

一种新的稀少控制条件下机载SAR影像区域网平差方法的研究

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A New Method of Block Adjustment of Airborne SAR Images with Few GCPs

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摘要

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摘要 困难测图地区缺少控制点一直是SAR图像校正的难点之一。该文针对机载SAR影像,提出了一种新的基于F.leberl构像模型平差的方法。借鉴光束法平差方法中解算前、后方交会思想,交替趋近求解未知参量。实验结果表明,该方法不仅实现了在稀少控制点下求得定位参数的稳定解,而且有效减小了航带间同名点坐标误差,平差精度达到了单航带多控制点独立校正的水平。

关键词: 机载SAR影像 F.leberl模型 区域网平差

Abstract: Lacking of GCPs (Ground Control Points) in hard survey area is one of the most difficult problems of geometric rectification. This paper proposes a new method of large SAR image-block adjustment based on F.leberl model. The parameters of the images and ground coordinate of pass points can be calculated with the use of alternative and iterative algorithm. The result shows that this method could get steady result with few GCPs and the error of tie points can also be decreased effectively, the accuracy reaches to the lever of single-image-calibration method.

Keywords: Airborne SAR images F.leberl model Block adjustment

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