

技术方法

CBERS-02B星数据融合方法评价

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摘要:

CBERS—02B星(以下简称02B星)多光谱CCD数据与全色HR数据空间分辨率相差较大, 给图像融合带来一定困难。在对IHS变换、主成分分析变换、Brovey变换、GS变换等融合算法分析的基础上, 利用02B星数据进行了融合试验。通过对试验结果的目视评价与定量分析发现, PC变换和GS变换方法融合图像纹理信息较清晰, 光谱保真度较好。在GS变换融合中, 可利用02B星CCD相机第5波段模拟GS变换的低分辨率输入, 融合结果统计值优于PC变换。

关键词: CBERS—02B图像; 图像融合; 主成分变换融合; GS变换融合

DATA FUSION EVALUATION OF CBERS—02B

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Abstract:

CBERS—02B multi-spectral CCD data are considerably different from HR panchromatic data in resolution, which causes great difficulty in image fusion. Based on an analysis of such means as the IHS transform fusion method, the principal component transform fusion method, the Brovey transform fusion method and the GS transform integration algorithm, the authors tested the fusion methods on CBERS—02B data. The evaluation of the visual and quantitative analysis of the results reveals that the PC and GS transform fusion image texture information is fairly clear and has better spectral fidelity. In the GS transformation fusion, Band 5 of the CBERS—02B CCD camera can be used as the low-resolution analog input, and the result of the statistical value is better than that of the PC transform.

Keywords: CBERS—02B image; Image fusion; Principal component transform fusion; GS transform fusion;

收稿日期 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

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