Establishing The DEM of Waisanding Offshore Sandbar By Airborne Lidar

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Abstracts

Waisanding Offshore Sandbar is located to the south west coast of Taiwan Island. A severe topographical change is manifested in the past. The dynamic processes of erosion and sedimentation make the islet continuously shifting from offshore to near the coast. An accurate monitoring of the dynamic change is required. Airborne lidar with a coverages of 8 strips has been conducted in 2004 with point density of 1 point per meter and a final product of 1 m grid of DEM. After strip adjustment, general mismaching between strips is smaller than 5 cm. With 165 check points obtained by GPS RTK, an average error is 0.028 m and a standard deviation of 0.036 m. This concludes the effectiveness of lidar for producing an accurate topography of sandbars.