

ABSTRACT

SOOS stands for the **Southern Ocean Observing System** and represents an international network of stakeholders and contributors that have common interest in enhancing sustained, integrated and multidisciplinary observations of the Southern Ocean, in order to better understand the state and variability of the Southern Ocean and its cryosphere, circulation, air-sea-ice fluxes, biogeochemical cycles and the Southern Ocean ecosystems. SOOS Data Management Sub-Committee is a community of data professionals who aim to bring together activities of the SOOS community, connect data repositories and support delivery of FAIR data for the Southern Ocean community.

At the centre of the Southern Ocean data ecosystem is SOOSmap - a portal for well curated and standardised datasets of key circumpolar interest. It provides not just access to data but also a very visible way to identify gaps in observing and data sharing efforts in the Southern Ocean.

EMODnet Physics with support of the SO-CHIC project has developed a new version of the SOOSmap portal that provides access to a broad spectrum of data products across multitude of data providers and science disciplines. Here we will highlight key features of the portal designed for better discoverability of data and usability of this tool that strives to get Southern Ocean data 'on the map'.

What is SOOSmap?

A portal for discovery and download of a wide range of observational Southern Ocean data from a variety of oceanographic platforms.

Users can select a map base layer and visualise datasets from a **matrix of data platforms** (columns) and **data types** (rows). Platforms include for example ship, glider, drifting buoys or marine mammals. Data types and parameters include for example temperature, salinity, sea level, biogeochemistry or biology. Users can also explore **gridded data products** or **view data profiles** and download data of the available parameters in the data format they prefer to work with.

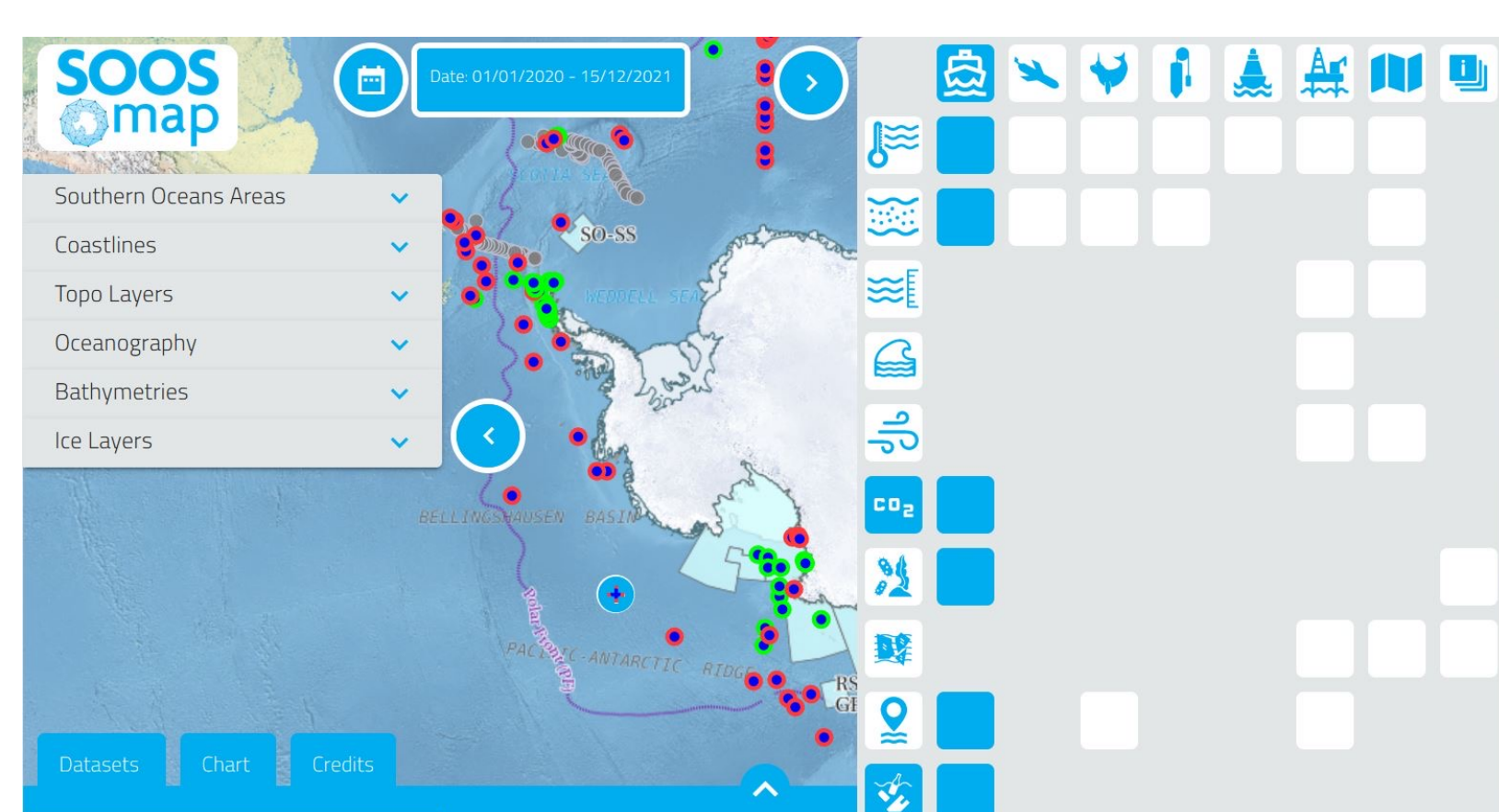
Why use SOOSmap?

