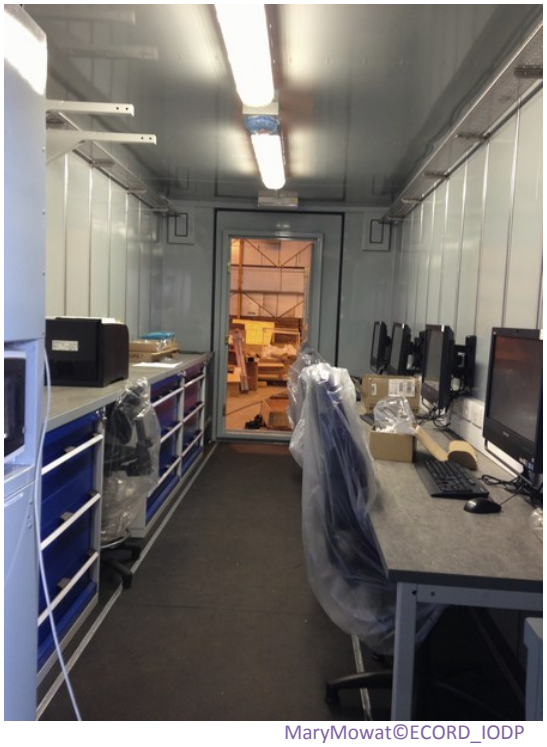
Expedition Log for IODP Expedition 347
Baltic Sea Paleoenvironment


