SCIENTIFIC PROGRAMME

Scientific Organizing Committee: BRZEZIŃSKI Aleksander, Poland, CAPITaine Nicole (Chair), France, DEFRAIGNE Pascale, Belgium, FUKUSHIMA Toshio, Japan, MCCarthy Dennis, USA, SOFF-FEL Michael, Germany, VONDRÁK Jan, Czech Republic, YATSKIV Yaroslav

Local Organizing Committee: BAUDOIN Pascale, BECKER Olivier, BIZOUARD Christian, BOURDA Geraldine, GONTIER Anne-Marie, NGUYEN Jean-Baptiste, SOUCHAY Jean (Chair)

Monday 20 September, 9h00-13h00

OPENING OF THE JOURNÉES 2004
Welcome from D. Egret, President of Paris Observatory
Introduction to the Journées 2004 by N. Capitaine (Chair of the SOC) and J. Souchay (Chair of the LCC)

SESSION I: RECENT AND FUTURE DEVELOPMENTS IN THE REALIZATION OF THE ICRS, Chair: J. Vondrák

Ma C.: Steps towards the next radio realization of the ICRS
Petit G., McCarthy D.D.: Updating the IERS Conventions to improve reference frames
Bolotin S.: Extension of the celestial reference frame
Souchay J.. Gaume R.: Activities of the ICRS Product Center of the IERS
Arias E.F., Bouquillon S.: Maintenance of the ICRS: stability of the axes by different sets of selected radio sources
Yatskiv Y., Bolotin S., Kuryanova A.: “GAOUA” realizations of the Celestial reference frame

Discussion 1 on the tasks that were previously part of the ICRS working group of the IAU
Chair: T. Fukushima

Monday 20 September, 14h15-18h30

SESSION II: MODELS FOR EARTH’S ROTATION: FROM POINCARÉ TO IAU 2000
Chair: A. Brzeziński

Dehant V., de Viron O., Van Hoolst T.: Poincaré fluid in the Earth core (invited)
Capitaine N.: Improvements in the precession-nutation models
Hilton J.: Report on the IAU WG Precession and the ecliptic (invited) + Discussion

Short oral presentations of posters
Chair: N. Capitaine

"Kickoff" meeting for the Project "Descartes-Nutation"
Chair: V. Dehant

POSTER SESSION 1
Tuesday 21 September, 9h00-13h00

SESSION II: CONTINUATION
Chair: Ya. Yatskiv, V. Dehant

Salstein D., Chao, B., Ponte, R., Chen, J., Zhou, Y.: Plans for high accuracy computations of
Earth rotation/polar motion excitations (invited)
Brzeziński A.: Non-tidal oceanic excitation of diurnal and semidiurnal polar motion estimated
from a barotropic ocean model
Escapa A., Getino J., Ferrándiz J.M.: On the effect of the redistribution tidal potential on the
rotation of the non-rigid Earth: discrepancies and clarifications
Efroimsky, M.: A possible reason for the discrepancy between the Kinoshita-Souchay theory and
the other theories of rigid-Earth rotation
Pashkevich V.V., Eroshkin G.I.: Spectral analysis of the numerical theory of the rigid Earth rota-
tion
Huang C-L.: On the coupling between geomagnetic field and Earth nutation in numerical inte-
gration approach
Chao B.F., Cox C. M.: Length-of-Day and Polar Motion Excitation "Observed" by Time-Variable
Gravity
McCarthy D.D.: The Free Core Nutation
Zharov V.: Model of the Free Core Nutation for improvement of the Earth nutation theory
Ron C., Capitaine N., Vondrak J.: A precession study based on the astrometric series and the
combined astrometric catalogue EOC-2
Shurygina N.: UT1 variations obtained from the combination of LLR, SLR and VLBI data at the
observation level
Varga P., Gambis D., Bizouard C., Bus Z.: What can we say on the relationship between the
global sismicity and the rotation vector of the Earth?
Müller J.: Earth Rotation and Global Dynamic Processes - Joint Research Activities in Germany

Tuesday 21 September, 14h00 - 18h30

POSTER SESSION 2

SESSION III: NOMENCLATURE IN FUNDAMENTAL ASTRONOMY
Chair: D.D. McCarthy

Capitaine N.: Report of the NFA Working Group
de Viron C., Dehant V.: 3D representation of the Non-Rotating Origin
Höhenkerk C.: Implementation of the new nomenclature in the Astronomical Almanac
Wallace P.: Post-IAU-2000 nomenclature for the telescope pointing application
Soffel M., Klioner S.: The ICRS, BCRS and GCRS: astronomical reference-systems and frames
in the framework of Relativity, problems of nomenclature

Discussion 2 on Nomenclature in fundamental astronomy
Chair: N. Capitaine
SESSION IV: ASTRONOMICAL REFERENCE SYSTEMS  
Chair: M. Soffel

