



# Finding Southern Ocean data – an architecture for data discovery

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and the SOOS Data Management Sub-Committee



The problem: The Southern Ocean is too big for any nation/institution to study alone





To detect and attribute changes in the Southern Ocean to their causes, and understand the impacts of these changes we need sustained, and internationally coordinated observations of the Southern Ocean

It is beyond the capability of single projects, programs, nations to address.

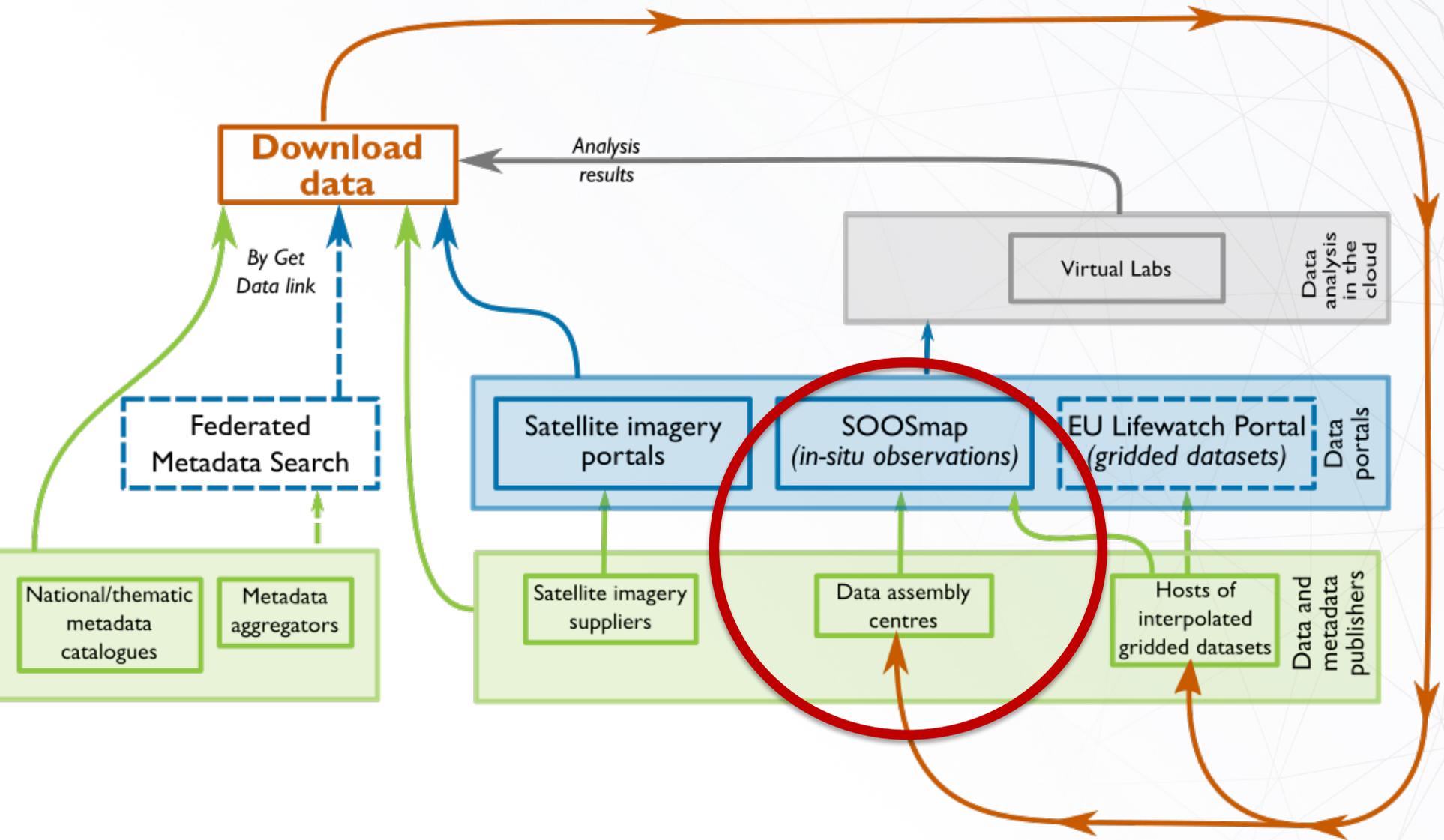
# No science community is an island

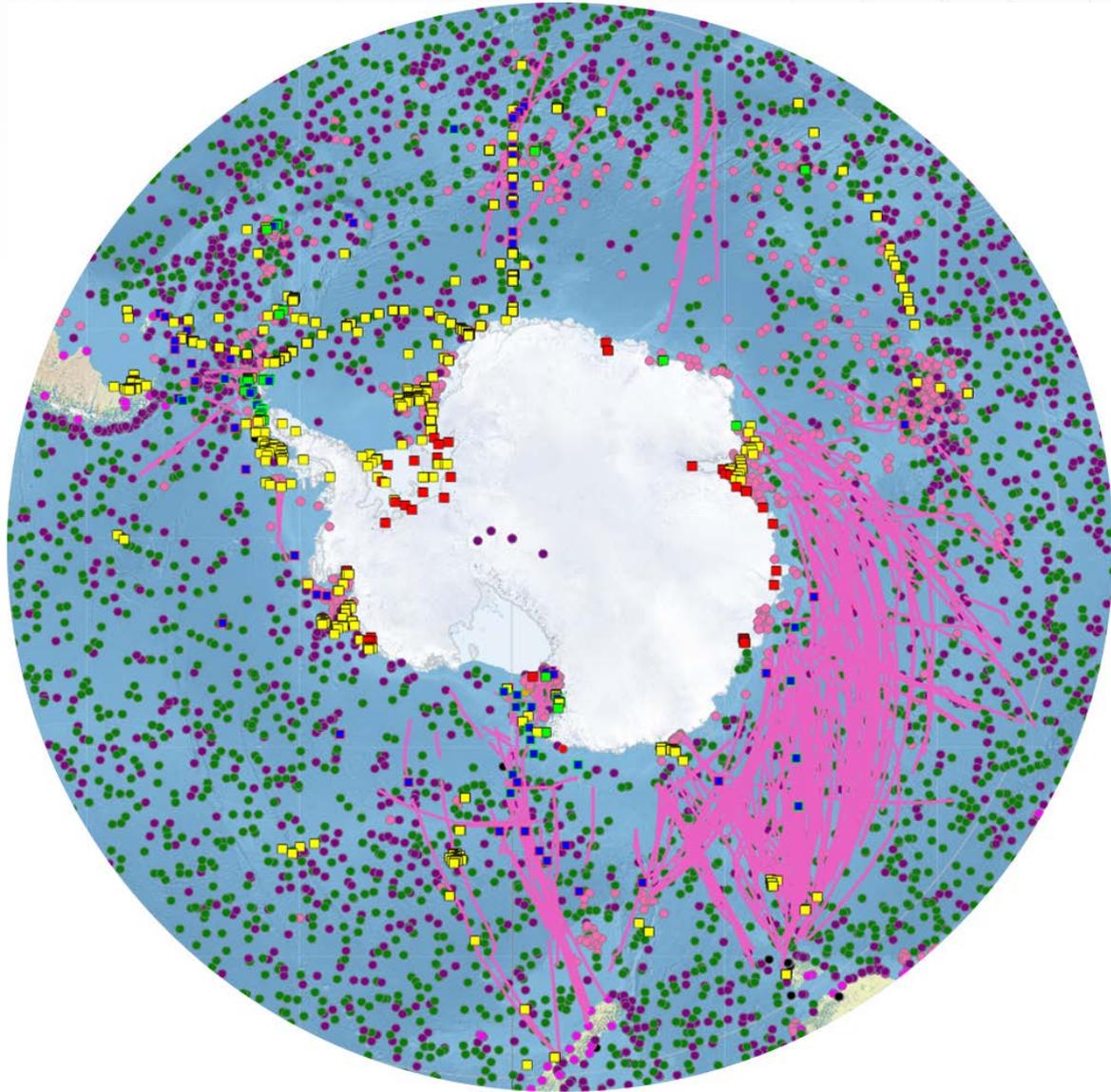
*No man is an Iland, intire of it selfe;  
Every man is a peece of the  
Continent, a part of the maine*

(John Donne, 1624)

# But, it's all just data, right?

- In-situ observations
- Gridded/interpolated datasets
- Model output
- Satellite imagery
- Standardised?
- Aggregated?
- Well documented?
- Findable?





Search platform...

