# 6K Camera DEEP TOW 6KCDT 00017 Submersible Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-11-30

ReadMe

**Dive No.**: 6KCDT 00017

**Submersible Conductivity-Temperature-Depth Profiler (CTD)**: Raw

**Data Policy**: JAMSTEC

**Observation Items**: Depth/Pressure, Temperature, Salinity, Dissolved oxygen

**Science Keywords**:

| | | |
|---|---|---|
| OCEANS | > OCEAN CHEMISTRY | > OXYGEN |
| OCEANS | > OCEAN TEMPERATURE | > WATER TEMPERATURE |
| OCEANS | > SALINITY/DENSITY | > SALINITY |

**Cruise Report**

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-04_leg1-2_all.pdf

**For Using Data**

**Principal Investigator**

Data Management Office

**Use Constraints**

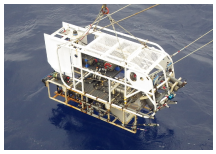
See Terms and Conditions about constrain of use.

**Data Citation**

See Terms and Conditions about data citation.

## Instrument

Instrument:
CTD/DO measurement system equipped on the Deep Ocean Floor Survey System "6K Camera DEEP TOW"



**Overview**

Deep Ocean Floor Survey System *6K Camera DEEP TOW* is supported by R/V *YOKOSUKA*, *KAIMEI*, *MIRAI* and *SHINSEI-MARU* as the research vessel. *6K Camera DEEP TOW* is designed to operate to a maximum depth of 6000 meters.

Each parameter of conductivity, water temperature, pressure, and dissolved oxygen (DO) can be measured in 1Hz and is transmitted to the PC for control and collection onboard. This CTD/DO sensor is installed vertically in the center of *6K Camera DEEP TOW*. This CTD/DO sensor is used for monitoring the depth of *6K Camera DEEP TOW*. The CTD/DO sensor has not been calibrated after the installation on *6K Camera DEEP TOW*.

The internal clock of the CTD/DO sensor is synchronized with the clock of control PC before the dive. The clock of control PC is synchronized with the NTP (Network Time Protocol) server on the research vessel.

**Specifications**

| Sensor | Measurement range | Accuracy | Model |
|---|---|---|---|
| Temperature | -5 ~ +35 ℃ | ±0.001 ℃ | SBE 9 |
| Conductivity | 0 ~ 7 S/m | ±0.0003 S/m | |
| Pressure | 0 ~ 15000 psia | ±0.015% of full scale range | |
| Dissolved oxygen | 120% of surface saturation | 2% of saturation | SBE 43 |

**Submersible vehicle positioning data**

The position of the submersible vehicle relative to that of the research vessel is determined by SSBL (Super Short Base Line) method of the acoustic underwater positioning which consists of the transponder mounted on the submersible vehicle and the receiver array mounted on the bottom of the research vessel.

In SSBL method, the position of the submersible vehicle relative to that of the research vessel is determined by the combination of the direction obtained from the phase difference measured from the angle of received acoustic waves at the receiver array and the distance calculated from the time of the acoustic wave propagation. The positioning accuracy relies on the line of sight distance and angle between the research vessel and the submersible vehicle, and rolling and pitching of the research vessel, etc. SSBL method is easy to operate because of no requirement to deploy seafloor baseline transponder(s) although the positioning accuracy of SSBL method is a little lower than that of LBL (Long Base Line) method.

Vertical sound velocity profile is required for the accurate distance to calculate from the time of the acoustic wave propagation. Therefore, the vertical temperature profiles of every sea regions were measured by using XBT etc.

The position of the submersible vehicle is determined by adding the relative distance between the research vessel and the submersible vehicle to GPS position of the research vessel. The conversion of the relative distance between the research vessel and the submersible vehicle to the coordinates of latitude and longitude uses the simplified formula with the area-dependent coefficients of every 30 degrees of latitude and longitude provided by Hydrographic and Oceanographic Department, Japan Coast Guard.

