

# MOORING DATA PROCESSING: UIB1 and UIB4

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## 1. ADCP data processing

The ADCP-data was processed using the standard RDI software and then loaded into Matlab, where the following criteria were used to mask out data, i.e., data is not used if it fulfills one or more of the following:

- Percent Good < 50%
- Echo < 0.4
- Relative Error > 0.5
- Speed/Magnitude > 1 m/s
- Pitch/Roll > 20°

For downward looking ADCPs the bottom 10% of the water column is also discarded.

## 2. Magnetic declination

Current meter data were corrected for magnetic declination with values obtained from <https://www.ngdc.noaa.gov/geomag-web/#declination> on March 6, 2018. Since the declination changes slowly (0.04° per year) the deployment mean values listed in Table 1 were used throughout the deployment.

Table 1: Correction for magnetic declination.

	Latitude	Longitude	Declination	Rate of change
<b>UiB1</b>	73.83°S	127.793°W	62.6°E	0.04°W / year
<b>UiB4</b>	73.7928°S	127.5996°W	62.4°E	0.04°W / year

## 3. Conductivity

Conductivity data from UiB1 and UIB4 needs further processing and will be submitted to NMDC at a later stage.

## 4. Temperature

No corrections/post processing were applied to the temperature records. Temperature records from the ADCPs were discarded, as there were more reliable measurements (Seabird sensors) from the same depth.

## 5. Oxygen

Oxygen data from UiB1 and UIB4 needs further processing and will be submitted to NMDC at a later stage.

## 6. Pressure

UiB4: The pressure sensor on UiB4, sn 8972 (Mikrocat) was found to be defect during post-cruise calibration and the data have been discarded. The only other pressure sensor on UiB4 is the

pressure sensor on the ADCP mounted in the top buoys. While we do not trust the absolute values, the anomalies can be used to detect mooring pull-downs (by ice bergs, see below). The instrument do not output pressure but “depth”. The depth anomalies [depth-median(depth)] is provided in UiB4\_UV.txt. as “depth anomaly” (in m).

## **7. Mooring pulldown**

UiB1: On two occasions (Dec 2016 and July 2017) was the instrument pulled down more than 10 m, probably by passing icebergs. Maximum pulldown was about 30 m and the events last less than a day. The tidal signal in the pressure records is approximately a meter.

UiB4: The record suggests that the instrument was pulled down more than ten meters about ten times during the deployment. Maximum pulldown was about 17 m. The tidal signal is just over a meter.