NanXiao©ECORD_IODP

IT, Data and Stuff

Mary Mowat

I'm the data manager on-board for the Baltic Expedition. This involves looking after all the IT equipment, network and the capture of data during the expedition and for future long term storage and distribution, providing support for the database input, and helping out with all sorts of general IT queries.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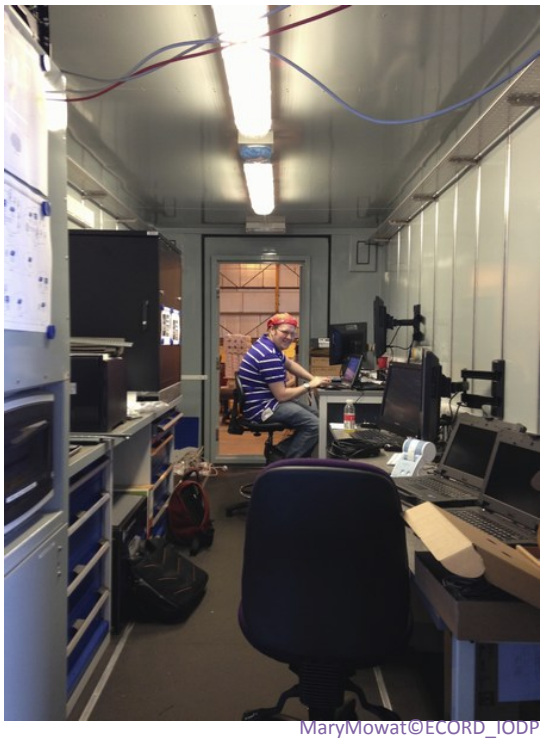
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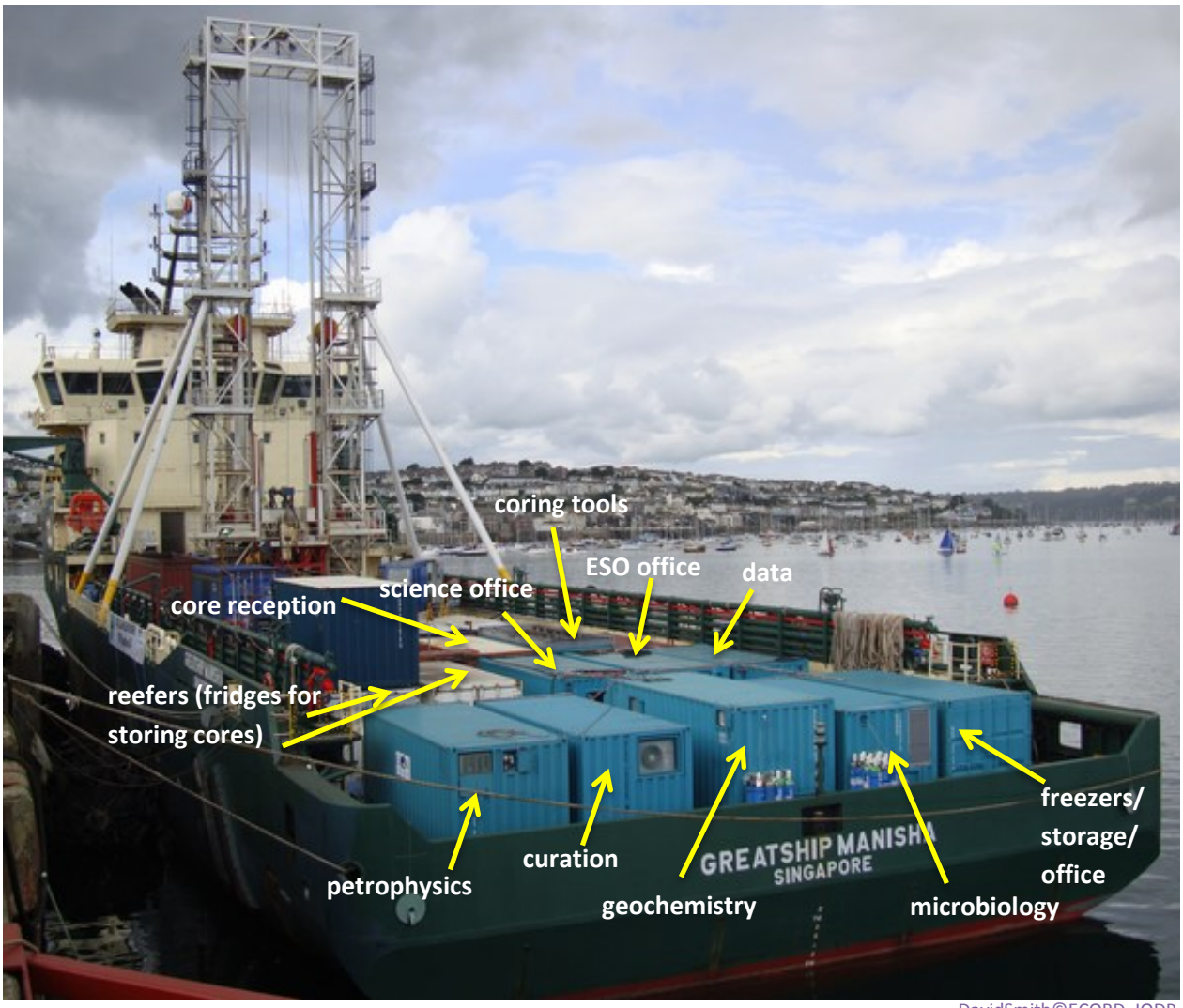
Earlier in the year three shiny new containers arrived at BGS in Loanhead. These were to become the data, ESO office and science containers and are a bit more upmarket than the ones we used on previous expeditions. We made a start installing some of the IT equipment such as some new all-in-one PCs, servers (a primary and a backup), printers, network switches, wireless access points and UPS batteries. Alan the IT geek from BGS helped to plan and set up the network and also joined us for the mobilisation in Falmouth.


MaryMowat©ECORD_IODP
Server rack

AliSkinner©ECORD_IODP
Network cables

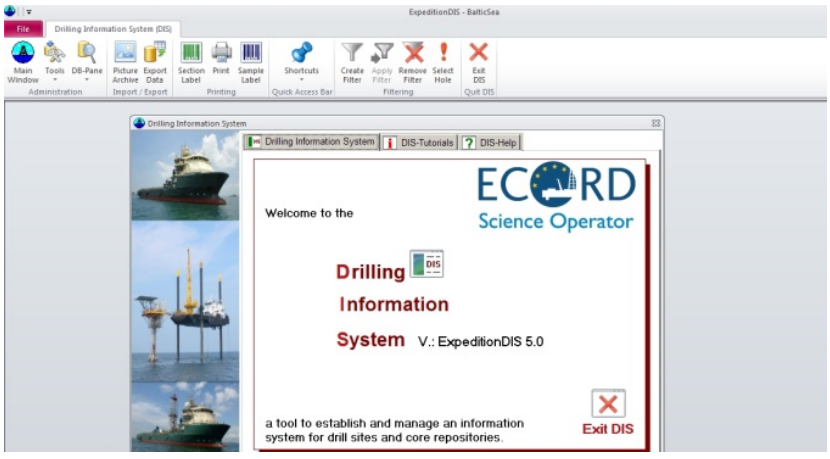
Once we were onboard the Greatship Manisha we connected the network from the switch in the data container to the other containers on the back deck and also up to the ship accommodation to connect the offices and to link into the ships communications network to provide internet. However the satellite internet bandwidth is fairly limited… especially as there's so many of us. We have practically forgotten what superfast broadband is... How did people survive in the days before internet!!



