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The *IAG Newsletter* is under the editorial responsibility of the *Communication and Outreach Branch* (COB) of the IAG.

It is an open forum and contributors are welcome to send material (preferably in electronic form) to the IAG COB (newsletter@iag-aig.org). These contributions should complement information sent by IAG officials or by IAG symposia organizers (reports and announcements). The *IAG Newsletter* is published monthly. It is available in different formats from the IAG new internet site: <http://www.iag-aig.org>

Each *IAG Newsletter* includes several of the following topics:

- I. news from the Bureau Members
- II. general information
- III. reports of IAG symposia
- IV. reports by commissions, special commissions or study groups
- V. symposia announcements
- VI. book reviews
- VII. fast bibliography

Books for review are the responsibility of:

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General Announcements

ILRS News

Update on Laser Ranging to LRO

Laser Ranging (LR) to the Lunar Reconnaissance Orbiter (LRO) is a one-way uplink only measurement, where the ground station measures the outgoing pulse time, and the Lunar Orbiter Laser Altimeter (LOLA) instrument onboard LRO measures the arrival time. The LOLA Science Team then forms the one-way ranges from the ground station and spacecraft measurements.

As of March 20th, the participating stations of the LRO-LR sub-network had accumulated over 975 hours of successful ranging to LRO since its launch in June 2009. The stations are located in Maryland, Texas, and California in the United States, as well as in Great Britain, Switzerland, France, Germany, South Africa, and Austria.

There have been many simultaneous passes between stations in the last year, where anywhere from two to four stations range to LRO successfully during the same pass. The separation between stations doing simultaneous ranging has been as much as 5000 km. The 3+ simultaneous passes are currently being analyzed for use in a geometric solution of the spacecraft location. Preliminary analysis looks very promising. The LR data is used by the LOLA Science Team to determine the relationship between ground and spacecraft time, and to estimate the onboard clock drift. Work is in the early stages to use the LR data in the LRO orbit solution. The accuracy of the LR range data is better than 10 cm. More information about LRO-LR can be found on the website: <http://lrolr.gsfc.nasa.gov>.

JAN MCGARRY
NASA GSFC

Meeting Announcements

17th International Workshop on Laser Ranging

The satellite and lunar laser ranging community will hold its 17th International Workshop on Laser Ranging in Bad Kötzting, Germany on May 16-20, 2011. The workshop will provide a venue for scientists, analysts, and practitioners to meet and discuss current and future applications, performance of the network, quality of data products, new technology, and paths forward to meet future requirements including those now being defined by GGOS. Representatives from other disciplines are welcome to participate. More information about the workshop can be found on the workshop website:

<http://www.fs.wetzell.de/veranstaltungen/slr/17thlaserworkshop/index.html>.

CAREY NOLL
Secretary, ILRS Central Bureau

APSG Workshop 2011

First Announcement and Call for Papers

*APSG Workshop 2011 on Space Geodesy and Its Applications for Geosciences and Space Exploitation
25-27 June, 2011, Melbourne, Australia*

Organized by:

Asia Pacific Space Geodynamics (APSG) Program Central Bureau
The RMIT University, Australia

Shanghai International Culture Association, China
Shanghai Astronomical Observatory, Chinese Academy of Sciences
Institute of Geodesy and Geophysics, Chinese Academy of Sciences

Advisory Committee

Prof. Houtze Hsu (Chair), Institute of Geodesy & Geophysics, China
Prof. Shuhua Ye (Advisor), Shanghai Astronomical Observatory, China
Prof. Benjamin Chao, Institute of Earth Sciences of Academia Sinica, Taiwan, China.
Prof. John LaBrecque, NASA Headquarters, U.S.A.
Prof. Kefei Zhang, RMIT SPACE Research Centre, Australia
Prof. Kosuke Heki, Hokkaido University, Japan
Prof. Michael R. Pearlman, ILRS, Center for Astrophysics, USA
Prof. Pil-Ho Park, Korea Astronomy and Space Science Institute, South Korea
Prof. Suriya Tatevian, Russian Academy of Sciences, Russia
Prof. Xiaoli Ding, Hong Kong Polytechnic University, Hong Kong, China

