Ice Tethered Profiler (ITP, WHOI) on Meereisportal.de

Content

Description of autonomous platform

Parameters and accuracy

Data Processing

How to cite

Description of autonomous platform

The Ice tethered Profiler (ITP) measures vertical profiles of water temperature, pressure and salinity along a cable up to 800 m deep. The main component is a CTD, a measuring device for conductivity, temperature and depth. Optional an additional bio sensor can be installed measuring profiles of dissolved oxygen, turbidity, chlorophyll, colored dissolved organic matter and photosynthetically active radiation. GPS position and data are transferred via Iridium.

Property name	Property value
Manufacturer	Woods Hole Oceanographic Institution, Falmouth, MA, United States
Data provider	Woods Hole Oceanographic Institution, Falmouth, MA, United States
Deployment type	Installation on sea ice through 27.5 cm hole
Power supply	Batteries (life time >1 year)
Data transmission interval	1 hour (user defined)

Parameters and accuracy

Parameter	Sensor	Accuracy
Conductivity, water pressure and water temperature	SBE 41 Argo CTD	
Position (from GPS)		

Data Processing

The data set has been processed and contains quality flags for different kinds for erroneous data. Flag values are the sum of individual error codes. The value of 0 refers to no error.

Quality flag, position: The geographic position is flagged +1 if the drift velocity, as derived from the GPS longitude and latitude, exceeds a threshold of 10 deg latitude or 50 deg longitude per time step; +2 if the position exceeds extreme values, such as longitude > 360 deg; +4 if the position is exactly 0.0.

How to cite

1. The reference for the (data portal of) Meereisportal.de is:

Grosfeld, K.; Treffeisen, R.; Asseng, J.; Bartsch, A.; Bräuer, B.; Fritzsch, B.; Gerdes, R.; Hendricks, S.; Hiller, W.; Heygster, G.; Krumpen, T.; Lemke, P.; Melsheimer, C.; Nicolaus, M.; Ricker, R. and Weigelt, M. (2016), Online sea-ice knowledge and data platform <www.meereisportal.de>, Polarforschung, Bremerhaven, Alfred Wegener Institute for Polar and Marine Research & German Society of Polar Research, 85 (2), 143-155, doi:10.2312/polfor.2016.011.

2. Please include the following phrase into the acknowledgment, substituting PARAMETER and DATE according to your usage:

Autonomous sea ice measurements (PARAMETER) from DATE to DATE were obtained from https://www.meereisportal.de (grant: REKLIM-2013-04).

3. Buoy data is archived at PANGAEA, a Data Publisher for Earth & Environmental Science, after the buoy has stopped sending data. Please refer to the buoys DOI.