

Snow Buoys

This document describes the data processing as performed from the raw data to the data product provided on meereisportal.de. In addition, general updates and changes in data sets are announced and described in this document. Updates are added in the beginning of the document.

Changes effective on 12 May 2016

All data sets (active and dead) buoys have been reprocessed to ensure the consistent usage of all routines for all data sets. Some units were processed with additional filters of outliers (min/max) criteria. Settings are buoy specific

General description – Status 11 May 2016

Invalid readings and data are given as NaN

The data processing consists of the following steps

- Remove duplicates
- Restrict data set to valid time period (e.g. exclude test data sets)
- Remove error values from the raw data
- Correction for temperature dependency for speed of sound (only first build of the buoys)
- Buoy specific corrections: min/max filters to remove outliers
- Filter snow depth readings
 - o Differences
 - o Running mean
- Convert relative changes to real snow depth (use deployment information)
- Calculate mean snow depth from 4 sonics