Dear Colleagues:

The Organizing Committee warmly invites you to take part in the APSG Workshop 2011 “Space Geodesy and Its Applications for Geosciences and Space Exploitation”, to be held in Melbourne, a beautiful city in Australia, 25-27 June, 2011. The workshop will take place before XXV IUGG General Assembly (www.IUGG2011.com), which will be held in the same city, 28 June - 8 July, 2011. Therefore you have an opportunity to attend the IUGG Assembly after the APSG Workshop. The detail about the Workshop can be found on the website: www.shao.ac.cn/APSG2011.

Topics

1 Data processing and inversion of geodetic technology

Including data processing and inversion methods of GNSS Satellite Gravity (GRACE GOCE) Satellite Altimetry and ICESat data, as well as other related topics

2 Estimation of the sea level change and ice melting in Asia-pacific regions by geodetic methods

Including regional sea-level changes, ice melting water storage changes and glacial isostatic adjustment (GIA) as well as other related topics

3 Crustal deformation, Earthquake Dynamics and Tsunami

Including inversion of focal mechanism, crustal deformation, tectonic movement and stress field Especially, recent research results for the Japanese strong earthquake and the subsequent tsunami should be paid close attention to.

4. Space geodesy-based atmospheric remote sensing

Including advanced geodetic techniques used for atmospheric remote sensing, extreme weather events and environment – theory, algorithm and innovative applications.

5. The Moon and Planetary Geodesy

New results from CE-2, SELENE, Chandrayaan-1, LRO missions, and introductions about future missions, such as YH-1, Phobos-Grunt.

Venue of Workshop

RMIT University, Melbourne

Formal language of Workshop

English

Registration fee (to be paid at the meeting)

Full registration: US \$300.

Student registration: US \$200.

Important dates

Deadline for Pre-Registration Form Submission: **15 April 2011**

Deadline for Abstracts Submission: **15 May 2011**

Workshop: **25-27 June 2011**

Submission of abstracts

Abstracts can be submitted either through email, fax or post, to the addresses listed at the correspondence section below, by May 15, 2011. Abstracts should be written in English, Microsoft Word (12 point Times New Roman) with bolded headings, title, author’s names, affiliation, e-mail and complete address.

Accommodation

A list of hotels will be provided in the Second Announcement. We will recommend 3-stars or 4-star hotels in the downtown area or university dormitories, close to the venue of the workshop.

Tour arrangement

The Organizing Committee will organize the city tour of Melbourne, and the other scenic spots of Australia after the workshop would be arranged according to your will by local travel agency.

Correspondence

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Chinese Academy of Sciences
80 Nandan Rd. Shanghai, 200030, China
Email: zrx@shao.ac.cn, qzh@shao.ac.cn or hc@shao.ac.cn
Fax: (86)-21-64696291

The participants are invited to fill in the Pre-Registration Form and submit it to Ms. Ruixi Zhou (Shanghai Astronomical Observatory, Email: zrx@shao.ac.cn or FAX: (86)-21-64696291) together with the titles of presentations (in the attached electronic form in word format) before **April 15, 2011**.

Pre-Registration Form is available from <http://202.127.29.4/APSG2011/reg.html>

KEFEI ZHANG
RMIT SPACE Research Centre



*2011 IAG General Assembly
at IUGG2011: "Earth on the Edge: Science for a Sustainable Planet"
Melbourne Convention and Exhibition Centre, Australia
28th June – 7th July, 2011*

- Early Bird Registration Deadline 11 April 2011
- Standard Registration Deadline 24 June 2011
- Conference website: <http://www.iugg2011.com>
- Scientific program of symposia, workshops, fieldtrips, symposia convenors, plenary and keynote speakers already available on website

The IAG Scientific Program consists of the following program of symposia:

IAG ONLY SYMPOSIA (see website www.iugg2011.com under Scientific Program for symposia descriptions, convenors names and Keynote Speakers)

- G01** Reference Frames from Regional to Global Scales
- G02** Monitoring and Modelling of Mass Displacements by Geodetic Methods
- G03** Monitoring and Modelling Earth Rotation
- G04** Multisensor Systems for Engineering Geodesy
- G05** Geodetic Imaging Techniques
- G06** Towards a Unified World Height System
- G07** High Precision GNSS

IAG - JOINT ASSOCIATION SYMPOSIA (see website www.iugg2011.com under Scientific Program for symposia descriptions, convenors names and Keynote Speakers)

- J-G01** Space Geodesy-based Atmospheric Remote Sensing as a Synergistic Link between Geodesy and Meteorology
- J-G02** Application of Geodetic Techniques in Cryospheric Studies

- J-G03** History of Geosciences from Terrestrial to Spaceborne Observations
- J-G04** Structure and Deformation of Plate Interiors
- J-G05** Integrated Earth Observing Systems
- J-G06** Tectonic Geodesy and Earthquakes

The theme for the IUGG2011 conference at large is “*Earth on the Edge: Science for a Sustainable Planet*”. IUGG2011 will be the largest multi-disciplinary geophysical meeting to be held in Australia, and in excess of 3,000 delegates are expected to attend. In addition to the IAG specific program outlined above, the scientific program will address many of the environmental, sustainability and hazard issues facing the Earth, including climate change, extreme weather events, melting glaciers and ice-caps, rising sea-levels, water in arid countries, earthquake hazards and tsunamis, and volcanic hazards, processes and natural resources. It should thus be a fantastically stimulating conference.

The conference website is at <http://www.iugg2011.com>, with information about the conference, the scientific program of symposia, workshops and fieldtrips, and listings of the symposia convenors and Keynote Speakers. On-line registration for the conference opened on the website on 16th August, as well as for fieldtrips, social touring, and accommodation.

The Organising Committee of IUGG2011 looks forward to welcoming the international volcanology and geoscience community to the 2011 IAG and IUGG General Assembly in Melbourne.

RAY CAS
Chair, Joint Australia and New Zealand Organising Committee IUGG2011

2nd GIA Modeling Training School, Gävle, Sweden, 13-17th June 2011

The main objective of this Training School is to give early-stage researchers whose principal area of expertise is not in GIA modeling an intensive training on numerical GIA modeling. The training will not be limited to the solid-earth deformation process of GIA only, but will also involve glaciological modeling of the disappearing Late-Pleistocene ice sheets on the one hand and GIA-induced sea-level change on the other hand. The School is sponsored by COST Action ES0701 and further information may be found at <http://tinyurl.com/2f6k2xu>.

MATT KING
School of Civil Engineering and Geosciences
Newcastle University

International workshop on GNSS Remote Sensing for Future Missions and Sciences

August 7-9, 2011, Shanghai, China
<http://www.shao.ac.cn/gnss>

The Global Navigation Satellite System (GNSS) has been widely used in navigation, positioning and geoscience applications. Recently, the versatile refracted, reflected and scattered signals of GNSS have been successfully demonstrated to sound the atmosphere and ionosphere, ocean, land surfaces (including soil moisture) and the cryosphere as a new remote sensing tool. With the further improvement of the next generation multi-frequency GNSS systems and receivers and new space-based instruments utilizing GNSS reflections and refractions, new scientific applications of GNSS are expected in various environment remote sensing fields in the near future.

The international workshop on *GNSS Remote Sensing for Future Missions and Sciences* will be a forum for assessing current ability and presenting recent results and future developments as well as looking for new collaboration opportunities, joint nanosatellite experiments and missions using GNSS refractometry, reflectometry and scatterometry, e.g., atmospheric and ionospheric sounding using ground and space-borne GPS measurements (CHAMP, GRACE, COSMIC, MetOp, TerraSAR-X, OceanSat-2), GNSS reflectometry (GNSS-R) in ocean altimetry, and soil moisture and ice/snow status as well as geohazards monitoring/warning (e.g., Hurricane, Typhoon, Tsunami and Earthquake).

SANDRA VERHAGEN
President, IAG Commission 4

IGAG Sponsored Meetings

1st International Workshop on The Quality of Geodetic Observation and Monitoring Systems

April 13-15, 2011, Garching/Munich, Germany

URL: <http://www.gih.uni-hannover.de/qugoms2011>

17th International Workshop on Laser Ranging and 23rd General Assembly of the International Laser Ranging Service

May 15-20, 2011, Bad Kötzing, Germany

URL: <http://www.fs.wetzell.de/veranstaltungen/slr/17thlaserworkshop/index.html>

EUREF 2011 Symposium

May 25-28, 2011, Chisinau, Republic of Moldova

URL: <http://www.euref-igag.net/>

XXV IUGG General Assembly

June 27 – July 8, 2011, Melbourne, Australia

URL: <http://www.iugg2011.com/>

2011 IAG General Assembly

at IUGG2011: “Earth on the Edge: Science for a Sustainable Planet”

Melbourne Convention and Exhibition Centre, Australia

June 28 – July 7, 2011

The next IAG General Assembly will be held as part of the major IUGG2011 international conference at the new Melbourne Convention and Exhibition Centre from 28th June to 7th July, 2011. IUGG (or the International Union for Geodesy and Geophysics) is a collaborative grouping of eight scientific learned societies or associations. The conference website is now open at <http://www.iugg2011.com>. On-line registration for the conference opened on the website on 16th August.

International workshop on GNSS Remote Sensing for Future Missions and Sciences

August 7-9, 2011, Shanghai, China

URL: <http://www.shao.ac.cn/gnss>

SIRGAS General Meeting 2011

August 8-10, 2011, Heredia, Costa Rica

URL: <http://www.sirgas.org/>

3rd International Colloquium - Scientific and Fundamental Aspects of the Galileo Programme

August 31 - September 2, 2011 in Copenhagen, Denmark

More information and online abstract submission is available on the Colloquium web site: <http://www.congrex.nl/11A12/>.

Joint International Symposium on Deformation Monitoring

November 2-4, 2011, Hong Kong, China

URL: <http://dma.lsgi.polyu.edu.hk/>

IGAG Related Meetings

ESA 4th GOCE User Workshop

March 31- April 1, 2011, TUM Munich, Germany

The European Space Agency (ESA) is organising the 4th in a series of International GOCE User Workshops from 31 March to 1 April 2011 at the Technische Universität München (TUM), Germany. It is intended to provide potential users of GOCE data products with the opportunity to obtain the latest information on satellite performance as well as details regarding ground segment operations, data products and user services. It will allow users to learn about product content and quality and the outcome of the data calibration and validation. This

Workshop is seeking the presentation of new results based on GOCE data in all application areas. Two months prior to the Workshop, the European Space Agency will release the second generation gravity field solutions based on GOCE data.

URL: <http://www.goce2011.org/>

EGU General Assembly 2011

April 3-8, 2011, Vienna, Austria

URL: <http://meetings.copernicus.org/>

JURSE 2011 - Joint Urban Remote Sensing Event (URBAN 2011 + URS 2011)

April 11-13, 2011, Munich, Germany

Contact: jurse2011@bv.tum.de

Third Conference on Earth Observation for Global Changes (EOGC2011)

April 13-15, 2011, Munich, Germany

URL: <http://www.pf.bv.tum.de/eogc2011/>

SPACOMM 2011

April 17-22, 2011, Budapest, Hungary

The Third International Conference on Advances in Satellite and Space Communications

URL: <http://www.iaria.org/conferences2011/SPACOMM11.html>

Geoinformation for Disaster Management (Gi4DM)

