SCIENTIFIC PROGRAMME

Scientific Organizing Commitee: A. Brzeziński, Poland; N. Capitaine, France (Chair); V. Dehant, Belgium; C. Hohenkerk, UK; I. Kumkova, Russian Federation; D.D. McCarthy, USA; M. Soffel, Germany; J. Souchay, France; J. Vondrák, Czech, R; Ya. Yatskiv, Ukraine

Local Organizing Commitee: P. Baudoin, O. Becker, N. Dimarcq (Chair), D. Gambis, A.-M. Gontier, S. Lambert, M. Pailler, J.-Y. Richard

Monday 20 September 2010

(at ENS: amphithéâtre Dussane)

9:15-9:30: **Opening of the Journées 2010**

Welcome from N. Dimarcq, Director of Department SYRTE of Paris Observatory (Chair of the LOC)
Introduction to the Journées 2010 by N. Capitaine (Chair of the SOC)

9:30-11:00: **Session 1 - The astronomical constants, SI units and future developments in numerical standards** *(Chair: V. Dehant)*

Luzum B., Hilton J. and NSFA WG (invited): *IAU Working Group on Numerical Standards for Fundamental Astronomy: the second triennium*
Petit G. (invited): *The new edition of the IERS Conventions: conventional reference systems and constants*
Jacobson R., Folkner W., Taylor A., Konopliv S., Williams J. G., Brozovic M.: *Planetary System GMs in the JPL Planetary Ephemerides*
Hohenkerk C.: *SOFA - status report, a review and a look to the future*
Capitaine N., Guinot B., Klioner S.: *Proposal for the re-definition of the astronomical unit of length through a fixed relation to the SI metre*
Vondrák J., Capitaine N., Wallace P.T.: *Some new thoughts about long-term precession formula*

11:00-11:30: Coffee-break

11:30-13:00: Session 2 - Solar system ephemerides and their comparison
- Special session organized in coordination with IAU Commission 4 (Ephemerides) -
(Chair: C. Hohenkerk and J. Vondrák)

Session 2 Introductory remarks (provided by G. Kaplan, President, IAU Commission 4)
Fienga A., Manche, H., Kuchynka, P., Laskar, J., Gastineau, M. (invited): *INPOP, Intégration Numérique Planétaire de l'Observatoire de Paris*
Folkner W. (invited): *Recent developments in planetary ephemeris observations*
Pitjeva E. (invited): *EPM - Ephemerides of planets and the Moon of IAA RAS: their model, accuracy, availability*
Laskar J., Fienga A., Gastineau M., Manche H: *INPOP, a 1 Million year planetary ephemeris*
Kudryavtsev S.: *Development of long-term numerical ephemerides of major planets to analytical series*

13:00-14:00: Lunch break

14:00-16:00: Session 2 (continuation) *(Chair: C. Hohenkerk and J. Vondrák)*

Yagudina E., Krasinsky G.A., Prokhorenko S.O.:*New version of ERA-EPM Moon theory*
Manche H., Fienga A., Laskar J., Gastineau M., Bouquillon S., Francou G., Kuchynka P.: *LLR residuals of the latest INPOP solution and constraints on post-Newtonian parameters*
Dehant V., Oberst J., Nadili R.: *Geodesy instrument package on the Moon for improving our knowledge of the Moon and the realization of Reference Frames*
Pashkevich V., Eroshkin G.I: *Application of the spectral analysis methods for the investigation of the Moon rotation*
Hilton J, Hohenkerk C.: *A comparison of the high accuracy Planetary Ephemerides DE421, EPM2008, and INPOP08*

Discussion

(at Observatoire de Paris: Salle Cassini)

16:15-16:45: Coffee-break

16:45-18:30: POSTER SESSION introduced by N. Capitaine and J. Souchay

18:30-20:00: Cocktail with a Welcome from D. Egret, President of Paris Observatory

Tuesday 21 September 2010

(at ENS: amphithéâtre Dussane)

9:00-11:00: Session 3 - Progress in astrometric catalogs in optical and radio wavelengths *(Chair: K. Johnston)*