Containers on the back deck of the Greatship Manisha

DavidSmith©ECORD_IODP

MaryMowat©ECORD_IODP



Hans from MARUM in Bremen, Germany who is also an ESO data manager joined us for the mobilisation and transit to Kiel and helped out with getting everything ready and making the final pre-expedition updates to the database. During the expedition data is captured in the DIS - Drilling Information System. The DIS is a scalable and flexible system implemented in SQLServer with client PCs connecting to the system through a Microsoft Access user interface. The DIS includes various tools for data input, visualization, report generation, data import and export, some of which were adapted for this expedition. It is used to capture information related to core and sample curation and to also store primary data such as MSCL data and interstitial water analyses. Other data which isn't captured in the database is stored on the file server.

BoBarker©ECORD_IODP

CarolCotterill©ECORD_IODP

In the Curation Container Holger the core curator enters the core curation information into the DIS with details such as core number and type, the length drilled and recovered and the individual section lengths. The total depth within the hole is automatically calculated. He laughs at the DIS when it asks if he is sure the recovery is correct for some of the super expanding cores at BSB-9! He takes photos of the core catcher samples which also get added to the DIS. Patrizia one of the ESO geochemists (along with Luzie) extracts pore water and samples for head space methane analysis from the cores and enters the info into the DIS.

BoBarker©ECORD_IODP

MichaelKenzler©ECORD_IODP

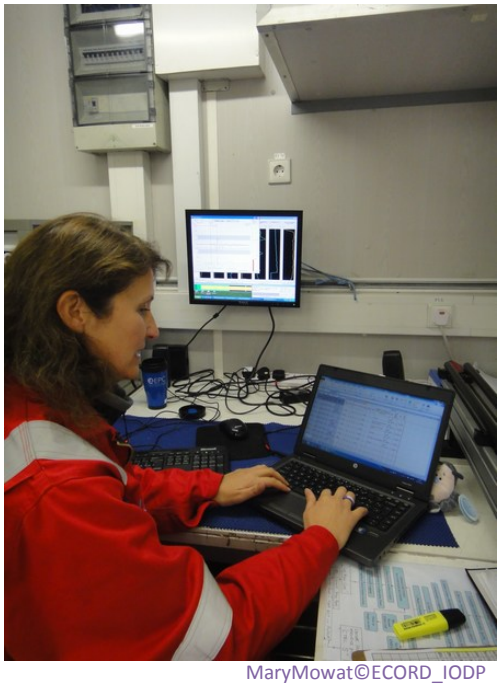
In the geochemistry container Caroline and Thorsten analyse subsample splits of the pore water for pH, alkalinity, salinity and ammonia, etc. and enter the data into DIS.

NadineQuintanaKrupinski©ECORD_IODP

CarolCotterill©ECORD_IODP

ThorstenBauersachs©ECORD_IODP

Thorsten's skills also sometimes come in useful when it rains on the Science Garden! Luckily it hasn't rained very often so far on the expedition. Dalton and Jeannine are the geochemists on the opposite shift. Dalton also displayed his unique drawing skills during a game of Pictionary on the transit from BSB-1 to BSB-10 but nobody managed to guess his cheese toastie!



