

International Association of Geodesy (IAG) Quadrennial Report 2007 – 2010

Home: <http://www.iag-aig.org>, Office: <http://iag.dgfi.badw.de>

INTRODUCTION

The main objective of IAG is to study all geodetic problems related to Earth observation and global change. This includes the determination of reference systems, gravity field, Earth rotation, surface positions and crustal deformation, and sea level. To accomplish the objectives, IAG is divided into four Commissions, fifteen Scientific Services, the Global Geodetic Observing System (GGOS), the Communication and Outreach Branch (COB), and the Inter-Commission Committee on Theory (ICCT). The administration is supervised by the Council and operated by the Bureau, the Executive Committee and the Office. The outreach is done by the COB. All these entities are in steady contact and inform about their activities through the IAG Newsletter and the bi-annual IAG Reports (Travaux de l'AIG).

ADMINISTRATION

IAG Council

The Council met twice during the IUGG General Assembly 2007 in Perugia. The list of national correspondents forming the IAG Council was regularly updated in contact with the IUGG Secretary General. Doubtful nominations (double, questionable) were cleared up. The Council was informed by e-mail about activities of the Bureau and the Executive Committee.

IAG Executive Committee (EC)

The Executive Committee is composed by the IAG President, immediate Past-President, Vice-President, Secretary General, the four Commission Presidents, the Chairperson of GGOS, the President of the COB, three representatives of the Services, and two members at large. Seven IAG EC meetings were held during the legislative period from 2007 to 2010: Perugia 2007, San Francisco 2007, Vienna 2008, San Francisco 2008, Buenos Aires 2009, Vienna 2010, and San Francisco 2010. The meeting summaries were published in the IAG Newsletter in the IAG Journal of Geodesy (Springer-Verlag) and are available online in the IAG Homepage (<http://www.iag-aig.org>) and IAG Office Homepage (<http://iag.dgfi.badw.de>).

Main agenda items at the EC meetings were the regular reports of the Commissions, Services, GGOS, ICCT, COB, and the Editor in Chief of the Journal of Geodesy. They were followed by the discussion on specific scientific issues, changes in the structures of GGOS and Services, and IAG publications. Other important topics were the IAG Scientific Assembly 2009 in Buenos Aires, the preparation of the Symposia with IAG participation during the IUGG General Assembly 2011 in Melbourne, the discussion of the bi-annual IAG Reports (Travaux de l'AIG), sponsoring of symposia, and the links to other organizations, e.g. FIG, GEO, JBGIS, IHO, ISO, and UNOOSA (see below).

IAG Bureau

The IAG Bureau, consisting of the President, the Vice-President and the Secretary General, held regular teleconferences and met in general before each of the IAG Executive Committee meetings. The President and Secretary General participated in the IUGG Executive Committee Meetings in Karlsruhe, 4-6 August 2008 and in Melbourne, 9-11 October 2009. The Bureau members represented IAG at various international scientific meetings and in several anniversaries, e.g. the 50th anniversary of Bundesamt für Geowissenschaften und Rohstoffe, Hannover, Germany, 25 November 2008, the 50th anniversary of the International

Cartographic Association, Bern, Switzerland, 9-10 June 2009, the 10th anniversary of the International VLBI Service (IVS), Bordeaux, France, 25-26 March 2009, the Centenary of the International Society of Photogrammetry and Remote Sensing (ISPRS), Vienna, Austria, 4 July 2010.

ACTIVITIES

IAG Office

The former IAG Central Bureau was renamed IAG Office according to the new IAG Bylaws adopted in Perugia 2007. As a result of the election of the new Secretary General, it moved with all the files including budget, homepage and databases from Copenhagen, Denmark, to Munich, Germany in the second half of 2007. The main task of the office is the administrative organization of all IAG business and events. This includes the budget management, the record keeping of the individual IAG memberships, and the preparation and documentation of all Council and Executive Committee meetings with detailed minutes for the EC members and meeting summaries published in the IAG Newsletters and the IAG Homepages.

