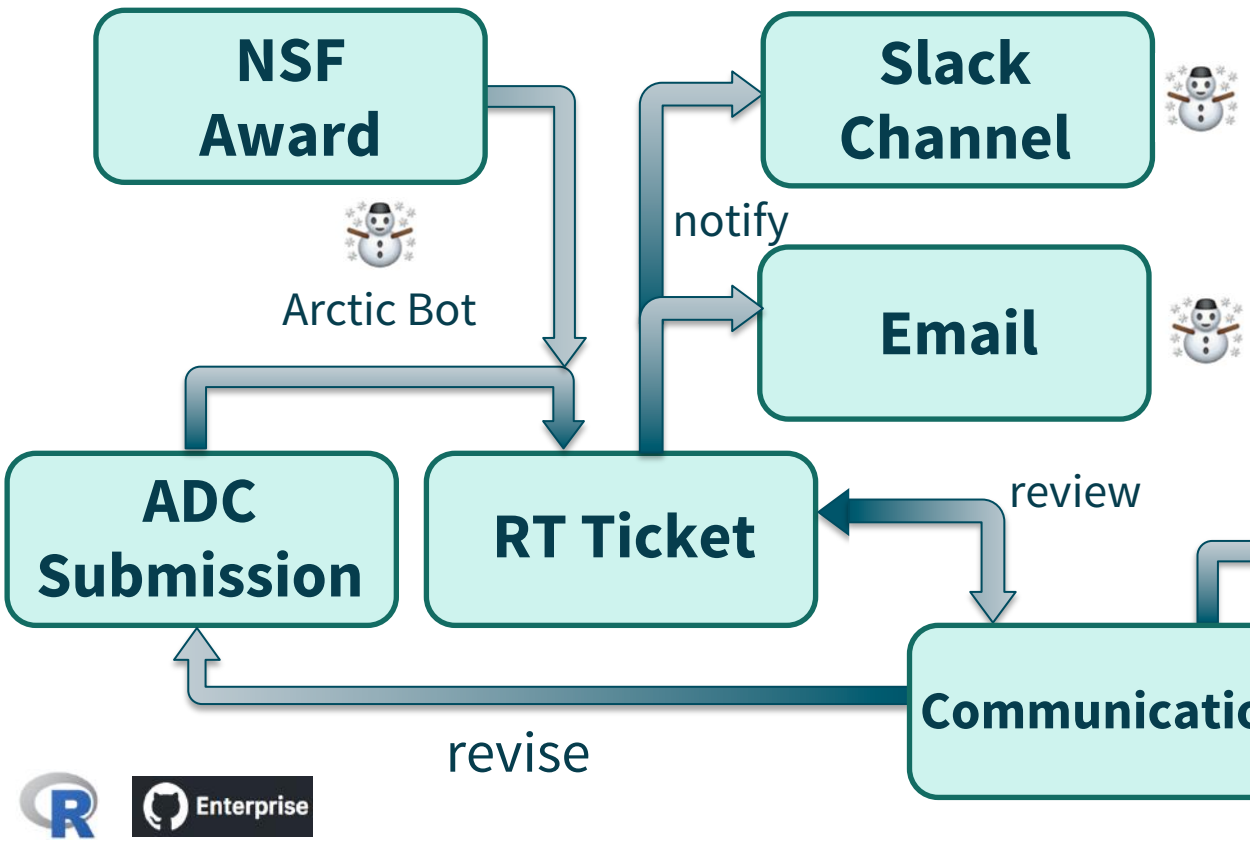






Support Services

Support Systems



Support Operations Team

Project Data Coordinator
Dominic Mullen

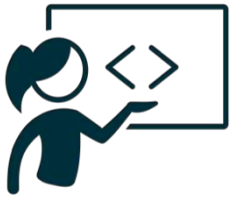
Project Data Support
Jeanette Clark

Student Intern
Rachel Sun

(support@arcticdata.io)

