



Préliminary Program

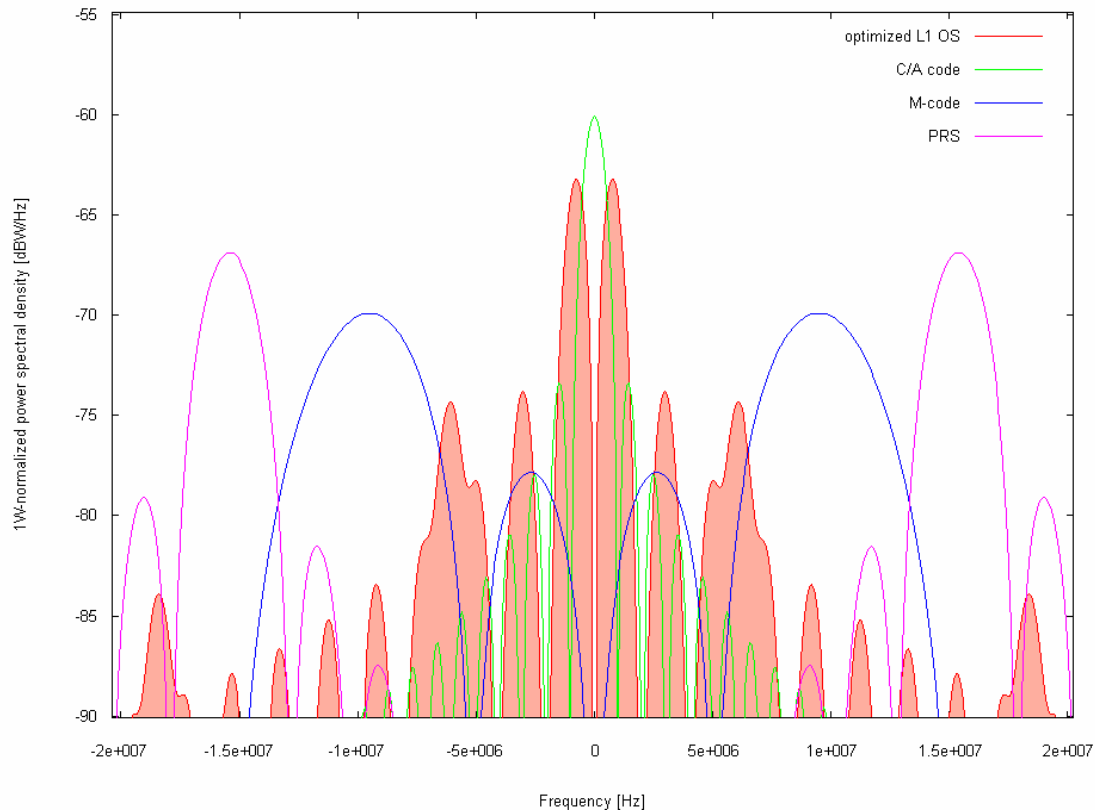
GNSS SIGNAL 2008



3rd CNES Workshop on

GNSS SIGNALS AND SIGNAL PROCESSING

21 & 22 APRIL 2008, IAS (INSTITUT AERO SPATIAL) TOULOUSE, FRANCE



The aim of this workshop is to provide an overview of the GNSS Signal definition, characteristics and performances related to any of the L, S and C navigation services. The use of GNSS signals for navigation and timing, science and 3 frequencies aeronautical or high precision applications will be considered. The selected papers mainly focus on signal processing aspects. **The Workshop is free of charge.**

Full papers up to 8 pages are required for publication: 15 mai 2008 and have to be sent to the workshop chairmen's addresses : jean-luc.issler@cnes.fr; jean-luc.gerner@esa.int. Free registrations to attend the workshop have to be made on the following website before the 15 april 2008 if possible: <http://cnes.cborg.net/cct/bipublic.html> (CNES CCT : Centre de Compétence Technique : Traitement du Signal et des Images + Positionnement et Datation par Satellites).