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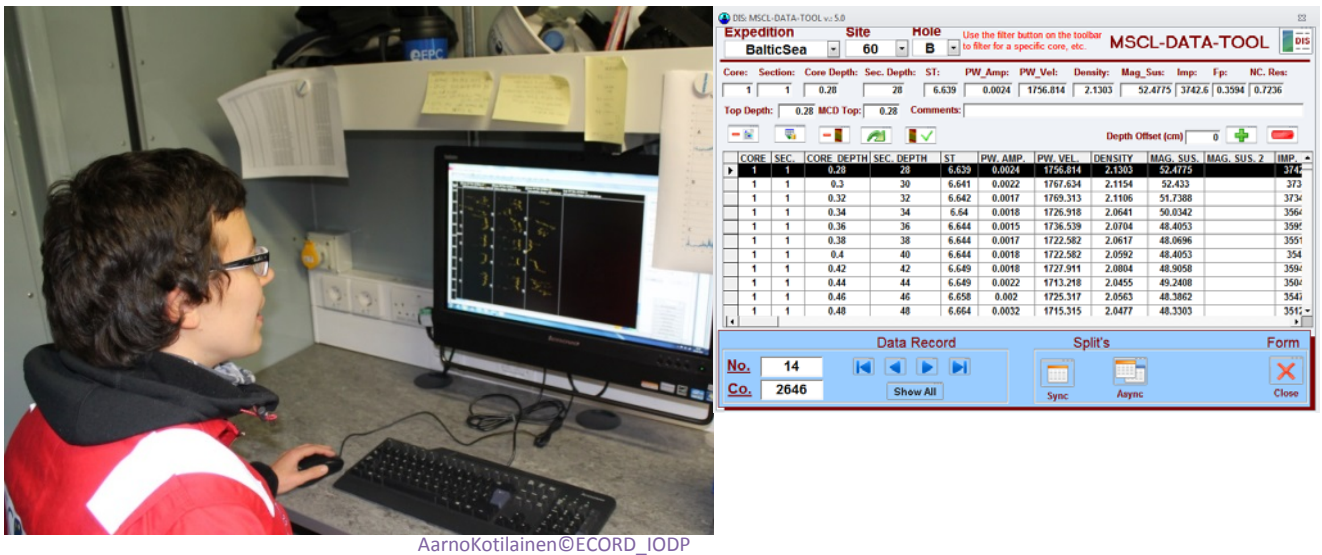
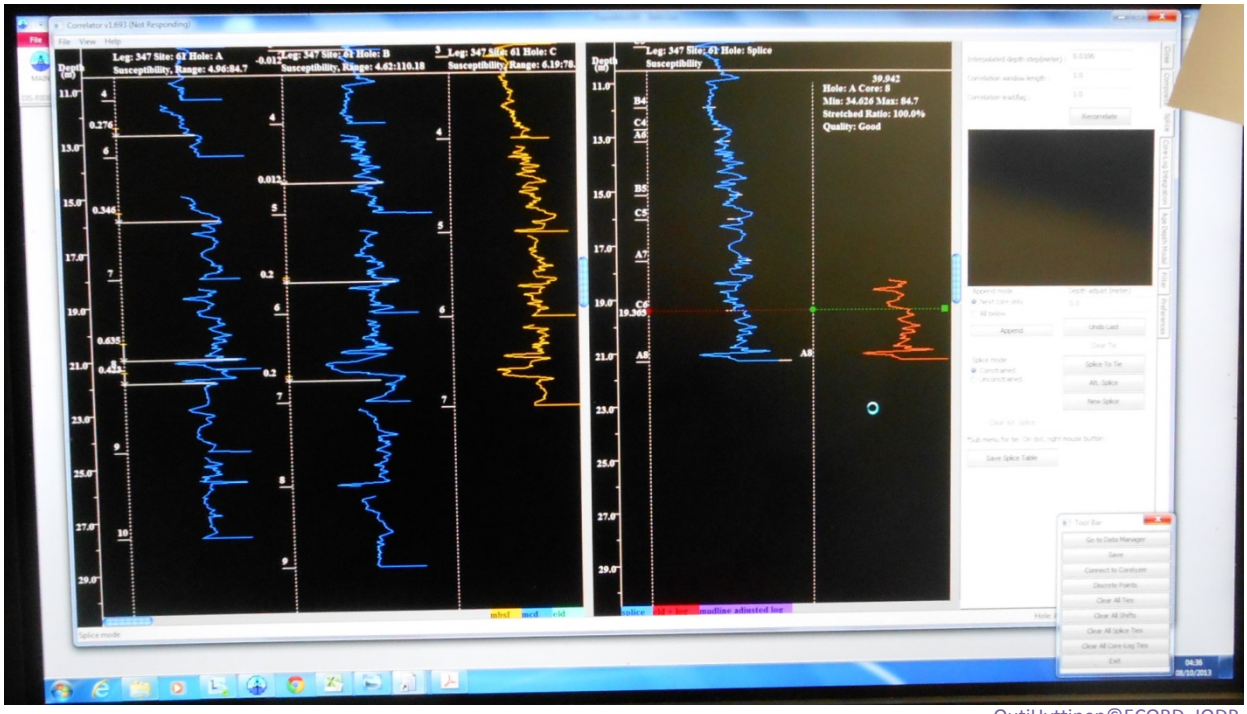
JeroenGroeneveld©ECORD_IODP

In the petrophysics container Annette gets to work on processing some MSCL (Multi Sensor Core Logger) data. Once it has been processed she loads the data straight into the DIS. Annick also works for EPC (European Petrophysics Consortium) and is the Petrophysics staff scientist. She oversees the MSCL measurement and is also responsible for the downhole logging data which is collected by Dirk and Christian from Weatherford. She usually works in the data container except when there's logging going on or if she's helping Anne-Sophie during a busy spell of MSCL measurements (particularly on a microbiology hole).



