



# ODIN2 - User-friendly, web-based access to more than 70 million oceanographic readings

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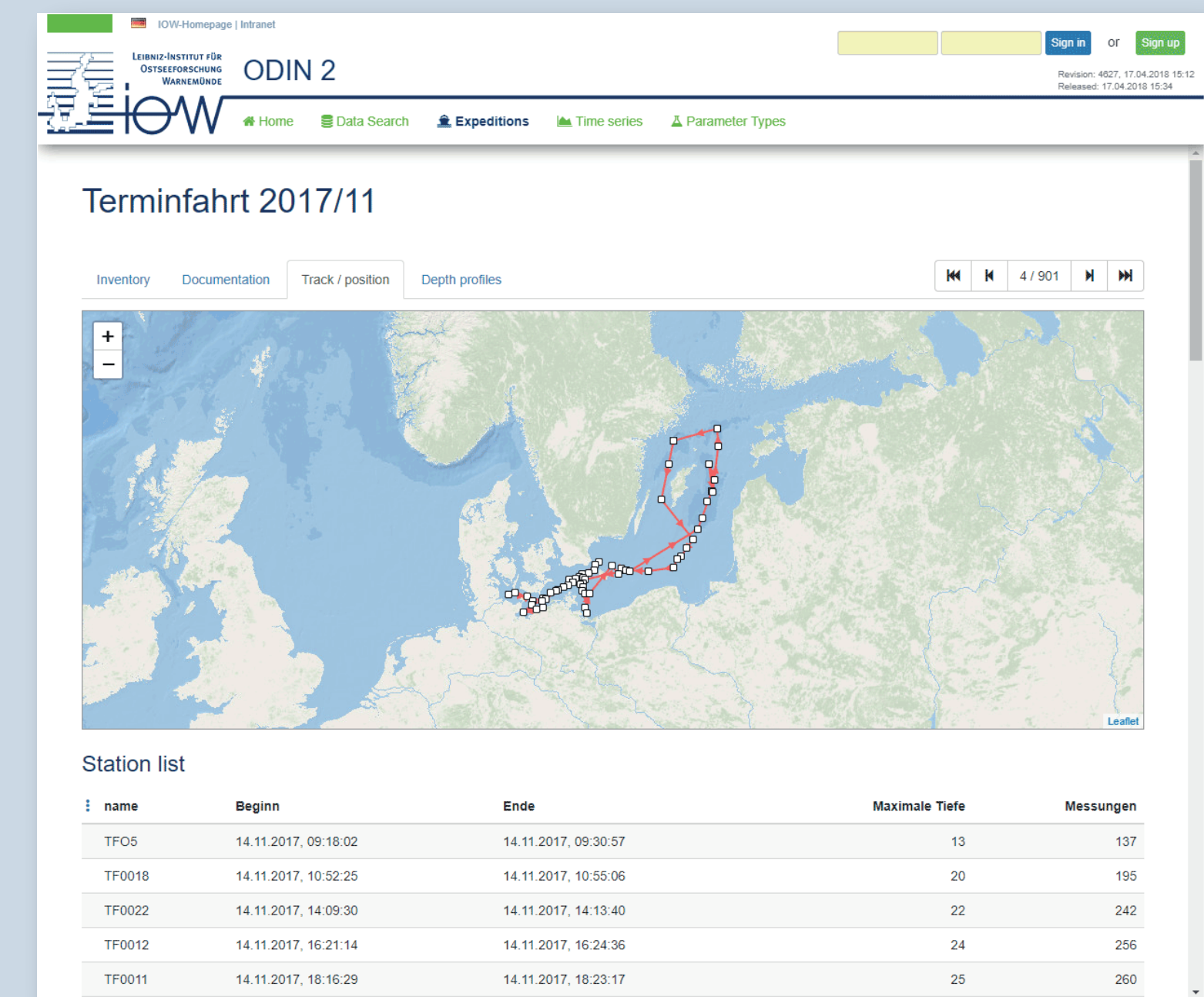
## ODIN2: a public, web-based search application

