

Type of Sampling Data

Vertical profiling data of CTD-water-sampler on position SB_POG during EDoM'19 measurement campaign

Contact

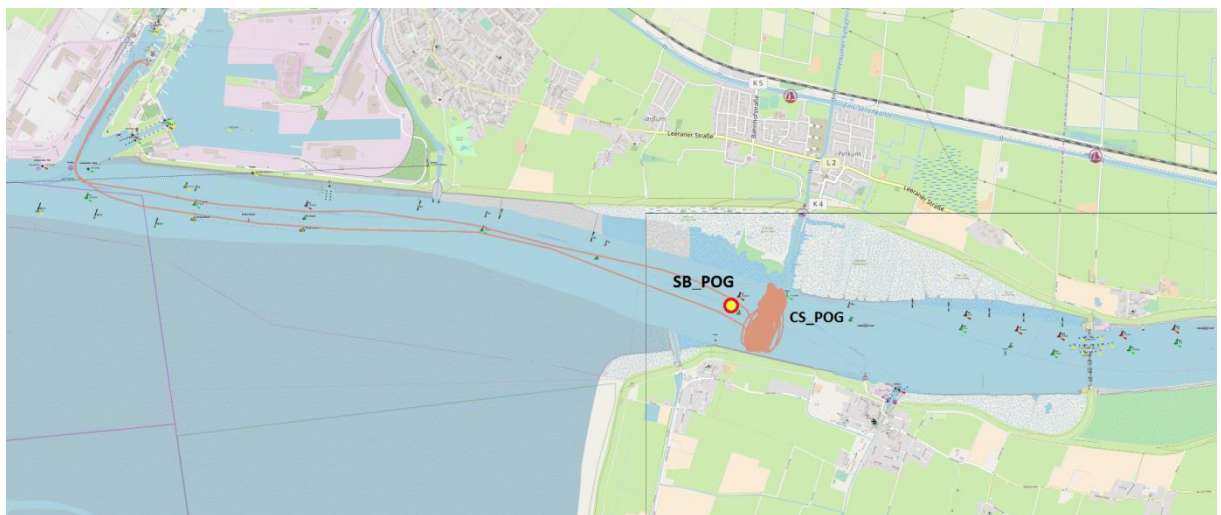
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Location



Position SB_POG, WGS84 approx. 53.32420 °(N) 7.25942 °(E)

Time / Date

24th January 2019 between 09:16 and 22:06 CET

Instrument setup

CTD-Water-Sampler

| Parameter | Instrument | S/N |
|----------------------------------|-------------------------------------|------|
| Temperature Conductivity | Sea-Bird Electronics SBE19plusV2 | 7245 |
| Pressure | Sea-Bird Electronics SBE19P | 7938 |
| Turbidity Chlorophyll CDOM | Turner Designs Scufa | 0773 |
| Altimeter | Benthos PSA916 | 4711 |

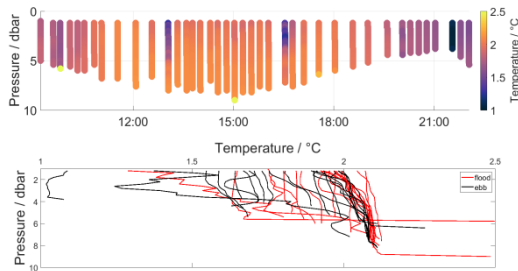


CTD-Water-Sampler

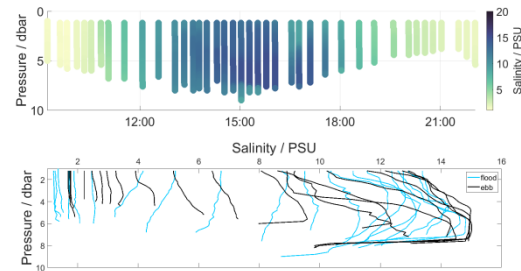
Measurements

In total 40 vertical CTD-profiles were taken during the EDoM'19 measurement campaign. The time interval between the CTD-measurements was 30 minutes and 15 minutes around slack water.

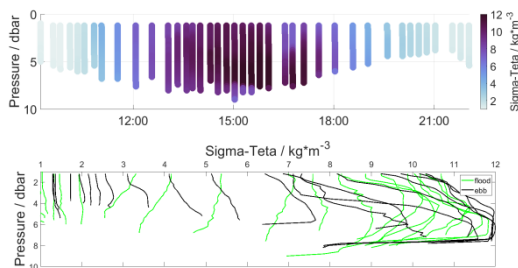
In total 29 water samples from the water surface (0,8 m) and bottom (1,5 m above) were taken.



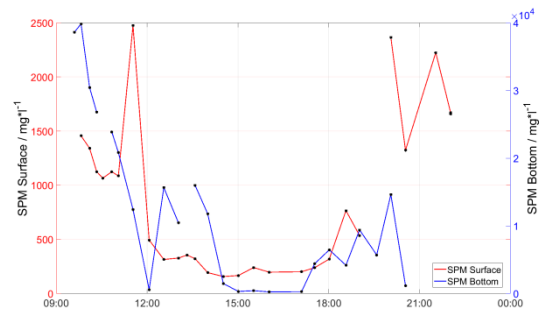
Temperature



Salinity



Density



SPM (Suspended Particulate Matter)

Data Processing of CTD measurements

1. SBE-Data Processing Software Version 7.26.7

1.1 Data Conversion: Convert raw data (.hex) to converted data (.cnv)

→ Output variables:

| |
|--|
| 1. Julian Days |
| 2. Latitude (deg) |
| 3. Longitude (deg) |
| 4. Pressure (dbar) |
| 5. Depth (m) |
| 6. Temperature (ITS-90, °C) |
| 7. Conductivity (mS/cm) |
| 8. Salinity (PSU) |
| 9. Density (Sigma-Theta, kg/m ³) |
| 10. Oxygen Saturation, Weiss (mg/l) |

→ Output format: ASCII (.cnv file)

→ Only data from **downcast** profiles were converted

1.2. LoopEdit: Marks value in data-matrix with bad flag if the pressure of the vertical profile slowdowns or reversals.

→ Minimum CTD-velocity 0.05 m/s

→ Minimum soak depth: 1.0 m

→ Maximum soak depth: 20

2. Matlab Processing Tool

2.1. Clear Data-Matrix: Delete data with bad flag (s. 1.2)

2.2. Calculating mean values and standard derivation: Averaging every 20 cm

2.3. Create Final Data-Matrix: Output format .txt

→ Output variables:

| | |
|---------------------------|---|
| 1. Year | 11. Std. Mean Temperature (°C) |
| 2. Month | 12. Mean Conductivity (mS/cm) |
| 3. Day | 13. Std. Mean Conductivity (mS/cm) |
| 4. Hour | 14. Mean Salinity (PSU) |
| 5. Minute | 15. Std. Mean Salinity (PSU) |
| 6. Second | 16. Mean Density (Sigma-Theta, kg/m ³) |
| 7. Latitude (°) / WGS84 | 17. Std. Mean Density (Sigma-Theta, kg/m ³) |
| 8. Longitude (°)/ WGS84 | 18. Mean Oxygen Saturation, Weiss (mg/l) |
| 9. Bin Depth (m) | 19. Std. Mean Oxygen Saturation, Weiss (mg/l) |
| 10. Mean Temperature (°C) | |

Storage of Data Files

Name:

Edom2019_CTD_SBE_001axx

Location:

0:/2019_January/01_Campaign/SB_POG_ICBM/CTD_Profile_Zephyr_ICBM/processed/