

## KAIYO K94-02 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2013-01-25

[ReadMe](#)   [Observation Data](#)

 Cruise ID: [K94-02 Leg1](#)

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

 Data Policy: [JAMSTEC](#)

Observation Items: 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/K94-02\\_leg1\\_all.pdf](http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/K94-02_leg1_all.pdf)

### For Using Data

#### Principal Investigator

Temperature : Yuji Kashino (JAMSTEC)

Salinity : Yuji Kashino (JAMSTEC)

#### Use Constraints

 See [Terms and Conditions](#) about constrain of use.

#### Data Citation

 See [Terms and Conditions](#) about data citation.

### Overview

 Please see the [cruise report](#)(PDF file) for details of data.

Readme for CTD data

 Nov.30, 2005  
 by Yuji Kashino

Sea-Bird Electronics CTD (SBE9/11) and a winch (Tsurumi Seiki Co. Ltd.) with a 10.6mm armored cable was used during the cruises. The CTD casts were usually carried out from sea surface to 1,000m depth at descent rates of 1 m/s to 1.5 m/s and a sampling rate of 24 Hz. On each cast, we stopped a CTD fish at around 10 m depth until the CTD pump could be activated in order to remove air bubbles in the T-C sensor of the CTD.

Two temperature sensors, two conductivity sensors, and one dissolved oxygen sensor were installed in the CTD. We usually processed the data from primary temperature and conductivity sensors.

The sensor calibrations were performed before and after cruises. Temperature and conductivity sensors were calibrated by the manufacturer (Sea-Bird Electronics Inc.), and pressure sensors by technicians of Nippon Marine Enterprise Co Ltd. or Marine Works Japan Ltd. The calibration results suggested that sensor drifts were less than the accuracy required for this project (temperature, 0.01K; salinity, 0.01PSU; pressure, 1dbar). Therefore, we do not correct sensor drift. We just removed large noise and created a 1 dbar-averaged data set. We also checked conductivity sensor performance using Autosal during the cruises.

Although the dissolved oxygen sensor had been calibrated annually by the manufacturer, its data had large errors. We think that we may be able to use CTD DO data if we correct it using DO values from adequately sampled water. Therefore, we do not correct CTD DO values and just flag the non-calibrated data as questionable.

Data format is almost the same as that defined in the WOCE Hydrographic Programme (WHP) considering data processing as follows:

1st line:

Expedition designation (country code(49), ship code(XK), cruise/leg designation), line name and date(month/day/year).

format(9x,a10,12x,a5,6x,3l2)

2nd line:

Station number and the number of records.

format(7x,i3,12x,i5)

3rd line:

date(day/month/year), time(hour/minute) and location(latitude/longitude, N/S: North/South, E/W: East/West).

format(i2,1x,a3,1x,i4,1x,i2,1x,i2,2x,i2,1x,f5,2,1x,a1,1x,i3,1x,f5,1,1x,a1)

4th line:

Headers for data columns.

5th line:

Units headers for data columns.

Pressure: deci-bar,

Temperature: degree (ITS-90),

Salinity: Practical Salinity Unit,

Dissolved oxygen: Milli-liter/liter

6th line:

Separation

7th line-End of file:

Data lines (pressure, in-situ temperature, salinity and dissolved oxygen). Pressure interval is one deci-bar. Numbers of observation are -9.

Data flag are always as follows:

Pressure: 2 (acceptable measurement)

Temperature: 2

Salinity: 2

Oxygen: 1 (non-calibrated)

format(f8,1,2f8,3,f8,2)

