This Lidar-derived topographic map was produced as a collaborative effort between the U.S. Geological Survey (USGS) Coastal and Marine Geology Program, the Northeast Coastal and Barrier Network of the National Park Service (NPS) Cape Cod National Seashore, and the NASA Experimental Advanced Airborne Research Lidar (EAARL). This map is not intended for use in navigation.

Data Description

The USGS-NPS-NASA EAARL data was collected as a part of the NASA Wallops Flight Facility's Wallops Island Cryospheric Facility project. This project provided the Lidar data to the USGS Coastal and Marine Geology Program for analysis and mapping. The data was generated from the Lidar data tile and incorporated into this map product.

Data were collected with a Cessna 310 aircraft. The EAARL uses a "waveform-resolving" green laser capable of mapping submarine and subaerial (land) features. The data were characterized by 8 points per meter squared, resulting in about one laser sounding per square meter. The data were processed by the USGS FISC (Florida Integrated Science Center) office, St. Petersburg, FL for each flightline. Data collection occurred with approximately 50% overlap between flightlines, resulting in about one laser sounding per square meter. The data were mapped using NASA Experimental Advanced Airborne Research Lidar (EAARL) technology, which was funded by the National Aeronautics and Space Administration (NASA) Wallops Flight Facility. The aim of the partnership that created this product is to develop advanced mapping technologies for mapping features at decimeter-scale resolution, and to expand the potential uses of the data, and to take advantage of these new data products to further our understanding of Earth processes.

Further Reading


By John C. Brock, C. Wayne Wright, Matt Patterson, Amar Nayegandhi, and Laurinda J. Travers.

USGS-NPS-NASA EAARL Bare Earth (BE) Lidar Topography
Map Tile 418000e_4628000n_19z

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