The Oceanographic Database of IOW (IOWDB) had originally been designed for particular internal requirements of the Leibniz Institute for Baltic Sea Research (IOW). IOWDB has always been aimed at the management of historical and recent oceanographic measurements. Most recently, the research tool ODIN2 was published to provide those research data to the public in a user-friendly way. ODIN2, and along with it IOW's long-term monitoring data, have been made **publicly available worldwide since April, 2018**. For convenience, ODIN2 offers the creation of a URL as a permanent link to repeat or share any previously defined search. All research data available via ODIN2 are licenced under CC BY 4.0

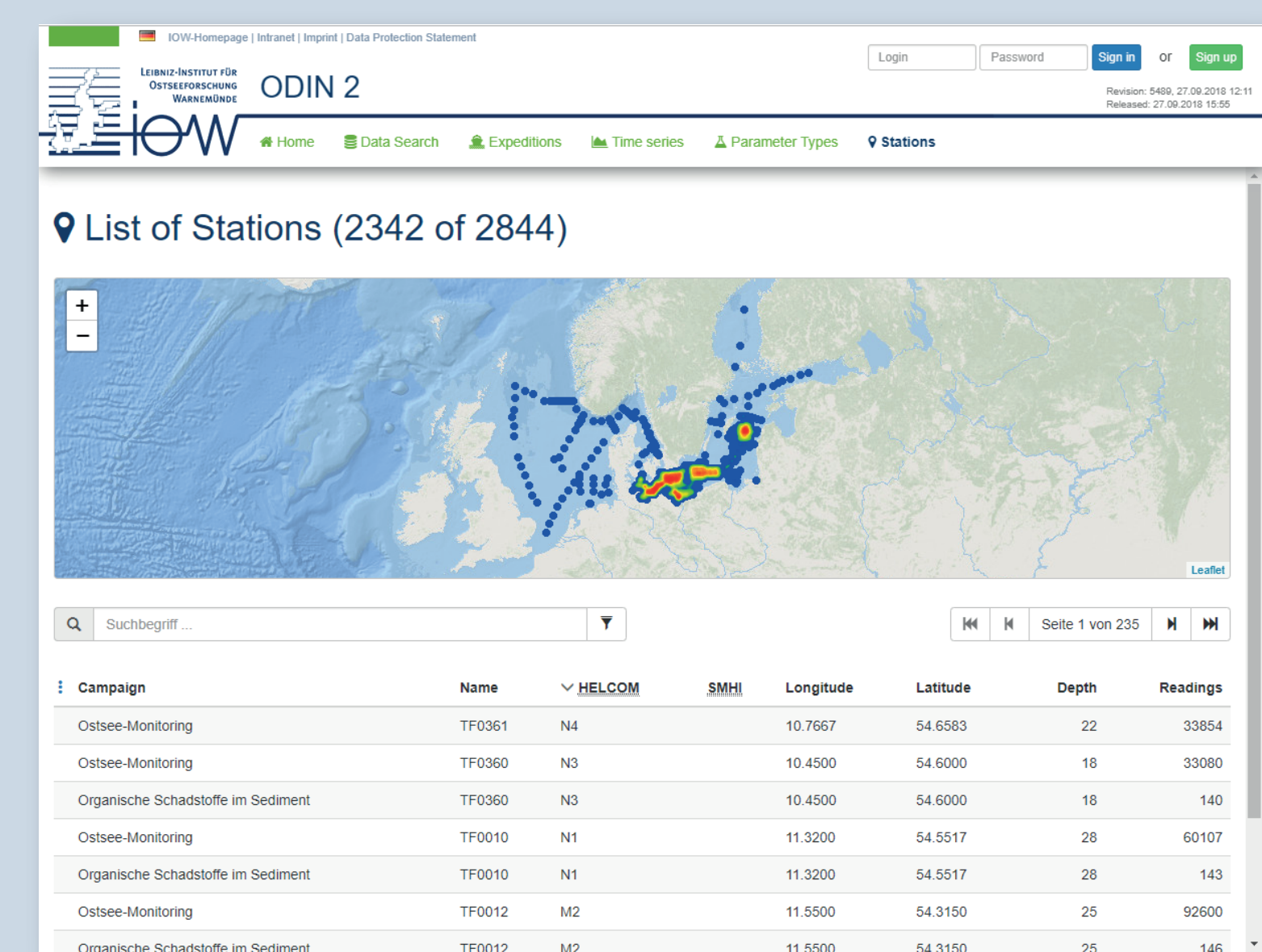


## Open Access

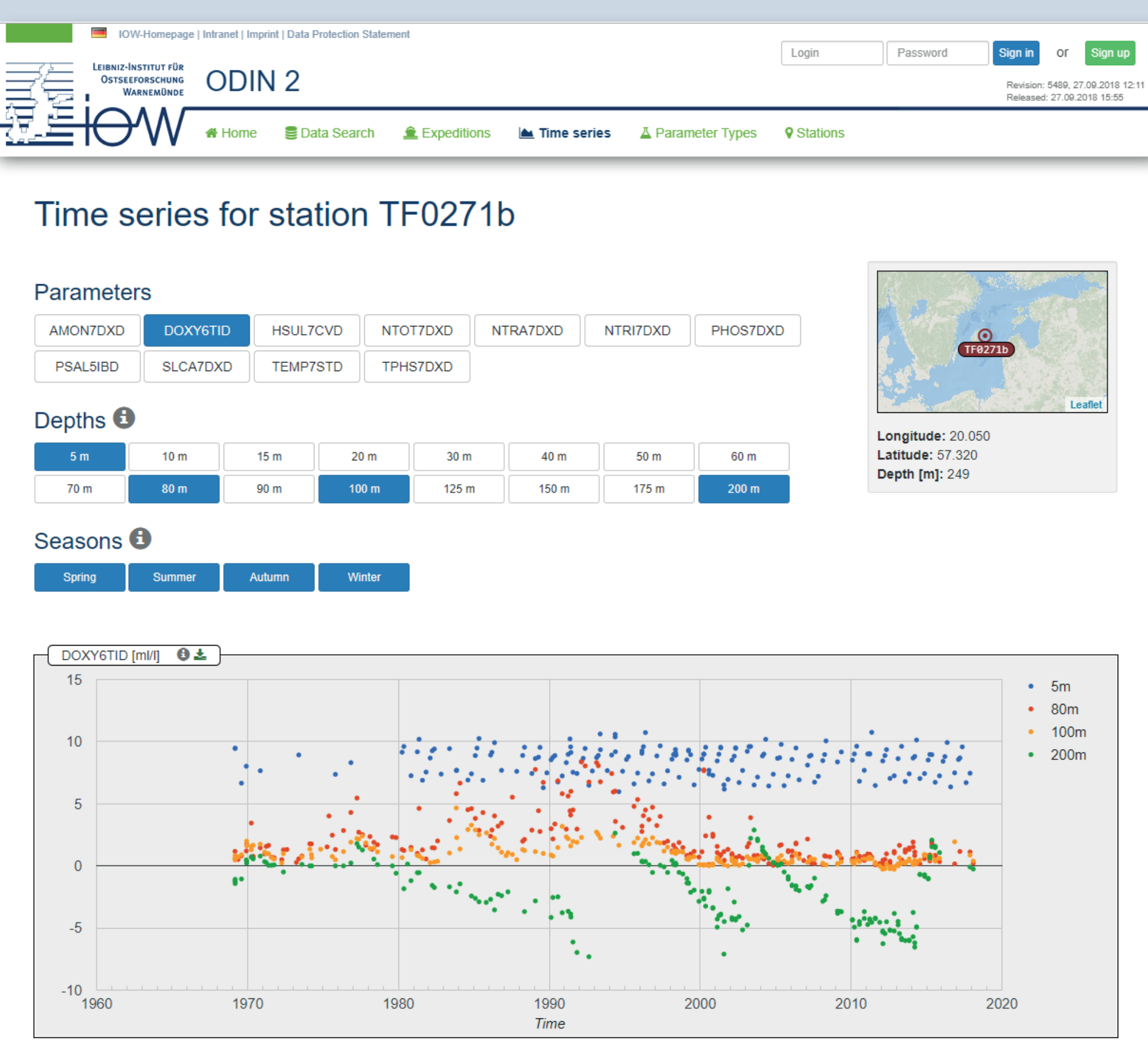
Instantly accessible are, for example, either **ship tracks** or **station lists** for each campaign as well as **on-the-fly depth profiles** of each CTD cast taken. For the long-term monitoring stations in the Baltic Sea, ODIN2 offers automatic visualisation of up to **50-year time series** for regularly sampled parameters at standard depths.



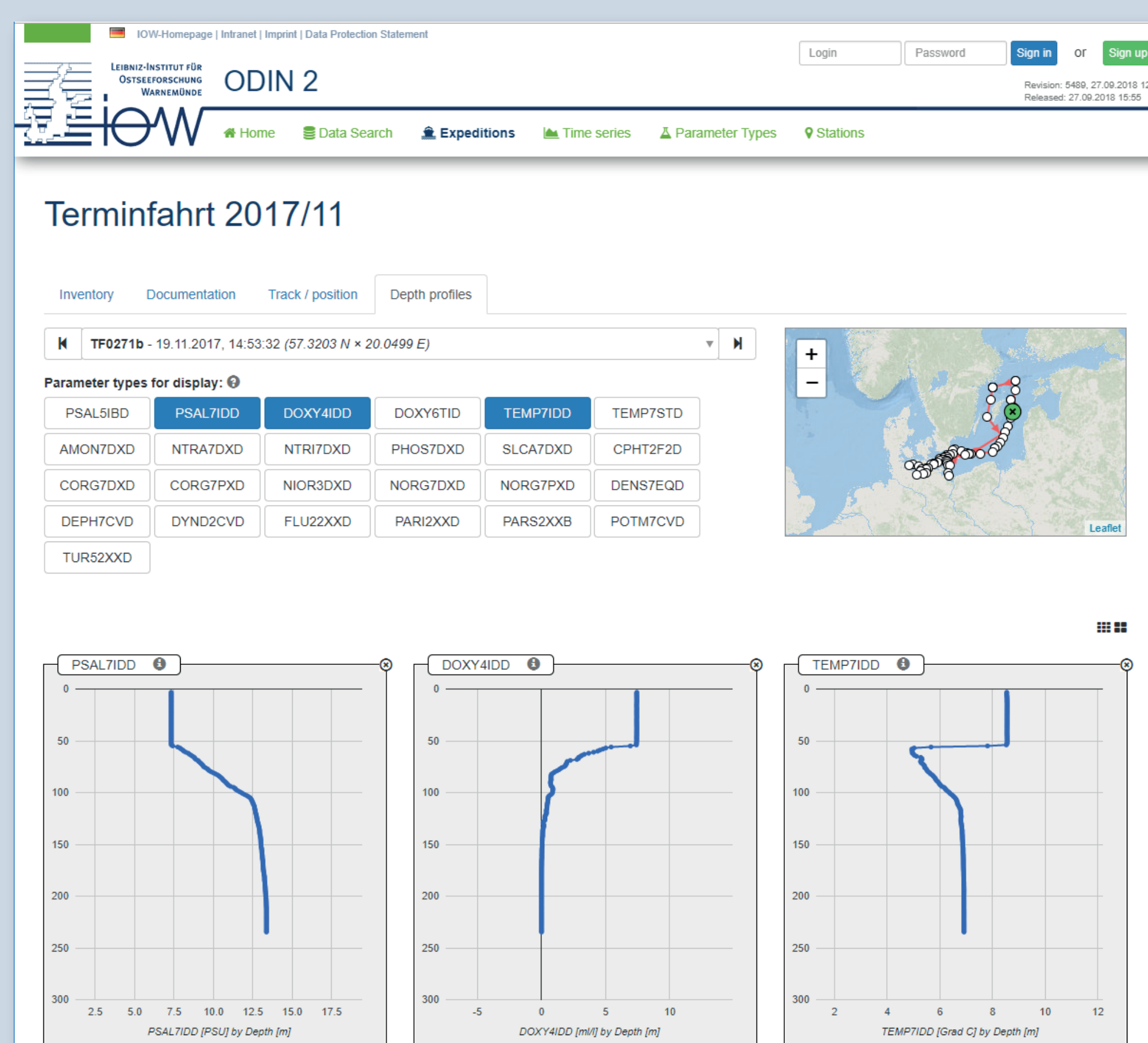
**Ship track and station list** for monitoring campaign „Terminfahrt 2017/11“. Each station contains an inventory, documentation and depth profiles.



