

PolInSAR极化误差对最优相干相位的影响研究

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Study on the Impact of Polarimetric Error on Optimal Coherence Phase of PolInSAR

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摘要

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摘要 极化干涉SAR定量应用中,极化误差会导致最优干涉相位估计误差。该文研究了极化干涉SAR测量处理中极化误差的传递,基于极化相干最优过程理论提出了一个新极化误差传递模型。在此基础上通过仿真验证并分析了极化误差对极化干涉最优干涉相位估计的影响,其结论能为在实际应用中进行精度分析和提出定标指标要求提供理论依据和参考。

关键词: 极化干涉SAR 极化干涉相干最优 极化误差 误差传递模型

Abstract: The polarimetric error will cause optimal interferometric phase estimation error. In this paper the polarimetric error transferring in the Polarimetric Interferometric SAR (PolInSAR) measurement is studied and a new polarimetric error transfer model is proposed based on polarimetric interferometric coherence optimization. The model is proved through the experimental simulation and the impact to the precision of optimal interferometric phase estimation due to the polarimetric error is analyzed based on the model. The conclusions could provide theoretical support and reference for the precision analysis and calibration requirements in the application.

Keywords: PolInSAR Polarimetric-interferometric phase coherence optimization Polarimetric error Error transfer model

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