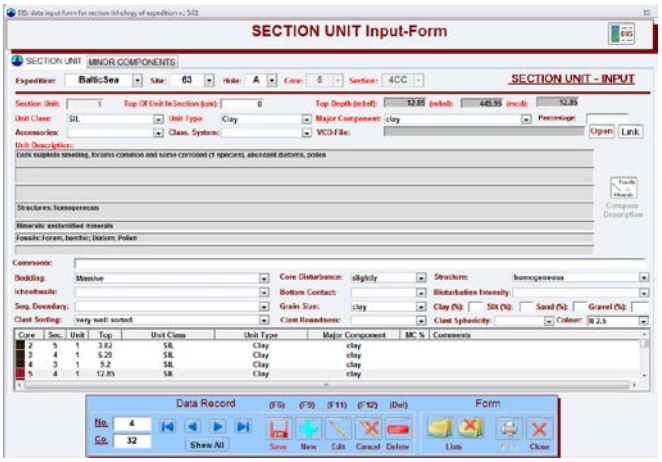
AarnoKotilainen©ECORD_IODP

Outi, one of the stratigraphic correlators exports the MSCL data from the DIS soon after Annette has uploaded it and views it using Corewall Correlator software. Data such from different holes at the same site can be compared and can also be correlated with downhole logging data and composite holes can be generated. This is useful to fill in gaps in core recovery and she can liaise with the drilling coordinator to try and ensure this. Sometimes every 2nd core on the 2nd hole is run through the Fast Track MSCL in order to quickly correlate the magnetic susceptibility data.



OutiHyttinen©ECORD_IODP

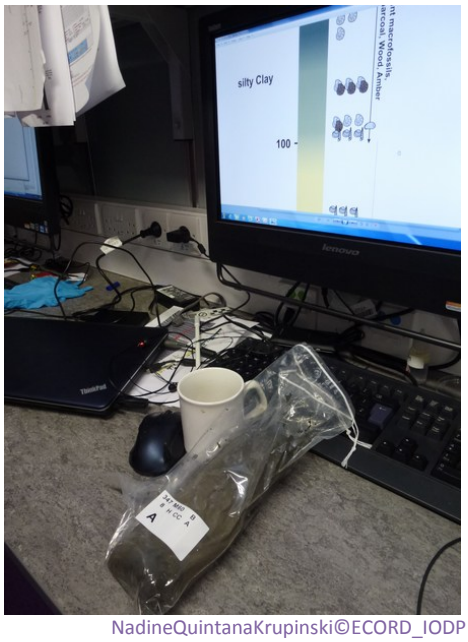
Magnetic susceptibility data from the 3 holes at site 61



OutiHyttinen©ECORD_IODP

Michael (known as Ede) the sedimentologist records initial geological descriptions mainly of the core catcher material into the Section Units input form in the DIS. He finds the right shade of dark grey to match the clay sample from the Munsell colour book and adds details such as the major lithological component, grain size, sorting, structure and minerals. He also makes up some smear slides to help with identification.

JeroenGroeneveld©ECORD_IODP



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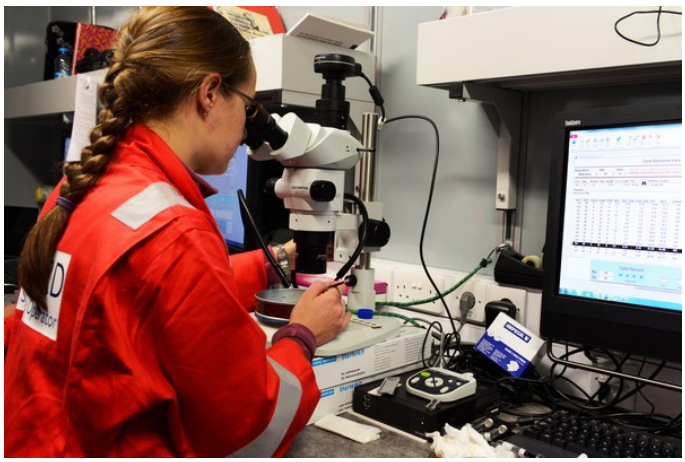
Thomas, one of the co-chiefs does the descriptions on the opposite shift. More details on the core sections will be added during the onshore phase next year when the cores are split open and can be described fully.



