This map depicts submarine topography data collected during July and August 2004 by the NASA Experimental Airborne Advanced Research Lidar (EAARL) system mounted on a Cessna 310 aircraft. The EAARL uses a 'waveform-resolving' green laser capable of mapping submarine and subaerial environments with high spectral resolution, water-column correction, and low costs, making it an innovative instrument under development at the NASA Wallops Flight Facility.

Data collection occurred with approximately 50% overlap between flightlines, resulting in about one laser sounding per square meter. The data were processed by the USGS Center for Coastal and Watershed Studies to produce a 1-meter resolution raster image that can be easily ingested into a Geographic Information System (GIS). The data were organized as 2 km by 2 km data tiles in 32-bit floating-point integer GeoTiff format. Contour line and hillshade layers were generated from the lidar data tile and incorporated into this map product.

High spectral resolution, water-column correction, and low costs were found to be key factors in providing accurate and affordable imagery to managers of coastal habitats. This map is not intended for use in navigation.

**PROJECT DESCRIPTION**

Lidar (EAARL) are being used. This sensor has the potential to make significant contributions in this realm for measuring water depth and conducting cross-environment surveys. High spectral resolution, water-column correction, and low costs were found to be key factors in providing accurate and affordable imagery to managers of coastal habitats.

**DATA DESCRIPTION**

The laser soundings used to create this map were collected during July and August 2004 by the NASA EAARL system mounted on a Cessna 310 aircraft. The EAARL uses a 'waveform-resolving' green laser capable of mapping submarine and subaerial environments with high spectral resolution, water-column correction, and low costs, making it an innovative instrument under development at the NASA Wallops Flight Facility.

**FURTHER READING**