

Minutes

of the

Annual SNC-IUGG Committee Meeting

17 November 2017, 10:15 – 11:30

WSL Institute for Snow and Avalanche Research SLF, Davos Dorf

Committee members present

Prof. Dr Jan Seibert, President, IAHS
Dr Charles Fierz, Secretary and treasurer, IACS
IAG Mr Adrian Wiget
IAGA Dr Alexey Kushnikov
IAPSEI Dr John Clinton
IPA Dr Marcia Phillips

Guest

Elias Samankassou, IUGG 2023 Geneva

Committee members absent with regrets

IACS Dr Andreas Bauder
IAVCEI Prof. Dr Peter Ulmer

Committee members absent

IAMAS Dr Christopher Hoyle

President J. Seibert opens the meeting and welcomes the committee members present. The necessary quorum required by the bylaws is attained.

1 Approval of the agenda

No modifications or additions are requested and the agenda is accepted as proposed in the invitation to the meeting.

2 Approval of the minutes of the 2016 meeting in Zurich

SNC-IUGG secretary C. Fierz apologises for having failed to produce the minutes. He will send them to the committee members in due time.

3 Communications

- IUGG General Assembly 2019 in Montréal, Canada
 - Scientific Program Committee held its first meeting in September 2017
- The newly created International Science Council, a merger of the International Council for Science (ICSU) and the International Social Science Council (ISSC) was approved 26 October 2017 in Taipei, Taiwan
 - <https://www.icsu.org/current/news/the-icsuissc-merger-explained>
- NC-IUGG membership renewal to be discussed further
 - Second member IAGA (Swiss Committee on Space Research?, SCOSTEP?)
 - Representation IAPSO

4 Reports from the members

IACS

Charles Fierz makes the following remarks:

- Wellington ~ 300 attendees, well organised – Proceedings w/ 19 papers – not all aspects of the Cryosphere well covered (snow, permafrost)
 - new President: Regine Hock, UoA Fairbanks, PhD CH
- MOCA21 w/ IAMAS and IAPSO, 2021 in Busan, SKorea
- Active participation in GCW, CryoNet, development of Best Practices for cryospheric measurements: Snow, ESB, Alpine permafrost
- Follow activities in 'High Mountains' exposed to cryosphere
- GAPHAZ: Assessment of Glacier and Permafrost Hazards in Mountain Regions

IAG

Adrian Wiget tables and comments his report (Annex 1).

IAGA

Alexey Kuvshinov reported on IAGA related activities (Annex 2)

IAHS

No report.

IAMAS

No report.

IAPSO

No correspondent, no report.

IASPEI

John Clinton tabled and comments his report (Annex 3).

IAVCEI

No report.

IPA

Marcia Phillips reports on the status of PERMOS (Swiss Permafrost Monitoring Network) and the plan to produce Best Practices for measurements in Alpine permafrost. She also mentions the data base for rock fall events; the project is a collaboration with the SED.

5 Treasurer's report

The treasurer tables his report for 2016. The report displays an income of **CHF 7 500.00** and an expenditure of **CHF 6 485.00**, of which **CHF 600.00** is the surplus returned to SCNAT for 2015. The bank account balance on 31 December 2017 amounted to **CHF 3 534.80**.

The report is accepted by the members present.

NC-IUGG overspent its budget by CHF 295.80. This corresponds to the bill for our lunch in Davos, which is included in the 2018 budget, and not budgeted bank account fees. In addition, the surplus 2016 returned to SCNAT was short by ~ CHF 300.- (error from secretary). **TBD with SCNAT**.

6 Budget 2018

Our requests for Union Lecture, travel assistance, and 'business lunch' in Davos were accepted as is (CHF 7 400.-). The allotted budget is pending acceptance by the Executive Council of SCNAT. Secretary C. Fierz proposes to discuss the final allotments at the next annual meeting. That way he hopes in future NC-IUGG will avoid to return too high surpluses to SCNAT.

7 Web page

No news.

8 Union Lecture

The Union Lecturer 2017 is Dr Maurine Montagnat, IGE, Grenoble, France, proposed by NC-IUGG but sponsored as usual by both NC-IUGG and NC-IUGS.

The title of her keynote is, "Inside a deep ice core – From small scale processes to large scale flow".

9 Activities 2018

10 Bid to host the IUGG 2023 General Assembly in Geneva (presentation by Elias Samankassou)

Elias Samankassou informed us about the current status of the Swiss (Geneva) bid for the IUGG General Assembly 2023. President Jan Seibert wrote a letter to Dr Jürg Pfister, Secretary General SCNAT, and to Prof. Dr Werner Eugster, President PF Geosciences, to mark our full support for this endeavor. (see Annex ??).

11 Varia

Nothing to report.

12 Next Meeting

30 November 2018 in Zurich (SGM 2018 in Bern), time to be announced.

2018-11-28 / C. Fierz

Annual Report 2017 of the Swiss Geodetic Commission (SGC) to the Swiss National Committee for the IUGG (SNC-IUGG)

1. Swiss Geodetic Commission meetings

The International Association of Geodesy (IAG) is represented in Switzerland by the Swiss Geodetic Commission (SGC), a commission of the “Platform Geosciences” of the Swiss Academy of Sciences SCNAT. Members of SGC are scientists from universities, governmental services and private companies working in the field of Geodesy. The commission met twice for its biannual spring and autumn meetings.

- 07.04.2017: 197th meeting of the SGC at **skyguide**, responsible for air navigation services for Switzerland, located in Wangen bei Dübendorf.
Presentations and visit of the facilities, including the navigation laboratory.
Ordinary spring meeting of the commission.
- 30.10.2017: 198th meeting of the SGC at the **Geodetic Engineering Laboratory TOPO**, School of Architecture, Civil and Environmental Engineering ENAC, EPF Lausanne. Presentations and reports of all member organizations on their activities and projects during 2017.
- 08.-10.11.2017: Common meeting of the German Geodetic Commission (DGK), the Austrian Geodetic Commission (ÖGK) and the Swiss Geodetic Commission (SGK/SGC) at the **Deutsches GeoForschungsZentrum GFZ**, Telegrafenberg in Potsdam, Germany

The minutes of the two annual meetings of the SGC, including summaries of the activity-reports, are published in the “Procès-Verbaux”: <http://www.sgc.ethz.ch/publications#verbaux>.

More details on the projects and research activities of the member organizations are published in their annual reports. The list of the members of the SGC can be found in: <http://www.sgc.ethz.ch/members.html>

2. General conferences and meetings

In this report, the attended conferences and meetings related to the IAG are mentioned. Apart from those, many members of the SGC participated and contributed to conferences, which are not directly sponsored by IAG. However, these contacts help as well to represent the geodetic community in different disciplines of geosciences and navigation. The larger meetings were:

- **International GNSS Service**: IGS Workshop 2017 “Pathways to Improved Precision”, 03.-07. 07. 2017 in Paris, France; 9 participants from Switzerland
<http://www.igs.org/presents/workshop2017>
- **European Geosciences Union EGU**, General Assembly 23.-28. 04. 2017 in Vienna, Austria; 668 participants from Switzerland including special sessions on Geodesy and Geodynamics as well as GGOS-meetings: <https://www.egu2017.eu/>
- **International Federation of Surveyors FIG**: General Assembly 2017: 29. 05. – 02. 06. 2017 in Helsinki, Finland
<https://www.fig.net/fig2017/>

- **International Society for Photogrammetry and Remote Sensing:**
ISPRS Geospatial Week 2017, 18.-22. 09. 2017, Wuhan, China
<http://www.isprs.org/society/gsw.aspx>
- **ION GNSS+ 2017**, 25.-29. 09. 2017 in Portland, Oregon, USA;
<https://www.ion.org/gnss/program.cfm>

3. EUREF 2017 Symposium; 17.-19. 05. 2017 in Wroclaw, Poland

EUREF is the IAG Reference Frame Subcommission for Europe. The SGC was represented at the EUREF 2017 Symposium by E. Brockmann (swisstopo) and by R. Dach (AIUB).

- Opening Session
- Session 1: ETRS89, EVRS
- Session 2: Networks: EPN, UELN, Densification
- Session 3: Techniques: GNSS, Levelling, Combination
- Session 4: Applications: Earth Sciences, Geo-Information
- Session 5: National Reports
- Closing Session and Poster Presentations

For more information, including the resolutions, please visit the website:

→ http://www.euref.eu/euref_symposia_meetings.html

4. EUREF Technical Working Group / GB Meetings:

The Technical Working Group (TWG) of EUREF is responsible, in general, for the control of EUREF activities and policy. Representative for Switzerland is E. Brockmann (swisstopo) and R. Dach (AIUB). Since the EUREF symposium, the Technical Working Group got new Terms of References. The new name is Governing Board (GB), similar as in other IAG services. In 2017, the TWG/GB met three times:

- Matera (Italy), 16.02.2017
- Wroclaw (Poland), 15.-16.05.2017
- Brussels (Belgium) 24.10.2017 (afterwards LAC workshop)