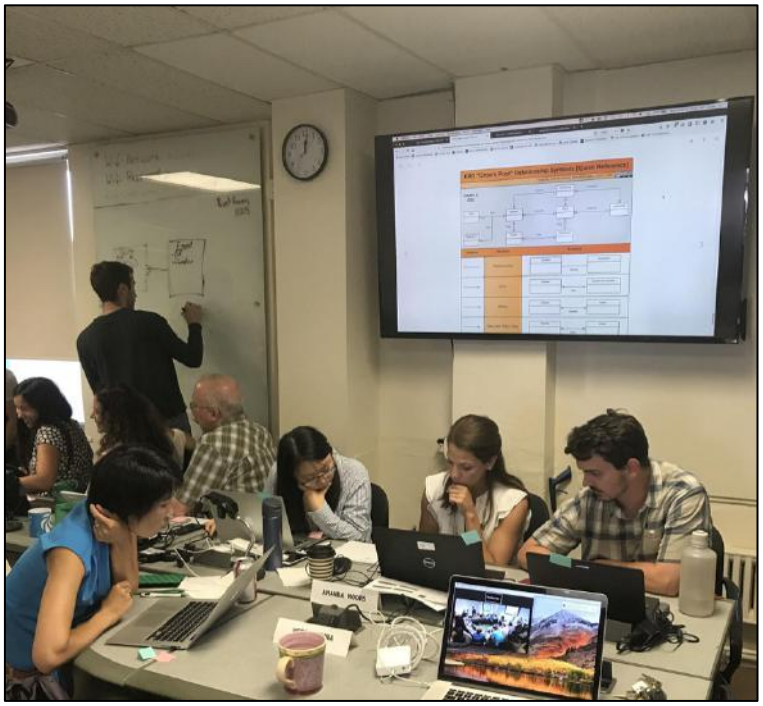
Training and Outreach

Training and Outreach

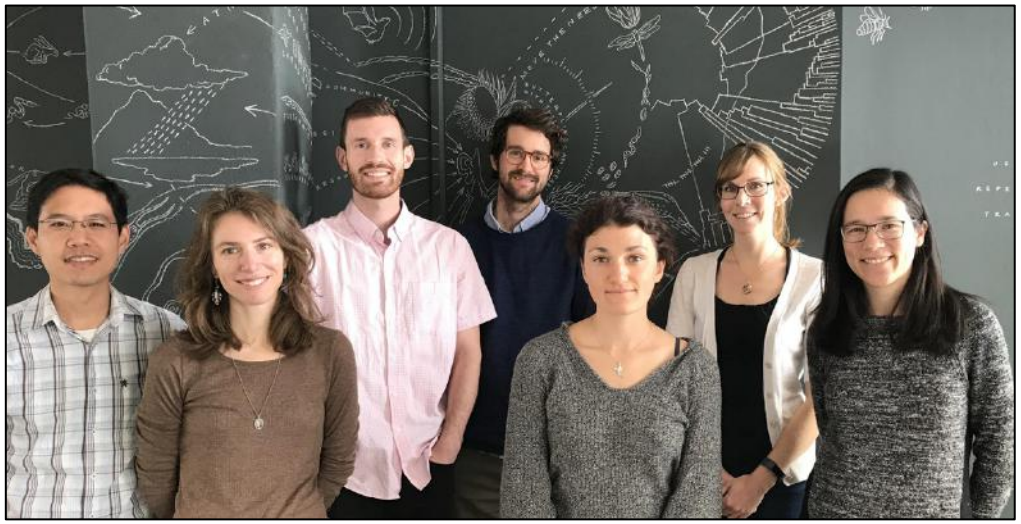


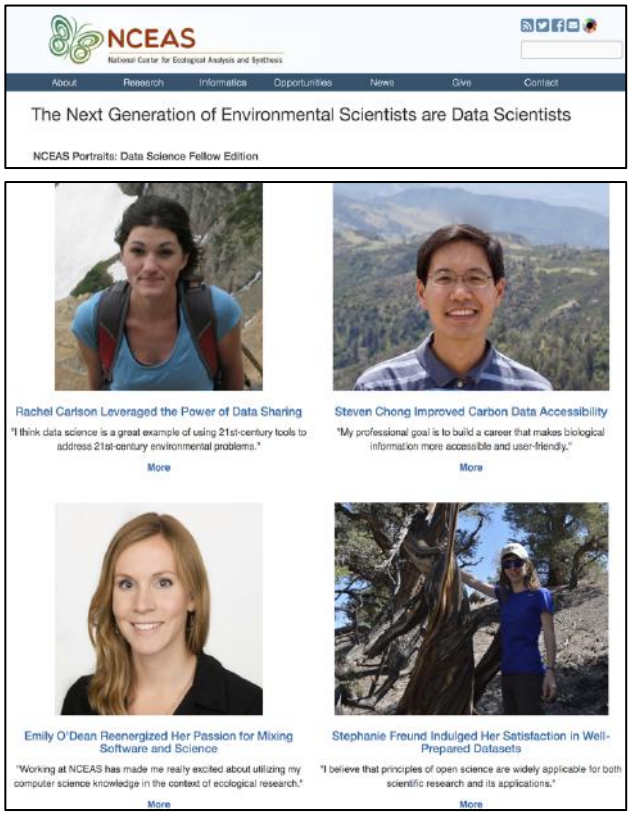
- Training
  - Trainings
  - Workshops
  - Internship Program
  - Data Fellows Program
  - Webinars