May 3-8, 2011, Antalya, Turkey

URL: <http://www.gi4dm2011.org/>

Global Space and Satellite Forum (GSSF)

May 9-11, 2011, ADNEC Abu Dhabi, UAE

URL: <http://www.gssforum.com/>

FIG Working Week 2011

May 18-22, 2011, Marrakech, Morocco

URL: <http://www.fig.net/fig2011/>

3rd Workshop on Absolute Long Distance Measurements in Air

May 27, 2011, Prague, Czech Republic

This Workshop aims to cover the current status in the field of long distance measurement in air and to disseminate the results of the just completed Joint Research Project 3.1, within the scope of the European Metrology Research Programme (EMRP).

URL: <http://www.longdistanceproject.eu/workshops/3rd-workshop-on-absolute-long-distance-measurement-in-air>

7th International Symposium on Mobile Mapping Technology

June 13-16, 2011, Krakow, Poland

The Symposium MMT' 2011 will be held on 13 – 16 June 2011, in the Sheraton hotel Cracow, Poland. We strongly invite and encourage all professionals, researchers and academics, business and industry partners, students to participate in this important event. Science Chair: Dorota Grejner-Brzezinska.

The MMT2011 web site is up and running: <http://www.mmtcracow2011.pl/>.

TransNav 2011

June 15-17, 2011, Gdynia, Poland

URL: <http://transnav.am.gdynia.pl/>

SGEM 2011

June 19-25, 2011, Albena, Bulgaria

The 11th International Multidisciplinary Scientific Geo-Conference and Expo - SGEM 2011 (Surveying Geology & mining Ecology Management) will be held during the period 19 - 25 June 2011 at Albena sea-side and spa

resort, Bulgaria. The SGEM GeoConference focuses on the latest findings and technologies in surveying geology and mining, ecology, and management, in order to contribute to the sustainable use of natural resources.

URL: <http://www.sgem.org/>

APSG Workshop 2011

June 25-27, 2011, Melbourne, Australia

URL: <http://www.shao.ac.cn/APSG2011>

ESA International Summer School on GNSS 2011

July 20-30, 2011, Berchtesgaden/Bavaria, Germany

It is the objective of this summerschool to provide the attendees with a comprehensive overview on the design and development of satellite navigation systems as well as its applications. The program is open to graduate students, PhD. candidates, early-stage researchers and young professional willing to broaden their knowledge.

URL: <http://www.munich-satellite-navigation-summerschool.org>

AOGS 2011 Conference

August 8-12, 2011, Taipei, Taiwan

There will be sessions related to geodesy on topics such as “New technological developments in space geodesy and applications on atmospheric and geodynamical research”, Solid Earth, Natural Hazards, and Atmosphere.

URL: <http://www.asiaoceania.org/aogs2011>

XXX URSI General Assembly and Scientific Symposium

August 13-20, 2011, Istanbul, Turkey

URL: <http://www.ursigass2011.org/>

ISDE7

August 23-25, 2011, Perth, Australia

The 7th International Symposium on Digital Earth (ISDE7) with the theme of the Knowledge Generation will be held in Perth, Australia from 23-25, August 2011 in conjunction with the Western Australian Land Information System (WALIS) Forum and the State Natural Resources Management (NRM) Conference.

URL: <http://www.isde7.net/>

Journées 'Systèmes de référence spatio-temporels' 2011

September 19-21, 2011, Vienna, Austria

URL: <http://info.tuwien.ac.at/hg/meetings/journees11/index.html>

Intergeo 2011

September 27-29, 2011, Nürnberg, Germany

URL: <http://www.intergeo.de/>

ISPRS - PIA11 Photogrammetric Images Analysis

October 5-7, 2011, Munich, Germany

URL: <http://www.pia11.tum.de/>

UGI 2011 Regional Geographic Conference

November 14-18, 2011, Santiago, Chile

URL: <http://www.ugi2011.cl/>

AGU Fall Meeting

December 5-9, 2011, San Francisco, USA

URL: <http://www.agu.org/meetings/>