



Exploring GEOTRACES data with Ocean Data View

Sunday, 26 June 2016 (9-16h), Yokohama, Japan

*Training Center, Nippon Maru Memorial Park
(2-1-1 Minato Mirai, Nishi-Ku, Yokohama, Japan)*

No.1 Conference Room

Workshop of the Goldschmidt 2016 Conference

About the Workshop

This workshop teaches standard and advanced ODV methods for the exploration and scientific analysis of environmental data. The GEOTRACES Intermediate Data Product 2014 (IDP2014) will be used as example dataset. Participants will learn how to create publication-ready maps, property-property plots and sections and how to apply simple or advanced station and sample filters. In addition, an overview over the wide range of derived variables available in ODV will be given and a number of variables often needed in geochemical research will be described and applied. This includes physical oceanography parameters, such as potential temperature or density, parameters of the ocean carbon system and special operations, such as aggregation, interpolation, unit conversion, differentiation and integration. Participants will also learn how to create overlay windows and how to apply special projections in maps and data plots.

Laptop Preparations

Participants are encouraged to bring their own laptop computer for use during the hands-on sessions of the workshop. All computers need to be prepared before the workshop by installing the latest version of the ODV software and downloading the IDP2014 dataset as well as some high-resolution map resources. There will be no Internet access during the workshop. Therefore it is important to perform the following steps before travelling to Yokohama.

1. Download and install the latest ODV version 4.7.6 from <http://odv.awi.de/>. New ODV users will have to register first.
2. Run ODV and install high-resolution map and bathymetry resources following guidelines in section 2.12 in the ODV User's Guide. In ODV choose the *Help > User's Guide* or press *F1* to view the User's Guide in your browser. Under *Gridded Bathymetry Resources* please install *IBCAO_V3_3x1min*. Under *Map Resources* please install *ETOPO1_2min (complete)* and any other global or regional resource you may want to use.
3. Download the IDP2014 discrete sample data in ODV format from <http://www.bodc.ac.uk/geotraces/data/idp2014/>. New BODC users will have to register and accept the usage rules. Unzip the downloaded file into your ODV data directory `<ODV User Directory>/data` or any other preferred destination on your computer. Use the *Help > About ODV* option (`odv4 > About odv4` on Mac OS X systems) to see the path of your *ODV User Directory*.

Workshop Agenda

09.00 – 10.45 ODV Basics

ODV overview presentation; elements of the application window; getting help; extended data and metadata support; changing the window layout; creating high-quality maps; adding annotations, polylines and arrows; exporting images; using gazetteers; creating property-property plots; station filtering by cruise, time or data availability; sample filtering by quality flags or range; saving and loading views; exchanging collections and making backups.

Participants create their own, favorite property-property plot.

Scientific discussion of findings in a property-property plot.

10.45 – 11.15 Coffee Break

11.15 – 13.00 ODV Sections

Defining sections and setting section properties; window scopes and section coordinate; identifying key variables; “honest” display vs. gridding; presentation on gridding methods; adjusting gridding length scales; adding contours; adjusting the color mapping; placement of the color bar; adjusting labeling intervals and font-size; analyzing gridding misfits.

Participants create their own, favorite section plot.

Scientific discussion of findings in a section plot (Hajime Obata).

13.00 – 14.00 Lunch Break

14.00 – 16.00 Overlay Plots, Derived Variables and Participant’s Requests

Setting up overlay plots; changing properties of overlay and parent windows; derived variables overview; identification of input key variables; physical oceanography derived variables; carbon system derived variables; special derived variables (ratio, aggregated, interpolated); time derived variables used with BATS collection.

Participants create their own, favorite overlay plot.

Scientific discussion of findings in overlay plots (Yoshiki Sohrin, Yuichiro Kumamoto).