The portal is designed for the scientific community **to easily access well-curated and standardised Southern Ocean datasets** generated by large and small international initiatives, such as SOCAT, GLODAP, GOSUD, ASPeCt, MEOP or NECKLACE, networks of gliders, ARGO floats and moorings or monitoring of sea ice, sea floor, albatrosses, plankton or plastic.

Aggregating a multitude of data on a single map can help to **highlight gaps** in observations and **identify new collaborations** or serve as an educational tool.

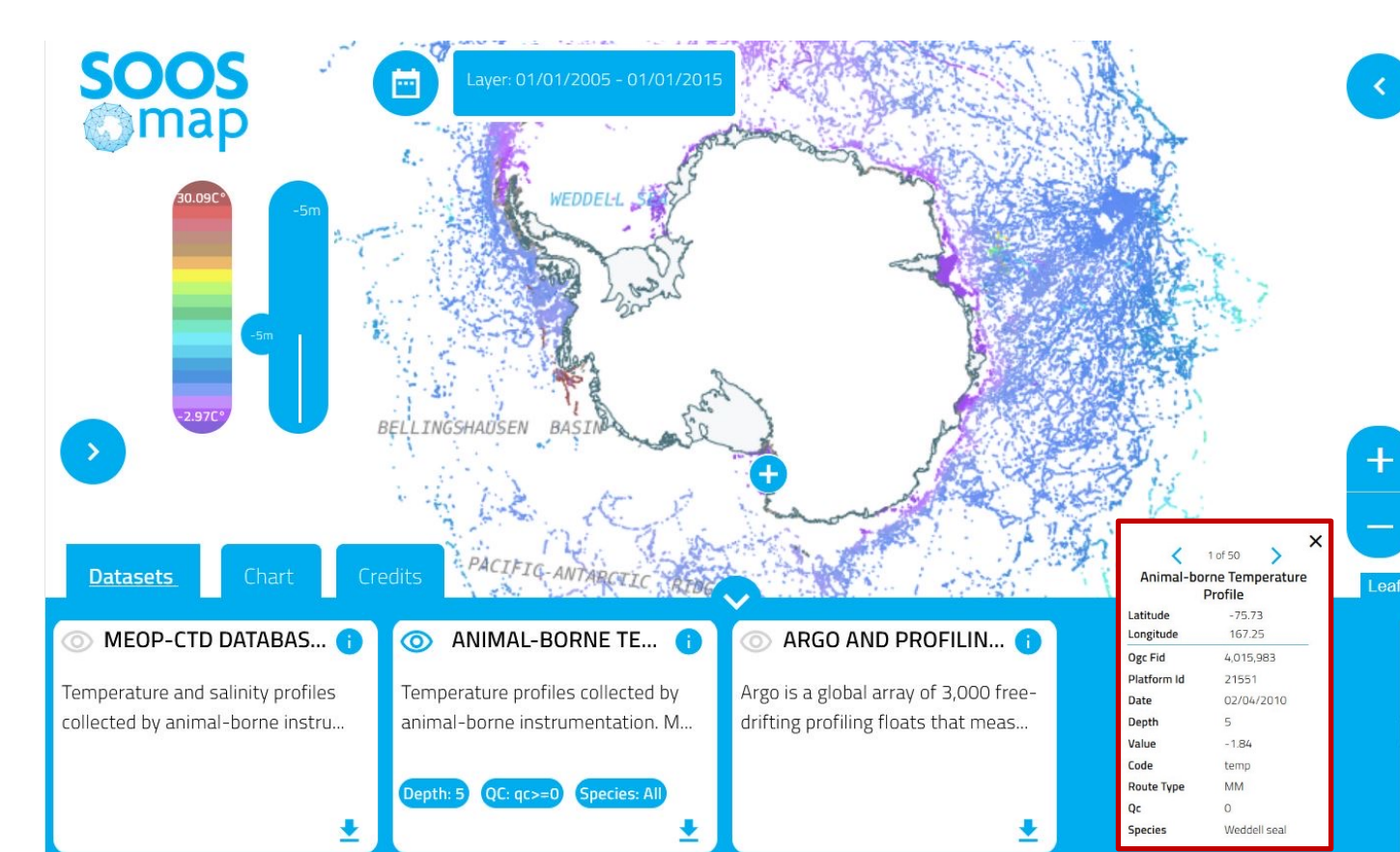
SOOSmap key features

The data portal provides an easy navigation in the complex landscape of multidisciplinary data using a novel way of a platform-parameter filter matrix and enables dataset download in a preferred data format using the SO-CHIC ERDDAP instance. The most relevant functionalities are highlighted in the panels below.



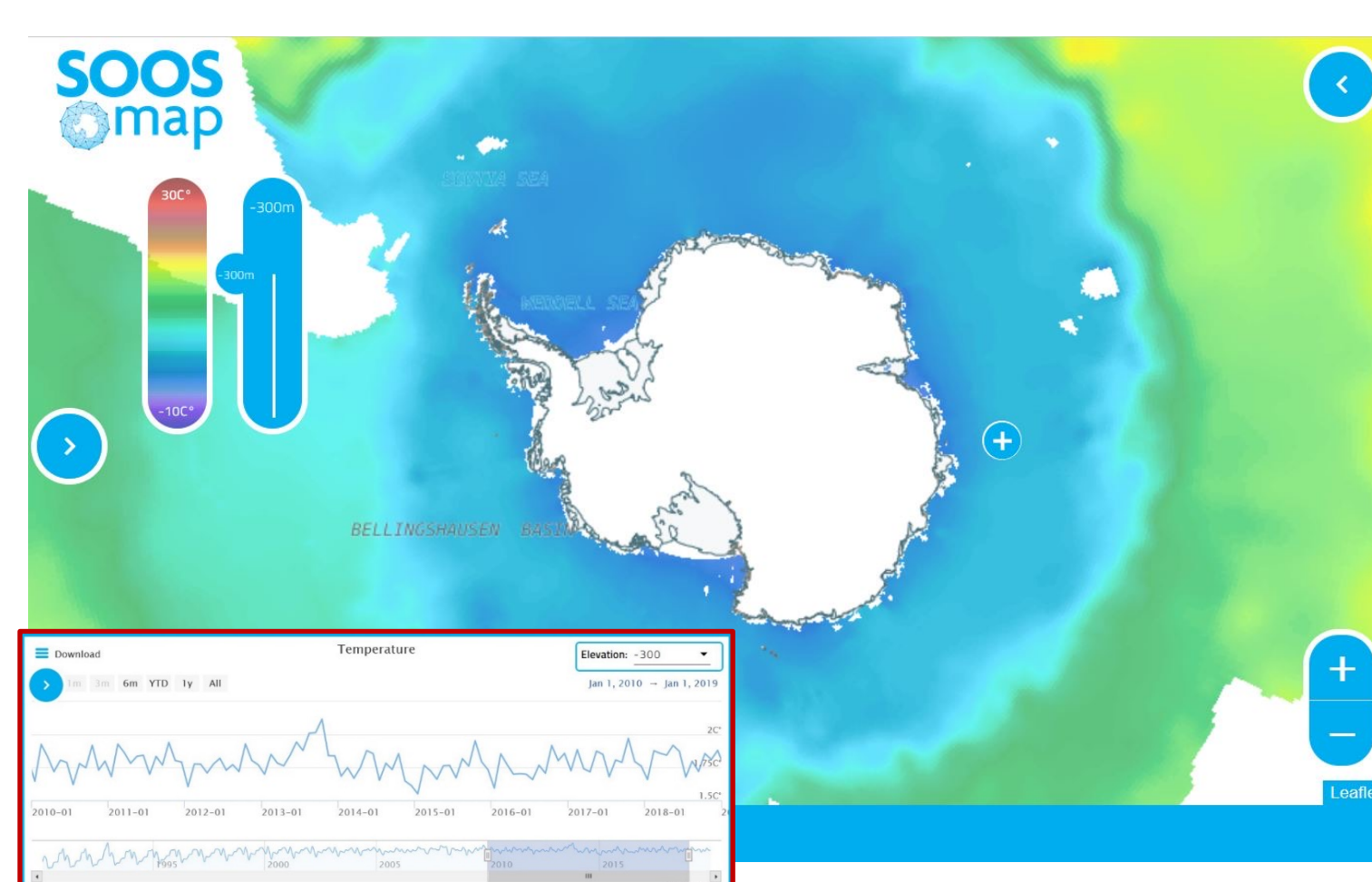
Select background layers, a platform and parameter of interest.

Users can select a map layer from the menu on the left and select data from a matrix of data platforms and data types on the right. In the example here the bathymetry layer is active and the first column of the matrix highlights in blue squares all available data types and products from the ship platform. Available datasets are then presented as a set of cards, where multiple cards can be activated to overlay and explore the datasets.



View available datasets, select a time range and sampling depth

By clicking on the card's eye icon users can select a dataset, view its info, refine the data selection to a specific depth or species and set a time range using the calendar icon at the top. The example here has activated a dataset card of animal-borne temperature profiles, visualising data at the depth 5 m between 2005-2015 provided by the MEOP Consortium. The insert in the red frame shows details of all data points at the specific location.

