

# Report of the IAGA Division V Business Meeting

Thursday 31 Aug 2017, Cape Town, South Africa.

Chair: Aude Chambodut; Co-Chair (Minutes): Kusumita Arora

---

## 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. USGS Geomagnetism Program: threat of drastic fund shortcut
7. IUGG 2019 session proposals from Division V
8. Resolution proposal from Division V
9. Resolution proposal from Division I – joined with Division V ?
10. Word from ESA
11. Any Other Business

---

## 1. Acceptance of the Agenda

The agenda was accepted without any additional items.

---

## 2. Report from Chair and Co-Chair

- Update of the Web site (<http://isgi.unistra.fr/iagaDivV/>)
  - Invited reviews at IUGG/IAGA meetings,
  - Div. V BM minutes,
  - ...(Please, do not hesitate to let us know if something is missing or needs update)
- Preparation work for present meeting (student files for IAGA School, grant applications,...)
- Usual email exchanges with IAGA SG regarding Div. actions.

Main part of activities are spread in Working Groups and will be presented in the following.

---

### 3. Report from WG V-OBS (BM Tuesday 29<sup>th</sup> August 2017)

*Report by J.Matzka (GFZ, Germany) [Absence of A. Chulliat (NOAA, USA)]*

- Status of geomagnetic observatories & IAGA list
- News from INTERMAGNET:
  - Steps to improve communication with community
  - Introduction of DOI
- Report on the XVII<sup>th</sup> IAGA Observatory Workshop in Dourbes, Belgium, 2016:
  - 87 participants from 37 countries
  - proceedings published in GI and ANGE0
- Information on the XVIII<sup>th</sup> IAGA Observatory Workshop at Conrad Observatory, Austria, 2018
  - co-hosting MagNetE and INTERMAGNET
- Bid for holding the XIX<sup>th</sup> IAGA Observatory Workshop in Kazan, Tatarstan, Russia, 2020
  - ➔ bid was accepted by unanimous vote
- Information regarding the state of USGS Geomagnetism Program
  - Initial presidential budget proposal eliminated Geomagnetism Program effective October 1<sup>st</sup>, 2017.
  - House of Representatives restored funding for the USGS Geomagnetism Program.
  - Senate and House must still agree on a final budget.
  - In the meantime, USGS Geomagnetism is continuing to operate
  - Longer-term status of budget and operations uncertain and degradation of data services and connected research possible
    - ➔ a resolution was formulated and accepted by unanimous vote  
*(to be discussed in point 8 of agenda)*
- Cape Town Observatory Session was very well attended.

---

### 4. Report from WG V-DAT (BM Wednesday 30<sup>th</sup> August 2017)

*Report by M.Nose (Kyoto University, Japan) & E. Clarke (BGS, UK)*

- Status of the IAGA indices
  - Status of the following IAGA-endorsed indices are reported.
    - Kp, Ap, Cp, QD
    - am, aa
    - AE, Dst
    - PC
    - SSC, SFE
    -
  - All indices are in good shape.
  - Creative Commons license and DOI are introduced to some indices.

- Actions taken by WG V-DAT
  - **Petition letter for USGS**
  - Update of WG V-DAT web site
- Data DOI Task Force
  - TF made a survey about present status of DOI-minting to geomagnetic data or indices.
  - Survey results are compiled in a report that is available from the V-DAT homepage.
- Data licensing
  - Possible licenses in Creative Commons are discussed.
  - A new task force on data licensing is established.
    - ➔ **Simon Flower agreed to lead the TF.**

---

## 5. Report from WG V-MOD (BM Monday 28<sup>th</sup> August 2017)

*Report by E. Thébault (Nantes University, France) & P. Alken (NGDC, USA)*

- Data sources for field modelling and IGRF-13:
  - Ground Observatories (including QD data)
  - SWARM measurements
  - DMSP, ePOP satellites
- Evolution and definition of IGRF:
  - Main vs Core field
  - Realistic error bars available to users
    - ➔ **No resolution BUT the WG endorses the IAGA resolution about the possible cut-off of USGS magnetic observatories**
- IGRF13 Plans
  - Agreed on task force for IGRF-13
  - Model parameterization and definition similar to IGRF-12 to avoid undesirable step in the IGRF coefficients
    - April 2019: Call for candidates via *gpmag* list
    - Oct. 2019: Deadline for submission of candidates
    - Nov. 2019: Evaluation of candidates
    - By Jan. 2020: Release of IGRF-13
  - A special issue will be published (*preferably open source journal*)
- WDMAM
  - Current task force was re-elected and new members joined it
    - Chair: J. Dymant, Co-chair: M. Catalan
  - Revision (WDMAM 2.0) was released in 2015
  - A web site *wdmam.org* is available to freely download the map.
  - The map is now updated on a regular basis
  - WDMAM working group meeting at 17:15 on Thursday, Aug. 31<sup>st</sup>, in the Rm 1.62

## 6. USGS Geomagnetism Program: threat of drastic fund shortcut

All WGs were very much concerned about the situation of USGS Geomagnetism Program:

- V-OBS formulated a Resolution,
- V-DAT underlined the important role of USGS observatories for derivation of geomagnetic indices and lists of remarkable events and underlined the existing V-OBS Resolution,
- V-MOD underlined the fact that, funding cut of USGS would jeopardize the construction of IGRF-13, & endorsed the forthcoming IAGA-level Resolution in this matter.

