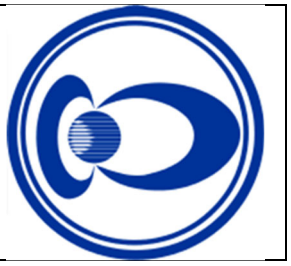
INTERMAGNET

Observatory Application Form



SECTION 1 Observatory Information	
Observatory Name	IAGA Code

Latitude	Longitude
DD MM SSS.S N/S	DDD MM SSS.S E/W
Elevation (m)	Country

SECTION 2 Observatory Contact Information	
Contact Name	
Address	
Country	
Telephone	
E-mail	

SECTION 3 Institute Information	
Institute Name	
Contact*	
Address*	
Country*	
Telephone*	
E-mail*	
* If different from Section 2	

SECTION 4 Continuously Recording Vector Magnetometer	
Instrument Manufacturer	Instrument Model
Measured Components	
XYZ [☐] HDZ [☐] DIF [☐] Other: (Please specify)	
Please provide further details on one-minute data specification where these parameters have been measured. Target INTERMAGNET values are shown in parenthesis []. Where parameters are not known, please leave blank.	
Sensor tilt compensation?	Automatic dynamic range of digital data [±4000 high lat. or ±3000 nT med/low lat.]
Yes [☐] No [☐]	nT
Sensor thermal coefficient [0.25 nT/°C]	Electronics thermal coefficient [0.25 nT/°C]
nT/°C	nT/°C
Typical annual temperature range of sensor	Typical annual temperature range of electronics
°C	°C
Base sampling rate of analogue signal	Resolution of base digital data [100 pT]
Hz	pT
Method of time synchronisation	
GPS [☐] NTP [☐] Radio [☐] Other: (Please specify)	
Duration of uninterruptible power supply (if applicable)	
hours	

SECTION 5 One-minute Vector Data	
Digital filtering conforms to INTERMAGNET one-minute specifications?	If no, please give details of the filter applied:
Yes [☐] No [☐]	

SECTION 6 Continuously Recording Scalar Magnetometer	
Instrument Manufacturer	Instrument Model
Automatic dynamic range of digital data [±4000 high lat. or ±3000 nT med/low lat.]	Resolution of base digital data [100 pT]
nT	pT
Base sampling rate of digital data [0.033 Hz]	
Hz	

SECTION 7 Data Transmission	
Which Geomagnetic Information Node (GIN) are data to be transmitted to?	
Edinburgh [☐] Golden [☐] Kyoto [☐] Ottawa [☐] Paris [☐]	
Frequency of data transmissions	
Daily [☐] 2 Days [☐] 3 Days [☐] Other: (Please specify)	
Method of data transmission – please select one or more of the following:	
Satellite [☐] GOES W [☐] GOES E [☐] METEOSAT [☐] GMS [☐] Other: (Please specify)	
E-mail [☐] Please enter source e–mail address used to send data	
Web service [☐]	
INTERMAGNET requires that member observatories report their data to a GIN within 72 hours of recording. If requested, a delay can be applied to plotting and/or publishing these data on the INTERMAGNET web site. Please specify a delay in days (or enter 0) below.	
INTERMAGNET web site publication delay	days
INTERMAGNET web site plotting delay	days

SECTION 8 Absolute Vector Magnetometer			
Instrument Manufacturer		Instrument Model	
Typical measurement frequency			
Daily [☐] Weekly [☐] Fortnightly [☐] Monthly [☐] Other: (Please specify)			
Measured components	Measured accuracies	Measured components	Measured accuracies
X [☐]	nT	D [☐]	arcseconds
Y [☐]	nT	I [☐]	arcseconds
Z [☐]	nT	F [☐]	nT
H [☐]	nT	Other: (Please specify)	

SECTION 9 Absolute Scalar Magnetometer	
Instrument Manufacturer*	Instrument Model*
Typical measurement frequency *	
Daily [☐] Weekly [☐] Fortnightly [☐] Monthly [☐] Other: Please specify)	
Measurement accuracy*	*if different from Section 8
nT	

SECTION 10a One-second Vector Instrument	
Sections 10a, 10b & 10c are optional and apply to observatories wishing to submit one-second data to INTERMAGNET in addition to one-minute data.	
Instrument Manufacturer*	Instrument Model*
Measured Components*	
XYZ [☐] HDZ [☐] DIF [☐] Other: (Please specify)	
Sensor tilt compensation?*	Automatic dynamic range of digital data * [±4000 high lat. or ±3000 nT med/low lat.]
Yes [☐] No [☐]	nT
Sensor thermal coefficient*	Electronics thermal coefficient*
nT/°C	nT/°C
Typical annual temperature range of sensor*	Typical annual temperature range of electronics*
°C	°C
Base sampling rate of analogue signal*	Resolution of base digital data [1pT]*
Hz	pT
Describe filter stages between analogue to one-second digital data	
Method of time synchronisation*	
GPS [☐] NTP [☐] Radio [☐] Other: (Please specify)	