5. IAG/IASPEI Joint Symposium; 30.07. – 04. 08. 2017 in Kobe, Japan

The IAG symposia were the following

- G01 Reference Frames
- G02 Static Gravity Field
- G03 Time Variable Gravity Field
- G04 Earth Rotation and Geodynamics
- G05 Multi-signal positioning: Theory and applications
- G06 Geodetic remote sensing
- G07 Global Geodetic Observing System (GGOS) and Earth monitoring services

For more information, please visit the website:

→ <http://www.iag-iaspei-2017.jp>

6. GGOS Days 2017: 31. 10. – 02. 11. 2017 in Vienna, Austria

The GGOS Days are the annual meeting of most of the Components of the Global Geodetic Observing System (GGOS): GGOS Consortium (large steering committee of GGOS), GGOS Coordinating Board (decision making body of GGOS), GGOS Bureau of Networks and Observations, GGOS Bureau of Products and Standards, GGOS Focus Areas 1, 2, 3 and 4 as well

as the GGOS Science Panel. The meetings are focused on strategic discussions rather than on formal reporting.

The SGC was represented by Dr. U. Marti (swisstopo).

For more information, please visit the website: www.ggos.org

7. AHORN 2017 – Der Alpenraum und seine Herausforderungen im Bereich Orientierung, Navigation und Informationsaustausch, 23./24. 11. 2017 in Schladming, Österreich

Das Schweizerische Institut für Navigation (ION-CH) organisierte gemeinsam mit seinen Partnervereinen aus Österreich, dem Österreichischen Verein für Navigation (ÖVN) und aus Deutschland, der Deutschen Gesellschaft für Ortung und Navigation (DGON) am 23. und 24. November 2017 in Schladming die Dreiländertagung AHORN 2017 - Der Alpenraum und seine Herausforderungen im Bereich Orientierung, Navigation und Informationsaustausch.

Schwerpunkte der Tagung sind Technologien für Ortung, Navigation und Kommunikation und die sich daraus ergebenden Anwendungen im alpinen Gelände. Zweck ist dabei die Zusammenführung von Forschern, Entwicklern, Bedarfsträgern und Nutzern zum Erfahrungsaustausch über die Anwendung vorhandener sowie Forderungen an künftige Technologien und deren Einsatzmöglichkeiten, um spezifische Probleme im alpinen Raum besser lösen zu können. Ziel ist die wissenschaftliche Behandlung des Themenbereichs sowie die Vorstellung praktischer Anwendungsbereiche und Referenzprojekte.

Die in der SGK vertretenen Institutionen waren u.a. vertreten durch Dr. U. Wild (swisstopo).

For more information, please visit the website:

→ <http://www.ovn.at/index.php?id=58> or <http://www.ion-ch.ch>

8. Swiss Geoscience Meeting 2017 in Davos, 17. - 18. 11. 2017

The theme of the 15th Swiss Geoscience Meeting was "Time in Geosciences: Moving boundaries" (→ <https://geoscience-meeting.ch/sgm2017/>). The Swiss Geodetic Commission was supporting and co-organizing two sessions at the SGM 2017:

Session 14: Remote Sensing of the Spheres

Convenors: Stefan Wunderle, Mathias Kneubühler, Dominik Brunner, Alain Geiger.

Session 16: Geoscience and Geoinformation – From data acquisition to modelling and visualisation

Convenors: Nils Oesterling, Adrian Wiget, Massimiliano Cannata, Michael Sinreich.

9. Publications

The minutes of the meetings of the SGC are published in the "Procès-Verbaux" (<http://www.sgc.ethz.ch/publications#verbaux>).

The members of the Swiss Geodetic Commission are publishing scientific articles and reports as well as general publications related to their working field on a regular basis. The following reports are in press in 2017 in the SGC-series called "Geodätisch-geophysikalische Arbeiten in der Schweiz":

(<http://www.sgc.ethz.ch/publications.html#geodgeophys>)

Nr. 97: B. Männel: Co-location of Geodetic Observation Techniques in Space

Nr. 98: M. Rehak: Integrated Sensor Orientation on Micro Aerial Vehicles

Nr. 99: F. Neyer: Monitoring Rock Glaciers by Combining Photogrammetric and GNSS-Based Methods

10. Miscellaneous

Members of SGC are involved in the coordination the project "European Gravity Service for Improved Emergency Management (EGSIEM)" of the Horizon 2020 EU Framework Programme for Research and Innovation → <http://www.egsiem.eu/>.