Following is a sample FORTRAN program.

```
-----
c
c Sample program
c
  character expocode*10,lineid*5,NS*1,EW*2,cmonth*3,dummy*48
  dimension p(5000),t(5000),s(5000),o(5000)
c
  open(10,file='F:TOCSKy0111CTDK0111001.CTD',status='old')
c
  read(10,101) expocode,lineid,imo,idy,iyr
101 format(9x,a10,12x,a5,6x,3i2)
  write(6,201) expocode,lineid,imo,idy,iyr
201 format('EXPOCODE='a10,1x,'Line id='a5,1x,'Date=',i2,'/',i2,'/',i2)
c
  read(10,102) istnnbr,irec
102 format(7x,i3,12x,i5)
  write(6,202) istnnbr,irec
202 format('Stn No.='i3,1x,'No of records=',i5)
c
  read(10,103) idy,cmon,iyr,ihr,imi,ilat,flat,NS,ilon,flon,EW
103 format(i2,1x,a3,1x,i4,1x,i2,1x,i2,2x,i2,1x,f5.2,1x,a1,1x,i3,
  @ 1x,f5.1,1x,a1)
  write(6,203) idy,cmon,iyr,ihr,imi,ilat,flat,NS,ilon,flon,EW
203 format('Date=',i2,'/',a3,'/',i4,1x,'Time='i2,':',i2,1x,
  @ 'Lat='i3,'-',f5.2,a1,1x,'Lon='i3,'-',f5.2,a1)
c
  read(10,'(a)') dummy
  read(10,'(a)') dummy
  read(10,'(a)') dummy
c
  do 10 n=1,irec
    read(10,104) p(n),t(n),s(n),o(n)
104 format(f8.1,2f8.3,f8.2)
    if( n.eq.1 .or. n.eq.irec ) then
      write(6,204) p(n),t(n),s(n),o(n)
204 format('P=',f8.1,1x,'T=',f8.3,1x,'S=',f8.3,1x,'O=',f8.2)
    endif
  10 continue
  close(10)
  stop
  end
-----
```

Others

Quality flags

Quality flags definitions for CTD/XCTD data

| Byte Value | Definition                         |
|------------|------------------------------------|
| 1          | Not calibrated with water samples. |
| 2          | Acceptable measurement.            |
| 3          | Quwstionable measurement.          |
| 4          | Bad measurement.                   |
| 5          | Not reported.                      |
| 6          | Interpolated value.                |
| 7 - 8      | Not assigned for CTD/XCTD data.    |
| 9          | Not sampled.                       |

Each CTD/XCTD parameter has two quality bytes, or flags, associated with it in two separate quality words. The definitions apply both to the analyst and the DQE quality words..

Related Information



**K94-02 Leg1**  
Ship Name: KAIYO  
Period: 1994-04-14 - 1994-05-08  
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)

Update History

|            |                                    |
|------------|------------------------------------|
| 2013-01-25 | An observation data was registerd. |
|------------|------------------------------------|

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

Lists  
Publication List  
Amount of Public Info.  
Data  
Map Search  
Data Tree

Information of the Ships  
NATSUSHIMA  
KAIYO  
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Information of the Submersibles  
KAIKO  
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Go to a Cruise Information

Cruise ID:

Go to a Dive Information

What's New  
Update History  
Feeds

Detailed Search

CHIKYU  
KAIMEI  
SHINSEI MARU  
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HYPER-DOLPHIN  
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6K Sonar DEEP TOW  
KM-ROV  
POWER GRAB SAMPLER  
(SHELL)  
POWER GRAB SAMPLER  
(CLOW)  
BMS

Dive ID:

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

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[ReadMe](#)   [Observation Data](#)

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3rd line:

date(day/month/year), time(hour/minute) and location(latitude/longitude, N/S: North/South, E/W: East/West).

format(i2,1x,a3,1x,i4,1x,i2,1x,i2,2x,i2,1x,f5,2,1x,a1,1x,i3,1x,f5,1,1x,a1)

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5th line:

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c
read(10,102) istnnbr,irec
102 format(7x,i3,12x,i5)
write(6,202) istnnbr,irec
202 format('Stn No.='i3,1x,'No of records=',i5)
c
read(10,103) idy,cmon,iyr,ihr,imi,ilat,flat,NS,ilon,flon,EW
103 format(i2,1x,a3,1x,i4,1x,i2,1x,i2,2x,i2,1x,f5.2,1x,a1,1x,i3,
@ 1x,f5.1,1x,a1)
write(6,203) idy,cmon,iyr,ihr,imi,ilat,flat,NS,ilon,flon,EW
203 format('Date=',i2,'/',a3,'/',i4,1x,'Time='i2,':',i2,1x,
@ 'Lat='i3,'-',f5.2,a1,1x,'Lon='i3,'-',f5.2,a1)
c
read(10,'(a)') dummy
read(10,'(a)') dummy
read(10,'(a)') dummy
c
do 10 n=1,irec
read(10,104) p(n),t(n),s(n),o(n)
104 format(f8.1,2f8.3,f8.2)
if( n.eq.1 .or. n.eq.irec ) then
write(6,204) p(n),t(n),s(n),o(n)
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Period: 1994-04-14 - 1994-05-08  
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)

