

JOURNÉES 2002 SYSTÈMES DE RÉFÉRENCE SPATIO-TEMPORELS

“Astrometry from ground and from space”

“Astrométrie au sol et dans l’espace”

Scientific Organising Committee: Brzezinski A., Poland; Capitaine N. (Chair), France; Defraigne P., Belgium; Kovalevsky J., France; Soffel M., Germany; Vondrák J., Czech R.; Yatskiv Y., Ukraine.

Local Organising Committee: Mioc V., Popescu P., Stavinschi M. (Chair)

Astronomical Institute of the Romanian Academy, Bucharest, RO-040558, Romania

Venue : Institut Français (Bucharest)

SCIENTIFIC PROGRAMME

Wednesday, 25 September: 14 h 30 – 18 h 00

OPENING OF THE JOURNÉES 2002 : Introduction and presentation

N. Capitaine and M. Stavinschi

SESSION 1a. – KINEMATICAL AND DYNAMICAL CELESTIAL REFERENCE SYSTEMS

Invited papers

M. SOFFEL, S. KLIONER : *Relativity for astrometry at the microarcsecond level*

J. CHAPRONT, G. FRANCOU: *The lunar ephemeris ELP2000 revisited*

Oral communications

G. DAMLJANOVIC, J. SOUCHAY: *Cross-identification of HIPPARCOS-2MASS second incremental data release*

Z. ZHU: *Hipparcos proper-motion system with respect to FK5 and SPM 2.0 systems*

G. PINIGIN et al.: *Refinement of linking optical-radio reference frames on the basis of collaborative observatories in international joint project*

R. TEIXEIRA et al.: *Optical position and proper motion of X-Ray sources south-eastern of the Ophiuchus molecular clouds*

B. COLL: *A principal positioning system for the Earth*

Oral presentation of posters (Sessions 1 and 2)

Thursday, 26 September: 9 h 00 – 13 h 00

SESSION 1b – CELESTIAL AND TERRESTRIAL REFERENCE SYSTEMS

Invited papers

P. CHARLOT: *Extending and improving the ICRF*

J. VONDRAK, C. RON: *An improved optical reference frame for long-term Earth rotation studies*

H. SCHUH, W. SCHLUETER, N. VANDENBERG: *Prospective improvements of IVS products and evolution of observing programs*

Ya. YATSKIV et al.: *Recent compiled catalogue of radio source positions RSC(GAO UA) 01 C01*

N. CAPITAIN: *Accurate formulation for the transformation between the Terrestrial and Celestial Reference Systems*

Oral communications

R. POPESCU, P. POPESCU and O. BĂDESCU: *Deflection of the vertical in Bucharest derived from geodetic astronomical observations*

S. LAMBERT, Ch. BIZOUARD: *Positioning the Terrestrial Ephemeris Origin in the International Terrestrial Reference Frame*

V. MIOC: *Earth’s rotation and stability of satellite orbits*

Oral presentation of posters (Sessions 3 and 4)

Thursday, 26 September: 14 h 30 – 18 h 00

SESSION 2 – THEORY OF EARTH ROTATION

Invited papers

- A. BRZEZINSKI, S. MATHEWS: *Recent advances in modeling the lunisolar perturbation in polar motion corresponding to high frequency nutation: report on the discussion of the IAU Comm.19 WG on Nutation*
O. de VIRON et al.: *Nutation residuals and physics of the Earth's interior*
A. ESCAPA, J. GETINO, J. M. FERRANDIZ: *Variational approach to the rotational dynamics of a three-layer Earth model; fluid outer core dynamics*
Ch. BIZOUARD, S. LAMBERT: *Variable processes in polar motion and length of day*

Oral communications

- W. KOSEK: *Polar motion prediction by different methods in polar coordinates system*
O. KUDLAY: *Precise Analysis of EOP Series; an attempt to distinguish chaotic and non-stationary processes*
J. SOUCHAY, M. FOLGUEIRA: *Free motion of rigid and elastic bodies with respect to inertial frame*
V. E. ZHAROV, S. L. PASYNOK: *Theory of nutation of the non-rigid Earth with the atmosphere*
V. MIOC, M. STAVINSCHI: *Martian rotation influence on eccentric trajectories of orbiters*

