Highlights of the INTERMAGNET Meeting in Vienna

The 2018 INTERMAGNET meeting was held between 2nd July and 4th July at the Central Institute for Meteorology and Geodynamics (ZAMG), Vienna, Austria.

INTERMAGNET meeting participants at ZAMG Headquarters. Photo copyright: ZAMG

Report Contents

The minutes of the meeting are available at http://intermagnet.org/publication-software/meetings-eng.php#vienna2018, though material relating to individual observatories, institutes or people has been removed from this public copy of the minutes.

Publication of 1-minute definitive data

INTERMAGNET will stop distributing the annual publication of one-minute definitive data on a physical medium (DVD or USB stick). The USB stick containing 2015 data will be the last publication on physical media. Starting with 1-minute definitive results for 2016, data will be published online only. A Digital Object Identifier will be created for each online publication.

It is worth noting that the USB for 2015 data will also include all definitive 1-minute data from 1991-2014 (including updates to erroneous data). The 2015 USB stick will contain 25 years of one-minute definitive data.

From 2016 onwards, the online publication of 1-minute definitive data on the web will include not only the data files, but also accompanying files such as readme.obs, yearmean.obs and a baseline file.

Analysis of Quasi-Definitive data

The definition of quasi-definitive data relates the data to definitive data that has yet to be published (see the definition here: http://intermagnet.org/faqs-eng.php#quasi-definitive). From time to time INTERMAGNET will check published definitive data against previously received quasi-definitive data to ensure that the data is within specification. Such a check was recently carried out for data from 2015. A total of 70 IMOs submitted Quasi-Definitive data in 2015, of these 17 had no definitive data at the time of the check so 53 IMOs were included in the comparison. A total of six months from 4 IMOs (1%) out of 603 months of available data were found to be outside the 5 nT limit. There were an additional 4 months which were close to the 5 nT limit. Timeliness of data was also checked. More details are available in the full report of the Vienna INTERMAGNET meeting.

Publication of the next version of the INTERMAGNET Technical Manual

Considerable progress has been made to complete the missing information required to produce version 5.0.0 of the Technical Manual. A workgroup session was organized during the last day of the meeting in Vienna where every participant was assigned a task that could be completed during the time allocated at the meeting or shortly after the meeting. Priority was given to essential sections required for the release of the manual. Other items will be developed as they become available and will be incorporated in future releases of the manual. A progress meeting will be held early fall to complete any missing information and then the manual will go through one last complete review. We expect to distribute the manual early in 2019.

Keeping our web pages up to date

INTERMAGNET is on GitHub (https://github.com/INTERMAGNET) and is now encouraging the INTERMAGNET officers to contribute documentation that will engage the community. This is an effort at being more transparent. As we add more documentation, we will encourage everyone to contribute discussions by submitting "Issues" within the GitHub system. Hope to see you soon on GitHub.

Advice on K9 lower limits

Following a presentation by Aude Chambodut in plenary session, the advice to IMOs that do not already have a value for K9 lower limit is to contact the International Service of Geomagnetic Indices (ISGI) to ensure a reasonable value is adopted before K-indices are produced. For IMOs that are already producing K-indices, the instruction is to ensure that the value of the K9 lower limit being used

by the IMO is accurately recorded in the metadata sent to INTERMAGNET. Where the value of the K9 lower limit is not representative, the guidance from ISGI is that this value should not be changed (in order to maintain homogeneity in the time series) but should be accurately recorded.

ISGI's contact details can be found here: http://isgi.unistra.fr/locate_us.php

Software available through INTERMAGNET

The Definitive Data subcommittee discussed problems concerning software supporting the INTERMAGNET CDF format. This software is especially important for IMOs providing 1-sec definitive data. Alongside existing programs such as DataCheck1s (Java), MagPy (Python) is well advanced in handling CDF data. A new program, gm_convert (Java), converts between a number of different formats including ImagCDF, IAF, IAGA2002, IMF and WDC. All these programs can be accessed from the INTERMAGNET software page: http://intermagnet.org/publication-software/software-eng.php

Digital Object Identifiers (DOIs) – an update

Following the previous INTERMAGNET meeting in 2017, we reported that INTERMAGNET will create DOIs for each of the annual INTERMAGNET CDs and DVDs published since 1991. We have created a draft 'landing page' for the first of these DOIs. This landing page is hosted at GFZ Postsam and was presented to INTERMAGNET officers at the meeting in Vienna. Creating this landing page has involved a significant amount of work to gather the metadata necessary to describe all institutes and observatories contributing to the publication. It is hoped that, having created the first DOI, DOIs for the remaining years of publication will require less work to complete. We will make this draft DOI available for comment as soon as work on it is complete.

Licensing of data distributed through INTERMAGNET – an update

As we communicated in previous messages, we believe that a Creative Commons version 4 licence with Attribution and Non-Commercial variations (known in shorthand as "CC:BY:NC") more closely fits INTERMAGNET needs than the current INTERMAGNET license. INTERMAGNET has created a prototype page on GitHub (https://intermagnet.github.io/data_conditions.html) on how licensing will be advertised on the web and will be investigating how to include license information in data files. This will replace INTERMAGNET's current license page (http://intermagnet.org/data-donnee/data-eng.php#conditions)

Notification of this change, and a request for comments, was sent to INTERMAGNET observatory contacts in July this year. If you have any final comments or suggestions please do let us know. If your institute wishes to release data under different conditions, can you let us know and tell us where your institute's license information can be found, so that we can include you in the table of "Institutes with different license conditions"?

INTERMAGNET officers

There was no change in the membership of the INTERMAGNET Executive Council.

Tero Raita joined the INTERMAGNET Operations Committee and will work on the Definitive Data and IMO Applications subcommittees. Welcome Tero!

The current organisational structure can be seen on the INTERMAGNET website: http://www.intermagnet.org/structops-eng.php

Next meeting

The next INTERMAGNET meeting will be held in Ottawa following the 27th IUGG Assembly in Montreal. The dates for the meeting are 20th to 22nd July 2019. Guest are welcome at the meeting.

Please get in touch with the Operations Committee Chair, Simon Flower (smf@bgs.ac.uk) if you would like to attend. Your contribution at the meeting will be welcome!

Thanks to…

The meeting was organized by the Central Institute for Meteorology and Geodynamics (ZAMG) at its offices in Vienna. Staff from the institute provided invaluable support for the meeting including catering and equipment as well as much needed facilities and help for the participants in the preparation and execution of their tasks. We were made to feel very welcome at the ZAMG and in this very pleasant area of Vienna. Many thanks to Roman Leonhardt and other staff at ZAMG for organising a successful meeting, particularly as it followed straight on from their work organising the observatories workshop the week before.

Simon Flower (INTERMAGNET Operations Committee Chair), smf@bgs.ac.uk, 20th November 2018