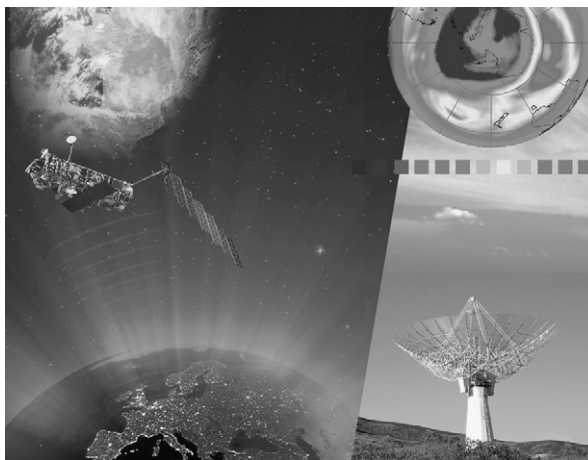


# COMPTES RENDUS PHYSIQUE

Tome 11 (2010) – N° 1



Cover illustration: Atelier Isatis - Dijon

## DOSSIER

Propagation and remote sensing / *Propagation et télédétection*

Guest editor / *Rédacteur en chef invité* : Jean Isnard

- Foreword  
**Jean Isnard** ..... 2
- Characterization, modeling and simulation of the MIMO propagation channel  
**Ghaïs El Zein, Hanna Farhat, Patrice Pajusco, Jean-Marc Conrat, Yves Lostanlen, Rodolphe Vauzelle, Yannis Pousset** ..... 7
- Assessment of rain fade mitigation techniques in the EHF band on a Syracuse 3 20/44-GHz low elevation link  
**L. de Montera, L. Barthès, C. Mallet, P. Golé, T. Marsault** ..... 18
- Coupled reverberation chambers for emulating MIMO channels  
**Olivier Delangre, Philippe De Doncker, Martine Lienard, Pierre Degauque** ..... 30
- Focusing and amplification of electromagnetic waves by time reversal in a leaky reverberation chamber  
**Matthieu Davy, Julien de Rosny, Jean-Christophe Joly, Mathias Fink** ..... 37
- Radio wave propagation in arch-shaped tunnels: Measurements and simulations by asymptotic methods  
**E. Masson, P. Combeau, Y. Cocheril, M. Berbineau, L. Aveneau, R. Vauzelle** ..... 44
- Radar monitoring of a wake vortex: Electromagnetic reflection of wake turbulence in clear air  
**Frédéric Barbaresco, Uwe Meier** ..... 54
- Monostatic Radar Cross Section of an object above a sea surface from a rigorous method  
**Gildas Kubické, Christophe Bourlier, Joseph Saillard** ..... 68

*Suite du sommaire page suivante*

*Sommaire (suite)*

- Low-grazing angles scattering of electromagnetic waves from one-dimensional natural surfaces: Rigorous and approximate theories  
**G. Soriano, P. Spiga, M. Saillard** ..... 77
- Modelling of the electromagnetic scattering by sea surfaces at grazing incidence. Application to HF surface wave radars  
**Yaël Demarty, Laetitia Thirion-Lefevre, Vincent Gobin** ..... 87
- Observing ice clouds with a Doppler cloud radar  
**Artemio Plana-Fattori, Alain Protat, Julien Delanoë** ..... 96
- New polarimetric signal subspace detectors for SAR processors  
**Frédéric Brigui, Laetitia Thirion-Lefevre, Guillaume Ginolhac, Philippe Forster** ..... 104
- Radio sciences and disaster management  
**Tullio Joseph Tanzi, François Lefeuvre** ..... 114