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5.5 Imaging Algorithms Based on Accurate Implicit Spectrums5.6 Comparison of the Algorithms; 5.7 Summary; References; Chapter 6: Imaging Algorithm for Translational Variant Bistatic SAR; 6.1 Introduction; 6.2 Imaging Algorithms for One-Stationary Bistatic SAR; 6.3 Imaging Algorithms for Translational Variant Bistatic SAR with Constant Velocities; 6.4 Summary; References; Chapter 7: Bistatic SAR Parameter Estimation and Motion Compensation; 7.1 Introduction; 7.2 Analyzing the Effects of Motion Errors; 7.3 Estimation of Doppler Parameters; 7.4 Principle and Methods of SAR Motion Compensation 7.5 SummaryReferences; Index

Sommario/riassunto

"This book focuses on bistatic SAR signal processing, mainly on imaging aspects. Topics include bistatic SAR resolution analysis, echo generation methods, imaging algorithms, imaging parameters estimation, and motion compensation methods. Qiu, Ding, and Hu begin with the history, present status and the trends of SAR development. The concept of bistatic SAR is then introduced and the key problems of bistatic SAR signal processing are described. To aid readers in understanding bistatic SAR more easily and establish a foundation of the concepts, the authors describe the theory of SAR imaging and briefly cover the traditional imaging algorithms of SAR. To give readers deeper impression of the subject the next chapters categorize bistatic SAR configurations and analyze resolution abilities for each configuration. This is followed by echo simulating methods of bistatic SAR. These are used to generate simulated scene echoes of bistaic SAR, which can provide data for the research of bistatic SAR imaging algorithms. Next, the authors describe several imaging algorithms for translational invariant bistatic SAR in detail comapre these algorithms, as well as introduce imaging algorithms for translational variant bistatic SAR configurations. This is followed by a study of the special working modes of bistatic SAR (forward- looking mode and three-dimensional resolving mode), analyzes the resolution of these bistatic SAR modes, and studies their imaging algorithms. Lastly, the authors focus on data processing technologies which are closely related to imaging, such as Doppler parameter estimation and the motion compensation method of bistatic SAR"--