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TEXTURE ANALYSIS BASED FUSION EXPERIMENTS USING HIGH-RESOLUTION SAR AND OPTICAL IMAGERY

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Abstract. High resolution SAR images contain plenty of detailed textural features, and optical images have spectral features. For the different characteristics of the two images, Firstly, we extracted textural measures of TerraSAR-X image based on the Gray Level Co-occurrence Matrix (GLCM) method, and chose the appropriate window. Then data fusion between textural measures of TerraSAR-X image and QuickBird multi-spectral image was implemented based on PCA transform, and the fusion results were quantitatively evaluated, showing that the fusion image keep spectral information well and the spatial information be enhanced.

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