**List of stations** available in IOWDB for the visible area (North & Baltic Sea) with station aliases from HELCOM and SMHI, as well as inventory for all measurements at each station.



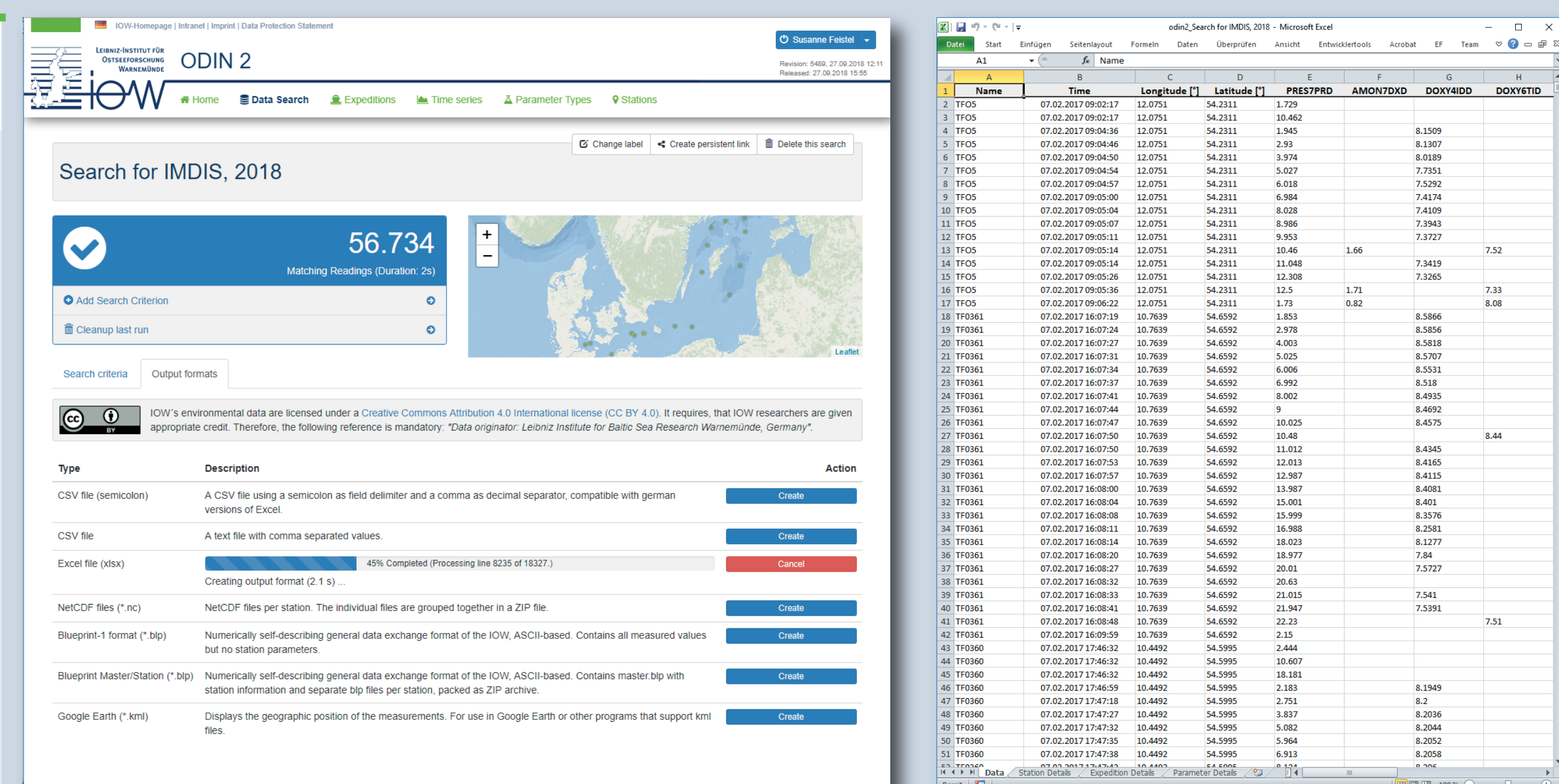
Visualisation of long-term measurements of **dissolved oxygen** and **hydrogen sulphide** at the **Gotland Deep** in the central Baltic Sea. The time series starts in **1969** and continues to **2017**. Displayed are data from the surface (5 m, blue dots), from the halocline depth (80 m, red dots; 100 m, yellow dots) and from the near-bottom depth (200 m, green dots). Clearly discernible are the **Major Baltic Inflow** events in 1993, 2003 and 2014.



