KAIYO KY12-14 Navigation

Last Modified: 2014-10-02

ReadMe | Observation Data | Data Format

Cruise ID: KY12-14
Navigation: Processed (DMO)-QCed
Data Policy: JAMSTEC
Observation Items:
Science Keywords:

Cruise Report
http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/KY12-14_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:
Radio navigation system

Overview

The following information is continuously collected and recorded as the Navigation QCed data during the cruise of R/V KAIYO.

- Time
- Location
- Surface temperature
- Wind direction and velocity
- Current direction and velocity
- Water depth

Data are recorded every one minute, and data file named after cruise code.

System

Manufacturer: SENA Co., Ltd.
Model: Sena Advanced Integrated Navigation System
Data format version 02.6

Sensor specifications

1)GPS

Manufacturer: Trimble Navigation Limited (Receiver)
Fugro Survey Limited (D-GPS)
Model: SPS751 (Receiver)
Starfix-XP (D-GPS)
Receiver location: Mast [starboard side]
Mast [port side]

2)Thermometer (seawater temperature)

Manufacturer: Murayama DENKI Ltd.
Model: DT-3110ARZ
Range: -10 - 50degC
Accuracy: +-0.1degC

3)Doppler sonar

Manufacturer: FURUNO ELECTRIC CO., LTD.
Model: DS-30
Range: Ship speed: -10.00 - +40.00knot [Cross direction]
-9.99 - +9.99knot [Horizontal direction]
Current direction and speed: 0.0 - 9.9knot [All direction]
Accuracy: Current speed: +-(2.0%+0.2knot)

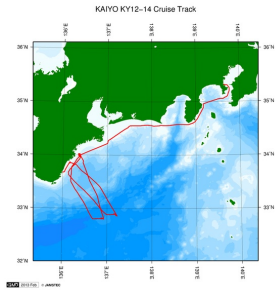
4)Multi narrow beam echo sounder

Manufacturer: SEABEAM INSTRUMENTS
Model: Sea Beam 2100
Frequency: 12.158kHz
Range: 45 - 11000m

5)Anemometer

Manufacturer: Ogasawara Keiki Seisakusho Co., Ltd.
Model: PR-350
Altitude: 27m (above sea level)
Range: Wind direction: all direction
Wind speed: 0 - 60m/s
Accuracy: Wind direction: +-5degree
Wind speed: 10m/s or less +-0.5m/s
10m/s or more +-0.5%

Related Information



Enlarge Image

KY12-14
Ship Name: KAIYO
Period: 2012-12-03 - 2012-12-08
Chief Scientist: Makoto Yamano (The University of Tokyo)
Proposal Title: Thermal structure of the Philippine Sea plate subducting along the Nankai Trough and its relation to seismic activity

Update History

2014-10-02	An observation data was registerd.
2013-02-25	An observation data was registerd.

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Navigation Qced

The one record of this data has 117 bytes of data part and 12 bytes of flag part.

Data part

No.	Column	Content	Format	Unit	Remarks
1	1 - 8	Date	i4,i2,i2		YYYYMMDD (UTC)
2	10 - 15	Time	i2,i2,i2		hhmmss (UTC)
3	17 - 19	Datum	a3		W84:WGS84 TD_:TOKYO DATUM
4	21 - 31	Latitude	i2,x1,f7.4,a1	degree - minute	dd-mm.mmmmN(S)
5	33 - 44	Longitude	i3,x1,f7.4,a1	degree - minute	ddd-mm.mmmmE(W)
6	46 - 49	Ship speed (Ground)	f4.1	knot	
7	51 - 55	Course (Ground)	f5.1	degree	
8	57 - 60	Ship speed (Water)	f4.1	knot	*1
9	62 - 66	Gyro	f5.1	degree	
10	68 - 72	Air temperature	f5.1	deg-C	
11	74 - 78	Sea surface temperature (SST)	f5.2	deg-C	
12	80 - 85	Atmospheric pressure	f6.1	hPa	Adjusted to the sea surface level
13	87 - 89	Relative humidity	i3	%	
14	91 - 93	True wind direction	i3	degree	Averaged over the previous 6 seconds *2
15	95 - 98	True wind speed	f4.1	m/sec	Averaged over the previous 6 seconds *2 No anemometer height adjustment
16	100 - 106	Depth	f7.1	m	
17	108 - 112	Current direction	f5.1	degree	Calculated value
18	114 - 117	Current speed	f4.1	knot	Calculated value

Flag part

No.	Column	Description	Format	Remarks
19	119	Flag 1	i1	QC flag for 'Latitude' and 'Longitude'
20	120	Flag 2	i1	QC flag for 'Ship speed (Ground)'
21	121	Flag 3	i1	QC flag for 'Course (Ground)'
22	122	Flag 4	i1	QC flag for 'Ship speed (Water)'
23	123	Flag 5	i1	QC flag for 'Gyro'
24	124	Flag 6	i1	QC flag for 'Air temperature'
25	125	Flag 7	i1	QC flag for 'Sea Surface Temerature (SST)'
26	126	Flag 8	i1	QC flag for 'Atmospheric pressure'
27	127	Flag 9	i1	QC flag for 'Relative humidity'
28	128	Flag 10	i1	QC flag for 'Wind direction' and 'Wind speed'
29	129	Flag 11	i1	QC flag for 'Depth'
30	130	Flag 12	i1	QC flag for 'Current direction' and 'Current speed'

*1 The plus and minus sign of No.8 [Ship speed (Water)] about R/V KAIREI indicates the velocity of direction of a bow and stem.
*2 No.14 [True wind direction] and No.15 [True wind speed] about R/V SHINSEI MARU are instantaneous value.
* The terminator of each record is 'CR+LF' code.
* Missing value and format error value are filled with '9'.

Definition of Quality Control Flags
Flag 1 : Longitude and Latitude
1 - accepted
2 - questionable value
4 - failed in location check
9 - system error or input error

Flag 2 : Ship speed (ground)
1 - accepted
2 - questionable value
4 - failed range check (under 20 knots)
9 - system error or input error

Flag 3 : Course (ground)
1 - accepted
2 - questionable value
4 - failed range check (0 ~ 360 degree)
9 - system error or input error

Flag 4 : Ship speed (water)
1 - accepted
4 - failed range check (under 20 knots)
9 - system error or input error

Flag 5 : Gyro
1 - accepted
4 - failed range check (0 ~ 360 degree)
9 - system error or input error

Flag 6 : Air temperature
3 - assumed good*
4 - failed range check (-20 ~ 40 degC)
9 - system error or input error

Flag 7 : Sea surface temperature
3 - assumed good*
4 - failed range check (-3 ~ 37 degC)
9 - system error or input error

Flag 8 : Atmospheric pressure
3 - assumed good*
4 - failed range check (890 ~ 1040 hPa)
9 - system error or input error

Flag 9 : Relative humidity
3 - assumed good*
4 - failed range check (0 ~ 100 %)
9 - system error or input error

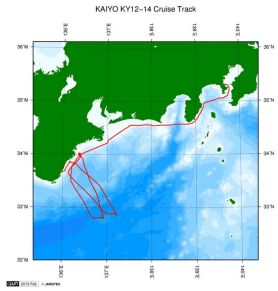
Flag 10 : Wind direction and wind speed
3 - assumed good*
4 - failed range check (0 ~ 360 degree : wind direction, 0 ~ 60 m/s : wind speed)
9 - system error or input error

Flag 11 : Depth
3 - assumed good*
4 - failed range check (4 ~ 11000 m)
9 - system error or input error

Flag 12 : Current direction and current speed
3 - assumed good*
4 - failed range check (0 ~ 360 degree : current direction, 0 ~ 5 knots : current speed)
9 - system error or input error

* 'assumed good' means that this data passed range check but may contains leap or inappropriate zero.

Related Information



Enlarge Image

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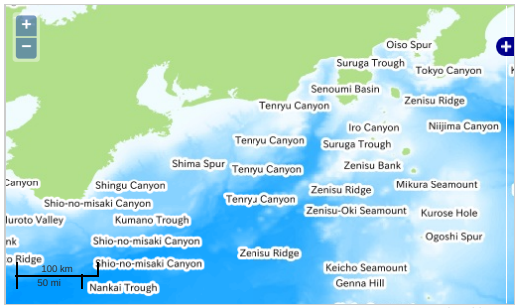
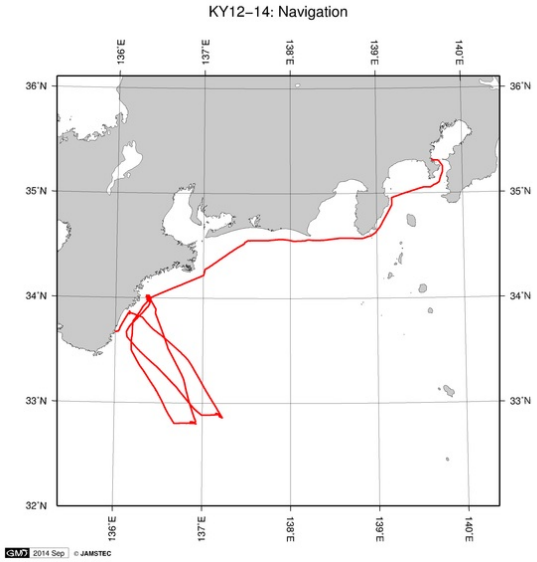
Observation Map



Imagery reproduced from ...

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

Figures



Data List

Add to Basket

File names
KY12-14.dat

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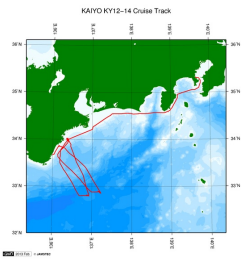

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