POSTER SESSION

CONFERENCE : 19 h 00

Friday, 27 September: 9 h 00 – 12 h 00

SESSION 3 – SPACE AND GROUND-BASED ASTROMETRY

Oral communications

- G. DAIGNE: *Al-sky surveys and optical interferometers: complementary tools in building frames?*
F. MIGNARD, J. KOVALEVSKY: *Space astrometry missions: common principles and objectives*
M. STAVINSCHI: *The IAU Working Group "Future developments in ground-based astrometry"*
J. L. MUINOS et al.: *Observations with our CCD transit circle in Argentina*
A.H. ANDREI et al.: *Solar diameter observations on the maximum of Cycle 23*
G. BOCSA: *Precise positions and magnitude for Pluto in 1932 and 1967-1975 at Bucharest Observatory*
C. RON, J. VONDRÁK: *An improved star catalogue for Ondrejov PZT*
C. DUCOURANT et al.: *Proper motion survey in the Bordeaux M2000 zone*

Discussion of the IAU Working Group including short communications

- G. PINIGIN: *Limit capabilities of ground-based optical astrometry instrumentation*
R. POPESCU, P. POPESCU, P. PARASCHIV: *Preliminary tests for CCD observations of mutual phenomena in Bucharest*

CONFERENCE : 12 h 00 -13 h 00

Concluding paper of Session 3 and discussion

- J. KOVALEVSKY: *Synthesis of possible programs using small ground-based astrometric instruments*

Friday, 27 September: 14 h 00 – 18 h 00

SESSION 4 – TIME, TIME TRANSFER AND EARTH ROTATION

Invited papers

S. DEBARBAT, M. LERNER: *La rotation de la Terre de l'Antiquité à l'aube du XXe siècle*
D. GAMBIS, D. ABARCA del RIO and D. SALSTEIN: *Solar activity and Earth rotation variability from interannual to decadal times scales*

Oral communications

M. SOMA, K. TANAKAWA, K.A. KAWABATA: *Earth's rotation in the 7th century derived from eclipse records in Japan and China*
P. TEYSSANDIER, B. LINET: *Time transfer and frequency shift to the order $1/c^4$ in the field of an axisymmetric rotating body*
C. MANDACHE et al.: *The atomic frequency standards and the time measurement*
P. PARASCHIV, P. POPESCU: *Long-term stability of Rhode&Schwarz quartz clocks*

CLOSING SESSION OF THE JOURNEES 2002

LIST OF POSTERS

SESSIONS 1a and 1b – REFERENCE SYSTEMS

Yu. BABENKO et al.: *Reduction of compiled catalogue in the selected extragalactic radio sources fields*
E. DROBITKO, V. VITYAZEV: *HIPPARCOS Kinematics of nearby and distant stars*
M. FUJISHITA: *Problems to construct the radio celestial reference frame using VERA*
E. KAZAKEVICH, V. ORLOV, V. VITYAZEV: *HIPPARCOS, search for stellar groups*
E. KAZAKEVICH, V. VITYAZEV: *TYCHO2, the wavelet search for stellar groups*

SESSION 2 – THEORY OF EARTH ROTATION

G. BOURDA: *Earth rotation and gravitational potential*
A. ESCAPA, J. M. FERRÁNDIZ, J. GETINO: *Quasi-semidiurnal nutations induced by the indirect effect of the triaxiality of the Earth : Rigid and non-rigid models*
A. KORSUN, G. KURBASOVA: *Dynamical study of Siberian anticyclone and Earth rotation*
Y. XIA, C. ZHANG: *Martian precession and nutation*
V. E. ZHAROV, S.L. PASYNOK, J. GETINO: *Comparative analysis of the new nutation series*

SESSION 3 – SPACE AND GROUND-BASED ASTROMETRY

A. H. ANDREI et al.: *Radio structure effects on the optical and radio representations of the ICRF*
Yu. BABENKO et al.: *Kyiv meridian axial telescope observation programs: First results*
M. BOUGEARD: *Statistical methods in application to astrometry*
R. LANGHANS: *A universal computer program for high precision position determination of minor planets on CCD-frames*
R. LANGHANS, V. MALYUTO, H. POTTHOFF: *Calculated differential color refraction confronted with observed stellar positions*
M. POGORELTSEV, O. VERTYPOLOKH, Yu. BABENKO: *Application of the "Scanner+MIDAS" complex for processing astrometric photographic plates*
Z. TANG et al.: *Rigorous vectorial formulae for block-adjustment and application extending FOV of CCD*
O. VERTYPOLOKH, YU. BABENKO, P. LAZORENKO: *Devices for reduction of CCD distortion under scan mode*