

PREFACE

The Journées 2011 “Systèmes de référence spatio-temporels”, with the sub-title “Earth rotation, reference systems and celestial mechanics: Synergies of geodesy and astronomy”, were organized from 19th to 21st of September 2011 by the Institute of Geodesy and Geophysics (IGG) of the Vienna University of Technology (TU Vienna), Austria; they were co-sponsored by the International Astronomical Union (IAU) and the International Association of Geodesy (IAG). The venue of the scientific sessions was at Bundesamt für Eich-und Vermessungswesen (BEV). These Journées were the 21st meeting in the Journées conference series, which provide an international forum for advanced discussion in the fields of space and time reference systems, Earth rotation, dynamics of the solar system, astrometry and time. The Journées were organized in Paris each year from 1988 to 1992, and then, since 1994, alternately in Paris (in 1994, 1996, 1998, 2000, 2004, 2007 and 2010) and other European cities, namely Warsaw in 1995 and 2005, Prague in 1997, Dresden in 1999 and 2008, Brussels in 2001, Bucharest in 2002 and St. Petersburg in 2003. Such an organization has been the result of an active and continuing cooperation between the Department “Systèmes de Référence Temps Espace” (SYRTE) of Paris Observatory and other institutions in Europe working in the same field.

The Journées 2011 were focused on issues related to recent developments in fundamental astronomy, time and relativity, plans for the next generation of astronomical space and time reference systems, Earth rotation and global geodynamics, celestial mechanics of solar system bodies, space observations and dedicated missions for geodesy and astronomy. There have been presentations and discussions related to the IAU Division 1 Working Groups, or Division 1 Commissions with potential recommendations to be submitted at the XXVIII General Assembly of the IAU in Beijing (August 2012). These recommendations concerned in particular a redefinition of the astronomical unit, nomenclature for nutation model or Universal Time and standardizing access to ephemerides; they also concerned the establishment of new working groups on pulsar time or on the definition and realization of the future ICRS and the organization of Division 1 within the new IAU structure.

There were 100 participants, coming from 21 different countries. The scientific programme included 10 invited papers, 47 oral communications and 25 posters; it was composed of the five following sessions:

Session 1: Fundamental astronomy, time and relativity;

Session 2: Towards the next generation of space-time reference systems;

Session 3: Modelling, observation and prediction of Earth rotation and global geodynamics;

Session 4: Celestial mechanics of solar system bodies;

Session 5: Space observations and dedicated missions for geodesy and astronomy;

Discussion - On future IAU recommendations and organization.

In addition to these scientific activities, the participants met on Monday 19th of September for a welcome drink after the poster session and on Tuesday evening 20th of September for a conference dinner at the restaurant and vineyard-estate ‘Fuhrgassl-Huber’ in Neustift am Walde.

The Proceedings are published thanks to a financial support from the IGG of TU Vienna; they are divided into five sections corresponding to the sessions of the meeting. The table of contents is given on pages iii to v, the list of participants on pages vii and viii, the scientific programme and list of posters on pages ix to xiii. The Postface on page 273 gives the first announcement for the “Journées” 2013 that will be held at Paris Observatory (France) on September 2013 (16-18 or 23-25).

We thank here all the participants in the Journées 2011 and all the institutions that supported this meeting. We are very grateful to the Scientific Organizing Committee (SOC) for its active role in the elaboration of the scientific programme and to all the authors of the papers for their valuable contributions. On behalf of the SOC, we thank the Local Organizing Committee for the very efficient preparation of the meeting and the very good local conditions and organization. We are also very grateful to S. Böhm, T. Nilsson and M. Schindelegger for their efficient work for the preparation of these Proceedings.

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Co-Chairs of the SOC

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