Search point 40.25,89.45

Clear Selection

PLATFORM TYPE

TURN ON ALL LAYERS

TURN OFF ALL LAYERS

ARGO/PROFILER

CTD PROFILES

DRIFTING BUOYS

FERRYBOX/SHIP

GLIDERS

MARINE MAMMAL

MOORING TIME SERIES

PROFILING MOORING

TESAC MESSAGES ON GTS

TIDE GAUGE

XBT OR XCTD PROFILES

CCAMLR ECOSYSTEM MONITORING SITES

CPR TOWS ROUTE

NECKLACE

SCAR SOUTHERN OCEAN

MICROPLASTICS DATA

MACRO

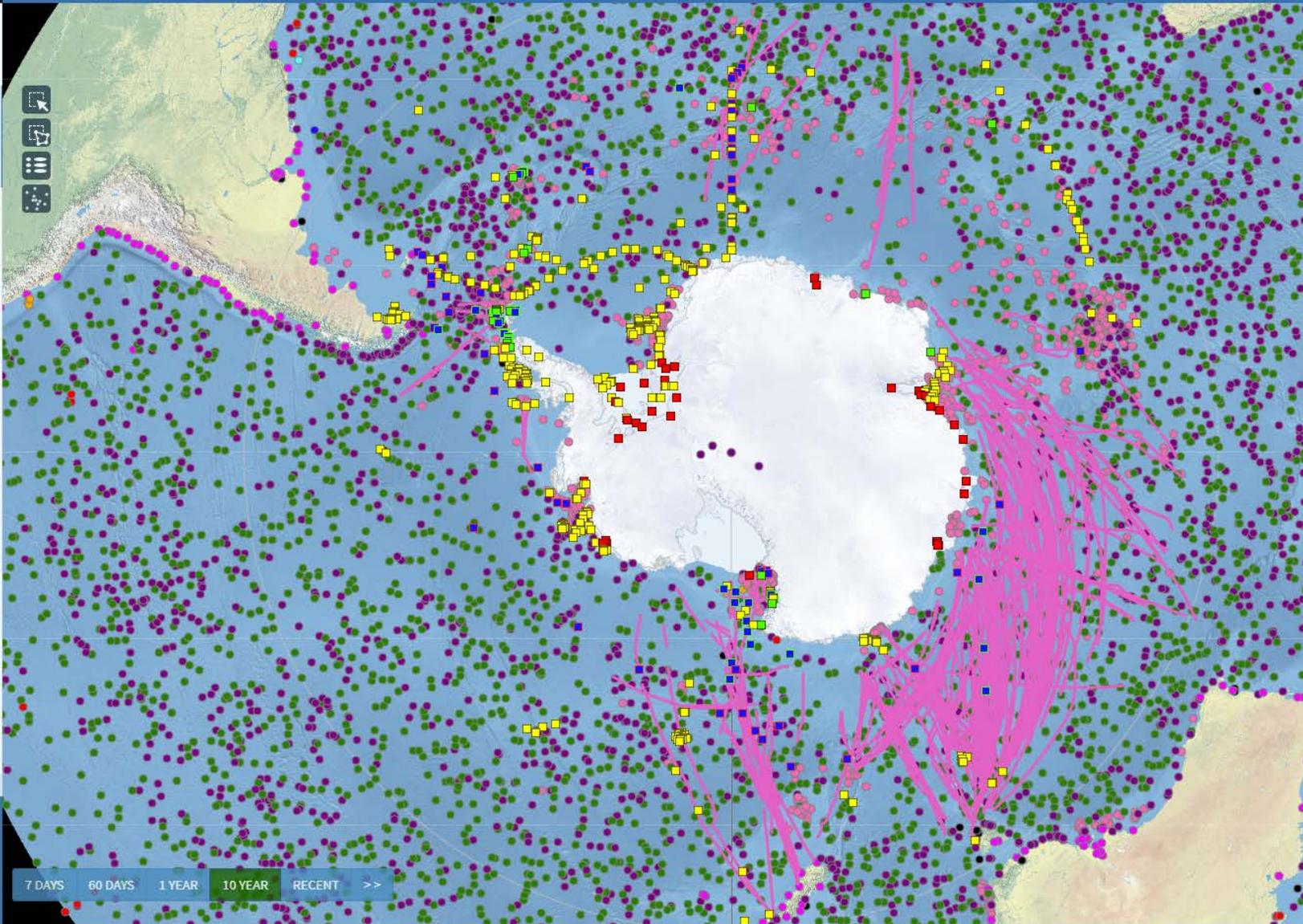
MICRO

SOOS MOORING NETWORK

PARAMETERS

DEPTH

SEA BASIN



7 DAYS 60 DAYS 1 YEAR 10 YEAR RECENT >>

PLATFORM TYPE

TURN ON ALL LAYERS

TURN OFF ALL LAYERS

- ARGO/PROFILER
- CTD PROFILES
- DRIFTING BUOY
- FERRYBOX/SHIP
- GLIDERS
- MARINE MAMMA
- MOORING TIME
- PROFILING MOO

PARAMETERS

- W** WAVES
  - T** WATER TEMPERATURE
  - S** WATER SALINITY
  - C** CURRENTS
  - H** OPTICAL PROPERTIES
  - L** SEA LEVEL
  - A** ATMOSPHERIC
  - C** WATER CONDUCTIVI
  - W** WINDS
  - R** RIVER
  - N** UNDER WATER NOIS
- MONITORING SITES**
- TESAC MES**
  - TIDE GAUGI**
  - XBT OR XC1**
  - CCAMLR EC**
  - CPR TOWS F**
  - NECKLACE**
  - SCAR SOUTHERN**
- MICROPLASTICS DATA**
- MACRO**
  - MICRO**
  - SOOS MOORING NETWORK**
- BIOGEOCHEMICAL**

PLATFORM TYPE

PARAMETERS

DEPTH

SEA BASIN

DATA PROVIDERS

DATA PRODUCTS

BASE LAYERS

DATA NETWORK

BASE LAYERS

CCAMLR AREAS

DIVISIONS

HIGH RESOLUT

MARINE PROTE

REGIONAL WORKING GROUPS

RESEARCH BLOCKS

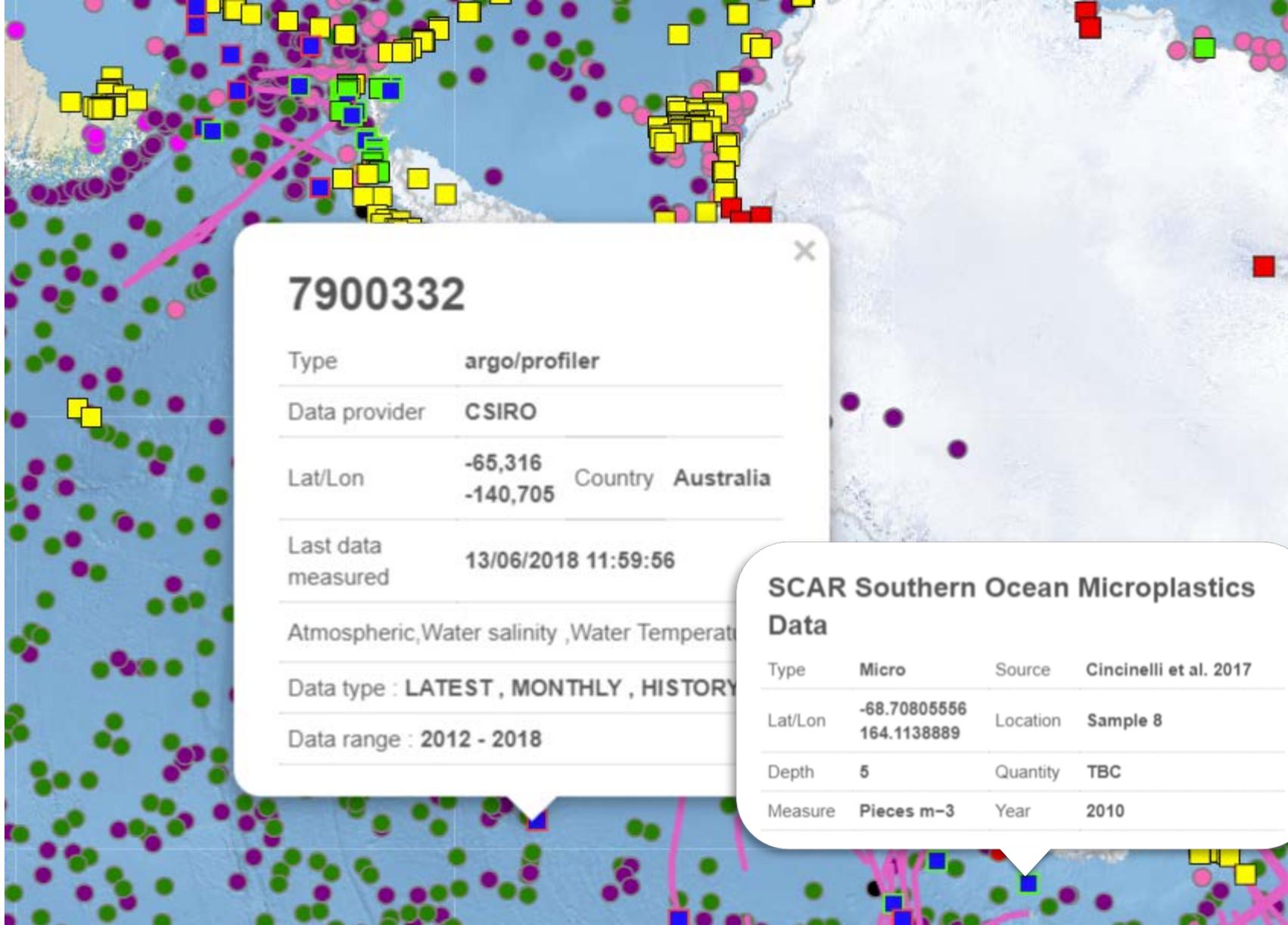
RESEARCH FACILITIES

SEA ICE CONCENTRATION

SEA SURFACE TEMPERATURE



PHYSICS  
Oceans physics at your fingertips



**7900332**

Type	argo/profiler		
Data provider	CSIRO		
Lat/Lon	-65,316 -140,705	Country	Australia
Last data measured	13/06/2018 11:59:56		
Atmospheric, Water salinity , Water Temperature			
Data type	: LATEST , MONTHLY , HISTORY		
Data range	: 2012 - 2018		

**SCAR Southern Ocean Microplastics Data**

Type	Micro	Source	Cincinelli et al. 2017
Lat/Lon	-68.70805556 164.1138889	Location	Sample 8
Depth	5	Quantity	TBC
Measure	Pieces m-3	Year	2010



**PLATFORM CODE**  
7900332

