

论文

平飞模式双站SAR成像算法研究

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摘要

双站SAR的成像技术是机载双站SAR的一个关键问题, 该文首先建立了平飞模式的双站模型, 然后在双站模型等效到单站的基础上, 对双站SAR成像方法进行了研究, 分别给出了平飞正侧视的CS双站成像算法和平飞斜侧视模式时的ECS双站成像算法, 该等效方法能够解决平飞模式的双站SAR成像问题, 最后通过计算机仿真, 验证了该算法的有效性。

关键词 [双站SAR](#) [ECS算法](#) [平飞](#)

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The Imaging Algorithm of Bistatic SAR with Parallel Track

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Abstract

The development of bistatic focusing algorithm is a pivotal issue, which is still in progress and not sufficiently solved. This paper firstly describes the special case of equal velocity vectors and parallel flight paths of transmitter and receiver, and then makes detailed and mathematical study on the approximate bistatic-to-monostatic application. Based on the Bistatic-To-Monostatic Application (BTMA), the bistatic imaging can be processed with a Standard SAR Processor, and then the conventional CS, ECS algorithm are also applicable to the bistatic imaging, which are all testified by the simulation in the paper. As a result, based on BTMA, the imaging of the bistatic SAR with parallel track can be solved.

Key words [Bistatic SAR](#) [Extended Chirp Scaling \(ECS\) algorithm](#) [Parallel track](#)

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