→ Please, do not hesitate to sign the on-line petition launched on [change.org](https://change.org) by E. Petrovsky, IAGA President, "Geomagnetism is not just about compass needles".

---

## 7. IUGG Session Proposals from Division V

### A. Planetary Magnetic Fields and Secular Variations from observational, numerical and experimental perspectives

[V-MOD, V-OBS -> Div.V + Div.I]

*I. Wardinski (France), A. Chulliat (USA), Rachel Bailey/ Anita di Chiara???*

### Decadal and centennial changes of the magnetic field [V-MOD -> Div.V+Div. I]

*C. Beggan (UK), P. Livermore (UK), A. Fournier (France)*

### B. Geomagnetic observations for space science and space weather applications [V-OBS with V-DAT and/or Div. IV and/or Div. V and ICSW and/or WG VI]

*E. Clarke (UK), N.N. (RSA, tentatively), M. Nose*

### C. Data licensing, data producing, data publication, and data citation of geomagnetic/geophysical data products [Div. V, or inter-division, or inter-discipline]

*M. Nosé (Japan), S. Flower (UK)*

### D. Geomagnetic observatories: Current developments and integration into multidisciplinary Earth observation networks [V-OBS + ...? ]

*A. Morschhauser (Germany), A. Gonsette (Belgium), A. Lewis (Australia, tentatively)*

Should be joined with other Observatories?

### E. Lithospheric Modeling and Tectonic Implications [V-MOD + ...? ]

*F. Vervelidou (Germany), S. Kotsiaros (Greece)*

*What about joined with IASPEI and IAG (i.e.: Tectonophysics and Crustal Structure)?*

### F. Dependable, long-term geomagnetic indices and modern, index-based services: 70th anniversary of the Kp index [V-DAT + InterCommHist ]

*J. Matzka (Germany), Anatoly Soloviev, J. Love (USA, tentative), M. Nosé (Japan, tentative)*

Five sessions from Div V (2 common with Div I)

---

## 8. Resolutions Proposal from Division V

- *From IAGA Division V Working Group V-OBS: DRAFT VERSION below*

---

### **Resolution No.2 (2017): USGS Geomagnetism Program and Magnetic Observatories**

The International Association of Geomagnetism and Aeronomy (IAGA)

#### **Considering**

- the value of continuity in high-quality, ground-based magnetic observations to increase our knowledge of Earth dynamics and space weather,
- the importance of such observations and related research in monitoring, modeling and forecasting extreme space weather events that could potentially disrupt the world,
- the critical importance of such observations in developing global reference models such as the International Geomagnetic Reference Field, used in navigation (airborne, marine), satellite orientation, directional drilling and numerous other applications,

#### **Noting**

- that the United States presidential budget for Fiscal Year 2018 has proposed to eliminate the USGS Geomagnetism program,
- that most countries with advanced economies support an observational, research-based geomagnetism program,

#### **Urges**

- the United States government to continue funding permanent, ground-based magnetic observations in the United States and its territories, as well as observation-based research in geomagnetism.

---

## 9. Resolutions Proposal from Division I -> joined with Division V ?

- *From IAGA Division I*

---

### **Resolution No.1 (2017): Magnetic satellite mission constellation**

The International Association of Geomagnetism and Aeronomy (IAGA)

#### **Considering**

- the interests of the scientific community in observing with the highest accuracy and resolution the numerous components of the Earth's magnetic field to investigate the fundamental processes and hazards affecting the Earth system, from the deep Earth to space
- that the Earth's magnetic field is one of the fundamental global change variables of our planet

#### **Acknowledging**

- the extensive expertise acquired within the international scientific community in analysing data from dedicated Low Earth Orbiting magnetic satellite missions like Oersted, CHAMP and Swarm continuously over the last 20 years, and the considerable success of these missions

#### **Stressing**

- the need for permanent long-term measurement of the magnetic field for understanding its generation, forecasting its evolution, and for space weather applications
- the possibility of further enhancing the science return and the technological applications of the on-going Swarm constellation by considering the addition of new satellites, such as nanosatellites

### ***Urges***

- international and national institutions, agencies and governmental bodies in charge of supporting Earth and space science research to make all efforts to extend support for current missions and to catalyse and implement new magnetic field satellite missions that would respond to the aforementioned need for continued and improved observation.

---

## **10. Word from ESA**

Rune Flobergen:

Technical problems with Swarm,  
Need support from community to continue to fund Swarm,  
Letters for the same to highest administration  
Emphasis on science and services for sustained support from policy makers

---

## **11. Any Other Business**

None

---

The chair thanked those present for their attendance and contributions and closed the meeting.

A total of ~ 20 people attended the meeting.