

SCIENTIFIC PROGRAMME

Scientific Organizing Committee: A. Brzeziński, Poland, N. Capitaine, France (Chair), P. Defraigne, Belgium, T. Fukushima, Japan, D.D. McCarthy, USA, M. Soffel, Germany, J. Vondrák, Czech, R. Ya. Yatskiv, Ukraine

Local Organizing Committee: D. Gambis (Chair), P. Baudoin, O. Becker, C. Bizouard, S. Bouquillon, L. Garin, A.-M. Gontier, S. Lambert, J. Souchay

Monday 17 September 2007, 9h00-13h00

Opening of the Journées 2007

Welcome from N. Dimarcq, Director of Department SYRTE of Paris Observatory

Introduction to the Journées 2007 by N. Capitaine (Chair of the SOC) and D. Gambis (Chair of the LOC)

Session I - Plans for the new ICRF

Chair: J. Vondrák, D.D. McCarthy

Ma, C.: *Progress in the 2nd realization of ICRF (Invited)*

Charlot, P. et al.: *Selecting ICRF-2 defining sources based on source structure*

Malkin, Z., Yatskiv, Ya.: *Next ICRF: Single global solution versus combination*

Boboltz, D., Fey, A. & K-Q VLBI Survey Collaboration: *Time Series Analysis of VLBI Astrometric Source Positions at 24-GHz*

Titov, O.: *Reference radio source apparent proper motions*

Bolotin S.: *Influence of different strategies in VLBI data analysis on realizations of ICRF*

Sokolova, J.: *Effect of the reference radio source selection on VLBI CRF realization*

Zacharias, N. et al.: *Extragalactic Optical-Radio Link Research at USNO*

Andrei, A. et al.: *A GAIA oriented analysis of a large sample of quasars*

Bourda, G. et al.: *A VLBI survey of weak extragalactic radio sources for the link with the future GAIA frame*

Monday 17 September 2007, 14h00-18h30

Session II - Models and Numerical standards in Fundamental astronomy

Chair: N. Capitaine

Luzum, B. et al.: *Current Status of the IAU Working Group Numerical Standards of Fundamental Astronomy (Invited)*

Soffel, M., Klioner, S.: *On astronomical constants (Invited)*

Short review of posters by A.-M. Gontier, J. Souchay, S. Lambert

Discussion on the 2nd realization of the ICRF and the numerical standards

Chair: B. Luzum, C. Ma, N. Capitaine

POSTER SESSION

Tuesday 18 September 2007, morning, 9h00-13h00

Session II - Models and Numerical standards in Fundamental astronomy (continuation)

Chair: M. Soffel

Capitaine, N.: *Recent progress in concepts, nomenclature and models in fundamental astronomy*

Pitjeva, E.: *Recent models of the planet motion and fundamental constants determined from position observations of planets and spacecraft*

Laskar, J. et al.: *INPOP06. A new numerical planetary ephemeris*

Manche, H. et al.: *INPOP: Adjustments to LLR data*

Hilton, J.: *Prospects for Improving the Masses of Asteroids*

Kudryavtsev, S.: *Harmonic models of tide-generating potential of terrestrial planets*

Session II - Sub-session on nutation

Chair: A. Brzezinski

Dehant, V. et al.: *Recent advances in modeling precession-nutation (Invited)*

Yatskiv, Ya., Korsun, A.: *IAU Symposium 78 "Nutation and the Earth's rotation" (held in Kiev, May 1977) as a first step in the consideration concerning the Non-rigid Earth Nutation Theory"*

Koot, L. et al.: *Estimation of Earth interior parameters from a Bayesian inversion of nutation time series*

Vondrák, J., Ron, C.: *VLBI observations of nutation, its geophysical excitations and determination of some Earth model parameters*

Petrov, L.: *About observability of the free core nutation*

Lambert, S., Dehant, V., Gontier, A.-M.: *Some issues in the Earth's interior exploration with VLBI*

Wallace, P., Capitaine, N.: *Concise algorithms for precession-nutation*

Tuesday 18 September 2007, 14h30-17h45

Session III - Relativity in Fundamental astronomy

Chair: V. Dehant

Klioner, S.: *Relativity in Fundamental Astronomy: solved and unsolved problems (Invited)*

Hestroffer, D. et al.: *Local tests of GR and dynamical reference frame linking with Gaia astrometry of asteroids*

Pashkevich, V., Eroshkin, G.: *Geodetic relativistic rotation of the solar system bodies*

Klioner, S., Soffel, M., Le Poncin-Lafitte, Ch.: *Towards the relativistic theory of precession and nutation*

Session IV - Prediction, combination and geophysical interpretation of Earth Orientation Parameters

Chair: Ya. Yatskiv

Wooden, W.: *Activities of the IERS Working Group on Prediction (Invited)*

Altamimi, Z., Gambis, D., Bizouard, Ch.: *Rigorous combination to ensure ITRF and EOP consistency (Invited)*

Kosek W., Kalarus, M., Niedzielski, T.: *Forecasting of the Earth orientation parameters - comparison of different techniques*

Kalarus, M., Kosek, W., Schuh, H.: *Current results of the Earth Orientation Parameters Prediction Comparison Campaign*

Wednesday 19 September 2007, 9h00-13h00

Session IV - Prediction, combination and geophysical interpretation of Earth Orientation Parameters (continuation)

Chair: H. Schuh, P. Defraigne

Stamatakis, N., Luzum, B., Wodden, W.: *Recent Improvements at the IERS Rapid Service/Prediction Center*

Nothnagel, A. et al.: *GGOS-D: A German Project on the Integration of Space Geodetic Techniques*

Stefka, V., Pesek, I., Vondrák, J.: *Three years solution of EOP by combination of results of different space techniques*

Kluegel, T. et al.: *Advances in inertial Earth rotation measurement - new data from the Wettzell 'G' ring laser*

Pavlis, E.: *ILRS contributions to near-real time EOP series*

Salstein, D. et al.: *Atmospheric excitation of Earth rotation/polar motion at high temporal resolution*

Brzezinski, A.: *On the influence of diurnal atmospheric tides on Earth rotation*

Englich, S., Weber, R., Schuh, H.: *Empirical validation of the conventional model for l.o.d. variations due to zonal Earth tides*

Korbacz, A., Brzezinski, A., Thomas, M.: *Geophysical excitation of LOD/UT1 estimated from the output of the global circulation models of the atmosphere - ERA-40 reanalysis and of the ocean - OMCT*

Kudryashova, M.: *Geophysical excitation of diurnal prograde polar motion derived from different OAM and AAM data*

Seoane, L., Bizouard, Ch., Gambis, D.: *Coherence of satellite gravimetric observations with the polar motion*

Discussion on the prediction of the EOPs

Chair: W. Wooden

Closing of the Journées 2007

LIST OF POSTERS

SESSION I

- Fey, A., Boboltz, D.: *Analysis of Astrometric Position Time Series for ICRF-2*
Gontier, A.-M., Lambert, S.: *Selection of stable radio sources to define a new ICRF*
Kurdubov, S., Skurikhina, E.: *Source positions time series generation and analysis*
Martinez, M., Marco F.J., Lopez J.A.: *Precessional parameters obtained from biased data of Hipparcos-FK5 proper motion*
Niell, A. & VLBI 2010 Committee: *VLBI2010: Progress towards the next generation geodetic VLBI system*
Petrachenko, W. et al.: *A Study of VLBI2010 Potential for Source Structure Corrections*
Yagudina, E.: *Connecting the dynamical frame to the ICRF by use of NEA's observations and the historical phenomenon of "fictitious equinox motion"*
Sohn, B.W.: *Korean VLBI Network and its plan for VLBI metrology*

SESSION II

- Damljanovic, G.: *Better proper motions accuracy for stars with Hipparcos satellite and ground-based observations*
Dermanis, A. Tsoulis, D.: *On the consistent definition of EOPs in relation to the observed ITRF-ICRF transformation*
Escapa, A., Getino, J., Ferrándiz J.-M.: *Geopotential of a triaxial Earth with rigid inner core in Andoyer canonical variables*
Folgueira, M., Dehant, V.: *Estimation of the topographic torque at the core-mantle boundary on the nutation*
Marco, F.J., Martinez, M.J., Lopez, J.A.: *Considerations about some problems on functional parametrical models implementation from a discrete set of data*
Pashkevich, V.: *Non-rigid Earth rotation series*
Tupikova, I.: *Analytical theory for an asteroid in the gravitational field of a migrating planet*
Zerhouni W., Capitaine, N., Francou, G.: *The use of LLR observations (1969-2006) for the determination of the GCRS coordinates of the pole*

SESSION IV

- Bolotina, O.: *Combination of different space geodetic techniques: algorithm of parameters estimation*
Chapanov, Ya., Gambis D.: *Correlation between the solar activity cycles and the Earth rotation;*
Chapanov Ya., Ron C., Vondrák, J.: *Estimation of the short-term zonal tides from UT1 observations*
Gambis, D., Richard, J.-Y., Salstein, D.: *Use of Atmospheric Angular Momentum forecasts for UT1 predictions*
Masaki, Y.: *Meteorological interpretation of transient LOD changes*
Morcov G.: *The polar motion and the draconitic period*
Nastula, J., Kolaczek, B., Salstein, D.: *Comparison of hydrological and GRACE-based excitation functions of polar motion in the seasonal spectral band*
Niedzielski, T., Kosek W.: *Forecasting irregular variations of UT1-UTC and LOD data caused by ENSO*
Poutanen M. et al.: *Status report on the Fennoscandian-Japanese project for near real-time UT1-observations with e-VLBI*
Rzeszutko, A., Kosek, W., Popinski, W.: *The influence of variable amplitudes and phases of the most energetic oscillations in the EOP on their prediction errors*
Spiridonov, E., Tsurkis E., Vinogradonova, O.: *Estimation of coefficients of differential equation modeling the polar motion*
van Dam, T., Gross, R., de Viron, O.: *The impact on EOP predictions of AAM forecasts from the ECMWF and NCEP*
Varga, P. et al.: *Correspondence of EOP and geomagnetic field*
Wang, W.J. et al.: *Frequency Modulation Solution of Earth Rotation*