Semi-automatic Coastline Extraction Method Using Synthetic Aperture Radar Images

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***Abstract*—Coastline is the boundary that discriminates the land and sea area. Originally, to utilize the coastline information, optical images from air-borne or space-borne systems are used. Due to manual interpretation from optical images, conventional coastline extraction method has several errors. This paper proposes semi-automatic coastline extraction method using Synthetic Aperture Radar (SAR) images to reduce these errors. SAR is a platform on-board active sensor that can observe Earth day and night regardless of the weather condition. SAR provides high-resolution images for variety of applications in remote sensing field such as climate change research, surveillance imaging, geoscience, and etc. Using the phase information in SAR image data, we detect and measure the coherence between land and sea area, finally get the coastline information.**

***Keyword*—Coastline extraction, Interferometry, Remote sensing, Synthetic Aperture Radar**

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