*If different from Section 4

SECTION 10b One-second Vector Data	
Please provide further details on one-second data specification, where these parameters have been measured. Target INTERMAGNET values are shown in parenthesis [] but these are not currently a prerequisite to submitting one-second data. Where parameters are not known, please leave blank.	
Time stamp accuracy to UTC [10 ms]	ms
Maximum group delay [10 ms]	ms
Pass band [DC to 0.2 Hz]	Hz
System attenuation above 0.5 Hz (≥50 dB)	dB
RMS noise in band DC to 8mHz [≤100 pT]	pT
Spectral density noise at 0.1 Hz [≤10 pT/√Hz]	pT/√Hz
Absolute error [±2. 5 nT]	nT
Scaling & linearity error [0.25 %]	%
Component orthogonality error [≤2 mrad]	mrad
Z-component verticality error [≤2 mrad]	mrad
Additional information	Please enter any further relevant information on one-second instrumentation or data parameters here

SECTION 10c One-second Data Auxiliary Measurements	
Scalar Instrument Manufacturer*	Scalar Instrument Model*
Base sampling rate of scalar data* [0.033 Hz]	Resolution of base scalar data* [10 pT]
Hz	pT
Temperature sensor sampling rate [0.017 Hz]	Resolution of temperature data [°C]
Hz	°C

*if different from Section 6

Section 11 INTERMAGNET Definitive Data Files

Along with this form, an application must be submitted with the following INTERMAGNET definitive data files:

[☐] Twelve consecutive months of definitive one-minute mean data in INTERMAGNET format IAFV2.1

[☐] INTERMAGNET baseline files for the same period in INTERMAGNET format IBFV2.00

[☐] An annual mean file in INTERMAGNET format IYFV1.02

[☐] Readme file (country and observatory)

Descriptions of file formats are available from the INTERMAGNET web site. They are also included in the INTERMAGNET Technical Manual.

As outlined in the INTERMAGNET Technical Manual, Observatories must also communicate data to an INTERMAGNET Geomagnetic Information Node (GIN) within 72 hours of recording. Acceptance of an observatory to INTERMAGNET will be completed once three months of data have been received by an INTERMAGNET GIN.

SECTION 12 Observatory Photograph

Please attach a photograph of the observatory for inclusion on the INTERMAGNET web site	

Section 13 Notes on Completing this Form

In order for an observatory application to be accepted by INTERMAGNET, the INTERMAGNET Operations Committee will assess an application against the data quality standards as described in the INTERMAGNET Technical Manual. The INTERMAGNET Technical Manual also contains information of data types, data exchange formats and notes on producing definitive data. The Technical Manual is available for download on the INTERMAGNET web site www.intermagnet.org

Observatories submitting an application should note that a condition of acceptance is that the observatory agrees to comply with the INTERMAGNET Observatory Participation Policy described in Section 14.

Completed application forms should be sent to the INTERMAGNET Observatories Subcommittee chair:

Chris Turbitt
INTERMAGNET
c/o British Geological Survey
The Lyell Centre, Riccarton
Edinburgh EH14 4AP
United Kingdom
cwtu@bgs.ac.uk

Sections 11a and 11b are included on this form to allow observatories currently making one-second recordings to submit these details to INTERMAGNET. It is not a prerequisite of INTERMAGNET membership that an observatory makes one-second recordings nor is it currently a prerequisite that one-second recordings meet the INTERMAGNET One-second Definitive Data Standard in order to be transmitted to INTERMAGNET. Please contact the INTERMAGNET Observatories Subcommittee chair for further information.

The Observatories Subcommittee chair can also be contacted at any stage of the application process for further information on the application form, data transmission or for assistance in producing the data files described in Section 12.

IAGA Observatory codes can be obtained from the chair of IAGA Division V Working Group V-OBS https://iaga-vobs.org/

Section 14 INTERMAGNET Observatory Participation Policy (PN1 Version 1.3)

Introduction

Observatory institutes wishing to have an observatory participate in INTERMAGNET are required to submit an application to the INTERMAGNET Observatories Subcommittee chair that demonstrates that the INTERMAGNET requirements and standards are being met. There is also an expectation that these standards will continue to be met in the future. Applications are assessed by the INTERMAGNET Operations Committee against a set of documented standards described in the Technical Manual. The Committee will recommend that the INTERMAGNET Executive Council accepts the application if:

- The observatory is meeting and will continue to meet the documented standards on data quality and data formats.
- The observatory transmits and will continue to transmit data in near real-time to the INTERMAGNET network
- The observatory will submit definitive data and metadata for publication via the INTERMAGNET Reference Data Set (IRDS) every year. The IRDS includes physical and online publication of definitive data.

The INTERMAGNET Operations Committee will periodically assess compliance with the standards.