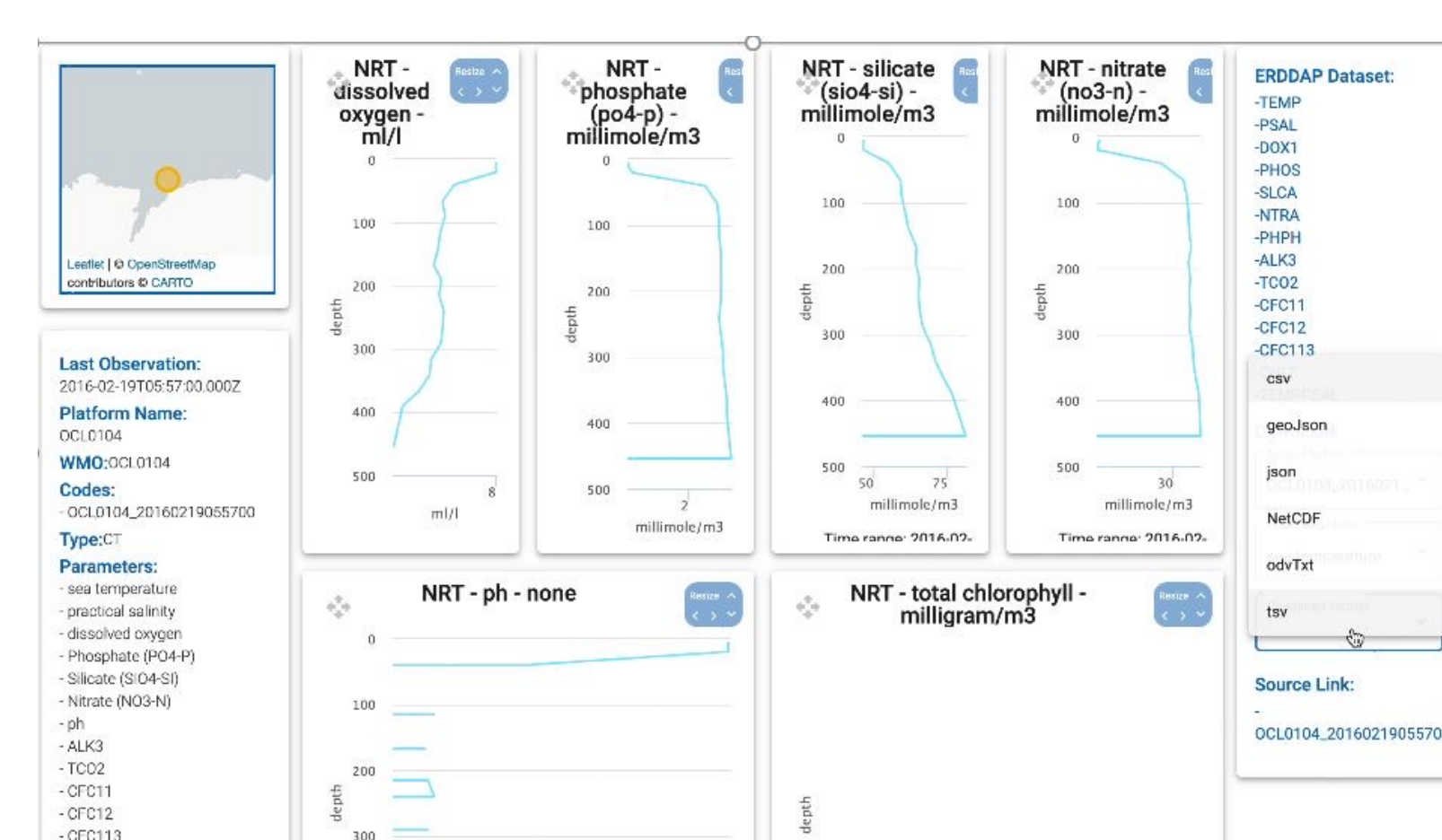


Explore gridded data products

The portal presents not only in-situ data but also animations in time from gridded data products. For any given data point a time series can be viewed in the Chart tab and downloaded in several data formats. The example here shows the CORA Climatology product by IFREMER with an insert of temperature time series at the depth 300m between January 2010 and 2019 for the location marked on the map with a white cross.

SOOSmap Tutorial

<https://www.youtube.com/@SOOS-Ocean>



View data profiles and select a preferable data download format

By selecting a data point on the map a popup window will appear with details of location and the sampling platform and a link to a platform page containing data customised according to the platform. A user can view available parameter profiles or time series and choose from several download formats for the parameter.

SOOSmap access

<https://www.soosmap.aq>

Contacts

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