

PROGRAM



SPACE SPECTRUM SURVEY 2012



2ND WORKSHOP ON SPECTRUM SURVEY FOR SIGNALS FROM SPACE, SPECTRAL ANALYSIS, AND SIGNAL PROCESSING

SPACE SPECTRUM SURVEY 2012

15th and 16th November 2012, German Aerospace Center (DLR), Oberpfaffenhofen, Germany

The aim of this workshop is to provide a scientific and technological forum for the important topic of spectrum survey of space signals. Furthermore, the workshop shall provide vital information and means for space agencies and other entities in order to support space engineering and planning of future space missions (e.g. link budget consolidations, regulatory issues, science & earth observation, space operations, further development of technologies). As space frequency bands are more and more occupied by unintentional interfering signals, spectral observations in these bands are now quasi-mandatory for space engineering; that is the design of new air-interfaces using signals transmitted between the earth and satellites, e.g. (Argos evolutions, global navigation satellite systems (GNSS) evolution, new telemetry, tracking and command (TT&C) systems, etc ...) or the design of scientific passive spaceborne radio observation systems (radiometers, reflectometers, ...). The considered space signals are therefore signals transmitted from space, or signals received by space platforms for scientific or operational purposes. The considered spectrum monitoring hardwares could be located on earth, airborne, spaceborne, ... The contributions to this workshop mainly focus on space spectrum survey including hardware and software, as well as spectral analysis and signal processing methods. The workshop is free of charge.

15th November 2012

09:30h-10:00h: Registration

10:00h-10:30h: Welcome

10:30h-12:00h : System Aspects and Regulatory Issues

- 10:30h-11:00h: Galileo – Recent Activities, C. Weber (DLR GfR)
- 11:00h-11:30h: How to Implement New Technologies and Applications in a Regulated Radio Frequency Spectrum Environment, R. Ewald (DLR)
- 11:30h-12:00h: Analysis of GNSS Interference Impact on Society and Evaluation of Spectrum Protection Strategies, R. Jr. Landry (LASSENA, École de Technologie Supérieure (ÉTS), Montreal (Qc)) and D. A. Sanou (LASSENA, ÉTS, Montreal (Qc))

12:00h-13:00h : Lunch

13:00h-14:30h : Space Spectrum Survey from Earth

- 13:00h-13:30h: Signal in Space (SIS) Analysis of New GNSS Satellites, P. Schmidt (DLR), J. Furthner (DLR), S. Thoelet (DLR), and M. Meurer (DLR)
- 13:30h-14:00h: Design, Development and First Results of an Interference Monitor System for GNSS Reference Stations, J. Wendel (Astrium GmbH), C. Kurzhals (Astrium GmbH), M. Houdek (Iguassu Software Systems), and J. Samson (ESA)
- 14:00h-14:30h: GNSS Signal Spectrum Determination using the Long Coherent Integration (LCI) Method, L. Lestarquit, P. Thevenon and Y. Gregoire (CNES); Eulalia Benito Llauro (Altran)

14:30-15:00h : Coffee Break

15:00h-16:00h : Space Spectrum Survey from Space

- 15:00h-15:30h: Use of a New X Band TMHD for Spectrum Survey with Cubesat, G.Guillois (Syrlinks), T.Dehaene (Syrlinks), G. Richard (Syrlinks), E.Peragin (CNES), T. Robert (CNES), and J-L.Issler (CNES)
- 15:30h-16:00h: Maritime Surveillance Using High Resolution TerraSAR-X Data, S. Lehner (DLR), S. Brusch (DLR), E. Schwarz (DLR)

16th November 2012

09:30h-11:30h : Signal Processing

- 09:30h-10:00h: JRC Activities on the Compatibility between LightSquared and GNSS Signals, C. O'Driscoll (EC JRC), D. Borio (EC JRC), and J. Fortuny (EC JRC)
- 10:00h-10:30h: A Compressed Sensing Analog to Information Converter for GNSS Interference Detection, A. Rügamer (Fraunhofer IIS), I. Lukčič (Fraunhofer IIS), G. Rohmer (Fraunhofer IIS), and J. Thielecke (Friedrich-Alexander University of Erlangen-Nuremberg)
- 10:30h-11:00h: GNSS Vulnerability and Mitigation Techniques: Development of a GNSS Position and Timing Authentication Testbed, O. Pozzobon (Qascom), C. Sarto (Qascom), A. Dalla Chiara (Qascom), G. Gamba (Qascom), M. Crisci (ESA), and R.T Ioannides (ESA)
- 11:00h-11:30h: Limitations of Geolocation Systems ?, L. Sterenberg (Thales Alenia Space France) and M. Huan (Thales Alenia Space France)

11:30h-12:00h : Discussion

12:00h : Lunch

Location

German Aerospace Center (DLR), Oberpfaffenhofen - how to get there

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The Oberpfaffenhofen site is approximately 25 km west of Munich on the Munich-Lindau motorway (A96).



DLR - Oberpfaffenhofen - [Journey](#)