It is recognised that any real-time network is potentially subject to operational problems leading to temporary interruption of data acquisition and/or degradation of data quality. If required, the INTERMAGNET Operations Committee may offer advice or technical support to resolve such problems. However, an observatory institute that is not able to operate an observatory to the required standards may have the INTERMAGNET status of that observatory withdrawn.

Application to the INTERMAGNET network

Institutes intending to have an observatory participate in the INTERMAGNET network are requested to submit an application and provide sample data to the INTERMAGNET Observatories Subcommittee chair using the form on the INTERMAGNET web site. The application will then be reviewed by the INTERMAGNET Operations Committee against the standards defined in the Technical Manual. If these standards are met, and once real-time data are being transmitted to the network, the INTERMAGNET Executive Council chair will communicate to the observatory institute that the application has been successful and that the observatory is recognised as an INTERMAGNET observatory. Observatories are accepted into INTERMAGNET on the condition that the institute will ensure data quality and data delivery standards continue to be met.

Applications may be rejected on the grounds that the data quality or data delivery standards have not yet been met, in which case the Operations Committee will communicate this and the reason for the decision to the observatory institute making the application. There is no restriction on institutes re-applying.

Ongoing Participation in the INTERMAGNET Network

On a regular basis, the Operations Committee will monitor the delivery of one-minute, real-time data by participating observatory institutes against the requirements outlined in the Technical Manual.

Where an observatory does not transmit real-time, one-minute data to the INTERMAGNET network for a continuous period of one-year, this will be considered to be a breach of the INTERMAGNET data delivery requirements and the observatory institute will be notified of the breach by the Operations Committee.

The Operations Committee will also assess definitive data submitted for inclusion in the annual IRDS against the data quality standards and format requirements for one-minute data as defined in the Technical Manual. The deadline for submission of definitive data will be communicated by the Operations Committee in advance and sufficient time will be provided for final processing following the year end.

Where no definitive data have been submitted prior to the submission deadline, this will be considered to be a breach of the INTERMAGNET data delivery requirements and the observatory institute will be notified of the breach by the Operations Committee.

Where definitive data have been submitted, but where data quality or format issues have not been resolved prior to the publication date of the IRDS, definitive data will not be published in the IRDS and this will be considered to be a breach of the INTERMAGNET data quality requirements. The observatory institute will be notified of the breach by the Operations Committee.

Where an observatory institute does not meet INTERMAGNET requirements for any reason, the Operations Committee will contact the operating institute to specify the nature of the problem and to offer assistance in resolving it.

Withdrawal of INTERMAGNET status

The Operations Committee will designate a participating observatory to be non-compliant where the observatory institute:

- Does not respond to a communication from the Operations Committee notifying that the observatory has breached INTERMAGNET standards

or

- Does not transmit real-time, one-minute data to the INTERMAGNET network for two consecutive years.

or

- Does not submit or does not have definitive one-minute data accepted for publication on the IRDS for two consecutive years.

In the event of observatory non-compliance, the Operations Committee will

- Notify an institute that an observatory has been designated as non-compliant, specifying which data delivery requirements have been breached
- Set a deadline by which time all INTERMAGNET data delivery requirements must be met. This deadline will normally be the date for submission of definitive data in the calendar year following the date of notification of non-compliance
- Inform the institute that the observatory's INTERMAGNET status may be withdrawn if this deadline is not met

Where a participating observatory meets the data delivery requirements by the stated deadline, the institute will be notified by the Operations Committee that the non-compliant designation has been lifted.

Where a participating observatory fails to meet the data delivery requirements by the stated deadline, the Operations Committee will inform the Executive Council and provide a recommendation on further action. On the basis of the recommendation by the INTERMAGNET Operations Committee, the INTERMAGNET Executive Council may withdraw INTERMAGNET status from a participating observatory.

Where an observatory has had INTERMAGNET status withdrawn, the observatory institute will be required to submit a further application to the INTERMAGNET Observatories Subcommittee chair before INTERMAGNET status can be reinstated.

Personal data privacy notice

In submitting this application, your personal data (name, email address, postal address, phone number and institute affiliation) will be held in the INTERMAGNET Observatory Metadata Database as the contact for the observatory. Your personal details are to be used by the British Geological Survey to contact you with regard to collecting observatory data, managing that data and for general communication concerning the observatory. Your email address is the minimum that we require to contact you. Your email address, as well as name, institute, postal address and phone number - if these are provided – would be made publicly available on the INTERMAGNET website as the contact for the observatory.

Your personal data will be handled in line with UK data protection legislation and managed securely. If you would like to know more, including how to exercise your Rights, please see our privacy notice https://www.bgs.ac.uk/legal-and-policy/privacy/.

Please sign and date below to confirm that:

- On behalf of my institute, I have read and agree to the INTERMAGNET terms and conditions of membership defined by the INTERMAGNET Observatory Participation Policy
- I have included the INTERMAGNET definitive data files detailed in Section 11 along with this application

(Institute representative – please insert scan of signature)	YYYY/MM/DD (Date)