**PLATFORM NAME**  
APEX Profiling Float SBE 5948

**WMO CODE**  
7900332

**INSTITUTION**  
CSIRO - Commonwealth Scientific and Industrial Research - Australian

**ASSEMBLY CENTER**  
GLOBAL DAC (Coriolis)

**TYPE**  
argo/profiler

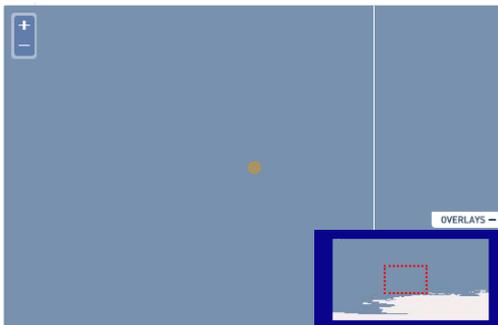
**PRINCIPAL INVESTIGATOR**  
Susan Wijffels

**CMEMS - PROD ID**  
INSITU\_GLO\_NRT\_OBSERVATIONS\_013\_030

**DATA QUALITY REFERENCES**

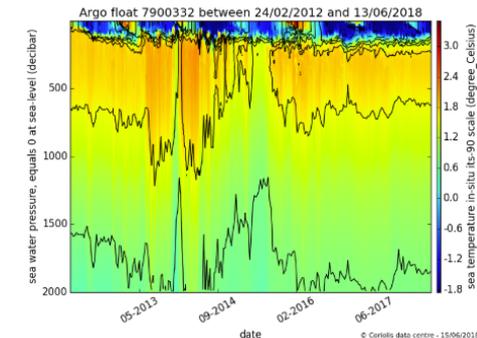
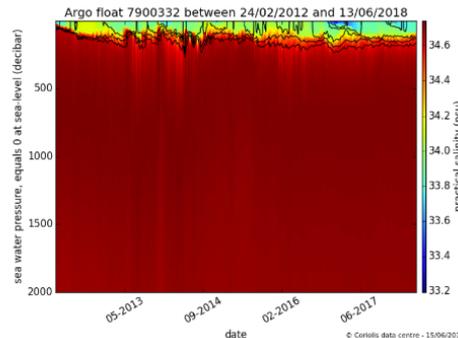
- [Argo DOI](#)
- [Argo GDAC](#)
- [Argo Data Guide](#)

7 Days 60 Days Older data

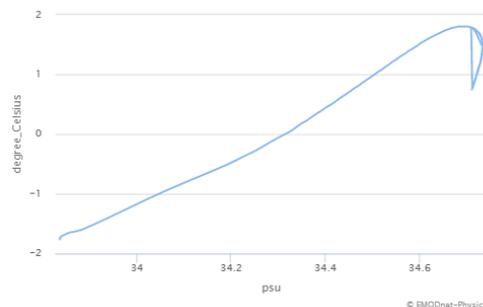


plots are a Runtime undersampled view of the dataset, to see full details open the "preview"

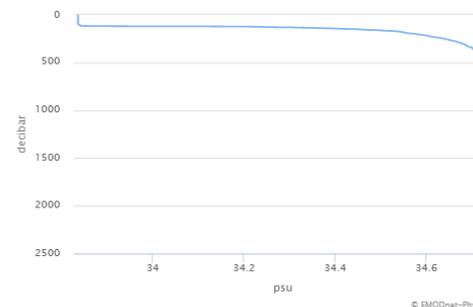
quick download(60 days): select data format and go  
[NetCDF](#) [CSV](#) [Download](#) [Preview](#)



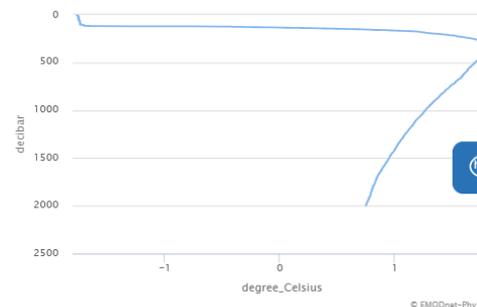
**PSAL-TEMP CYCLE**  
from 2018/06/11 to 2018/08/10



**PSAL-PRES CYCLE**  
from 2018/06/11 to 2018/08/10



**TEMP-PRES CYCLE**  
from 2018/05/11 to 2018/08/10

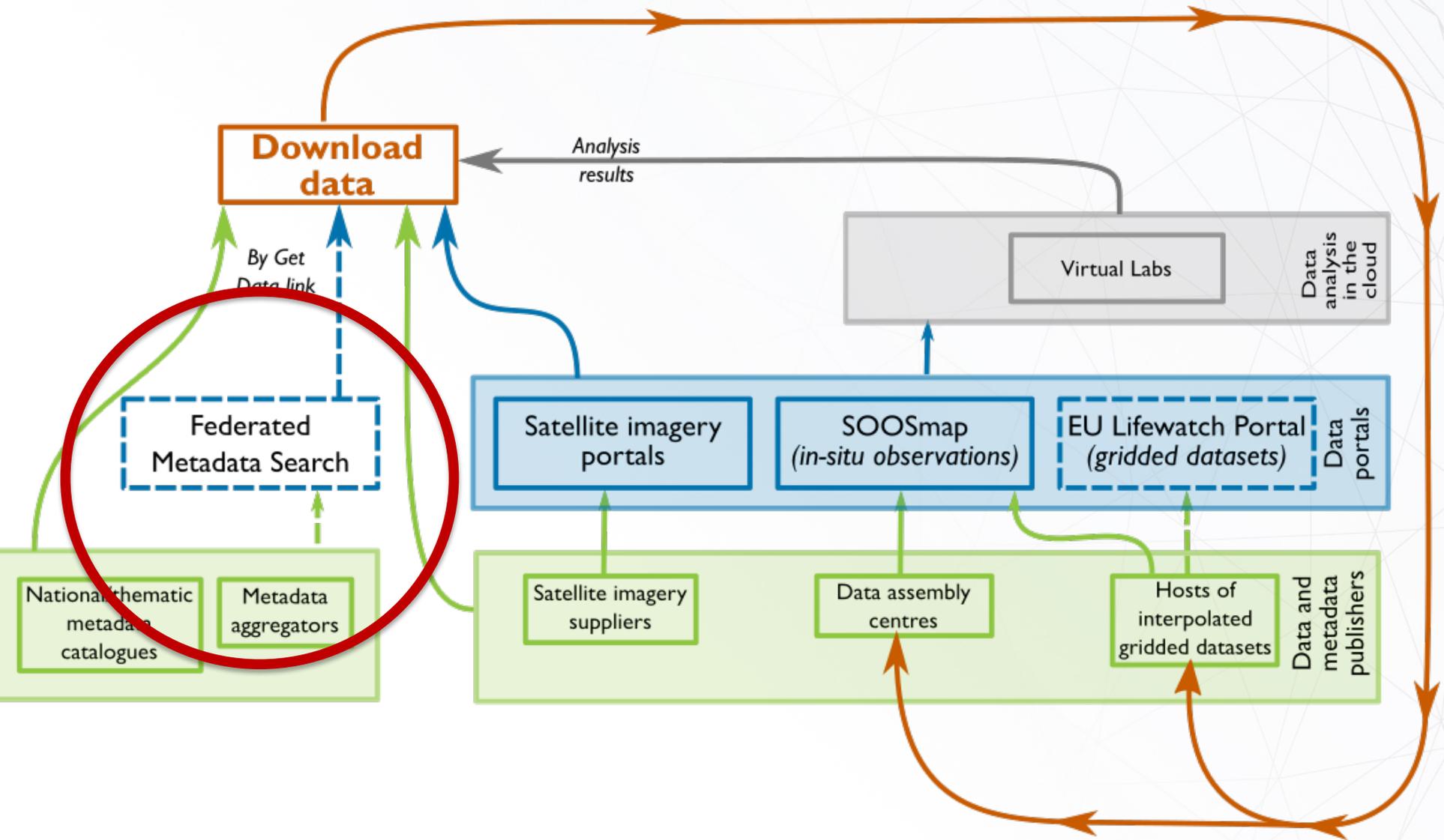


**PRES\_ADJUSTED-PRES CYCLE**  
from 2018/06/11 to 2018/08/10



**TEMP\_ADJUSTED-PRES CYCLE**  
from 2018/06/11 to 2018/08/10





# Polar Data Planning Summit

## Boulder, May 2018

PDPS 2018

Details  
 Published: 23 August 2018

Page 3 of 6

### Registered Participants

Name	Affiliation	Country
David Arthur	Polar View	Denmark
Pip Bricher	Southern Ocean Observing System	Australia
Andreas Czforszky	British Antarctic Survey / Polar View	United Kingdom
Taco de Bruin	NIOZ Royal Netherlands Institute for Sea Research	The Netherlands
Eric Coplin	Battelle-NEON	United States
Ruth Duerr	Rorin Institute for Independent Scholarship	United States
Florence Fetterer	NSIDC	United States
Daniel Gibson	Government of Northwest Territories	Canada
Oystein Godoy	Norwegian Meteorological Institute	Norway
Sarah Inman	University of Washington	United States
Christopher Jones	National Center for Ecological Analysis and Synthesis, UC Santa Barbara	United States
Peter Kirsch	Polar Data Centre; British Antarctic Survey	United Kingdom
Christine Laney	Battelle-NEON	United States
Ellsworth LeDrew	University of Waterloo, Polar Data Catalogue	Canada
Corrado Leone	Italian National Research Council	Italy
Simona Longo	CNR	Italy
William Manley	University of Colorado, INSTAAR	United States
Heidi McCann	CIRES/NSIDC	United States
Maribeth Murray	Arctic Institute of North America, University of Calgary	Canada
Mark Parsons	Rensselaer Polytechnic Institute	United States
Peter L. Pulister	University of Colorado at Boulder	United States
Yubao QIU	Institute of Remote Sensing and Digital Earth	China
Simon Roope	Canada Centre for Mapping and Earth Observation / Natural Resources Canada	Canada
Hannele Savola	Thule Institute, University of Oulu	Finland
Serge Scory	Royal Belgian Institute of Natural Sciences	Belgium
Donna Scott	National Snow and Ice Data Center	United States
Aleksandr Smirnov	Arctic Portal	Iceland
Sandy Starkweather	NOAA-ES&R/CIRES	United States
Don Stott	National Center for Atmospheric Research	United States
Colleen Strawhacker	National Snow and Ice Data Center	United States
Shane St. Savage	Arctic Data Science (Alaska Ocean Observing System)	United States
Martien Tacoma	NIOZ Royal Netherlands Institute for Sea Research	The Netherlands
Chris Torrence	NSIDC	United States
Tanell Utai	NOAA	United States
Thomas Vindenesbergeth	Royal Belgian Institute of Natural Sciences	Belgium
Nacomi Whitty	Polar Field Services	United States
Ann Windragerl	NOAA/NSIDC	United States
Lynn Yarmey	Research Data Alliance	United States

PDPS 2018
Agenda
Participants
Use Cases
Resources
Registration, Transportation, Weather
All Pages







# DUE SOUTH

DATABASE OF UPCOMING EXPEDITIONS  
TO THE SOUTHERN OCEAN



This database allows you to share plans for upcoming Southern Ocean and Antarctic research projects. It will help you to find collaborators and coordinate your field plans. The database holds multi-disciplinary, multi-national information about planned projects. Use it to find out who is working near you in the upcoming field season, or who is working on similar problems in other parts of the Southern Ocean. Upload your field plans to help potential collaborators find you.

