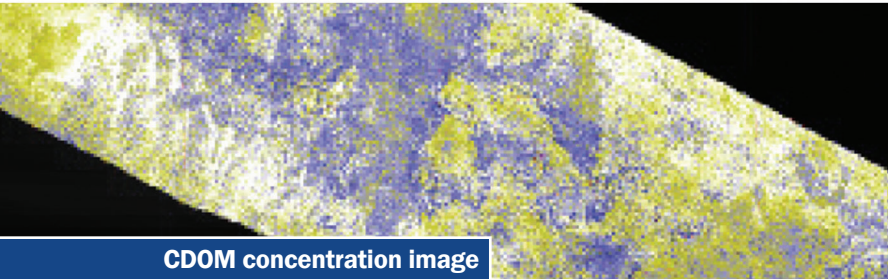
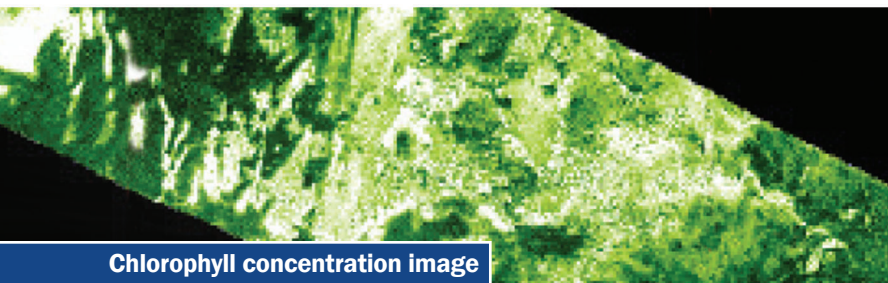


# CZMIL – Coastal Zone Mapping and Imaging Lidar

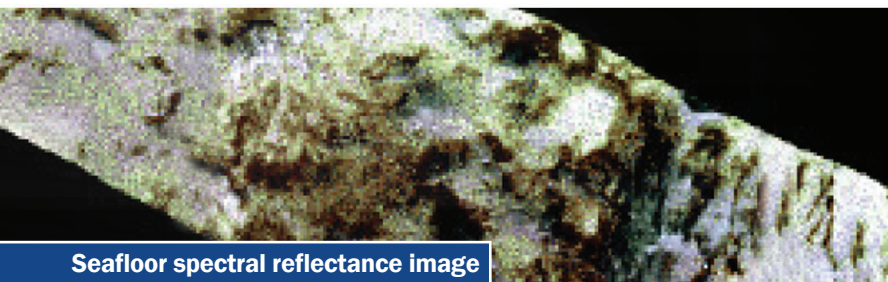
An advanced lidar sensor that goes as deep as any lidar, and right up to the beach.



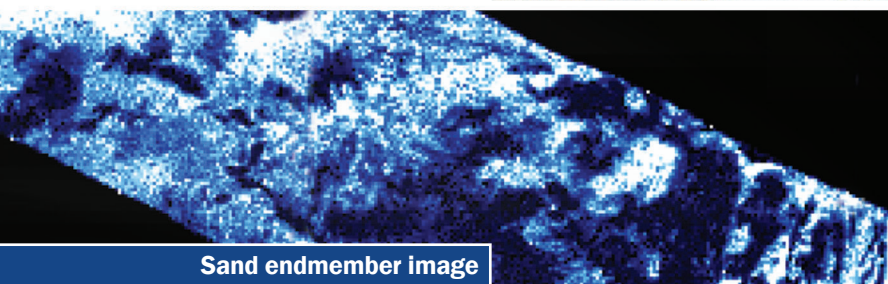
CDOM concentration image



Chlorophyll concentration image



Seafloor spectral reflectance image



Sand endmember image

Developed under the auspices of the US Army Corps of Engineers (USACE) and the Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX), CZMIL is a new lidar sensor for mapping and charting the coastal zone.

CZMIL is an integrated lidar-imagery sensor system and software suite designed for the highly automated generation of physical and environmental information products for mapping the coastal zone. Data outputs include:

- Water depth
- Seafloor reflectance
- Water column attenuation
- Chlorophyll concentration
- CDOM concentration
- Automated bottom classification.

CZMIL is the result of collaborative efforts to improve the remote sensing tools used within the National Coastal Mapping Program (NCMP). Until now, coastal areas such as the surf zone and turbid waters have been especially challenging to lidar sensors. But recent advances in processing bathymetric lidar signals—and in the fusion of these signals with ancillary sensor data such as hyperspectral imagery—have led to improved hardware that supports more advanced environmental applications.

With its enlarged aperture receiver (4 times the size of previous sensors) and doubled spatial resolution, CZMIL accelerates data and product delivery, and improves the quality of information products derived from fused lidar and imagery datasets. And when it comes to traditionally problematic areas such as turbid water and the surf zone, CZMIL's lidar sensor delivers unprecedented performance.

## CZMIL...

- A complete coastal zone mapping and imaging lidar system
- Large aperture receiver—4 times the size of previous systems
- Twice the spatial resolution of current lidar systems
- Excellent performance in shallow and turbid water

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