Specific duties were the preparation and execution of the IAG Scientific Assembly 2009 and the IAG part of the IUGG General Assembly 2011, the edition of the Geodesist's Handbook 2008 as the organizational guide of IAG with the complete description of the IAG structure (reports, terms of reference, documents), and the Mid-Term Reports 2007–2009 (Travaux de l'AIG Vol. 36). Publications of the Journal of Geodesy and the Proceedings in the IAG Symposia series, both in Springer-Verlag, were supervised. Travel grants were assigned to young scientists for participation in many IAG sponsored symposia.

Communication and Outreach Branch (COB)

The main task of the COB is maintaining the IAG Homepage and publishing the monthly Newsletter online and in the Journal of Geodesy. It also keeps track of all IAG related events by the meetings calendar. Since July 2010 the IAG newsletter is also sent to the Presidents and Secretaries General of the IUGG Associations and JBGIS members. The COB prepared, printed and distributed a new IAG leaflet and a big IAG brochure and participated in the preparation of the Geodesist's Handbook 2008.

Commissions and Inter-Commission Committee

The four IAG Commissions and the Inter-Commission Committee on Theory compiled their final reports 2003 – 2007, the new structure descriptions for the period 2007 – 2011, and the mid-term reports 2007 – 2009 for publication in the IAG Reports (Travaux de l'AIG) and the Geodesists Handbook. They are maintaining their individual Homepages. Most of the Commissions held several symposia, workshops and other meetings during the period 2007-2011 (see below). They organized symposia at the IAG Scientific Assembly 2009 and the IUGG General Assembly 2011.

Services

There are fifteen IAG Services which may be split into three general fields: geometry (IERS, IDS, IGS, ILRS, IVS), gravity (IGFS, ICGEM, IDEMS, IGeS, BGI) and combination (IAS, IBS, BIPM, ICET, PSMSL). All of them maintain their own Homepages and data servers and hold their administrative meetings (Directing Board or Governing Board, respectively). They compiled their final reports 2003-2007, the new terms of reference for the period 2007 – 2011, and the mid-term reports 2007-2009 for publication in the IAG Reports (Travaux de l'AIG) and the Geodesists Handbook. Most Services held international meetings (see below).

Global Geodetic Observing System (GGOS)

GGOS became a new component as the “flagship of IAG” in 2007. The mission of GGOS is to advance geodetic observing methods for Earth and planetary system science by defining and advocating for the establishment of the geodetic infrastructure; improving the quality and accessibility of geodetic observations and products; coordinating interaction between the IAG Services, Commissions, and stakeholders; and educating the scientific community about the benefits of geodetic research and the public about the fundamental role of geodesy in society.

The GGOS Reference Document (330 pages) was published in Springer-Verlag in 2009. It contains many individual articles with a description of all aspects of the Global Geodetic Observing System written by a very large number of authors. A total of 10 GGOS Steering Committee meetings were held in the period 2007 - 2010, and several GGOS Workshops and Retreats were performed. GGOS is representing IAG as a participating organization in the Group on Earth Observation (GEO) and participated in the GEO Plenary Assemblies and other GEO and GEOSS meetings. A GGOS Inter-Agency Committee is being established to support the sustainability of GGOS.

Coordination with other organisations

IAG maintains close cooperation with several organizations outside IUGG. There were meetings on a regular basis with the Advisory Board on the Law of the Sea (ABLOS, together with IHO), Group on Earth Observation (GEO, with IAG as a participating organization), International Standards Organization (ISO, with IAG represented in TC211 Geographic Information / Geomatics), Joint Board of Geospatial Information Societies (JBGIS), United Nations Offices for Outer Space Affairs (UN-OOSA, with participation in Space-based Information for Disaster Management and Emergency Response, UN-SPIDER, and International Committee on Global Navigation Satellite Systems, ICG).

Meetings

Important meetings of IAG components and sponsored IAG meetings were in 2007 – 2010:

- Workshop on Conventions, Sèvres, France, September 17-19, 2007.
- Joint Internat. GRACE Science Team Meeting, Potsdam, Germany, Oct. 15-17, 2007;
- Unified Analysis Workshop, Monterey, CA, USA, December 5-7, 2007;
- International VLBI Service (IVS) 5th General Meeting and Analysis Workshop, St. Petersburg, Russia, 03-07 March 2008;
- Several Sessions co-organized by the Commissions at the EGU General Assembly, Vienna, Austria, 13-18 April 2008;
- FIG/IAG Symposium "Measuring the Changes", Lisbon, Portugal, 12-15 May 2008;
- SIRGAS General Meeting 2008, Montevideo, Uruguay, 26-29 May 2008;
- International GNSS Service Workshop, Miami Beach, Florida, USA, 02-06 June 2008;
- 7th International e-VLBI Workshop in Shanghai, China, 16-17 June 2008;
- Commission 4 participation in the FIG Working Week, 14-19 June 2008, Stockholm;
- Sub-commission 1.3a EUREF Symposium, Brussels, Belgium, 18-20 June 2008;
- Symposium Gravity, Geoid and Earth Observation, Chania, Greece, 23-27 June 2008;
- Sessions at the 37th COSPAR General Assembly, Montreal, Canada, 01-05 July 2008;
- 16th International Symposium on Earth Tides, Jena, Germany, 01-05 September 2008;
- Journées 2008 “Systemes de reference spatio-temporels”, Dresden, Germany, 22-24 September 2008;
- 9th European VLBI Network Symposium, Bologna, Italy, 23-26 September 2008;

- 16th International Workshop on Laser Ranging, Poznan, Poland, 13-17 October 2008;
- International DORIS Service (IDS) Workshop, Nice, France, 12-14 November 2009;
- Several Sessions co-organized by the Commissions at the AGU Fall Meeting, San Francisco, California, USA, 15-19 December 2008.
- 3rd Workshop Deformation and Gravity, Lanzarote, Spain, February 23–26, 2009;
- Workshop on Radio Frequencies and Feeds, Wettzell, Germany, March 18–21, 2009;
- 10th Anniversary of International VLBI Service, Bordeaux, France, March 25, 2009;
- International VLBI Service (IVS) Workshop, Bordeaux, France, March 26, 2009;
- 5th IVS Technical Operations Workshop, Westford, USA, April 27–30, 2009;
- European Reference Frame (EUREF) Symposium, Florence, Italy, May 27–30, 2009;
- Training School on GIA Modelling. Gävle, Sweden, June 1–5, 2009;
- 8th International Workshop on e-VLBI Science, Madrid, Spain, June 22–26, 2009;
- Global Geodetic Observing System Workshop, Espoo, Finland, June 23–26, 2009;
- VII Hotine-Marussi Symposium Theoretical Geodesy, Rome, Italy, July 6–10, 2009;
- IAG-SIRGAS School on Reference Systems, Bogotá, Colombia, July 13-17, 2009;
- 16th Advisory Board on the Law of the Sea (ABLOS) conference, Nusa Dua Bali, Indonesia, August 4–5, 2009;
- IAG Scientific Assembly 2009, Buenos Aires, Argentina, Aug. 31 – Sept. 4, 2009;
- SIRGAS General Meeting, Buenos Aires, Argentina, August 31 – September 4, 2009;
- International Geoid School, Buenos Aires, Argentina, Sept. 7–11, 2009;
- ILRS Technical Workshop on SLR Tracking, Metsovo, Greece, Sept 14–19, 2009;
- International Earth Rotation and Reference Systems Service (IERS) Workshop on EOP Combination and Prediction, Warsaw, Poland, October 19–21, 2009;
- 2009 Workshop on the North American Geoid, Boulder, USA, October 21–23, 2009;
- GGOS Intergovernmental Committee, Frankfurt, Germany, November 2–3, 2009;
- Second GGOS Unified Analysis Workshop, San Francisco, USA, Dec. 11–12, 2009;
- International VLBI Service for Geodesy and Astrometry (IVS) 2010 General Meeting, Hobart, Australia, February 07-14, 2010;
- V Congreso Internacional de Agrimensura, Havana, Cuba, March 02-05, 2010;
- Geophysics, Geodesy and Tectonics of the North Africa Plate Boundary for Better Earthquake and Tsunami Hazard Assessment, Algiers, Algeria, May 15-21, 2010;
- European Reference Frame (EUREF) Symposium, Gävle, Sweden, June 02-06, 2010;
- Second Workshop on Application of Artificial Intelligence and Innovations in Engineering Geodesy, Braunschweig, Germany, June 16, 2010;
- Beacon Satellite Symposium, Barcelona, Spain, June 07-11, 2010;
- IAG School on Reference Frames, Mytilene, Lesvos, Greece, June 07-12, 2010;
- IAG Symposium on Terrestrial Gravimetry: Static and Mobile Measurements, St. Petersburg, Russia, June 22-25, 2010;
- 10th International Geoid School, St. Petersburg, Russia, June 28 – July 02, 2010.
- IGS Workshop and Special Workshop on Vertical Rates from GPS, Newcastle, UK, June 28 – July 2, 2010;
- 15th General Assembly of WEGENER, Bogazici University, Istanbul, Turkey, September 14-17, 2010;
- 2nd General Assembly of the IGFS - International Gravity Field Service Fairbanks, Alaska, USA, September 20-22, 2010;
- IAG Commission 1 Symposium 2010. Reference Frames for Applications in Geosciences (REFAG2010), Marne-La-Vallée, France, October 04-08, 2010;
- 9th International e-VLBI Workshop, Perth, Australia, October 10-20, 2010;