Members of SGC are actively involved in the following COST actions:

- COST Action TU1302 SaPPART - Satellite Positioning Performance Assessment for Road Transport. Meetings: Final event – Conference: 04. 10. 2017 in Brussels (B); SaPPART dissemination activities during 24th ITS World Congress in Montreal, Canada, 29. 10. – 02. 11. 2017; Presentations at the 1st GALILEO User Assembly Conference, 28.-29. 11. 2017 in Madrid. P.-Y. Gilliéron (EPFL) is Chair of SaPPART.
→ <http://www.sappart.net/>
- ES1206 GNSS4SWEC - Advanced Global Navigation Satellite Systems tropospheric products for monitoring severe weather events and climate. E. Brockmann (swisstopo) and A. Geiger (ETHZ) are members. Currently, the final report is in preparation.
→ <http://gnss4swec.knmi.nl/>

16.11.2017, A. Wiget, Member of the SNC-IUGG, representing IAG
and national correspondent and delegate to IAG

IAGA related activity:

Conferences, which scientists from Switzerland attended:

- 1) ESA Swarm Data Quality meeting, Edinburgh, Scotland, 26-29 September 2016;
- 2) ESA Living Planet Symposium, Prague, Czech Republic, 9-13 May 2016;
- 3) EM Induction Workshop, Chiang Mai, Thailand, 14-20 August 2016;
- 4) IAGA Workshop on Geomagnetic Observatory Instruments, Data Acquisition and Processing, Dourbes, Belgium, 4-10 September 2016;
- 5) European Geosciences Union General Assembly, Vienna, Austria, 23-28 April 2016;

Geomagnetic observatories supported by Switzerland

- 1) Gan, Maldives, Indian Ocean;
- 2) Apia, Samoa, South Pacific Ocean (in cooperation with New Zealand);
- 3) Cocos Apia, Indian Ocean (in cooperation with Australia);
- 4) Valentia, Ireland (in cooperation with Ireland and Germany);

Magnetotelluric (MT) studies led by scientists from Switzerland

- 1) Local MT studies in Aargau (geothermal context);
- 2) Regional MT studies in Mongolia (geodynamic context);

European Space Agency (ESA) activities led by scientists from Switzerland

- 1) ESA Science Study “Magnetic tidal signals and their use in mapping the electrical conductivity of the lithosphere and upper mantle” (2015-2016);
- 2) ESA Contract “Swarm Expert Support Laboratory” (2014-2018);

2017 Annual Report – SNC-IASPEI

John Clinton, Swiss Seismological Service (SED), ETH Zurich
Swiss Correspondent for IASPEI

Activities 2017

- **IAG-IASPEI Joint Assembly, Kobe (Aug):** Around 20 Seismologists from Swiss Institutions participated in this meeting, organizing multiple sessions and contributing to over 30 presentations

J. Clinton elected FDSN WG2 Chair: for defining standards / best practice / open data for seismology – in particular new version for data formats. Also extensions to metadata formats
- **SED co-authored with Swisstopo GGL/ETHZ** a white paper titled “The Future of National GNSS-Geomonitoring Infrastructures in Switzerland” being published in *Geodätisch-geophysikalische Arbeiten in der Schweiz*
- **ETHZ leadership in EU project EPOS:** The European Plate Observing System (EPOS) aims to build a sustainable base for European Research Infrastructures in Earth Science, and will develop a novel IT framework to coordinate multidisciplinary access to data and derived products. A new ~Euro18m 4 year Implementation Phase began in 2015. ETH coordinates Seismology.
- **ETHZ develops QuakeMI2.0:** the latest version of community standard for earthquake description in XML format (*endorsed by IASPEI resolution*)
- **ETHZ develops Seismic Service for Mars InSight Mission** (landing Nov 2018)
- **SED involved in new UNESCO platform for EEW**, informing 3rd world on potential for EEW (science and public policy)
- **2018 ESC meeting in Malta:** strong participation by Swiss Scientists planned
- **Manage ~200 permanent stations in CH, 3 in Greenland.**
- **Support networks in Central America, coordinate temporary network across Alps (AlpArray - ~300 temporary stations from 2016-2018)**

Key Swiss involvement in IASPEI

Dr. John Clinton, SED, ETHZ ***SNC IASPEI Correspondent; Chair FDSN WG: Data Formats***
Dr. Florian Haslinger, SED, ETHZ ***President EMSC, EPOS WP 8 leader***
Prof Stefan Wiemer, SED, ETHZ ***Swiss Representative at ISC***
Prof Donat Faeh, SED, ETHZ ***Swiss Titular Member for ESC***
Prof. Dominco Giardini, SEG, ETHZ ***Member, IASPEI Executive Committee; Past President.***