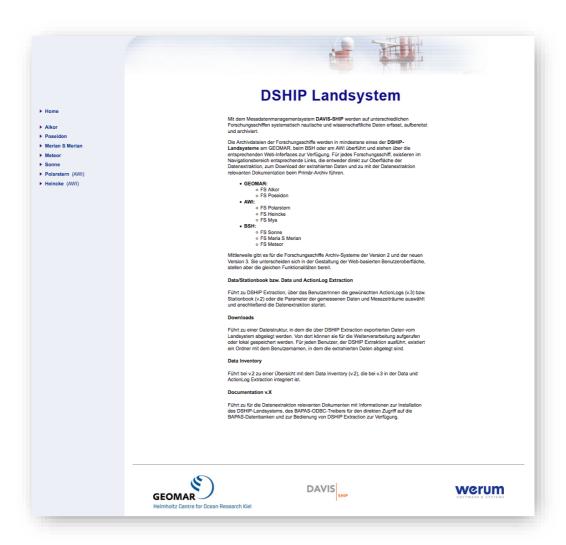


Tutorial

DSHIP land system (v.2)



Contact

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Introduction

Nautical and scientific data on various research vessels are systematically collected, processed and archived with the data management system DAVIS-SHIP (DSHIP).

The archives files of the research vessels are transferred to the DSHIP land system and these data are accessable through a web inferface. DSHIP contains tracks, stations and underway measurements from cruises of German research vessels.

For each research vessel there is a corresponding link that leads to the data extraction, to extracted data and to documentation.

Extraction

The user selects the desired instruments, parameter and measurement periods to start with data extraction.

Extracted data

The exported data are available under '**Extracted data**' For each user who performs a DSHIP extraction there is a folder with the user name, in which the extracted data is stored.

Data Inventory

The Data Inventory lists all periods where data archives are available.

Documentation

Here you can find documents with information about installing the DSHIP Land Systems (BAPAS ODBC driver for direct access to the BAPAS databases).

1. Access to the DSHIP land system

Go to the **GEOMAR DSHIP land system** http://dship.geomar.de/ to get underway data from RV ALKOR and RV POSEIDON. The data is accessible from the GEOMAR intranet, for external use please contact the GEOMAR data management team datamanagement@geomar.de. The GEOMAR DSHIP land system is linked to the **BSH DSHIP land system** http://dship.bsh.de/ (Bundesamt für Seeschifffahrt und Hydrographie) where underway data from all German research vessels is archived. To get access to the BSH DSHIP land system please contact dod@bsh.de.

For the RV SONNE data is available at GEOMAR from the year 2005 to 2014 only. Data from 2015 on is available from the BSH DSHIP land system.

2. Research Vessels

RV ALKOR: The RV ALKOR is a medium sized research vessel. She operates in the North and Baltic Sea as well as in the Kattegat and the Skagerrak.

For information about devices and sensors see:

http://dship.geomar.de/alkor data/GESODocu/ascii/

RV POSEIDON: The RV POSEIDON is a medium-sized research vessel that operates primarily in the North Atlantic Ocean and the Mediterranean Sea. The research vessel is available for research cruises in the fields of oceanography, marine biology, and geology. For information about devices and sensors see:

http://dship.geomar.de/poseidon_data/GESODocu/ascii/

RV SONNE: The RV SONNE serves as a research platform for almost all german marine research disciplines. She operates primarily in the Pacific and Indian Oceans.

For information about devices and sensors see:

http://dship.geomar.de/sonne_data/GESODocu/ascii/

RV Maria S. MERIAN: The RV Maria S. MERIAN operates in the Atlantic, in the North and Baltic Sea. Apart from the RV POLARSTERN it is the only European research vessel that is ready for use in ice.

For information about devices and sensors see:

http://dship.geomar.de/merian_data/GESODocu/ascii/

RV METEOR: The RV METEOR sails several seas, from the Atlantic, the eastern Pacific, and the western Indian Oceans to the Mediterranean and the Baltic Seas. The METEOR provides an interdisciplinary research platform for scientists from numerous research fields, such as maritime meteorology and aerology, physical oceanography, applied physics, marine chemistry, marine botany, zoology, bacteriology and mycology, marine geology, sedimentology, and marine geophysics.

For information about devices and sensors see:

http://dship.geomar.de/meteor neu data/GESODocu/ascii/

3. How to use DSHIP

In this chapter you will find informations about how to extract data from the DSHIP land system. There are archive systems for version 2 and version 3 for the research vessels. They differ in the design of the web-based user interface but provide the same functionalities. This tutorial describes the user interface of Dship land system version 2.

3.1 Data Inventory

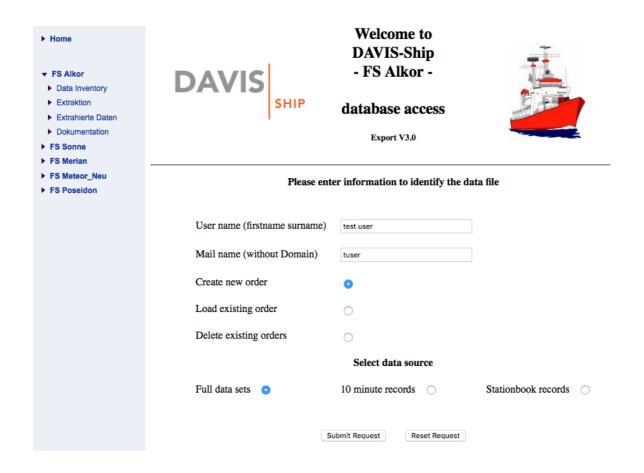
If you click on 'Data Inventory' in the navigation panel of the selected research vessel you will get informations about the available cruises (start/end date and time).

3.2 Data and ActionLog Extraction

Select your Stationbook or parameters of the data measured. If you click on **'Extraction'** in the navigation panel of the selected research vessel you will get access to the database.

- Fill in your name and mail name
- If you want to create a new order, activate the selection button 'Create new order'

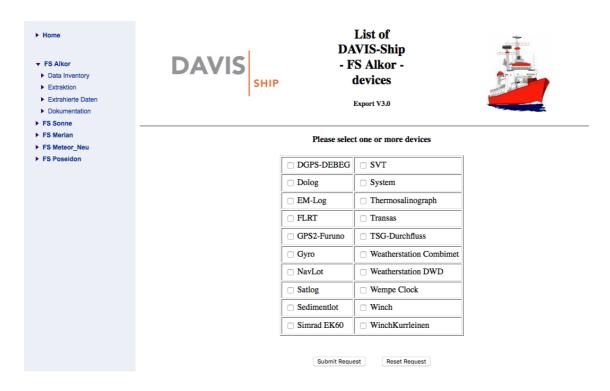
- If you want to use an existing order, activate the selection button 'Load existing order'
- If you want to delete an existing extraction order, activate the selection button 'Delete existing orders'
- When selecting 'Load existing order' or 'Delete existing orders' it is also important to select the corresponding data source under 'Select data source'.



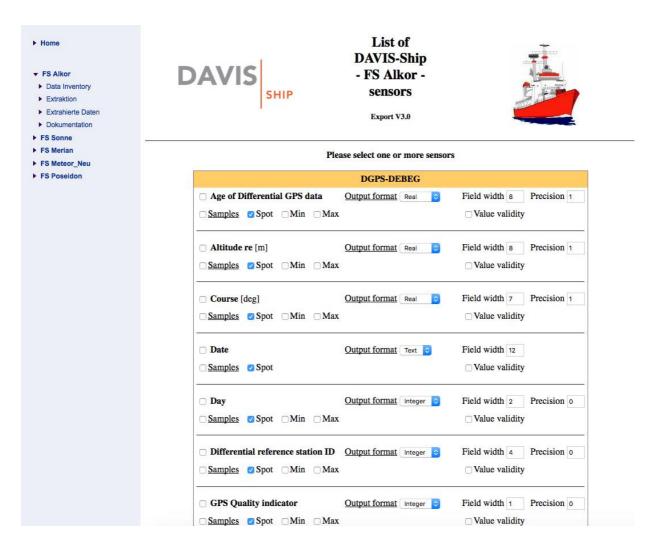
3.2.1 Full DataSets-Extraction

If the option 'Create new order' and 'Full data sets' is selected, the next step is the selection of devices.

- Activate the check box of those devices from which you would like to select the parameters.
- Click on 'submit request' or click on 'reset request' if you want to revert your selection.



The following list displays all the sensors of the previously selected devices. Depending on the selected device, several sensors are available for selection.



Output format

Select the sensors you want to export by clicking the check box in front of the sensor name. The **output format** specifies the format of the generated data.

Real Number with decimal digits
Integer Number without decimal digits

Text ASCII character

Position lat

Latitude position with Deg Min, decimalMin N/S

Position lon

Longitude position with Deg Min, decimalMin E/W

Position deg

Position with +/-Deg, decimalDeg (- for south and west)

Field width Number of possible output characters **Precision** Accuracy, number of floating points

The default output format has been configured by the administrator. Please note that not all combinations of sensor, output format and field width make sense. 'Field width' specifies the length of the whole output column including both, decimal symbol and precision. With the precision input field you enter the number of decimal digits.

Samples

The second line of each sensor item has check boxes for statistical information about the data. Each of them will generate an additional column in the output file.

Samples Number of valid samples within the interval

SpotFirst sample (valid) of the intervalMinMinimum value (valid) of the intervalMaxMaximum value (valid) of the intervalMeanAverage over all valid samples

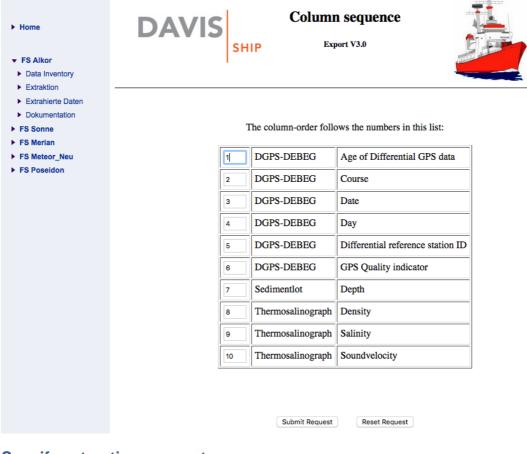
Variance Variance of all valid samples

Std dev Standard deviation of all valid samples

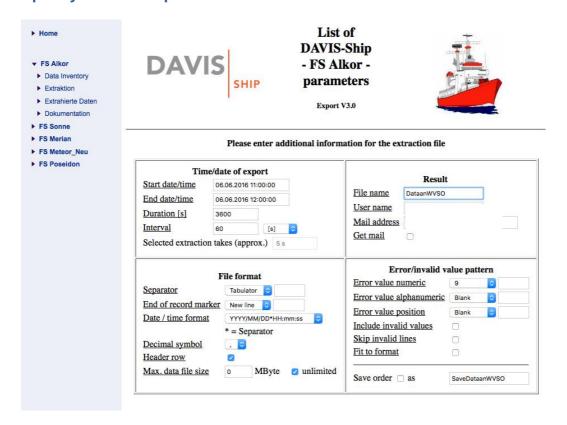
Value valid Validity of the calculated values (V-Valid / I-Invalid)

Mean valid Validity of the calculated average (V-Valid / I-Invalid)

Determine the columns order by placing the corresponding numbers in the input fields.



Specify extraction parameter



The following briefly explains the meaning of the input-fields:

Separator

The 'separator' is inserted between the individual values extracted for one point of time.

End of record marker

The 'end of record marker' separates the single export steps representing one point of time.

Error values

The 'error values' are used to indicate missing or invalid data. It is possible to define different values for figures, positions and text.

Include invalid values

If 'show invalid values' is selected, Export will use these invalid values instead of error values.

Skip invalid lines

If 'skip invalid lines' is selected, lines of data containing only invalid values are skipped.

Fit to format

If 'fit to format' is selected, Export fills up the output format with leading blanks.

Start date/time

'Start date/time' is the start date and time of the request. The string must have the format "DD.MM.YYYY HH:mm:ss".

End date/time

'End date/time' is the end date and time of the request. The string must have the format "DD.MM.YYYY HH:mm:ss".

Duration

As an alternative to the 'end date/time' you may specify the 'duration'. The duration calculates the end date/time of the request in seconds from the start data/time. If end date/time is specified, it will be adopted.

Interval

'Interval' is the gap in time between two data lines. You may specify this gap in hours ('[h]'), minutes ('[min]'), seconds ('[s]') and milliseconds ('[ms]'). If you choose [ms], only 50, 100, 200 or any value divisible by 1000 are permissible values.

The larger the interval you choose the longer takes the extraction. Please have a look at the value displayed in the filed below: 'Selected extraction takes (approx.)' ...

File name

'File name' is the prefix of the output files. Use a speaking name, e.g. AL477 to be able to find your data when making several orders. The generated files have these extensions:

.dat	Extracted data
.log	Extracted log-entries (only for full data sets)
.sys	Notifications resp. errors from the extraction process
.txt	Generic description of the processed order

Decimal Symbol

You can choose between the German and the English decimal-symols, ',' and '.'.

Header row

If 'Header row' is selected, Export produces lines at the top of the data file containing the sensor and device names.

Max. data file size

The 'max. data file size' is the maximum size (in Mega Bytes) a data file may have. The system generates new files, if necessary. The files will then be numbered. The minimum is 1 and only integers are allowed.

Entering 0 is equal to checking 'unlimited'. In this case, no limit for the file size is taken into account.

Get mail

If 'Get mail' is selected, an e-mail is sent on completion of the export. Make sure you entered a valid email address.

User name

The 'user name' has to be your full name.

Mail address

The 'mail address' has to be your complete e-mail address.

Date / time format

You may choose the 'date / time format' from the following defaults. Please note that the asterisk (*) represents the separator.

YYYY*MM*DD*HH*mm*ss	year*month*day*hour*minute*second
YYYY*ddd*HH*mm*ss	year*julian days*hour*minute*second
YYYY/MM/DD*HH:mm:ss	year/month/day*hour:minute:second
DD.MM.YYYY*HH:mm:ss	day.month.year*hour:minute:second
YYYY*MM*DD	year*month*day
YYYY*ddd	year*julian days

YYYY/MM/DD	year/month/day
DD.MM.YYYY	day.month.year
HH*mm*ss	hour*minute*second
HH:mm:ss	hour:minute:second
Seconds since 1970	Time in seconds since 01.01.1970 00:00:00
None	No time / date column in the output file

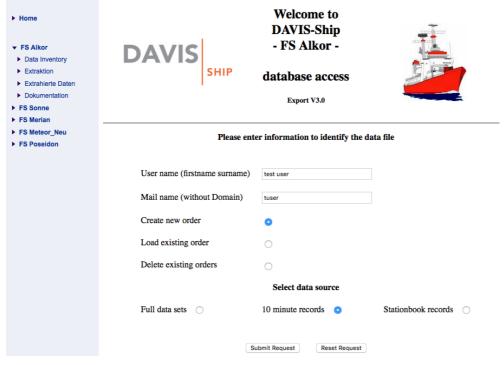
Order confirmation

Finally, the user gets the message with the link to the directory where the results are stored. Click on the link if you want to download the extracted files.

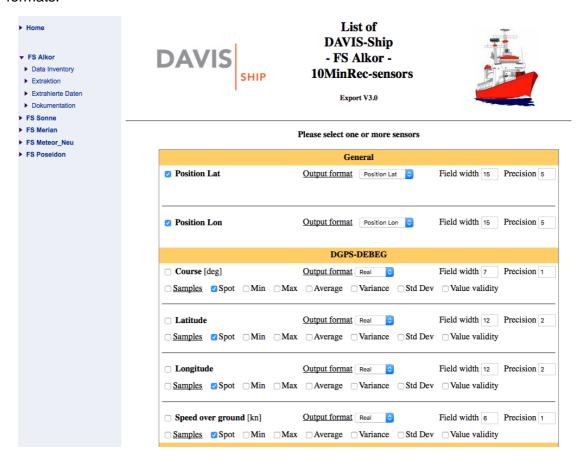
You'll also receive an info e-mail about a successfully executed extraction job. The e-mail will include the following informations:

3.2.2 10 minute records - Extraction

The procedure for the extraction is similar to the 'Full data sets' extraction. Click the option 'Create new order' or Load existing order and '10 minutes records'.



The devices and sensors for the 10-minute sets are configured by the administrator. Therefore, the separate selection of the devices and sensors is not available, but the list of sensors is immediately available. Select the desired sensors and its values and output formats.



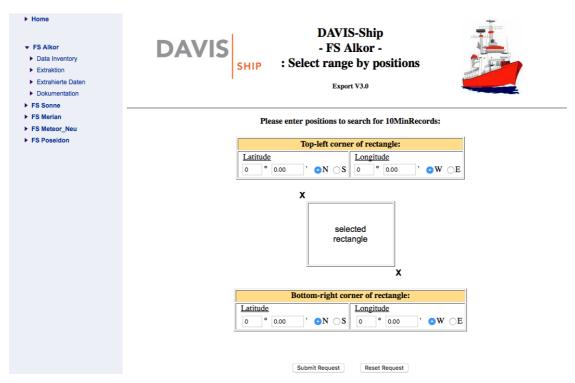
As with the full data sets you can define the column order. If you want to make the data selection based on geographical position, you have the possibility to activate 'Select range by positon'.



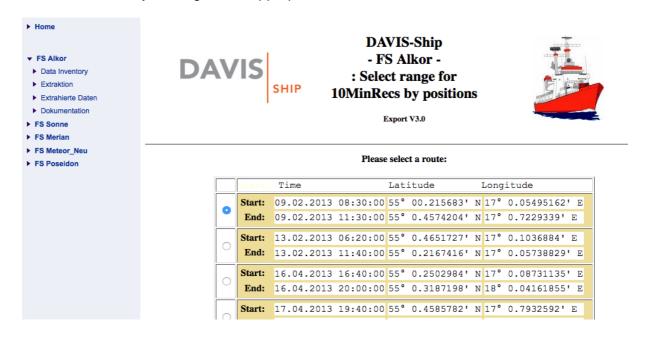
If the default option 'Select range by time' has been selected, you can skip the following section.

Select range by position

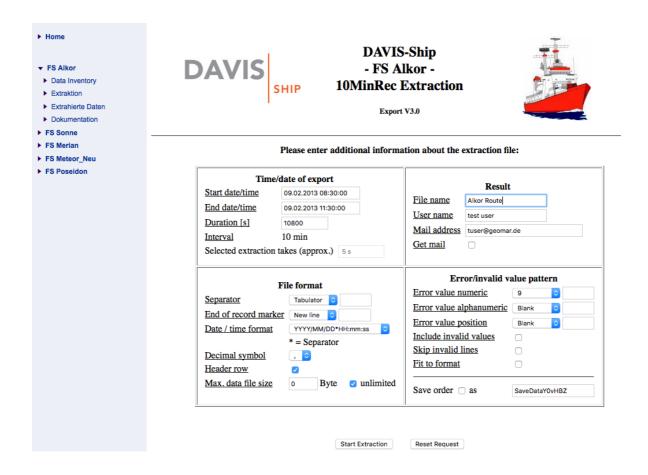
A rectangle can be defined by two coordinate points. The system then determines all routes from the database that pass through this square. The individual routes are then displayed as a list on the next page. In the field of the 'top-left corner of rectangle' fill in the coordinates of the upper left vertex and in the field 'bottom-right corner of rectangle' fill in the coordinates for the right vertex at the bottom.



Select one route by clicking on the appropriate radio button from the desired route.



The selection of the extraction parameters is almost identical to those of the already described **'Full data sets'** extraction.



Order confirmation

The order confirmation of the '10 minute records' is similar to the 'Full data sets' extraction.

N.B.

There is no warranty for the correctness of the data extracted. There is no quality control applied to the data.

This Tutorial is adopted from *Werum Software & Systems (2005): DAVIS-SHIP Extraction. Version 3.41. URL: http://dship.geomar.de/docu/Extraction/pdf/DAVIS-SHIP_Extraction_D.pdf*

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