SCIENTIFIC PROGRAMME

Scientific Organising Commitee: N. Capitaine, France (Chair); H. Schuh, Austria (Co-Chair); A. Brzeziński, Poland; V. Dehant, Belgium; C. Hohenkerk, UK; I. Kumkova, Russian Federation; D.D. McCarthy, USA; M. Soffel, Germany; J. Souchay, France; J. Vondrák, Czech Republic; Ya. Yatskiv, Ukraine.
Local Organising Commitee: H. Schuh, J. Böhm, S. Böhm, R. Dvorak, S. Linsmayer, T. Nilsson, M. Schindelegger, R. Weber.

Monday 19 September 2011

9:15–9:30: Opening of the Journées 2011
Welcome from H. Schuh, Vienna University of Technology, Chair of the LOC

Welcome from A. Hochwartner, President of the BEV, Vienna

Introduction to the Journes 2011 by N. Capitaine, Chair of the SOC

9:30–11:00: Session 1 – Fundamental astronomy, time and relativity
(Chair: N. Capitaine and M. Soffel)

Titov O. (invited): *The secular aberration drift and future challenges for VLBI astrometry*

Bucciarelli B., Smart R., Umberto, Dapra M.T., Lattanzi M., Penna J.L., da Silva Neto D.N., Andrei A.H.: *PARSEC's high precision astrometry - the making of*

Coelho B., Anton S., Taris F., da Silva Neto D., Bouquillon S., Souchay J., Andrei A.: *Morphological classification of QSOs in the SDSS DR7 population*

Pitjeva E.: *Values of some astronomical parameters - au, GM, M of the Sun, their possible variations from modern observations, and interrelations between them*

Hohenkerk C.: *SOFA and the algorithms for transformations between scales & between systems*

Vondrák J., Capitaine N., Wallace P.: *New long-term expressions for precession*

Capitaine N.: *Comparison between different forms of variables and parameters used for high accuracy models and observations of the Earth's precession and nutation*

11:00–11:30: Coffee break

11:30–13:00: Session 1 (continuation)
(Chair: N. Capitaine and M. Soffel)

Bize S. (invited): *Highly precise clocks to test fundamental physics*

Hobiger T., Koyama Y., Hanado Y., Ichikawa R., Sekido M., Böhm J. and Sun J.: *On the potential of VLBI2010 for time and frequency transfer*

Dimarcq N.: *High performance time & frequency transfer techniques for remote clocks comparisons*

Soffel M., Tian W.: *Relativity and large ringlaser gyroscopes*

Lambert S.B., le Poncin-Lafitte C.: *On general relativity tests with the VLBI*

Soja B., Plank L., Schuh H.: *General relativistic delays in current and future VLBI*

13:00–14:00: Lunch break

14:00–16:00: Session 2 – Towards the next generation of space-time reference systems
(Chair: J. Vondrk and Y.S. Yatskiv)

Mignard F. (invited): *From the Gaia frame to an ICRF-3?*

Manchester R.N., Hobbs G. (invited): *Pulsar timing and a pulsar-based timescale*

Yatskiv Y.S.: *One possible realization of the ICRF before the Gaia frame*

Malkin Z., Schuh H., Ma C., Lambert S.: *Terrestrial and celestial reference frames: Synergy and mutual impact*

Bourda G., Charlot P.: *Plans for an accurate alignment of the VLBI frame and the future Gaia frame*

Taris F., Andrei A., Klotz A., Vachier F., Côte R., Souchay J.: *Optical monitoring of extragalactic sources for the link between the ICRF and the future Gaia celestial reference frame*

Jacobs C., Majid W., Romero-Wolf A., Sotuela I., Garcia-Miro C., Horiuchi S., Neidhart A., Kronschnabl G., Schreiber U., Porcas R., Kraus A., Gomez-Gonzalez J., Lopez-Fernandez J.A., Colomer F., de Vicente P., Lovell J., Natusch T., Gulyaev S., Zharov V., Takeuchi H., Ichikawa R.: *The Potential for a Ka-band (32 GHz) worldwide VLBI network*

Pavlis E.C., Kuzmicz-Cieslak M., Hinkey P.M.: *Forthcoming improvements in SLR data analysis: Towards the mm SLR*

Romero-Wolf A., Jacobs C.: *Effects of tropospheric spatio-temporal correlated noise on the analysis of space geodetic data*

16:00–18:00: POSTER SESSION

18:00–18:45: Welcome Drink

Tuesday, 20 September 2011

09:00–11:00: Session 3 – Modelling, observation and prediction of Earth rotation and global geodynamics
(Chair: A. Brzezinski and V. Dehant)

Böhm S., Nilsson T., Schindelegger M., Schuh H. (invited): *Atmospheric and oceanic excitation of Earth rotation*

Koot L. (invited): *Constraints on the structure and dynamics of the Earth's deep interior inferred from nutation observations*

Seitz F.: *Simulation, prediction and analysis of Earth rotation parameters with a dynamic Earth system model*

Dehant V., Folgueira M., Puica M.: *Analytical computation of the effects of the core-mantle boundary topography on tidal length-of-day variations*

Gross R.S.: *Improving UT1 predictions using short-term forecasts of atmospheric, oceanic, and hydrologic angular momentum*

Bizouard C.: *Asymmetric excitation of the polar motion*

Stamatakos N., Luzum B., Carter M.S., Stetzler B., Shumate N., Tracey J.: *Recent improvements in the IERS Rapid Service Prediction Center products*

Kaufman M., Pasynok S.: *Rapid EOP calculations using VieVS software*

11:00–11:30: Coffee break

11:30–13:00: Session 3 (continuation)
(Chair: A. Brzezinski and V. Dehant)

Brzezinski A., Böhm S.: *Analysis of the high frequency components of Earth rotation demodulated from VLBI data*

Chapanov Y., Vondrák J., Ron C.: *A model of centennial oscillations of the Earth rotation based on total solar irradiance variations*

Schindelegger M., Böhm J., Salstein D., Schuh H.: *The signature of atmospheric tides in sub-daily variations of Earth rotation as unveiled by globally-gridded atmospheric angular momentum functions*

Dobslaw H., Kadow C., Matthes K., Thomas M.: *Impact of atmospheric tides on subdiurnal length-of-day variations*

Panafidina N., Rothacher M.: *Empirical model of subdaily variations in the Earth rotation from GPS and its stability*

Nilsson T, Böhm J., Schuh H.: *Determination of Earth rotation by combining VLBI and ringlaser observations*

13:00–14:00: Lunch break

14:00–16:00: Session 4 – Celestial mechanics of solar system bodies
(Chair: C. Hohenkerk and J. Souchay)

Escapa A. (invited): *Analytical modeling of the rigid internal motions of a three-layer celestial body through Hamilton's Principle*

Hilton J. (invited): *Progress report of the IAU Commission 4 Working Group on Ephemeris Access and the comparison of high accuracy planetary ephemerides*

Weratschnig J.M., Stewart S.G., Hilton J.L.: *New additions to the astronomical almanac-ephemeris data of dwarf planets*

Kudryavtsev S.M.: *Precision analytical calculation of effect of the solid Earth tides on satellite motion*

Pashkevich V.V., Eroshkin G.I.: *Construction of the numerical and semi-analytical solutions of the Moon rotation*

Ivanova T.V.: *Taking into account the planetary perturbations in the Moon's motion*

Yagudina E.I., Krasinsky G.A., Prokhorenko S.O.: *EPM-ERA 2011 Lunar theory and selenodynamical parameters from LLR data*

Bazso A., Galiazzo M.: *Lunar effects on close encounters of Hungarias with the Earth*

16:00–16:30: Coffee break

16:30–17:00: Session 4 (continuation)
(Chair: C. Hohenkerk and J. Souchay)

Dvorak R., Lhotka Ch., Zhou L.Y.: *On the stability of Earth's Trojans*

Baudisch H., Dvorak R.: *Where are the Saturn Trojans?*

17:00–18:00: Discussion – On future IAU recommendations and organization: Presentation of Topics
(Chair: D.D. McCarthy)

McCarthy D.D.: *Introduction*

Capitaine N.: *Astronomical unit*

Urban S.: *Nomenclature for current precession and nutation models*

Hilton J.: *Standardizing access to ephemerides*

McCarthy D.D.: *IAU structure*

19:00–21:30: CONFERENCE DINNER

Wednesday, 21 September 2011

09:00–10:30: Session 5 – Space observations and dedicated missions for geodesy and astronomy
(Chair: R. Gross and H. Schuh)

Rummel R. (invited): *GOCE: Its principles and science*

Hase H., Behrend D., Ma C., Petrachenko W., Schuh H., Whitney A. (invited): *The future global VLBI2010 network of the IVS*

Biancale R., Gambis D., Richard J.-Y., Seitz M.: *Activity of the Combination at Observation Level Working Group*

Zharov V.E., Girin I.A., Kostenko V.I., Likhachev S.F.: *Estimation of the ground-space interferometer parameters during Radioastron mission*

Pavlis E.C., Ciufolini I., Paolozzi A.: *LARES: A new mission to improve the measurement of lense-thirring effect with Satellite Laser Ranging*

Lovell J., McCallum J., Shabala S., Dickey J., Watson C., Titov O.: *The AuScope VLBI Array*

11:00–11:30: Coffee break

11:00–12:00: Discussion – On future IAU recommendations and organization: Discussion
(Chair: D.D. McCarthy)

Nomenclature
Astronomical unit
Standardizing access to ephemerides
Summary

12:00–12:15: Closing of the Journées 2011