

YOKOSUKA YK14-05 Total Magnetic Intensity (TMI)

Last Modified: 2018-05-09

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

Cruise ID: **YK14-05**

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

Cruise Report

http://www.godac.jamstec.go.jp/catalog/data/doc_catalog/media/YK14-05_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.

Period (UTC)

2014-04-14 09:17 ~ 2014-04-20 21:21

Instrument

Instrument:

Proton magnetometer (YK07-01 -)



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. and Tierra Technica Ltd.

Type : PM-217

Measurement range : 30,000 -70,000 nT

Resolution : 0.01 nT

Accuracy : less than 0.1 nT

Location : No.1 Study Room

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

$A_n = F - F_{igrf}$

A_n : Total geomagnetic field intensity anomaly

F : Observed total geomagnetic field intensity

F_{igrf} : 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:

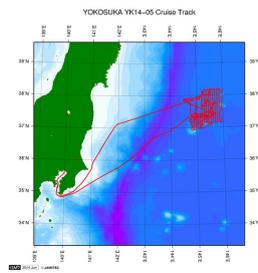
- Time error (inversion of time, continuation of same timestamps)
- Ground speed of the ship below 1knot or exceeding 20knot
- Total geomagnetic field intensity anomaly exceeding ± 4000 nT
- Spatial gradient of the total geomagnetic field intensity anomaly exceeding ± 300 nT/km

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

[Cruise Data](#) [Dive Data](#)



[Enlarge Image](#)

YK14-05

Ship Name: YOKOSUKA
Period: 2014-04-10 - 2014-04-23
Chief Scientist: Naoto Hirano (Tohoku University)
Proposal Petit-spot distributions along deformation of subducting plate
Title:

Update History

2018-05-09	An observation data was registered.
2016-04-23	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:



YOKOSUKA YK14-05 Total Magnetic Intensity (TMI)

Last Modified: 2018-05-09

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

Cruise ID: **YK14-05**

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

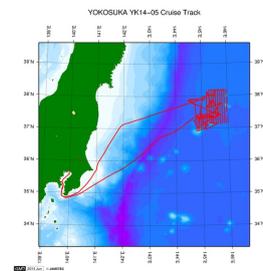
Data Policy: [JAMSTEC](#)

TMI (proton)

No.	Column	Item	Format	Unit	Remarks
1	1 - 2	Year	i2	year	0 - 99, UTC
2	3 - 4	Month	i2	month	1 - 12, UTC
3	5 - 6	Day	i2	day	1 - 31, UTC
4	7 - 8	Hour	i2	hour	0 - 23, UTC
5	9 - 10	Minute	i2	minute	0 - 59, UTC
6	11 - 12	Second	i2	second	0 - 59, UTC
7	13 - 21	Longitude	i9	0.00001 deg	No sign for eastern hemisphere. Negative for the western hemisphere.
8	22 - 29	Latitude	i8	0.00001 deg	No sign for the northern hemisphere. Negative for the southern hemisphere.
9	30 - 34	Depth	i5	m	0 - 11000
10	35 - 40	Magnetory	i6	0.1 nT	[-99999, +99999]

Related Information

[Cruise Data](#) [Dive Data](#)



[Enlarge Image](#)

YK14-05

Ship Name: YOKOSUKA
Period: 2014-04-10 - 2014-04-23
Chief Scientist: Naoto Hirano (Tohoku University)
Proposal: Petit-spot distributions along deformation of subducting plate
Title:

Update History

2018-05-09	An observation data was registerd.
2016-04-23	An observation data was registerd.

JAMSTEC

[Site Policy](#)
[Privacy Policy](#)
[Application for Data and Samples](#)
[Data Policy](#)
[Map Search](#)
[Data Tree](#)
[Detailed Search](#)
[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:

YOKOSUKA YK14-05 Total Magnetic Intensity (TMI)

Last Modified: 2018-05-09

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

Cruise ID: [YK14-05](#)

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

Data Policy: [JAMSTEC](#)

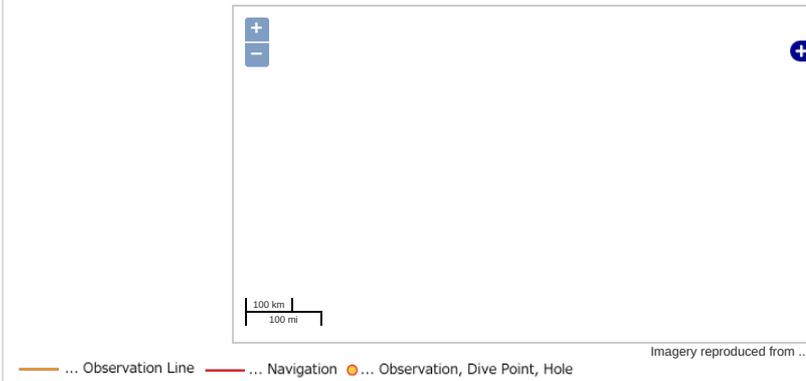
Observation Items: Total magnetic field intensity

Science Keywords:

[OCEANS](#) > [MARINE GEOPHYSICS](#) > [MARINE MAGNETICS](#)

[SOLID EARTH](#) > [GEOMAGNETISM](#)

Observation Map



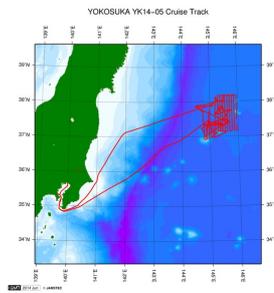
Data List

File names

YK14-05_0_corr.tmag

Related Information

Cruise Data Dive Data



YK14-05

Ship Name: YOKOSUKA

Period: 2014-04-10 - 2014-04-23

Chief Scientist: Naoto Hirano (Tohoku University)

Proposal: Petit-spot distributions along deformation of subducting plate

Title:

Update History

2018-05-09	An observation data was registered.
2016-04-23	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: