

## **Business Meeting IAGA Division V**

**July 15, 2023, 18:05–19:00 CET [M4, City Cube, Level 3]**

**IUGG 2023, 28th General Assembly, Berlin, Germany**

**Report by M. Nosé (Chair) and R. Leonhardt (Co-chair)**

### **Agenda**

1. Acceptance of the agenda
2. Report from Chair and Co-Chair
3. Report from WG V-OBS
4. Report from WG V-DAT
5. Report from WG V-MOD
6. Resolution proposal from Division V
7. IAGA 2025 session proposals from Division V
8. Election of new Chair and Co-chair
9. Any Other Business

At 18:05, welcome to the participants by Division V Chair.

### **1. Acceptance of the agenda**

Agenda was unanimously approved.

### **2. Report from Chair and Co-Chair**

#### **Report by M. Nosé**

- The Division V chair and co-chair have been working for the usual task of coordination, reminders and relaying information. Main part of Division V activities are spread in Working Groups. Chair and co-chair of Division V thanks WG chairs and co-chairs for their excellent works.
- The 6th IAGA Summer School was conducted on 6–11 July 2023 in Niemegek Observatory. Division V had 13 applicants by the deadline of October 31, 2022. After evaluation by WG chairs (and subsequently by EC), 4 applicants were selected to attend the summer school.
- IAGA is promoting social media activities to attract young and early career researchers to IAGA, and to encourage their active involvement in IAGA activities. Some articles related to Division V have been posted.

Question by Gaultier Hulot: Would there have been more suitable candidates as actually selected for the summer school?

Answer yes, 13 candidates, 4 on top with similar grades. Finally two? were selected for the IAGA Summer school.

Would it be possible to send more candidates - yes.

### **3. Report from WG V-OBS**

**Business Meeting WG V-OBS (July 13, 2023)**

**Report by M. Nosé**

**Workshop reports:**

- Successful XIX. IAGA observatory workshop in May 2023 in Hungary, 63 participants from 20 countries, presentation of result of instrument comparison, special issues in Copernicus Geoscientific Instrumentation and in Publications in Geomatics to be open soon.
- Update on XX. IAGA observatory workshop in Vassouras, Brazil, close to Rio de Janeiro. The date is Wednesday 2024-10-30 to 2024-11-07
- Presentation of XXI. IAGA observatory workshop candidate Kakioka, Japan. The WG members voted for this candidate and the XXI. workshop will be in October 2026 in Kakioka, Japan.

#### **Report from INTERMAGNET:**

- Plans to include more participants from INTERMAGNET observatories (IMOs).
- Changes to INTERMAGNET data archive and download as it moved from NRCan to BGS.
- Planning to use seedlink and MQTT protocols for faster real-time data in INTERMAGNET.
- Minutes of INTERMAGNET in person meeting in Hungary in May 2023 to be published soon.

#### **Observatory list:**

- New provisional codes: GLK (Gyulagarak, Armenia), FIH (Fihaonana, Madagascar)
- Closed observatories: TAN (Antanarivo, Madagascar, replaced by FIH)

#### **Discussions:**

- Additional online meeting in one year?
- V-OBS mandate for variometer stations?
- Division V could be approached to update V-OBS mandate (e.g. variometer stations, satellite missions) and mission statement.
- IUGG/IAGA to consider having a free weekend during the GA for better work/life balance or to give time to catch up with institute duties.
- No further info on future of Apia observatory

#### **Resolutions:**

- None

#### **Election of chair and co-chair:**

- Jürgen Matzka will step down as chair after the IUGG GA. Katia Pinheiro will step down as co-chair after the IUGG GA, she will not candidate as chair.
- **Seiki Asari** (Japan) was the only candidate for chair and was confirmed by the majority of BM participants.
- **Jürgen Matzka** (Germany) was the only candidate for co-chair and was confirmed by the majority of BM participants.

Update on Apia AIA Observatory by T. Petersen: Site visit in August 2023, future looks good, but need to wait for the site visit. Thanks for all the supporting letters

Typos: FIO->FIH

## **4. Report from WG V-DAT**

### **Business Meeting WG V-DAT (July 14, 2023)**

#### **Report by E. Clarke**

1. Status of the IAGA-endorsed data products (magnetic activity indices and lists of events)
  - ISGI Data Repository (*Aude Chambodut*) – data exchange, updates and increased distribution. Preparing DOIs for the bulletin series and ensuring IAGA ROR ID in this and all IAGA endorsed products