Arctic Data Science Training

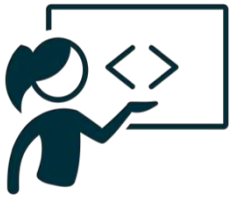


Data Science Fellowship

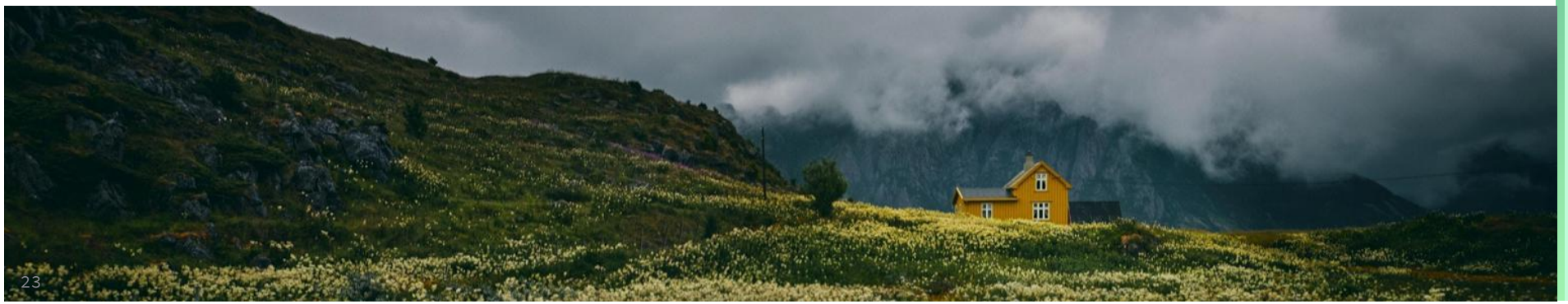




Training and Outreach

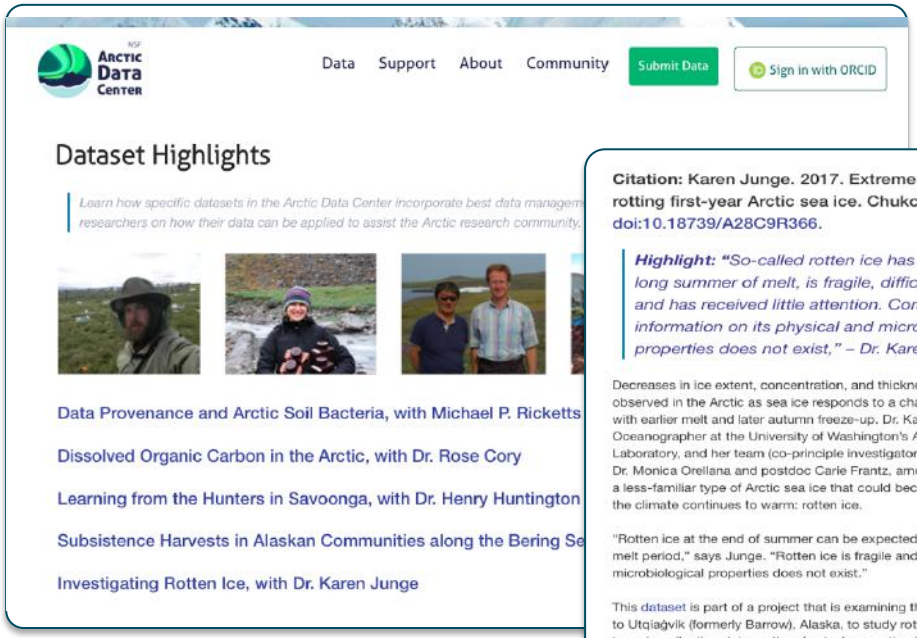


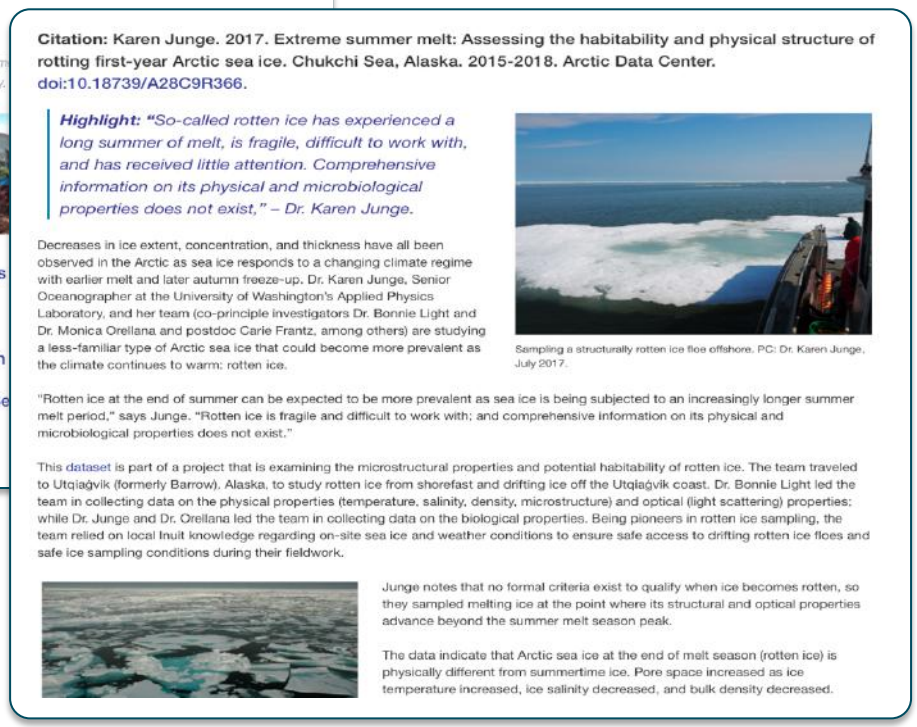
- Outreach
  - In-person events
  - News items and other communications
  - Social media
  - Arctic Data Center website



Data Training & Outreach

Data Highlights





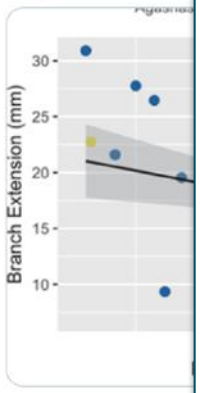
Social Media

Ecology @ESAEcology · Sep 4
#New in @ESAEcology with #OpenData from **@arcticdatactr**

Poor #nutrition as a potential cause of divergent #tree growth near the #Arctic treeline in northern Alaska

#dendroclimatology

esajournals.onlinelib



3

Andy Parsekian @uw_nsgeophysics · May 16
The full, hard-earned dataset is also published on the **@arcticdatactr** in raw and processed forms. If you like playing with surface NMR data, or if you just want talik info to use in your own work, we encourage you to download the dataset! (2/2) arcticdata.io/catalog/view/d...

