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## Double Polarization SAR Image Classification based on Object-Oriented Technology

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### ABSTRACT

This paper proposed to use double polarization synthetic aperture radar (SAR) image to classify surface feature, based on DEM. It takes fully use of the polarization information and external information. This paper utilizes ENVISAT ASAR APP double-polarization data of Poyang lake area in Jiangxi Province. Compared with traditional pixel-based classification, this paper fully uses object features (color, shape, hierarchy) and accessorial DEM information. The classification accuracy improves from the original 73.7% to 91.84%. The result shows that object-oriented classification technology is suitable for double polarization SAR's high precision classification.

### KEYWORDS

Synthetic Aperture Radar, Image Classification, Object-Oriented, Pixel-Based, DEM

### Cite this paper

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