Soffel M., Klioner S.: Relativity in the problems of astronomical reference systems and Earth rotation: status and prospects (invited)  
Mignard F.: Inertial frame with Gaia: selection of sources and limitations (invited)  
Léponcin-Lafitte C., Teyssandier P.: Influence of the multipole moments of a giant planet on the propagation of light: application to Gaia  
Vondrak J., Ron C.: Combined astrometric catalogue EOC-2 - an improved reference frame for long-term Earth rotation studies  
Chapront J., Francou G.: The lunar libration, Comparison between various models  
Fukushima T.: Efficient Orbit Integration by Integrating Orbital Longitude  

SESSION V: FUTURE OF UTC: CONSEQUENCES IN ASTRONOMY  
Chair: T. Fukushima  

Arias E.F., Guinot, B.: UTC: Historical background and perspectives  
Gambis D., Bizouard, C., Franço, G., Carlucci T., Sail M.: Prediction of UT1 and length of day variations  
Wooden W.H., Johnson, T.J., Kammeyer, P.C., Carter, M.S., Myers, A.E.: Determination and Prediction of UT1 at the IERS rapid service/prediction center  

Discussion  
Chair: D.D. McCarthy  

Closing of the Journées 2004 and Announcement of the Journées 2005  
N. Capitaine, A. Brzeziński  

LIST OF POSTERS  

SESSION I

Bucciarelli B., Lattanzi M.G., Massone G., Poma A., Tang Z., Uras S.: Realisation of faint Reference catalogues around ICRF radio sources from photographic observations  
Camargo J.I.B., Daigne G., Ducourant C., Charlot P.: Precise near-IR astrometry and photometry of southern ICRF quasars  
Fey A.L.: Improving the ICRF in the southern hemisphere  
Sokolova J.R.: Influence of the early VLBI observations on the ICRF stability  

SESSION II

Akulenko L.D., Kumakshe S.A., Markov YU.G.: The model and the prediction of the Earth’s pole motion  
Bădescu O., Popescu P., Popescu P.: A method for accuracy and efficiency increase of geodetic-astronomical determination of the vertical’s deviation  
Boilotina O.V.: Implementation of new models for Earth rotation in data analysis at the Ukrainian Centre of the determination of the EOP
Bourda G.: *Earth rotation and variations of the gravity field, in the framework of the “Descartes-Nutation” Project*

Coulot D., Berio P., Biancale R. & al.: *Combination of space geodesy techniques for monitoring the kinematics of the Earth*

Folgueira M., Capitaine N., Souchay J.: *The equations of the Earth’s rotation in the framework of the IAU 2000 resolutions*

Koot L., de Viron O., Dehant V.: *Atmospheric angular momentum time series: Characterization of their internal noise and construction of a combined series*

Kosek W., Kalarus M., Johnson T.J., Wooden W.H., McCarthy D.D., Popiński W.: *A comparison of UT1-UTC forecasts by different prediction techniques*

Kudryavtsev S.M.: *KSM03 harmonic development of the Earth TGP in the ITRS*

Lambert S.: *Non-linear terms in the non-rigid Earth’s nutation*

Nastula J., Kolaczk B.: *Studies of regional atmospheric pressure excitation function of polar motion*

Nastula J., Gambis D.: *Assessment of quality of polar motion series derived from space-geodetic techniques*

Rambaux N., Van Hoolst T., Dehant V.: *Earth librations due to core-mantle couplings*

Rogister Y., Rochester M.G.: *Normal mode theory of a rotating Earth model using a Lagrangian perturbation of a spherical model of reference*

Sidorenkov N.: *The decade fluctuations of the Earth rotation velocity and of the secular polar motion*

Stavinschi M., Gambis D., Maris G., Mioc V., Oneica A.: *Common periodicities in the solar activity and the Earth rotation*

Stavinschi M., Mioc V.: *Astronomical researches in Poincaré’s and Romanian works*

Zhang B., Li J.L., Wang G.L., Zhao M.: *A discussion on the solution of high frequency variations of ERP*

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SESSION IV


Damljanović G., Vondrák J.: *Improved proper motions in declination of some Hipparcos stars derived from observations of latitude*

Kumkova I.I., Stepashkin M.V.: *Estimation of relativistic contributions in the GCRS-ITRS transformation*

López J.A., Martinez M.J., Marco F.J.: *A new method for dynamical analysis of orientation errors from non regular samples*


Martinez M.J., Marco F.J., López J.A.: *Two independent estimations for the epsilon_2 values in the Hipparcos-FK5 catalogues*

Pireaux C.: *Relativistic modeling of the orbit of geodetic satellites equipped with accelerometers*

Popescu R., Nedelcu A.: *Astrometrical positions of NEO inferred from CCD observations at Bucharest*

Yu Y., Tang Z.H., Li J.L., Zhao M.: *Application of block adjustment of overlapping CCD frames*

Zhu Z., Zhang H.: *Galactic warping motion from Hipparcos proper motions and radial velocities*

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SESSION V

Soma M., Tanikawa K.: *TT-UT obtained from ancient solar eclipses observed at plural sites*