

The Research of Sea Bottom Topography Detecting in Taiwan Shoal by Sar Image

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Abstract

Under mid-low wind and strong current conditions, the sea bottom topography in the shallow water can be showed on the radar images. These kind of images had been observed on side looking airborne radar (SLAR); real aperture radar (RAR); and synthetic aperture radar (SAR) images.

Taiwan Shoal is a wide sandwave area of 10,000km² in the south-west of Peng-Hu island. In this thesis, the model proposed by Alpers and Hennings (1984) was applied. Water depth measured by Ocean Research III; calculated current field and wind speed measured by anemometer in Dong-Ji island are used as input data. And the comparison between the model estimated result and the ship-measured depth are made.

The comparison shows a good agreement between model and in-situ measurement. And the further efforts for two dimensional model can make the method more useful.

Keywords: Sea bottom topography, Taiwan shoal, Synthetic aperture radar (SAR).

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