- aa, CK days, am (*Aude Chambodut*) – EOST have continued computation and provision, DOIs minted
  - Kp/ap, Q/D days (*Jürgen Matzka*) – GFZ Continued as normal, DOI, archive monthly updated, new paper about Kp was published in 2021, new portal for data distribution
  - AE, Dst (*Ayako Matsuoka*) – Kyoto published the definitions of the version updated on the web site. Some clarity is needed on the definition of ‘final’ AE, which may be the reason for the delays. Definitive Dst from 2017 is delayed due to delay of San Juan data
  - Rapid variations SC, sfe (*Juan José Curto*) – Ebre continued to add to the list. New observatories now providing SC lists: KOU PPT DLT IPM LZH (France) and TDC VSS TTB SHE VNA (Brazil), SCs are now distinguished between +ve and –ve H component after Takeuchi, et al, 2002.
  - PC (*Anna Naemi Willer*) – DTU and AARI continued as normal. Final PCS available to 2019 (2020-21 coming soon), Final PCN available to 2021 (2022 coming soon). AARI are working on DOIs and both teams are working on a technical publication. DTU are installing a new observatory TAB, which will eventually replace THL due to likely contamination of data by developments.
2. PC index - The effect of a change in the reference epoch (*Jonas Bregnhøj Nielsen*) – presented the analysis results – the differences as a time series (1975-2022) and the accumulated histogram of these. The recommendation by DTU was to keep the original coefficients. This was uncontested at the meeting and therefore approved by the WG
  3. Data DOI Task Force report (*Kirsten Elger*) TF continued under Kirsten’s chairmanship since 2021 to promote the use of DOI referenced data publications as best practice and FAIR principles. TF met online in March 2022. INTERMAGNET data reference sets now have DOIs. DOIs are now common practice with many organisations. WG decided to continue with the TF for the next 2 years, to continue to guide and encourage further update. Action on Ellen/Anna to send an email to all the meeting participants to ask if there are any further volunteers to be included in the TF and on Kirsten to communicate with the full list of members – some previous members may need to be asked to confirm further commitment.
  4. Status Report from INTERMAGNET (*Ellen Clarke*) – Meeting in Sopron in May. Introducing a new “General Member” category, move of the database and data collections from NRCan, Ottawa to BGS, Edinburgh. Several developments going on regarding the data delivery and metadata collection and distribution
  5. Status Report from WDS/WDC for Geomagnetism (*Sarah Reay and Anna Willer*) – All of the original WDCs – Edinburgh, Copenhagen, Boulder, Kyoto, Mumbai, Moscow and Beijing are all still active. Most have continued under the WDS umbrella. Action for Ellen and Anna to contact Geeta Vichare, to get the status on Mumbai WDC. Reports on developments were given by Copenhagen and Edinburgh. There are several new developments in progress in Edinburgh.
  6. We had no suggestions for new resolutions
  7. Election of new officers:
    - **Anna Willer**, DTU was elected as the new V-DAT chair; and
    - **Ayako Matsuoka**, Kyoto was elected as the new V-DAT co-chair
    - Both will serve for the next 4 years.
  8. AOB – Suggestion by Ciaran Beggan for further discussions and collaborative efforts on the digitization of analogue geomagnetic records. WG agreed to form a new task force or sub-group (chaired by Ciaran). Names of several of those interested in joining this group were collated.

Action on Ellen/Anna to send an email to all the meeting participants to ask if there are any further volunteers to be included and on Ciaran to communicate with the collated list of members.

Comment G. Hulot: how to call the group on archives and (re-)use: solution “Taskforce”

## 5. Report from WG V-MOD

### Business Meeting WG V-MOD (July 15, 2023)

#### Report by P. Allan

1. World Digital Magnetic Anomaly Map (WDMAM)
  - Version 2.1 has been finalized and will be available shortly on wdmam.org
  - New data include Antarctica (ADMAP), Brazil, Caribbean and Gulf of Mexico, East and Southeast Asia (MAMEA), Marine data Worldwide, and revised map of Russia
  - Current task force would like to transition leadership to the younger generation by the Lisbon 2025 meeting
2. International Geomagnetic Reference Field (IGRF)
  - Data sources for IGRF-14 are plentiful, including satellites and ground stations
  - W. Brown presented a detailed analysis of differences between observatory data and DGRFs between 1940 and 1960, finding unusually large differences
  - Revisiting past DGRFs is unattractive as it would likely confuse many users of the model
  - An idea was put forth to develop a new product which could be updated regularly and correct the issues found with the 1940-1960 DGRFs. More discussion will be needed.
  - IGRF-14 schedule was discussed, with an international call to be made in spring 2024, and a final model to be released in January 2025
3. Elections and Proposed Sessions
  - **Ciaran Beggan** has been elected chair of V-MOD working group
  - **Clemens Kloss** has been elected co-chair of V-MOD working group

No questions.

## 6. Resolution proposal from Division V

None

## 7. IAGA 2025 session proposals from Division V

Discussion about the sessions and what can be merged/joined with IASPEI

Comment Ciaran - Merge digitizing, archives and (re-)use

Comment: Add comments on session proposals - joint or specific for the division 5

The following 6 sessions will be proposed from Division V.

1. Current developments of geomagnetic observatories and advances in higher time resolution geomagnetic measurements  
Conveners: Sarah Reay (UK), Pierdavide Coisson (France), Amoré Nel (South Africa)
2. Automated instrumentation and automated data processing, including ML and AI, for geomagnetic observations  
Conveners: Roman Leonhardt (Austria), Laszlo Hegymegi (Hungary), Jürgen Matzka, (Germany)

3. Geomagnetic Observations, Indices and Products for Space Science, Space Weather and Space Climate Applications  
Conveners: Audrey Schilling (Umeå University); Gemma Richardson (BGS); Denny Oliveira (NASA) researcher from India (Kusimita to let us know)
4. Analogue Data for the Future: Preservation and Present-Day Utilization of Historical Data in the Geosciences (Suggest as a joint session with IASPEI)  
Conveners: Ciaran Beggan and TBC
5. Modelling, ground and space-based data and innovations from the IGRF-14 generation and for the future  
Conveners: Ciaran Beggan, Clemens Kloss, Naomi, Frederik
6. The future of WDMAM and crustal magnetic anomaly mapping  
Conveners: Jerome Dyment, Will Brown

#### **8. Election of new Chair and Co-chair**

New Chair: R. Leonhardt

New Co-Chair: T. Peterson

#### **9. Any other business**

No any other business.

At 19:00 CET, the meeting was over and adjourned. The Chair and Co-Chair thanked the participants. There were 22 participants.