Zacharias N. & Gaume R. (invited):*UCAC and URAT: optical astrometric catalog observing programs*
Souchay J. (invited): *The Large Quasar Astrometric Catalog (LQAC) and the densification of the ICRF through the LQRF (Large Quasar Reference Frame)*
Andrei A., Bucciarelli B.: *Parallaxes of Southern Extremely Cool objects I: Targets, proper motions and first results*
Bourda G., Charlot P., Collioud R., Porcas R., Garrington S.: *Towards a VLBI catalog of optically-bright extragalactic radio sources for the alignment of the radio frame with the future Gaia frame*
Damljanovic G.: *Comparison of the proper motions in declination of four catalogues via 807 Hipparcos stars*
Yatskiv Ya, Fedorov P., Akhmetov V.: *The XPM catalogue as a realisation of the extragalactic reference system in optical and near infrared wavelengths*
Maigurova N.: *Optical positions of ICRF sources using UCAC3 reference stars*

Discussion

11:00-11:30: Coffee-break

11:30-12:30: Session 4 - Recent developments in theory and observation of Earth rotation and related reference systems *(Chair: Ya Yatskiv)*

Brzeziński A. (invited): *Diurnal excitation of Earth rotation estimated from recent geophysical models*
Gross R. (invited): *Observing and modeling long-period tidal variations in polar motion*
Altamimi Z. (invited): *Examination of ITRF2008 results*

13:00-14:00: Lunch break

14:00-15:30: Session 4 (continuation) *(Chair: A. Brzeziński)*

Petrov S., Bashakova, E., Fetisov S., Smirnov S., Trofimov D.: *Subdiurnal polar motion from GNSS observations*
Boehm S., Schuh H.: *Response of the Earth system to zonal tidal forcing examined by VLBI based dUT1 variations*
Chapanov Y., Vondrák J., Ron C.: *Centennial cycles of the solar activity and Earth rotation*
Escapa A, Getino J., Miguel D., Ferrándiz J.M.: *Influence of the inner core geopotential variations on the rotation of the Earth*
Ivanova T., Brumberg V.: *On Solution of the three-axial Earth's rotation problem*
Boucher C.: *A refined definition of the International Terrestrial Reference System*
Coulot D., Bernard E., Collilieux X.: *Influence of station referencing on the quality of EOP time series*

15:30-16:00: Coffee-break

16:00-17:45: Session 4 (continuation) *(Chair: R. Gross)*

Nastula J., Pasnicka M., Kolaczek B.: *Comparison of the hydrological excitation functions HAM of polar motion for the period 1980.0-2009.0*
Kosek W., Popski W., Niedzielski T.: *Wavelet based comparison of high frequency oscillations in the geodetic and fluid excitation functions of polar motion*
Malkin Z.: *Comparison of CPO and FCN empirical models*
Nilsson T., Boehm J., Schuh H.: *Impacts of the 2010 Chile earthquake on Earth rotation*
Pavloskaya N., Petrov S.: *Thermal S1-tide in the atmospheric angular momentum and polar motion*
Schindelegger M., Boehm J., Schuh H., Salstein D.: *High-resolution atmospheric angular momentum functions from different ECMWF data classes*
Stamatakos N., Luzum B., McCarthy D.D.: *Recent Improvements in IERS Rapid Service/Prediction Center Products*
Zotov L.: *Analysis of Chandler wobble excitation, reconstructed from observations of the Earth's polar motion*

(at Observatoire de Paris: Salle Cassini)

18:30-19:30: Exhibition from archives of Paris Observatory library

19:30-22:00: Conference dinner (Salle Cassini) and "Best Poster Award"

Wednesday 22 September 2010

(at ENS: amphithéâtre Dussane)

9:00-11:00: Session 5 - Pulsars timing, relativity and time transfer *(Chair: J. Souchay)*

Kopeikin S. (invited): *An extension of the IAU framework for reference systems*
Hobbs G. (invited): *Developing a pulsar-based time scale*
Rodin A.: *Ensemble pulsar time scale*
Korotkova N., Ilyasov Yu. P., Pshirkov M. S.: *IPTA and sensitivity of radio telescopes*
Cognard I.: *High precision pulsar timing: Nancay and the European Pulsar Timing Array*
Gusev A.: *Chandler wobble and Free Core Nutations of single pulsar*
Soffel M., Klioner S., Gerlach E.: *About the MacCullagh relations in Relativity*