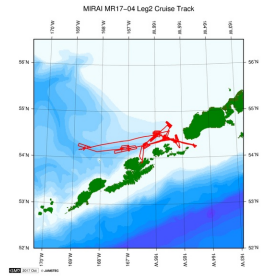
**About this data**

We have no plan to process the data due to equipment failure etc.

Please refer to the "Contact Us" if you wish to use the raw data.

**Related Information**

Cruise Data Dive Data




Enlarge Image

**MR17-04 Leg2**
Ship Name: MIRAI
Period: 2017-08-05 - 2017-08-21
Chief Scientist: Yoshihiro Fujiwara (JAMSTEC)
Proposal Title: ▸ Collaborative experiment on Biogeochemical and Ecosystem Studies for sub-Arctic sea

**Update History**

| | |
|---|---|
| 2021-11-30 | An observation data was registerd. |

**JAMSTEC**
Site Policy
Privacy Policy
Application for Data and Samples
Data Policy

**What's New**
Update History
Feeds

**Lists**
Publication List
Amount of Public Info.

**Data**
Map Search
Data Tree
Detailed Search

**Information of the Ships**
NATSUSHIMA
KAIYO
YOKOSUKA
MIRAI
KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

**Information of the Submersibles**
KAIKO
SHINKAI 2000
SHINKAI 6500
DEEP TOW
HYPER-DOLPHIN
URASHIMA
YOKOSUKA DEEP TOW
6K Camera DEEP TOW
6K Sonar DEEP TOW
KM-ROV
POWER GRAB SAMPLER (SHELL)
POWER GRAB SAMPLER (CLOW)
BMS

**Go to a Cruise Information**
Cruise ID: Go

**Go to a Dive Information**
Dive ID: ---- Go



JAMSTEC 国立研究開発法人 海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

# 6K Camera DEEP TOW 6KCDT 00017 Submersible Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-11-30

ReadMe

**Dive No.**: 6KCDT 00017
**Submersible Conductivity-Temperature-Depth Profiler (CTD)**: Raw
**Data Policy**: JAMSTEC
**Observation Items**: Depth/Pressure, Temperature, Salinity, Dissolved oxygen
**Science Keywords**:

OCEANS > OCEAN CHEMISTRY > OXYGEN
OCEANS > OCEAN TEMPERATURE > WATER TEMPERATURE
OCEANS > SALINITY/DENSITY > SALINITY

**Cruise Report**
http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-04_leg1-2_all.pdf

**For Using Data**

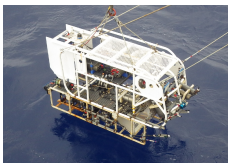
**Principal Investigator**
Data Management Office

**Use Constraints**
See Terms and Conditions about constrain of use.

**Data Citation**
See Terms and Conditions about data citation.

## Instrument

Instrument:
CTD/DO measurement system equipped on the Deep Ocean Floor Survey System "6K Camera DEEP TOW"



## Overview

Deep Ocean Floor Survey System *6K Camera DEEP TOW* is supported by R/V *YOKOSUKA*, *KAIMEI*, *MIRAI* and *SHINSEI-MARU* as the research vessel. *6K Camera DEEP TOW* is designed to operate to a maximum depth of 6000 meters.

Each parameter of conductivity, water temperature, pressure, and dissolved oxygen (DO) can be measured in 1Hz and is transmitted to the PC for control and collection onboard. This CTD/DO sensor is installed vertically in the center of *6K Camera DEEP TOW*. This CTD/DO sensor is used for monitoring the depth of *6K Camera DEEP TOW*. The CTD/DO sensor has not been calibrated after the installation on *6K Camera DEEP TOW*.

The internal clock of the CTD/DO sensor is synchronized with the clock of control PC before the dive. The clock of control PC is synchronized with the NTP (Network Time Protocol) server on the research vessel.

## Specifications

| Sensor | Measurement range | Accuracy | Model |
|---|---|---|---|
| Temperature | -5 ~ +35 ℃ | ±0.001 ℃ | SBE 9 |
| Conductivity | 0 ~ 7 S/m | ±0.0003 S/m | |
| Pressure | 0 ~ 15000 psia | ±0.015% of full scale range | |
| Dissolved oxygen | 120% of surface saturation | 2% of saturation | SBE 43 |

## Submersible vehicle positioning data

The position of the submersible vehicle relative to that of the research vessel is determined by SSBL (Super Short Base Line) method of the acoustic underwater positioning which consists of the transponder mounted on the submersible vehicle and the receiver array mounted on the bottom of the research vessel.

In SSBL method, the position of the submersible vehicle relative to that of the research vessel is determined by the combination of the direction obtained from the phase difference measured from the angle of received acoustic waves at the receiver array and the distance calculated from the time of the acoustic wave propagation. The positioning accuracy relies on the line of sight distance and angle between the research vessel and the submersible vehicle, and rolling and pitching of the research vessel, etc. SSBL method is easy to operate because of no requirement to deploy seafloor baseline transponder(s) although the positioning accuracy of SSBL method is a little lower than that of LBL (Long Base Line) method.

Vertical sound velocity profile is required for the accurate distance to calculate from the time of the acoustic wave propagation. Therefore, the vertical temperature profiles of every sea regions were measured by using XBT etc.

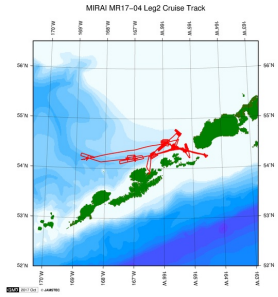
The position of the submersible vehicle is determined by adding the relative distance between the research vessel and the submersible vehicle to GPS position of the research vessel. The conversion of the relative distance between the research vessel and the submersible vehicle to the coordinates of latitude and longitude uses the simplified formula with the area-dependent coefficients of every 30 degrees of latitude and longitude provided by Hydrographic and Oceanographic Department, Japan Coast Guard.

## About this data

We have no plan to process the data due to equipment failure etc.
Please refer to the "Contact Us" if you wish to use the raw data.

Related Information

Cruise Data Dive Data




Enlarge Image

**MR17-04 Leg2**
Ship Name: MIRAI
Period: 2017-08-05 - 2017-08-21
Chief Scientist: Yoshihiro Fujiwara (JAMSTEC)
Proposal Title: ▸ Collaborative experiment on Biogeochemical and Ecosystem Studies for sub-Arctic sea

**Update History**

| | |
|---|---|
| 2021-11-30 | An observation data was registerd. |

**JAMSTEC**
Site Policy
Privacy Policy
Application for Data and Samples
Data Policy

**What's New**
Update History
Feeds

**Lists**
Publication List
Amount of Public Info.

**Data**
Map Search
Data Tree
Detailed Search

**Information of the Ships**
NATSUSHIMA
KAIYO
YOKOSUKA
MIRAI
KAIREI
CHIKYU
KAIMEI
SHINSEI MARU
HAKUHO MARU

**Information of the Submersibles**
KAIKO
SHINKAI 2000
SHINKAI 6500
DEEP TOW
HYPER-DOLPHIN
URASHIMA
YOKOSUKA DEEP TOW
6K Camera DEEP TOW
6K Sonar DEEP TOW
KM-ROV
POWER GRAB SAMPLER (SHELL)
POWER GRAB SAMPLER (CLOW)
BMS

**Go to a Cruise Information**
Cruise ID: Go

**Go to a Dive Information**
Dive ID: ---- Go



JAMSTEC 国立研究開発法人 海洋研究開発機構
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

# 6K Camera DEEP TOW 6KCDT 00017 Submersible Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2021-11-30

ReadMe

**Dive No.**: 6KCDT 00017
**Submersible Conductivity-Temperature-Depth Profiler (CTD)**: Raw
**Data Policy**: JAMSTEC
**Observation Items**: Depth/Pressure, Temperature, Salinity, Dissolved oxygen
**Science Keywords**:

| | | |
|---|---|---|
| OCEANS | > OCEAN CHEMISTRY | > OXYGEN |
| OCEANS | > OCEAN TEMPERATURE | > WATER TEMPERATURE |
| OCEANS | > SALINITY/DENSITY | > SALINITY |