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NadineQuintanaKrupinski©ECORD_IODP

Nadine the micropalaeontologist searches for tiny forams and ostracods in samples from the core catcher which have been washed and dried. When she finds some she can display them on the screen and also take some photos. She adds some more details to the Section Units form and maintains a spreadsheet of the abundance, diversity and species found which is useful for determining the environmental conditions.

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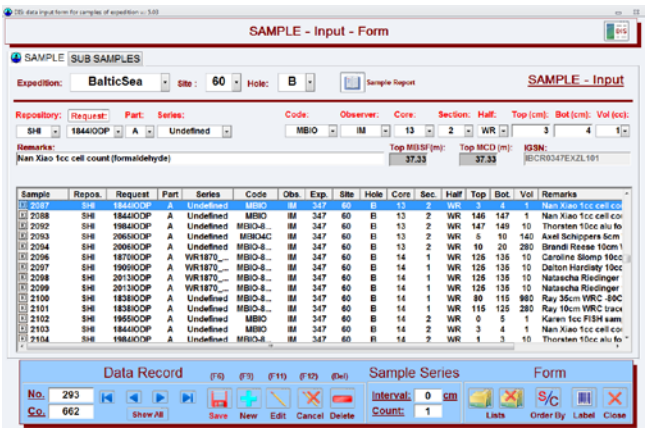
Aarno and Jeroen who are Outi's and Nadine's counterparts on the opposite shift watch some of the amazing Baltic sunsets and end up with faces to match their boiler suits!

Thomas Andrén©ECORD_IODP

Thomas Andrén©ECORD_IODP

The data container doubles up as a workshop which I share with Alan the electrical engineer. He operates Eric the ROV to watch as they used the seabed template to level part of the drill string after becoming stuck due to sand blockage. (Eric was named after Eric the fruitbat from a Monty Python sketch).

AarnoKotilainen©ECORD_IODP



When it's time for a microbiology hole, Ian enters the information on the samples taken into the DIS and prints out labels. There are many samples taken especially in top few cores which are very heavily sampled.

Thomas Andrén©ECORD_IODP

MaryMowat©ECORD_IODP

On the night shift Bo the other co-chief/microbiologist takes over with database entry. A few non-microbiologists also get drafted in to help out with the hectic sampling and database entry.

CarolineSlomp©ECORD_IODP

IanMarshall©ECORD_IODP

Barry (who's not really a fan of computers!) and Andrea the microbiologists work in their make-shift office among the storage boxes and freezers. On the day shift Nan and Rui also make their home here. The freezers are for the microbiology samples which are stored at -80˚C. Nan also operates her flow cytometer for measuring cell counts in here. This container was used as the data container on the last expedition.

On completion of the offshore phase of the expedition, the ExpeditionDIS and the file system will be transferred to the Bremen Core Repository along with the cores to continue data capture during the Onshore Science Party in January/February 2014 where further sampling and analyses of the cores will take place. On completion of the Onshore Science Party, expedition scientists will continue to have access to all data through a password-protected website throughout the moratorium period. After the expedition the sampling and core curation data will be exported to Curation DIS, the Long-term Bremen Core Repository core curation system.

All expedition data (except the downhole log data) will be transferred to World Data Center for Marine Environmental Sciences (WDCMARE) PANGAEA database by Hans for long-term archiving and will be made available publicly after the moratorium. Data from previous ECORD Mission Specific Platform (MSP) expeditions are downloadable from the MSP data portal http://iodp.wdc-mare.org which will later also include the Expedition 347 data sets when they are released. The central portal for all IODP data is the Scientific Earth Drilling Information Service (SEDIS; http://sedis.iodp.org). The downhole log data will be transferred to the Lamont-Doherty Earth Observatory for long-term archiving and made available via the LDEO Log Database - http://brg.ldeo.columbia.edu/DATA. The scientists will continue to work on their own samples and data for years to come.

AnneSophieFanget©ECORD_IODP