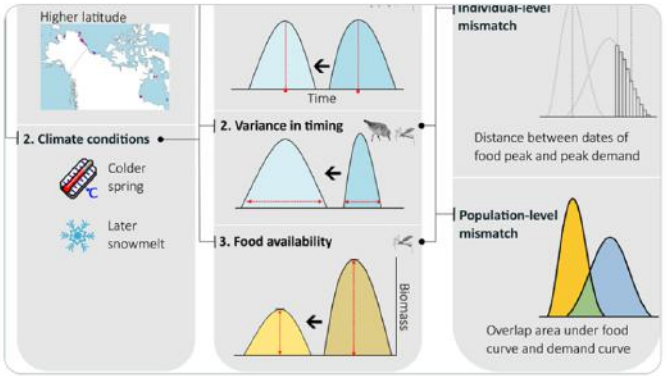
4

Ecological Monographs @ESAMonographs · Jun 11
#New in @ESAMonographs with #OpenData from **@arcticdatactr**

Dissociation of climatic cues and warming #climate are linked with phenological mismatch between #Arctic #shorebirds and prey invertebrates

#phenology @eunbkwon

esajournals.onlinelibrary.wiley.com/doi/10.1002/ec...



7 6

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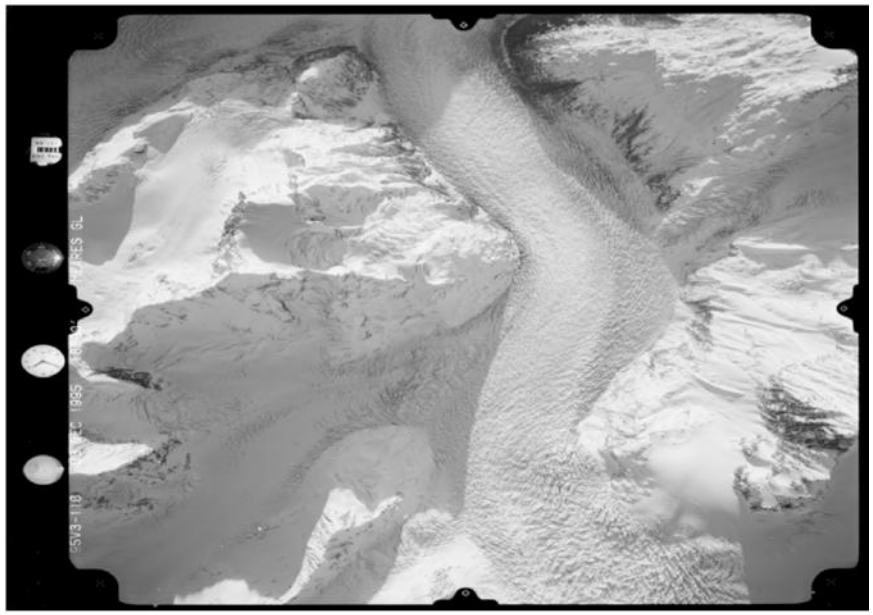
Data Rescue

Data Recovery: Aerial Glacier Photos

- Austin Post's collection
- 1964 – 1997
- 2 - 6 rolls per year
- 100,000+ files = 4.9 TB
  - Glacier photos: TIFs, JPGs, TNs
  - Reconstructed flight paths, images of notes, image metadata, camera specs



Meares Glacier, Prince William Sound, AK
61.187448, -147.457573, taken from 18,000'
December 3, 1995, Roll 3, Frame 110
doi:10.18739/A2FF6Z (NAGAP_95V3_110.jpg)

the Arctic Data Center,

NSF Standards & Policies

Who Must Submit

https://arcticdata.io/submit/#who-must-submit

Arctic Research Opportunities (ARC):

- Complete metadata and all appropriate data and derived products
- Within 2 years of collection or before end of award, whichever comes first

ARC Arctic Observing Network:

- Complete metadata and all data
- Real-time data made public immediately
- Within 6 months of collection

Who Must Submit: Social Sciences

https://arcticdata.io/submit/#who-must-submit

Arctic Social Sciences Program (ASSP):

- NSF policies include special exceptions for ASSP and other awards that contain sensitive data
- Human subjects, governed by an Institutional Review Board, ethically or legally sensitive, at risk of decontextualization
- Metadata record that documents non-sensitive aspects of the project and data
  - *Title, Contact information, Abstract, Methods*

Terms of Use: Licensing and Distribution

https://arcticdata.io/submit/#license-and-data-distribution

All metadata and (non-sensitive) data will be released under either:

CC-0 Public Domain Dedication:

