

HISPAC



INTERNATIONAL
SPACE
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INSTITUTE

High Performance Clocks, with Special Emphasis on Geodesy and Geophysics and Applications to Other Bodies of the Solar System

Workshop

30 November – 4 December 2015

Conveners

Véronique Dehant, Royal Observatory of Belgium, Belgium

Leonid Gurvits, Joint Institute for VLBI in Europe and Delft University of Technology, the Netherlands

Michael Kramer, Max Planck Institute, Bonn, Germany

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Rafael Rodrigo, ISSI Bern, Switzerland

Peter Wolf, SYRTE, Paris Observatory, France

John Zernecki, ISSI Bern, Switzerland

The main objective is to discuss a possible technology transfer across disciplines. The idea is to bring together scientists from space research and ground development, from time transfer techniques and radio-science missions; from the time/frequency community, as well as from the Earth sciences, fundamental physics and solar system exploration communities, in order to study, e.g., by extensive numerical simulation, possible improvements in applications when including local clock measurements at 10-18 (1 cm level in geopotential height difference). The outcome would be proposals for improvements (if any) in a number of research fields. For example, in Earth sciences, improvements could concern global and regional gravity field models, with specific geophysical applications when using in combination different satellite data (GOCE, GRACE, etc.), ground gravimetry and leveling, precise positioning, etc. New proposals for solar-system exploration and for fundamental physics are also expected outcomes of this workshop.