MONDAY 21 APRIL 2008 (NEW GNSS SIGNALS DAY)

8H45	9H00	WORKSHOP OPENING by : Jean-Luc Issler (CNES/CST), Jean-Luc Gerner (ESA/ESTEC)
9H00	9H15	Overview of the QZSS Signal plan S. Kogure (JAXA, Japan)
9H15	9H40	Status on GALILEO program J. Godet (European Commission, Brussels, EU)
9H40	10H00	Contribution and justification to GALILEO-1 frequencies and signals Jean-Luc Issler (CNES, Toulouse, EU)
10H00	10H30	GNSS Constellation Simulator (GCS) Virginie Dominguez, Gilles Mesnager, Christian Peyrotte (TAS, Toulouse, EU) Jean-Marc Aymes (SMP, Toulouse, EU) Antoine de Latour, Joël Dantepal, Géraldine Artaud, Lionel Ries (CNES, Toulouse, EU)
COFFEE BREAK		
New GNSS Systems and Signals		
Chairmen : S. Kogure – JAXA -, J-L. Gerner – ESA -, R. Landry -ETS-		
11H00	11H30	The application of BOC modulation technique in CAPS system Lu Xiaochun Wu Haitao Bian Yujing Wang Xue The National Time Service Center , Chinese Academy Of Science
11H30	12H00	tutorial on the GALILEO ALTBOC signal ORIGIN AND INTERESTS OF THE ALTBOC L. Lestarquit (CNES, Toulouse, EU)
12H00	12H30	Systematic approach to optimum chip pulse shape design F. Antreich, J A Nossek (DLR, Munchen, EU) J-L. Issler (CNES, Toulouse, EU)
12H30	14H00	LUNCH
Mitigation techniques :		
Chairmen Oliver Julien -ENAC-, Gustavo Lopez-Risueño –ESA-, Frederic Bastide –GSA-		
14H00	14H30	Enlarging transmitting GNSS satellite filter bandwidth to improve performance and compatible with protection of non-GNSS side receptions Jean-Luc Issler (CNES, Toulouse, EU)
14H30	15H00	RFI mitigation of GNSS signals for radio astronomy: problems and current techniques André Gilloire, Hervé Sizun (Association Observation Radio – 22560 Pleumeur Bodou – EU)
15H00	15H30	Compatibility of E1 signals with radio Astronomy Olivier Julien (ENAC, Toulouse, EU) Jean-Luc Issler (CNES, Toulouse, EU)
16H00	16H30	New processing techniques in the presence of multipath Fadoua Brahim, Thierry Chonavel (TÉLÉCOM Bretagne, Plouzané, EU)
16H30	17H00	SBAS C/A code interferences characterization and mitigation Olivier Nouvel, Matthieu Sihrener (M3SYSTEMS, Lavernoz, EU) Laurent Lestarquit, Jean-Luc Issler (CNES, Toulouse, EU) Christophe Macabiau, Olivier Julien (ENAC, Toulouse, EU)
17H00	17H30	Panel discussions about new GNSS signals, their bandwidth and accuracy

TWESDAY 21 APRIL 2008 (GNSS RECEIVERS AND SIGNAL PROCESSING DAY)

Spaceborne GNSS receivers :
Chairmen Huang Puming –CAST-, Antoine de Latour -CNES-

9H00	9H30	Contribution to the use of GNSS receivers in space J-L. Issler, A. de Latour, L. Lestarquit, M. Grondin, L. Ries (CNES, Toulouse, EU)
9H30	10H00	Precise geosynchronous orbit/time determination using spaceborne GPS receiver without on board atomic clock J-B. Thevenet, C. Peyrotte, C. Melhen (TAS, Toulouse + Cannes, EU) E. Colzi (ESA, Toulouse, EU)
10H00	10H30	BOC Signal performance and algorithmes for direct conversion receivers R. M. Weiler, P. Blunt (Surrey Space Center, Guilflord, EU) A. Morris, M. Unwin, S. Hodgart (Surrey Satellite Technology LD, Guildford, EU)

COFFEE BREAK

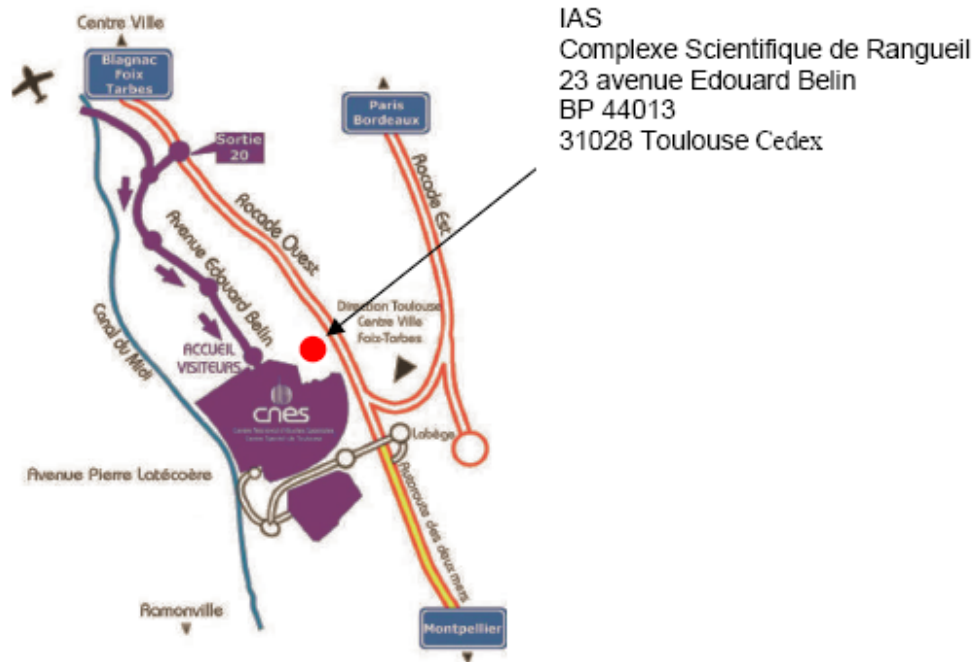
GNSS RECEIVERS and SIGNAL PROCESSING
Chairmen : Antony R. Pratt –DSTL- , Manuela Rapisarda –ESA- , Felix Antreich -DLR-

11H00	11H30	Architecture of the GALILEO TUS receiver for coherent ALTBOC tracking N. Martin, H. Guichon (Thales Avionics, Valence, EU) M. Hollreiser, J. De Mateo (ESA/ESTEC, Noordwijck, EU)
11H30	12H00	GNSS Receiver Test Bench G. Artaud, L. Ries, M. Jeannot, J. Dantepal, D. Zobler (CNES, Toulouse, EU)
12H00	12H30	ORUS open receiver; GALILEO CBOC signal processing F. Benghouzi (M3Systems, Lavernoze, EU) J. Perello Gisbert (ESA/ESTEC, Noordwijck, EU)

LUNCH

GNSS SIGNAL PROCESSING AND MODELING
Chairmen : Christoph Guenther –DLR- , Francesco Longo –ASI-

14H00	14H30	Effect of Noise Processes on Tracking Loops of GNSS Receivers Jari Mannermaa, Qin Zhengdi (Nokia, Tampere, EU)
14H30	15H00	GALILEO CBOC tracking by accumulation José Diez (DEIMOS space, Madrid, EU) João S. Sylva (DEIMOS Engenharia, Lisbon, EU)
15H00	15H30	Impact of correlation on the accuracy of signals of the same carrier M. Rapisarda, T. Burger (ESA/ESTEC, Noordwijck, EU)
15H30	16H30	A Model for the Surface Scattering of BOC Signals James L. Garrison (University of Purdue, USA)
16H30	17H00	Interest of GPS reflected signal to characterize the surface of beaches S. Reboul, A. Gardel (Université du Littoral Cote d'Opale , Callais, EU)
17H00	17H30	Panel discussion on future GNSS signal processings and receivers



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