Cruise progress 14th April, 2018

Brief lectures

- Introduction into geophysics *(V. Unnithan)*
- Marine Microbiology, interaction of diatoms with bacteria *(M. Ullrich)*

Instruments used:

- CTD (several stations)
- ADCP
- Multinet (prepped)
- Multibeam - several passes over the Hela and two unknown shipwrecks (images will be found on the PIGGY server)
- GNOM ROV - for closer look at the ship turbine, getting a feel for the controls in the harbour. Goal: assess usability on open sea.

Multibeam

Several transects over shipwreck Hela, went over it three times at 5kn

Noteable discoveries:

- two other unknown shipwrecks
- several ridges, some very high
- passing through the area where plenty of slick was dumped: beautiful ripple structure where it was completely flat a few years ago -> shows how the sediment was reworked

GNOM ROV

Software for video recording and acquisition works, connections successful

Several problems:

- controls: laggish, after a course correction was made, it takes several seconds to show up on the compass in the viewscreen. Not a problem when you have line of sight, however when under the ship or deeper under water, this does not work.
- motor control itself: no slow, medium, fast impulses, only one kind of setting
- getting seaweed and similar stuck in the propellors
- cable constantly pulling in one direction, making turning over right very hard
- autoheading does not work properly, can therefore not fix a heading

Possible solutions:

- short impulses of controls for directions -> limited success, works sometimes, in the time you wait for reaction, current and waves have already moved the GNOM significantly
- potentially decouple controls from the current controller and steer via touchpad -> would require some crafting, cannot do that here
- attempt to use it from the dingy -> better control?