

3.3 Analysis Coordinator

Unified Analysis Workshops in 2007 and 2009

The organization of the two UAWs was certainly one of the major tasks of the IERS Analysis Coordinator in the years 2007 and 2009. The Unified Analysis Workshop of 2007 has already been described in the IERS Annual Report 2007, and for the Unified Analysis Workshop 2009 a description may be found in this volume, Section 4.3. Some of the major action items are summarized here:

- **IERS Working Group on SINEX:** The proposal was made to create an IERS WG for the maintenance and updating of the SINEX format. Some of the tasks that were already clear were the inclusion of satellite antenna PCV parameters, the documentation of models and procedures used by the Analysis Centers and a new layout of SINEX format description. The IERS WG on SINEX was finally established in April 2011 with Daniela Thaller as the chair.
- **Combination of SLR Range Biases:** SLR range biases should be combined at the ILRS Combination Centers. This would improve the consistency of the combined solutions of the ILRS. This recommendation has not yet been implemented by the ILRS Combination Centers.
- **Apply atmospheric loading on the observation level:** Is atmospheric loading to be applied on the observation level for next reprocessing? A lot of tests have been done in the meantime by Tonie van Dam, Rolf Dach, Johannes Böhm and others. The final decision has not yet been taken. The topic is very controversial.
- **Reference pressure field for atmospheric loading:** In order to select a reference pressure field for atmospheric loading (and other corrections depending on pressure; e.g. a priori troposphere gradients), it was agreed that it makes sense to collect the information on reference pressure fields used by the different loading centers. In addition, tests should be done to see the differences between different approaches. The outcome of the selection of the reference pressure field should be reported to the IERS Conventions Center for inclusion into the IERS Conventions. The status today is that different groups still use different reference pressure fields.
- **Subdaily ERP tidal model:** The model for subdaily ERP tidal terms was not of sufficient accuracy anymore. Libration was not correctly handled at present. The release of an improved subdaily model is being planned by the IERS Conventions Center.

- Solar radiation pressure models for GNSS satellites: Solar radiation pressure modeling and parameterization is a crucial issue not only for GNSS but also for other satellites. A common effort to solve this problem should be initiated. In the meantime quite some progress was achieved in this issue (e.g. by Urs Hugentobler and others).
- Documentation of AC modeling and parameterization standards: A detailed documentation of AC modeling and parameterization standards would be very beneficial for all combination centers and also for the ITRF computations. However, so far this has not been realized.

Whereas some action items have been fulfilled in a short time frame others are still pending. But step by step the combination of the IERS products can be improved. The lists of all the action items of the UAW 2007 and the UAW 2009 are available at the web pages <<http://www.iers.org/UAW2007>> and <<http://www.iers.org/UAW2009>>.

Special Meetings and Conference Sessions on Combination Issues

2007

- EGU Meeting 2007, Vienna: Session G4 “What Constraints do Earth Rotation, Shape and Gravity Measurements Place on the Dynamical Processes of the Solid Earth?”, chaired by R. Gross, H.P. Plag
- XXIV IUGG General Assembly, 2–13 July 2007, Perugia, Italy: Session GS005 The Global Geodetic Observation System (GGOS), convened by M. Rothacher, R. Neilan, H.P. Plag
- IERS Conventions Workshop, 20–21 September 2007, Sèvres, France
- Journées “Systemes de reference spatio-temporels”, “The Celestial Reference Frame for the Future”, 17–19 September 2007, Paris Observatory
- Unified Analysis Workshop, 5–7 December 2007, Monterey, USA, organized by GGOS and IERS
- AGU Fall Meeting, 10–14 December 2007, San Francisco: Session on “The Global Geodetic Observing System: Observing and Interpreting Mass Transport in the Earth System”

2008

- EGU Meeting 2008, 13–18 April 2008, Vienna: Session G12 “GGOS: Observing and Interpreting Earth’s Mass Transports”, chaired by R. Gross, H.P. Plag, M. Rothacher
- UAW 2007 Follow-up Meeting, 15 April 2008, Technical University of Vienna, Vienna: “UAW Action Items”, chaired by M. Rothacher
- AOGS 5th Annual Meeting, 16–20 June 2008, Busan, Korea: GGOS session

- AGU Fall Meeting, 15–19 December 2008, San Francisco: Session on “Global Geodetic Observing System: Science and Instrumentation”, convened by R. Gross, H.P. Plag, M. Rothacher

2009

- EGU Meeting 2009, 19–24 April 2009, Vienna: Session G8 “The Global Geodetic Observing System: Ground and Space-based Infrastructure for Earth Science”, Convener: R. Gross, Co-Conveners: M. Rothacher, H.-P. Plag
- IAG Scientific Assembly 2009, 31 August – 4 September 2009, Buenos Aires, Argentina: GGOS session
- Second Unified Analysis Workshop 2009, 11–12 December 2009, San Francisco, CA, USA, organized by GGOS and IERS
- AGU Fall Meeting, 14–18 December 2009, San Francisco: Session on “GGOS and the Global Water Cycle”, convened by H.P. Plag, R. Gross, C.K. Shum

Reference

Rothacher M., Boonkamp H., Angermann D., Böhm J.: Sub-Commission 1.1. Coordination of Space Techniques, IAG Commission 1 – Reference Frames, Final Report, IAG Commission 1 Bulletin No. 20, p. 13–24, DGFI, München, 2007.

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