论文

斜视模式SAR的子孔径算法分析及实现

李明峰[①②], 王贞松[①]

[①]中国科学院计算技术研究所,北京,100080;[②]中国科学院电子学研究所,北京,100080

摘要
该文根据传统的子孔径算法提出了适用于斜视情况的改进的子孔径算法,该算法可以明显改善图像的质量,并有助于自聚焦算法的收敛。同时,该文还提出了一种适用于该算法结构的自适应调整比例因子的图像域杂波锁定方法,可以大大加快收敛速度并提高收敛精度。该文还详细讨论了改进的子孔径算法对存储容量的要求,提出实时处理情况下的算法流程,分析了算法的计算量并与R–D算法做了相应比较。

关键词　　子孔径算法　自适应因子调整　存储需求

分类号　TN951

Implementation and Analysis of Modified Subaperture Approach for Squint Mode Air-Borne SAR

Li Ming-feng[①②], Wang Zhen-song[①]

[①]Institute of Computing Technology; Chinese Academy of Sciences; Beijing 100080; China; [②]Institute of Electronics; Chinese Academy of Sciences, Beijing 100080,China

Abstract
For processing the data of squint mode SAR, the modified subaperture approach based on classical real-time subaperture processing is presented in this paper. This new approach can improve the image quality obviously and make the auto-focus processing converge better. At the same time, a new clutterlock algorithm of proportion factor self-adaptive in image field is introduced, which can improve the converging speed and the precision of result. In this paper, the memory requirements in the real-time processing procedures are discussed carefully. Finally, the amount of computing is analyzed and compared with that of the R-D algorithm.

Key words　Subaperture method　Auto-adjusting proportion factor　Memory requirement

DOI :

通讯作者

作者个人主页　李明峰[①②], 王贞松[①]

扩展功能

本文信息

▶ Supporting info
▶ PDF(1282KB)
▶ [HTML全文](0KB)
▶ 参考文献[PDF]
▶ 参考文献

服务与反馈

▶ 把本文推荐给朋友
▶ 加入我的书架
▶ 加入引用管理器
▶ 复制索引
▶ Email Alert
▶ 文章反馈
▶ 浏览反馈信息

相关信息

▶ 本刊中 包含"子孔径算法"的 相关文章

本文作者相关文章

- 李明峰
- 王贞松