Update History

|            |                                    |
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Privacy Policy  
Application for Data and Samples  
Data Policy

Lists  
Publication List  
Amount of Public Info.  
Data  
Map Search  
Data Tree

Information of the Ships  
NATSUSHIMA  
KAIYO  
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Information of the Submersibles  
KAIKO  
SHINKAI 2000  
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Go to a Cruise Information

Cruise ID:

Go to a Dive Information

What's New  
Update History  
Feeds

Detailed Search

CHIKYU  
KAIMEI  
SHINSEI MARU  
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HYPER-DOLPHIN  
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6K Sonar DEEP TOW  
KM-ROV  
POWER GRAB SAMPLER  
(SHELL)  
POWER GRAB SAMPLER  
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BMS

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## KAIYO K94-02 Leg1 Conductivity-Temperature-Depth Profiler (CTD)

Last Modified: 2013-01-25

[ReadMe](#) [Observation Data](#)

Cruise ID: **K94-02 Leg1**

Conductivity-Temperature-Depth Profiler (CTD): Processed (PI)

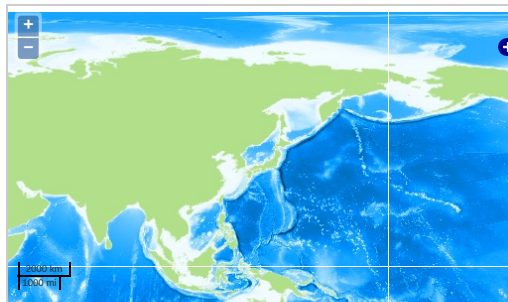
Data Policy: **JAMSTEC**

Observation Items: Pressure, Temperature, Salinity, Dissolved oxygen

Science Keywords:

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

### Observation Map



— ... Observation Line — ... Navigation ● ... Observation, Dive Point, Hole

Imagery reproduced from ...

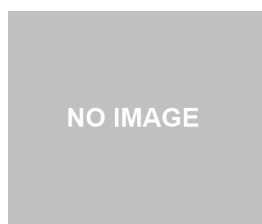
### Data List

[Add to Basket](#)

#### File names

|                          |                 |
|--------------------------|-----------------|
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| <input type="checkbox"/> | K9402001.CTD    |
| <input type="checkbox"/> | K9402002.CTD    |
| <input type="checkbox"/> | K9402003.CTD    |
| <input type="checkbox"/> | K9402004.CTD    |
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| <input type="checkbox"/> | K9402007.CTD    |
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| <input type="checkbox"/> | K9402009.CTD    |
| <input type="checkbox"/> | K9402010.CTD    |
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| <input type="checkbox"/> | K9402022.CTD    |
| <input type="checkbox"/> | K9402023.CTD    |
| <input type="checkbox"/> | K9402024.CTD    |
| <input type="checkbox"/> | K9402025.CTD    |
| <input type="checkbox"/> | K9402026.CTD    |
| <input type="checkbox"/> | K9402027.CTD    |
| <input type="checkbox"/> | K9402028.CTD    |
| <input type="checkbox"/> | K9402029.CTD    |

### Related Information



#### K94-02 Leg1

Ship Name: KAIYO  
Period: 1994-04-14 - 1994-05-08  
Chief Scientist: Yoshifumi Kuroda (JAMSTEC)

### Update History

2013-01-25

An observation data was registered.

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Site Policy

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#### What's New

Update History

Feeds

#### Lists

Publication List

Amount of Public Info.

#### Data

Map Search

Data Tree

Detailed Search

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KM-ROV

POWER GRAB SAMPLER

(SHELL)

POWER GRAB SAMPLER

(CLOW)

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#### Go to a Dive Information

Dive ID:

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