

论文

## 分布式SAR系统PRF误差对ATI测速的影响

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摘要

分布式SAR采用收发平台分置的飞行方式, 具有许多突出优点, 但接收机和发射机的PRF会有误差。该文根据收发分置SAR系统原理, 建立了收发分置SAR系统PRF误差对成像及干涉的影响模型, 研究了PRF误差对ATI相位及测速的影响, 并在此基础上提出了对PRF精度的要求。仿真验证了模型的有效性和要求的合理性。

关键词 [收发分置SAR](#) [沿航迹干涉\(ATI\)](#) [PRF](#) [干涉相位](#)

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## The Influence of PRF Error to Velocity Measurement in Distributed SAR

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Abstract

Distributed SAR system adopts the flight model which receivers and transmitter are in different platform, that has many prominent merits, but the receiver and transmitter's PRF can have error. The paper bases on the principle of bistatic SAR, establishes the influence model of the PRF error to imaging and interferometry, analyzes the influence of the PRF error to interferometric phase, and proposes the PRF precision request in this foundation. The simulation enunciates the validity of the model and the reasonableness of the PRF precision requirement.

Key words [Bistatic SAR](#) [Along-Track Interferometry\(ATI\)](#) [Pulse Repeat Frequency \(PRF\)](#) [Interferometric phase](#)

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