**Cruise Report**
http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/MR17-04_leg1-2_all.pdf

**For Using Data**

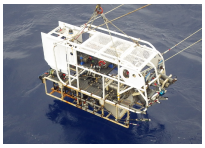
**Principal Investigator**
Data Management Office

**Use Constraints**
See Terms and Conditions about constrain of use.

**Data Citation**
See Terms and Conditions about data citation.

## Instrument

Instrument:
CTD/DO measurement system
equipped on the Deep Ocean Floor
Survey System "6K Camera DEEP
TOW"



## Overview

Deep Ocean Floor Survey System *6K Camera DEEP TOW* is supported by R/V *YOKOSUKA*, *KAIMEI*, *MIRAI* and *SHINSEI-MARU* as the research vessel. *6K Camera DEEP TOW* is designed to operate to a maximum depth of 6000 meters.

Each parameter of conductivity, water temperature, pressure, and dissolved oxygen (DO) can be measured in 1Hz and is transmitted to the PC for control and collection onboard. This CTD/DO sensor is installed vertically in the center of *6K Camera DEEP TOW*. This CTD/DO sensor is used for monitoring the depth of *6K Camera DEEP TOW*. The CTD/DO sensor has not been calibrated after the installation on *6K Camera DEEP TOW*.

The internal clock of the CTD/DO sensor is synchronized with the clock of control PC before the dive. The clock of control PC is synchronized with the NTP (Network Time Protocol) server on the research vessel.

## Specifications

| Sensor | Measurement range | Accuracy | Model |
|---|---|---|---|
| Temperature | -5 ~ +35 ℃ | ±0.001 ℃ | SBE 9 |
| Conductivity | 0 ~ 7 S/m | ±0.0003 S/m | |
| Pressure | 0 ~ 15000 psia | ±0.015% of full scale range | |
| Dissolved oxygen | 120% of surface saturation | 2% of saturation | SBE 43 |

## Submersible vehicle positioning data

The position of the submersible vehicle relative to that of the research vessel is determined by SSBL (Super Short Base Line) method of the acoustic underwater positioning which consists of the transponder mounted on the submersible vehicle and the receiver array mounted on the bottom of the research vessel.

In SSBL method, the position of the submersible vehicle relative to that of the research vessel is determined by the combination of the direction obtained from the phase difference measured from the angle of received acoustic waves at the receiver array and the distance calculated from the time of the acoustic wave propagation. The positioning accuracy relies on the line of sight distance and angle between the research vessel and the submersible vehicle, and rolling and pitching of the research vessel, etc. SSBL method is easy to operate because of no requirement to deploy seafloor baseline transponder(s) although the positioning accuracy of SSBL method is a little lower than that of LBL (Long Base Line) method.

Vertical sound velocity profile is required for the accurate distance to calculate from the time of the acoustic wave propagation. Therefore, the vertical temperature profiles of every sea regions were measured by using XBT etc.

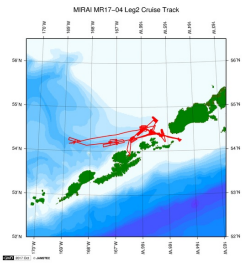
The position of the submersible vehicle is determined by adding the relative distance between the research vessel and the submersible vehicle to GPS position of the research vessel. The conversion of the relative distance between the research vessel and the submersible vehicle to the coordinates of latitude and longitude uses the simplified formula with the area-dependent coefficients of every 30 degrees of latitude and longitude provided by Hydrographic and Oceanographic Department, Japan Coast Guard.

## About this data

We have no plan to process the data due to equipment failure etc.
Please refer to the "Contact Us" if you wish to use the raw data.

## Related Information

Cruise Data  Dive Data




Enlarge Image

**MR17-04 Leg2**
Ship Name: MIRAI
Period: 2017-08-05 - 2017-08-21
Chief Scientist: Yoshihiro Fujiwara (JAMSTEC)
Proposal Title: Collaborative experiment on Biogeochemical and Ecosystem Studies for sub-Arctic sea

| Update History | |
|---|---|
| 2021-11-30 | An observation data was registerd. |