- IGCP 565 Workshop 3: Separating Hydrological and Tectonic Signals in Geodetic Observations, Reno, Nevada, USA, October 11-13, 2010;
- International DORIS Service (IDS) Workshop, Lisbon, Portugal, October 21-22, 2010;
- Observing and Understanding Earth Rotation, Shanghai, China, October 25-28, 2010;
- Sixth ABLOS Conference, Monaco, Monaco, October 25-27, 2010;
- Second SIRGAS School on Reference Systems, Lima, Peru, November 08-10, 2010;
- SIRGAS 2010 General Assembly, Lima, Peru, November 11-12, 2010.

Publications

The Journal of Geodesy, the official IAG scientific periodical with an Editor in Chief approved by the IAG Executive Committee, was continuously published with monthly issues in Springer-Verlag. In the IAG Symposia proceedings Series, the following volumes were published in:

- 132: VI Hotine-Marussi Symposium on Theoretical and Computational Geodesy (2008);
- 133: Observing our Changing Earth, Proceedings of the IAG General Assembly (2009);
- 134: Geodetic Reference Frames, Proceedings of Commission 1 Symposium (2009);
- 135: Gravity, Geoid and Earth Observation, Proc. of Commission 2 Symposium (2010).

The proceedings of the IAG Scientific Assembly in Buenos Aires 2009 were compiled and are in press.

The Reference Book on GGOS was published as a monograph in Springer-Verlag, and the IAG Reports (Travaux de l'AIG) 2007 – 2009 were published by the IAG Office.

Awards, anniversaries, obituaries

The following medals and prizes have been awarded:

- Levallois Medal to C.C. Tscherning, Denmark (2007);
- Bomford Prize to M. Furuya, Japan (2007);
- Young Author Award to Steffen Schön, Germany (2007);
- Order of Merit of the Federal Republic of Germany to Hermann Drewes (2008);
- Young Authors Award to Franziska Wild-Pfeiffer, Germany (2009).

The following anniversaries were celebrated with IAG participation:

- 70th Birthday of the former IAG and IUGG President, Helmut Moritz, in Berlin, 15 November 2008;
- 10th Anniversary of the International VLBI Service for Geodesy and Astrometry, Bordeaux, France, 25 March 2009;
- 50th Anniversary of the German IUGG adhering body “Bundesamt für Geowissenschaften und Rohstoffe”, Hannover, 25 November 2008.

Obituaries were written for former IAG officers and outstanding geodesists who passed away:

- Carlo Morelli, Trieste, Italy (2008);
- Lubomir Wlodzimerz Baran, Poland (2009);
- Kurt Bretterbauer, Austria (2009);
- Werner Gurtner, Switzerland (2009);
- Irene Fischer, USA (2009);
- Leif Svensson, Sweden.

Hermann Drewes, IAG Secretary General