11:00-11:30: Coffee-break

11:30-12:30: Session 5 (continuation) *(Chair: M. Soffel)*

Xie Y., Kopeikin S.: *Post-Newtonian mechanics of the Earth-Moon system*
Teyssandier P.: *Post-post-Newtonian light propagation without integrating geodesic equations*
Mouret S.: *Test of General Relativity with the Gaia mission*
Lamine B., Courty J.-M., Reynaud S., Jaekel M.-T.: *Testing gravity law in the solar system*

Discussion

12:30-12:45: Closing of the Journées 2010

Announcement of the Journées 2011

13:00-14:00: Lunch break
(at the canteen of Paris Observatory)

14:00-16:30: WG and task group meetings (in meeting rooms of Paris Observatory)

LIST OF POSTERS

Session 1

1.1 Débarbat S., Passeron I.: *From old weights and measures to the SI as a numerical standard for the world*
1.2 Kudryavtsev S.: *An effect in satellite motion non-modeled by the current numerical standards*

Session 2

2.1 Kaplan G.: *Session 2 Introductory remarks*
2.2 Barache C., Bouquillon S., Carlucci T., Deleflie F., Francou G., Manche H., Samain E., Torre J-M.: *Web Interface for Lunar Laser Ranging observations*
2.3 Cottereau L.: *A dynamical study of Phoebe's rotation*
2.4 Francou G., Simon J.L.: *New analytical planetary theories VSOP2010*
2.5 Giorgini J.: *Summary and Status of the Horizons Ephemeris System*
2.6 Hilton J, Hohenkerk C.: *A comparison of the high accuracy Planetary Ephemerides DE421, EPM2008, and INPOP08*
2.7 Marco F., Martnez, M.J., Lpez J.A.: *Propagation in time of errors for the mutual inclination of satellites*
2.8 Weratschnig J., Taylor D.B., Bell S.A., Hilton J., Sinclair A.T.: *Calculation of Lunar Librations in The Astronomical Almanac using JPL Lunar Ephemerides*

Session 3

3.1 Andrei A.H., Gontier A.-M. , Barache C., da Silva Neto D.N., Taris F., Bourda G. , LeCampion J.-F., Souchay J., Camargo J.I.B., Pereira Osrio J.J. , Assafin M., Vieira Martins R., Bouquillon S., Anton S.:*Gaia Initial Quasar Catalogue Updates: morphology and variability*
3.2 Yatskiv Ya., Bolotin S., Lytvyn S.: *The MAOC08a combined catalogue of radio source positions created in the course of preparation for the ICRF2 Journes 2010 "Systmes de rfrence spatio-temporels"*

Session 4

4.1 Aleshkina E.: *On correlation between variations in Earth rotation and frequency of earthquakes*
4.2 Abarca Del Rio R., Gambis, D.: *Relationship between solar activity and the Earth rotation; re-analyses*
4.3 Bizouard C., Lambert S., Remus F., Seoane L., Gambis D.: *The source of the variable Chandler wobble*
4.4 Capitaine N., Folgueira, M.: *Earth rotation based on the coordinates of the CIP in the GCRS: solution for a rigid Earth*
4.5 Chapanov Y., Gambis D.: *Variations of the Earth main moments of inertia due to glacial cycles for the last 800 Ka*
4.6 Hefty J., Gerhatova L., Burgan J.: *Combination of GPS and GLONASS in Precise Point Positioning algorithms and its effect on site coordinates determination*
4.7 Kudlay O.: *Solution and an analysis of the general celestial body rotation problem*
4.8 Kudryashova M., Lambert S., Defraigne P., Dehant V., Bruyninx C.: *Determination of nutation offsets by combining VLBI/GPS-produced normal equations*
4.9 Lambert S., Gontier A.-M., Barache C.: *Operational and research activity at the Paris Observatory VLBI analysis*
4.10 Lambert S., Gontier A.-M.: *Physical characteristics of the ICRF2 quasars*
4.11 Malkin Z.: *Using modified Allan variance for time series analysis*

Session 5