

农村发展—农业信息

星载高分辨率SAR土地利用调查监测应用潜力评价

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摘要:

近年发射的1 m/3 m高分辨率合成孔径雷达(Synthetic Aperture Radar, SAR)卫星为多云多雾地区土地利用动态遥感监测提供了重要数据源。为进一步检测高分辨率SAR卫星的适用性,采用对比分析和统计评价法,对TERRASAR、COSMO SkyMed、RADARSAT-2高分辨率SAR卫星中1 m聚束模式和3 m条带模式数据新增建设用地监测能力进行综合评价。结果表明,1 m聚束模式新增建设用地属性识别准确率可达到80%,3 m条带模式识别准确率约75%,基本新增建设用地监测应用需要。

关键词: 变化监测

Evaluation on High Spatial Resolution SAR Data for Land Use Discrimination and Land Change Detection

Abstract:

High spatial resolution Synthetic Aperture Radar (SAR) satellites (1 m/3 m) have been launched recently which provided more choice to carry out land remote sensing project. In order to evaluate its suitability, there high resolution SAR satellites were selected for evaluation including TERRASAR, COSMO SkyMed and RADARSAT-2. Comparative analysis and statistical evaluation were used. The result shows that TERRASAR, COSMO SkyMed, RADARSAT-2 had similar ability for land use discrimination and land use dynamic change detect. Spotline mode data had relative high accuracy which obtains 80% overall accuracy for land use thematic mapping while stripmap mode data only obtained less than 75% overall accuracy for the same test sites. The result showed that evaluated SAR data can be used in land use dynamic monitor project.

Keywords: Change detection

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