 Create Expedition

 Create Project

 Search Expeditions

 Search Projects

# DUE SOUTH

OUTLINE OF UPCOMING EXPEDITIONS TO THE SOUTHERN OCEAN

## Expedition Search

Clear filters

Hide past Expeditions

Free Text

Nation

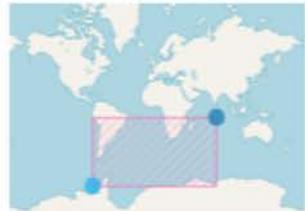
Vehicle Type

SOOS Region

Date Start

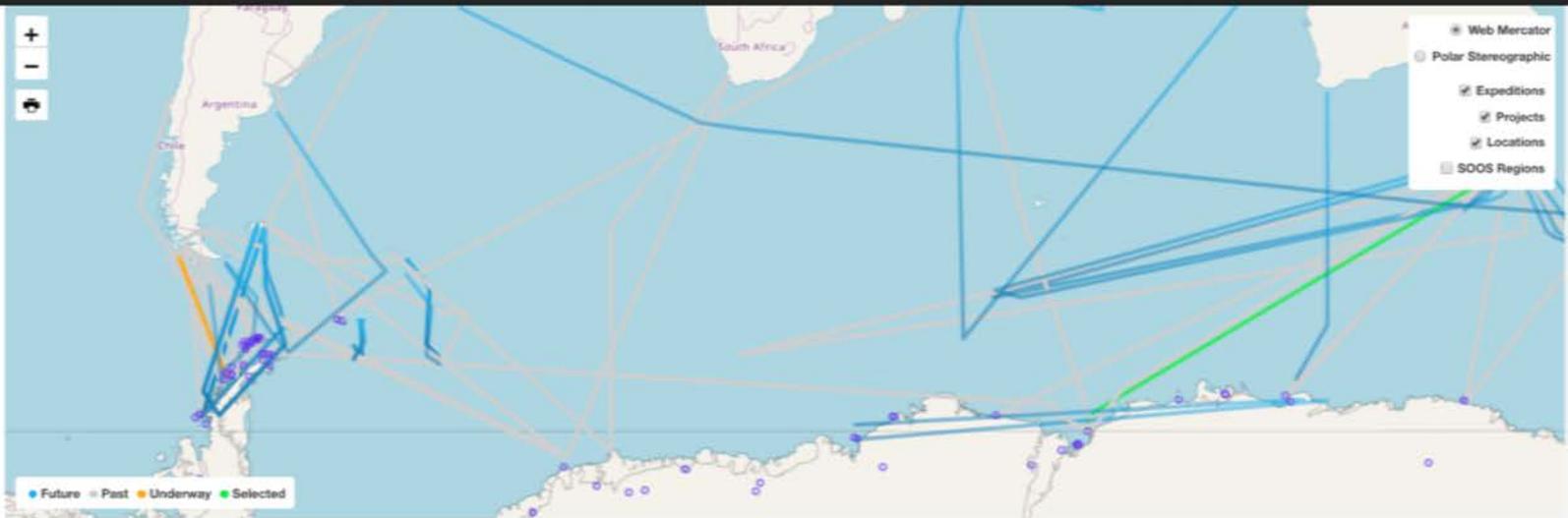
Date End

Spatial (Bounding Box)



Lat  Lng

Lng  Lat



11	JR17001	RRS James Clark Ross	Ship	0	2017-11-21	2017-12-16	United Kingdom
12	SR1b repeat hydrography 2019/2020	RRS James Clark Ross	Ship	0	2019-11-01	2019-12-01	United Kingdom
13	SR1b repeat hydrography 2020/2021	RRS Sir David Attenborough	Ship	0	2020-11-01	2020-12-01	United Kingdom
14	A23 repeat hydrography section	RRS James Clark Ross	Ship	0	2018-01-20	2018-02-11	United Kingdom
15	A23 repeat hydrography section 2018/19	RRS James Clark Ross	Ship	0	2019-01-01	2019-05-01	United Kingdom
16	A23 repeat hydrography section 2019/20	RRS James Clark Ross	Ship	0	2020-01-01	2020-05-01	United Kingdom
17	A23 repeat hydrography section 2020/21	RRS Sir David Attenborough	Ship	0	2021-01-01	2021-05-01	United Kingdom
18	Orkney Passage moorings 2018/19	RRS James Clark Ross	Ship	0	2019-01-01	2019-05-01	United Kingdom
19	Orkney Passage moorings 2020/21	RRS Sir David Attenborough	Ship	0	2021-01-01	2021-05-01	United Kingdom
20	V1 2017/18	Aurora Australis	Ship	0	2017-10-25	2017-12-06	Australia
21	LMG17-06 (XBT)	Laurence M. Gould	Ship	0	2017-06-30	2017-07-24	United States
22	Tangaora Antarctic Voyage 2018	Tangaora	Ship	0	2018-02-01	2018-03-31	New Zealand
23	Tangaora Antarctic Voyage 2019	Tangaora	Ship	0	2019-01-01	2019-02-28	New Zealand
24	IDEAL Beagle Channel 2017	FORREST	Ship	1	2017-07-17	2017-07-28	Chile

Data management: The bit of science  
where copying each other is actually a  
good thing to do.....

(with permission, of course!)



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