



Hindawi Publishing Corporation

International Journal of Navigation and Observation

International Journal of Navigation and Observation
Volume 2008 (2008), Article ID 347518, 14 pages
doi:10.1155/2008/347518

Research Article

An Analysis of X-Band Calibrated Sea Clutter and Small Boat Reflectivity at Medium-to-Low Angles

P. L. Herselman,¹ C. J. Baker,² and H. J. de Wind¹

¹CSIR Defence, Peace, Safety and Security, P.O. Box 395, Pretoria

²Department of Electronic and Electrical Engineering, University College London, UK

Received 15 February 2008; Accepted 4 June 2008

Academic Editor: Simon Watts

Abstract

The coherent temporal characteristics of medium-to-low grazing clutter are considered for different radar waveforms under a range of environmental conditions. Accurate empirical modelling of sea clutter enables the inference of clutter characteristics pertinent for port safety and navigation. Understanding the dynamics of clutter, in addition to empirical sea clutter models, allows the development of models which will improve the performance of surveillance and marine navigation. This is based on the empirical analysis of data recorded with two calibration frequencies. Specifically, target echoes from small boats are included.

Copyright © 2009 Hindawi Publishing Corporation. All rights reserved.