

基于频域合成方法的多发多收SAR技术研究

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The Research of Multiple-input and Multiple-output SAR Based on Frequency Synthetic

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摘要

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摘要 多孔孔径子带合成技术是目前技术条件下多发多收SAR系统可工程实现的技术方案。该文深入研究了基于频域合成的子带合成技术,建立了相应的数学模型。并结合数学推导详细给出了该方法的原理和实现步骤,提出了适用于多发多收SAR系统的滤波器构建方法和算法流程,最终通过计算机仿真验证了该方法的可行性和有效性。

关键词: 合成孔径雷达 多发多收 频域合成 高分辨率 宽测绘带

Abstract: Multiple aperture sub-band synthetic technique can be realized for Multiple-input and Multiple-output SAR at the state-of-the-art level. The frequency sub-band synthetic technique is researched; The mathematical model is proposed. Combining mathematical deduction, the principle and implementation steps are presented in detail, the method for getting the filter and the image algorithm are proposed. The computer simulations show the effectiveness and feasibility of the method.

Keywords: Synthetic Aperture Radar (SAR) Multiple-Input and Multiple-Output (MIMO) Frequency synthetic High resolution Wide swath

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