



航空学报 » 2006, Vol. 27 » Issue (1) :82-86 DOI:

论文

最新目录 | 下期目录 | 过刊浏览 | 高级检索

<< Previous Articles | Next Articles >>

块自适应球形矢量量化算法压缩SAR原始数据

关振红, 朱兆达, 朱岱寅

南京航空航天大学 信息学院, 江苏 南京 210016

Compression of SAR Raw Data by Block Adaptive Spherical Vector Quantization

GUAN Zhen-hong, ZHU Zhao-da, ZHU Dai-yin

College of Information Science and Technology, Nanjing University Aeronautics and Astronautics, Nanjing 210016, China

摘要

参考文献

相关文章

Download: PDF (1822KB) HTML OKB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 提出使用块自适应球形矢量量化算法压缩SAR原始数据,该算法充分利用SAR原始数据经过自适应块处理之后在较小的数据块范围内具有稳定高斯分布的特点,使用格型矢量技术中的球形码书量化器进行量化,可以提高算法的压缩性能。通过运用球形矢量量化算法对SAR原始数据进行压缩、解压缩获取相应的SAR图像与块自适应量化和块自适应矢量量化经过同样过程得到SAR图像进行比较分析,得出块自适应球形格矢量量化算法是算法复杂度和算法性能之间比较好的折中。

关键词: 合成孔径雷达(SAR) 球形矢量量化 块自适应量化 矢量量化

Abstract: In this paper, we propose to employ the block adaptive spherical vector quantization for compression of synthetic aperture radar (SAR) raw data. This algorithm exploits the known result that a blockwise normalized SAR raw signal is a Gaussian stationary process. With the comparison and analysis of quality parameters computed on the image, the proposed block adaptive spherical vector quantization shows an interesting performance/complexity trade-off, with respect to other algorithms such as the block adaptive quantization and the block adaptive vector quantization.

Keywords: SAR spherical vector quantization block adaptive quantization vector quantization

Received 2004-11-22; published 2006-02-25

引用本文:

关振红;朱兆达;朱岱寅. 块自适应球形矢量量化算法压缩SAR原始数据[J]. 航空学报, 2006, 27(1): 82-86.

GUAN Zhen-hong; ZHU Zhao-da; ZHU Dai-yin. Compression of SAR Raw Data by Block Adaptive Spherical Vector Quantization[J]. Acta Aeronautica et Astronautica Sinica, 2006, 27(1): 82-86.

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

- ▶ 关振红
- ▶ 朱兆达
- ▶ 朱岱寅