



### 一种曲线轨迹下的大场景前斜视成像算法

刘高高\* 张林让 刘昕 刘楠 陈广锋 张波\*

西安电子科技大学雷达信号处理国家重点实验室 西安 710071

## Missile-borne Large Region Squint SAR Algorithm Based on a Curve Trajectory

Liu Gao-gao Zhang Lin-rang Liu Xin Liu Nan Chen Guang-feng Zhang Bo\*

National Lab of Radar Signal Processing, Xidian Univ., Xi'an 710071, China

摘要

参考文献

相关文章

Download: PDF (370KB) [HTML](#) 1KB Export: BibTeX or EndNote (RIS) Supporting Info

**摘要** 该文提出一种曲线轨迹下获取前向目标图像的新算法。考虑到曲线轨迹下严重的距离耦合，算法首先通过时域距离走动校正有效减少了距离耦合，然后采用级数反演法获得2维频率域表达式，求取ECS算法的相关系数，利用ECS获得了精确的成像结果。文章最后通过仿真实验验证了算法的有效性。

**关键词：** 合成孔径雷达 ECS算法 曲线轨迹 弹载 斜视 级数反演法

**Abstract:** An advanced algorithm is proposed to obtain forward-target image on a curve trajectory, which causes a serious range coupling. The algorithm decreases efficiently the coupling with Range Walk Correction (RCM) in time domain firstly. The 2-dimision frequency domain expression is presented with series reversion. The correlative coefficient of ECS algorithm is obtained, and SAR image is got with ECS. Finally simulations show the validity of the proposed algorithm.

**Keywords:** Synthetic Aperture Radar (SAR) Extended Chirp Scaling (ECS) algorithm Curve trajectory Missile-borne Squint Series reversion

Received 2010-06-03;

本文基金:

国家自然科学基金(60672130)和国家重点实验室基金资助课题

通讯作者: 刘高高 Email: liu\_gaogao@qq.com

引用本文:

刘高高, 张林让, 刘昕, 刘楠, 陈广锋, 张波. 一种曲线轨迹下的大场景前斜视成像算法[J] 电子与信息学报, 2011, V33(3): 628-633

Liu Gao-Gao, Zhang Lin-Rang, Liu Xin, Liu Nan, Chen Guang-Feng, Zhang Bo. Missile-borne Large Region Squint SAR Algorithm Based on a Curve Trajectory [J], 2011, V33(3): 628-633

链接本文:

http://jeit.ie.ac.cn/CN/10.3724/SP.J.1146.2010.00575 或 http://jeit.ie.ac.cn/CN/Y2011/V33/I3/628

#### Service

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ Email Alert
- ▶ RSS

#### 作者相关文章

- ▶ 刘高高
- ▶ 张林让
- ▶ 刘昕
- ▶ 刘楠
- ▶ 陈广锋
- ▶ 张波