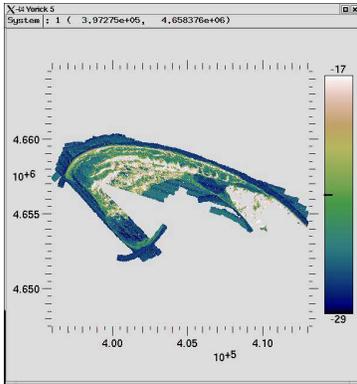


Inter-Agency Partnership Produces High Accuracy Elevation Survey at Cape Cod National Seashore



LIDAR data showing north end of Cape Cod

Thirty-four gigabytes of elevation data were collected and 29,000 digital, aerial photos were taken last week at Cape Cod National Seashore by a group of scientists from NASA, USGS, and the National Park Service.

A cooperative scientific study designed to collect high accuracy digital elevation information and digital aerial photos in coastal parks was conducted on October 8th. This study is designed to give the National Park Service high-resolution elevation data in coastal and barrier island parks to a vertical accuracy of roughly 15-cm. A new type of LIDAR (Light Detection and Ranging) instrument known as EAARL (Experimental Advanced Airborne Research

Lidar), was used to collect the data. Mark Duffy of the Northeast Region Coastal and Barrier Network has been working to develop and implement cooperative programs between the National Park Service, NASA, and the USGS Coastal Research Center for collection, processing and delivery of these data to parks. As part of this cooperative program, Wayne Wright (NASA Goddard Space Flight Center) and Virg Rabine (NASA pilot) flew CACO on Tuesday, October 8, 2002. The National Park Service's Mark Duffy and Tim Smith (NPS GPS Coordinator) provided ground support and the NPS Inventory and Monitoring Program provided funding for this inter-agency effort. Trimble Navigation supplied the geodetic grade GPS equipment for the ground reference station. The cooperative relationship between the three agencies allowed the entire Cape Cod mission to be completed for a fraction of normal costs associated with a project of this scale. This program is of great benefit to the NPS, NASA, and USGS. The NPS acquires valuable monitoring data, while NASA utilizes parks and NPS supplied logistical support for developing and testing new remote sensing equipment, while the USGS continues to develop innovative processing and analysis techniques for these complex data sets. The cooperative program is scheduled to provide LIDAR surveys in selected Coastal and Barrier Network parks on an every other year interval to monitor changes in beach geomorphology.



GPS base station provides tie to earth during airborne LIDAR