

## KAIREI KR06-03 Total Magnetic Intensity (TMI)

Last Modified: 2019-06-25

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

Cruise ID: **KR06-03**

**Total Magnetic Intensity (TMI)**: Processed (DMO)-Corrected

**Data Policy**: [JAMSTEC](#)

**Observation Items**: Total magnetic field intensity

**Science Keywords**:

OCEANS > MARINE GEOPHYSICS > MARINE  
MAGNETICS  
SOLID EARTH > GEOMAGNETISM

### 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.

### Period (UTC)

2006-04-04 23:38 – 2006-04-14 02:00

### Instrument

Instrument:

Proton magnetometer



### Overview

The proton precession magnetometer measures the total magnetic field intensity as the frequency of electric current which is generated by the proton precession. In order to avoid the ship's magnetization, the instrument is towed by the vessel about 200 - 300m. As a quality control, data of low reliability was removed (see section 5. for quality control criteria). Synthetic geomagnetic field values were calculated from IGRF models.

### Measurement System

Manufacturer : Kawasaki Geological Engineering Co. Ltd.

Type : PROTO10

Measurement range : 30,000 - 65,000 nT

Resolution : 0.01 nT

Accuracy : 0.1 nT

Location : Dry Laboratory

### Data processing

The following corrections and calculations were performed.

#### (1) International Geomagnetic Reference Field (IGRF)

Synthetic geomagnetic field values are calculated from IGRF 11th generation models by using navigation data ; latitude, longitude and date.

Reference: IAGA Division V-MOD Geomagnetic Field Modeling <http://www.ngdc.noaa.gov/IAGA/vmod/igrf.html>

#### (2) Calculation of the geomagnetic field anomaly

$An = F - Figrf$

An: Total geomagnetic field intensity anomaly

F: Observed total geomagnetic field intensity

Figrf: Synthetic total geomagnetic field intensity from IGRF

#### (3) Output of the data

Time (UTC)

Latitude (degree)

Longitude (degree)

Observed total magnetic field intensity (nT)

Total geomagnetic field intensity anomaly (nT)

### Quality control of data

Following criteria were used for removal of data of low reliability:

- Time error (inversion of time, continuation of same timestamps)
- Ground speed of the ship below 1knot or exceeding 20knot
- Total geomagnetic field intensity anomaly exceeding  $\pm 4000$ nT
- Spatial gradient of the total geomagnetic field intensity anomaly exceeding  $\pm 300$ nT/km

### Note

(1) File naming rule: Cruise ID\_corr.tmag

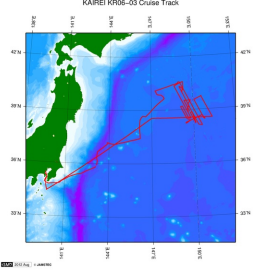
(2) Sampling rate: 20 seconds (It depends on geomagnetic field intensity and inclination )


(3) Geodetic system: WGS84

(4) If you would like the raw data set, please contact us from "Contact Us" above.

### Related Information

KAIREI KR06-03 Cruise Track



 [Enlarge Image](#)

KR06-03

Ship Name: KAIREI

Period: 2006-04-03 - 2006-04-15

Chief Scientist: Masao Nakanishi (Chiba University)

Update History	
2019-06-25	An observation data was registerd.
2018-05-09	An observation data was registerd.
2013-07-27	An observation data was registerd.
2012-11-25	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

KAIIMEI

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 to a Dive Information

Dive ID:

 **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

Copyright 2011 Japan Agency for Marine-Earth Science and Technology

## KAIREI KR06-03 Total Magnetic Intensity (TMI)

Last Modified: 2019-06-25

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

Cruise ID: **KR06-03**

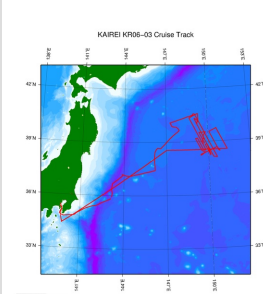
Total Magnetic Intensity (TMI): Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

### TMI Corrected

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 -25	Latitude	f9.5	degree	No sign for the northern hemisphere. Negative for the southern hemisphere.
4	27 -36	Longitude	f10.5	degree	No sign for eastern hemisphere. Negative for the western hemisphere.
5	38 -45	Observed total geomagnetic field intensity	f8.1	nT	
6	46 -53	Total geomagnetic field intensity anomaly	f7.1	nT	

### Related Information



#### KR06-03

Ship Name: KAIREI  
Period: 2006-04-03 - 2006-04-15  
Chief Scientist: Masao Nakanishi (Chiba University)

[Enlarge Image](#)

### Update History

2019-06-25	An observation data was registered.
2018-05-09	An observation data was registered.
2013-07-27	An observation data was registered.
2012-11-25	An observation data was registered.

**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 to a Dive Information

Dive ID:

## KAIREI KR06-03 Total Magnetic Intensity (TMI)

Last Modified: 2019-06-25

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

Cruise ID: [KR06-03](#)

Total Magnetic Intensity (TMI): Processed (DMO)-Corrected

Data Policy: [JAMSTEC](#)

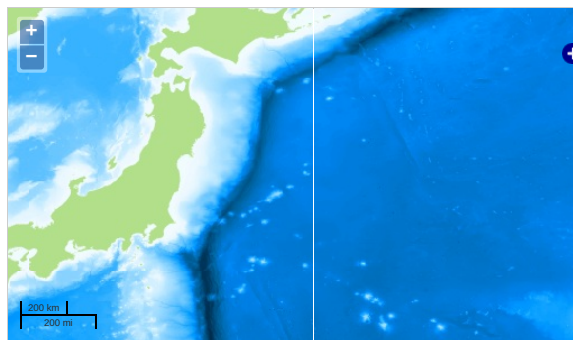
Observation Items: Total magnetic field intensity

Science Keywords:

OCEANS > MARINE GEOPHYSICS > MARINE MAGNETICS

SOLID EARTH > GEOMAGNETISM

### Observation Map



Imagery reproduced from ...

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

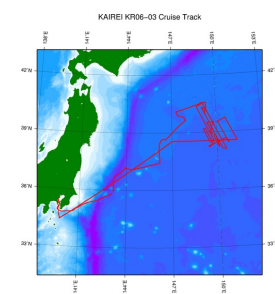
### Data List

[Add to Basket](#)

#### File names

☐ KR06-03\_0\_corr.tmag

### Related Information



[Enlarge Image](#)

#### KR06-03

Ship Name: KAIKEI

Period: 2006-04-03 - 2006-04-15

Chief Scientist: Masao Nakanishi (Chiba University)

### Update History

2019-06-25	An observation data was registered.
2018-05-09	An observation data was registered.
2013-07-27	An observation data was registered.
2012-11-25	An observation data was registered.

#### 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

[KAICO](#)  
[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 to a Dive Information

Dive ID: