



**Hindawi Publishing Corporation**

## International Journal of Navigation and Observation

International Journal of Navigation and Observation  
Volume 2008 (2008), Article ID 793868, 9 pages  
doi:10.1155/2008/793868

### Research Article

## Comparison between Galileo CBOC Candidates and BOC(1,1) in Terms of Detection Performance

Fabio Dovis,<sup>1</sup> Letizia Lo Presti,<sup>1</sup> Maurizio Fantino,<sup>2</sup> Paolo Mulassano,<sup>1</sup> and Godet<sup>3</sup>

<sup>1</sup>Dipartimento di Elettronica, Politecnico di Torino, Corso Duca degli Abruzzi, 10129 Torino, Italy

<sup>2</sup>Istituto Superiore Mario Boella, Corso Castellidardo 30/A, 10138 Torino, Italy

<sup>3</sup>Galileo Unit, European Commission DG-Tren, 28 Rue de Mot, 10490 Luxembourg, Luxembourg

Received 31 July 2007; Revised 30 December 2007; Accepted 25 February 2008

Academic Editor: Gerard Lachapelle

### Abstract

Many scientific activities within the navigation field have been focused on the development of both GPS L1C and Galileo E1 OS, after the 2004 agreement between the two systems. The joint effort by scientists of both systems has led to the development of binary offset carrier (MBOC) which is defined on the basis of its spectrum. The goal of this paper is to compare the performance of the composite BOC implementation of an MBOC signal in terms of detection performance. The comparison among the CBOC and BOC(1,1) modulations is also presented. The goal is to have excellent tracking performance and multipath rejection capability.

Copyright © 2009 Hindawi Publishing Corporation. All rights reserved.