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论文

基于内定标信号的合成孔径雷达系统幅相误差的提取和校正

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摘要
该文根据合成孔径雷达的三路定标设计，提出了基于内定标信号的收发系统幅相误差的提取和校正方案。与从雷达回波数据中提取系统相位误差的方法相比，该方案具有两方面的优越性：提取误差不受地物特性的限制，使用方便；不但可以提取相位误差，还可以提取系统幅度误差。经验证该方案能大大改善图像质量。

关键词 合成孔径雷达 幅相误差 内定标

分类号 TN958

Extraction and Correction of SAR Amplitude and Phase Errors Based on Internal Calibration Signal

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Abstract
Based on the design of three-path calibrator of SAR, this paper proposes one solution of obtaining system errors information from internal calibrator signal to correct the received SAR data in frequency domain. Compared with the methodology of extracting system phase errors from SAR echo data, the method addressed in this paper has two advantages: it is convenient to use since it is independent of ground objects; it can extract system phase errors as well as amplitude errors. Experimental results indicate that the method is very effective to improve image quality.

Key words Synthetic Aperture Radar (SAR) Amplitude and phase errors Internal calibration

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