

## PREFACE

The Journées 2014 “Systèmes de référence spatio-temporels”, with the sub-title “Recent developments and prospects in ground-based and space astrometry”, were organized at Pulkovo Observatory, from 22 to 24 September 2014, and were included in the program of celebrating of the 175th anniversary of the Pulkovo observatory. They were organized in cooperation with the Paris Observatory (“Systèmes de Référence Temps Espace” (SYRTE) Department) and were co-sponsored by the International Astronomical Union (IAU), the International Association of Geodesy (IAG), the Government of St. Petersburg, Dynasty Foundation, and Russian Foundation for Basic Research.

The Journées 2014 were the 23rd meeting in this series of international meetings, whose main purpose is to provide an international forum for advanced discussion in the fields of space and time reference systems, Earth rotation, 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, 2010 and 2013) and other European cities, namely Warsaw in 1995 and 2005, Prague in 1997, Dresden in 1999 and 2008, Brussels in 2001, Bucharest in 2002, St. Petersburg in 2003 and Vienna in 2011. Such an organization has been the result of an active and continuing cooperation between the SYRTE Department of Paris Observatory and other institutions in Europe.

The scientific programme of the Journées 2014 was focused on the issues related to the recent developments and new challenges in astronomical space and time reference systems and their relativistic aspects, realization of the next ICRF, astrometric catalogs, Earth rotation and geodynamics, astronomical almanacs and software, and planetary ephemerides. A special session was devoted to the history of the Pulkovo observatory.

There were 87 participants, coming from 16 different countries. The scientific programme included 7 invited talks, 44 oral presentations and 34 posters; it was composed of the following sessions:

- Session 1: Celestial reference system and frame
- Session 2: Relativity and time scales
- Session 3: Solar and extrasolar systems dynamics
- Sub-Session on the “IAU/IAG Joint Working Group on Theory of Earth Rotation”
- Session 4: Earth’s rotation and geodynamics
- Session 5: Astronomical almanacs and software

The sessions included several discussions on issues related to e.g. the Working Group on “Theory of Earth Rotation” and the future of almanac services. A general discussion was devoted to the reorganization of the IAU structure. Business meetings of the IAU Commission 19 and of the SOFA IAU Working Group were also organized in association with these Journées.

In addition to these scientific activities, the participants met for a cocktail and a conference dinner in the Pulkovo Observatory on Monday and Tuesday evening 22 and 23 September, respectively. A special excursion on the Pulkovo Observatory took place on 24 September after the closing of the meeting. PDF version of the presentations made at the Journées 2014, as well as other information related to the meeting are available at <http://www.gao.spb.ru/english/as/j2014/home.htm>.

These Proceedings are divided into six 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 detailed scientific programme on pages ix to xiv.

The electronic version of the volume is available at <http://syрте.observatoireparis.fr/jsr/journees2014/pdf/>. According to the SOC decision it is the last Journées Proceedings published in paper form.

We thank here all the participants in the Journées 2014. We are very grateful to the Scientific Organizing Committee for its active role in the elaboration of the scientific programme and to all the authors of the papers for their valuable contributions. We are also grateful to Olivier Becker for his help for the preparation of the web site for the meeting and the on-line proceedings. On behalf of the SOC, we express our thanks to the Director of the Pulkovo Observatory and Local Organizing Committee for the very efficient preparation of the meeting and the very good local conditions and organization.

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Co-Chairs of the SOC  
30 March 2015