**Depth profiles** available in ODIN2: A single CTD cast at the **Gotland Deep** in the Baltic Sea, taken **November 19, 2017**, from surface (top) to 240 m depth (bottom). Profiles from left to right: **practical salinity** ranging between 7 and 14 PSU, **dissolved oxygen concentration** (8 to 0 ml/l) and **temperature** (8 to 4 °C). The **stratification** of the Baltic Sea is instantly visible.

## After Registration

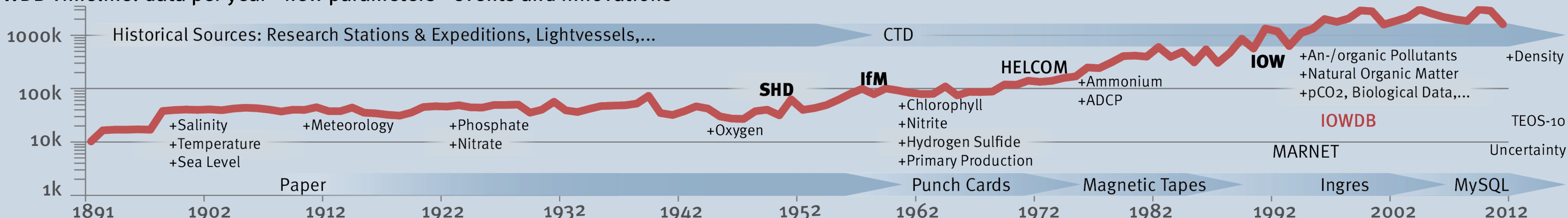
Registration is a simple e-mail verification. It is used to bind searches to a user and enable **saving and sharing of searches**. To explore the research data in IOWDB, ODIN2's individual search engine is the most powerful and fastest tool. It offers **complex search and filter options** for geographic areas, time spans, seasons, depth range, parameters, cruises or standard positions. After executing a search, the results are integrated in user-friendly digital **export formats such as plain text, xls or netCDF**.



## IOWDB: the underlying database

The content of our database includes oceanographic readings and metadata (mainly Baltic Sea) from **1877 to 2018** obtained during **934 research campaigns** of the IOW (the former Institut für Meereskunde, IfM) and cooperating institutions. As of October 2018, the IOWDB contains more than **73 million measured samples** representing **georeferenced point data** from the water column, primarily from CTD profiles, hydrochemical and biological sampling, current-meter time series, trace metal sampling and long-term monitoring. Phyto- and zooplankton data are available for 1988 to 2017.

## IOWDB Timeline: data per year - new parameters - events and innovations



https://odin2.io-warnemuende.de