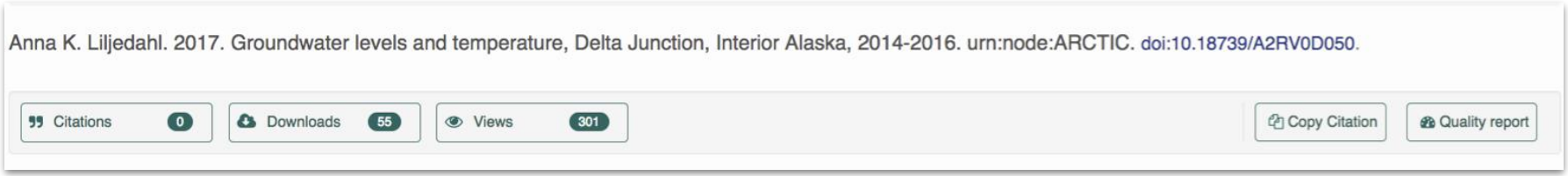
"...can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission."

Creative Commons Attribution 4.0 International License:

"...free to...copy,...redistribute,...remix, transform, and build upon the material for any purpose, even commercially,...[but] ***must give appropriate credit***, provide a link to the license, and indicate if changes were made."

Data Citation

- We assign a DOI to each published data set
- Researchers should cite data they use

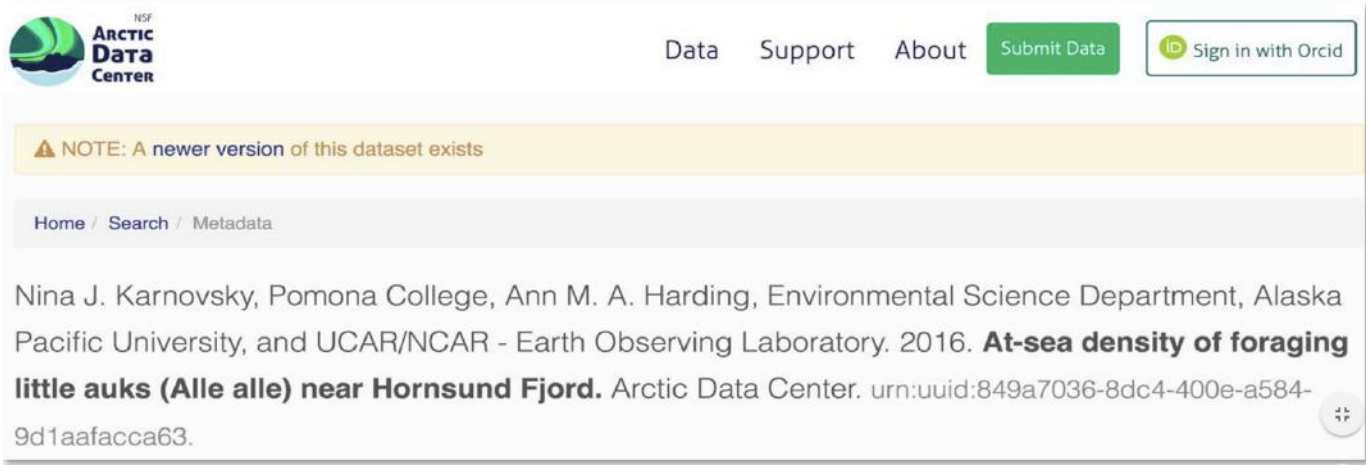


- We are working as part of Make Data Count to track the citations to data

MAKE DATA COUNT

Data Citation

- Each update has a unique identifier
- Cite the exact version used
- Newer versions are clearly indicated



the Arctic Data Center, NSF Standards & Policies, **Summary**

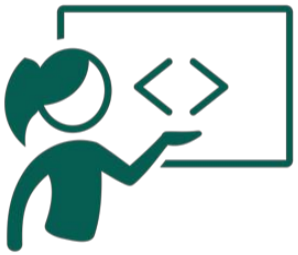
Arctic Data Center Features and Services

Data Archive

Data Discovery Portal

Tools and Infrastructure

Support Services



Training and Outreach

Data Rescue

Operation Metrics

5,700
DATA SETS

1,520
CREATORS

721K+
DATA FILES

14,119
USERS

34TB+
TOTAL SIZE

11.9M+
FILE DOWNLOADS

https://arcticdata.io