

Handling of Analytical/Lab Data in MCS, SENSORWeb and DSHIP

simplified workflow for field and lab instruments' relation and data storage

Reminder (excerpt from [MOSAic Data Policy](#)):

- A primary subset of laboratory sample analysis data: Must be stored on the land MCS no later than 31 Jul 2021 .
- Full collection of laboratory sample analysis data: Must be stored on the land MCS latest no later than 31 Jan 2022.

metadata relation

1. If not happened already, please register all participating devices at [sensor.awi.de](#) responsible party: [chief editors](#)
2. Each device needs to be added to the respective MOSAic collection(s). This is mandatory for the following step. responsible party: [chief editors](#)
3. Event relations are added to [sensor.awi.de](#) responsible party: AWI under the following preconditions:
 - scientific community creates a list, such as the table below. responsible party: [chief editors](#)
 - items are available and described properly at [sensor.awi.de](#) responsible party: [chief editors](#)

You are very welcome to add new lab facilities under one parent, such [laboratory:awi-c-233](#) and subsume all (new) items to it.

field item ID	lab item ID	device operation ID	datetime start	datetime end
3214	647	PS122/4_49-14	2020-12-11T10:00:00	2020-12-17T16:45:00
3232	647	PS122/2_11-14	2021-02-21T10:00:00	2021-02-27T16:45:00
3232	3873	PS122/2_11-16	2021-10-01T00:00:00	2021-10-27T00:00:00

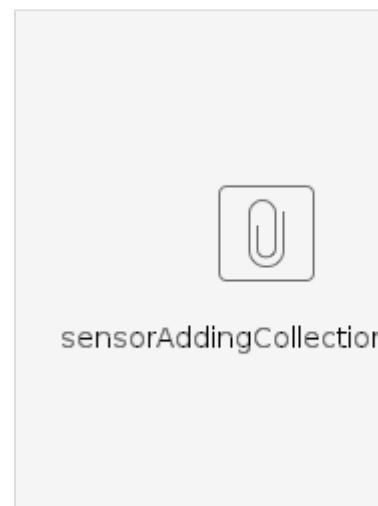
data storage on MCS

1. analysis data are placed in `/isibhv/projects-dmz/MOSAic/platforms_processed/<-fact`
2. path structure follows URN structure in [sensor.awi.de](#), frequently URN structure is cloned to file structure at MCS responsible party AWI
3. analysis data is stored in folders derived from URN structure, e.g. [laboratory:awi-c-233:toc-lcpn_h54435401246ae](#) data is stored at `/isibhv/projects-dmz/MOSAic/platforms_processed/laboratory/awi-c-233/toc-lcpn_h54435401246ae` responsible party: **each scientist individually**
4. to make it easier and feasible for users: analyses data can be stored in massive xls|x|tsv|csv tables directly in the folder derived from [sensor.awi.de](#), preconditions:
 - device operation ID
 - lab instrument [sensor.awi.de](#) ID
 - field instrument [sensor.awi.de](#) ID

must be stated per row to guarantee a proper and seamless metadata documentation. Example in table below.

par A	par B	par C	device operation ID	lab item ID	field item ID
0.4	123.2	0.00004	PS122/4_49-14	647	3214
0.54	42.55	0.007665	PS122/2_22-42	647	5452
0.23 7	8.28 0	0.008425	PS122/2_20-73	647	3233

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In some browsers video is played only when opened in a new tab.

Relate to Device Operations in DShip ActionLog

Many of the snow, ice, water and other samples taken during MOSAiC will most likely only be analysed in laboratories on land sometime later. However, there are also analytical instruments on board already analysing samples. These analytical activities on board have to be logged in the SENSORWeb but not in the DShip ActionLog. This has to be done by adding an 'Action' to your analytical instrument in SENSOR as follows:

- Go to SENSORWeb (<http://sensor.awi.de/>) and go to your specific analytical device.
- Push the 'Actions' button and in the appearing window that is listing the previous actions press the 'Add' button.

Towed Ocean Profiler topAWI

Overview | Contacts | **Actions** | Parameters | Resources | Properties | Local Frame | Subdevices | Images | Logout

Current Version:

+ Add ← Push the Add button

Show: 25 entries Search:

ID	Type	Label	Date	Lat/Long/elevation	Tools
5781	Information	PS1221_1-1	2019-09-21 18:42	73.139296° / 29.832235° / 267 m	
5775	Information	PS121/WLZ_12-1	2019-09-20 15:57	69.679548° / 18.996648° / -	
5773	Information	PS121/WLZ_11-1	2019-09-20 15:51	69.679547° / 18.996648° / -	
5771	Information	PS121/WLZ_10-1	2019-09-20 09:15	69.679543° / 18.996652° / -	
4735	Deployment	PS113_29-3	2018-05-30 17:33 - 2018-05-31 16:25	19.80722° / -21.14615° / -	
4734	Deployment	PS113_24-1	2018-05-24 14:10 - 2018-05-25 22:41	-2.20879° / -25.0285° / -	
4988	Deployment	PS113_4_1	2018-05-11 17:56 - 2018-05-11 21:38	-44.84202° / -56.63065° / -	
4989	Calibration	PS113_4-1	2018-05-11 17:56 - 2018-05-11 21:38	-44.81456° / -56.59619° / -	

- In the appearing window put as 'Label' the **device operation** under which the sample is logged in the DShip ActionLog. Choose '**Processing**' as Event Type and put in at least the date on which the sample has been analysed.

Add an action

Overview | Event resources | **Event relations** | Subdevices

An individual version of this record will be created whenever you choose an action of type calibration, commissioned, deployment and mount. These are displayed under "Show History". You also can attach this Event to any subdevice by selecting them under "Subdevices".

Label: PS121/WLZ_12-1 ← Device Operation during which the sample was taken

Event Type: Processing ← Use 'Processing' as Event Type

From: 2019-10-03T10:00:00 ← Date of analysis

Until: 2019-10-03T12:00:00

Description: analysis of 10 snow samples ← Any comment

- Go to '**Event relations**' in the same window. In the opening window choose from the drop down menu '**Sample taken from**' as Relation type. Under Related Root Item Urn look for the shortname of the device with which the sample was taken.

Add related item to action

Relation Type: Data taken from ← Choose "Data taken from" from drop down menu

Related Root Item Urn: sn_sxl ← Relate to device with which the sample was taken

Showing 0 to 0 of 0 entries

4735	Deployment	PS113_29-3	2018-05-30 17:33 - 2018-05-31 16:25	19.80722° / -21.14615° / -	
4734	Deployment	PS113_24-1	2018-05-24 14:10 - 2018-05-25 22:41	-2.20879° / -25.0285° / -	
4988	Deployment	PS113_4_1	2018-05-11 17:56 - 2018-05-11 21:38	-44.84202° / -56.63065° / -	

- Press '**Save**' in both windows.

Storage of analytical data on MCS

After adding an action to your analytical instrument, you want to store the data in a certain structure on the MCS. There you need to create a folder with the device operation ID in the 'exdata' folder under **your analytical instrument** on the MCS.

Following the example above that would be: **\\mcs.fs-polarstern.de\platformstowed_systems\topawilexdata\PS121-WLZ_12-1_analysis**

You need to create this folder yourself. Please do not put slashes in the device operation as in DShip ActionLog but substitute '/' by '-'.

Contact: support@mosaic-data.org